Technical Evaluation Report

TO ASSIST WITH CODE COMPLIANCE

Plated Hold Downs (PHD)

TER No. 1501-07

Issue Date: April 8, 2015
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Subject to Renewal: July 1, 2017

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DIVISION: 06 00 00 – WOOD, PLASTICS, AND COMPOSITES
Section: 06 05 23 – Wood, Plastic, and Composite Fastenings

1. **Product Evaluated:**
   - **1.1.** Plated Hold Downs (PHD)[1]
   - **1.2.** For the most recent version of this technical evaluation report, visit drjengineering.org. For more detailed state professional engineering and code compliance legal requirements and references, visit drjengineering.org/statelaw. DrJ is fully compliant with all state professional engineering and code compliance laws.
   - **1.3.** This TER shall be used in conjunction with a PHD design drawing signed and sealed by a registered design professional (RDP) authorized by D6 Building Products, Inc.

2. **Applicable Codes and Standards:**[2]
   - **2.1.** *2009, 2012 and 2015 International Building Code* (*IBC*)
   - **2.2.** *2009, 2012 and 2015 International Residential Code* (*IRC*)
   - **2.3.** *Florida Building Code* (*FBC*), see the supplement to this TER

[1] PHD is a patented product covered by one or more of the following patents: 6,389,767, 6,564,519, 6,826,882, 7,171,789, 7,559,178 and 7,849,647, which have been incorporated into this TER. In addition, PHD has a provisional patent # 62/032,675, as of 08/18/2014.

[2] Unless otherwise noted, all references in this code compliant technical evaluation report (TER) are from the 2012 version of the codes and the standards referenced therein, including, but not limited to, *ASCE 7*, *SDPWS* and *WFCM*. This product also complies with the 2000-2009 and 2015 versions of the *IBC* and *IRC* and the standards referenced therein. As required by law, where this TER is not approved, the building official shall respond in writing, stating the reasons this TER was not approved. For variations in state and local codes, if any, see Section 8.

2.4. *ASTM A36 – Standard Specification for Carbon Structural Steel*

2.5. *ASTM A563 – Standard Specification for Carbon and Alloy Steel Nuts*

2.6. *AISC 360 – Specifications for Structural Steel Buildings*

2.7. *AWC NDS – National Design Specification for Wood Construction* (*NDS*) including *Supplement*

2.8. *AWC SDPWS Wind & Seismic – Special Design Provisions for Wind and Seismic*

2.9. *TPI 1 – National Design Standard for Metal Plate Connected Wood Truss Construction*

3. Performance Evaluation:

3.1. This TER examines the capacity of the PHD proprietary connection system to create a load path to transfer loads for the following conditions.

3.1.1. Structural performance under axial tension and compression loads following code compliant generally accepted engineering practice using nationally recognized *ASTM* and *ANSI* standards referenced by the building code.

3.1.2. Compliance for use as boundary elements or chords of shear walls and braced wall panels designed in accordance with *NDS*, *SDPWS*, *IRC*, *IBC*, and applicable state and local building codes as modified and adopted.

