

L.K. ALUMINUM, LLC

EPS FOAM CORE "SMARTLOK" ROOF PANELS METAL SKIN EVALUATION REPORT NON-IMPACT - HVHZ / NON-HVHZ

NON-SITE-SPECIFIC STRUCTURAL PERFORMANCE EVALUATION. A DESIGN PROFESSIONAL SHALL BE RESPONSIBLE FOR CERTIFYING THE APPLICATION OF THIS INFORMATION TO ANY SITE-SPECIFIC LOCATION.

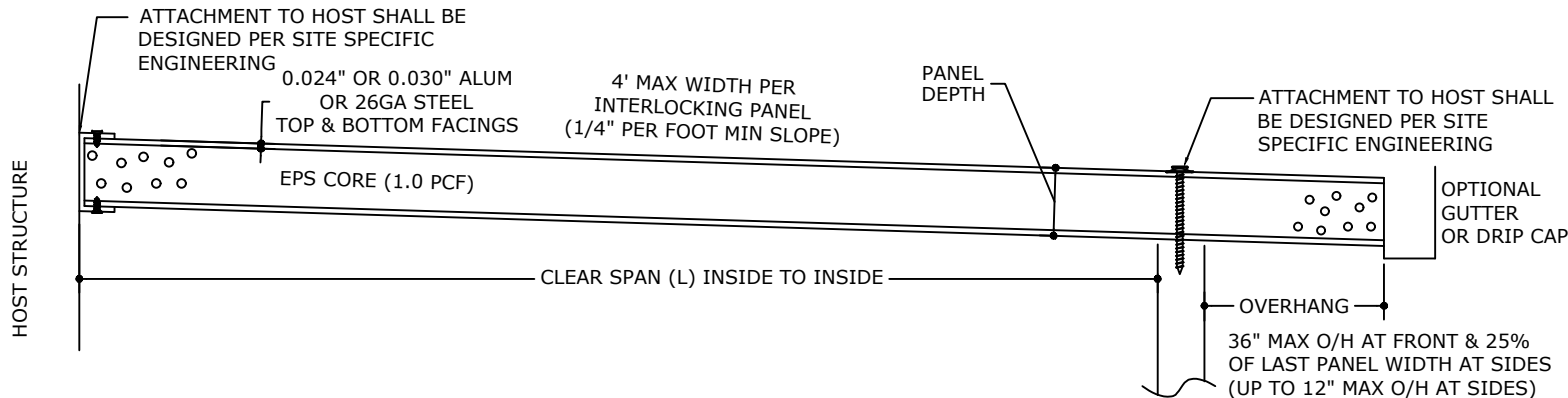
MAXIMUM ALLOWABLE CLEAR SPAN TABLE:

