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

"SECTION 206C - EXCAVATION AND BACKFILL FOR DRAINAGE FACILITIES

206C.01 Description. This section describes the following:

(1) Excavating and backfilling to depths and lines established for drainage structure foundations;

(2) Excavating and backfilling trenches for culverts, structural plate culverts, concrete and cement rubble masonry, grouted rubble paving, hand-laid and dumped riprap;

(3) Disposing of surplus material from excavations;

206C.02 Materials.

Structure Backfill Material	703.20
Trench Backfill Material	703.21

Controlled Low Strength Material (CLSM) may be used in accordance with Section 313 - Controlled Low Strength Material (CLSM) for Utilities and Structures 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.

Provide plastic marking tape that is acid and alkali-resistant polyethylene film, 6-inches wide with minimum thickness of 0.004 inch. Provide tape with minimum strength of 1,750 psi lengthwise and 1,500 psi crosswise. Manufacture tape with integral wires, foil backing, or other means to enable detection by a metal detector when tape is buried up to 3-feet deep. Manufacture tape specifically for marking and locating underground utilities. Provide metallic core of tape encased in a protective jacket or provided with other means to protect it from corrosion. Tape shall conform to the following colors and shall bear a continuous printed inscription describing the specific utility: Red: Electric; Yellow: Gas, Oil, Dangerous Materials; Orange: Telephone, Telegraph, Television, Police, and Fire Communications; Blue: Water System; Green: Sewer Systems.

206C.03 Construction Requirements.

(A) Excavation. Notify the Engineer 10 working days before excavating for drainage structures and culverts.

The Contractor shall be responsible for the stability of temporary open cuts during construction of structures or trenches and shall take appropriate measures to meet OSHA requirements at no additional cost to the State.

In excavation operations, do not disturb ground below bottom of bed course material. If ground below bottom of bed course material is disturbed, excavate disturbed ground until undisturbed ground is reached. Backfill this area with Class D concrete. Conduct this work at no increase in contract price or contract time.

Keep foundation excavation dry by draining, bailing, pumping, or driving sheathings.

When the material from excavation does not meet quality requirements specified for backfill according to Subsection 206.02 - Materials, furnish conforming material, as required.

Deposit remaining structure or trench excavation material that is not used as backfill, in roadway embankments in accordance with Section 203 - Excavation and Embankment.

(B) Structure and Trench Backfill. For cast-in-place drainage structures, do not deposit fill material against back of outside wall until test samples indicate that concrete has developed strength required in Subsection 503.03(E) – Loading.

Cure 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 relative compaction of not less than 95%. The Engineer may reduce compaction requirement of 95 percent is achieved according to Subsection 203.03(C)(2) – Relative Compaction Test. The Engineer may reduce 95 percent compaction requirement in situations where such compaction is not feasible, such as in footings located in running streams or in swampy areas. The Engineer will be the sole judge of the degree of reduction. In streambeds subject to appreciable scour, backfill footings with rockfill instead of complying with 95 percent compaction requirement.

When the Engineer cannot use field density test, compact each layer of backfill with vibratory or other acceptable equipment on granular backfill material.

When compacting structure and trench backfill for metal pipes, do not use water containing excessive quantity of salt or other deleterious substances..

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

When required, place sufficient fill at culverts ahead of other grading operations to permit public traffic to cross.

Compact backfill material in the following areas to a relative compaction of not less than 90 percent:

(1) Footings for slope protection, slope paving, and aprons;

(2) Cement rubble masonry and concrete headwalls;

(3) Drainage facilities in median areas or in traffic interchange loops.

Place plastic marking warning tapes for the appropriate type of utility directly above pipe, within a depth of 3 feet from the finish grade, unless otherwise shown.

206C.04 Method of Measurement. Structure excavation is paid for on a lump sum basis. Measurement for payment does not apply.

206C.05 Basis of Payment. The Engineer will pay for the accepted excavation on a contract lump sum basis. Payment will be full compensation for the work prescribed in this section and the contract documents.

The Engineer will pay for the following pay item when included in the proposal schedule:

Pay Item	**Pay Unit**
Excavation for _____	Lump Sum

The Engineer will pay for the removal of unsuitable material from depths greater than 3 feet below depth indicated in the contract documents in accordance with Subsection 104.02 - Changes.

The Engineer will not pay for structure and trench backfills for culverts and structural plate culverts separately and will consider the cost for those items as included in the contract prices for the various culvert contract pay items. The cost is for the work prescribed in this section and the contract documents.

END OF SECTION 206C