

Invitation for Bid Documents

DELTA STATE UNIVERSITY CLEVELAND, MISSISSIPPI

CAIN-TATUM HALL
PARKING LOT IMPROVEMENT PROJECT

DSU04-2022
RFx Number: 3160004869

PROJECT MUST BE COMPLETED AND INVOICED BY JUNE 30, 2022

DELTA STATE UNIVERSITY
2022 CAIN-TATUM HALL PARKING LOT IMPROVEMENT PROJECT
CLEVELAND, MISSISSIPPI

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INSTRUCTIONS FOR BIDDERS

Sealed Bids for construction of the Delta State University, **2022 Cain-Tatum Hall Parking Lot Improvement Project**, will be received by the Delta State University, Office of Procurement Services, 1417 Maple Street, Cleveland, MS, 38733, until Tuesday, March 15, 2022 at 2:00pm CST, which time the Bids received will be publicly opened and read aloud.

The project consists of asphalt pavement removal, excavation, clay gravel base repair, and pavement striping of the parking lot behind Cain-Tatum Hall at Delta State University.

Bidding Documents may be examined free of charge by contacting the Delta State University Office of Procurement Services at bids@deltastate.edu or cbeach@deltastate.edu, Tel. 662-846-4046.

Bids may be submitted in person, by mail or electronically. For delivery in person or by mail, the Bid must be enclosed in a sealed envelope and plainly marked on the outside of the envelope with the following: Bid for the Delta State University, 2022 Cain-Tatum Hall Parking Lot Improvement Project, to be opened on March 15, 2022 at 2:00pm CST, and addressed to Delta State University; Office of Procurement Services, 1417 Maple Street, Cleveland, MS, 38733. In addition, the envelope shall list the bidders Company Name, Company Address, and the Bidder's Mississippi State Contractor's License number. Delta State University and Engineer assume no responsibility for premature opening of any bid envelope which is not properly marked. For electronic submissions of bids, go to: https://www.ms.gov/dfa/contract_bid_search and use the RFx Number for your reference number.

Bidders must comply with all rules, regulations, and statutes to purchasing in the State of Mississippi, in addition to the requirements on this form. General Bid Terms and Conditions can be found here: <https://www.deltastate.edu/PDFFiles/procurement/Bid-Terms-and-Conditions-2021.pdf>

Any Contract resulting from this Invitation for Bid shall be in substantial compliance with Delta State University's Standard Contract Addendum: <https://www.deltastate.edu/PDFFiles/procurement/DSU-Contract-Addendum-2021.pdf>

Bid Security in the amount of five (5) percent of the maximum total bid amount is required. No bidder may withdraw his bid within 60 calendar days after the actual date of opening.

Delta State University reserves the right to waive any informality or to reject any and all bids.

Publication Dates: February 9, 2022
 February 16, 2022

BID FORM

ARTICLE 1 – BID RECIPIENT

- 1.01 This Bid is submitted to: Delta State University, Office of Procurement Services, 1417 Maple Street, Cleveland, Mississippi 38733.
- 1.02 This Bid is submitted for construction of the Delta State University, 2022 Cain-Tatum Hall Parking Lot Improvement Project.
- 1.03 The undersigned Bidder proposes and agrees, if this Bid is accepted, to enter into an Agreement with Owner in the form included in the Bidding Documents to perform all Work as specified or indicated in the Bidding Documents for the prices and within the times indicated in this Bid and in accordance with the other terms and conditions of the Bidding Documents.

ARTICLE 2 – BIDDER'S ACKNOWLEDGEMENTS

- 2.01 Bidder accepts all of the terms and conditions of the Bidding Documents, including without limitation those dealing with the disposition of Bid security. This Bid will remain subject to acceptance for 60 days after the Bid opening, or for such longer period of time that Bidder may agree to in writing upon request of Owner.

