CBUCK Engineering

Specialty Structural Engineering

CBUCK, Inc. Certificate of Authorization #8064

Evaluation Report

Burmon Hurricane Brackets - BHB

Manufacturer:

Burmon Building Products

for

Florida Product Approval

 # FL 27022.1

Florida Building Code 6th Edition (2017)

Per Rule 61G20-3

Method: **2 - B**

Category: **Structural Components**

Sub - Category: **Wood Connectors**

Product: *Burmon BHB Hurricane Brackets*

Type: **Wood Roof Truss/Rafter to Wall Bracket**

Prepared by:

James L. Buckner, P.E., SECB

Florida Professional Engineer # 31242

Florida Evaluation ANE ID: 1916

Report No. 17-163-1-ER.2

Date: 4 / 28 / 18, Rev 6/15/18

Contents:

Facsimile of digital copy signed by
James L. Buckner, P.E.
Electronically signed and sealed documents shall comply with the provisions of FAC Rule 61G15-23.

JAMES L. BUCKNER LICENSE No 31242 STATE OF FLORIDA PROFESSIONAL ENGINEER

Date: 2018.06.15 18:03:40 -04'00'

Manufacturer:

Burmon Building Products

171 Kamala Cresent, Unit 12
Casuarina, NSW, 2487
Australia

Product Name:

1. **Burmon Hurricane Anchor - Double Top Plate - Model BHBBDP**
2. **Burmon Hurricane Anchor - Single Top Plate - Model BHBSP**

Product Category: Structural Components

Product Sub-Category Wood Connectors

Compliance Method: State Product Approval Rule 61G20-3.005 (2) (b)

Product Description: The Burmon Hurricane Bracket model BHB is a heavy duty roof truss connector used to anchor wood trusses, rafters, or beams to a wooden top plate. The patented anchor system and impact driver technology are designed to reduce construction time and increase joint quality.

Product Assembly as Evaluated:

General Assembly Description:
Refer to Page 4 of this report for product assembly components/material & standards:

- 2 x Wood Roof Truss/Rafter
- Screws connecting
- Hurricane Anchor Bracket
- Screws connecting
- Dimensional Wood Wall Top Plate (Designed by others)

Support Type:

Type: Top Plate
Untreated LVL wood members or Double Untreated wood top plate

(Design of Top Plate and its attachment to support wall/framing is outside the scope of this evaluation.)

Description:

Minimum Dimensions:	2x6
Material:	Spruce Pine Fir (G=0.55 Minimum) Untreated LVL (G=0.50 Minimum)
Wood:	Wood members with which the connectors are used shall be either sawn lumber or engineered lumber having a minimum specific gravity of 0.50 (minimum equivalent specific gravity of 0.50 for engineered lumber.

Performance:

Wind Uplift Resistance - Anchor Bracket Assembly To Double Top Plate

* **5,314 LBS** Ultimate Test Uplift Load

Wind Uplift Resistance - Anchor Bracket Assembly To Single Top Plate

* **4,021 LBS** Ultimate Test Uplift Load

Note: Ultimate Load listed no safety factor has been applied.

Performance Test:

The following test protocol was performed to demonstrate compliance with the intent of the code as this product does not specifically addressed the performance standard in the code.

- **ASTM D1761 (2006) –** *Standard Test Methods for Mechanical Fasteners in Wood, Sections 21 through 30*
- Uplift performance only

Code Compliance:

The product described herein has demonstrated compliance with the Florida Building Code 6th Edition (2017). Section 1708.2

Evaluation Report Scope:

This product evaluation is limited to compliance with the structural requirements of the Florida Building Code, as related to the scope section to Florida Product Approval Rule 61G20-3.001.

