

## SECTION 52

### BOX, PIPE, AND PLATE CULVERT UNDERCUTTING

#### 52.1 DESCRIPTION

##### A. General

This work consists of the removal of unstable material or rock, either in ledge or boulder formation, below the bedding grade of box, pipe, and plate pipe culverts and the backfilling of undercut areas.

##### B. Related Work Items

Section 11	Utility Excavation and Backfill
Section 12	Roadway and Drainage Excavation
Section 14	Embankment
Section 15	Disposal of Surplus Excavation and Waste
Section 20	Granular Materials
Section 51	Structure Excavation for Box Culverts
Section 112	Select Granular Backfill

#### 52.2 MATERIALS

##### A. Box Culverts

Material for backfilling undercut areas of box culverts shall consist of gravel or other material suitable to the Engineer.

##### B. Pipe and Plate Pipe Culverts

Material for backfilling undercut areas of pipe and plate pipe culverts shall consist of soil or gravel selected material.

#### 52.3 CONSTRUCTION REQUIREMENTS

##### A. Undercutting excavation

Undercutting shall be performed to the lines and grades set forth on the plans or as otherwise ordered by the Engineer. The width of undercutting for pipe culverts will be the diameter of the pipe plus four (4) feet or the span or arch pipe plus four (4) feet unless otherwise ordered by the Engineer. Undercut material shall be disposed of as directed by the Engineer.

**B. Backfill**

Backfill shall be satisfactorily compacted in horizontal layers of not to exceed six (6) inches loose depth.

**52.4 METHOD OF MEASUREMENT**

Authorized undercutting of box, pipe, and plate pipe culverts will be measured to the nearest whole cubic yard. The width, length, and lower limits will be as shown on the plans or as otherwise directed by the Engineer. The upper limit will be the bedding grade for box culverts and the lower face of the pipe for pipe and plate pipe culverts, except the upper limit for pipe culverts to be installed on a Class B bedding will be one (1) foot below the lower face of the pipe.

**52.5 BASIS OF PAYMENT**

When an item is provided in the contract, this work will be paid for at the contract price per cubic yard to the nearest whole cubic yard for "Undercutting Culverts." When an item for "Undercutting Culverts" is provided in the contract, and undercutting of culverts is required at locations other than those specified on the plans, such undercutting will also be paid for at the contract price for "Undercutting Culverts."

When an item for "Undercutting Culverts" is not provided in the contract, payment for undercutting will be made as follows:

Undercutting for box culverts will be paid for at two and one-half (2 1/2) times the contract unit price for "Structure Excavation, Box Culvert".

Undercutting for pipe and plate pipe culverts will be paid for at six dollars (\$6.00) per cubic yard or twenty (20) times the contract unit price for Unclassified Excavation, whichever is least.

The above payment will be full compensation for equipment, labor and for furnishing, placing and compacting backfill material, including water, in place of the excavated material.

**END OF SECTION**