ARTICLE 3 – BIDDER'S REPRESENTATIONS

- 3.01 In submitting this Bid, Bidder represents that:
 - A. Bidder has examined and carefully studied the Bidding Documents, and any data and reference items identified in the Bidding Documents, and hereby acknowledges receipt of any Addenda.
 - B. Bidder has visited the Site, conducted a thorough, alert visual examination of the Site and adjacent areas, and become familiar with and satisfied itself as to the general, local, and Site conditions that may affect cost, progress, and performance of the Work.
 - C. Bidder is familiar with and has satisfied itself as to all Laws and Regulations that may affect cost, progress, and performance of the Work.
 - D. Bidder has carefully studied all: (1) any available reports of explorations and tests of subsurface conditions at or adjacent to the Site and all drawings of physical conditions relating to existing surface or subsurface structures at the Site, as may be identified in the Bidding Documents, and (2) reports and drawings relating to Hazardous Environmental Conditions, if any, at or adjacent to the Site that have been identified in the Bidding Documents.

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- E. Bidder has considered the information known to Bidder itself; information commonly known to contractors doing business in the locality of the Site; information and observations obtained from visits to the Site; the Bidding Documents; and any Site-related reports and drawings identified in the Bidding Documents, with respect to the effect of such information, observations, and documents on (1) the cost, progress, and performance of the Work; (2) the means, methods, techniques, sequences, and procedures of construction to be employed by Bidder; and (3) Bidder's safety precautions and programs.
- F. Bidder agrees, based on the information and observations referred to in the preceding paragraphs, that no further examinations, investigations, explorations, tests, studies, or data are necessary for the determination of this Bid for performance of the Work at the price bid and within the times required, and in accordance with the other terms and conditions of the Bidding Documents.
- G. Bidder is aware of the general nature of work to be performed by Owner and others at the Site that relates to the Work as indicated in the Bidding Documents.
- H. Bidder has given Engineer written notice of all conflicts, errors, ambiguities, or discrepancies that Bidder has discovered in the Bidding Documents, and confirms that the written resolution thereof by Engineer is acceptable to Bidder.
- I. The Bidding Documents are generally sufficient to indicate and convey understanding of all terms and conditions for the performance and furnishing of the Work.
- J. The submission of this Bid constitutes an incontrovertible representation by Bidder that Bidder has complied with every requirement of this Article, and that without exception the Bid and all prices in the Bid are premised upon performing and furnishing the Work required by the Bidding Documents.

ARTICLE 4 – BIDDER'S CERTIFICATION

4.01 Bidder certifies that:

- A. This Bid is genuine and not made in the interest of or on behalf of any undisclosed individual or entity and is not submitted in conformity with any collusive agreement or rules of any group, association, organization, or corporation;
- B. Bidder has not directly or indirectly induced or solicited any other Bidder to submit a false or sham Bid;
- C. Bidder has not solicited or induced any individual or entity to refrain from bidding; and
- D. Bidder has not engaged in corrupt, fraudulent, collusive, or coercive practices in competing for the Contract. For the purposes of this Paragraph 4.01.D:
 - 1. "corrupt practice" means the offering, giving, receiving, or soliciting of anything of value likely to influence the action of a public official in the bidding process;
 - 2. "fraudulent practice" means an intentional misrepresentation of facts made (a) to influence the bidding process to the detriment of Owner, (b) to establish bid prices at

artificial non-competitive levels, or (c) to deprive Owner of the benefits of free and open competition;

3. “collusive practice” means a scheme or arrangement between two or more Bidders, with or without the knowledge of Owner, a purpose of which is to establish bid prices at artificial, non-competitive levels; and
4. “coercive practice” means harming or threatening to harm, directly or indirectly, persons or their property to influence their participation in the bidding process or affect the execution of the Contract.

ARTICLE 5 – BASIS OF BID

- 5.01 Bidder will complete the Work in accordance with the Contract Documents for the following unit price(s): **SEE ATTACHED BID SCHEDULE**
- 5.02 Bidder acknowledges that (1) each Bid Unit Price includes an amount considered by Bidder to be adequate to cover Contractor’s overhead and profit for each separately identified item, and (2) estimated quantities are not guaranteed, and are solely for the purpose of comparison of Bids, and final payment for all unit price Bid items will be based on actual quantities, determined as provided in the Contract Documents.

ARTICLE 6 – TIME OF COMPLETION

- 6.01 Bidder agrees to and accepts the provisions for Contract Time and Liquidated Damages as provided under Article 4 of the Construction Contract.

