

## 741 – CASED PILING

### SECTION 741

#### CASED PILING

##### 741.1 DESCRIPTION

Construct and install a casing to enclose and isolate piling within a retaining wall mass. Brace, dewater, backfill and place steel cap plate on casing.

##### BID ITEM

Cased Pile

##### UNITS

Linear Foot

##### 741.2 MATERIALS

**a. Casing.** Provide a casing with a diameter 12 inches larger than the diameter of the pile, and of sufficient thickness to carry the working stresses and loads imposed on the casing during construction. At a minimum, use 14-gage corrugated metal pipe (CMP) for the permanent casing. When specified, provide a permanent casing that is less than or equal to 1 inch out-of-round. The deviation of a chord from end to end shall be a maximum of 2 inches.

The Engineer will accept the casing based on compliance with the specified requirements, and visual inspection of condition.

**b. Aggregate.** Provide meeting the following requirements:

Sieve Size	Percent Retained by Weight
3/8"	0 - 20%
No.8	40 - 80%
No.100	98 - 100%

Provide clean, naturally rounded (not crushed) aggregate. Provide aggregate free of deleterious substances such as shale, with a maximum limestone content of 10%. Obtain the Regional Geologist's approval of the aggregate, before installing it in the casing backfill system. Such approval could take up to 7 days.

Aggregates covered by this subsection are accepted based on the procedures described in **subsection 1101.5.**

**c. Cap Plate.** Provide structural steel cap plate conforming to ASTM-A36 materials and galvanized according to ASTM 123. Fabricate a round cap plate that is 3/4-inch thick and 6 inches larger in diameter than the casing which it covers. The cap plate will fit the profile of the pile being used so that there is a maximum of a 1/2-inch gap between the cap plate and the pile. Cut out the shape of the pile into the cap plate, prior to galvanizing.

Submit shop drawings according to **SECTION 105.**

##### 741.3 CONSTRUCTION REQUIREMENTS

- Prior to driving the pile, construct the cased pile by first pre-drilling a minimum of 5 feet into in-situ material at the location shown on the plans. Center the pre-drilled hole at the pile locations. Construct the pre-drilled hole 3 inches larger than the nominal diameter of the casing defined above. Locate and construct the casing according to the tolerances in **subsection 704.3c.**
- After driving the pile, install the casing over the pile and embed into the predrilled hole. Plumb and center the casing with the pile.
- Install the cap plate to rest on top of the casing and center on the pile and the casing.
- Brace the casing to prevent movement during backfilling and retaining wall construction.
- Backfill casing with the aggregate to within 15 feet of the top of the pile; the remainder will be left open.

##### 741.4 MEASUREMENT AND PAYMENT

The Engineer will measure the cased pile by the linear foot.

Payment for "Cased Pile" at the contract unit price is full compensation for the specified work. Piling construction, measurement and payment will be handled under **SECTION 704.**