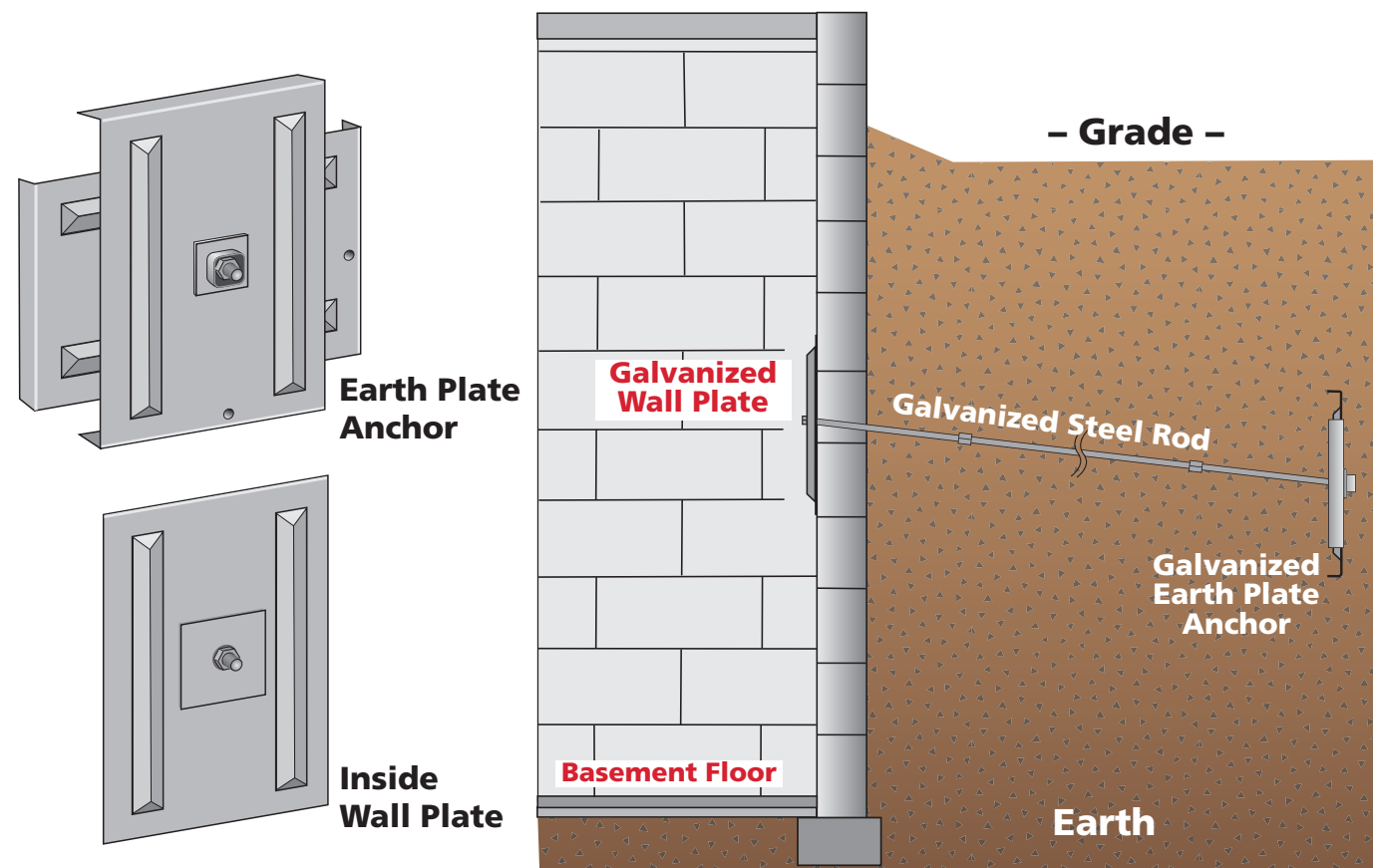


Earth Plate Anchors



Earth Plate Anchors

ECP Earth Plate Anchors are designed to stabilize cracking and bowed foundation walls. The inside wall plate is fabricated from 10 gauge hot-rolled steel and measures 12" X 26". The wall plate has two embossed reinforcing ribs for additional stiffness, plus a 4" square, 10-gauge square washer is included for added strength. The Earth Plate Anchor, fabricated from two 10-gauge plates, has four reinforcing ribs and four cleats providing approximately 432 square inches of soil bearing surface. The wall plate and Earth Plate Anchor are connected by a 3/4" diameter continuously threaded tie rod and secured with nuts. The Earth Plate Anchor assembly is hot dipped galvanized for protection against corrosion. The ECP Earth Plate Anchors are the most economical method for providing