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# ADDENDUM No. TWO

Date:	June 18	, 2024

Project: Flemington Road Improvements, MES No. 2023-80

Engineer: M.E. Sack Engineering Model Hinesville, Georgia

The original plans, specifications, and bid documents are amended to include the following:

Plan Set:

 Replace the entire plan set with enclosed of the same. Note the Engineer has decided to include 1.5" Open Graded Crack Relief Interlayer as a required item. The Engineer has also decided NOT to perform the Full-Depth Asphalt Removal, but instead the Full-Depth Concrete Removal and 10" GAB backfill. Details on sheet C300 have been updated to reflect the required paving sections.

Table of Contents:

 Replace the previous Table of Contents with the enclosed of the same. Note Section 301 – Soil-Cement Construction has been replaced with Section 315 – Cement Stabilized Reclaimed Base Construction under Section V-D: Georgia Department of Transportation (GDOT) Specifications.

Bid Form:

 Replace the previous Bid Form with the enclosed of the same. Note Full Depth Roadway Removal, and 4" Granular Roadway Base have been removed, that Adjust Manhole Top and Shoulder Fill & Grading have been added, and that the quantities have changed for 10" Granular Roadway Base, Full-Depth Roadway Reclamation, and Recycling Agent. **Technical Specifications:** 

 Replace the previous Section 01150 – Measurement and Payment with the enclosed of the same. Note that the order of a few items has been adjusted, Shoulder Fill & Grading has been added, and additional language is included for Full-Depth Roadway Reclamation.

**GDOT Specifications:** 

 Replace Section 301 – Soil-Cement Construction with the enclosed Section 315 – Cement Stabilized Reclaimed Base Construction.

The following clarifications are offered for questions received:

- 1. Wrong GDOT Spec?
  - GDOT Section 301 is replaced with GDOT Section 315 by this addendum.
- 2. If the alternates are chosen, will items be added for removal of existing dirt/agg?
  - Alternative A for 4" GAB is being removed from the bid form by this addendum. There will
    not be an item for removal of dirt/aggregate; however, there will be an additional item for
    shoulder fill and grading that will be required to match the new surface elevation.
- 3. Is shoulder scrapping & grubbing similar to Clear and Grubb?
  - Please refer to the enclosed Section 01150 Measurement and Payment, Paragraph 2.04 Shoulder Scraping & Grubbing.
- 4. Will a jobsite trailer be needed for this job?
  - No.

-END-



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# . BID FORM

Bid Item	Quantity	Units	Description	Unit Price	Cost
1	35	SY	Concrete Pavement Removal	\$	\$
2	1	LS	Shoulder Scraping & Grubbing	-	\$
3	35	SY	10" Granular Roadway Base	\$	\$
4	36,165	SY	Full-Depth Roadway Reclamation	\$	\$
5	1,400	TN	Recycling Agent (Stabilization) for Base Course (Cement)	\$	\$
6	36,200	SY	1.5" Open Graded Crack Relief Interlayer	\$	\$
7	36,200	SY	2.5" 9.5mm Asphalt Paving	\$	\$
8	4	EA	Adjust Manhole Top	\$	\$
9	15	SY	Concrete Valley Gutter	\$	\$
10	1	LS	Shoulder Fill & Grading	-	\$
11	1	LS	Shoulder Grassing	-	\$
12	11	LF	24" Thermoplastic Stop Bar	\$	\$
13	280	LF	8" Thermoplastic Crosswalk Striping	\$	\$
14	635	LF	4" Thermoplastic Solid White Line Striping	\$	\$
15	270	LF	5" Thermoplastic Double Solid Yellow Line Striping	\$	\$
16	24	LF	24" Paint & Bead Stop Bar	\$	\$
17	25,465	LF	4" Paint & Bead Solid White Line Striping	\$	\$
18	6,330	LF	5" Paint & Bead Double Solid Yellow Line Striping	\$	\$
19	1,240	LF	5" Paint & Bead Dashed Yellow Line Striping	\$	\$
20	4,100	LF	5" Paint & Bead Dashed/Solid Yellow Line Striping	\$	\$
21	20,150	LF	Rumble Strips on 4" White Striping	\$	\$
22	3	EA	Transverse Rumble Strips before Stop Sign	\$	\$
23	12,700	LF	Raised Pavement Markers	\$	\$
24	1	LS	Traffic Control	-	\$
25	1	LS	Mobilization (5% Max)	-	\$
				SUBTOTAL	\$
				TOTAL BID	\$

