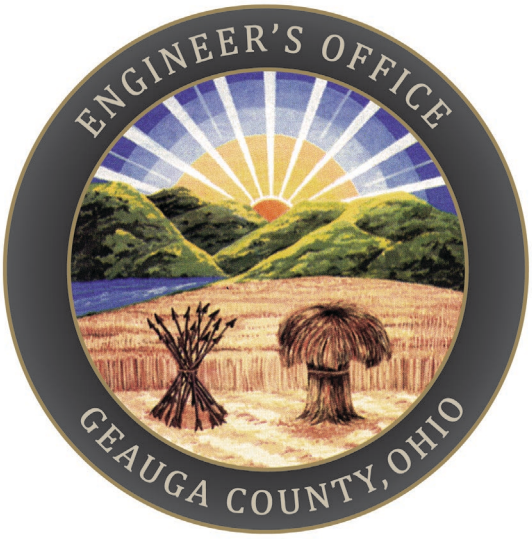

MODIFICATIONS TO THE

OHIO DEPARTMENT OF TRANSPORTATION

2023 CONSTRUCTION AND MATERIAL SPECIFICATIONS

AND SUPPLEMENTAL SPECIFICATIONS

GEAUGA COUNTY

YEAR 2026

February 23, 2026

100 GENERAL PROVISIONS

The Contractor shall follow the State of *Ohio Department of Transportation Construction and Material Specifications (C&MS)* published January 1, 2023, (including *Supplemental Specification 800*) unless otherwise noted in this document. Where the "Department" is referenced in the State manual it shall be interpreted as the Public Authority or authorized agent. Where the "Director" or "Engineer" is referenced in the State manual, it shall mean the "Geauga County Engineer".

Section 100 - General Provisions of the C&MS shall not apply. The *Standard Contract Provisions for Improvement Contracts* prepared by the Geauga County Engineer's Office cover the contracting and legal provisions for county and township public improvement projects. The most recent publication shall serve as a basis of specifications, unless otherwise stated in the Plans or Description of Work, for all highway-related improvements in Geauga County.

In addition to the provisions listed above, the Contractor shall follow the most current ODOT LPA Construction and Material Specifications Proposal Note 100 and ODOT LPA Template Contract Provisions for all Federal Aid Projects.

All costs for equipment, labor, tools, material, hauling, and disposal shall be included in the bidder's unit price for each bid item.

200 EARTHWORK

ITEM 204 SUBGRADE COMPACTION AND PROOF ROLLING

204.03 Compaction of the Subgrade. The Contractor shall perform all compaction tests according to Supplement 1015 and correct any deficiencies. Where subgrade constructed under this Contract becomes loosened, rutted, or otherwise defective, the Contractor shall correct the deficiency before proceeding with subsequent work.

ITEM 206 CHEMICALLY STABILIZED SUBGRADE

206.03 Submittals. If the pay item for Mixture Design for Chemically Stabilized Soils is included, the weight of the cement used shall be between five percent and nine percent (5% - 9%) of the dry weight of the subgrade soil as directed by the Engineer.

The percent of cement shall be determined by using compressive strength tests performed on soil cement cylinders prepared as per ASTM D-1633. The compressive strength test shall be performed on cylinders using subgrade samples taken from a minimum of three (3) separate locations, with no less than one (1) from within the pavement area, as approved by the Engineer for a 7-day cure. The percentage by weight of the cement content of the tests shall be 4, 6, and 8 percent or as directed. Three (3) cylinders for each percentage are required, a minimum of 9 total. The soil mixtures for the tests shall be made at optimum moisture. The final mixture shall have the capability of attaining a minimum strength of two hundred (200) psi in seven (7) days.

The data suitably presented shall be submitted to the Engineer for acceptance. The Engineer will determine the percentage to be used on the project. The percentage of cement used on the project may be varied to meet field conditions.

