

EVALUATION SUBJECT: 4"x 4" Post Base Kit Item #: 56607 (4X4-PB-LS)

TER-1646

REPORT HOLDER:

OZCO BUILDING PRODUCTS
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SCOPE OF EVALUATION (compliance with the following codes):

This Product Evaluation Report is being issued in accordance with the requirements of the 2012 International Building Code for generic use within the state seal shown per Section 104.11. The product noted on this report has been tested and/or evaluated as summarized herein. Re-evaluation of this product shall be required following pertinent International Building Code and local state code modifications or revisions.

SUBSTANTIATING DATA:

• **Product Test Reports**

Uplift and download forces and torsional moment for structural performance has been tested using the methods described by ASTM D 1761 Standard Test Methods for Mechanical Fasteners in Wood as per test report # D6706.01-119-16 by Architectural Testing, Inc (Report date: 06/13/14).

• **Structural Engineering Calculations**

Structural engineering calculations have been prepared which evaluate the product based on comparative and/or rational analysis to qualify the following design criteria:

- Maximum allowable uplift capacity
- Maximum allowable gravity capacity
- Maximum torsional moment capacity
- Anchor capacity

No 33% increase in allowable stress has been used in the design of this product.

INSTALLATION:

The product listed above shall be installed in strict compliance with the Product Evaluation Document (i.e. engineering drawing from the test report), along with all components noted therein.

The product components shall be of the material specified in the Product Evaluation Document. Bolts and screws must be installed in accordance with the applicable provisions in the NDS and concrete anchor manufacturer's published installation instructions.

Full engagement shall be provided when connecting the steel flanges (lips) together for full capacity. (leave 1/8" minimum length of uncovered lip past the outer steel plane surface).

LIMITATIONS & CONDITIONS OF USE:

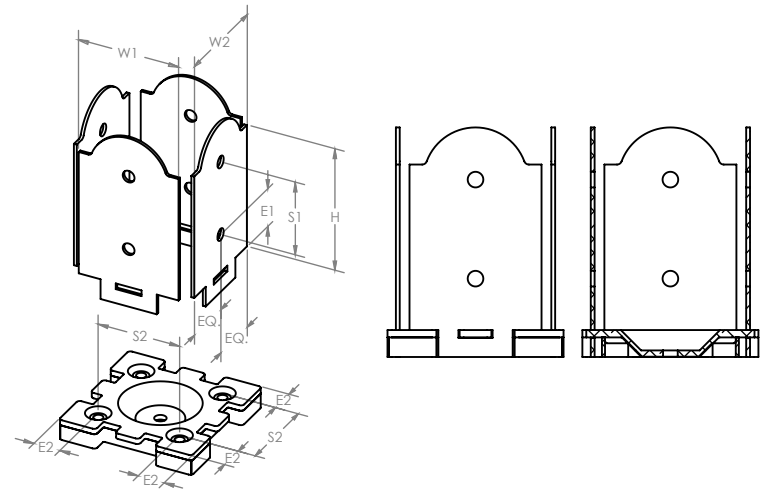
Use of this product shall be in strict accordance with the Product Evaluation Documents as noted herein.

All supporting host structures shall be designed to resist all superimposed loads and shall be of a material listed in this report. Host structure conditions which are not accounted for in this product's respective anchor schedule shall be designed for on a site-specific basis by a registered Professional Engineer.

Adjustment factors noted herein and all applicable codes shall be considered by the installer, where applicable.

All components which are permanently installed shall be protected against corrosion, contamination, and other such damage at all times. Installer is responsible to protect against dissimilar materials.

Fasteners, including nuts and washers, for use in exterior conditions and in contact with preservative-treated wood or for fire-retardant-treated wood shall be of hot-dipped zinc-coated galvanized steel, stainless steel, silicon bronze or copper. Wood screws and lag screws shall be permitted to be of mechanically deposited zinc-coated steel with coating weights in accordance with ASTM B 695, Class 55 minimum



ELEVATED POST HOLDDOWN

The post base architectural line has a 1/2" standoff height to reduce the potential effects of decay at post and column ends.