# SECTION 01150 MEASUREMENT AND PAYMENT

# PART 1 - GENERAL

# 1.01 QUANTITIES

- A. Quantities: Quantities listed in the Proposal are approximate only and are intended to serve as a guide in comparing bids, and may be increased or decreased without invalidating the unit price bid.
- B. Payment: Contractor shall be paid for actual in place quantities as determined by the Engineer field measurements.
- C. Discrepancies: In case of discrepancies between the figures shown in the unit prices and totals, the unit prices shall apply and the totals shall be corrected to agree with the unit price.

# PART 2 - MEASUREMENT AND PAYMENT

# 2.01 CONCRETE PAVEMENT REMOVAL

- A. Measurement: Measurement shall be made on the basis of the number of square yards of graded aggregate base applied to the roadway at the specified thickness as shown on the construction plans. Irregular areas such as turnouts, filler strips, and intersections will be measured to the closest square yard.
- B. Payment: Payment will be made on the basis of the number of square yards of granular crusher run (graded aggregated) base at the specified thickness applied to the roadway at the unit price state in the bid. The price shall include all labor, equipment, and material to complete the task. The task shall include, but not be limited to, furnishing, hauling, placing and compaction of the crusher run base in order to bring the base to the lines, grades, and cross sections shown of the construction plans or established by the Engineer.

# 2.02 SHOULDER SCRAPING & GRUBBING

- A. Measurement: Measurement shall be made on the basis of the percentage complete of the task in accordance with the plans and specifications.
- B. Payment: Payment will be made at the lump sum stated in the bid. The price bid shall include furnishing all labor, materials, and equipment necessary to complete this item. Work shall include, but is not limited to, removal of all trees, shrubs, grass, soil, sand, and undergrowth that presently exist along the shoulder, preventing the construction of this project. All material removed including vegetation, roots and organic mat shall be removed from the site and disposed of at a permitted site. The contractor shall take special care not to disturb the roots of trees that are marked to remain. Trees to be saved shall be marked and approved by the engineer prior. Trees to be saved shall have the appropriate tree protection installed.

# 2.03 GRANULAR ROADWAY BASE

- A. Measurement: Measurement shall be made on the basis of the number of square yards of graded aggregate base applied to the roadway at the specified thickness as shown on the construction plans. Irregular areas such as turnouts, filler strips, and intersections will be measured to the closest square yard.
- B. Payment: Payment will be made on the basis of the number of square yards of granite crusher run (graded aggregated) base at the specified thickness applied to the roadway at the unit price stated in the bid. The price shall include all labor, equipment, and material to complete the task. Work shall include, but not be limited to, the furnishing, hauling, placing, and compaction of the crusher run base in order to bring the base to the lines, grades, and cross sections shown on the construction plans or established by the Engineer.

# 2.04 FULL-DEPTH ROADWAY RECLAMATION

- A. Measurement: Measurement shall be made on the basis of each square yard of pavement to undergo full-depth reclamation and each ton of Portland Cement to be added to the mix in accordance with the plans, specifications, and bid documents. Refer to Section 315.4 of GDOT specification 315 for measurement of Cement Stabilized Reclaimed Base and Portland Cement. Contractor shall provide the engineer with weight tickets for each load of cement additive that is used.
- B. Payment: Payment will be made on the basis of the unit price stated in the bid. The unit price shall include furnishing all labor, materials, and equipment necessary to complete this item of work. Work shall in include, but not be limited to, pulverization of roadway and base material, addition of chemical stabilizers, compaction of new base mix, and curing of mix. Refer to Section 315.5 of GDOT specification 315 for payment of Cement Stabilized Reclaimed Base and Portland Cement.