3.2. Any code compliance issues not specifically addressed in this section are outside the scope of this evaluation.

4. Product Description and Materials:

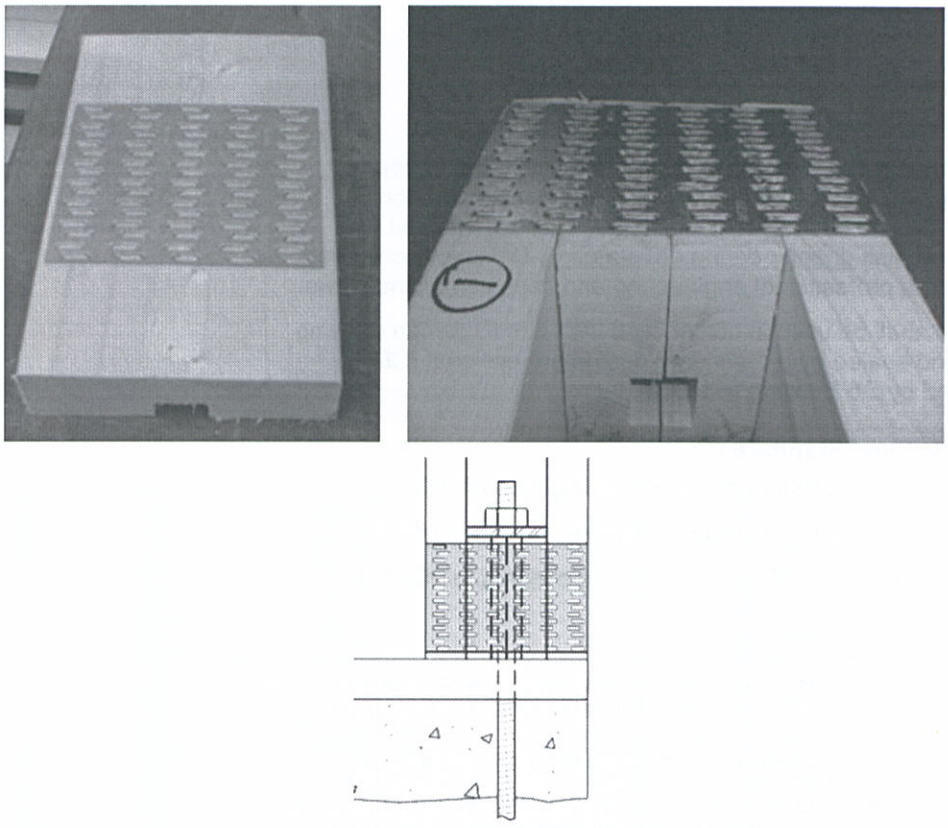

Figure 1: Photo of Blocking, Photo of One End of a PHD, & Detail Showing One Example of Installation

4.1. PHD Description

4.1.1. The PHD is a wall anchoring system used in conventional light-frame construction projects.

4.1.2. The PHD provides a continuous load path from the top of the wall to the foundation.

4.1.3. The PHD resists wind uplift axial loads as a hold-down anchor.

4.1.4. The PHD resists uplift loads generated from laterally applied loads that create overturning uplift forces as a hold-down anchor.

4.1.5. The PHD consists of wood framing members connected using blocking, metal plate connectors (i.e., truss plates) used as wood joint connections and load transfer components, and some type of hold-down connection system (i.e., threaded rods, cables, straps, etc.).

4.1.5.1. The PHD is created by sandwiching pieces of 2x blocking between two or more studs and connecting the assembly using metal plate connectors in a unique and patented combination to resist and appropriately distribute all applied loads to any reaction point, as shown in Figure 1.

4.1.5.2. A 1" x 1" square hole is created through the 2x blocking by routing a 1"-wide by $^1/_2$"-deep channel in two (2) adjacent 2x blocks at the center of each blocking member.

4.1.5.3. The PHD can be attached using all thread rods (ATR) or other appropriate foundation connection system:

4.1.5.3.1. Directly to the foundation

4.1.5.3.2. From level to level

4.1.5.4. The ATR or other appropriate connection system is attached to the PHD with a steel bearing or compression plate and nut on each end, as shown in Figure 2.

4.1.5.5. The PHD in each level is connected end-to-end to provide a continuous load path from the top of the wall to the foundation, as shown in Figure 2.

4.1.5.6. The wood posts, blocking, truss connector plates, and ATR or other appropriate connection system are individually sized to carry the required tension and compression loads at each floor of the structure.