Limitations and Conditions of Use:

- Scope of "Limitations and Conditions of Use" for this evaluation:
  This evaluation report for "Optional Statewide Approval" contains technical documentation, specifications and installation method(s) which include "Limitations and Conditions of Use" throughout the report in accordance with Rule 61G20-3.005. Per Rule 61G20-3.004, the Florida Building Commission is the authority to approve products under "Optional Statewide Approval".
- Option for application outside "Limitations and Conditions of Use"
  Rule 61G20-3.005(1)(e) allows engineering analysis for "project specific approval by the local authorities having jurisdiction in accordance with the alternate methods and materials authorized in the Code". Any modification of the product as evaluated in this report and approved by the Florida Building Commission is outside the scope of this evaluation and will be the responsibility of others.
- Design of support system is outside the scope of this report.
- Fire Classification is outside the scope of Rule 61G20-3, and is therefore not included in this evaluation.
- This evaluation report does not evaluate the use of this product for use in the High Velocity Hurricane Zone code section. (Dade & Broward Counties)

Quality Assurance:

The manufacturer has demonstrated compliance of roof panel products in accordance with the Florida Building Code and Rule 61G20-3.005 (3) for manufacturing under a quality assurance program audited by an approved quality assurance entity through **ATI-Intertek Testing Services NA, Inc–QA.** (FBC Organization #: QUA 1673).

Components/Materials (As Evaluated):

Truss Bracket:

Material:	Galvanized Steel (G90)
Material Properties:	In compliance with FBC Section 1405.1
Dimension:	
Bracket Thicknesses:	18 GA
Bracket Width(s):	1 1/2”
Bracket Depth:	3”
Bracket Height:	4 23/32”

Fasteners:

Bracket to Double Top Plate:

Type:	Ultra-Low Pankcake Head Screws
Material:	Steel
Corrosion Resistance:	Galvanized/ TriSeal, ASTM B-117
Size:	#10 x 2-1/2”

Bracket to Single Top Plate:

Type:	Ultra-Low Pancake Head Screws
Material:	Steel
Corrosion Resistance:	Galvanized/ Tri-Seal, ASTM B-117
Size:	#10 x 1-3/4”

<u>Bracket to Truss:</u>

Type:	Hex Washer Head Screws
Material:	Steel
Corrosion Resistance:	Galvanized/ Tri-Seal, ASTM B-117
Size:	#12 x 1-1/2”

Installation:

Option #1- Double Top Plate Bracket Attachment	
# Screws to Top Plate	**(6) #10 x 2-1/2" Ultra-Low Pancake Head**
# Screws to Truss	**(4) #12 x 1-1/2 Hex Washer Head**

Option #2 - Single Top Plate Bracket Attachment	
# Screws to LVL Plate	**(6) #10 x 1-3/4" Ultra-Low Pancake Head**
# Screws to Truss	**(4) #12 x 1-1/2 Hex Washer Head**

Fasteners, where used, shall be minimum length listed above.

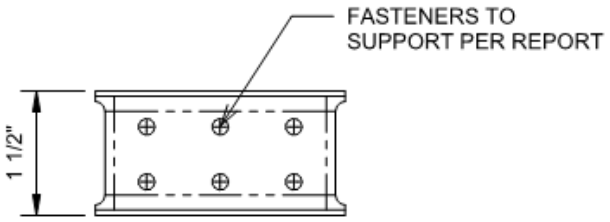
Install the BHB Bracket assembly in compliance with the installation method listed in this report and applicable code sections of FBC 6th Edition (2017). The installation method described herein is in accordance with the scope of this evaluation report. Refer to manufacturer's installation instructions as a supplemental guide for attachment.