# 2.05 ASPHALT PAVING OVERLAY/CRACK PROOF INTERLAYER

- A. Measurement: Measurement will be made on the basis of each square yard of asphalt in place, in accordance with the plans and specifications and accepted by the Engineer.
- B. Payment: Payment will be made on the basis of the number of square yards of asphalt in place, in accordance with the unit price bid as stated in contract. Work shall include, but is not limited to, the furnishing, hauling, placing, and compaction of the asphalt and aggregate in order to bring the pavement to the lines, grades and cross sections as designated on the construction plans. The unit price shall also include all surface cleaning, prime, tack, and pavement markings. All striping shall be in accordance with the current MUTCD and local specifications.

# 2.06 ADJUSTING TO GRADE OF MISCELLANEOUS ROADWAY STRUCTURES

- A. Measurement: Measurement will be made on the basis of adjusting each structure to grade, to determine the unit or units of each type completed and accepted, in accordance with the plans and specifications and accepted by the engineer. Structure tops to be raised or lowered 2 ft. (600 mm) or less are considered "Adjust to Grade."
- B. Payment: Payment will be made on the basis of each structure adjusted to grade. The unit price bid shall include all labor, materials and equipment necessary, including, but

not limited to, excavation, shoring and sheeting, dewatering, gravel bedding, castings, backfill, compaction and complete surface restoration. Payment is full compensation for adjusting to grade the structures as specified in this Specification.

# 2.07 CURB AND GUTTER, VALLEY GUTTER, AND CONCRETE BANDS

- A. Measurement: Measurement will be made on the basis of each linear foot of curb and gutter installed to the lines and grades shown on the plan. The size of the curb and gutter will be shown on the plans and indicated on the bid documents.
- B. Payment: Payment shall be made on the basis of the unit price stated in the bid. The price bid shall include all materials, labor, and equipment necessary to complete the work. Work shall include, but is not limited to, all excavation, forming, grade staking, compaction, curb and gutter installation, dewatering, form wrecking, cleanup, and surface restoration

# 2.08 SHOULDER FILL & GRADING

- A. Measurement: Measurement shall be made on the basis of the percentage complete of the lump sum bid in accordance with the construction plans and bid items.
- B. Payment: Payment shall be made on the basis of the percentage complete of the lump sum price stated in the bid as determined by the project engineer. The unit price shall include, but is not limited to, furnishing all labor, materials, and equipment necessary for the grading of new shoulders to match the final pavement elevation and tie to the existing grade in order to drain towards the roadside ditches, in accordance with plans and specifications. Work shall include, but not be limited to, furnishing all materials, leveling, compacting, and surface restoration.

### 2.09 GRASSING

- A. Measurement: Measurement shall be made on the basis of the completed item in accordance with the construction plans and bid items.
- B. Payment: Payment will be made in accordance with the price stated in the bid. The unit price shall include, but is not limited to, furnishing all labor, materials, and equipment necessary for the satisfactory growth of grass on all disturbed areas in accordance with plans and specifications. Work shall include, but not be limited to, furnishing all materials, fertilizer, soil samples, grass seed, raking, leveling, watering, maintenance, and final surface restoration. Final payment will not occur until permanent grass is established.

### 2.10 THERMOPLASTIC PAVEMENT MARKING

- A. Measurement: Measurement shall be made on the basis of each linear foot of pavement markings in place in accordance with the plans and specifications.
- B. Payment: Payment shall be made at the linear footage stated in the bid. The unit price bid shall include all labor, materials, and equipment necessary to complete the task. The task shall include, but is not limited to, supplying and installing all thermoplastic pavement markings to replace existing in accordance with construction plans, surface restoration, and cleanup.

# 2.11 PAINT AND BEAD PAVEMENT MARKING

- A. Measurement: Measurement shall be made on the basis of each linear foot of pavement markings in place in accordance with the plans and specifications.
- B. Payment: Payment shall be made at the linear footage stated in the bid. The unit price bid shall include all labor, materials, and equipment necessary to complete the task. The task shall include, but is not limited to, supplying and installing all paint and bead pavement markings to replace existing in accordance with construction plans, surface restoration, and cleanup.

