



ICC PEI LLC

PER-20256

ICC PEI LLC is an accredited ISO Standard 17065 Product Certifier. This **Product Evaluation Report** represents a product that ICC PEI LLC has Evaluated. This product has a Product Evaluation Service Agreement & Follow-up Inspection Service Agreement. This **Product Evaluation Report** in no way implies warranty for this product or relieves **Grip-Tite Manufacturing Co., LLC** of their liabilities for this product. This **PER** is an official document if it is within one year of the Initial or Re-Approval date.

Initial Approval
April, 2020

Re-Approved
April, 2021

See all Reports at: www.p-e-i.com

Report Owner

Grip-Tite Manufacturing Co., LLC.
115 W. Jefferson Street
Winterset, IA 50273

Approved Manufacturing Location

Grip-Tite Manufacturing Co., LLC.
115 W. Jefferson Street
Winterset, IA 50273

Product

Grip-Tite® Wall Anchor System

Evaluation Report Information

www.griptite.com/products/wall-anchor-system
Grip-Tite Mfg. contact: **Steve Lage** - (515) 462-1313

General Details

The following described wall anchor system has been evaluated for axial tension load capacity only. The **Grip-Tite® Wall Anchor System** is intended for exterior use as a tie-back device to stabilize foundation walls affected by leaning, tilting, bowing or cracking. The **Grip-Tite® Wall Anchor System** inserts a steel rod through the wall into the outside earth. A soil anchor is then attached to the steel rod through a vertical hole in the ground. An interior wall plate then secures the rod to the inside foundation wall. Evaluation of the soil, building foundation wall and applied loads are outside the scope of this PER and should be provided by an on-site design professional

Product Description

The **Grip-Tite® Wall Anchor System** consists of an interior wall plate, exterior soil anchor, a connecting steel rod and hardware for stabilization of the foundation walls.

Component Description

Interior Wall Plate - The interior wall plate is part of an assembly that is 18.25" x 11" or 28" x 12-1/2" formed steel plate. See Table 1 for more details. The wall plate is hot dipped galvanized in accordance with ASTM A123M. See Figure 4. The maximum distance that the wall plate can span is 8".

Flat Plate Washer - The flat plate washer is part of the interior wall assembly that is 4" x 4" x 1/4" thick manufactured from ASTM A 36 Steel. See coating note 1.

Exterior Soil Anchor - The exterior soil anchor is part of an assembly made from two (2) pieces of formed steel plate. See Table 2 for more details. The soil plate is hot dipped galvanized in accordance with ASTM A123M. See Figure 5.

Threaded Rod - The fully threaded rod is 3/4"-10 UNC cold rolled round bar. The threaded rod is manufactured per SAE J403 Grade 1018, with a minimum ultimate tensile strength of 63ksi and minimum elongation 53ksi and galvanized to meet ASTM A153.

Beveled Washers and Nut- 1.75" Beveled washer manufactured per ASTM F436. A 3/4" galvanized square nut conforming to ASTM A563 Grade A. See coating note 1.

Threaded Coupler - The threaded coupler is 1" o.d. x 3" long and manufactured from ASTM A513-5 Grade 1020 steel with a minimum yield strength of 68ksi and minimum tensile strength of 86ksi. The 3/4"-10 UNC threads extend 1-1/8" in from each end. See coating **Coating Note 1** - Hot dipped galvanized ASTM A153 or ASTM F2329 43µm thickness, mechanical deposited ASTM B695 class 25 (25µm thickness) or Zinc plated ASTM B663 Fe/Zn 12 (12µm thickness)

Code Compliance

2012 International Building Code Section 1604.4, 1605.3, 1705.1.1, 1705.6, 1803
2015 International Building Code Section 1604.4, 1605.3, 1705.1.1, 1705.6, 1803
2018 International Building Code Section 1604.4, 1605.3, 1705.1.1, 1705.6, 1803

Table 1

Wall Plate Size & min. thickness	Steel	Minimum Rib Depth	Minimum Rib Length	Min. Yield Strength	Max. Allowable Tension Load
18-1/4"x11"x .136"tk.	ASTM A572	1.0"	12.5"	64.9	9,400 lbs.
18-1/4"x11"x .131"tk.	ASTM A572	.83"	12.5"	67.1	7,290 lbs.
28"x12-1/2"x .18" tk.	ASTM A572	1.1"	19.2"	63.3	10,000 lbs.
28"x12-1/2"x .18" tk.	ASTM C1008-1011	1.1"	19.2"	51.1	10,000 lbs.