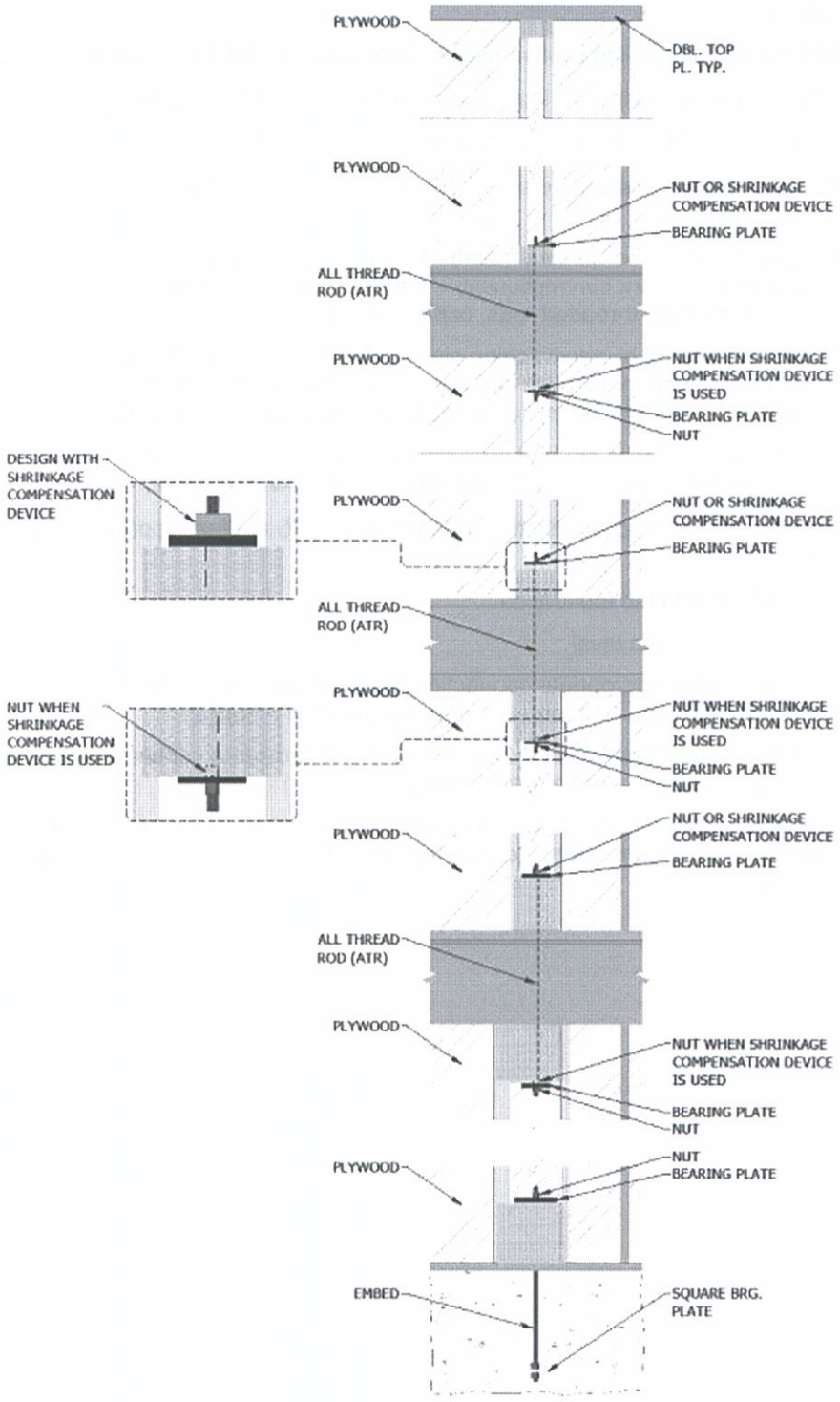

Figure 2: Elevation View of a 4-Level Continuous Load Path System Using PHDs

4.2. Materials

4.2.1. Lumber

4.2.1.1. Visually graded or machine graded sawn lumber is used for the posts and blocking in PHD.

4.2.1.2. Lumber design values are as published by the applicable lumber rules-writing agency as approved by the American Lumber Standards Committee (ALSC). These are incorporated into lumber design provisions and equations created by the American Wood Council (AWC) and input into PHD modeling and analysis equations. The lumber design values correspond with the grade stamp identified by the PHD manufacturer on the lumber prior to cross cutting.

4.2.1.3. Posts and blocking within the truss connector plate contact area shall be free from lumber characteristics including, but not limited to, loose knots, decayed knots, unsound wood, bark, pitch content, holes and wane.

4.2.1.4. Blocking shall be a minimum of No. 3 SPF, unless otherwise noted.

4.2.1.5. All lumber end cuts shall be square-cut accurately and shall be perpendicular to the length of the lumber.

4.2.2. All Thread Rod (ATR)

4.2.2.1. *ASTM A36*, *A307* Grade C, or *F1554* Grade 36 steel ATR, with a minimum yield strength of 36 ksi and a minimum ultimate strength of 58 ksi.

4.2.3. Steel Plate Washers

4.2.3.1. 3" x 3" *ASTM A36* steel plates, with a minimum yield strength of 36 ksi and a minimum ultimate strength of 58 ksi.

4.2.3.2. Bearing plate thickness of either 3/8" or ½".

4.2.4. Nuts

4.2.4.1. Nuts are *ASTM A563* Grade A or *SAE J995* Grade 2 hex nuts with standard cut washers.

4.2.5. Metal Plate Connectors

4.2.5.1. Metal plate connectors used in PHD are manufactured in accordance with *ANSI/TPI 1* Chapter 4.

4.2.5.2. Metal plate connectors are made of 20 ga. (0.00356") *ASTM A653*, SS Grade 40 steel (SS = Structural Steel).

4.2.5.3. Metal plate connectors have a minimum G60 galvanized coating (0.005" thickness on each side).

4.2.5.4. Each PHD uses published metal plate connector manufacturer's design values, product certification and installation instructions as designated in this TER or an engineered PHD design.

