

Amend **Section 206 - Excavation and Backfill for Conduits and Structures** to read as follows:

**"SECTION 206 - EXCAVATION AND BACKFILL  
FOR CONDUITS AND STRUCTURES**

**206.01 Description.** This section is for excavation and backfilling trenches for drainage culverts.

Excavation for structures does not include the excavation for paved gutters.

**206.02 Materials.** Materials shall conform to the following:

Structure Backfill Material 703.20

Trench Backfill Material 703.21

The Contractor may use Section 313 - Controlled Low Strength Material (CLSM) in place of trench and structure backfill material subject to the Engineer's acceptance. Do not use CLSM as trench backfill when installing aluminum and aluminum coated pipe culverts. When using CLSM, the Engineer will consider CLSM as the required backfill.

**206.03 Construction Requirements.**

**(A) General.** Notify the Engineer 10 working days before excavation for structures, so that the Engineer can take cross-sectional elevations and measurements of the undisturbed ground.

Excavate foundations to the elevations according to the particular type of structure to be placed.

Do not disturb the ground below the elevations shown in the contract in structure excavation operations. When disturbing such ground below the required elevations, excavate the disturbed ground until the undisturbed ground is reached. Backfill this area with Class D concrete until the required foundation footing elevation is reached. This work shall be at no cost to the State.

Keep the foundation dry by draining, bailing, pumping, driving sheathings or constructing cofferdams and cribs.

When the material from excavation does not meet the quality requirements specified for the backfill, furnish such suitable material as

required.

Use or dispose surplus and suitable material from structure excavation remaining after completing backfilling according to Section 203 - Excavation and Embankment.

**(B) Inspection.** When the Engineer needs to determine the character of the foundation material, dig test pits and make test borings and foundation bearing tests. The Engineer will pay the cost according to Subsection 104.03 - Extra Work.

**(C) Structure and Trench Backfill.** Do not deposit material in fills until the test samples imply that the concrete has developed a strength required in Subsection 503.03(E) - Loading against the back of concrete walls.

Cure the test samples under conditions similar to those affecting the structure. Continue backfilling so that excessive unbalanced loads are not introduced against the structure.

Place backfill material in uniform horizontal layers not exceeding 8 inches in loose thickness before compaction. Moisten and compact each layer of backfill until obtaining a relative compaction of not less than 95%.

When the Engineer cannot use the field density test, compact each layer of backfill with vibratory or suitable equipment on granular backfill material. Test methods to decide maximum densities and relative compaction according to Subsection 106.09 - Special Test Methods.

The Engineer will not permit compaction of backfill material by ponding or jetting.

#### **206.04 Method of Measurement.**

**(A) Structural Excavation.** For culverts, the lateral limits for payment of structure excavation shall be 18 inches outside the external limits of the pipe.

For culverts, the lower limits for payment shall be the bottom elevation of the bed course material, and the upper limits shall be the existing ground.

The Contractor shall remove soft, spongy, or unsuitable material from the width equal to the span or diameter of the culvert plus one diameter outside the lateral limits of the culvert when encountering such material.

When using CLSM for backfill, the trench width may be reduced to the outside diameter or span of the culvert plus six inches on each side.

**(B) Structure and Trench Backfill for Culverts.** The Engineer will not measure structure and trench backfills for culverts.

**206.05 Basis of Payment.**

**(A) Structure Excavation.** The Engineer will pay for the accepted structure excavation at the contract unit price per cubic yard complete in place.

The price includes full compensation for excavating for structures and culvert trenches; keeping the foundation dry; backfilling culvert trenches; backfilling culvert trenches with CLSM; furnishing and applying water for the compaction of structure backfill; testing the samples; placing backfill material in uniform horizontal layers; moistening and compacting each layer of backfill; and furnishing labor, materials, tools, equipment, and incidentals necessary to complete the work.

**(B) Structure and Trench Backfill for Culverts.** The Engineer will not pay for structure and trench backfill for culverts. The cost shall be incidental to Structure Excavation.

The Engineer will make payment under:

<b>Pay Item</b>	<b>Pay Unit</b>
Structure Excavation for _____	Cubic Yard"