Referenced Data:

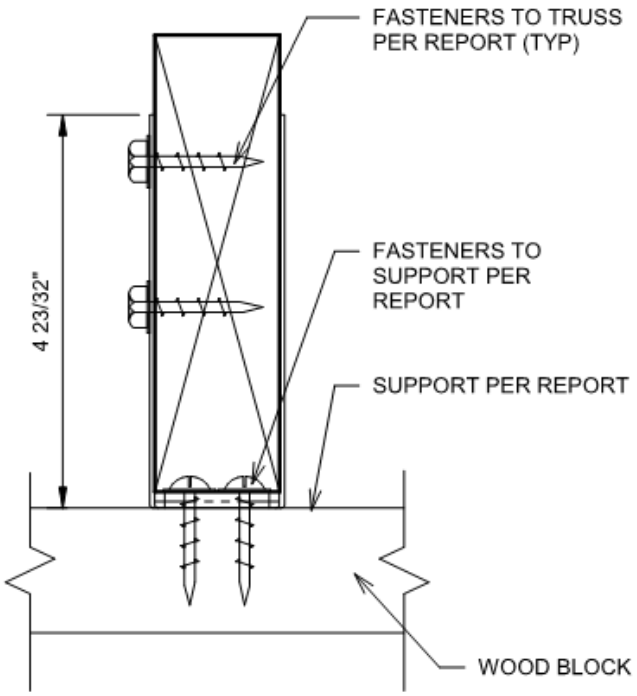
1. ASTM D1761-06 – Standard Test Methods for Mechanical Fasteners in Wood
   By Intertek Testing Services NA, Inc (FBC Organization #TST ID: 1558)
   File No. H3848.02-119-16 R1 Date: 5/21/18

2. Quality Assurance
   By Intertek Testing Services NA, Inc (FBC Organization #QUA ID:1673)

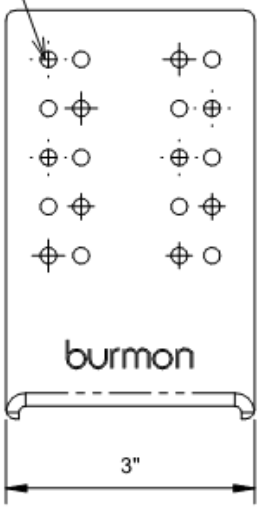
3. Certification of Independence
   By James L. Buckner, P.E. @ CBUCK Engineering
   (FBC Organization # ANE 1916)



PLAN VIEW



SIDE VIEW 1



SIDE VIEW 2

BURMON CLIP TO WOOD

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COA #8064

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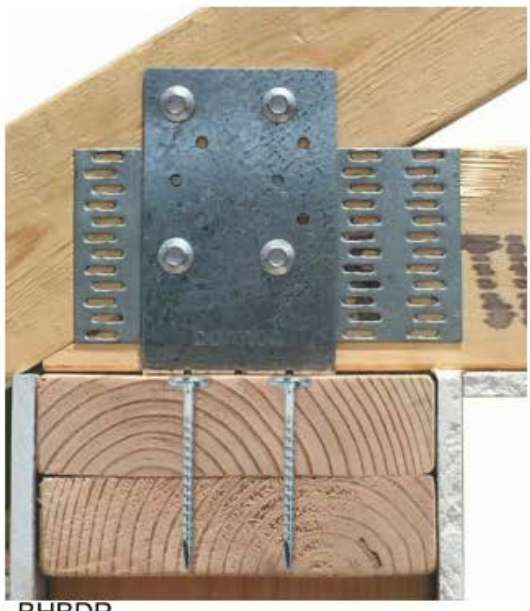
DRAWN BY	MJR
CHECKED BY	JLB
REVISIONS:	

S.1

Scale 6" = 1'-0"

Pictures are intended to illustrate Typical Type of Assembly Only

1 BHBSP
3/4" = 1'-0"



NOTE:
SEE REPORT FOR
NUMBER AND TYPE OF
FASTENERS (TYP)

2 BHBDP
3/4" = 1'-0"

	BHBSP/DP		
CBUCK Engineering Specialty Structural Engineering CBUCK, Inc. COA #8064 1374 Community Dr Jupiter, FL 33458 (561) 491-9927	PROJECT #:	17-163.1-ER	S.2
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	CHECKED BY	JLB	
	REVISIONS:		Scale 3/4" = 1'-0"