supplemental lateral force to help stabilize bowed and cracked walls. This installation can be quickly installed using handheld equipment and requires minimal excavation or disturbance to the yard.

Installation of Earth Plate Anchors

- Locate and mark all utility lines in and around area.
- Measure and mark placements for Plate Anchors.
- Remove sod patch and prepare excavation to accept the Anchor Plate.
- Drill 1-1/2" diameter hole through wall.
- Install 3/4" diameter tie rod from wall to the excavation.
- Secure Plate Anchor to tie rod with nut.
- Install Wall Plate, washer and nut to the other end of the tie rod at the wall.
- Tighten nut to predetermined load with torque wrench.
- Backfill excavated soil and replace sod.



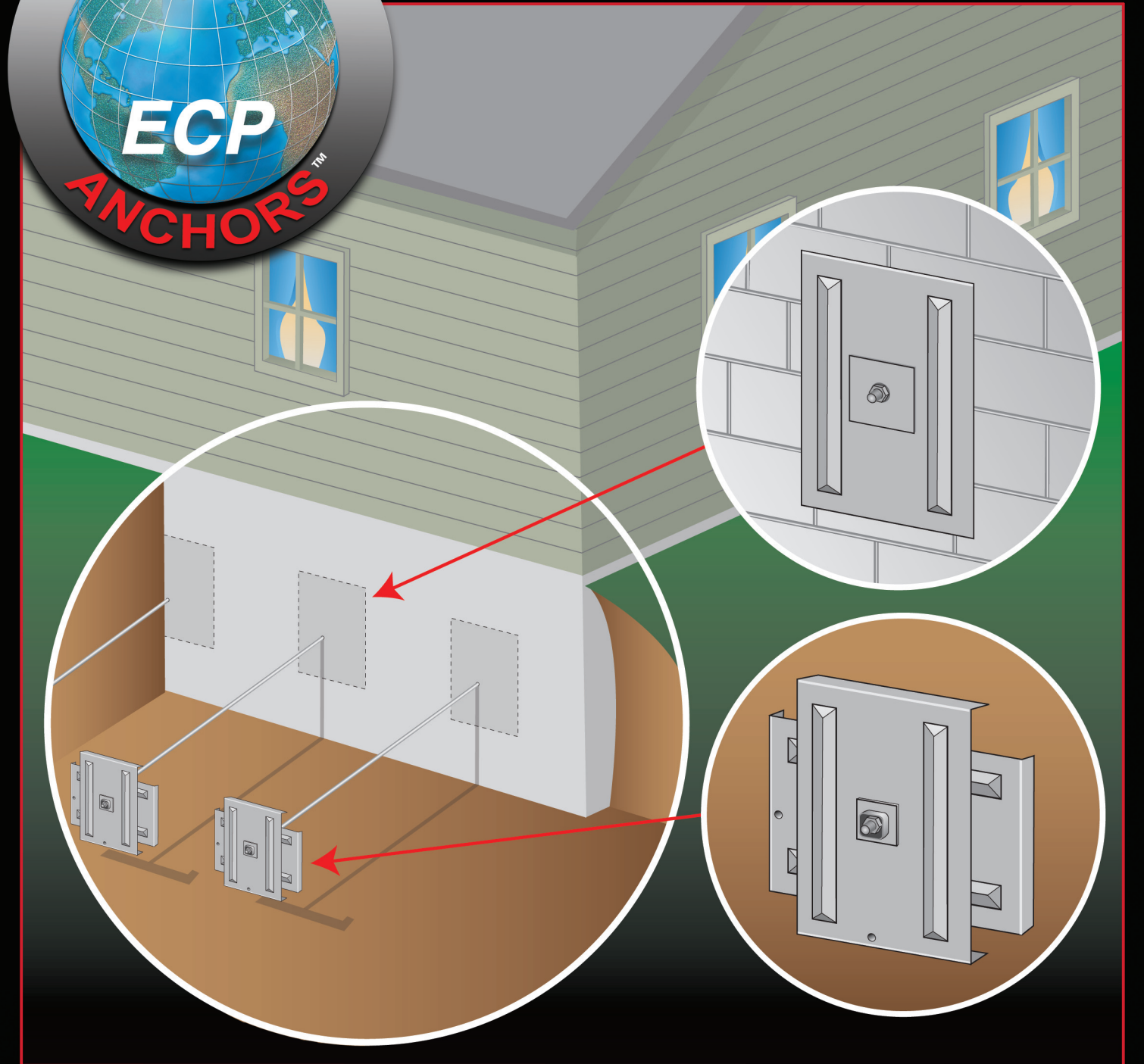
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"Designed and Engineered to Perform"

