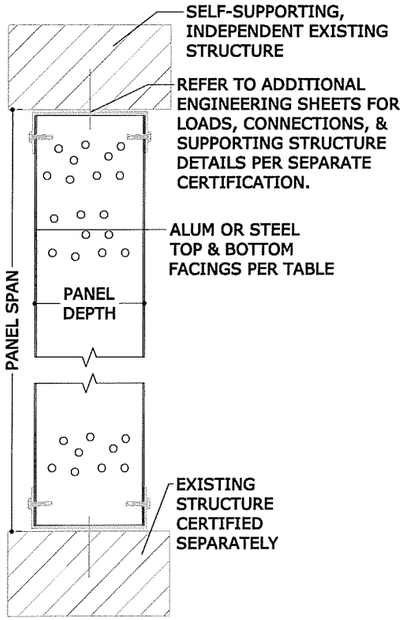
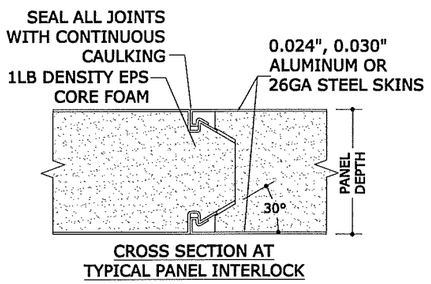
STRUCTALL BUILDING SYSTEMS

EPS FOAM CORE WALL PANELS - METAL SKIN



1/1 WALL PANEL SPAN

N.T.S. PLAN OR SECTION



CROSS SECTION AT TYPICAL PANEL INTERLOCK

2/1 PANEL INTERLOCK DETAIL

N.T.S. DETAIL

NOTE: THIS PANEL CHART IS NOT INTENDED TO DEPICT VERTICAL LOAD-BEARING CONDITIONS. SEE SEPARATE ENGINEERING FOR VERTICAL LOADING.

MAXIMUM ALLOWABLE CLEAR SPAN TABLE:

Max Allowable Wall Load	Deflection Limit (L/...)	3" Panels		4" Panels			6" Panels		
		0.024" Alum Skin	0.030" Alum Skin	0.024" Alum Skin	0.030" Alum Skin	26ga Steel Skin	0.024" Alum Skin	0.030" Alum Skin	26ga Steel Skin
		1-LB EPS	1-LB EPS	1-LB EPS	1-LB EPS	1-LB EPS	1-LB EPS	1-LB EPS	1-LB EPS
+/- 10 psf	120	14'-10"	16'-0"	17'-6"	19'-9"	20'-3"	21'-9"	24'-0"	23'-0"
+/- 10 psf	240	11'-9"	15'-9"	13'-11"	15'-8"	16'-10"	17'-3"	19'-5"	20'-9"
+/- 15 psf	120	12'-12"	16'-0"	15'-4"	17'-3"	16'-6"	18'-1"	20'-2"	20'-5"
+/- 15 psf	240	10'-4"	13'-9"	12'-2"	13'-9"	14'-8"	15'-1"	16'-12"	18'-1"
+/- 20 psf	120	11'-9"	13'-11"	13'-11"	15'-3"	14'-4"	15'-8"	17'-6"	17'-8"
+/- 20 psf	240	9'-4"	12'-6"	11'-1"	12'-6"	13'-4"	13'-9"	15'-5"	16'-6"
+/- 25 psf	120	10'-11"	12'-5"	12'-9"	13'-8"	12'-10"	14'-0"	15'-8"	15'-10"
+/- 25 psf	240	8'-8"	11'-7"	10'-3"	11'-7"	12'-5"	12'-9"	14'-4"	15'-3"
+/- 30 psf	120	10'-0"	11'-4"	11'-8"	12'-6"	11'-8"	12'-9"	14'-3"	14'-5"
+/- 30 psf	240	8'-2"	10'-11"	9'-8"	10'-11"	11'-8"	11'-12"	13'-6"	14'-5"
+/- 35 psf	120	9'-3"	10'-6"	10'-9"	11'-7"	10'-10"	11'-10"	13'-3"	13'-4"
+/- 35 psf	240	7'-9"	10'-4"	9'-2"	10'-4"	10'-10"	11'-5"	12'-9"	13'-4"
+/- 39 psf	120	8'-10"	9'-11"	10'-3"	10'-11"	10'-3"	11'-3"	12'-6"	12'-8"
+/- 39 psf	240	7'-6"	9'-11"	8'-10"	9'-12"	10'-3"	10'-12"	12'-4"	12'-8"
+/- 45 psf	120	8'-2"	9'-3"	9'-6"	10'-2"	9'-6"	10'-5"	11'-8"	11'-9"
+/- 45 psf	240	7'-2"	9'-3"	8'-5"	9'-6"	9'-6"	10'-5"	11'-8"	11'-9"
+/- 50 psf	120			9'-0"	9'-8"	9'-1"	9'-11"	11'-1"	11'-2"
+/- 50 psf	240			8'-2"	9'-2"	9'-1"	9'-11"	11'-1"	11'-2"
+/- 55 psf	120			8'-7"	9'-3"	8'-7"	9'-5"	10'-7"	10'-8"
+/- 55 psf	240			7'-11"	8'-11"	8'-7"	9'-5"	10'-7"	10'-8"
+/- 60 psf	120			8'-3"	8'-10"	8'-3"	9'-0"	10'-1"	10'-2"
+/- 60 psf	240			7'-8"	8'-8"	8'-3"	9'-0"	10'-1"	10'-2"
+/- 65 psf	120			7'-10"	7'-10"	7'-11"	8'-8"	9'-8"	9'-10"
+/- 65 psf	240			7'-6"	7'-6"	7'-11"	8'-8"	9'-8"	9'-10"
+/- 70 psf	120			7'-3"	7'-3"	7'-8"	8'-4"	9'-4"	9'-5"
+/- 70 psf	240			7'-3"	7'-3"	7'-8"	8'-4"	9'-4"	9'-5"
+/- 78 psf	120					7'-3"	7'-11"	8'-10"	8'-11"
+/- 78 psf	240					7'-3"	7'-11"	8'-10"	8'-11"
+/- 80 psf	120							8'-9"	8'-10"
+/- 80 psf	240							8'-9"	8'-10"
+/- 85 psf	120							8'-6"	8'-7"
+/- 85 psf	240							8'-6"	8'-7"
+/- 90 psf	120							8'-3"	8'-4"
+/- 90 psf	240							8'-3"	8'-4"
+/- 95 psf	120							8'-0"	8'-1"
+/- 95 psf	240							8'-0"	8'-1"

DIRECTIVE FOR USE:

1. DETERMINE TYPE OF ENCLOSURE TO BE COVERED (OPEN, SCREENED WALLS, OR FULLY ENCLOSED).
2. VERIFY APPROPRIATE DESIGN LOAD WITH GOVERNING MUNICIPALITY AND BUILDING CODES IN EFFECT FOR THE PROJECT LOCATION USING 2009 OR 2012 INTERNATIONAL BUILDING CODE AS APPLICABLE AS PROVIDED BY SEPARATE ENGINEERING, BY A LICENSED ENGINEER OR REGISTERED ARCHITECT. SEPARATE ENGINEERING MAY BE REQUIRED FOR ALTERNATE DESIGN LOADS.
3. FIND ALLOWABLE COMPOSITE PANEL CLEAR SPAN IN TABLES FOR APPROPRIATE PANEL DEPTH, FACING THICKNESS, AND EPS CORE DENSITY SELECTED.
4. ▨ INDICATES VALUES NOT VALID FOR USE.

DEFLECTION NOTES:

1. USE L/240 FOR ALL EXTERIOR WALLS AND INTERIOR PARTITIONS WITH BRITTLE FINISHES.
2. USE L/120 FOR ALL EXTERIOR WALLS AND INTERIOR PARTITIONS WITH FLEXIBLE FINISHES.
3. LOCAL CODES MAY SUPERSEDE THE ABOVE BASE DEFLECTION CRITERIA FROM THE INTERNATIONAL BUILDING CODE. CONTRACTOR TO VERIFY ALL LOCAL CODES WHICH MAY APPLY BEFORE USE OF THIS DESIGN.

MAXIMUM ALLOWABLE DESIGN PRESSURES:

AS NOTED IN CLEAR SPAN TABLE

DESIGN NOTES:

POSITIVE AND NEGATIVE DESIGN PRESSURES CALCULATED FOR USE WITH THIS SYSTEM SHALL BE DETERMINED BY OTHERS ON A JOB-SPECIFIC BASIS IN ACCORDANCE WITH THE GOVERNING CODE. SITE-SPECIFIC LOAD REQUIREMENTS FOR WIND LOAD, SNOW LOAD OR ANY LOAD COMBINATION SHALL BE DETERMINED IN ACCORDANCE WITH ASCE 7 AND THE 2009 & 2012 INTERNATIONAL BUILDING CODE (AS APPLICABLE) BY SEPARATE ENGINEERING CERTIFICATION AND SHALL BE LESS THAN OR EQUAL TO THE POSITIVE OR NEGATIVE DESIGN PRESSURE CAPACITY VALUES LISTED HEREIN FOR ANY ASSEMBLY AS SHOWN.

GENERAL NOTES:

1. THIS SPECIFICATION HAS BEEN DESIGNED AND SHALL BE FABRICATED IN ACCORDANCE WITH THE REQUIREMENTS OF THE 2009 & 2012 INTERNATIONAL BUILDING CODE & 2009 & 2012 INTERNATIONAL RESIDENTIAL CODE. CONTRACTOR SHALL INVESTIGATE AND CONFORM TO ALL LOCAL BUILDING CODE AMENDMENTS WHICH MAY APPLY. DESIGN CRITERIA BEYOND AS STATED HEREIN MAY REQUIRE ADDITIONAL SITE-SPECIFIC SEALED ENGINEERING. SEISMIC DESIGN HAS NOT BEEN CONSIDERED.
2. COMPOSITE PANELS SHALL COMPLY WITH CHAPTER 7 SECTION 719 (IBC 2009), CHAPTER 7 SECTION 720 (2012 IBC), CHAPTER 8 SECTION 803, CLASS A INTERIOR FINISH, AND CHAPTER 26 SECTION 2603 OF THE 2009 & 2012 IBC.
3. NO 33-1/3% INCREASE IN ALLOWABLE STRESS HAS BEEN USED IN THE DESIGN OF THIS SYSTEM.
4. DESIGN PRESSURES AS NOTED HEREIN ARE BASED ON A MAXIMUM TESTED PRESSURE DIVIDED BY A 2.0 FACTOR OF SAFETY. WEIGHT OF THE PANELS HAS NOT BEEN INCLUDED, WALL PANELS SHALL BE INSTALLED PLUMB TO THE VERTICAL WITH NO SLOPING IN THE HORIZONTAL DIRECTION.
5. THE ARCHITECT/ENGINEER OF RECORD FOR THE PROJECT SUPERSTRUCTURE WITH WHICH THIS DESIGN IS USED SHALL BE RESPONSIBLE FOR THE INTEGRITY OF ALL SUPPORTING SURFACES TO THIS DESIGN WHICH SHALL BE COORDINATED BY THE PERMITTING CONTRACTOR.
6. SEPARATE 'SITE-SPECIFIC' SEALED ENGINEERING SHALL BE REQUIRED IN ORDER TO DEVIATE FROM LOADS, DEFLECTIONS, OR SPANS CONTAINED HEREIN. LINEAR INTERPOLATION OF THE ALLOWABLE SPAN TABLES LISTED HEREIN SHALL NOT BE PERMITTED. CONTACT THIS ENGINEER FOR ALTERNATE SPAN CALCULATIONS AS MAY BE REQUIRED.
7. THE SYSTEM DETAILED HEREIN IS GENERIC AND DOES NOT PROVIDE INFORMATION FOR A SPECIFIC SITE. FOR SITE CONDITIONS DIFFERENT FROM THE CONDITIONS DETAILED HEREIN, A LICENSED ENGINEER OR REGISTERED ARCHITECT SHALL PREPARE SITE SPECIFIC DOCUMENTS FOR USE IN CONJUNCTION WITH THIS DOCUMENT.
8. THE CONTRACTOR SHALL CAREFULLY CONSIDER POSSIBLE IMPOSING LOADS, INCLUDING BUT NOT LIMITED TO ANY CONCENTRATED LOADS WHICH MAY JUSTIFY GREATER DESIGN CRITERIA. THIS ADDITIONAL LOAD CRITERIA SHALL BE PROPERLY ANALYZED BY A LICENSED ENGINEER OR REGISTERED ARCHITECT.
9. EPS CORE COMPOSITE PANELS SHALL BE CONSTRUCTED USING TYPE 3105-H254 ALUMINUM FACINGS OR ASTM A653, CS, TYPE B HOT DIP GALVANIZED G90 COATED STEEL FACINGS. EXPANDED POLYSTYRENE FOAM SHALL HAVE TYPICAL DENSITY OF 1.0 PCF. THE EPS FOAM SHALL BE ADHERED TO THE ALUMINUM FACING WITH MORAD M640 SERIES ADHESIVE (BY ROHM AND HAAS COMPANY). FABRICATION SHALL BE IN ACCORDANCE WITH APPROVED FABRICATION METHODS BY MANUFACTURER FOR ALL PANELS.
10. THE CONTRACTOR IS RESPONSIBLE TO INSULATE ALL MEMBERS FROM DISSIMILAR MATERIALS TO PREVENT ELECTROLYSIS.
11. ENGINEER SEAL AFFIXED HERE TO VALIDATES STRUCTURAL DESIGN AS SHOWN ONLY. USE OF THIS SPECIFICATION BY CONTRACTOR, et. al. INDEMNIFIES & SAVES HARMLESS THIS ENGINEER FOR ALL COST & DAMAGES INCLUDING LEGAL FEES & APPELLATE FEES RESULTING FROM MATERIAL FABRICATION, SYSTEM ERECTION, & CONSTRUCTION PRACTICES BEYOND THAT WHICH IS CALLED FOR BY LOCAL, STATE, & FEDERAL CODES & FROM DEVIATIONS OF THIS PLAN.
12. EXCEPT AS EXPRESSLY PROVIDED HEREIN, NO ADDITIONAL CERTIFICATIONS OR AFFIRMATIONS ARE INTENDED.
13. ALTERATIONS, ADDITIONS, OR OTHER MARKINGS TO THIS DOCUMENT ARE NOT PERMITTED AND INVALIDATE THIS CERTIFICATION.

TABLE VALUE DERIVATIONS:

PANEL PROPERTIES:

1. PANEL STRUCTURAL PROPERTIES DERIVED FROM CERTIFIED TEST REPORTS Nos. TT-506027B, 506027C, 506027D, 509014A, 509014B BY TERRAPIN TESTING, ESP012351P-1, ESP012351P-2, ESP012351P-3, ESP012351P-3A, ESP012351P-4, ESP012351P-5, ESP012351P-6, EXP012351P-6A, ESP012351P-7, ESP012351P-8, ESP012351P-9, ESP012351P-9A BY ELEMENT MATERIALS TECHNOLOGY.
2. PANEL DEAD LOADS HAVE NOT BEEN FACTORED INTO CALCULATIONS FOR WALL PANEL PROPERTIES.

FRANK L. BENNARDO, P.E.
STATE SEAL INDICATED BELOW
VALID FOR (1) JOB(s) ONLY
VALID ONLY WITH RAISED ENGINEER SEAL

FRANK L. BENNARDO, P.E.
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MI:49491
MS:16927
MO: 2003019621
NH:10624
NJ: 24GE0435350
NC:PE027
OH:66438
PA:PE060
RI:7928
SC:21507
TX:96064
VT:8182
VA: 0402 038109
DE: 15009, CA 27
ID: 11090, CA 20

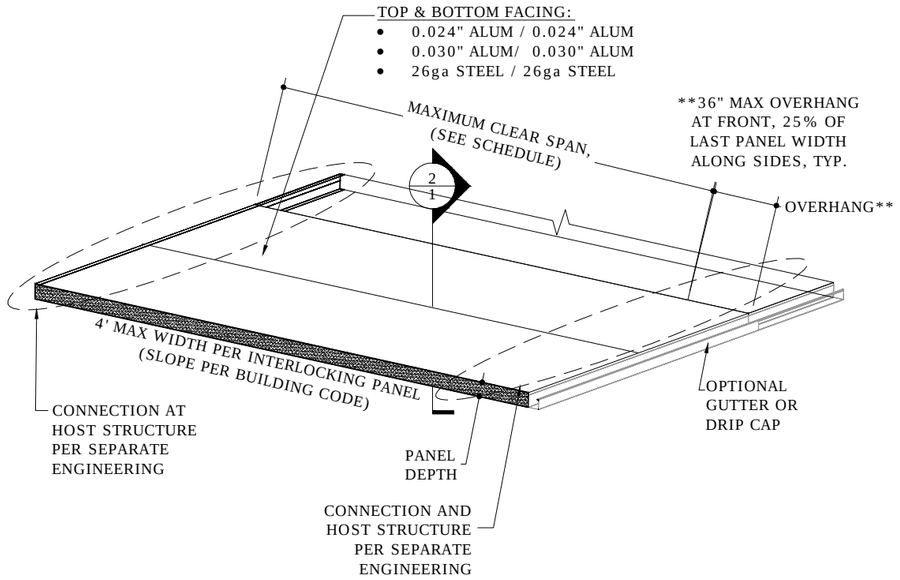
REMARKS	DRWN	CHKD	DATE
INIT ISSUE	TSB	FLB	06-29-12
REV. FOR 2012 IBC	CSL	TSB	07-08-13

12-STRUCT-02
SCALE: 03
PAGE DESCRIPTION:

1 OF 1

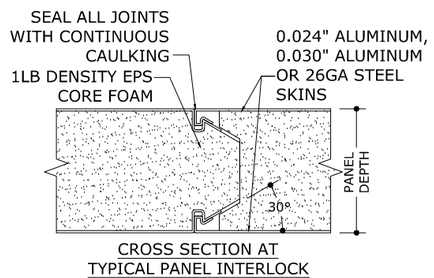
STRUCTALL BUILDING SYSTEMS

EPS FOAM CORE ROOF PANELS - METAL SKIN



1/1 CLEAR SPAN ISOMETRIC

N.T.S. ISOMETRIC



CROSS SECTION AT TYPICAL PANEL INTERLOCK

2/1 PANEL INTERLOCK DETAIL

N.T.S. DETAIL

DESIGN NOTES:

POSITIVE AND NEGATIVE DESIGN PRESSURES CALCULATED FOR USE WITH THIS SYSTEM HAVE BEEN CALCULATED IN ACCORDANCE WITH ASCE 7-10 AND THE 2012 & 2015 INTERNATIONAL BUILDING CODE USING ALLOWABLE STRESS DESIGN METHODOLOGY WITH THE CRITERIA OUTLINED HEREIN.

MAXIMUM ALLOWABLE DESIGN PRESSURES:

AS NOTED IN CLEAR SPAN TABLES

ENCLOSED STRUCTURE LOADS:

1. CALCULATIONS BASED ON ASCE 7-10, Vult= 130 MPH - 180 MPH, ENCLOSED STRUCTURE COMPONENTS & CLADDING, RISK CATEGORY=II, Kd=0.85, Kzt=1.0, Kz=TABLE 30.3-1, GCpi=+/-0.18, 15' MEAN ROOF HEIGHT.

SCREENED ENCLOSURE LOADS:

2. WIND LOADS ARE TAKEN AS THE MAXIMUM BETWEEN ASCE 7-10 ENCLOSED STRUCTURE COMPONENTS & CLADDING (AS DESCRIBED ABOVE) AND THE GOVERNING LOADS AS ILLUSTRATED IN IBC TABLE 2002.4 FOR VERTICAL LOADS ON SOLID ROOFS, UP TO 15' MEAN ROOF HEIGHT, Vult= 130 MPH - 180 MPH.

OPEN STRUCTURE LOADS:

3. CALCULATIONS BASED ASCE 7-10, ROOF OVER OPEN STRUCTURE COMPONENTS & CLADDING, OBSTRUCTED WIND FLOW, RISK CATEGORY=II, Kd=0.85, Kzt=1.0, Kz=0.85, 15' MEAN ROOF HEIGHT, Vult= 130 MPH - 180 MPH.

*LOAD COMBINATIONS UTILIZED IN THIS MASTER PLAN SHEET HAVE BEEN DERIVED FROM THE ALLOWABLE STRESS DESIGN LOAD COMBINATIONS ILLUSTRATED IN ASCE 7-10
**ALL WIND SPEEDS LISTED HERE ARE Vult WIND SPEEDS. Vasd WIND SPEEDS MAY BE CALCULATED WITH THE FOLLOWING CONVERSION: Vult=Vasd x √0.6
***CALCULATIONS CONSIDER 9.46° ROOF SLOPE. ROOF LIVE LOADS USED IN CALCULATIONS CONSIDER 20 PSF AS DEFINED IN IBC SECTION 1607.

GENERAL NOTES:

1. THIS SPECIFICATION HAS BEEN DESIGNED AND SHALL BE FABRICATED IN ACCORDANCE WITH THE REQUIREMENTS OF THE 2012 & 2015 INTERNATIONAL BUILDING CODE FOR USE OUTSIDE THE HVHZ. COMPOSITE ROOF PANELS SHALL COMPLY WITH CHAPTER 7 SECTION 720, CHAPTER 8 SECTION 803, CLASS A INTERIOR FINISH, AND CHAPTER 26 SECTION 2603 OF THE FBC.
2. CONTRACTOR SHALL INVESTIGATE AND CONFORM TO ALL LOCAL BUILDING CODE AMENDMENTS WHICH MAY APPLY. DESIGN CRITERIA BEYOND AS STATED HEREIN MAY REQUIRE ADDITIONAL SITE-SPECIFIC SEALED ENGINEERING.
3. NO 33-1/3% INCREASE IN ALLOWABLE STRESS HAS BEEN USED IN THE DESIGN OF THIS SYSTEM.
4. DESIGN PRESSURES AS NOTED HEREIN ARE BASED ON A MAXIMUM TESTED PRESSURE DIVIDED BY A 2.0 FACTOR OF SAFETY.
5. THE ARCHITECT/ENGINEER OF RECORD FOR THE PROJECT SUPERSTRUCTURE WITH WHICH THIS DESIGN IS USED SHALL BE RESPONSIBLE FOR THE INTEGRITY OF ALL SUPPORTING SURFACES TO THIS DESIGN WHICH SHALL BE COORDINATED BY THE PERMITTING CONTRACTOR.
6. SEPARATE 'SITE-SPECIFIC' SEALED ENGINEERING SHALL BE REQUIRED IN ORDER TO DEVIATE FROM LOADS, DEFLECTIONS, OR SPANS CONTAINED HEREIN. LINEAR INTERPOLATION OF THE ALLOWABLE SPAN TABLES LISTED HEREIN SHALL NOT BE PERMITTED. CONTACT THIS ENGINEER FOR ALTERNATE SPAN CALCULATIONS AS MAY BE REQUIRED.
7. THE SYSTEM DETAILED HEREIN IS GENERIC AND DOES NOT PROVIDE INFORMATION FOR A SPECIFIC SITE. FOR SITE CONDITIONS DIFFERENT FROM THE CONDITIONS DETAILED HEREIN, A LICENSED ENGINEER OR REGISTERED ARCHITECT SHALL PREPARE SITE SPECIFIC DOCUMENTS FOR USE IN CONJUNCTION WITH THIS DOCUMENT.
8. EPS PANEL PERFORMANCE CHARACTERISTICS FOR SELF IGNITION, FLAME SPREAD AND SMOKE DENSITY HAVE BEEN QUALIFIED THROUGH APPLICABLE ASTM TEST STANDARDS. SEE EVALUATION REPORT FOR MORE INFORMATION.
9. THE CONTRACTOR SHALL CAREFULLY CONSIDER POSSIBLE IMPOSING LOADS ON ROOF, INCLUDING BUT NOT LIMITED TO ANY CONCENTRATED LOADS WHICH MAY JUSTIFY GREATER DESIGN CRITERIA. THIS ADDITIONAL ROOF LOAD CRITERIA SHALL BE PROPERLY ANALYZED BY A LICENSED ENGINEER OR REGISTERED ARCHITECT.
10. EPS CORE COMPOSITE PANELS SHALL BE CONSTRUCTED USING TYPE 3105-H254 ALUMINUM FACINGS OR ASTM A653, CS, TYPE B HOT DIP GALVANIZED G90 COATED STEEL FACINGS. EXPANDED POLYSTYRENE FOAM SHALL HAVE TYPICAL DENSITY OF 1.0 PCF. THE EPS FOAM SHALL BE ADHERED TO THE ALUMINUM FACING WITH MORAD M640 SERIES ADHESIVE (BY ROHM AND HAAS COMPANY). FABRICATION SHALL BE IN ACCORDANCE WITH APPROVED FABRICATION METHODS BY MANUFACTURER FOR ALL PANELS.
11. THE CONTRACTOR IS RESPONSIBLE TO INSULATE ALL MEMBERS FROM DISSIMILAR MATERIALS TO PREVENT ELECTROLYSIS.
12. ENGINEER SEAL AFFIXED HERE TO VALIDATES STRUCTURAL DESIGN AS SHOWN ONLY. USE OF THIS SPECIFICATION BY CONTRACTOR, et. al. INDEMNIFIES & SAVES HARMLESS THIS ENGINEER FOR ALL COST & DAMAGES INCLUDING LEGAL FEES & APPELLATE FEES RESULTING FROM MATERIAL FABRICATION, SYSTEM ERECTION, & CONSTRUCTION PRACTICES BEYOND THAT WHICH IS CALLED FOR BY LOCAL, STATE, & FEDERAL CODES & FROM DEVIATIONS OF THIS PLAN.
13. EXCEPT AS EXPRESSLY PROVIDED HEREIN, NO ADDITIONAL CERTIFICATIONS OR AFFIRMATIONS ARE INTENDED.
14. ALTERATIONS, ADDITIONS, OR OTHER MARKINGS TO THIS DOCUMENT ARE NOT PERMITTED AND INVALIDATE THIS CERTIFICATION.

TABLE VALUE DERIVATIONS:

PANEL PROPERTIES:

1. PANEL STRUCTURAL PROPERTIES DERIVED FROM CERTIFIED TEST REPORTS Nos. TT-506027B, 506027C, 506027D, 509014A, 509014B BY TERRAPIN TESTING, ESP012351P-1, ESP012351P-2, ESP012351P-3, ESP012351P-3A, ESP012351P-4, ESP012351P-5, ESP012351P-6, EXP012351P-6A, ESP012351P-7, ESP012351P-8, ESP012351P-9, ESP012351P-9A BY ELEMENT MATERIALS TECHNOLOGY.
2. PANEL DEAD LOADS HAVE BEEN FACTORED INTO CALCULATIONS FOR LIVE LOADS OR UPLIFT AS WELL AS CALCULATIONS FOR PANEL PROPERTIES.

FRANK L. BENNARDO, P.E.
STATE SEAL INDICATED BELOW
05/03/2016
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- ☐MI:49491
- ☐MN:43001
- ☐MO: 2003019621
- ☐NH:10624
- ☐NJ: 24GE04353500
- ☐NC:PE027234
- ☐OH:66438
- ☐PA:PE060991
- ☐RI:7928
- ☐SC:21507
- ☐TX:96064
- ☐VT:8182
- ☐VA: 0402 038109
- ☐DE: 15009, CA 2782
- ☐ID: 11090, CA 2030

REMARKS	DRWN	CHKD	DATE
INIT ISSUE (12-STRUC-01)	CSL	KL	04/05/12
REV FOR WIND SPEEDS	CSL	TSB	12/05/13
FBC 5TH EDITION (2014)	CSL	TSB	04/21/15
UPDATE FOR IBC	JAC	JCF	04/26/16
-	-	-	-

15-2409b

SCALE: NTS UNLESS NOTED

1 OF 3

MAXIMUM ALLOWABLE CLEAR SPAN TABLE ROOF OVER ENCLOSED STRUCTURE:

Wind Speed (MPH)	Exposure	Live Load &/or Uplift	Deflection Limit (L/...)	3" Panels		4" Panels			6" Panels		
				0.024" Alum Skin	0.030" Alum Skin	0.024" Alum Skin	0.030" Alum Skin	26ga Steel Skin	0.024" Alum Skin	0.030" Alum Skin	26ga Steel Skin
				1-LB EPS	1-LB EPS	1-LB EPS	1-LB EPS	1-LB EPS	1-LB EPS	1-LB EPS	1-LB EPS
90	B	+/- 20 psf	120	11'-9"	13'-11"	13'-11"	15'-3"	14'-4"	15'-8"	17'-6"	17'-8"
90	B	+/- 20 psf	180	10'-4"	13'-9"	12'-2"	13'-9"	14'-4"	15'-1"	16'-12"	17'-8"
90	B	+/- 20 psf	240	9'-4"	12'-6"	11'-1"	12'-6"	13'-4"	13'-9"	15'-5"	16'-6"
90	C	+/- 20 psf	120	11'-9"	13'-11"	13'-11"	15'-3"	14'-4"	15'-8"	17'-6"	17'-8"
90	C	+/- 20 psf	180	10'-4"	13'-9"	12'-2"	13'-9"	14'-4"	15'-1"	16'-12"	17'-8"
90	C	+/- 20 psf	240	9'-4"	12'-6"	11'-1"	12'-6"	13'-4"	13'-9"	15'-5"	16'-6"