MATERIAL: Shall be 7 gauge base and sideplate (12 gauge for 4x4 post, see Table 1) in accordance with ASTM A653 Grade 33 with minimum yield strength, $F_y = 33$ ksi and a minimum tensile strength, $F_u = 45$ ksi.

FINISH: Comprised of powder coated, hot dip galvanized steel conforming to ASTM A153.

INSTALLATION: Use all specified fasteners. Assembly kit includes fasteners to wood post. See General Notes.

This product does not provide adequate resistance to prevent members from rotating about the base or torsion along longitudinal axis and therefore is not recommended for non top-supported installations or moment connections after base, such as fences or unbraced carports.

Use of post base connector with engineered wood products and different wood species other than listed herein as Southern Yellow Pine (specific gravity, $G=0.55$) or Douglas Fir-Larch (specific gravity, $G=0.50$) are not covered under this report and shall be evaluated by a Professional Engineer.

All side plates are required to be installed with full engagement of lips at base to obtain full load capacity.

OPTIONS: For specific scenarios contact OZCO for custom solutions.

TABLE 1: 4"x 4" Post Base Capacities

| MODEL NO. | POST SIZE | MATERIAL | | DIMENSIONS (IN) | | | | | | | FASTENERS | | ALLOWABLE LOADS - DF/SP (LBS) | | | |
|-----------|-----------|----------|------------|-----------------|-------|-------|----|-----|-------|-------|--------------------|------|-------------------------------|--------------|----------|----------|
| | | BASE | SIDE PLATE | W1 | W2 | H | E1 | E2 | S1 | S2 | ANCHOR | QTY. | DOWN (100) | UPLIFT (160) | F1 (160) | F2 (160) |
| 4X4-PB-LS | 4X4 | 7 Ga | 12 | 3-9/16 | 4-1/4 | 4-1/4 | ?? | 3/8 | 2-1/2 | 2-3/4 | 1/4"x1-3/4" Screws | 8 | 6,160 | 1,978 | 513 | 513 |
| | | | | | | | | | | | 3/8" dia. Bolts | 4 | | | | |

GENERAL NOTES:

1- The tabulated allowable loads shown are based on Allowable Stress Design (ASD) and loads have been increased for wind or earthquake loading accordingly to load duration factor, CD under the 2012 National Design Specification for Wood Construction (NDS) with no further increase allowed. Load reduction may apply where other loads govern.

2- Tabulated allowable loads shown apply to connections into wood used under dry conditions, with moisture content equal or less than 19% and where sustained temperatures are 100°F (37.8°C) or less. The allowable loads must be adjusted by the applicable factors for wet service conditions and higher temperatures in accordance with the National Design Specification for Wood Construction (NDS)

3- Anchor bolts (grade 8) to host structure/foundation shall have minimum yield strength, $F_y = 130$ ksi and tensile strength, $F_u = 150$ ksi, minimum $\frac{3}{8}$ " diameter. Anchor specification shall be as per Professional Engineer who shall verify host structure for shear and uplift capacity. Design of anchor bolts and concrete footings is outside the scope of this report.

4- Screws provided with hex washer head with 1-1/2" diameter hex washer cap plug. Minimum bending yield strength for screws, $F_{yb} = 70,000$ psi and ultimate tensile strength, $F_u = 74,000$ psi, 1.65" inches thread penetration.

5- Designer shall consider effects on strength of lumber from new preservative treatments or fire retardant treatments other than under National Design Specification for Wood Construction (NDS).

6- For higher gravity loads, provide solid packed grout under 1/2" standoff plate before installing into concrete base. Base download capacity on column or concrete shall be in accordance with code, by others.

7- Gravity load capacity shall be reduced where limited by the capacity of the wood member.

8- Combining vertical and lateral loads using a unity equation is recommended for final connection capacity, per Professional Engineer.

9- Screw penetration is into solid wood and does not include thickness of any finishes.

NOTES:

1- Uplift and gravity loads capacity shall be based on either the post design or concrete design calculated per code. 4- Designer shall consider effects on strength of lumber from new preservative treatments or fire retardant treatments other than under National Design Specification for Wood Construction (NDS).

2- For downward loads, wood posts shall have maximum unbraced length less than 8ft with axial compression only.