# 2.12 RUMBLE STRIPS ON SHOULDER

- A. Measurement: Measurement shall be made on the basis of each linear foot of rumble strips in place in accordance with the plans and specifications.
- B. Payment: Payment shall be made at the linear footage stated in the bid. The unit price bid shall include all labor, materials, and equipment necessary to complete the task. The task shall include, but is not limited to, installing all rumble strips to replace existing in accordance with construction plans, surface restoration, and cleanup.

# 2.13 TRANSVERSE RUMBLE STRIPS BEFORE STOP SIGN

- A. Measurement: Measurement shall be made on the basis of each transverse rumble strip in place in accordance with the plans and specifications.
- B. Payment: Payment shall be made at the unit price stated in the bid. The unit price bid shall include all labor, materials, and equipment necessary to complete the task. The task shall include, but is not limited to, installing all rumble strips to replace existing in accordance with construction plans, surface restoration, and cleanup.

# 2.14 RAISED PAVEMENT MARKERS

- A. Measurement: Measurement shall be made on the basis of each linear foot of raised pavement markers in place in accordance with the plans and specifications.
- B. Payment: Payment shall be made at the linear footage stated in the bid. The unit price bid shall include all labor, materials, and equipment necessary to complete the task. The task shall include, but is not limited to, installing all raised pavement markers in accordance with construction plans, surface restoration, and cleanup

# 2.15 TRAFFIC CONTROL

- A. Measurement: Measurement shall be made on the basis of the percentage complete of the lump sum bid in accordance with the construction plans and bid items.
- B. Payment: Payment shall be made on the basis of the percentage complete of the lump sum price stated in the bid as determined by the project engineer. The lump sum shall include furnishing all labor, materials, and equipment necessary to complete the task. The task shall include, but is not limited to, the placing, moving, and maintenance of all signage, barricades, cones, barrels, flagging, flag men, and guide vehicles throughout the construction process to safely reroute traffic from existing traffic patterns. Traffic control shall be done in a manner to safely warn, reroute, and lead vehicles to their

destination. Additional signage will be required if the engineer deems that the traffic control in place does not fully meet the required intent of the task. Changing of existing traffic patterns shall be communicated with the engineer no less than 48 hours prior to.

# 2.16 MOBILIZATION

A. Payment will be made for the price as stated in the Contract once the Contractor has established his construction yard, and met the requirements established in the Contract Documents. Mobilization will be recognized complete once the Contractor has provided a construction schedule and moved his equipment and a substantial amount of material to the job site. Construction must be underway and progressing. Payment for mobilization will be limited to a maximum amount not to exceed 5% of the bid price.

END OF SECTION

# Section 315—Cement Stabilized Reclaimed Base Construction (CSRB)

# **315.1 General Description**

This work includes constructing a cement stabilized base course by pulverizing the existing flexible pavement, underlying base and subgrade, and mixing with Portland cement. Construct according to these specifications and to the lines, grades, thickness, and typical cross-sections shown on the plans or established by the Engineer.

# **315.1.01 Related References**

General Provisions 101 through 150

# A. Standard Specifications

Section 109-Measurement and Payment

Section 301-Soil Cement Construction

Section 412-Bituminous Prime

Section 814-Soil Base Materials

Section 821-Cutback Asphalt

Section 824-Cationic Asphalt Emulsion

Section 830-Portland Cement

Section 880-Water

### **B. Referenced Documents**

GDT 19 - Determining Maximum Density of Soil-Cement mixtures

GDT 20 – Determining Field Density of soils with <45% retained on the No. 10 sieve and < 10% retained on the 1 in. sieve

GDT 21 - Determining Field Density of soils containing >45% retained on the No.10 sieve or >10% retained on the 1 in. sieve

GDT 59 - Testing Density of roadway materials with Nuclear Gauge

GDT 65 - Laboratory Design of Soil-Cement and Cement Stabilized Graded Aggregate

GDT 67 - Family of Curves Method for determining Maximum Density of soils

GDT 86 - Determining the compressive strength of Cement Stabilized Base cores taken from the roadway

# 315.1.02 Submittals

Prior to construction, submit a Construction Work Plan to the Engineer consisting of the proposed equipment, materials, and operation procedures. If the Engineer determines that the work plan is not satisfactory, revise the procedures and augment or replace equipment, as necessary, to complete the work.