4.2.6. General Connection Design

4.2.6.1. Any other referenced connectors used in any aspect of the design use the design values published by the connector manufacturer's product certification and installation instructions or the AWC per the *NDS*.

5. Applications:

5.1. General

5.1.1. PHDs are used as an alternative wall anchoring system in conventional light-frame construction projects.

5.1.2. PHDs are used to provide a continuous load path from the top of the wall to the foundation.

5.1.3. PHDs are used as a hold-down device in a braced wall panel or segmented shear wall. This connector provides resistance to overturning and uplift forces to provide a continuous load path to the foundation.

5.1.4. PHDs are used to resist wind uplift axial loads as a hold-down anchor.

5.1.5. PHDs are used to resist uplift loads generated from laterally applied loads that create overturning uplift forces as a hold-down anchor.

5.2. Shear Wall Applications

5.2.1. PHDs may be used as boundary elements or chords of shear walls and braced wall panels when designed in accordance with the *NDS*, *SDPWS*, *IRC*, and/or *IBC*, as modified and adopted by the applicable state and local building codes or in accordance with proprietary shear wall specifications.

5.2.1.1. The nominal unit shear capacity design of any structural sheathing and sheathing to chord connections shall follow the requirements found in the *IRC*, *IBC* and *SDPWS*, or any proprietary structural sheathing manufacturer's specifications.

5.2.1.2. Structural sheathing perimeter fastening is required for one of the studs in each PHD. Using the perimeter fastening for both members of the PHD is acceptable.

5.2.1.3. Structural sheathing and gypsum wallboard are attached to the wood studs per the engineer's plans and specifications, where the fasteners installed into the PHD are the same on-center spacing as the perimeter fastening schedule for any structural sheathing.

5.3. Prescriptive *IBC* Applications

5.3.1. PHDs meet the engineered design requirements of *IBC* Section R2308.4[3] and may be used in structures built in accordance with the *IBC* as follows:

5.3.1.1. A PHD can be used as a tie-down for alternative braced wall panels per *IBC* Section 2308.9.3.1[4].

5.3.1.2. A PHD with an uplift capacity of at least 1,800 lbs. is required in one-story buildings.

5.3.1.3. A PHD with an uplift capacity of at least 3,000 lbs. is required in the first story of two-story buildings.

5.3.2. A PHD can be used as a tie-down for an alternative braced wall panel adjacent to a door or window opening per *IBC* Section 2308.9.3.2[5].

5.3.2.1. A PHD at each end of a panel must have an uplift capacity of at least 4,200[6] lbs.

5.3.2.2. Where a panel is located on only one side of the opening, the PHD used as bearing studs at the other end of the opening must have an uplift capacity of at least 1,000 lbs.

5.4. Prescriptive *IRC* Applications

5.4.1. PHDs meet the engineered design requirements of *IRC* Section R301.1.3 and may be used in structures built in accordance with the *IRC* as follows:

5.4.1.1. A PHD can be used as a hold-down device for Method AWB (Alternate braced wall), as described in *IRC* Section R602.10.6.1 and Figure R602.10.6.1.

5.4.1.1.1. For Method AWB, the uplift capacity of the PHD must be greater than or equal to the hold-down force from *IRC* Table R602.10.6.1.

5.4.1.2. A PHD can be used as a hold-down device for Method PFH (Portal frame with hold-downs), as described in *IRC* Section R602.10.6.2 and Figure R602.10.6.2.

5.4.1.2.1. The PHD at each end of a portal frame must have an uplift capacity of at least 4,200[7] lbs.

5.4.1.2.2. Where a single portal frame is used, the PHD used in place of the double 2x4 post at the other end of the opening must have an uplift capacity of at least 1,000 lbs.

5.4.1.3. A PHD can be used as a hold-down device for Method BV-WSP (Wood Structural Panels with stone or masonry veneer), as described in *IRC* Section R602.10.2.2.1 and R602.10.6.5 and Figure R602.10.6.5.

5.4.1.3.1. For Method BV-WSP, the uplift capacities of the PHD must meet the specified hold-down forces given in *IRC* Table R602.10.6.5.

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[3] *2015 IBC* Section 2308.8.
[4] *2015 IBC* Section 2308.6.5.1
[5] *2015 IBC* Section 2308.6.5.2
[6] 3,500 lbs. when designing per the *2015 IRC* in accordance with *IBC* Section 2308.6.5.2.
[7] 3,500 lbs. when designing per the *2015 IRC* in accordance with *IBC* Section 2308.6.5.2.

