

- 2 Drill holes deep enough to meet design requirements. The engineer may change the specified elevation of the bottom of a drilled hole depending on where satisfactory material is encountered. Do not place reinforcing steel or concrete until the final bottom elevation has been established.
- 3 Use removable casing, when necessary, to prevent caving or water seepage. Ensure that such casing is smooth, watertight, and made of metal strong enough to resist hydrostatic pressure, concrete pressure, and surrounding earth pressure. Ensure that the casing is clean, extends to the top of the drilled hole excavation, and has an outside diameter not less than the specified diameter of the drilled hole.
- 4 When the top of the drilled shaft is below ground level, use a removable oversize casing or other approved forming method from the ground surface to the shaft as required to control caving.
- 5 If caving conditions are encountered, stop drilling and change methods.
- 6 Use water for drilling mud or slurry only with approval of the engineer.
- 7 As approved by the engineer, dispose of excavated material not used as backfill around the completed structure.

506.4.2 Cleaning and Inspection

- 1 Do not place concrete before the engineer has inspected drilled holes for tolerances, satisfactory bearing material, and freedom from debris and loose material. The department will consider a hole sufficiently dry if water depth can be kept at 3 in [75 mm] or less while placing concrete.

506.4.3 Reinforcing Steel

- 1 Assemble the reinforcing steel cage completely and place as a unit.
- 2 Anchor the reinforcing cage adequately to prevent movement after installation. Use spacers to ensure proper clearance between the reinforcing steel cage and shaft face.
- 3 Extend the bars in the lower portion of the shaft to the bottom of the hole if the shaft is lengthened and full-depth reinforcement is specified. Lap-splice the bars to proper length in accordance with Subsection 514.4.5, Placing and Fastening, and Table 506.4.3-1, Lap Lengths for Drilled Shaft Reinforcing Steel.