ECP Earth Plate Anchors™



"Designed and Engineered to Perform"



Earth Plate Anchors

Why Use ECP Earth Plate Anchors™?

- 8,250 Pounds Clamping Capacity
- 316 Square Inches Wall Bearing Surface (2.2 square feet)
- 432 Square Inches Soil Bearing Surface (3 square feet)
- Distance to Earth Plate Anchor Adjustable 9' to 17-1/2'
- Installs With Portable Equipment
- Installs With Little Disturbance to Landscape
- Installs With Little or No Vibration

Specifications: Product Material

2.01 Earth Plate Anchor

The Earth Plate Anchor shall be constructed from two 12" by 26", 10 gauge steel plates. The plates shall each have two stiffening ribs that run parallel with the long dimension. Each end of the narrow dimension shall have an earth cleat formed by a 1/2" right angle bend. The Earth Plate Anchor when attached to the anchor rod has the configuration of a cross with the earth cleats facing toward the wall. The bearing area of the earth plate anchor system is 3 ft². Plates shall be hot dip galvanized.

2.02 Anchor Rod & Hardware

The anchor rod shall consist of a combination two or three 3/4"-10 all thread rods by 4'-6", 7'-0" and/or 9'-0" long and coupling(s). Two 3/4"-10 square nuts shall be supplied to attach the Earth Plate Anchor and the wall plate to the anchor rod. Material shall conform to ASTM A193 B-7 and shall have a yield of 105 ksi. A 4" square by 10 gauge thick plate washer shall conform to ASTM A36 and mounts between the wall plate and nut. Product shall be galvanized.

2.03 Wall Plate

The wall plate shall be constructed from 12" by 26", 10 gauge steel. The plate shall each have two stiffening ribs that run parallel with the long dimension. Wall Plate shall be hot dip galvanized.

Section 3 – Earth Plate Anchor Installation

The following specification contains the major steps to be undertaken to install Earth Plate Anchors. Variations may occur depending upon the application and the type of structural support required.

Warnings:

⚠ Thoroughly investigate the job site for the possible existence and location of all underground utilities before proceeding. Avoid all contact with ALL underground utilities!

⚠ Collapsing soil can be dangerous. Follow OSHA requirements at all times. Do not enter any excavation if there are any questions about the stability of the soil.