90	D	+/- 20 psf	120	11'-9"	13'-11"	13'-11"	15'-3"	14'-4"	15'-8"	17'-6"	17'-8"
90	D	+/- 20 psf	180	10'-4"	13'-9"	12'-2"	13'-9"	14'-4"	15'-1"	16'-12"	17'-8"
90	D	+/- 20 psf	240	9'-4"	12'-6"	11'-1"	12'-6"	13'-4"	13'-9"	15'-5"	16'-6"
100	B	+/- 20 psf	120	11'-9"	13'-11"	13'-11"	15'-3"	14'-4"	15'-8"	17'-6"	17'-8"
100	B	+/- 20 psf	180	10'-4"	13'-9"	12'-2"	13'-9"	14'-4"	15'-1"	16'-12"	17'-8"
100	B	+/- 20 psf	240	9'-4"	12'-6"	11'-1"	12'-6"	13'-4"	13'-9"	15'-5"	16'-6"
100	C	+/- 20 psf	120	11'-9"	13'-11"	13'-11"	15'-3"	14'-4"	15'-8"	17'-6"	17'-8"
100	C	+/- 20 psf	180	10'-4"	13'-9"	12'-2"	13'-9"	14'-4"	15'-1"	16'-12"	17'-8"
100	C	+/- 20 psf	240	9'-4"	12'-6"	11'-1"	12'-6"	13'-4"	13'-9"	15'-5"	16'-6"
100	D	+/- 20 psf	120	11'-9"	13'-11"	13'-11"	15'-3"	14'-4"	15'-8"	17'-6"	17'-8"
100	D	+/- 20 psf	180	10'-4"	13'-9"	12'-2"	13'-9"	14'-4"	15'-1"	16'-12"	17'-8"
100	D	+/- 20 psf	240	9'-4"	12'-6"	11'-1"	12'-6"	13'-4"	13'-9"	15'-5"	16'-6"
116	B	+/- 28 psf	120	10'-5"	11'-9"	12'-1"	12'-11"	12'-1"	13'-3"	14'-9"	14'-11"
116	B	+/- 28 psf	180	9'-2"	11'-9"	10'-10"	12'-3"	12'-1"	13'-3"	14'-9"	14'-11"
116	B	+/- 28 psf	240	8'-4"	11'-2"	9'-11"	11'-2"	11'-11"	12'-3"	13'-9"	14'-9"
116	C	+/- 28 psf	120	10'-5"	11'-9"	12'-1"	12'-11"	12'-1"	13'-3"	14'-9"	14'-11"
116	C	+/- 28 psf	180	9'-2"	11'-9"	10'-10"	12'-3"	12'-1"	13'-3"	14'-9"	14'-11"
116	C	+/- 28 psf	240	8'-4"	11'-2"	9'-11"	11'-2"	11'-11"	12'-3"	13'-9"	14'-9"
116	D	+/- 28 psf	120	10'-5"	11'-9"	12'-1"	12'-11"	12'-1"	13'-3"	14'-9"	14'-11"
116	D	+/- 28 psf	180	9'-2"	11'-9"	10'-10"	12'-3"	12'-1"	13'-3"	14'-9"	14'-11"
116	D	+/- 28 psf	240	8'-4"	11'-2"	9'-11"	11'-2"	11'-11"	12'-3"	13'-9"	14'-9"
130	B	+/- 28 psf	120	10'-5"	11'-9"	12'-1"	12'-11"	12'-1"	13'-3"	14'-9"	14'-11"
130	B	+/- 28 psf	180	9'-2"	11'-9"	10'-10"	12'-3"	12'-1"	13'-3"	14'-9"	14'-11"
130	B	+/- 28 psf	240	8'-4"	11'-2"	9'-11"	11'-2"	11'-11"	12'-3"	13'-9"	14'-9"
130	C	+/- 28 psf	120	10'-5"	11'-9"	12'-1"	12'-11"	12'-1"	13'-3"	14'-9"	14'-11"
130	C	+/- 28 psf	180	9'-2"	11'-9"	10'-10"	12'-3"	12'-1"	13'-3"	14'-9"	14'-11"
130	C	+/- 28 psf	240	8'-4"	11'-2"	9'-11"	11'-2"	11'-11"	12'-3"	13'-9"	14'-9"
130	D	+/- 32 psf	120	9'-9"	11'-1"	11'-4"	12'-2"	11'-5"	12'-6"	13'-11"	14'-1"
130	D	+/- 32 psf	180	8'-10"	11'-1"	10'-5"	11'-9"	11'-5"	12'-6"	13'-11"	14'-1"
130	D	+/- 32 psf	240	8'-0"	10'-9"	9'-6"	10'-8"	11'-5"	11'-9"	13'-3"	14'-1"
140	B	+/- 28 psf	120	10'-5"	11'-9"	12'-1"	12'-11"	12'-1"	13'-3"	14'-9"	14'-11"
140	B	+/- 28 psf	180	9'-2"	11'-9"	10'-10"	12'-3"	12'-1"	13'-3"	14'-9"	14'-11"
140	B	+/- 28 psf	240	8'-4"	11'-2"	9'-11"	11'-2"	11'-11"	12'-3"	13'-9"	14'-9"
140	C	+/- 32 psf	120	9'-10"	11'-1"	11'-5"	12'-2"	11'-5"	12'-6"	13'-11"	14'-1"
140	C	+/- 32 psf	180	8'-10"	11'-1"	10'-6"	11'-10"	11'-5"	12'-6"	13'-11"	14'-1"
140	C	+/- 32 psf	240	8'-1"	10'-9"	9'-6"	10'-9"	11'-5"	11'-10"	13'-3"	14'-1"
140	D	+/- 39 psf	120	8'-11"	10'-1"	10'-4"	11'-1"	10'-4"	11'-4"	12'-8"	12'-9"
140	D	+/- 39 psf	180	8'-4"	10'-1"	9'-10"	11'-1"	10'-4"	11'-4"	12'-8"	12'-9"
140	D	+/- 39 psf	240	7'-6"	10'-1"	8'-11"	10'-0"	10'-4"	11'-1"	12'-5"	12'-9"
155	B	+/- 31 psf	120	9'-12"	11'-3"	11'-7"	12'-5"	11'-7"	12'-8"	14'-2"	14'-4"
155	B	+/- 31 psf	180	8'-11"	11'-3"	10'-7"	11'-11"	11'-7"	12'-8"	14'-2"	14'-4"
155	B	+/- 31 psf	240	8'-2"	10'-10"	9'-7"	10'-10"	11'-7"	11'-11"	13'-5"	14'-4"
155	C	+/- 37 psf	120	9'-0"	10'-3"	10'-6"	11'-3"	10'-6"	11'-6"	12'-10"	12'-12"
155	C	+/- 37 psf	180	8'-5"	10'-3"	9'-11"	11'-2"	10'-6"	11'-6"	12'-10"	12'-12"
155	C	+/- 37 psf	240	7'-7"	10'-2"	9'-0"	10'-2"	10'-6"	11'-2"	12'-7"	12'-12"
155	D	+/- 45 psf	120	8'-2"	9'-3"	9'-6"	10'-2"	9'-6"	10'-5"	11'-8"	11'-9"
155	D	+/- 45 psf	180	7'-10"	9'-3"	9'-3"	10'-2"	9'-6"	10'-5"	11'-8"	11'-9"
155	D	+/- 45 psf	240	7'-2"	9'-3"	8'-5"	9'-6"	9'-6"	10'-5"	11'-8"	11'-9"
165	B	+/- 35 psf	120	9'-4"	10'-7"	10'-10"	11'-7"	10'-10"	11'-11"	13'-4"	13'-5"
165	B	+/- 35 psf	180	8'-7"	10'-7"	10'-2"	11'-5"	10'-10"	11'-11"	13'-4"	13'-5"
165	B	+/- 35 psf	240	7'-9"	10'-5"	9'-2"	10'-5"	10'-10"	11'-5"	12'-10"	13'-5"
165	C	+/- 42 psf	120	8'-6"	9'-7"	9'-10"	10'-7"	9'-10"	10'-10"	12'-1"	12'-2"
165	C	+/- 42 psf	180	8'-0"	9'-7"	9'-6"	10'-7"	9'-10"	10'-10"	12'-1"	12'-2"
165	C	+/- 42 psf	240	7'-4"	9'-7"	8'-8"	9'-9"	9'-10"	10'-8"	12'-0"	12'-2"
165	D	+/- 52 psf	120			8'-11"	9'-7"	8'-11"	9'-10"	10'-11"	11'-1"
165	D	+/- 52 psf	180			8'-11"	9'-7"	8'-11"	9'-10"	10'-11"	11'-1"
165	D	+/- 52 psf	240			8'-1"	9'-1"	8'-11"	9'-10"	10'-11"	11'-1"
170	B	+/- 37 psf	120	9'-1"	10'-3"	10'-6"	11'-3"	10'-7"	11'-7"	12'-11"	13'-1"
170	B	+/- 37 psf	180	8'-5"	10'-3"	9'-11"	11'-2"	10'-7"	11'-7"	12'-11"	13'-1"
170	B	+/- 37 psf	240	7'-8"	10'-2"	9'-0"	10'-2"	10'-7"	11'-2"	12'-7"	13'-1"
170	C	+/- 45 psf	120	8'-3"	9'-4"	9'-7"	10'-3"	9'-7"	10'-6"	11'-9"	11'-10"
170	C	+/- 45 psf	180	7'-11"	9'-4"	9'-4"	10'-3"	9'-7"	10'-6"	11'-9"	11'-10"
170	C	+/- 45 psf	240	7'-2"	9'-4"	8'-5"	9'-6"	9'-7"	10'-6"	11'-9"	11'-10"
170	D	+/- 55 psf	120			8'-8"	9'-3"	8'-8"	9'-6"	10'-7"	10'-9"
170	D	+/- 55 psf	180			8'-8"	9'-3"	8'-8"	9'-6"	10'-7"	10'-9"
170	D	+/- 55 psf	240			7'-11"	8'-11"	8'-8"	9'-6"	10'-7"	10'-9"
180	C	+/- 51 psf	120			9'-0"	9'-8"	9'-0"	9'-11"	11'-1"	11'-2"
180	C	+/- 51 psf	180			8'-11"	9'-8"	9'-0"	9'-11"	11'-1"	11'-2"
180	C	+/- 51 psf	240			8'-2"	9'-2"	9'-0"	9'-11"	11'-1"	11'-2"