Moisture density curves for the percentage chosen by the Engineer shall be made in accordance with AASHTO T-99 by the soil consultant for each sample. This data shall be submitted to the Engineer three working days prior to the work.

The design and quality control testing as described shall be paid for under Item 206 Mixture Design for Chemically Stabilized Soils.

206.05 Construction. The Contractor shall perform all compaction tests according to Supplement 1015. Additionally, perform field verification of the mix design per Supplement 1120. Compressive strength tests shall be performed on the cores at a 7-day cure. The Engineer must be satisfied the soil has reached a 200-psi strength prior to allowing the asphalt paving work.

300 BASES

ITEM 301 ASPHALT CONCRETE BASE

301.02 Composition. Do not start mix production without asphalt mix design approval from the Engineer in writing. The submittal shall include the design of all mixes, source and gradation of aggregate and proposed asphalt content for the asphalt course or courses proposed to be used for a project. The proposed source (asphalt plant) of the asphalt mix must have an approved quality control program on file with the Geauga County Engineer.

ITEM 304 AGGREGATE BASE

304.02 Materials. No ACBFS (Air Cooled Blast Furnace Slag), GS (Granulated Slag), OH (Open Hearth Slag), EAF (Electric Arc Furnace Slag), BOF (Basic Oxygen Furnace) Slag or RPCC (Recycled Portland Cement Concrete) materials will be permitted.

400 FLEXIBLE PAVEMENT

ITEM 401 ASPHALT CONCRETE FIELD OPERATIONS

401.05 Weather Limitations. Never place asphalt concrete if the air temperature is below the minimum established in **Table 1**. Chemical warm mix asphalt (WMA) additives shall not be permitted.

TABLE 1 WEATHER LIMITATIONS

Course Thickness	Air Temperature
3.0 inches and over	40 °F
1.5 to 2.9 inches	45 °F
1.0 to 1.4 inches	50 °F
Less than 1.0 inches	60 °F
424 Polymer (any depth)	60 °F

401.07 Hauling. No loads of any material shall be accepted if the trucks are overloaded. Maximum allowable net loads shall be in accordance with State and/or Local regulations regarding weight limits. Certification documenting the allowable gross weight for all vehicles working on the project shall always be available for inspection by the Engineer.

401.08 Placement Operations. If existing mailbox approaches are to be paved, the Contractor shall resurface the approaches in general conformance with **Figure 1** for all courses of asphalt.

The Contractor shall place a minimum apron while performing the mainline work, as needed, for access during construction, as directed by the Engineer. Payment for this item shall be included with the mainline item.

The Contractor shall schedule paving work to complete all adjacent lanes and close all longitudinal centerline joints prior to the end of each workday, unless otherwise specified in the Bid Specifications. Seal all transverse and longitudinal surface course joints per 702.09.

