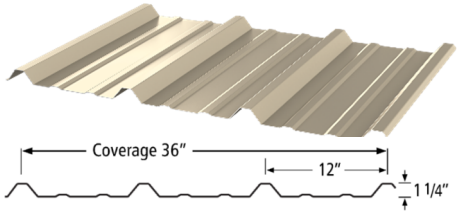
CORNERSTONE BUILDING BRANDS

Steel PBR on Steel Purlins
FL42382.12-R2

Steel PBR Panel on 16ga Steel Purlins



Fortify Building Solutions
7313 Fairview St.
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Union Corrugating
701 S. King St.
Fayetteville, NC 28301

Product Description

PBR panel with nominal 1.25" rib height, and panel coverage of 36". This profile may be produced with alternate names: PBR, and PBR or R.

Product Material

22ga, 24ga, 26ga, or 29ga steel (min)

Corrosion resistant per FBC 1507.4.3 where required.

Fastener

#12 or ¼" fastener with sealing washer

Fasteners compliant with FBC 1506.6 and FBC 1711 where required.

Substrate/Deck

16ga steel purlins

Min 50 ksi

Evaluated by:

David Eng, PE
Timberlake Cove, LLC
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FL PE 81377 | FL CA 33344
www.TimberLakeCove.com

DAVID E. ENG
LICENSE
No. 81377
STATE OF FLORIDA
PROFESSIONAL ENGINEER

David E Eng
2026.10.03
14:39:05 -06'00'

This item has been digitally signed and sealed by D.E. Eng, PE, on the date indicated. Printed copies of this document are not considered signed and sealed and the signature must be verified on any electronic copies

Maximum Allowable Loads & Installation Requirements:

This product approval covers 1 installation configuration. A factor of safety of 2 has been applied to all allowable uplift pressures shown.

29ga – 22ga on 16ga (min) steel framing @ 48" o.c.

¼"x7/8" lap fastener at 20" o.c.

Interior supports: ¼" x 1.25" fasteners in 12"-12" pattern (1 per rib)

Panel ends: ¼" x 1.25" fasteners in 7"-5"-7" pattern (2 per rib):

29ga, 48" fastener spacing: -55 PSF

26ga, 48" fastener spacing: -80 PSF

24ga, 48" fastener spacing: -90 PSF

22ga, 48" fastener spacing: -142.5 PSF (for 22ga, use 7"-5-7" pattern for both interior supports and panel ends)

26ga (min) on 16ga (min) steel framing

¼"x7/8" lap fastener at 24" o.c.

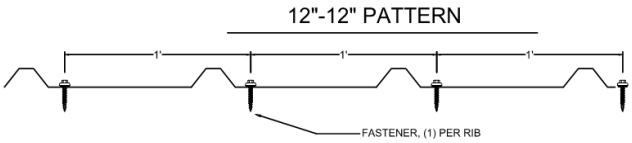
Interior supports: #12 x 1.25" fasteners in 12"-12" pattern (1 per rib)

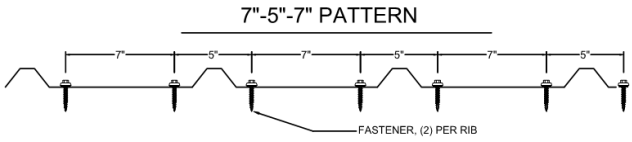
Panel ends: #12 x 1.25" fasteners in 7"-5"-7" pattern (2 per rib):

20" fastener spacing: +96 / -163 PSF

60" fastener spacing: +32 / -45.5 PSF

Interpolation between fastener spacing is permitted.





Underlayment: Not required per FBC 1507.1.1, exception 2.

Slope: Comply with local building code or FBC 1507.4.2 where required.

Metal Hip & Ridge Cover: Comply with local building code or FBC 1504.3.1.1 where required.

Technical Documentation:

This product has been tested by Encon Technology (TST6485) to the ASTM E 1592 standard, report C2054-1, as referenced in FL 9555.8-R5.
This product has been tested by Force Engineering (TST5328) to the ASTM E 1592 standard, report 07-0045T-07 A, B, E, F, as referenced in FL 11819.5-R5.
This product has been tested by Force Engineering (TST5328) to the FM 4771 'Resistance to Foot Traffic' standard, report 07-0172T-17, as referenced in FL 11819.5-R5.

Compliance Statement:

This product as described has demonstrated compliance with Florida Building Code 2026 (9th Edition), 1709.2.2 (**non-HVHZ**), as required by FL Rule 61G20-3, method 1D.