NOTE:
SEE TABLE NOTES DETAILED ON SHEET 3

MAXIMUM ALLOWABLE CLEAR SPAN TABLE ROOF OVER SCREEN WALL STRUCTURE:

Wind Speed (MPH)	Exposure	Live Load &/or Uplift	Deflection Limit (L/...)	3" Panels		4" Panels			6" Panels		
				0.024" Alum Skin	0.030" Alum Skin	0.024" Alum Skin	0.030" Alum Skin	26ga Steel Skin	0.024" Alum Skin	0.030" Alum Skin	26ga Steel Skin
				1-LB EPS	1-LB EPS	1-LB EPS	1-LB EPS	1-LB EPS	1-LB EPS	1-LB EPS	1-LB EPS
90	B	+/- 20 psf	120	11'-9"	13'-11"	13'-11"	15'-3"	14'-4"	15'-8"	17'-6"	17'-8"
90	B	+/- 20 psf	180	10'-4"	13'-9"	12'-2"	13'-9"	14'-4"	15'-1"	16'-12"	17'-8"
90	B	+/- 20 psf	240	9'-4"	12'-6"	11'-1"	12'-6"	13'-4"	13'-9"	15'-5"	16'-6"
90	C	+/- 20 psf	120	11'-9"	13'-11"	13'-11"	15'-3"	14'-4"	15'-8"	17'-6"	17'-8"
90	C	+/- 20 psf	180	10'-4"	13'-9"	12'-2"	13'-9"	14'-4"	15'-1"	16'-12"	17'-8"
90	C	+/- 20 psf	240	9'-4"	12'-6"	11'-1"	12'-6"	13'-4"	13'-9"	15'-5"	16'-6"
90	D	+/- 20 psf	120	11'-9"	13'-11"	13'-11"	15'-3"	14'-4"	15'-8"	17'-6"	17'-8"
90	D	+/- 20 psf	180	10'-4"	13'-9"	12'-2"	13'-9"	14'-4"	15'-1"	16'-12"	17'-8"
90	D	+/- 20 psf	240	9'-4"	12'-6"	11'-1"	12'-6"	13'-4"	13'-9"	15'-5"	16'-6"
100	B	+/- 20 psf	120	11'-9"	13'-11"	13'-11"	15'-3"	14'-4"	15'-8"	17'-6"	17'-8"
100	B	+/- 20 psf	180	10'-4"	13'-9"	12'-2"	13'-9"	14'-4"	15'-1"	16'-12"	17'-8"
100	B	+/- 20 psf	240	9'-4"	12'-6"	11'-1"	12'-6"	13'-4"	13'-9"	15'-5"	16'-6"
100	C	+/- 20 psf	120	11'-9"	13'-11"	13'-11"	15'-3"	14'-4"	15'-8"	17'-6"	17'-8"
100	C	+/- 20 psf	180	10'-4"	13'-9"	12'-2"	13'-9"	14'-4"	15'-1"	16'-12"	17'-8"
100	C	+/- 20 psf	240	9'-4"	12'-6"	11'-1"	12'-6"	13'-4"	13'-9"	15'-5"	16'-6"
100	D	+/- 20 psf	120	11'-9"	13'-11"	13'-11"	15'-3"	14'-4"	15'-8"	17'-6"	17'-8"
100	D	+/- 20 psf	180	10'-4"	13'-9"	12'-2"	13'-9"	14'-4"	15'-1"	16'-12"	17'-8"
100	D	+/- 20 psf	240	9'-4"	12'-6"	11'-1"	12'-6"	13'-4"	13'-9"	15'-5"	16'-6"
116	B	+/- 26 psf	120	10'-10"	12'-3"	12'-7"	13'-6"	12'-8"	13'-10"	15'-5"	15'-7"
116	B	+/- 26 psf	180	9'-6"	12'-3"	11'-2"	12'-8"	12'-8"	13'-10"	15'-5"	15'-7"
116	B	+/- 26 psf	240	8'-7"	11'-6"	10'-2"	11'-6"	12'-3"	12'-8"	14'-2"	15'-2"
116	C	+/- 26 psf	120	10'-9"	12'-2"	12'-6"	13'-5"	12'-6"	13'-8"	15'-4"	15'-6"
116	C	+/- 26 psf	180	9'-5"	12'-2"	11'-2"	12'-7"	12'-6"	13'-8"	15'-4"	15'-6"
116	C	+/- 26 psf	240	8'-7"	11'-5"	10'-1"	11'-5"	12'-2"	12'-7"	14'-1"	15'-1"
116	D	+/- 27 psf	120	10'-7"	11'-11"	12'-3"	13'-2"	12'-3"	13'-5"	15'-0"	15'-2"
116	D	+/- 27 psf	180	9'-4"	11'-11"	10'-12"	12'-5"	12'-3"	13'-5"	15'-0"	15'-2"
116	D	+/- 27 psf	240	8'-5"	11'-3"	9'-12"	11'-3"	12'-1"	12'-5"	13'-11"	14'-11"
130	B	+/- 27 psf	120	10'-8"	12'-1"	12'-5"	13'-3"	12'-5"	13'-7"	15'-2"	15'-4"
130	B	+/- 27 psf	180	9'-4"	12'-1"	11'-1"	12'-6"	12'-5"	13'-7"	15'-2"	15'-4"
130	B	+/- 27 psf	240	8'-6"	11'-4"	10'-1"	11'-4"	12'-2"	12'-6"	14'-0"	14'-12"
130	C	+/- 27 psf	120	10'-6"	11'-11"	12'-3"	13'-1"	12'-3"	13'-5"	14'-12"	15'-2"
130	C	+/- 27 psf	180	9'-3"	11'-11"	10'-12"	12'-5"	12'-3"	13'-5"	14'-12"	15'-2"
130	C	+/- 27 psf	240	8'-5"	11'-3"	9'-12"	11'-3"	12'-0"	12'-5"	13'-11"	14'-10"
130	D	+/- 28 psf	120	10'-4"	11'-8"	11'-12"	12'-10"	12'-0"	13'-2"	14'-8"	14'-10"
130	D	+/- 28 psf	180	9'-2"	11'-8"	10'-10"	12'-2"	12'-0"	13'-2"	14'-8"	14'-10"
130	D	+/- 28 psf	240	8'-4"	11'-1"	9'-10"	11'-1"	11'-10"	12'-2"	13'-9"	14'-8"
140	B	+/- 27 psf	120	10'-6"	11'-11"	12'-3"	13'-1"	12'-3"	13'-5"	14'-12"	15'-2"
140	B	+/- 27 psf	180	9'-3"	11'-11"	10'-12"	12'-4"	12'-3"	13'-5"	14'-12"	15'-2"
140	B	+/- 27 psf	240	8'-5"	11'-3"	9'-12"	11'-3"	12'-0"	12'-4"	13'-11"	14'-10"
140	C	+/- 28 psf	120	10'-4"	11'-8"	11'-12"	12'-10"	12'-0"	13'-2"	14'-8"	14'-10"
140	C	+/- 28 psf	180	9'-2"	11'-8"	10'-10"	12'-2"	12'-0"	13'-2"	14'-8"	14'-10"
140	C	+/- 28 psf	240	8'-4"	11'-1"	9'-10"	11'-1"	11'-10"	12'-2"	13'-9"	14'-8"
140	D	+/- 30 psf	120	10'-1"	11'-5"	11'-9"	12'-6"	11'-9"	12'-10"	14'-4"	14'-6"
140	D	+/- 30 psf	180	9'-0"	11'-5"	10'-8"	12'-0"	11'-9"	12'-10"	14'-4"	14'-6"
140	D	+/- 30 psf	240	8'-2"	10'-11"	9'-8"	10'-11"	11'-8"	12'-0"	13'-6"	14'-5"
155	B	+/- 28 psf	120	10'-4"	11'-8"	12'-0"	12'-10"	12'-1"	13'-2"	14'-9"	14'-11"
155	B	+/- 28 psf	180	9'-2"	11'-8"	10'-10"	12'-3"	12'-1"	13'-2"	14'-9"	14'-11"
155	B	+/- 28 psf	240	8'-4"	11'-1"	9'-10"	11'-1"	11'-11"	12'-3"	13'-9"	14'-8"
155	C	+/- 29 psf	120	10'-2"	11'-5"	11'-9"	12'-7"	11'-10"	12'-11"	14'-5"	14'-7"
155	C	+/- 29 psf	180	9'-1"	11'-5"	10'-8"	12'-1"	11'-10"	12'-11"	14'-5"	14'-7"
155	C	+/- 29 psf	240	8'-3"	10'-12"	9'-9"	10'-11"	11'-9"	12'-1"	13'-7"	14'-6"
155	D	+/- 34 psf	120	9'-5"	10'-7"	10'-11"	11'-8"	10'-11"	11'-12"	13'-4"	13'-6"
155	D	+/- 34 psf	180	8'-7"	10'-7"	10'-2"	11'-6"	10'-11"	11'-12"	13'-4"	13'-6"
155	D	+/- 34 psf	240	7'-10"	10'-5"	9'-3"	10'-5"	10'-11"	11'-6"	12'-11"	13'-6"
165	B	+/- 29 psf	120	10'-2"	11'-6"	11'-10"	12'-8"	11'-10"	12'-12"	14'-6"	14'-8"
165	B	+/- 29 psf	180	9'-1"	11'-6"	10'-9"	12'-1"	11'-10"	12'-12"	14'-6"	14'-8"
165	B	+/- 29 psf	240	8'-3"	11'-0"	9'-9"	10'-12"	11'-9"	12'-1"	13'-7"	14'-6"
165	C	+/- 32 psf	120	9'-9"	10'-12"	11'-4"	12'-1"	11'-4"	12'-5"	13'-10"	13'-12"
165	C	+/- 32 psf	180	8'-10"	10'-12"	10'-5"	11'-9"	11'-4"	12'-5"	13'-10"	13'-12"
165	C	+/- 32 psf	240	8'-0"	10'-8"	9'-5"	10'-8"	11'-4"	11'-9"	13'-2"	13'-12"
165	D	+/- 39 psf	120	8'-10"	9'-12"	10'-3"	10'-11"	10'-3"	11'-3"	12'-6"	12'-8"
165	D	+/- 39 psf	180	8'-3"	9'-12"	9'-9"	10'-11"	10'-3"	11'-3"	12'-6"	12'-8"
165	D	+/- 39 psf	240	7'-6"	9'-12"	8'-10"	9'-12"	10'-3"	10'-12"	12'-4"	12'-8"
170	B	+/- 29 psf	120	10'-2"	11'-5"	11'-9"	12'-7"	11'-10"	12'-11"	14'-5"	14'-7"
170	B	+/- 29 psf	180	9'-1"	11'-5"	10'-8"	12'-1"	11'-10"	12'-11"	14'-5"	14'-7"
170	B	+/- 29 psf	240	8'-3"	10'-12"	9'-9"	10'-11"	11'-9"	12'-1"	13'-7"	14'-6"
170	C	+/- 34 psf	120	9'-5"	10'-8"	10'-12"	11'-9"	10'-12"	12'-0"	13'-5"	13'-7"
170	C	+/- 34 psf	180	8'-8"	10'-8"	10'-2"	11'-6"	10'-12"	12'-0"	13'-5"	13'-7"
170	C	+/- 34 psf	240	7'-10"	10'-5"	9'-3"	10'-5"	10'-12"	11'-6"	12'-11"	13'-7"
170	D	+/- 41 psf	120	8'-7"	9'-8"	9'-11"	10'-8"	9'-11"	10'-11"	12'-2"	12'-4"
170	D	+/- 41 psf	180	8'-1"	9'-8"	9'-7"	10'-8"	9'-11"	10'-11"	12'-2"	12'-4"
170	D	+/- 41 psf	240	7'-4"	9'-8"	8'-8"	9'-9"	9'-11"	10'-9"	12'-1"	12'-4"
180	C	+/- 37 psf	120	8'-12"	10'-2"	10'-5"	11'-2"	10'-6"	11'-6"	12'-10"	12'-11"
180	C	+/- 37 psf	180	8'-4"	10'-2"	9'-11"	11'-2"	10'-6"	11'-6"	12'-10"	12'-11"
180	C	+/- 37 psf	240	7'-7"	10'-2"	8'-12"	10'-1"	10'-6"	11'-2"	12'-6"	12'-11"

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REMARKS	DRWN	CHKD	DATE
INIT ISSUE (12-STRUC-01)	CSL	KL	04/05/12
REV FOR WIND SPEEDS	CSL	TSB	12/05/13
FBC 5TH EDITION (2014)	CSL	TSB	04/21/15
UPDATE FOR IBC	JAC	JCF	04/26/16
-	-	-	-

15-2409b

SCALE: NTS UNLESS NOTED

2 OF 3

MAXIMUM ALLOWABLE CLEAR SPAN TABLE ROOF OVER OPEN STRUCTURE:

Wind Speed (MPH)	Exposure	Live Load &/or Uplift	Deflection Limit (L/...)	3" Panels		4" Panels			6" Panels		
				0.024" Alum Skin	0.030" Alum Skin	0.024" Alum Skin	0.030" Alum Skin	26ga Steel Skin	0.024" Alum Skin	0.030" Alum Skin	26ga Steel Skin
				1-LB EPS	1-LB EPS	1-LB EPS	1-LB EPS	1-LB EPS	1-LB EPS	1-LB EPS	1-LB EPS
90	B	+/- 20 psf	120	11'-9"	13'-11"	13'-11"	15'-3"	14'-4"	15'-8"	17'-6"	17'-8"
90	B	+/- 20 psf	180	10'-4"	13'-9"	12'-2"	13'-9"	14'-4"	15'-1"	16'-12"	17'-8"
90	B	+/- 20 psf	240	9'-4"	12'-6"	11'-1"	12'-6"	13'-4"	13'-9"	15'-5"	16'-6"
90	C	+/- 20 psf	120	11'-9"	13'-11"	13'-11"	15'-3"	14'-4"	15'-8"	17'-6"	17'-8"
90	C	+/- 20 psf	180	10'-4"	13'-9"	12'-2"	13'-9"	14'-4"	15'-1"	16'-12"	17'-8"
90	C	+/- 20 psf	240	9'-4"	12'-6"	11'-1"	12'-6"	13'-4"	13'-9"	15'-5"	16'-6"
90	D	+/- 20 psf	120	11'-9"	13'-11"	13'-11"	15'-3"	14'-4"	15'-8"	17'-6"	17'-8"
90	D	+/- 20 psf	180	10'-4"	13'-9"	12'-2"	13'-9"	14'-4"	15'-1"	16'-12"	17'-8"
100	D	+/- 20 psf	240	9'-4"	12'-6"	11'-1"	12'-6"	13'-4"	13'-9"	15'-5"	16'-6"
100	B	+/- 20 psf	120	11'-9"	13'-11"	13'-11"	15'-3"	14'-4"	15'-8"	17'-6"	17'-8"
100	B	+/- 20 psf	180	10'-4"	13'-9"	12'-2"	13'-9"	14'-4"	15'-1"	16'-12"	17'-8"
100	B	+/- 20 psf	240	9'-4"	12'-6"	11'-1"	12'-6"	13'-4"	13'-9"	15'-5"	16'-6"
100	C	+/- 20 psf	120	11'-9"	13'-11"	13'-11"	15'-3"	14'-4"	15'-8"	17'-6"	17'-8"
100	C	+/- 20 psf	180	10'-4"	13'-9"	12'-2"	13'-9"	14'-4"	15'-1"	16'-12"	17'-8"
100	C	+/- 20 psf	240	9'-4"	12'-6"	11'-1"	12'-6"	13'-4"	13'-9"	15'-5"	16'-6"
100	D	+/- 20 psf	120	11'-9"	13'-11"	13'-11"	15'-3"	14'-4"	15'-8"	17'-6"	17'-8"
100	D	+/- 20 psf	180	10'-4"	13'-9"	12'-2"	13'-9"	14'-4"	15'-1"	16'-12"	17'-8"
100	D	+/- 20 psf	240	9'-4"	12'-6"	11'-1"	12'-6"	13'-4"	13'-9"	15'-5"	16'-6"
116	B	+/- 28 psf	180	9'-2"	11'-9"	10'-10"	12'-3"	12'-1"	13'-3"	14'-9"	14'-11"
116	B	+/- 28 psf	240	8'-4"	11'-2"	9'-11"	11'-2"	11'-11"	12'-3"	13'-9"	14'-9"
116	C	+/- 28 psf	120	10'-5"	11'-9"	12'-1"	12'-11"	12'-1"	13'-3"	14'-9"	14'-11"
116	C	+/- 28 psf	180	9'-2"	11'-9"	10'-10"	12'-3"	12'-1"	13'-3"	14'-9"	14'-11"
116	C	+/- 28 psf	240	8'-4"	11'-2"	9'-11"	11'-2"	11'-11"	12'-3"	13'-9"	14'-9"
116	D	+/- 28 psf	120	10'-5"	11'-9"	12'-1"	12'-11"	12'-1"	13'-3"	14'-9"	14'-11"
116	D	+/- 28 psf	180	9'-2"	11'-9"	10'-10"	12'-3"	12'-1"	13'-3"	14'-9"	14'-11"
116	D	+/- 28 psf	240	8'-4"	11'-2"	9'-11"	11'-2"	11'-11"	12'-3"	13'-9"	14'-9"
130	B	+/- 28 psf	120	10'-5"	11'-9"	12'-1"	12'-11"	12'-1"	13'-3"	14'-9"	14'-11"
130	B	+/- 28 psf	180	9'-2"	11'-9"	10'-10"	12'-3"	12'-1"	13'-3"	14'-9"	14'-11"
130	B	+/- 28 psf	240	8'-4"	11'-2"	9'-11"	11'-2"	11'-11"	12'-3"	13'-9"	14'-9"
130	C	+/- 29 psf	120	10'-4"	11'-8"	12'-0"	12'-10"	12'-1"	13'-2"	14'-9"	14'-11"
130	C	+/- 29 psf	180	9'-2"	11'-8"	10'-10"	12'-3"	12'-1"	13'-2"	14'-9"	14'-11"
130	C	+/- 29 psf	240	8'-4"	11'-1"	9'-10"	11'-1"	11'-11"	12'-3"	13'-9"	14'-8"
130	D	+/- 35 psf	120	9'-5"	10'-7"	10'-11"	11'-8"	10'-11"	11'-11"	13'-4"	13'-6"
130	D	+/- 35 psf	180	8'-7"	10'-7"	10'-2"	11'-5"	10'-11"	11'-11"	13'-4"	13'-6"
130	D	+/- 35 psf	240	7'-10"	10'-5"	9'-3"	10'-5"	10'-11"	11'-5"	12'-11"	13'-6"
140	B	+/- 29 psf	120	10'-4"	11'-9"	12'-0"	12'-11"	12'-1"	13'-2"	14'-9"	14'-11"
140	B	+/- 29 psf	180	9'-2"	11'-9"	10'-10"	12'-3"	12'-1"	13'-2"	14'-9"	14'-11"
140	B	+/- 29 psf	240	8'-4"	11'-2"	9'-10"	11'-1"	11'-11"	12'-3"	13'-9"	14'-8"
140	C	+/- 35 psf	120	9'-5"	10'-7"	10'-11"	11'-8"	10'-11"	11'-12"	13'-4"	13'-6"
140	C	+/- 35 psf	180	8'-7"	10'-7"	10'-2"	11'-6"	10'-11"	11'-12"	13'-4"	13'-6"
140	C	+/- 35 psf	240	7'-10"	10'-5"	9'-3"	10'-5"	10'-11"	11'-6"	12'-11"	13'-6"
140	D	+/- 42 psf	120	8'-6"	9'-8"	9'-11"	10'-7"	9'-11"	10'-10"	12'-1"	12'-3"
140	D	+/- 42 psf	180	8'-1"	9'-8"	9'-6"	10'-7"	9'-11"	10'-10"	12'-1"	12'-3"
140	D	+/- 42 psf	240	7'-4"	9'-8"	8'-8"	9'-9"	9'-11"	10'-9"	12'-1"	12'-3"
155	B	+/- 34 psf	120	9'-7"	10'-10"	11'-1"	11'-11"	11'-1"	12'-2"	13'-7"	13'-9"
155	B	+/- 34 psf	180	8'-8"	10'-10"	10'-3"	11'-7"	11'-1"	12'-2"	13'-7"	13'-9"
155	B	+/- 34 psf	240	7'-11"	10'-6"	9'-4"	10'-6"	11'-1"	11'-7"	13'-0"	13'-9"
155	C	+/- 41 psf	120	8'-8"	9'-9"	10'-1"	10'-9"	10'-1"	11'-0"	12'-4"	12'-5"
155	C	+/- 41 psf	180	8'-2"	9'-9"	9'-8"	10'-9"	10'-1"	11'-0"	12'-4"	12'-5"
155	C	+/- 41 psf	240	7'-5"	9'-9"	8'-9"	9'-10"	10'-1"	10'-10"	12'-2"	12'-5"
155	D	+/- 49 psf	120			9'-1"	9'-9"	9'-2"	10'-0"	11'-2"	11'-3"
155	D	+/- 49 psf	180			9'-0"	9'-9"	9'-2"	10'-0"	11'-2"	11'-3"
155	D	+/- 49 psf	240			8'-2"	9'-3"	9'-2"	10'-0"	11'-2"	11'-3"
165	B	+/- 38 psf	120	8'-12"	10'-2"	10'-5"	11'-2"	10'-5"	11'-5"	12'-9"	12'-11"
165	B	+/- 38 psf	180	8'-4"	10'-2"	9'-10"	11'-1"	10'-5"	11'-5"	12'-9"	12'-11"
165	B	+/- 38 psf	240	7'-7"	10'-1"	8'-11"	10'-1"	10'-5"	11'-1"	12'-6"	12'-11"
165	C	+/- 46 psf	120	8'-2"	9'-2"	9'-5"	10'-1"	9'-6"	10'-4"	11'-7"	11'-8"
165	C	+/- 46 psf	180	7'-10"	9'-2"	9'-3"	10'-1"	9'-6"	10'-4"	11'-7"	11'-8"
165	C	+/- 46 psf	240	7'-1"	9'-2"	8'-5"	9'-6"	9'-6"	10'-4"	11'-7"	11'-8"
165	D	+/- 56 psf	120			8'-7"	9'-2"	8'-7"	9'-5"	10'-6"	10'-7"
165	D	+/- 56 psf	180			8'-7"	9'-2"	8'-7"	9'-5"	10'-6"	10'-7"
165	D	+/- 56 psf	240			7'-10"	8'-10"	8'-7"	9'-5"	10'-6"	10'-7"
170	B	+/- 40 psf	120	8'-8"	9'-10"	10'-1"	10'-10"	10'-1"	11'-1"	12'-4"	12'-6"
170	B	+/- 40 psf	180	8'-2"	9'-10"	9'-8"	10'-10"	10'-1"	11'-1"	12'-4"	12'-6"
170	B	+/- 40 psf	240	7'-5"	9'-10"	8'-9"	9'-11"	10'-1"	10'-11"	12'-3"	12'-6"
170	C	+/- 49 psf	120			9'-2"	9'-10"	9'-2"	10'-0"	11'-3"	11'-4"
170	C	+/- 49 psf	180			9'-1"	9'-10"	9'-2"	10'-0"	11'-3"	11'-4"
170	C	+/- 49 psf	240			8'-3"	9'-3"	9'-2"	10'-0"	11'-3"	11'-4"
170	D	+/- 60 psf	120			8'-4"	8'-11"	8'-4"	9'-1"	10'-2"	10'-3"
170	D	+/- 60 psf	180			8'-4"	8'-11"	8'-4"	9'-1"	10'-2"	10'-3"
170	D	+/- 60 psf	240			7'-8"	8'-8"	8'-4"	9'-1"	10'-2"	10'-3"
180	C	+/- 55 psf	120			8'-8"	9'-3"	8'-8"	9'-6"	10'-7"	10'-9"
180	C	+/- 55 psf	180			8'-8"	9'-3"	8'-8"	9'-6"	10'-7"	10'-9"
180	C	+/- 55 psf	240			7'-11"	8'-11"	8'-8"	9'-6"	10'-7"	10'-9"

MAXIMUM ALLOWABLE CLEAR SPANS FOR ADDITIONAL LIVE/UPLIFT LOAD PRESSURES - SCREEN, ENCLOSED & OPEN (SEE NOTE*):

Live Load &/or Uplift	Deflection Limit (L/...)	3" Panels		4" Panels			6" Panels		
		0.024" Alum Skin	0.030" Alum Skin	0.024" Alum Skin	0.030" Alum Skin	26ga Steel Skin	0.024" Alum Skin	0.030" Alum Skin	26ga Steel Skin
		1-LB EPS	1-LB EPS	1-LB EPS	1-LB EPS	1-LB EPS	1-LB EPS	1-LB EPS	1-LB EPS
+/- 10 psf	120	14'-10"	16'-0"	17'-6"	19'-9"	20'-3"	21'-9"	24'-0"	23'-0"
+/- 10 psf	180	12'-12"	16'-0"	15'-4"	17'-3"	18'-6"	19'-0"	21'-4"	22'-10"
+/- 10 psf	240	11'-9"	15'-9"	13'-11"	15'-8"	16'-10"	17'-3"	19'-5"	20'-9"
+/- 15 psf	120	12'-12"	16'-0"	15'-4"	17'-3"	16'-6"	18'-1"	20'-2"	20'-5"
+/- 15 psf	180	11'-4"	15'-1"	13'-5"	15'-1"	16'-2"	16'-7"	18'-8"	19'-11"
+/- 15 psf	240	10'-4"	13'-9"	12'-2"	13'-9"	14'-8"	15'-1"	16'-12"	18'-1"

NOTE*: THE CONTRACTOR SHALL CAREFULLY CONSIDER POSSIBLE IMPOSING LOADS ON ROOF, INCLUDING BUT NOT LIMITED TO ANY CONCENTRATED/SERVICE LOADS WHICH MAY JUSTIFY GREATER DESIGN CRITERIA. THIS ADDITIONAL ROOF LOAD CRITERIA SHALL BE PROPERLY ANALYZED BY A LICENSED ENGINEER OR REGISTERED ARCHITECT.

CLEAR SPAN TABLE USE INSTRUCTIONS:

1. DETERMINE TYPE OF ENCLOSURE TO BE COVERED (ENCLOSED, SCREENED WALLS, OR OPEN STRUCTURE).
2. DETERMINE THE SITE SPECIFIC REQUIRED ULTIMATE DESIGN WIND SPEED (MPH), IN ACCORDANCE WITH THE INTERNATIONAL BUILDING CODE.
3. FIND ALLOWABLE COMPOSITE PANEL CLEAR SPAN IN TABLES FOR APPROPRIATE PANEL DEPTH, FACING THICKNESS, AND EPS CORE DENSITY SELECTED.
4. ▨ INDICATES VALUES NOT VALID FOR USE.

DEFLECTION NOTES:

1. DETERMINE REQUIRED DEFLECTION LIMITATION PER THE MINIMUM REQUIREMENTS ILLUSTRATED IN THE INTERNATIONAL BUILDING CODE.

OTHER CONSIDERATIONS:

1. FRONT OVERHANG MAY BE UP TO 3'-0" WITH VALUES LISTED HEREIN. MAXIMUM UNSUPPORTED SIDE OVERHANG IS 25% OF LAST PANEL WIDTH (i.e. 12" MAX FOR 48" PANEL WIDTH).