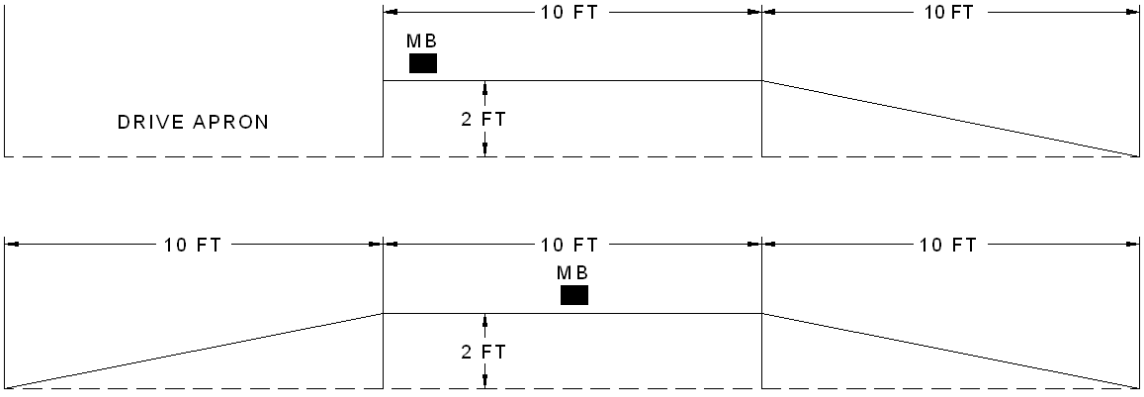

FIGURE 1 PAVEMENT AT MAILBOX APRONS

ITEM 411 STABILIZED CRUSHED AGGREGATE

411.02 Materials. Do not use ACBFS (Air Cooled Blast Furnace Slag), GS (Granulated Slag), OH (Open Hearth Slag), EAF (Electric Arc Furnace Slag), BOF (Basic Oxygen Furnace) or RPCC (Recycled Portland Cement Concrete).

ITEM 422 CHIP SEAL

422.02 Materials. Certified material submittals shall be submitted to the engineer a minimum of 48 hours prior to placement. If material is stockpiled the contractor must test the material per CMS 422.02.

422.13 Method of Measurement. Certified scale tickets for aggregate and emulsion are required for determining quantity used and shall be provided to the Engineer within 24 hours of the installation of the material. The Contractor may provide certified test results, from the supplier of cover aggregate, in writing to determine the conversion factor to cubic yards of the cover aggregate approved for each application. If certified documentation is not provided, aggregate shall be measured by weight and converted to cubic yards in accordance with **Table 2**.

TABLE 2 CONVERSION FACTORS

Aggregate	Pounds per Cubic Yard
#8 Limestone	3300
#67 Limestone	3000

422.14 Basis of Payment. The Owner will pay for accepted quantities at the contract prices as follows:

Item	Unit	Description
422	Gallon	Seal Coat Bituminous Material
422	Cubic Yard	Seal Coat Cover Aggregate, No._____

ITEM 424 FINE GRADED POLYMER ASPHALT CONCRETE

424.02 Composition. Use a PG 76-22M asphalt binder unless otherwise directed in the Specifications. Reference Section 440 of this document for other material restrictions.

ITEM 440 ASPHALT CONCRETE MIX DESIGN – GENERAL

440.01 Description. Do not start mix production without asphalt mix design approval from the Engineer in writing. The submittal shall include the design of all mixes, source and gradation of aggregate and proposed asphalt content for the asphalt course or courses proposed to be used for a project. The proposed source (asphalt plant) of the asphalt mix must have an approved quality control program on file with the Geauga County Engineer.

440.02 Materials. Do not use ACBFS (Air Cooled Blast Furnace Slag) in any mixes. Do not use gravel in any surface mixes.

440.05 Reclaimed Asphalt Concrete Pavement and Reclaimed Asphalt Shingles. Do not use Reclaimed Asphalt Shingles (RAS), tires, or other recycled materials.

Follow Method 1 for Reclaimed Asphalt Pavement (RAP). Limit RAP according to **Table 3**.

TABLE 3 STANDARD RAP LIMITS

Asphalt Mix Application	Percent RAP by Dry Weight of Mix
424 Fine Graded Polymer	10%
441 Surface Course	10%
441 Intermediate Course	35%
301 Base Course	50%

ITEM 441 MARSHALL ASPHALT CONCRETE

441.02 Composition. Use a PG 64-22 asphalt binder unless otherwise directed in the Bid Specifications. Reference Section 440 of this document for other material restrictions.

500 STRUCTURES

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600 INCIDENTALS

ITEM 605 UNDERDRAINS

605.02.B Materials. All underdrain pipes shall be perforated polyvinyl chloride plastic pipe meeting the requirements of ODOT C&MS 707.41 or approved equal.

605.03 Pipe Underdrains Construction. All granular backfill material shall be limited to #57 size washed gravel or limestone.

