

An ACI Standard

# Construction of Drilled Piers—Specification

Reported by ACI Committee 336

ACI SPEC-336.1-24



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## Construction of Drilled Piers—Specification

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*This Specification addresses requirements for drilled pier construction. Drilled piers are sometimes called drilled shafts, drilled caissons, drilled piers with bells, drilled shafts with bells, or bored piles. This Specification includes: excavation; the use of liners and casing; drilling slurry and concrete free-fall placement methods; testing; reinforcement fabrication and placement; concrete properties and placement; quality control and quality assurance; and acceptance. The successful installation and performance of a drilled pier is fundamentally dependent on the means and methods of construction along with the effects of the site-specific subsurface conditions.*

**Keywords:** bored pile; caisson; casing, drilled caisson; drilled pier; drilled shaft; drilling fluid; excavation; foundation; free-fall; liner; obstruction; slurry.

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**PART 1—GENERAL****1.1—Scope**

**1.1.1** This Specification covers construction of drilled piers and applies to piers 18 in. diameter and larger as indicated in Contract Documents.

**1.1.2** Unless otherwise specified, requirements for general requirements, formwork, reinforcement, concrete material, concrete production, and cast-in-place concrete shall be in accordance with Sections 1, 2, 3, 4, and 5 of **ACI SPEC-301**, including supplementary requirements indicated in Contract Documents.

**1.1.3** Unless otherwise specified, construct drilled piers indicated in Contract Documents as mass concrete in accordance with Section 8 of ACI SPEC-301, including supplementary requirements, if any, in Contract Documents.

**1.1.4** Provisions of this Specification shall govern if there are conflicts with ACI SPEC-301.

**1.1.5** This Specification is incorporated by Contract Documents and provides requirements for Contractor.

**1.1.6** This Specification governs for construction within its scope, except project-specific Contract Documents govern if there is a conflict.

**1.1.7** This Specification governs if there is a conflict with referenced material and testing standards.

**1.1.8** Contractor is permitted to submit written alternatives to any provision in this Specification for consideration.

**1.1.9** Do not use this specification in conjunction with **ACI SPEC-350.5** unless Contract Documents state that this Specification governs for Work covered by 1.1.1.

**1.1.10** Ignore provisions of this Specification that are not applicable to the Work.

**1.1.11** Values in this Specification are stated in inch-pound units.

**1.1.12** The Notes to Specifier are not part of this Specification.

**1.1.13** Unless otherwise specified, use this Specification in conjunction with any testing and inspections required by the authority having jurisdiction.

**1.2—Interpretation**

**1.2.1** Unless otherwise explicitly stated, this Specification shall be interpreted using the following principles.

**1.2.1.1** Interpret this Specification consistent with the plain meaning of the words and terms used.

**1.2.1.2** Definitions provided in this Specification govern over the definitions of the same or similar words or terms found elsewhere.

**1.2.1.3** Whenever possible, interpret this Specification so that its provisions are in harmony and do not conflict.

**1.2.1.4** Headings are part of this Specification and are intended to identify the scope of the provisions or sections that follow. If there is a difference in meaning or implication between the text of a provision and a heading, the meaning of the text governs.

**1.2.1.5** Footnotes are part of this Specification. The meaning of the provision text governs in the event of a difference in meaning or implication between the provision text and a footnote to that provision.

**1.2.1.6** Where a provision of this Specification involves two or more items, conditions, requirements, or events connected by the conjunctions “and” or “or,” interpret the conjunction as follows:

“and” indicates that all of the connected items, conditions, requirements, or events apply

“or” indicates that the connected items, conditions, requirements, or events apply singularly

**1.2.1.7** The use of the verbs “may” or “will” indicates that the Specification provision is for information to the Contractor.

**1.2.1.8** The phrase “as indicated in Contract Documents” means the Specifier included the provision requirements in Contract Documents.

**1.2.1.9** The phrase “unless otherwise specified” means the Specifier may have included an alternative to the default requirement in Contract Documents.

**1.2.1.10** The phrase “if specified” means the Specifier may have included a requirement in Contract Documents for which there is no default requirement in this Specification.

**1.2.1.11** “Unless otherwise stated, the inch-pound [or SI, whichever is applicable] system of units is applicable to combined standards referenced in this Specification.”

**1.3—Definitions**

The following definitions shall govern in this Specification.

**accepted**—determined by Architect/Engineer to be in compliance with Contract Documents.

**anchorage**—structural devices such as anchor bolts, threaded rods, or steel shapes used to fasten structural components to drilled piers.

**Architect/Engineer**—the architect, engineer, architectural firm, or engineering firm developing Contract Documents, or administering the Work under Contract Documents, or both.

**belled pier (under-ream bell)**—a designed enlargement at drilled pier bottom.

**casing**—a temporary or permanent steel cylinder lowered, vibrated, twisted, or a combination of these, into excavated hole to preclude soil, water, or both, from entering excavation.

**casing method**—drilled pier installation process in which casing is used to prevent surrounding earth from caving into excavated drilled pier and to prevent water from entering