⚠ Failure To Heed These Warnings, Or To Follow Safe Work Habits, Or Improper Use Of The Equipment And Materials May Result In Life Threatening Situations, Bodily Injury And/Or Property Damage!

4.01 Soil load on the wall.

The largest soil loads occur when water is present behind the wall. The following maximum load estimates may be used:

Estimated Basement Wall Load – Water Pressure Present			
Soil Height ft	Wall Load Estimate lb/lf	Wall Load – FS 1.5 lb/lf	Wall Load – FS 2 lb/lf
6ft	1,620	2,430	3,240
7ft	2,205	3,307	4,410
8ft	2,880	4,320	5,760

4.02 Capacity of the Earth Plate Anchor in Soil

The following ECP Earth Plate Anchor capacities can be expected under the following soil conditions:

Estimated Bearing Capacity of Earth Plate Anchors			
Clay Soil – 5' Deep (min)		Sandy Soil – 5' Deep (min)	
SPT Blow Count "N"	Earth Plate Anchor Capacity	SPT Blow Count "N"	Earth Plate Anchor Capacity
2 blows/ft	6,000 lb	2 blows/ft	10,000 lb
4 blows/ft	12,000 lb	4 blows/ft	15,000 lb

4.03 Wall Penetration

Based upon the load, soil capacity and maximum anchor rod tensioning force of 8,250 lb; determine the earth plate anchor spacing. Position the wall penetrations at the point of maximum bow in the wall. Bore 2" diameter holes through the wall at the designated locations.

4.04 Excavate

Excavate the target location for the installing the earth plate anchors. The excavations are recommended to be 13-1/2 to 17- 1/2 feet from the wall but shall never be closer than 9 feet to the wall. Excavations shall be deep enough to install the earth plate anchor at a depth of at least one foot lower than the elevation of the wall penetration or below the frost depth, whichever is greater. The excavation shall be of suitable size and depth to accommodate the earth plate anchor. Barricade or cover the excavations for safety.

4.05 Installation of Components

Drive the anchor rod assemblies through the holes in the wall into the soil to terminate in the excavations to accept the earth plate anchors. Anchor rod must emerge no higher than the depth prescribed in 4.04. Attach the earth plate anchor to the anchor rod with a nut. The earth cleats shall point toward the wall. Install the wall plate and square plate washer over the anchor rod and secure with a nut against the wall.

4.06 Plate Anchor Tensioning

Tension the system by tightening the nut attaching the wall plate. The maximum dry torque that can be applied to the nut is 87 ft-lbs. This torque will provide an estimated clamping force of 8,250 lb. The Earth Plate Anchor System strength exceeds the strength of a typical concrete block basement wall. Caution is advised when tensioning the system.

4.07 Documentation

At the conclusion of the installation, the raw field data shall be converted into an installation report that includes the location of each placement and the amount of load placed on each anchor. This may be filed in the job folder or provided to the client or engineer.