Total Load*	Deflection Limit (L/...)	3" Panels					4" Panels				6" Panels		
		0.024" Alum Skin	0.030" Alum Skin	26ga Steel Skin	0.024" (*) 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	1.5-LB EPS	1-LB EPS	1-LB EPS	1-LB EPS	1-LB EPS	1-LB EPS	1-LB EPS		
10 PSF	80	17'-2"	19'-11"	20'-0"	17'-11"	20'-4"	22'-0"	23'-0"	23'-0"	23'-0"	23'-0"		
	120	15'-0"	17'-5"	18'-7"	15'-8"	17'-9"	19'-2"	21'-11"	22'-6"	23'-0"	23'-0"		
	180	13'-1"	15'-3"	16'-2"	13'-8"	15'-6"	16'-9"	19'-2"	19'-8"	20'-8"	23'-0"		
	240	11'-11"	13'-10"	14'-9"	12'-5"	14'-1"	15'-3"	17'-5"	17'-10"	18'-10"	21'-11"		
15 PSF	80	15'-0"	16'-9"	16'-6"	15'-8"	17'-6"	18'-9"	18'-9"	20'-10"	22'-6"	23'-0"		
	120	13'-1"	15'-3"	16'-2"	13'-8"	15'-6"	16'-9"	18'-9"	19'-8"	20'-8"	23'-0"		
	180	11'-5"	13'-3"	14'-2"	11'-11"	13'-7"	14'-8"	16'-9"	17'-2"	18'-1"	21'-1"		
	240	10'-5"	12'-1"	12'-10"	10'-10"	12'-4"	13'-4"	15'-2"	15'-7"	16'-5"	19'-2"		
20 PSF	80	13'-7"	14'-6"	14'-4"	14'-3"	15'-1"	16'-3"	16'-3"	18'-0"	19'-6"	20'-8"		
	120	11'-11"	13'-10"	14'-4"	12'-5"	14'-1"	15'-3"	16'-3"	17'-10"	18'-10"	20'-8"		
	180	10'-5"	12'-1"	12'-10"	10'-10"	12'-4"	13'-4"	15'-2"	15'-7"	16'-5"	19'-2"		
	240	9'-5"	11'-0"	11'-8"	9'-10"	11'-2"	12'-1"	13'-10"	14'-2"	14'-11"	17'-5"		
25 PSF	80	12'-2"	13'-0"	12'-10"	13'-3"	13'-6"	14'-7"	14'-6"	16'-2"	17'-5"	18'-5"		
	120	11'-1"	12'-10"	12'-10"	11'-6"	13'-1"	14'-2"	14'-6"	16'-2"	17'-5"	18'-5"		
	180	9'-8"	11'-2"	11'-11"	10'-1"	11'-5"	12'-4"	14'-1"	14'-6"	15'-3"	17'-9"		
	240	8'-9"	10'-2"	10'-10"	9'-2"	10'-5"	11'-2"	12'-10"	13'-2"	13'-10"	16'-2"		
30 PSF	80	11'-1"	11'-10"	11'-8"	12'-3"	12'-4"	13'-3"	13'-3"	14'-9"	15'-11"	16'-10"		
	120	10'-5"	11'-10"	11'-8"	10'-10"	12'-4"	13'-3"	13'-3"	14'-9"	15'-11"	16'-10"		
	180	9'-1"	10'-6"	11'-3"	9'-6"	10'-9"	11'-7"	13'-3"	13'-7"	14'-4"	16'-9"		
	240	8'-3"	9'-7"	10'-2"	8'-7"	9'-9"	10'-7"	12'-1"	12'-4"	13'-0"	15'-2"		
35 PSF	80	10'-3"	11'-0"	10'-10"	11'-4"	11'-5"	12'-3"	12'-3"	13'-8"	14'-9"	15'-7"		
	120	9'-10"	11'-0"	10'-10"	10'-4"	11'-5"	12'-3"	12'-3"	13'-8"	14'-9"	15'-7"		
	180	8'-7"	10'-0"	10'-8"	9'-0"	10'-3"	11'-0"	12'-3"	12'-11"	13'-7"	15'-7"		
	240	7'-10"	9'-1"	9'-8"	8'-2"	9'-3"	10'-0"	11'-5"	11'-9"	12'-4"	14'-5"		
40 PSF	80	9'-7"	10'-3"	10'-1"	10'-7"	10'-8"	11'-6"	11'-6"	12'-9"	13'-9"	14'-7"		
	120	9'-5"	10'-3"	10'-1"	9'-10"	10'-8"	11'-6"	11'-6"	12'-9"	13'-9"	14'-7"		
	180	8'-3"	9'-7"	10'-1"	8'-7"	9'-9"	10'-7"	11'-6"	12'-4"	13'-0"	14'-7"		
	240	7'-6"	8'-8"	9'-3"	7'-10"	8'-10"	9'-7"	10'-11"	11'-3"	11'-10"	13'-9"		
45 PSF	80	9'-1"	9'-8"	9'-6"	10'-0"	10'-1"	10'-10"	10'-10"	12'-0"	13'-0"	13'-9"		
	120	9'-1"	9'-8"	9'-6"	9'-6"	10'-1"	10'-10"	10'-10"	12'-0"	13'-0"	13'-9"		
	180	7'-11"	9'-2"	9'-6"	8'-3"	9'-5"	10'-2"	10'-10"	11'-11"	12'-6"	13'-9"		
	240	7'-2"	8'-4"	8'-11"	7'-6"	8'-6"	9'-2"	10'-6"	10'-10"	11'-4"	13'-3"		