5.4.1.4. A PHD with an uplift capacity of at least 800 lbs. can be used as a hold-down device for End Conditions 2 and 5, as described in *IRC* Section R602.10.7, Figure R602.10.7 and Figure 3.

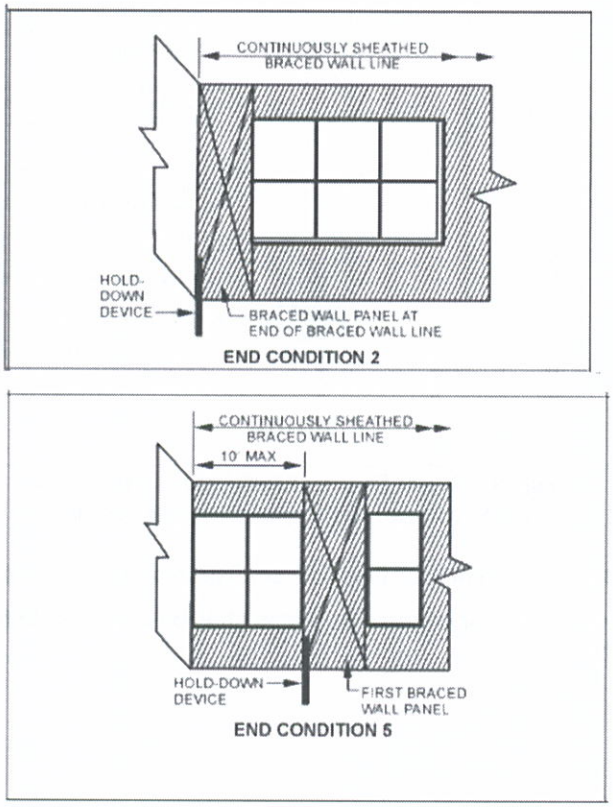

Figure 3: *IRC* Hold Device Locations

5.5. Engineered Provisions

5.5.1. A PHD can be used as a boundary element or chord in engineered shear walls per *IBC* Section 2305.1 and *SDPWS* Section 4.3.6.4.2 using the allowable design loads per the PHD engineered design for the shear wall application.

5.5.2. All engineered designs must be performed in accordance with accepted engineering procedures, experience and good technical judgment for approval.

5.6. Design

5.6.1. Engineered PHD designs shall be prepared by a registered design professional and submitted to the authority having jurisdiction.

5.6.2. Engineered designs shall incorporate PHDs using the design provisions in the *NDS* and *ANSI/TPI 1* to determine the allowable tension and compression forces in the sawn lumber posts, blocking, and top and bottom plates, and the shear and lateral load resistance of the truss connector plates.

5.6.3. The allowable tension load for the ATR is determined using the provisions of *ANSI/AISC 360.*

5.6.4. The allowable tension load for any other appropriate connection system is determined based on the hold-down manufacturer's product certification and installation instructions.

5.6.5. Figure 4 provides a typical detail for the PHD configurations used as a hold-down at the end of a shear wall or braced wall panel.

5.6.5.1. For this application, fasten structural sheathing to the end stud using the perimeter nailing specified for the shear wall or braced wall panel design.

5.6.5.2. Holes drilled for installation of utilities shall be maximum 1" in diameter. Holes shall be spaced a minimum of 4" and shall not be within 4" of the blocking.

5.6.5.3. Holes shall maintain a minimum $^{5}/_{8}$" distance from the edge of the stud.

5.6.5.4. All other connection design shall follow the provisions of *NDS* Section 11.5.

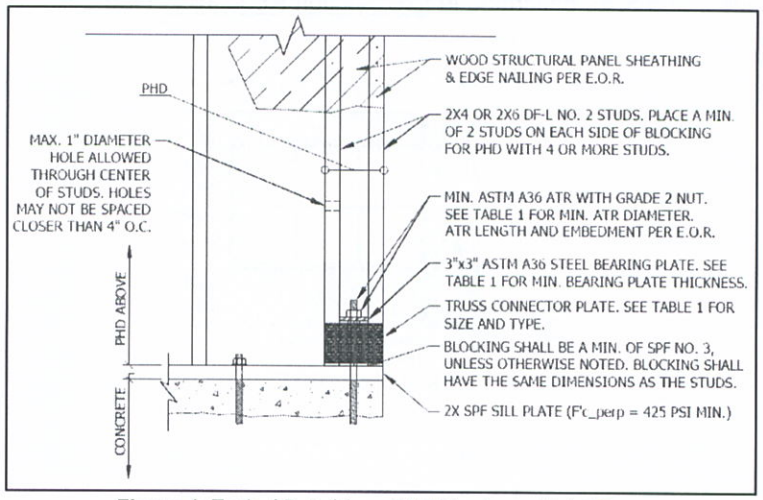

Figure 4: Typical Detail for a PHD Used as a Hold-Down Device for a Braced Wall Panel or Segmented Shear Wall