Compliance with the following Standard

AISC-360-16- Specification for Structural Steel Buildings

Design Considerations

A structural evaluation **shall** be submitted at the request of the building official on a job specific basis with consideration to the existing foundation wall, soil conditions and overall system integrity.

General Product Use and Limitations

1. The **Grip-Tite® Wall Anchor System** shall be installed by trained installers certified by Grip-Tite Manufacturing.
2. A site survey is necessary of the area where the anchors will be placed to locate any possible interferences such as utilities, plumbing, electric or phone lines.
3. The **Grip-Tite® Wall Anchor System** can be used to anchor concrete, masonry, steel or timber wall foundations.
4. Engineering Design and/or calculations shall be prepared by a Licensed Architect or Engineer.
5. The **Grip-Tite® Wall Anchor System** shall follow the published installation instructions in accordance with this **PER** report and shall be made easily available on the job site at the time of installation.
6. The **Grip-Tite® Wall Anchor System** is evaluated for Axial Tension Load Capacity only.
7. Per the International Building Code Section 1803.2, a Geotechnical Investigation shall be conducted to evaluate the adequacy, strength and stability of the load bearing soils to determine location, depth, and spacing for the anchors. This requirement may be waived by the Building Official when satisfactory data from an adjacent area is available.
8. The foundation wall condition and allowable bearing capacity is outside the scope of this evaluation report and shall be evaluated by a Licensed Engineer per site.
9. **Grip-Tite® Wall Anchor System** installation instructions state the wall anchor shall be flush against the wall. The exterior anchor shall bear uniformly on the soil with the system loads acting concentrically along the axis of the threaded rod. All threaded rods shall be screwed into the coupler until they bottom out, using all of the coupler threads.
10. Special inspection may be required by the Building Official as stated in the IBC Section 1705.
11. The soil that has been removed for the Anchor hole installation shall be replaced and compacted or filled with concrete to complete the installation of the **Grip-Tite® Wall Anchor System**.

Items Requiring Verification

The following items are related to the use of **Grip-Tite® Anchor Wall System**, but not within the scope of this evaluation specification. However these items are related to the determination of code compliance.

1. Design, calculations, and details for the building system verifying compliance with this report.
2. The installers qualifications.
3. Soil Stability and bearing strength.

Wall Height and Soil Variability References

15° Wall Chart	26° Wall Chart	36° Wall Chart
15° Angle, 7' Wall	26° Angle, 7' Wall	36° Angle, 7' Wall
15° Angle, 8' Wall	26° Angle, 8' Wall	36° Angle, 8' Wall
15° Angle, 9' Wall	26° Angle, 9' Wall	36° Angle, 9' Wall
15° Angle, 10' Wall	26° Angle, 10' Wall	36° Angle, 10' Wall

* This information is based on measuring the wall height and using with the soil test report.

