

SECTION 51

STRUCTURE EXCAVATION

51.1 DESCRIPTION

A. General: This work consists of the necessary foundation excavation for box culverts and structures.

B. Related Work:

Section 11	Utility Excavation and Backfill
Section 12	Roadway and Drainage Excavation and Embankment
Section 58	Concrete Box Culvert
Section 63	Storm Sewer Junction Boxes and Manholes

51.2 MATERIALS (Not Specified)

51.3 CONSTRUCTION REQUIREMENTS

A. Depth of Excavation: The elevations of the bottoms of footings shown on the plans are approximate and the Engineer may order, in writing, such changes in elevations of footings as necessary.

B. Treatment of Foundation: Rock or other hard foundation material shall be free of loose material, cleaned, and cut to a firm surface. The surface may be level, stepped, or serrated as approved by the Engineer.

Where concrete is placed on an excavated surface other than rock, special care shall be taken not to disturb the bottom of the excavation. Concrete shall not be placed until the depth of excavation has been checked and the suitability of the foundation material approved.

Foundation excavation may be trimmed to the exact size of the footing and the footing forms omitted, when approved by the Engineer.

Removal of unstable material below the bedding grade of box culverts shall be performed as set forth in Section 58.

C. Disposal of Excavation Material: The excavated material shall be used for backfill and embankment or disposed of as directed. Excavated material shall not be placed in stream beds.

D. Inspection: The Engineer shall be notified as soon as each excavation is completed. Backfill material shall not be placed until the Engineer determines that the depth and size of the excavation and the foundation material are acceptable.

- E. Backfill Above Bedding Grade:** Material used for backfill shall be of an acceptable quality and shall be free from large or frozen lumps, wood, and other extraneous material.

Spaces not occupied by permanent work shall be backfilled to match the surface of the surrounding ground.

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

The slope bounding the excavation for wingwalls shall be stepped or roughened to prevent wedge action of the backfill against the concrete.

Backfill placed around box culverts and walls shall be deposited equally on both sides of the structure. Backfill shall be compacted in accordance with Section 12.

51.4 METHOD OF MEASUREMENT

Unless specifically mentioned in detailed plans and specifications, structure excavation shall not be measured. It shall be incidental to the structure being installed. If provisions for structure excavation are provided, the plan shown quantity will be the quantity accepted for payment. Field measurements for structure excavation quantities will not be made, unless the Engineer determines that conditions warrant such measurements.

Plans quantity shall be the volume of material that must be removed for the installation of the structure, and shall not include undercut. Plans shall state assumptions on the volume of excavation required to install the structure, including trench side slope and width. Structure excavation will be calculated to the nearest cubic yard.

51.5 BASIS OF PAYMENT

Structure excavation shall be incidental to the structure being installed, unless otherwise stated in the detailed plans and specifications.

If provisions for payment of structure excavation are provided, payment will be made at the contract unit price per cubic yard for structure excavation, box culvert; structure excavation, retaining wall; or structure excavation, miscellaneous.

Payment will be considered full compensation for furnishing materials, labor, equipment, tools, and incidentals, including furnishing, installing, and removing any temporary works necessary to excavate material for construction of the structure.

END OF SECTION