# 315.1.03 Mix Design

The Contractor shall submit a mix design to the Office of Materials and Testing for approval at least three weeks prior to construction. The Mix Design process shall be completed in accordance with GDOT Test Method/GDT 65 by an accredited materials laboratory. The sampling, testing, proportioning, and documentation shall be completed by an accredited materials laboratory. The Contractor will be responsible for ensuring that appropriate traffic control measures are in place during the sampling operations. In-place samples of the road structure shall be taken at a minimum frequency of 1000 ft. (300m) per two lanes; alternating the sample locations to achieve a sample every 500 lane-feet (152m). Additional samples may be needed to represent material changes and/or problem areas. Each sample shall contain at least 30 lbs. (14kg) of proportionally blended materials to be reclaimed. The Portland cement used in the design process must be from an approved source listed on GDOT's Qualified Products List/QPL3 and representative of the same material to be used in construction.

The mix design submittal to the Office of Materials and Testing shall include the following:

- 1. Approximately 100 lbs. (45kg) of proportionally blended material from all in-place samples taken from the roadway.
- 2. A one-gallon sample (plastic container) of the stabilizer used in the mix design.
- 3. All Test Data (charts, graphs, spreadsheets, etc.) along with design parameters. Test data should include the target gradation of the blended material, optimum moisture content of mixing, and application rate of the stabilizer to meet the design requirements.

Note: Since the Mix Design is based on source specific materials, any changes to materials or sources will render the design invalid.

# **315.2 Materials**

Ensure that materials meet the requirements of the following GDOT Standard Specifications:

Material	Section
Blotter material (sand)	412.3.05.G.3
Soil Base Material	814.2.02
Cutback asphalt, RC-30, RC-70, RC-250 or MC-30, MC-70, MC-250, CSS-1h, AE-P, CRS-2	821.2.01
Portland Cement (Type I or Type II)	830.2.01
Water	880.2.01

# **315.3 Construction Requirements**

# 315.3.01 Personnel

Ensure that only experienced and capable personnel operate equipment.

# 315.3.02 Equipment

Equipment used in CSRB construction must meet the following requirements and be approved by the Engineer prior to the beginning of construction. All equipment shall be in satisfactory condition and capable of its intended purpose. The Engineer may at any time reject any equipment that is deemed unsafe, erratic, or produces an inadequate performance.

Note: Equipment type, size, operation and condition are subject to the Engineer's approval and must be adjusted and/or replaced upon their request.

# A. Reclaimer

CSRB will require a reclaimer unit that meets the following requirements:

- 1. Designed expressly for reclamation capable of pulverizing and mixing through asphaltic pavement, granular/soil base, Subbases, and subgrade down to depths of at least 12 in. (300mm).
- 2. Having a cutting drum with a minimum width of 8 ft. (2m).
- 3. Capable of continuously mixing materials to a homogenous blend and at a consistent depth.
- 4. Powered by an engine of at least 500 horsepower with steerable front and rear wheels.
- 5. Controlled by an electronic metering system capable of injecting mix water directly into the mixing chamber and has automatic sensors to monitor water application and mixing depth.

# **B.** Spreader

For CSRB construction, use a cyclone-type mechanical spreader or its equivalent that will spread Portland cement in a relatively dust-free process. Spreader must have an electronic or mechanical metering system which monitors the application rate.

Note: The use of pneumatic tubes to transfer cement or lime directly onto the roadway will not be allowed.

# C. Additional Equipment (Water Truck, Compaction and Grading equipment, and Prime Distributer)

Additional equipment necessary to complete the work must be in satisfactory condition and proper for its intended purpose. Compactive equipment includes a sheep's foot roller, vibratory steel wheel roller and a pneumatic rubber tire roller. Use the correct size/type rollers or combination thereof that is capable of achieving the required density. A pressure distributor that complies with GDOT Standard Specifications/Subsection 424.3.02.B will be required to apply the bituminous prime coat.

Note: Equipment type, size, operation and condition are subject to the Engineer's approval and must be adjusted and/or replaced upon their request.