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- ☐MS:16927
- ☐IN:1060688
- ☐LA:30341
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- ☐MA:43224
- ☐MI:49491
- ☐MN:43001
- ☐MO: 2003019621
- ☐NH:10624
- ☐NJ: 24GE04353500
- ☐NC:PE027234
- ☐OH:66438
- ☐PA:PE060991
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- ☐TX:96064
- ☐VT:8182
- ☐VA: 0402 038109
- ☐DE: 15009, CA 2782
- ☐ID: 11090, CA 2030

REMARKS	DRWN	CHKD	DATE
INIT ISSUE (12-STRUC-01)	CSL	KL	04/05/12
REV FOR WIND SPEEDS	CSL	TSB	12/05/13
FBC 5TH EDITION (2014)	CSL	TSB	04/21/15
UPDATE FOR IBC	JAC	JCF	04/26/16
-	-	-	-

15-2409b

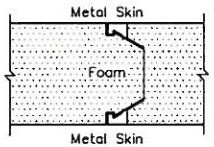
SCALE: NTS UNLESS NOTED

Panel Thk.		DL + LL @ 22 lbs. per sq. ft.						DL + LL @ 32 lbs. / sq. ft.				
	Overhang		0 FT.	1 FT.	2 FT.	3 FT.	4 FT.	0 FT.	1 FT.	2 FT.	3 FT.	4 FT.
2"	Gauge	.024	10'-7"	10'-9"	11'-4"	–	–	8'-9"	9'-0"	–	–	–
		.032	13'-11"	14'-1"	14'-6"	–	–	11'-6"	11'-9"	–	–	–
		26ga.	14'-6"	14'-7"	15'-0"	–	–	12'-0"	12'-2"	–	–	–
3"	Gauge	.024	14'-4"	14'-6"	14'-11"	15'-7"	–	11'-11"	12'-1"	12'-7"	–	–
		.032	16'-10"	16'-11"	17'-4"	17'-11"	–	13'-11"	14'-1"	14'-6"	–	–
		26ga.	16'-11"	17'-0"	17'-5"	18'-0"	–	14'-0"	14'-2"	14'-7"	–	–
4"	Gauge	.024	15'-9"	15'-11"	16'-3"	16'-10"	17'-8"	13'-1"	13'-3"	13'-8"	14'-5"	–
		.032	18'-2"	18'-3"	18'-7"	19'-2"	19'-10"	15'-1"	15'-2"	15'-7"	16'-3"	–
		26ga.	18'-7"	18'-8"	19'-0"	19'-6"	20'-3"	15'-5"	15'-6"	15'-11"	16'-6"	–
6"	Gauge	.024	19'-7"	19'-8"	19'-11"	20'-6"	21'-2"	16'-3"	16'-4"	16'-9"	17'-4"	18'-1"
		.032	22'-7"	22'-8"	22'-11"	23'-5"	23'-11"	18'-9"	18'-10"	19'-2"	19'-8"	20'-4"
		26ga.	23'-2"	23'-3"	23'-6"	23'-11"	24'-6"	19'-3"	19'-4"	19'-8"	20'-2"	20'-10"
8"	Gauge	.024	22'-10"	22'-11"	23'-2"	23'-7"	24'-2"	18'-11"	19'-0"	19'-4"	19'-10"	20'-7"
		.032	26'-4"	26'-5"	26'-8"	27'-0"	27'-6"	21'-10"	21'-11"	22'-2"	22'-8"	23'-3"
		26ga.	26'-7"	26'-8"	26'-11"	27'-3"	27'-9"	22'-0"	22'-2"	22'-5"	22'-10"	23'-5"

Panel Thk.		DL + LL @ 42 lbs. per sq. ft.						DL + LL @ 52 lbs. / sq. ft.				
	Overhang		0 FT.	1 FT.	2 FT.	3 FT.	4 FT.	0 FT.	1 FT.	2 FT.	3 FT.	4 FT.
2"	Gauge	.024	7'-8"	7'-11"	–	–	–	6'-11"	7'-2"	–	–	–
		.032	10'-1"	10'-3"	–	–	–	9'-1"	9'-3"	–	–	–
		26ga.	10'-6"	10'-8"	–	–	–	9'-5"	9'-8"	–	–	–
3"	Gauge	.024	10'-5"	10'-7"	11'-2"	–	–	9'-4"	9'-7"	–	–	–
		.032	12'-2"	12'-4"	12'-10"	–	–	10'-11"	11'-2"	–	–	–
		26ga.	12'-3"	12'-5"	12'-11"	–	–	11'-0"	11'-2"	–	–	–
4"	Gauge	.024	11'-5"	11'-7"	12'-1"	–	–	10'-3"	10'-5"	11'-0"	–	–
		.032	13'-2"	13'-4"	13'-9"	–	–	11'-10"	11'-11"	12'-6"	–	–
		26ga.	13'-5"	13'-7"	14'-0"	–	–	12'-1"	12'-3"	12'-9"	–	–
6"	Gauge	.024	14'-2"	14'-4"	14'-9"	–	–	12'-9"	12'-11"	13'-4"	–	–
		.032	16'-4"	16'-6"	16'-10"	–	–	14'-8"	14'-10"	15'-3"	–	–
		26ga.	16'-9"	16'-11"	17'-3"	–	–	15'-1"	15'-3"	15'-7"	–	–
8"	Gauge	.024	16'-6"	16'-8"	17'-0"	17'-7"	–	14'-10"	14'-11"	15'-5"	–	–
		.032	19'-1"	19'-2"	19'-6"	19'-11"	–	17'-2"	17'-3"	17'-7"	–	–
		26ga.	19'-3"	19'-4"	19'-8"	20'-2"	–	17'-3"	17'-5"	17'-9"	–	–

Panel Thk.		DL + LL @ 62 lbs. per sq. ft.						DL + LL @ 72 lbs. / sq. ft.				
	Overhang		0 FT.	1 FT.	2 FT.	3 FT.	4 FT.	0 FT.	1 FT.	2 FT.	3 FT.	4 FT.
2"	Gauge	.024	6'-4"	6'-7"	–	–	–	5'-10"	–	–	–	–
		.032	8'-3"	8'-6"	–	–	–	7'-8"	–	–	–	–
		26ga.	8'-8"	8-10"	–	–	–	8'-0"	–	–	–	–
3"	Gauge	.024	8'-7"	8'-9"	–	–	–	7'-11"	8'-2"	–	–	–
		.032	10'-0"	10'-3"	–	–	–	9'-4"	9'-8"	–	–	–
		26ga.	10'-1"	10'-3"	–	–	–	9'-5"	9'-7"	–	–	–
4"	Gauge	.024	9'-5"	9'-7"	–	–	–	8'-9"	8'-11"	–	–	–
		.032	10'-10"	11'-0"	–	–	–	10'-0"	10'-3"	–	–	–
		26ga.	11'-1"	11'-3"	–	–	–	10'-3"	10'-8"	–	–	–
6"	Gauge	.024	11'-8"	11'-10"	12'-4"	–	–	10'-10"	11'-0"	–	–	–
		.032	13'-6"	13'-7"	14'-0"	–	–	12'-8"	12'-8"	–	–	–
		26ga.	13'-10"	13'-11"	14'-5"	–	–	12'-10"	12'-11"	–	–	–
8"	Gauge	.024	13'-7"	13'-9"	14'-2"	–	–	12'-7"	12'-9"	13'-3"	–	–
		.032	15'-8"	15'-10"	16'-2"	–	–	14'-7"	14'-8"	15'-1"	–	–
		26ga.	15'-10"	15'-11"	16'-4"	–	–	14'-8"	14'-10"	15'-3"	–	–

Snap–N–Lock Composite Panel



Foam – 1.0# Density E.P.S.
Aluminum – 3105–H14/H25 Alloy
Steel – ASTM–AT26/A 526M–90
Patent # 4,769,963 & 5,086,599

Notes

Charts show Maximum Clear Spans for Snap–N–Lock Composite Panels using 1 lb./cu. ft. E.P.S. Foam, combined Dead/Live Load and/or Snow Load.

Panel Dead Load is calculated at 2 lbs. per sq. ft. The remainder is the Live Load or Snow Load.
eg. 22 lbs / sq. ft. is 2 lbs. Dead Load + 20 lbs. Live or Snow Load.

Overhang improves panel span, 4 ft. maximum or as listed.

The Thermal Resistance Value of a panel is R–4 per inch of thickness.
eg. a 3" panel has a value of R–12

Panels may be used in a wall or roof application.

Maximum Panel Length is 32'–0". On longer clear spans, clear span will be reduced as overhang increases to reflect this limitation.

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STRUCTALL BUILDING SYSTEMS STANDARD ENGINEERING
Engineered by LAWRENCE E. BENNETT P.E.
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Scale: None

Page

Table 1.1F Structall Building Systems Inc. Snap - N - Lock® Composite Roof Panels Allowable Spans and Applied Loads (#/SF)

Manufacturers Proprietary Products: FL Product Approval #1387

8" x 48" x 0.024" Panels Aluminum Alloy 3105 H-14 or H-25 Foam Core E.P.S. 1# Density

Zone (MPH)	Open Structures						Screen Rooms						Glass & Modular Rooms						Overhang / Cantilever	
	1&2 span/load*		3 span/load*		4 span/load*		1&2 span/load*		3 span/load*		4 span/load*		1&2 span/load*		3 span/load*		4 span/load*		All	
100	29'-11"	13	33'-6"	13	32'-5"	13	23'-11"	20	26'-9"	20	25'-11"	20	22'-4"	23	24'-11"	23	24'-2"	23	4'-0"	45
110	29'-2"	14	32'-7"	14	31'-6"	14	23'-4"	21	26'-2"	21	25'-3"	21	20'-7"	27	23'-1"	27	22'-3"	27	4'-0"	55
120	26'-4"	17	29'-6"	17	28'-6"	17	21'-5"	25	23'-11"	25	23'-2"	25	18'-11"	32	21'-2"	32	20'-5"	32	4'-0"	65
123	25'-8"	17	28'-9"	17	27'-9"	17	20'-11"	26	23'-5"	26	22'-7"	26	18'-5"	34	20'-7"	34	19'-11"	34	4'-0"	69
130	24'-3"	20	27'-1"	20	26'-2"	20	19'-11"	29	22'-3"	29	21'-6"	29	17'-5"	38	19'-5"	38	18'-9"	38	4'-0"	77
140A	22'-7"	23	25'-3"	23	24'-5"	23	18'-4"	34	20'-6"	34	19'-10"	34	17'-5"	38	19'-5"	38	18'-9"	38	4'-0"	89
140B	22'-7"	23	25'-3"	23	24'-5"	23	18'-4"	34	20'-6"	34	19'-10"	34	16'-2"	44	18'-1"	44	17'-5"	44	4'-0"	89
150	21'-3"	26	23'-9"	26	22'-11"	26	17'-2"	39	19'-2"	39	18'-6"	39	13'-10"	60	16'-9"	51	16'-2"	51	4'-0"	102

8" x 48" x 0.030" Panels Aluminum Alloy 3105 H-14 or H-25 Foam Core E.P.S. 1# Density

Zone (MPH)	Open Structures						Screen Rooms						Glass & Modular Rooms						Overhang / Cantilever	
	1&2 span/load*		3 span/load*		4 span/load*		1&2 span/load*		3 span/load*		4 span/load*		1&2 span/load*		3 span/load*		4 span/load*		All	
100	34'-7"	13	38'-8"	13	37'-5"	13	27'-8"	20	30'-11"	20	29'-10"	20	25'-9"	23	28'-10"	23	27'-10"	23	4'-0"	45
110	33'-8"	14	37'-7"	14	36'-4"	14	26'-11"	21	30'-2"	21	29'-2"	21	23'-9"	27	26'-7"	27	25'-8"	27	4'-0"	55
120	30'-5"	17	34'-0"	17	32'-10"	17	24'-9"	25	27'-8"	25	26'-8"	25	21'-10"	32	24'-5"	32	23'-7"	32	4'-0"	65
123	29'-7"	17	33'-1"	17	32'-0"	17	24'-2"	26	26'-11"	26	26'-1"	26	21'-3"	34	23'-9"	34	22'-11"	34	4'-0"	69
130	27'-11"	20	31'-3"	20	30'-3"	20	22'-11"	29	25'-8"	29	24'-9"	29	20'-1"	38	22'-5"	38	21'-8"	38	4'-0"	77
140A	26'-1"	23	29'-1"	23	28'-2"	23	21'-2"	34	23'-8"	34	22'-11"	34	20'-1"	38	22'-5"	38	21'-8"	38	4'-0"	89
140B	26'-1"	23	29'-1"	23	28'-2"	23	21'-2"	34	23'-8"	34	22'-11"	34	18'-8"	44	20'-10"	44	20'-1"	44	4'-0"	89
150	24'-6"	26	27'-4"	26	26'-5"	26	19'-9"	39	22'-1"	39	21'-5"	39	17'-4"	51	19'-4"	51	18'-8"	51	4'-0"	102