5.6.6. Figure 5 provides a typical detail for the PHD configuration used as a hold-down for a beam in uplift.

5.6.6.1. For this application, shear connection plates shall be designed to transfer the full uplift load into one side of the PHD.

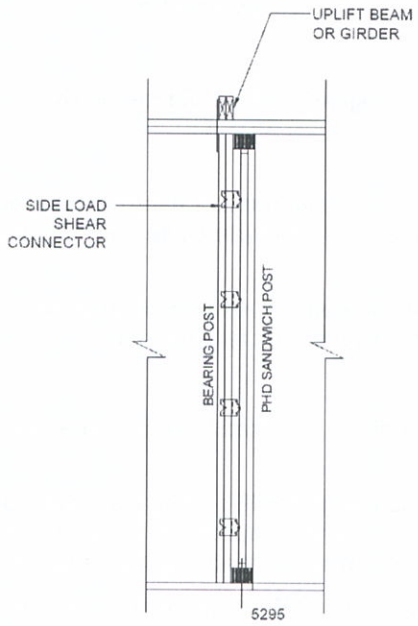

Figure 5: Girder Post with Uplift

6. Installation:

6.1. All PHDs shall be installed in accordance with D6 Building Products' published installation instructions and this TER. In the event of a conflict between the manufacturer's installation instructions and this TER, the more restrictive shall govern.

6.2. A copy of D6 Building Products' published installation instructions shall be available at all times on the jobsite during installation.

6.3. Installation Procedure

6.3.1. The PHD shall be installed in the braced wall panel or segmented shear wall in the same manner as double end studs.

6.3.1.1. For *IRC* applications, the top and bottom plates shall be face nailed into the ends of each member of the PHD with two (2) 16d box (3½" x 0.135") nails per *IRC* Table R602.3(1) or equivalent.

6.3.1.2. For *IBC* applications, the top and bottom plates shall be face nailed into the ends of each member of the PHD with two (2) 16d common (3½" x 0.162") or three (3) 3" x 0.131" nails per *IBC* Table 2304.9.1[8].

6.3.2. Sheathing fasteners for the shear walls shall be installed into the framing members on each side of the PHD. Fasteners shall be spaced a maximum of 6" o.c. for the framing members supporting panel edges and a maximum of 12" o.c. for all other framing members or as defined by the shear wall design, whichever results in closer spacing.

6.3.3. The nominal unit shear capacity design of any proprietary structural sheathing and sheathing connections shall follow the requirements found in any of the proprietary structural sheathing manufacturer's specifications.

6.3.4. Nominal unit shear capacities, detailing, and all related shear wall design and installation information shall be in compliance with *SDPWS* and/or any proprietary structural sheathing manufacturer's specifications.

6.3.5. Installation of the ATR to the foundation shall be in accordance with the approved construction documents and all related ATR specifications.

6.3.6. As an alternative to the ATR, the allowable tension load for wire rope with threaded stud used in this application is determined using the provisions of TER No. 0910-01.

7. Test and Engineering Substantiating Data:

7.1. The allowable loads for the products listed in this TER were developed using the following referenced standards, as applicable.

7.1.1. *ANSI/AWC NDS-2012 – National Design Specification (NDS) for Wood Construction* – with *2012 Supplement*.

7.1.2. *ANSI/TPI 1-2014 – National Design Standard for Metal Plate Connected Wood Truss Construction*.

7.1.3. *ANSI/AISC 360-2010 – Specification for Structural Steel Buildings*.

7.1.4. Generally accepted engineering data and specifications supporting the use of alternative fasteners as equivalent to the code prescribed fasteners.

7.1.5. Generally accepted engineering data and specifications identifying the load carrying capacity of the metal connector plates.