ARTICLE 7 – ATTACHMENTS TO THIS BID

- 7.01 The following documents are submitted with and made a condition of this Bid:
 - A. Required Bid security;
 - B. List of Proposed Subcontractors;
 - C. List of Proposed Suppliers;
 - D. List of Project References;
 - E. Bidder's Mississippi Contractor's License No.

ARTICLE 8 – DEFINED TERMS

- 8.01 The terms used in this Bid with initial capital letters have the meanings stated in the Instructions to Bidders, the General Conditions, and the Supplementary Conditions.

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ARTICLE 9 – BID SUBMITTAL

BIDDER: *[Indicate correct name of Bidding entity]* _____

Signed:

[Signature] _____

[Printed name]: _____

[Title]: _____

[If Bidder is a corporation, a limited liability company, a partnership, or a joint venture, attach evidence of authority to sign]

Attest:

By:*[Signature]:* _____

[Printed Name]: _____

[Title]: _____

[If Bidder is a corporation, a limited liability company, a partnership, or a joint venture, attach evidence of authority to sign]

Submittal Date: _____

Name and Email of Bidder's Contact person: _____

Address for Giving Notice: _____

Telephone Number: _____

Fax Number: _____

Bidder's MS State License Number : _____

[Required by State Law if Bid is over \$50,000]

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BID SCHEDULE

BID LOCATION: Delta State University, Office of Procurement Services, 1417 Maple Street, Cleveland, MS, 38733

BID DATE: Tuesday, March 15, 2022 at 2:00pm CST

				UNIT PRICE		TOTAL
ITEM	DESCRIPTION	UNITS	QUANTITY	WORDS	FIGURES	
1	Hot Mix Asphalt	TN	169.00			
2	Asphalt Removal	SY	1,531.00			
3	Unclassified Excavation	CY	29.24			
4	Base Repair	TN	59.15			
5	Striping (White)	LF	684.00			
6	ADA Symbols (Blue)	EA	3.00			
7	ADA Hatch (Blue)	LF	75.00			
TOTAL BID AMOUNT						

CONTRACT FOR CONSTRUCTION

This Contract is by and between _____ Delta State University _____ (Owner) and

_____ (Contractor).

Owner and Contractor agree as follows:

ARTICLE 1 - THE WORK

1.01 Work

- A. Work includes all labor, materials, equipment, services, and documentation necessary to construct the Project defined herein. The Work may include related services such as testing, start-up, and commissioning, as required by the Contract Documents.
- B. The Contractor shall complete all Work as specified or indicated in the Contract Documents. The Project is generally described as follows:
 - 1. The Delta State University, 2022 Cain-Tatum Hall Parking Lot Improvement Project.

ARTICLE 2 - CONTRACT DOCUMENTS

2.01 Intent of Contract Documents

- A. It is the intent of the Contract Documents to describe a functionally complete project. The Contract Documents do not indicate or describe all of the Work required to complete the Project. Additional details required for the correct installation of selected products are to be provided by the Contractor and coordinated with the Owner and Engineer. This Contract supersedes prior negotiations, representations, and agreements, whether written or oral. The Contract Documents are complementary; what is required by one part of the Contract Documents is as binding as if required by other parts of the Contract Documents.
- B. During the performance of the Work and until final payment, Contractor and Owner shall submit all matters in question concerning the requirements of the Contract Documents or relating to the acceptability of the Work under the Contract Documents to the Engineer. Engineer will be the initial interpreter of the requirements of the Contract Documents, and judge of the acceptability of the Work thereunder.
- C. Engineer will render a written clarification, interpretation, or decision on the issue submitted, or initiate a modification to the Contract Documents.
- D. Contractor, and its subcontractors and suppliers, shall not have or acquire any title to or ownership rights to any of the Drawings, Specifications, or other documents (including copies or electronic media editions) prepared by Engineer or its consultants.

2.02 Contract Documents Defined

- A. The Contract Documents consist of the following documents:
1. Advertisement for Bids.
 2. Bid Form.
 3. Bid Bond.
 4. This Contract.
 5. Performance bond.
 6. Payment bond.
 7. Drawings.
 8. Addenda.
 9. The following which may be delivered or issued on or after the Effective Date of the Contract:
 - a. Work Change Directives.
 - b. Change Orders.
 - c. Field Orders.

