

701-B-154 OVERSIZED PREDRILLED PILE HOLES AND BENTONITE GROUT FOR
REDUCTION OF PILE DOWNDRAG

(Adopted 09-01-05)

Description

This work shall consist of pre-drilling pile holes to the elevations and at the location shown on the plans, driving piles, and backfilling with bentonite grout.

Materials

Bentonite grout shall be untreated, sodium bentonite mined in South Dakota or Wyoming, finely ground with not more than 5% retained on the No. 200 (75 μ m) sieve. It shall be free of lumps and objectionable materials that would prevent easy mixing into a smooth fluid free of lumps of unmixed bentonite. Calcium bentonite will not be acceptable.

The following are acceptable suppliers of bentonite.

Baroid, Haliburton Services, Houston (281) 871-5900

Local distributors are:

IES Drilling Supply, Pearl City, IL (800) 388-2906

Hughes Supply, Indianapolis, IN (317) 543-3603

Laibe Supply, Indianapolis, IN (317) 231-2250

Cetco, Arlington Heights (847)392-5800

Wyo-ben, Billings MT (406) 652-6351

Local distributors are:

Midsouth Supply, Greenfield, IN (317) 894-2210

Griffin Dewatering, Hammond, IN (219) 931-1662

J Line Pump, Yorkville, IL (630) 553-5100

Pump and Irrigation Supply, Evansville, IN (812) 985-3545

The grout shall be proportioned at 2 lbs (0.907 kg) of pure bentonite powder per 1 gal. (3.785 L) of potable water. Deviations from these proportions require approval of the Engineer.

Construction Requirements

The minimum diameter of the holes shall be 4 in. (100 mm) greater than the maximum cross sectional dimension of the pile. The holes shall be drilled to the elevations shown on the plans. The piles shall then be driven to full penetration, if practicable, but at least to the specified bearing value. If pile sleeves are shown on the plans, the drilled holes shall be sleeved to maintain the opening during the driving of the piles.

Immediately after driving the piles, the annular space between the pile and the permanent casing or the pre-drilled hole shall be filled with the bentonite grout. The grout shall be emplaced at depths shown on the plans or as directed. The method of emplacement will be to fill the entire annular space from the bottom upwards to the top of the pile in one pumping operation using tremie pipe.

Tremie pipe construction shall include side discharge ports. Termination of the tremie pipe using a tee connection will be

acceptable. Tremie pipe may be constructed of polyvinyl chloride, however, joints shall not be glued or cemented.

Method of Measurement

Predrilled pile holes will be measured by the linear foot (linear meter). Bentonite grout will not be measured.

Basis of Payment

Predrilled pile holes will be paid for at the contract unit price per linear foot (linear meter) for oversized predrilled pile holes.

Payment will be made under:

Pay Item	Pay Unit Symbol
Predrilled Oversized Pile Holes.....	LFT (m)

The costs of sleeves and sleeving, maintaining open holes during pile driving, bentonite grout, and placing bentonite grout and all miscellaneous materials and work shall be included in the cost of predrilled oversized pile holes.