# 315.3.03 Preparation

Prior to commencing reclaiming operations, blade grass and excess soil a minimum of 12 in. (300mm) from the edge of pavement. Locate, mark and preserve existing centerline, manholes, and utilities (gas, water, and electric lines). Relocate mailboxes and other appurtenances within such proximity to the roadway as to risk damage or interfere with the work. Remove sections of driveway aprons in the right-of-way where necessary to permit the reclaimer to operate without damaging the machinery or driveway pavement. If necessary, saw-cut a neat parallel line to the proposed edge of pavement and remove the concrete along the road. After all work is complete, replace appurtenances to their original location as nearly as possible.

# 315.3.04 Construction

# A. Weather Limitations

- 1. Mix only when the weather permits the course to be finished without interruption and within the time specified.
- 2. Mix materials only when the moisture of the materials to be used in the mixture meets the specified limits.
- **3.** Begin mixing only when the air temperature is above 40°F in the shade and rising.

# B. Moisture Adjustment

Adjust the moisture content of the roadway materials to within 100 to 120 percent of the optimum moisture immediately before spreading the cement. The optimum moisture content is determined by the Job Mix Design and can be adjusted by the Engineer.

# C. Cement Application

- 1. Apply cement on days when wind will not interfere with spreading.
- Apply cement at the rate specified on the Job Mix Design (as established by <u>GDT-65</u>) and mix to the depth shown on the Plans. The Engineer may alter the spread rate during the progress of construction if necessary. Maintain the application rate within <u>+</u> 10 percent of that specified by the Engineer.
- 3. Provide both equipment and personnel to measure the application rate of cement placed. Each tanker of cement shall be checked by using a square yard cloth/certified scales and by determining the overall coverage area of each tanker. Multiple checks may be necessary to ensure that the spread rate is maintained within the ± 10 percent limit.
- 4. If the cement content falls below the 10 percent limit in the mixing area, add additional cement to bring the affected area within the tolerance specified, make necessary adjustments to the spreader, and perform additional checks to ensure the problem is corrected. If the cement content is more than the 10 percent limit in the mixing area, the excess quantity will be deducted from the Contractor's pay for cement.
- 5. Regulate operations to limit the application of cement to sections small enough so that all of the mixing, compacting, and finishing operations can be completed within the required time limits.
- 6. Pass only spreading and mixing equipment over the spread cement and operate this equipment so that it does not displace cement.
- 7. Replace damaged cement at no cost to the Department when damage is caused by:
  - a. Hydration due to rain, before or during mixing operations.
  - **b.** Spreading procedures are contrary to the requirements stated above.
  - c. Displacement by the Contractor's equipment or other traffic.

# **D.** Mixing

- 1. Begin mixing as soon as possible after the cement is spread and continue until a homogeneous and uniform mixture is produced. The Engineer at any time may require adjustments or replacement of equipment if a homogeneous and uniform mixture conforming to these Specifications is not achieved.
- 2. Continue pulverizing until the base mixture is uniform in color and conforms to the following gradation requirements:
  - a. 100 percent passing the 3 in. sieve (76.1mm) or the natural size of the in-situ aggregate.
  - b. 55 percent of the roadway material, excluding gravel, passes the No. 4 sieve (4.75mm).
- **3.** Add water as needed to maintain or bring the moisture content to within the moisture requirements immediately after the preliminary mixing of the cement and roadway material.
- 4. Mix the additional water homogeneously into the full depth of the mixture.