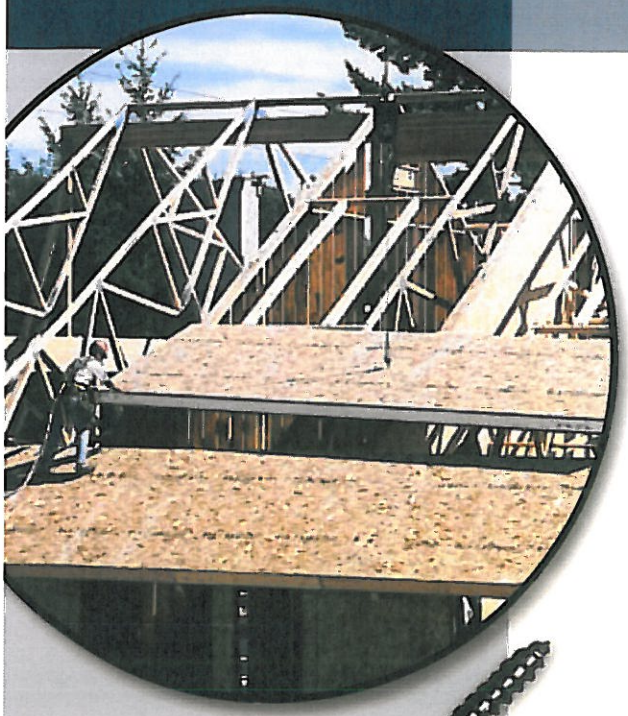
8" x 48" x 26 ga. Grade D Steel Wall Panel Foam Core E.P.S. 1# Density

Zone (MPH)	Open Structures						Screen Rooms						Glass & Modular Rooms						Overhang / Cantilever	
	1&2 span/load*		3 span/load*		4 span/load*		1&2 span/load*		3 span/load*		4 span/load*		1&2 span/load*		3 span/load*		4 span/load*		All	
100	34'-11"	13	39'-0"	13	37'-9"	13	27'-10"	20	31'-2"	20	30'-1"	20	25'-11"	23	29'-1"	23	28'-1"	23	4'-0"	45
110	33'-11"	14	37'-11"	14	36'-8"	14	27'-2"	21	30'-5"	21	29'-5"	21	23'-11"	27	26'-10"	27	25'-11"	27	4'-0"	55
120	30'-8"	17	34'-4"	17	33'-2"	17	24'-11"	25	27'-10"	25	26'-11"	25	22'-0"	32	24'-8"	32	23'-10"	32	4'-0"	65
123	29'-11"	17	33'-5"	17	32'-3"	17	24'-4"	26	27'-3"	26	26'-4"	26	21'-5"	34	23'-11"	34	23'-2"	34	4'-0"	69
130	28'-3"	20	31'-7"	20	30'-6"	20	23'-2"	29	25'-11"	29	25'-0"	29	20'-3"	38	22'-7"	38	21'-10"	38	4'-0"	77
140A	26'-3"	23	29'-5"	23	28'-5"	23	21'-5"	34	23'-11"	34	23'-1"	34	20'-3"	38	22'-7"	38	21'-10"	38	4'-0"	89
140B	26'-3"	23	29'-5"	23	28'-5"	23	21'-5"	34	23'-11"	34	23'-1"	34	18'-10"	44	21'-0"	44	20'-4"	44	4'-0"	89
150	24'-8"	26	27'-7"	26	26'-8"	26	19'-11"	39	22'-4"	39	21'-7"	39	17'-5"	51	19'-6"	51	18'-10"	51	4'-0"	102

Note: Total roof panel width = room width + wall width + overhang. *Design or applied load based on the affective area of the panel

SIP Fasteners

For Structural Insulated Panel and Nail Base Construction



APPLICATION

TRUFAST SIP Fasteners are specifically engineered for attaching structural insulated panels (sips) and nail base panels to wood and metal framing. Featuring a large, pancake head style with a 6-lobe drive, TRUFAST SIP Fasteners drive quickly and smoothly, and draw panels securely without the need of a washer. And only TRUFAST offers three fastener styles for use in wood, corrugated steel, and steel members without pre-drilling! Contact your panel manufacturer or distributor and ask to test drive a TRUFAST SIP Fastener, and see why they're the #1 fastener in the SIP industry.

PRODUCT FEATURES

- Case hardened and tempered for easy installation and long term durability.
- Large diameter, low profile pancake head provides excellent pull-through resistance without the need for a washer while eliminating "telegraphing" on shingles, metal panels and other roof surface materials.
- 6-Lobe internal drive offers excellent bit engagement during installation, especially in high torque applications.
- Widest selection of fastener lengths in the industry for proper sizing to panel thickness.
- Choice of 3 thread/point styles for job-matched performance in either wood or steel substrates.

SIPTP
Thread Point for Wood & Timber Applications

SIPLD
Light Duty - Drill Point for Corrugated Steel Deck & Wood Applications

SIPHD
Heavy Duty - Drill Point for Thick Steel Member Applications

PRODUCT SPECIFICATIONS

Material:	Case hardened and tempered carbon steel
Head Style/Drive:	Pancake Head with T-30 Internal Drive
Head Diameter:	0.625"
Nominal Shank Diameter:	SIPTP and SIPLD: 0.190" SIPHD: 0.212"
Thread Length:	SIPTP* and SIPLD: 2.750" SIPHD: 3.875"
	** 3" and longer fasteners; 2" and 2-1/2" fasteners are full thread*
Overall Lengths:	SIPTP: 2" thru 18" SIPLD: 3" thru 18" SIPHD: 6" thru 13-3/4"
Point:	SIPTP: Gimlet Thread SIPLD: #2 (0.135" dia.) Drill Point SIPHD: #4 (0.225" dia.) Drill Point
Coating:	Epoxy e-coat (black) *Passes more than 15 cycles (Kesternich) in accordance with DIN 50012*

TRUFAST TF™
Construction Fastening Solutions

ALTENLOH, BRINCK & CO Group

SINCE 1823

SIP Fasteners

For Structural Insulated Panel and Nail Base Construction

PRODUCT SELECTION

Length in.	(mm)	SIPTP Part #	SIPLD Part #	Pkg. Qty.
2	(51)	SIPTP-2000	NA	500/Pail
2-1/2	(64)	SIPTP-2500	NA	500/Pail
3	(76)	SIPTP-3000	SIPLD-3000	500/Pail
3-1/2	(89)	SIPTP-3500	SIPLD-3500	500/Pail
4	(102)	SIPTP-4000	SIPLD-4000	500/Pail
4-1/2	(114)	SIPTP-4500	SIPLD-4500	500/Pail
5	(127)	SIPTP-5000	SIPLD-5000	500/Pail
5-1/2	(140)	SIPTP-5500	SIPLD-5500	500/Pail
6	(152)	SIPTP-6000	SIPLD-6000	500/Pail
6-1/2	(165)	SIPTP-6500	SIPLD-6500	500/Pail
7	(178)	SIPTP-7000	SIPLD-7000	500/Pail
7-1/2	(191)	SIPTP-7500	SIPLD-7500	500/Pail
8	(203)	SIPTP-8000	SIPLD-8000	500/Pail
8-1/2	(216)	NA	SIPLD-8500	250/Pail
9	(229)	SIPTP-9000	SIPLD-9000	250/Pail
10	(254)	SIPTP-10000	SIPLD-10000	250/Pail
11	(279)	SIPTP-11000	SIPLD-11000	250/Pail
12	(305)	SIPTP-12000	SIPLD-12000	250/Pail
13	(330)	SIPTP-13000	SIPLD-13000	250/Box
14	(356)	SIPTP-14000	SIPLD-14000	250/Box
15	(381)	SIPTP-15000	SIPLD-15000	250/Box
16	(406)	SIPTP-16000	SIPLD-16000	250/Box
18	(483)	SIPTP-18000	SIPLD-18000	250/Box

NOTE: Two T-30 Driver Bits included in each package

Length in.	(mm)	SIPHD Part #	Pkg. Qty.
6	(152)	SIPHD-6000	500/Pail
8	(203)	SIPHD-8000	250/Pail
9-3/4	(248)	SIPHD-9750	250/Pail
11-3/4	(298)	SIPHD-11750	250/Pail
13-3/4	(349)	SIPHD-13750	250/Box

NOTE: Two T-30 Driver Bits included in each package

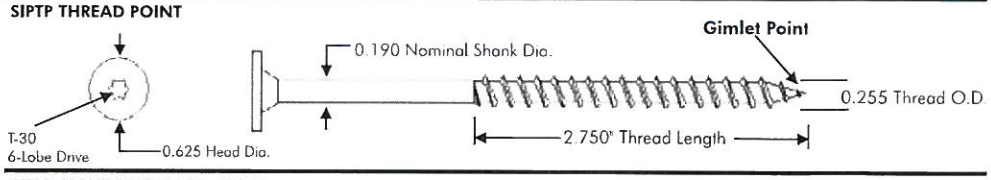
T-30 Driver Bit

FM APPROVED

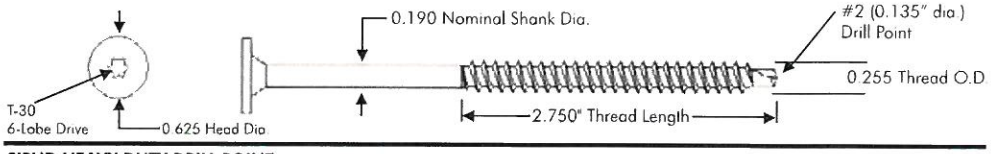
NOTE: All tests were conducted by an independent testing laboratory. Test results are offered only as a guide and are not guaranteed in any way by TRUFAST, LLC. "Head Pull-Thru", "Withdrawal", and "Lateral Load" data reflect average ultimate values.

FASTENER DIMENSIONS

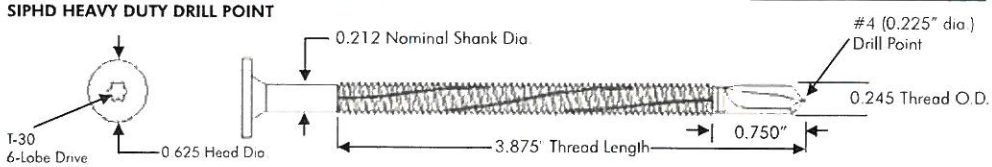
SIPTP THREAD POINT



SIPLD LIGHT DUTY DRILL POINT



SIPHD HEAVY DUTY DRILL POINT



PERFORMANCE DATA

Fastener	Tensile Strength	Shear Strength	Head Pull-Thru Values 7/16" OSB	SIP Panel
SIPTP	3380 lbf.	2900 lbf.	545 lbf.	630 lbf.
SIPLD	3380 lbf.	2900 lbf.	545 lbf.	630 lbf.
SIPHD	6000 lbf.	3400 lbf.	545 lbf.	630 lbf.

Withdrawal Values in Wood*

Specific Gravity	0.67	0.55	0.50	0.46	0.43	0.36	0.31
SIPTP & SIPLD:	1429	1173	1067	981	917	768	661

*Values are in lb/in. of thread penetration

Withdrawal Values in Steel

Type B Corrugated	22 ga	20 ga	18 ga		
SIPLD:	510 lbf	645 lbf	920 lbf		
Structural Steel	16 ga	13 ga	12 ga	3/16"	1/4"
SIPHD:	770 lbf	1130 lbf	1690 lbf	3100 lbf	4500 lbf

Lateral Load Resistance

Fastener	Main Member	Side Member	Load (lbf.)
SIPTP	SPF 2x4	SIP Panel	943
SIPLD	22 ga. Corrugated Steel	Nail Base	411
SIPLD	7/16" OSB	Nail Base	112
SIPHD	1/8" Structural Steel	SIP Panel	929

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