ARTICLE 3 - ENGINEER

3.01 Engineer

- A. The Engineer for this Project is Joshua F. McPherson, P.E., Eley-McPherson Engineering, PA, 306 Third Street, Cleveland, Mississippi, 38732. Tel. 662-846-0180.

ARTICLE 4 - CONTRACT TIMES

4.01 Contract Times

- A. The Work shall be substantially completed and invoiced for payment by June 30, 2022.

4.02 Liquidated Damages

- A. Contractor and Owner recognize that time is of the essence in the performance of the Contract, and that Owner will incur damages if Contractor does not complete the Work according to the requirements of Paragraph 4.01. Because such damages for delay would be difficult and costly to determine, Owner and Contractor agree that as liquidated damages for delay (but not as a penalty) Contractor shall pay Owner \$500.00 for each day that expires after the Contract Time for substantial completion.

4.03 Delays in Contractor's Progress

- A. If Owner, Engineer, or anyone for whom Owner is responsible, delays, disrupts, or interferes with the performance or progress of the Work, then Contractor shall be entitled to an equitable adjustment in the Contract Times and Contract Price. Contractor's entitlement to an adjustment of the Contract Times is conditioned on such adjustment being essential to Contractor's ability to complete the Work within the Contract Times.
- B. Contractor shall not be entitled to an adjustment in Contract Price or Contract Times for delay, disruption, or interference caused by or within the control of Contractor or their subcontractors or suppliers.
- C. If Contractor's performance or progress is delayed, disrupted, or interfered with by unanticipated causes not the fault of and beyond the control of Owner, Contractor, and those for which they are responsible, then Contractor shall be entitled to an equitable adjustment in Contract Times.
- D. Contractor shall not be entitled to an adjustment in Contract Price or Contract Times for any delay, disruption, or interference if such delay is concurrent with a delay, disruption, or interference caused by or within the control of Contractor or Contractor's subcontractors or suppliers.

4.04 Progress Schedules

- A. Contractor shall develop a progress schedule and submit to the Engineer for review and comment before starting Work on the Site. The Contractor shall modify the schedule in accordance with the comments provided by the Engineer.
- B. The Contractor shall update and submit the progress schedule to the Engineer each month. The Owner may withhold payment if the Contractor fails to submit the schedule.

ARTICLE 5 - CONTRACT PRICE

5.01 Payment

- A. Owner shall pay Contractor in accordance with the Contract Documents, the sum of the final quantities multiplied by the unit prices as indicated in the Bid Schedule.

ARTICLE 6 - BONDS AND INSURANCE

6.01 Bonds

- A. Before starting Work, Contractor shall furnish a performance bond and a payment bond from surety companies that are duly licensed and authorized to issue bonds in the required amounts in the jurisdiction in which the Project is located. Each bond shall be in an amount equal to the Contract Price, as security for the faithful performance and payment of all of Contractor's obligations under the Contract. These bonds shall remain in effect until the completion of the correction period specified in Paragraph 7.12 but, in any case, not less than one year after the date when final payment becomes due.

6.02 Insurance

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- A. Before starting Work, Contractor shall furnish evidence of insurance from companies that are duly licensed and authorized in the jurisdiction in which the Project is located with a minimum AM Best rating of A-VII or better. Contractor shall provide insurance in accordance with the following:
1. Contractor shall provide coverage for not less than the following amounts, or greater where required by Laws and Regulations:
 - a. Worker's Compensation: (As required by State Statute)
Accident.....\$100,000 Per Occurrence
Disease\$500,000 Policy Limit
Disease.....\$ 100,000 Per Employee
 - b. Commercial General Liability:
General Aggregate.....\$ 1,000,000
Bodily Injury and Property Damage.....\$500,000 Per Occurrence
Fire Damage Liability.....\$50,000 Per Occurrence
Medical Expense.....\$5,000 Per Person
 - c. Automobile Liability
Bodily Injury and Property Damage.....\$500,000 combined single limit
(Or)
Bodily Injury.....\$250,000 per person
Bodily Injury.....\$500,000 Per Accident
Property Damage.....\$100,000 Per Occurrence
 - d. Excess Liability
Bodily Injury and Property Damage.....\$1,00,000 Aggregate
(Combined Single Limit)
 - e. Property Insurance
Builder's Risk.....Equal to Contract Amount
(or)
Installation Floater.....Equal to Contract Amount
- B. All insurance policies required to be purchased and maintained will contain a provision or endorsement that the coverage afforded will not be canceled or materially changed or renewal refused until at least 10 days prior written notice has been given to the insured and additional insured.
- C. Automobile liability insurance provided by Contractor shall provide coverage against claims for damages because of bodily injury or death of any person or property damage arising out of the ownership, maintenance, or use of any motor vehicle. The automobile liability policy shall be written on an occurrence basis.
- D. The Contractor shall provide property insurance covering physical loss or damage during construction to structures, materials, fixtures, and equipment, including those materials,