# E. Compaction and Finishing

- 1. Test Section
  - a. A test section shall be constructed with the first tanker of cement delivered to the project. The length of the test section will be determined by area in which the entire tanker of cement will cover.
  - **b.** The Engineer will evaluate compaction, moisture, homogeneity of mixture, thickness of stabilization, and finished base surface. If the Engineer deems necessary, revise the compaction procedure or replace equipment.
- 2. Time Limits
  - a. Complete compaction within 2 hours after the cement has been applied.
  - **b.** Do not perform vibratory compaction on materials more than 90 minutes old, measured from the time cement was added to the mixture.
  - c. Complete all operations within 4 hours from adding cement to finishing the surface.
- 3. Moisture Control
  - **a.** During compaction, ensure that the moisture is uniformly distributed throughout the mixture at a level of between 100 and 120 percent of the optimum moisture content.
- 4. Compaction Requirements
  - a. Use a sheep's foot roller, steel wheel roller or pneumatic-tired roller for initial compactive effort unless an alternate method is approved by the Engineer.
  - **b.** Compact the cement-stabilized base course to at least 98 percent of the maximum dry density established on the Job Mix Design.
  - c. Uniformly compact the mixture and then shape to the grade, line, and cross- section shown on the Plans.
  - **d**. Remove all loosened material accumulated during the shaping process. Do not use additional layers of cement-treated materials in order to conform to cross-sectional or grade requirements.
  - e. Use a pneumatic-tired roller to roll the finished surface until it is smooth, closely knit, and free from cracks or deformations, and conforming to the proper line, grade, and cross-section.
  - **f.** In places inaccessible to the roller, obtain the required compaction with mechanical tampers approved by the Engineer. Apply the same compaction requirements as stated above in Subsection 315.3.04.E.4.
  - **g.** Perform grading operations immediately after the placement and compaction operations. Roll the stabilized base course again with a pneumatic-tired roller.

# F. Construction Joints

- 1. Form a straight transverse joint at the end of each day's construction or whenever the work is interrupted.
- 2. Create the straight transverse joint by cutting back into the completed work to form a true vertical face free of loose or shattered material.
- **3.** Form the joint at least 2 ft. (0.6m) from the point where the spreader strike-off plate comes to rest at the end of the day's work, or at the point of interruption.
- 4. Form a longitudinal joint as described above if cement-stabilized mixture is placed over a large area where it is impractical to complete the full width during one day's work. Use the procedure for forming a straight transverse joint. Remove all waste material from the compacted base.

# G. Priming the Base

- 1. The surface of the completed base course must be moist cured until the bituminous prime is applied.
- 2. Apply prime only to an entirely moist surface. If weather delays prime application, apply prime as soon as the surface moisture is adequate.
- **3.** Apply bituminous prime according to GDOT Standard Specifications/Section 412 as soon as possible and in no case later than 24 hours after completion of the finishing operations.
- 4. Protect finished portions of the cement-stabilized base course that are used by equipment in the construction of an adjoining section to prevent marring or damaging of the completed work. Protect the stabilized area from freezing during the curing period.

# H. Opening to Traffic

 Correct any failures caused by traffic at no additional cost to the Department. Make repairs specified in GDOT Standard Specifications/Subsection 300.3.06.B whenever defects appear. This preservation action does not relieve the Contractor of his responsibility to maintain the work until final acceptance as specified in GDOT Standard Specifications/Section 105.

# 315.3.05 Quality Acceptance

# A. Compaction Tests

- 1. Determine the maximum dry density from representative samples of compacted material, according to GDOT Test Method/GDT 19 or GDT 67.
- Determine the in-place density of finished courses according to GDOT Test Method/GDT 20, GDT 21 or GDT 59 as soon as possible after compaction, but before the cement sets.

# **B.** Gradation Tests

1. Ensure that the gradation of the completely mixed cement-stabilized base course meets the requirements as stated above in Subsection 315.3.04.D.2.

# C. Finished Surface Tests

- 1. Check the finished surface of the cement-stabilized base course transversely using one of the following tools:
  - **a.** A template, cut true to the required cross-section and set with a spirit level on non-super elevated sections.
  - b. A system of ordinates measured from a string line.
  - c. A surveyor' level.
- 2. Ensure the ordinates measured from the bottom of the template, string line, or straightedge, to the surface do not exceed ½ in. (12.5mm) at any point.

## D. Thickness Tolerances

- 1. Determine the thickness of the cement-stabilized base course by making as many checks as necessary to determine the average thickness, but not less than one check per 1000 ft. (300m) per 2 lanes. Checks shall be taken after the completion of the base course and prior to priming.
- 2. If any measurement is deficient in thickness by more than ½ in. (12.5mm), make additional measurements to isolate the affected area. Correct any area deficient by more than ½ in. (12.5mm) to the design thickness by using one of the following methods:
  - a. Apply GDOT approved asphaltic concrete 9.5mm Superpave.
  - **b.** Reconstruct to the required thickness.

