EVALUATION REPORT OF
BUTLER MANUFACTURING COMPANY
'SHADOWALL WALL PANEL'

FLORIDA BUILDING CODE 9TH EDITION (2026)
FLORIDA PRODUCT APPROVAL
FL 12493.2-R7
PANEL WALLS
SIDING

Prepared For:
Butler Manufacturing Company
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This report consists of
Evaluation Report (2 Pages including cover)
Design Procedure (4 Pages)
Installation Details (1 Pages)

Report No. C3050-6
Date: 9.25.2026

BALA SOCKALINGAM
LICENSE
No. 62240
STATE OF
FLORIDA
PROFESSIONAL ENGINEER

This item has been digitally signed and sealed by Bala Sockalingam, PE, on the date indicated.

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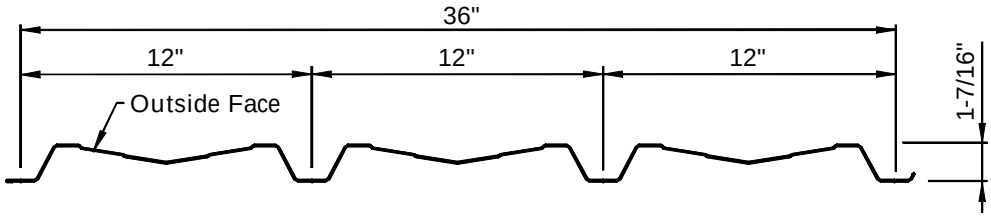
Manufacturer:	Butler Manufacturing Company
Product Name:	Shadowall
Panel Description:	36" wide coverage with (4) 1-7/16" deep inverted ribs.
Materials:	Min. 26 ga., 50 ksi steel Galvanized coated steel (ASTM A653) or Galvalume coated steel (ASTM A792) as per FBC 2026 Section 1405.2.
Support Description:	Min. 16 ga., 55 ksi steel section.
Design Uplift Pressure:	The allowable uniform loads shown on Page 4 of the Design Procedure were determined in accordance with FBC 2026 Section 1404.5 and 2210.1 and AISI S100-16(2020) w/S2-20. Panel fasteners, supports, frames and support connections must be designed to resist all loads.
Panel Attachment:	Corrosion resistant Scrubolt™ with washer for punched supports or #12-14 x 1-1/4" long self-drilling screws with washer for unpunched supports. Alternate fasteners are shown on Page 3 of the Design Procedure. For installation in areas within 3000 ft. of a saltwater coastline, fasteners are corrosion resistant as per FBC 2026 Section 1711.
At all supports	12" o.c. across panel width
Sidelap Attachment:	¼"-14 x 3/4" long corrosion resistant self-drilling screws with washer at max. 36" o.c. Fasteners are equally spaced between supports. For installation in areas within 3000 ft. of a saltwater coastline, fasteners are corrosion resistant as per FBC 2026 Section 1711.
Code Compliance:	The product described herein has demonstrated compliance with FBC 2026 Section 1404.5.
Product Limitations:	Design wind loads shall be determined for each project in accordance with FBC 2026 Section 1609 or ASCE 7-22 using allowable stress design. The maximum support spacing listed herein shall not be exceeded. The design pressure for reduced support spacing may be computed using rational analysis prepared by a Florida Professional Engineer or based on Butler load span table. This evaluation report is not applicable in High Velocity Hurricane Zone.

A. PANEL CROSS SECTION



Panels are rolled using ASTM A 653 or A 792 material, for Grade see Table B1. For complete material specifications and material weights refer to Material Specifications Document MS-05-01.

Panel Data in this Design Procedure is also applicable for eShadowall panels.

B. PANEL DESIGN

All applicable panel design procedures and references are explained in DP 10.1. All applicable panel design properties calculated according to AISI Standard S-100

B1. Panel Section Properties

ref. AISI Section B

Panel Material	Design Thickness (in)	Weight (psf)	E (ksi)	F_y (ksi)	F_u (ksi)	Compression on Outside		Compression on Inside	
						Sx (in^3)	I (in^4)	Sx (in^3)	I (in^4)
26 Ga.	0.0180	0.92	29500	50	65	0.059	0.051	0.044	0.042
24 Ga.	0.0230	1.17	29500	50	65	0.076	0.068	0.061	0.057
22 Ga.	0.0290	1.44	29500	50	65	0.096	0.087	0.081	0.077

Notes:
1. Design base metal thickness is exclusive of panel finishes.

B2. Flexural Strength (Resistance) kip-in./ ft. width of panel

ref. AISI F1, F3.1, F2.4.1

Nominal Gage	Outside of Panel in Compression, Sxe (+)				Inside of Panel in Compression, Sxe (-)			
	Nominal Strength	Allowable Strength (ASD)	Design Strength (LRFD)	Design Resistance (LSD)	Nominal Strength	Allowable Strength (ASD)	Design Strength (LRFD)	Design Resistance (LSD)
26 Ga.	2.95	1.77	2.66	2.66	2.21	1.11	1.77	1.66
24 Ga.	3.82	2.29	3.43	3.43	3.03	1.81	2.73	2.73
22 Ga.	4.79	2.87	4.31	4.31	4.04	2.42	3.63	3.63

Notes:

1. Tabulated values are for Allowable and Design Bending Strengths (Resistances) where:
   - Allowable Strength = M_n / Ω_b (ASD), kip-in.
   - Design Strength = $\phi_b M_n$ (LRFD & LSD), kip-in.
   - $\Omega_b = 1.67$ (ASD); $\phi_b = 0.90$ (LRFD); $\phi_b = 0.90$ (LSD-Canada)
2. Nominal Bending Strength: $M_n = S_{xe}F_y$, kip-in.
3. Load reductions or strength (resistance) increases for wind have not been included.