This product as described has been tested and demonstrated compliance with:

- ASTM E1592 – Test Method for Structural Performance of Sheet Metal Roof and Siding Systems by Uniform Static Air Pressure Difference
- FM 4471 – Resistance to Foot Traffic

Design Process:

Compare the maximum allowable loads on page 2 to the ASD uplift pressures for the project to determine sufficiency and installation requirements.

Alternatively, as an option, the load tables in this report provides one prescriptive option for the fastening requirement for the applicable wind loads for roofs within the parameters described. For roofs outside of the listed parameters, design wind loads shall be determined as required by FBC 1609, ASCE 7, or other design code in force, using allowable stress. These load tables are based on ASCE 7-22. Use of these tables assumes that the structure is: Enclosed and conforms to wind-borne debris provisions and is a regular shaped building and is not subject to across-wind loading, vortex shedding, or instability; nor does it have a site location for which channeling or buffeting warrant consideration

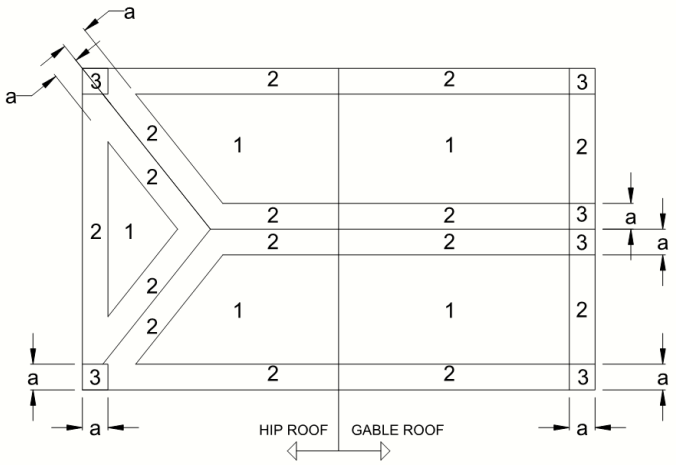
Engineering analysis may be completed by other licensed engineers for project specific approval by local authorities having jurisdiction.

Optional Load Tables:

These load tables are provided as a courtesy to provide one possible prescriptive option for a generic, typical structure without calculating the design pressures.

For structures outside the parameters of these load tables (e.g. height above 30 feet), calculate the required allowable design pressure and compare to the maximum allowable loads shown on page 2. These load tables shall not be construed to in any way limit the installation of this product to the cases shown.

Contact the manufacturer for further information, or consult a licensed design professional.



a: 10% OF LEAST HOIZONTAL DIMENSION OR 0.4h, WHICHEVER IS SMALLER, BUT NOT LESS THAN EITHER 4% OF LEAST HORIZONTAL DIMENSION OR 3FT (0.9M). OR AS DETERMINED BY DESIGN OR OTHER APPLICABLE CODE.

ROOF ZONES FOR GENERIC BUILDING

Instructions:

Select the appropriate load table that applies to the structure in question.

Determine the design wind speed for the project location.

Use the attachment method indicated for that windspeed within each roof zone.

Use this load table for structures which meet the following criteria:
Are located in **Exposure B** area
Have either a **flat roof, or gable/hip roof** with **max slope of 45° (±12:12)**
Have a mean roof height of **30 feet or less**

FL42382.12: 26ga (min) PBR on 16ga (min) purlins

Wind	120	130	140	150	160	170	180	190	200
Zone 1:	60"	60"	60"	60"	48"	48"	48"	48"	48"
Zone 2:	60"	60"	48"	48"	48"	48"	20"	20"	20"
Zone 3:	48"	48"	48"	48"	20"	20"	20"	20"	20"

Use this load table for structures which meet the following criteria:
Are located in **B, C, or D exposure** area
Have either a **flat roof, or gable/hip roof** with **max slope of 45° (±12:12)**
Have a mean roof height of **30 feet or less**

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Wind	120	130	140	150	160	170	180	190	200
Zone 1:	48"	48"	48"	48"	20"	20"	20"	20"	20"
Zone 2:	48"	48"	20"	20"	20"	20"	20"	20"	NR
Zone 3:	20"	20"	20"	20"	20"	NR	NR	NR	NR

Use this load table for structures which meet the following criteria:
Are located in **Exposure B** area
Have either a **hip roof** with **max slope of 45° (±12:12)**
or gable roof with slope between 27° and 45° (±6.1:12 - 12:12)
Have a mean roof height of **30 feet or less**