No payment will be made for any Asphaltic Concrete 9.5mm Superpave used to correct deficiencies nor will pavement be made for removing and reconstructing the deficient work.

3. If any measurement exceeds thickness by more than ½ in. (12.5mm), make additional measurements to isolate the affected area. If the basis of payment is per cubic yard and the average thickness for any mile increment exceeds the allowable ½ in. (12.5mm) tolerance the excess quantity in that increment will be deducted from the Contractor's payments. The excess quantity is calculated by multiplying the average thickness that exceeds the allowable ½ in. (12.5mm) tolerance by the surface area of the base, as applicable.

# **315.4 Measurement**

# A. Cement-Stabilized Base Course

Measure the surface length along the centerline when payment is specified by the square yard. The width is specified on the plans. Measure irregular areas, such as turnouts and intersections, by the square yard.

# **B. Portland Cement**

Measure Portland cement by the ton.

### C. Bituminous Prime

Bituminous prime is not measured for separate payment. Include the cost of furnishing and applying bituminous prime according to the provisions of GDOT Standard Specifications/Section 412 in the Unit Price Bid for each individual base item.

# 315.5 Payment

# A. Cement-Stabilized Base Course

Cement-stabilized base, in-place and accepted, will be paid for at the Contract Unit Price per square yard. Payment will be full compensation for roadbed preparation, mixing on the road, shaping, pulverizing, watering, compaction, defect repair, bituminous prime and maintenance.

# **B. Portland Cement**

Portland cement will be paid for at the Contract Unit Price per ton. Payment is full compensation for furnishing, hauling, and applying the material. Only Type I or Type II Portland cement incorporated into the finished course will be paid for and no payment will be made for cement used to correct defects due to the Contractor's negligence, faulty equipment, or error.

Payment will be made under:

Item No. 315	Cement Treated Base Course	Per square yard (meter)
Item No. 315	Portland Cement	Per ton (megagram)

# FLEMINGTON ROAD IMPROVEMENTS FOR CITY OF FLEMINGTON LIBERTY COUNTY, GEORGIA DATE: OCTOBER 23, 2023



- 1. WALLACE MARTIN DEMOLITION PLAN
- JOSEPH MARTIN DEMOLITION PLAN
   OLD SUNBURY DEMOLITION PLAN
- 4. WALLACE MARTIN SITE PLAN
- JOSEPH MARTIN SITE PLAN
   OLD SUNBURY SITE PLAN
- 7. DETAILS

SHEET C101-102 SHEET C103 SHEET C104-105

<u>SHEET</u>

SHEET C201-202 SHEET C203 SHEET C204-205 SHEET C300

DRAWING LEGEND

DRAWING LEGEND				
DESCRIPTION	PROPOSED	EXISTING		
SANITARY SEWER		SS		
UNDERGROUND WATER LINE	w			
FORCE MAIN	FM	FM		
STORM DRAINAGE PIPE				
UNDERGROUND TELEPHONE LINE	т	— т — —		
UNDERGROUND TELEPHONE CONDUIT	тс	TC		
UNDERGROUND GAS LINE	12"G			
DITCH CENTERLINE	· · · ·			
SPOT ELEVATION	X=90.00	X		
TOP OF CURB ELEVATION	TC=90.00	\_ <sub>TC=90.00</sub>		
FIRE HYDRANT	×	24		
SEWER MANHOLE	S	S		
WATER VALVE	wv M	₩ N		
TELEPHONE MANHOLE		$\bigcirc$		
LIGHT POLE	<b>\$</b>	¢		
SIGN	_ <del></del>			
WATER METER		$\square$		
BENCHMARK	•	$\bullet$		
CONCRETE MONUMENT FOUND				
GUY POLE		-0		
IRON PIN FOUND		0		
IRON PIN SET	۲			
TELEPHONE PEDESTAL				
POWER POLE	ې ص	CL P		
HANDICAP SPACE	ۇر sm	ۇر. SM		
SEDIMENT BASIN MARKER W/NOTCH	S™ →	$\bigcirc$		

