fixtures, or equipment in storage or transit.

- E. If Contractor has failed to obtain and maintain required insurance, Owner may exclude the Contractor from the Site, impose an appropriate set-off against payment, and exercise Owner's termination rights under Article 15.

ARTICLE 7 - CONTRACTOR'S RESPONSIBILITIES

7.01 Supervision and Superintendence

- A. Contractor shall supervise and direct the Work competently and efficiently, devoting such attention thereto and applying such skills and expertise as may be necessary to perform the Work in accordance with the Contract Documents. Contractor shall be solely responsible for the means, methods, techniques, sequences, safety, and procedures of construction.
- B. Contractor shall assign a competent resident superintendent who is to be present at all times during the execution of the Work. This resident superintendent shall not be replaced without written notice to and approval by the Owner and Engineer except under extraordinary circumstances.
- C. Contractor shall at all times maintain good discipline and order at the Site.
- D. Except as otherwise required for the safety or protection of persons or the Work or property at the Site or adjacent thereto, and except as otherwise stated in the Contract Documents, all Work at the Site shall be performed during regular working hours, Monday through Friday.

7.02 Other Work at the Site

- A. In addition to and apart from the Work of the Contractor, other work may occur at or adjacent to the Site. Contractor shall take reasonable and customary measures to avoid damaging, delaying, disrupting, or interfering with the work of Owner, any other contractor, or any utility owner performing other work at or adjacent to the Site.

7.03 Services, Materials, and Equipment

- A. Unless otherwise specified in the Contract Documents, Contractor shall provide and assume full responsibility for all services, materials, equipment, labor, transportation, construction equipment and machinery, tools, appliances, fuel, power, light, heat, telephone, water, sanitary facilities, temporary facilities, and all other facilities and incidentals necessary for the performance, testing, start up, and completion of the Work, whether or not such items are specifically called for in the Contract Documents.
- B. All materials and equipment incorporated into the Work shall be new, of good quality and shall be stored, applied, installed, connected, erected, protected, used, cleaned, and conditioned in accordance with instructions of the applicable supplier, except as otherwise may be provided in the Contract Documents.

7.04 Subcontractors and Suppliers

- A. Contractor may retain subcontractors and suppliers for the performance of parts of the Work. Such subcontractors and suppliers must be acceptable to Owner.

7.05 Quality Management

- A. Contractor is fully responsible for the managing quality to ensure Work is completed in accordance with the Contract Documents.

7.06 Licenses, Fees and Permits

- A. Contractor shall pay all license fees and royalties and assume all costs incident to performing the Work or the incorporation in the Work of any invention, design, process, product, or device which is the subject of patent rights or copyrights held by others.
- B. Contractor shall obtain and pay for all construction permits and licenses unless otherwise provided in the Contract Documents.

7.07 Laws and Regulations; Taxes

- A. Contractor shall give all notices required by and shall comply with all local, state, and federal Laws and Regulations applicable to the performance of the Work. Except where otherwise expressly required by applicable Laws and Regulations, neither Owner nor Engineer shall be responsible for monitoring Contractor's compliance with any Laws or Regulations.
- B. Contractor shall bear all resulting costs and losses, and shall indemnify and hold harmless Owner and Engineer, and the officers, directors, members, partners, employees, agents, consultants, and subcontractors of each and any of them from and against all claims, costs, losses, and damages if Contractor performs any Work or takes any other action knowing or having reason to know that it is contrary to Laws or Regulations.
- C. Contractor shall pay all applicable sales, consumer, use, and other similar taxes Contractor is required to pay in accordance with Laws and Regulations.