7.1.6. Proprietary tension testing of PHDs by SBC Research Institute (SBCRI) under contract with Qualtim, Inc.

7.1.7. Generally accepted engineering analysis of the PHD prepared by Qualtim, Inc.

7.1.7.1. Using *NDS* and *ANSI/TPI 1* design methodology.

7.1.7.2. Calibration of generally accepted engineering equations to proprietary testing by SBCRI under contract with Qualtim Inc.

7.1.7.3. Analysis of proprietary tested and engineering mechanics based failure modes and application of generally accepted engineering factors of safety to assure reliable and safe performance.

7.2. The product(s) evaluated by this TER falls within the scope of one or more of the model, state or local building codes for building construction. The testing and/or substantiating data used in this TER is limited to buildings, structures, building elements, construction materials and civil engineering related specifically to buildings.

[8] *2015 IBC* Section 2304.10.1

7.3. The provisions of model, state or local building codes for building construction do not intend to prevent the installation of any material or to prohibit any design or method of construction. Alternatives shall use consensus standards, performance-based design methods or other engineered alternative means of compliance. This TER assesses compliance with defined standards, generally accepted engineering analysis, performance-based design methods, etc. in the context of the pertinent building code requirements.

7.4. Some information contained herein is the result of testing and/or data analysis by other sources, which DrJ relies on to be accurate as it undertakes its engineering analysis.

7.5. DrJ has reviewed and found the data provided by other professional sources are credible. This information has been approved in accordance with DrJ's procedure for acceptance of data from approved sources.

7.6. DrJ's responsibility for data provided by approved sources is in accordance with professional engineering law.

7.7. Where appropriate, DrJ relies on the derivation of design values, which have been codified into law through codes and standards (e.g., *IRC*, *WFCM*, *IBC*, *SDPWS*, etc.). This includes review of code provisions and any related test data that helps with comparative analysis or provides support for equivalency to an intended end-use application.

7.8. PHD is a patented product covered by one or more of the following patents: 6,564,519 and 7,171,789, which have been incorporated into this TER. In addition, PHD has a provisional patent # 62/032,675 as of 08/18/2014.

8. Findings:

8.1. Data and engineering analysis review has found that the PHD, as described in this TER, conforms to the requirements of the code references listed in Section 2.

8.2. *IBC* Section 104.11 and *IRC* Section R104.11 (*IFC* Section 104.9 is similar) state:

> **104.11 Alternative materials, design and methods of construction and equipment.** The provisions of this code are not intended to prevent the installation of any material or to prohibit any design or method of construction not specifically prescribed by this code, provided that any such alternative has been *approved*. An alternative material, design or method of construction shall be *approved* where the *building official* finds that the proposed design is satisfactory and complies with the intent of the provisions of this code, and that the material, method or work offered is, for the purpose intended, at least the equivalent of that prescribed in this code. ... Where the alternative material, design or method of construction is not *approved*, the *building official* shall respond in writing, stating the reasons the alternative was not *approved*.[9]

8.3. This product has been evaluated with the codes listed in Section 2, and is compliant with all known state and local building codes. Where there are known variations in state or local codes that are applicable to this evaluation, they are listed here:

8.3.1. No known variations

8.4. This TER uses professional engineering law, the building code, ANSI/ASTM consensus standards and generally accepted engineering practice as its criteria for all testing and engineering analysis. DrJ's professional engineering work falls under the jurisdiction of each state Board of Professional Engineers, when signed and sealed.

9. Conditions of Use:

9.1. Where required by the authority having jurisdiction (AHJ) in which the project is to be constructed, this TER and the installation instructions shall be submitted at the time of permit application.

9.2. Any generally accepted engineering calculations needed to show compliance with this TER shall be submitted to the code official for review and approval.

9.3. Design loads shall be determined in accordance with the building code adopted by the jurisdiction in which the project is to be constructed.

9.4. The manufacturer's installation instructions shall be available on the jobsite for inspection.

9.5. Refer to the PHD quality control (QC) procedures and installation manual for construction means and methods support.

[9] The last sentence is adopted language in the 2015 codes.

9.5.1. Storage, weather conditions, durability considerations, handling, installing, restraining and bracing of the PHDs are defined in the QC procedures and installation process to support proper construction means and methods.

9.6. Design

9.6.1. Building Designer Responsibility

9.6.1.1. Unless the AHJ allows otherwise, the Construction Documents shall be prepared by a Building Designer (e.g., Owner, Registered Design Professional, etc.) for the Building and shall be in accordance with *IRC* Section R106 and *IBC* Section 107.

9.6.1.2. The Construction Documents shall be accurate and reliable and shall provide the location, direction and magnitude of all applied loads and shall be in accordance with *IRC* Section R301 and *IBC* Section 1603.