ITEM 611 PIPE CULVERTS, SEWERS, DRAINS, AND DRAINAGE STRUCTURES

611.01 Description. Any reference to the requirements outlined in ODOT 611.04.B-D is not required, unless outlined in the project specifications. All inspections will be performed by the Engineer's Representative.

The Contractor shall locate and protect all existing drains and sewer outlets during the clearing and grubbing operation. These facilities shall be provided with an unobstructed outlet to the newly constructed ditch or storm sewer.

The Contractor shall assure a positive drainage pattern at the inlet and outlet of cross culvert installations.

The Contractor shall reconstruct driveways to the same existing driveway dimensions unless shown differently on the plans, specifications or minimums stated below for the different drive types.

611.02 Materials. All materials shall consist of an approved stone or gravel. No ACBFS (Air Cooled Blast Furnace Slag), GS (Granulated Slag), OH (Open Hearth Slag), EAF (Electric Arc Furnace Slag), BOF (Basic Oxygen Furnace) or RPCC (Recycled Portland Cement Concrete) shall be permitted.

For ODOT 706.05 Precast Reinforced Concrete Box sections, provide the box section conforming to ASTM C 1577, with the following modification to paragraphs 6.4 and 6.5.

Paragraph 6.4 - Use chemical admixtures according to ODOT 705.12. Use a corrosion inhibitor unless epoxy coated reinforcing steel is used. An approved list of corrosion inhibiting admixtures is on file at the Laboratory. Manufacturers should recognize that the corrosion inhibitors and admixtures may influence strength, entrained air content, workability, etc. of their concrete mixes. The manufacturer's choice of one of these corrosion inhibitors does not alleviate meeting all design requirements of this structure.

Paragraph 6.5 - Provide epoxy coated reinforcement according to ODOT 709.00, Grade 60 (Grade 420), or ODOT 709.14. In lieu of epoxy coated reinforcement, an approved corrosion inhibiting admixture may be added to the concrete at the approved dosage; and provide reinforcement according to ODOT 709.01, 709.03 or 709.05; Grade 60 (Grade 420) or ODOT 709.08, 709.10, 709.11 or 709.12. Provide epoxy or galvanized coated or stainless-steel connections when connecting a precast structural unit into a cast-in-place structural component or between segments of adjacent precast structural units either manufactured as separate units or across construction joints when manufactured as one unit. Provide epoxy coated reinforcement according to ODOT 709.00 or 709.14, when these connections are designed using reinforcing steel. Provide galvanized coatings or stainless steel according to ODOT 711.02, when these connections are designed using connection plates, hardware or concrete inserts.

All support for reinforcement within the formwork that bears against an exposed face of the conduit, shall be a non-metallic material.

ITEM 617 RECONDITIONING SHOULDERS

617.02 Materials. Gravel, ACBFS (Air Cooled Blast Furnace Slag), GS (Granulated Slag), OH (Open Hearth Slag), EAF (Electric Arc Furnace Slag), BOF (Basic Oxygen Furnace) or RPCC (Recycled Portland Cement Concrete) materials shall not be permitted under this item.

When specified in the plans, Compacted Aggregate material shall consist of limestone or Reclaimed Asphalt Pavement (RAP) meeting the gradation of ODOT 703.18.

ITEM 623 CONSTRUCTION LAYOUT STAKES AND SURVEY MONUMENTS

623.05 Placement, Protection and Restoration of Survey Monuments. Boxless monuments shall be installed, by an Ohio Registered Professional Surveyor, per the Construction Drawings, or as directed by the Engineer. The new monument locations shall be marked with four (4) PK nails by the Registered Surveyor. Once the monument locations are marked, the Contractor shall notify the Engineer for review and approval. Upon approval the monuments shall be set.

Survey methods for this project shall include construction layout hubs, nails, and stakes for verification by the Engineer. The Contractor may also utilize automated machine control and real time layout by GPS, Total Station, or Leveling Device in addition to physical stakes.