7.08 Record Documents

- A. Contractor shall maintain one printed record copy of all Drawings, Specifications, Addenda, Change Orders, Work Change Directives, Field Orders, written interpretations and clarifications, and approved shop drawings in a safe place at the Site. Contractor shall annotate them to show changes made during construction. Contractor shall deliver these record documents to Engineer upon completion of the Work.

7.09 Safety and Protection

- A. Contractor shall be solely responsible for initiating, maintaining, and supervising all safety precautions and programs in connection with the Work.
- B. Contractor shall take all necessary precautions for the safety of, and shall provide the necessary protection to prevent damage, injury, or loss to:
 - 1. All persons on the Site or who may be affected by the Work;
 - 2. All the Work and materials and equipment to be incorporated therein, whether in storage on or off the Site; and
 - 3. Other property at the Site or adjacent thereto, including trees, shrubs, lawns, walks, pavements, roadways, structures, other work in progress, utilities, and underground facilities not designated for removal, relocation, or replacement in the course of

construction.

- C. All damage, injury, or loss to any property caused, directly or indirectly, in whole or in part, by Contractor, or anyone for whose acts the Contractor may be liable, shall be remedied by Contractor at its expense (except damage or loss attributable to the fault of Contract Documents or to the acts or omissions of Owner or Engineer and not attributable, directly or indirectly, in whole or in part, to the fault or negligence of Contractor).
- D. Contractor shall be responsible for coordinating any exchange of material safety data sheets or other hazard communication information required to be made available to or exchanged between or among employers at the Site in accordance with Laws or Regulations.
- E. In emergencies affecting the safety or protection of persons or the Work or property at the Site or adjacent thereto, Contractor shall act to prevent threatened damage, injury, or loss. Contractor shall give Engineer prompt written notice if Contractor believes that any significant changes in the Work or variations from the Contract Documents have been caused thereby or are required as a result thereof. If Engineer determines that a change in the Contract Documents is required because of the action taken by Contractor in response to such an emergency, a Work Change Directive or Change Order will be issued.

7.10 Shop Drawings, Samples, and Other Submittals

- A. Contractor shall review and coordinate the shop drawing and samples with the requirements of the Work and the Contract Documents and shall verify all related field measurements, quantities, dimensions, specified performance and design criteria, installation requirements, materials, catalog numbers, and similar information.
- B. Each submittal shall bear a stamp or specific written certification that Contractor has satisfied Contractor's obligations under the Contract Documents with respect to Contractor's review of that submittal, and that Contractor approves the submittal.
- C. With each submittal, Contractor shall give Engineer specific written notice of any variations that the shop drawing or sample may have from the requirements of the Contract Documents.
- D. Engineer will provide timely review of shop drawings and samples.
- E. Engineer's review and approval will not extend to means, methods, techniques, sequences, or procedures of construction or to safety precautions or programs.
- F. Engineer's review and approval of a separate item does not indicate approval of the assembly in which the item functions.
- G. Contractor shall make corrections required by Engineer and shall return the required number of corrected copies of shop drawings and submit, as required, new samples for review and approval. Contractor shall direct specific attention in writing to revisions other than the corrections called for by Engineer on previous submittals.
- H. Shop drawings are not Contract Documents.

7.11 Warranties and Guarantees

- A. Contractor warrants and guarantees to Owner that all Work will be in accordance with the Contract Documents and will not be defective. Engineer and its officers, directors, members,

partners, employees, agents, consultants, and subcontractors shall be entitled to rely on Contractor's warranty and guarantee.

7.12 Correction Period

- A. If within one year after the date of substantial completion, any Work is found to be defective, or if the repair of any damages to the Site, adjacent areas that Contractor has arranged to use through construction easements or otherwise, and other adjacent areas used by Contractor as permitted by Laws and Regulations, is found to be defective, then Contractor shall promptly and without cost to Owner, correct such defective Work.