9.6.2. Construction Documents

9.6.2.1. Construction Documents shall be submitted to the Building Official for approval and shall contain the plans, specifications and details needed for the Building Official to approve such documents.

9.7. Responsibilities

9.7.1. The information contained herein is a product, engineering or building code compliance technical evaluation report performed in accordance with the referenced building codes, testing and/or analysis through the use of accepted engineering procedures, experience and technical judgment.

9.7.2. DrJ technical evaluation reports provide an assessment of only those attributes specifically addressed in the Products Evaluated or Code Compliance Process Evaluated section.

9.7.3. The engineering evaluation was performed on the dates provided in this TER, within DrJ's professional scope of work.

9.7.4. This product is manufactured under a third-party quality control program in accordance with *IRC* Section R104.4 and R109.2 and *IBC* Section 104.4 and 110.4.

9.7.5. The actual design, suitability and use of this TER for any particular building is the responsibility of the Owner or the Owner's authorized agent, and the TER shall be reviewed for code compliance by the Building Official.

9.7.6. The use of this TER is dependent on the manufacturer's in-plant QC, the ISO/IEC 17020 third-party inspection process, proper installation per the manufacturer's instructions, the Building Official's inspection and any other code requirements that may apply to assure accurate compliance with the applicable building code.

10. Identification:

10.1. The PHDs described in this TER are identified by a design drawing sent with the shipment bearing the manufacturer's name, product name and other information to confirm code compliance.

10.2. All PHDs described in this TER are identified by a label bearing the manufacturer's name, product name, TER number and other information to confirm code compliance.

10.3. Additional technical information can be found at d6bp.com.

11. Review Schedule:

11.1. This TER is subject to periodic review and revision. For the most recent version of this TER, visit drjengineering.org.

11.2. For information on the current status of this TER, contact DrJ Engineering.

- Mission and Professional Responsibilities
- Product Evaluation Policies
- Product Approval – Building Code, Administrative Law and P.E. Law

FBC Supplement to TER No. 1501-07
Issued: February 6, 2015

DIVISION: 06 00 00 – WOOD, PLASTICS, AND COMPOSITES
Section: 06 05 23 – Wood, Plastic, and Composite Fastenings

REPORT HOLDER:
D6 Building Products, Inc.

EVALUATION SUBJECT:
PLATED HOLD DOWNS

1. Purpose and Scope

Purpose:

The purpose of this Technical Evaluation Report (TER) supplement is to indicate that D6 Building Products, Inc. Plated Hold Downs (PHD), recognized in TER No. 1501-07, have also been evaluated for compliance with the codes noted below.

Applicable code editions:
- *2010* and *2014 Florida Building Code – Building*, including HVHZ
- *2010* and *2014 Florida Building Code – Residential*, including HVHZ

2. Conclusions

D6 Building Products, Inc. Plated Hold Downs (PHD), described in TER No. 1501-07, comply with the *2010* and *2014 Florida Building Code – Building* and *2010* and *2014 Florida Building Code – Residential*, provided the design and installation are in accordance with the *International Building Code®* (*IBC*) provisions noted in the TER.

This supplement is subject to renewal concurrently with TER No. 1501-07.

State and Local Code Compliance Evaluation Supplement to TER No. 1501-07
Issued: February 9, 2015

DIVISION: 06 00 00 – WOOD, PLASTICS, AND COMPOSITES
Section: 06 05 23 – Wood, Plastic, and Composite Fastenings

REPORT HOLDER:
D6 Building Products, Inc.

EVALUATION SUBJECT:
PLATED HOLD DOWNS

1. Purpose and Scope

The purpose of this Technical Evaluation Report (TER) supplement is to indicate that Plated Hold Downs (PHD) have also been evaluated for general compliance with the state and local codes that are based on the ICC model codes. This product also complies with the following specific state and local amendments, if any, which are substantively different from the model ICC model building codes and are the subject of this TER:

- None known to DrJ at the time this TER was created.

2. Conclusions

Plated Hold Downs (PHD), described in TER No. 1501-07, comply with the ICC model, state and local building codes as described herein, including the substantive alternative language noted above. Code compliance depends on the design and installation being in accordance with all of the provisions noted in the TER, this supplement, and the codes referenced therein.

If there is a substantive state or local code provision that applies to TER 1501-07 that has not been listed above, please contact DrJ immediately.

This supplement is subject to renewal concurrently with TER No. 1501-07.