FL42382.12: 26ga (min) PBR on 16ga (min) purlins

Wind	120	130	140	150	160	170	180	190	200
Zone 1:	60"	60"	60"	60"	48"	48"	48"	48"	48"
Zone 2:	60"	60"	48"	48"	48"	48"	48"	20"	20"
Zone 3:	60"	48"	48"	48"	48"	20"	20"	20"	20"

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Zone 2:	48"	48"	48"	20"	20"	20"	20"	20"	20"
Zone 3:	48"	20"	20"	20"	20"	20"	NR	NR	NR

Use this load table for structures which meet the following criteria:
Are located in **Exposure B** area
Have either a **flat roof, or gable/hip roof** with **max slope of 45° (±12:12)**
Have a mean roof height of **30 feet or less**

FL42382.12: 22-29ga PBR panel, on 16ga (min) steel framing

Wind	120	130	140	150	160	170	180	190	200
Zone 1:	29ga	29ga	29ga	29ga	29ga	26ga	26ga	26ga	26ga
Zone 2:	29ga	29ga	29ga	26ga	26ga	26ga	24ga	22ga	22ga
Zone 3:	29ga	26ga	26ga	26ga	24ga	22ga	22ga	22ga	22ga

Use this load table for structures which meet the following criteria:
Are located in **Exposure B** area
Have either a **hip roof** with **max slope of 45° (±12:12)**
or gable roof with slope between 27° and 45° (±6.1:12 - 12:12)
Have a mean roof height of **30 feet or less**

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Wind	120	130	140	150	160	170	180	190	200
Zone 1:	29ga	29ga	29ga	29ga	29ga	29ga	26ga	26ga	26ga
Zone 2:	29ga	29ga	29ga	26ga	26ga	26ga	26ga	24ga	22ga
Zone 3:	29ga	29ga	26ga	26ga	26ga	24ga	22ga	22ga	22ga

Use this load table for structures which meet the following criteria:
Are located in **B, C, or D exposure** area
Have either a **flat roof, or gable/hip roof** with **max slope of 45° (±12:12)**
Have a mean roof height of **30 feet or less**

FL42382.12: 22-29ga PBR panel, on 16ga (min) steel framing

Wind	120	130	140	150	160	170	180	190	200
Zone 1:	29ga	26ga	26ga	26ga	24ga	22ga	22ga	22ga	22ga
Zone 2:	26ga	26ga	24ga	22ga	22ga	22ga	22ga	NR	NR
Zone 3:	24ga	22ga	22ga	22ga	NR	NR	NR	NR	NR

Use this load table for structures which meet the following criteria:
Are located in **B, C, or D exposure** area
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or gable roof with slope between 27° and 45° (±6.1:12 - 12:12)
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Zone 1:	29ga	29ga	26ga	26ga	26ga	24ga	22ga	22ga	22ga
Zone 2:	26ga	26ga	26ga	22ga	22ga	22ga	22ga	NR	NR
Zone 3:	26ga	24ga	22ga	22ga	22ga	NR	NR	NR	NR

Locations and Trade Names

This product is manufactured by Cornerstone Building Brands by one or more of the following brands, and is distributed under one or more the trade names shown below. Each brand maintains a variety of manufacturing facilities and trade names, to include the ones noted here. Contact the manufacturers listed for the most up-to-date list of locations serving the Florida market.

Corporate Headquarters
5020 Weston Parkway | Cary, NC 27513

Fortify Building Solutions
7313 Fairview St.
Houston, TX 77041

American Building Components
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Houston, TX 77041

Ceco Building Systems
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MBCI
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701 S. King St.
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Certification of Independence:

David Eng, PE and Timberlake Cove, LLC do not have, nor will acquire a financial interest in any company manufacturing or distributing products under this evaluation. The same entities do not have, nor will acquire, a financial interest in any other entity involved in the approval process of the product.

Exclusions and Limitations:

Design of deck and roof structure (to include attachment of plywood or wood plank) shall be completed by others. Fire classification and shear diaphragm design are outside the scope of this evaluation. Accelerated weathering/salt spray is outside the scope of this evaluation. Metal hip and ridge cover is outside the scope of this evaluation.

This report is limited to compliance with structural wind load requirements of FBC 1504.3.2, as required by Rule 61G20-3. Neither Timberlake Cove nor the manufacturer shall be responsible for any conclusions, interpretations, or designs made by others based on this evaluation report. This report is limited solely to documenting compliance with Rule 61G20-3, and makes no express or implied warranty regarding performance of this product. Installation shall be subject to the local building code and authority having jurisdiction; this report shall not be construed to supersede local codes in force.