7.13 Indemnification

- A. To the fullest extent permitted by Laws and Regulations, and in addition to any other obligations of Contractor under the Contract or otherwise, Contractor shall indemnify and hold harmless Owner and Engineer, and the officers, directors, members, partners, employees, agents, consultants and subcontractors of each and any of them from and against all claims, costs, losses, and damages (including but not limited to all fees and charges of engineers, architects, attorneys, and other professionals and all court or arbitration or other dispute resolution costs) arising out of or relating to the performance of the Work, provided that any such claim, cost, loss, or damage is attributable to bodily injury, sickness, disease, or death, or to injury to or destruction of tangible property (other than the Work itself), including the loss of use resulting therefrom but only to the extent caused by any negligent act or omission of Contractor, any subcontractor, any supplier, or any individual or entity directly or indirectly employed by any of them to perform any of the Work or anyone for whose acts they may be liable.

ARTICLE 8 - OWNER'S RESPONSIBILITIES

8.01 Owner's Responsibilities

- A. Except as otherwise provided in the Contract Documents, Owner shall issue all communications to Contractor through Engineer.
- B. Owner shall make payments to Contractor as provided in this Contract.
- C. Owner shall provide Site and easements required to construct the Project.
- D. If Owner intends to contract with others for the performance of other work at or adjacent to the Site, unless stated elsewhere in the Contract Documents, Owner shall have sole authority and responsibility for such coordination.
- E. The Owner shall be responsible for performing inspections and tests required by applicable codes.
- F. The Owner shall not supervise, direct, or have control or authority over, nor be responsible for, Contractor's means, methods, techniques, sequences, or procedures of construction, or the safety precautions and programs, or for any failure of Contractor to comply with Laws and Regulations applicable to the performance of the Work. Owner will not be responsible for Contractor's failure to perform the Work in accordance with the Contract Documents.

- G. While at the Site, Owner's employees and representatives shall comply with the specific applicable requirements of Contractor's safety programs of which Owner has been informed.
- H. Owner shall furnish copies of any applicable Owner safety programs to Contractor.

ARTICLE 9 - ENGINEER'S STATUS DURING CONSTRUCTION

9.01 Engineer's Status

- A. Engineer will be Owner's representative during construction. The duties and responsibilities and the limitations of authority of Engineer as Owner's representative during construction are set forth in this Contract.
- B. Neither Engineer's authority or responsibility under this Article 9 or under any other provision of the Contract, nor any decision made by Engineer in good faith either to exercise or not exercise such authority or responsibility or the undertaking, exercise, or performance of any authority or responsibility by Engineer, shall create, impose, or give rise to any duty in contract, tort, or otherwise owed by Engineer to Contractor, any subcontractor, any supplier, any other individual or entity, or to any surety for or employee or agent of any of them.
- C. Engineer will make visits to the Site at intervals appropriate to the various stages of construction. Engineer will not be required to make exhaustive or continuous inspections on the Site to check the quality or quantity of the Work.
- D. Engineer has the authority to reject Work if Contractor fails to perform Work in accordance with the Contract Documents.
- E. Engineer will render decisions regarding the requirements of the Contract Documents and judge the acceptability of the Work.
- F. Engineer will not supervise, direct, control, or have authority over or be responsible for Contractor's means, methods, techniques, sequences, or procedures of construction, or the safety precautions and programs, or for any failure of Contractor to comply with Laws and Regulations applicable to the performance of the Work. Engineer will not be responsible for Contractor's failure to perform the Work in accordance with the Contract Documents.

ARTICLE 10 - CHANGES IN THE WORK

10.01 Authority to Change the Work

- A. Without invalidating the Contract and without notice to any surety, Owner may, at any time or from time to time, order additions, deletions, or revisions in the Work.

10.02 Change Orders

- A. Owner and Contractor shall execute appropriate Change Orders covering:
 - 1. Changes in the Contract Price or Contract Times which are agreed to by the parties, including any undisputed sum or amount of time for Work actually performed in accordance with a Work Change Directive;

2. Changes in the Work which are: (a) ordered by Owner or (b) agreed to by the parties or (c) resulting from the Engineer's decision, subject to the need for Engineer's recommendation if the change in the Work involves the design (as set forth in the Drawings, Specifications, or otherwise), or other engineering or technical matters; and
 3. Changes in the Contract Price or Contract Times or other changes which embody the substance of any final binding results under Article 12.
- B. If the provisions of any bond require notice to be given to a surety of any change affecting the general scope of the Work or the provisions of the Contract Documents (including, but not limited to, Contract Price or Contract Times), the giving of any such notice will be Contractor's responsibility. The amount of each applicable bond will be adjusted to reflect the effect of any such change.