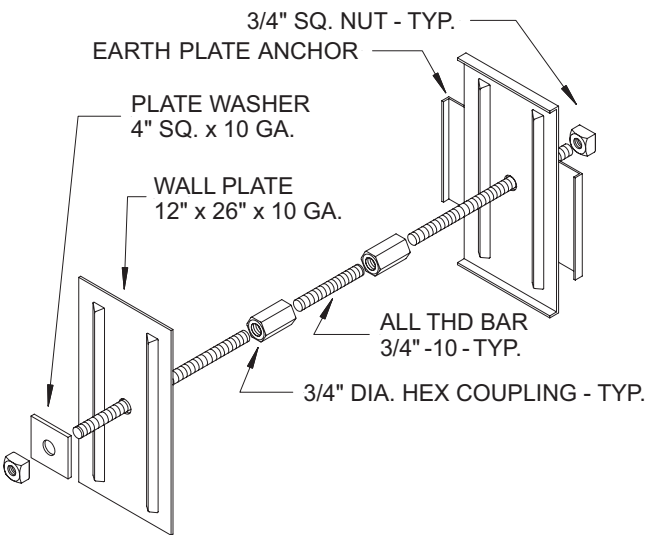
4.08 Cleanup

Remove all scrap and other construction debris from the site. Remove all tools and equipment, clean them and store them. The excavations shall now be backfilled using the soil that was removed and stored nearby. The backfill shall be placed into the holes in small lifts of 6" to 8" and then properly tamped to achieve maximum density. After the backfilling operation is complete, the sod, paving, etc. shall be replaced and restored to as close to preconstruction condition as possible. Dispose of all construction in a safe and legal manner.

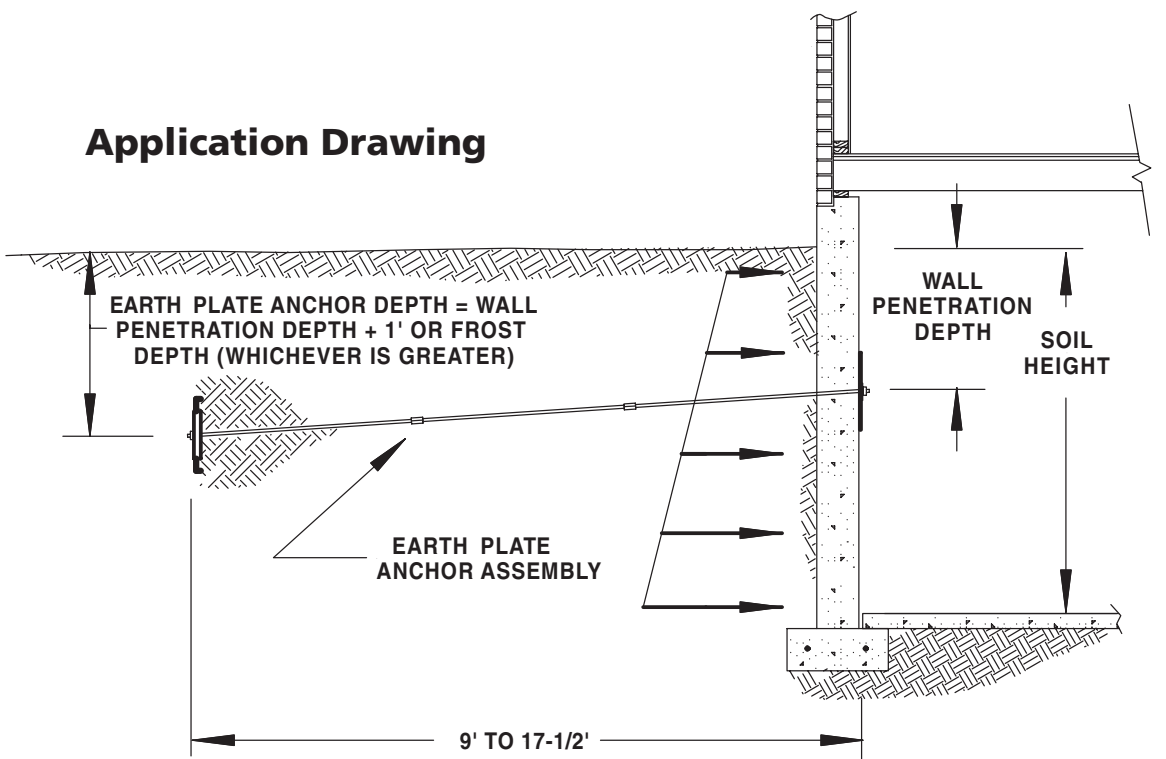
Earth Plate Anchors



ECP Earth Plate Anchors™ Component Details



Application Drawing



Earth Contact Products, LLC reserves the right to change design features, specifications and products without notice, consistent with our efforts toward continuous product improvement. Please check with Earth Contact Products at 972-480-0007 or 913-393-0007 to verify that you are using the most recent specifications.

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