TABLE USE INSTRUCTIONS:

- DETERMINE TYPE OF ENCLOSURE TO BE COVERED (OPEN, SCREENED WALLS, OR FULLY ENCLOSED) AND CORRESPONDING DEFLECTION LIMIT. (IN HVHZ AREAS USE DEFLECTION LIMIT OF L/180 FOR PANEL SPANS GREATER THAN 12'-0").
- THE SPANS LISTED HEREIN ARE APPLICABLE FOR NON-HABITABLE STRUCTURES ONLY.
- DETERMINE THE SITE SPECIFIC REQUIRED DESIGN LOAD PER BY SEPARATE ENGINEERING, CERTIFIED BY A DESIGN PROFESSIONAL IN ACCORDANCE WITH THE FLORIDA BUILDING CODE AND ANY GOVERNING CODE, MUNICIPALITY, AND BUILDING CODES IN EFFECT FOR THE PROJECT LOCATION.
- BASED ON THE PROJECT DESIGN CONDITIONS DETERMINED, SELECT A SUITABLE ROOFING PANEL WITH AN ALLOWABLE SPAN GREATER THAN OR EQUAL TO THE PROJECT REQUIREMENTS.
- COMPONENT FRONT CONNECTION TO SUPPORTING BEAM AND BACK CONNECTION TO HOST STRUCTURE TO BE DETERMINED SEPARATELY ON A SITE SPECIFIC BASIS BY A DESIGN PROFESSIONAL.

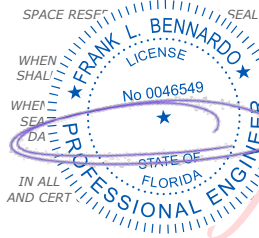
EPS ROOF PANEL / SPAN DETAIL:



NOTE REGARDING USE OF THIS DOCUMENT & USE OUTSIDE FLORIDA:

NON-SITE-SPECIFIC STRUCTURAL PERFORMANCE EVALUATION. THIS PRODUCT EVALUATION IS VALID FOR USE IN **FLORIDA ONLY**. USE OF THIS EVALUATION REQUIRES A REVIEW & CERTIFICATION BY A LOCAL DESIGN PROFESSIONAL WHO SHALL BE RESPONSIBLE FOR THE PROPER ADAPTATION OF THIS GENERAL PERFORMANCE EVALUATION TO ANY SITE-SPECIFIC PROJECT. CONTACT THIS OFFICE AT ENGINEERINGEXPRESS.COM/QUOTE FOR ASSISTANCE WITH YOUR PROJECT-SPECIFIC NEEDS & FOR ADAPTATION & CERTIFICATION OF THIS DOCUMENT OUTSIDE OF FLORIDA.

FRANK BENNARDO, PE
PE# 0046549 CA# 9885



Digitally signed by
Frank Bennardo
Date: 2023.08.21
10:47:51 -04'00'

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 STRUCTURAL REQUIREMENTS OF THE FLORIDA BUILDING CODE EIGHTH EDITION (2023).
- 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.
- EPS CORE COMPOSITE PANELS SHALL BE CONSTRUCTED USING TYPE 3105-H254 ALUMINUM FACINGS, 1.0 PCF EPS. THE EPS FOAM SHALL BE ADHERED TO THE ALUMINUM FACINGS WITH MOR-AD M-652 MOISTURE CURE URETHANE ADHESIVE (BY ROHM & HAAS Co.). FABRICATION SHALL BE IN ACCORDANCE WITH APPROVED FABRICATION METHODS BY METALS USA BLDG PRODUCTS AT THEIR GROVELAND FACILITY.
- IF APPLICABLE, 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.
- PANEL DEAD LOADS HAVE BEEN FACTORED INTO CALCULATIONS FOR GRAVITY LOADS AS WELL AS CALCULATIONS FOR PANEL PROPERTIES.