B3. Shear Strength (Resistance) kips / ft. width of panel

ref. AISI Section G

Panel Nominal Gage	Nominal Strength V_n	Allowable Strength (ASD)	Design Strength (LRFD)	Design Resistance (LSD)
26 Ga.	0.513	0.320	0.487	0.410
24 Ga.	0.836	0.523	0.794	0.669
22 Ga.	1.179	0.737	1.120	0.943

Notes:

1. Tabulated values are for Allowable and Design Shear Strengths (Resistances) where:
   - Allowable Strength = V_n / Ω (ASD), kips per ft. width of panel
   - Design Strength (Resistance) = $\phi_v V_n$ (LRFD & LSD), kips per ft. width of panel
   - $\Omega_v = 1.6$ (ASD); $\phi_v = 0.95$ (LRFD); $\phi_v = 0.80$ (LSD-Canada)
2. Nominal Shear Strength: V_n per AISI Section G, kips per ft. width of panel.
3. Load reductions or strength (resistance) increases for wind have not been included

B4. Web Crippling Strength kips / ft. width of panel

ref. AISI G5

Panel Nominal Gage	End – One Flange Loading				Interior – One Flange Loading			
	Nominal Strength P_n	Allowable Strength (ASD)	Design Strength (LRFD)	Design Resistance (LSD)	Nominal Strength P_n	Allowable Strength (ASD)	Design Strength (LRFD)	Design Resistance (LSD)
26 Ga.	0.288	0.170	0.260	0.231	0.454	0.259	0.386	0.340
24 Ga.	0.452	0.266	0.407	0.362	0.717	0.410	0.610	0.538
22 Ga.	0.690	0.406	0.621	0.552	1.103	0.630	0.938	0.827

Notes:

1. Tabulated values are for Allowable and Design Web Crippling Strengths (Resistances) where:
   - Allowable Strength = P_n / Ω_w (ASD), kips per ft. width of panel
   - Design Strength (Resistance) = $\phi_w P_n$ (LRFD & LSD), kips per ft. width of panel
   - End Loading: $\Omega_w = 1.7$ (ASD); $\phi_w = 0.90$ (LRFD); $\phi_w = 0.80$ (LSD-Canada)
   - Interior Loading: $\Omega_w = 1.75$ (ASD); $\phi_w = 0.85$ (LRFD); $\phi_w = 0.75$ (LSD-Canada)
   - Assumed Bearing Length: 2”
2. Nominal Web Crippling Strength: P_n per AISI G5, kips per ft. width of panel.
3. Load reductions or strength (resistance) increases for wind have not been included.

C. Fastener Options

ref. DP 3.7.BM

The following table shows the various fasteners available for the Shadowall wall panels. The "X" symbols indicate recommended fasteners for use with the wall panels. Blank spaces in the tables indicate that particular condition is not recommended.

Standard Fasteners (unless specified)

Location	Fastener Description and Part Number			Punched or Unpunched Panel	Blanket Insulation Thickness		
					0" to 4"	> 4" to 6"	> 6" to 8"
Panel to Structural	7/8", Scrubolt™, T-45, TORX	SB	0097361	Punched	X		
	1 1/2", Scrubolt, T-45, TORX	LSB	0097362	Punched		X	X
	1 1/4", S.D.S., T-30, TORX	SDS	0097365	Unpunched	X	X	(1)
Panel to Panel	3/4", S.D.S., T-30, TORX	SDS	0097364		X	X	X

(1) – Not a recommended application
Torx® fastener is a registered trademark.

C1. eShadowall Fasteners

Two fasteners are available for use with the eShadowall wall panel. Punched structurals will utilize a 3 1/2" Scrubolt, T-45 Torx Head 097604. Un-Punched structurals require a 3 1/2" long self-drilling screw, T-30 Torx Head, 097605.

D. Panel Deflections

ref. DP 6.2

For pressure loading, panel deflections are obtained by using I_x (+). For suction loading, panel deflections are obtained by using I_x (-).

E. Load Table

	Allowable Uniform Load (psf)									
Panel	**Span = 3.0'**		**Span = 4.0'**		**Span = 5.0'**		**Span = 6.0'**		**Span = 7.5'**	
Material	**P**	**S**	**P**	**S**	**P**	**S**	**P**	**S**	**P**	**S**
26 Ga	85	109	56	72	36	46	24	32	16	21
24 Ga	133	135	92	101	59	74	39	49	27	33
22 Ga	204	135	123	101	79	81	52	61	36	42

Notes:

1. P = Pressure on outside of panel, S = Suction on outside of panel
2. Tabulated values are Allowable Strength Design (ASD) format in accordance with the 2016 AISI Specification considering bending, shear, web crippling, combined bending and shear, and fastener pullover from panel. Panel pullover based on hex-head self-drilling screw.
3. Panel allowable loads are limited by L/60 deflection.
4. All values shown are for 3 or more spans.

Document and Revision History

REV. #	DATE	DESCRIPTION
0	12/8/17	For Florida Product Approval, Removed Section E
1	5/25/2018	Corrected Sx(t) Compression on Outside values in Section Properties
2	09/2020	Renumbered document. Updated for 2020 FBC and product approvals
3	08/2023	Removed code-year from AISI reference