

SPECIFICATIONS

Models DP-75/DP-75E, DP-100E & DP-200E

This information has been developed to assist in providing standard format specifications for public or commercial projects. It is a guideline only, and may be altered as appropriate to fit specific conditions or project designs.

1. General

1.01 Scope/Description

- A. The general conditions, alternates and addenda, applicable drawings, and technical specifications shall apply to all work under this section.
- B. The contractor shall furnish all materials, labor, equipment, and incidentals as shown, specified, and required to install Diamond Pier foundations.
- C. Work includes preparing site and soil; furnishing and preparing foundation components; aligning, leveling, plumbing, and installing foundation components; setting and driving foundation pins; and capping pins.

1.02 Related Work

- A. Superstructure construction
- B. Wood treating/field treating

1.03 References/Standards

- A. ASTM A 53 – Standard Specification for Pipe
- B. ASTM A153 – Standard Specification for Zinc Coating on Hardware
- C. ASTM, ACI, and CRSI standards for precast concrete products
- D. ASTM C1116/C1116M-10a – Standard Specification for Synthetic Fiber Re-inforcing – Type III, when applicable

1.04 Delivery/Storage and Handling

- A. Contractor shall verify upon delivery that all the proper materials have been received.
- B. Contractor shall protect the materials from damage. See Temporary Product Storage in the Commercial Installation Instructions.
- C. Contractor shall review MSDS documents and, when required, maintain a copy on site at all times.

1.05 Submittals

- A. Latest edition of Commercial Installation Instructions for public or commercial projects.
- B. Manufacturer's or Engineer's evaluation of foundation system load capacities for this project.

1.06 Quality Assurance/Testing

- A. Stamped certified soil testing and outside inspection or vendor supervision will be paid for by the owner.

2. Products

2.01 Manufacturer

- A. Pin Foundations, Inc., 2105 34th Ave. NW, Gig Harbor, WA 98335, phone 253-858-8809 (Mailing Address: 4810 Pt. Fosdick Dr. NW, PMB 60, Gig Harbor, WA 98335)

2.02 System Type

- A. Diamond Pier foundation – DP-200E, DP-100E, DP-75E – Precast heads to be minimum 4000 psi concrete, minimum 3/8" aggregate, with 5-7% total air entrainment in frost zone applications. Reinforcing to be minimum 2" synthetic macro-fibers. Note: For high chlorine applications, concrete shall be minimum 5000 psi.
DP-75 – Precast heads to be minimum 5500 psi concrete, minimum 3/8" aggregate, with 5-7% total air entrainment, and no reinforcing fibers.

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Models DP-75/DP-75E, DP-100E & DP-200E (Continued)

2. Products (continued)

2.03 Pins/Capacity

A. Four pins per pier. Capacity relative to length, diameter, and driving angle in site-specific soils. Stamped capacities shall rely on stamped local geotechnical evaluations and complete project loading and site information. All pins to be minimum Schedule 40 galvanized steel pipe (UNO) with butt cut driving ends (UNO).

B. DP-200E to use 2" nominal pipe – 2.375" actual OD. DP-100E to use 1-1/2" nominal pipe – 1.9" actual OD.

DP-75/DP-75E to use 1-1/4" nominal pipe - 1.67" actual OD. Pins to be capped with UV resistant vinyl caps. Sealable caps to be sealed with 50-year adhesive caulk (UNO).

2.04 Connections/Posts/Beams

A. Diamond Pier connection to be galvanized steel post base attached to pier with single galvanized anchor bolt (UNO). Anchor bolt for DP-75/DP-75E and DP-100E to be 5/8" galvanized, ASTM A 307 Grade A. For DP-200E, anchor bolt to be 3/4" galvanized, ASTM A 307, Grade A. Four-bolt configuration (4B) bolt diameters to be 1/2", 5/8", and 3/4" for the DP-75E 4B, DP-100E 4B, and DP-200E 4B, respectively.

B. Pressure-treated posts to have factory treated ends at bracket interface when feasible.

3. Execution

3.01 Inspection

A. Contractor shall verify superstructure layout, spans, and resulting loads for consistency with the manufacturer's or engineer's evaluated capacities and report any inconsistencies to the owner's agent prior to installation.

3.02 Site Prep

A. Use of heavy equipment and/or alteration of site soils or vegetation to be kept to a minimum to avoid compaction, erosion, and the need for site repair or replanting.

3.03 Equipment/Installation

A. Pins to be full length as specified before driving. No coupled or welded pins are to be used.

B. Follow Commercial Installation Instructions for pier placement and pin driving

C. Pins may be cut off in a partially driven position if they meet substantial resistance in the soil. See Commercial Installation Instructions.