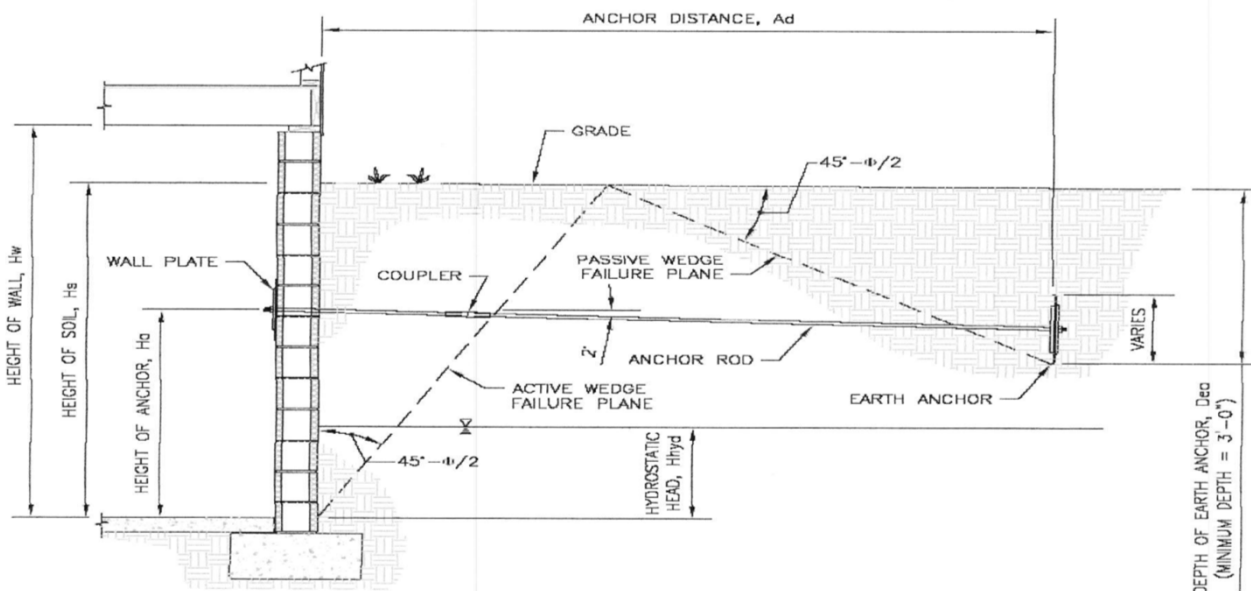


Figure 1 - Typical Wall Anchor Assembly

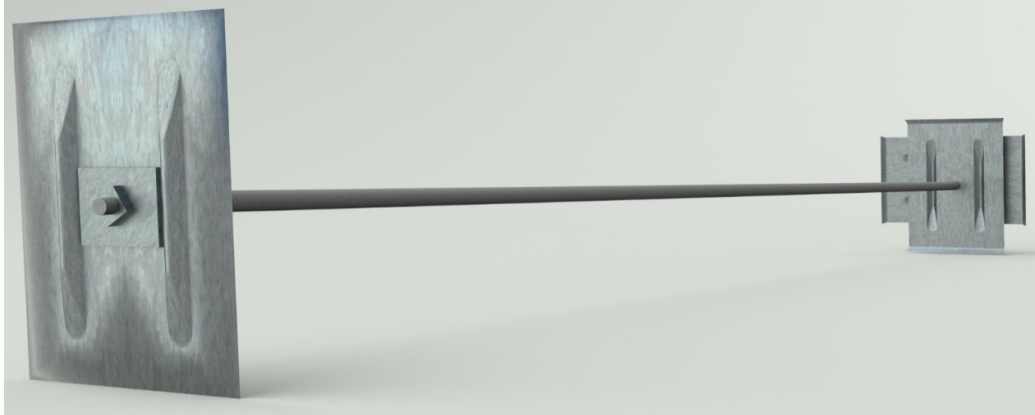


Figure 2 -Grip-Tite® Wall Anchor System Assembly

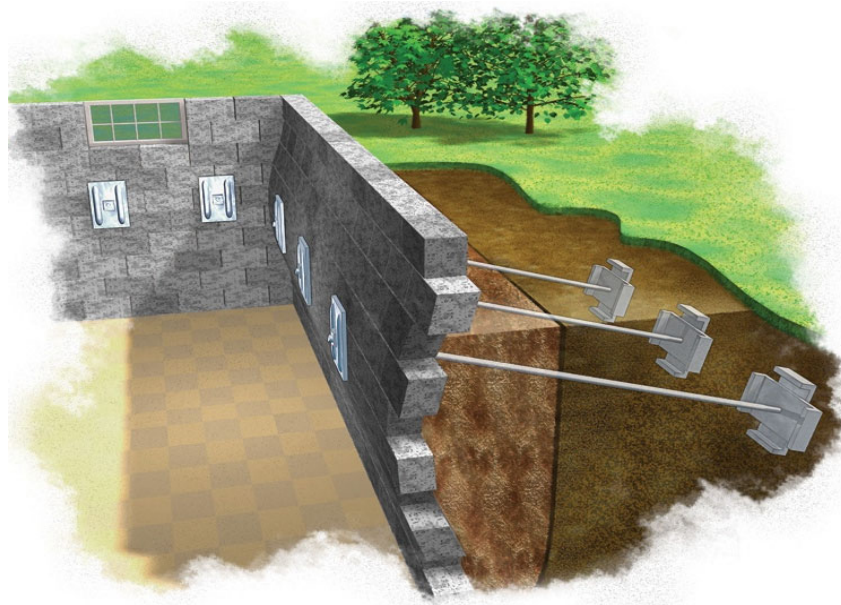


Figure 3 - Typical Wall Anchor Final

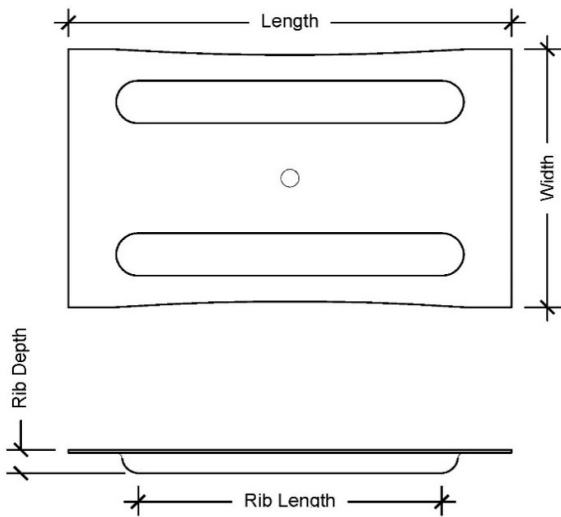


Figure 4 - Interior Wall Plate

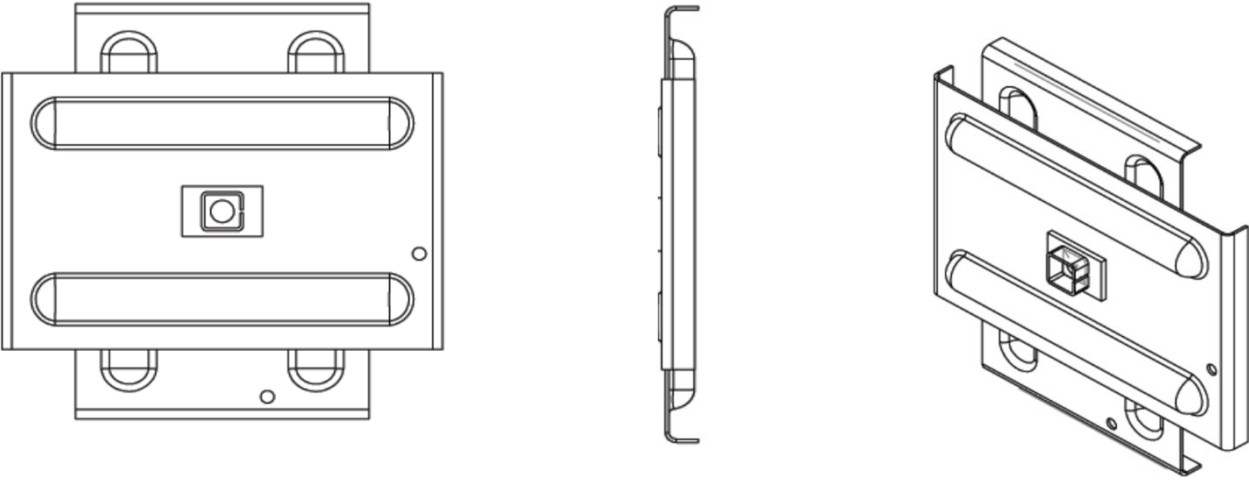


Figure 5 - Exterior Soil Anchor

Table 2

Soil Plate Number	Steel	Size
GT250A	ASTM C1008-1011	18-1/4"x11"x 10 gauge
	ASTM A572, Grade 50	18-1/4"x11"x 10 gauge
GT325A	ASTM C1008-1011	18-1/4"x11"x 10 gauge
	ASTM A572, Grade 50	18-1/4"x11"x 10 gauge
	ASTM C1008-1011	28"x12-1/2"x 7 gauge
	ASTM A572, Grade 50	28"x12-1/2"x 7 gauge
GT400A	ASTM C1008-1011	28"x12-1/2"x 7 gauge
	ASTM A572, Grade 50	28"x12-1/2"x 7 gauge

Product Labeling

All **Grip-Tite® Wall Anchor System** components manufactured by Grip-Tite covered by this **PER** must have a label attached with at least the following information:

1. Manufacturer Name
2. This **PER** Number & *Pei* **ES** Logo

Acceptable Evaluation Marks



Product Documentation

- A Product Evaluation Service Agreement between *Pei Evaluation Service®* and **Grip-Tite Manufacturing Co., LLC.**
- A Follow-up Inspection Service Agreement between *Progressive Engineering Inc.* and **Grip-Tite Manufacturing Co., LLC.**
- A **Grip-Tite Manufacturing Co., LLC** - Quality Systems Manual - Dated: 11/30/2021
- A **Grip-Tite Manufacturing Co., LLC** - Anchor System Components Drawings
- A PEI Test Report 2020-6073- Dated 4/20/2020
- A PEI Test Report 2020-6145- Dated 7/7/2020
- A PEI Test Report 2021-6154- Dated 6/18/2021
- An opinion letter- Dated 10/20/2021
- A PEI Test Report 2021-6289- Dated 11/7/2021