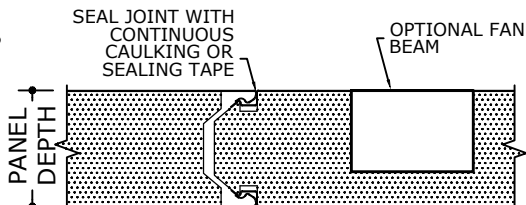
GENERAL NOTES

- THIS SPECIFICATION HAS BEEN DESIGNED AND SHALL BE FABRICATED IN ACCORDANCE WITH THE REQUIREMENTS OF THE APPLICABLE BUILDING 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.
- THIS DOCUMENT IS ONLY VALID WITH ORIGINAL SIGNATURE AND SEAL OF A P.E. OF THIS FIRM.
- 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.
- THE DESIGN PROFESSIONAL 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.
- THE CONTRACTOR IS RESPONSIBLE TO INSULATE ALL MEMBERS FROM DISSIMILAR MATERIALS TO PREVENT ELECTROLYSIS.
- 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.
- EXCEPT AS EXPRESSLY PROVIDED HEREIN, NO ADDITIONAL CERTIFICATIONS OR AFFIRMATIONS ARE INTENDED.
- ALTERATIONS, ADDITIONS, OR OTHER MARKINGS TO THIS DOCUMENT ARE NOT PERMITTED AND INVALIDATE THIS CERTIFICATION.

SPAN TABLE NOTES:

- SPANS SHOWN BASED ON PRODUCT TESTING LISTED IN GENERAL NOTES.
- PANEL DEAD LOADS HAVE BEEN FACTORED INTO CALCULATIONS FOR GRAVITY LOADS AS WELL AS CALCULATIONS FOR PANEL PROPERTIES.
- POSITIVE AND NEGATIVE DESIGN PRESSURE SHALL BE DETERMINED SEPARATELY PER ASCE 7 BASED ON SITE SPECIFIC APPLICATION AND COMPARED TO THE APPLICABLE TABLE ABOVE. THE LIMITING POSITIVE OR NEGATIVE PRESSURE SPAN VALUE SHALL BE USED FOR INSTALLATION.
- CALCULATED PRESSURES SHALL CONSIDER THE CONTROLLING LOAD COMBINATION, USING ALL APPLICABLE ASCE 7 LOADS INCLUDING DEAD, LIVE, SNOW, WIND, AND ANY OTHER LOADING APPLICABLE TO THE INSTALLATION, DETERMINED PER SEPARATE CERTIFICATION.
- TABLE CONSIDERS ASD DESIGN PRESSURES. TO CONVERT SEPARATELY CALCULATED ULTIMATE PRESSURES TO DESIGN PRESSURES, $P(ULT)*0.6 = P(ASD)$.

PANEL INTERLOCK DETAIL



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FOR SITE SPECIFIC DEVIATIONS & MORE INFORMATION ABOUT THIS DOCUMENT OR SCAN THIS QR CODE

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EPS FOAM CORE "SMARTLOK" ROOF PANELS W/ METAL SKIN

FLORIDA BUILDING CODE EIGHTH EDITION (2023)

FLORIDA STATEWIDE APPROVAL (FSA FL#21853.1)

DATE	CHKD	DRWN	REMARKS
06/09/21	RWN	CCB	FBC 2020 (20-30652) R3
08/21/23	CCB	MLD	FBC 2023

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SCALE: NTS UNLESS NOTED

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