ARTICLE 11 – DIFFERING CONDITIONS

11.01 Differing Conditions Process

- A. If Contractor believes that any subsurface or physical condition including but not limited to utilities or other underground facilities that are uncovered or revealed at the Site either differs materially from that shown or indicated in the Contract Documents or is of an unusual nature, and differs materially from conditions ordinarily encountered and generally recognized as inherent in Work of the character provided for in the Contract Documents then Contractor shall, promptly after becoming aware thereof and before further disturbing the subsurface or physical conditions or performing any Work in connection therewith (except in an emergency), notify Owner and Engineer in writing about such condition. Contractor shall not further disturb such condition or perform any Work in connection therewith (except with respect to an emergency) until receipt of a written statement permitting Contractor to do so.
- B. After receipt of written notice, Engineer will promptly:
1. Review the subsurface or physical condition in question;
 2. Determine necessity for Owner obtaining additional exploration or tests with respect to the condition;
 3. Determine whether the condition falls within the differing site condition as stated herein;
 4. Obtain any pertinent cost or schedule information from Contractor;
 5. Prepare recommendations to Owner regarding the Contractor's resumption of Work in connection with the subsurface or physical condition in question and the need for any change in the Drawings or Specifications; and
 6. Advise Owner in writing of Engineer's findings, conclusions, and recommendations.
- C. After receipt of Engineer's written findings, conclusions, and recommendations, Owner shall issue a written statement to Contractor regarding the subsurface or physical condition in question, addressing the resumption of Work in connection with such condition, indicating whether any change in the Drawings or Specifications will be made, and adopting or rejecting Engineer's written findings, conclusions, and recommendations, in whole or in part.

ARTICLE 12 - CLAIMS AND DISPUTE RESOLUTION

12.01 Claims Process

- A. The party submitting a claim shall deliver it directly to the other party to the Contract and the Engineer promptly (but in no event later than 10 days) after the start of the event giving rise thereto.
- B. The party receiving a claim shall review it thoroughly, giving full consideration to its merits. The two parties shall seek to resolve the claim through the exchange of information and direct negotiations. All actions taken on a claim shall be stated in writing and submitted to the other party.
- C. If efforts to resolve a claim are not successful, the party receiving the claim may deny it by giving written notice of denial to the other party. If the receiving party does not take action on the claim within 45 days, the claim is deemed denied.
- D. If the dispute is not resolved to the satisfaction of the parties, Owner or Contractor shall give written notice to the other party of the intent to submit the dispute to a court of competent jurisdiction unless the Owner and Contractor both agree to an alternative dispute resolution process.

ARTICLE 13 - TESTS AND INSPECTIONS; CORRECTION OF DEFECTIVE WORK

13.01 Tests and Inspections

- A. Owner and Engineer will have access to the Site and the Work at reasonable times for their observation, inspection, and testing. Contractor shall provide them proper and safe conditions for such access.
- B. Contractor shall give Engineer timely notice of readiness of the Work for all required inspections and tests, and shall cooperate with inspection and testing personnel to facilitate required inspections and tests.
- C. If any Work that is to be inspected, tested, or approved is covered by Contractor without written concurrence of Engineer, Contractor shall, if requested by Engineer, uncover such Work for observation. Such uncovering shall be at Contractor's expense.

13.02 Defective Work

- A. Contractor shall ensure that the Work is not defective.
- B. Engineer has the authority to determine whether Work is defective, and to reject defective Work.
- C. Prompt notice of all defective Work of which Owner or Engineer has actual knowledge will be given to Contractor.
- D. The Contractor shall promptly correct all such defective Work.
- E. When correcting defective Work, Contractor shall take no action that would void or otherwise

impair Owner's special warranty and guarantee, if any, on said Work.

- F. If the Work is defective or Contractor fails to supply sufficient skilled workers or suitable materials or equipment, or fails to perform the Work in such a way that the completed Work will conform to the Contract Documents, then Owner may order Contractor to stop the Work, or any portion thereof, until the cause for such order has been eliminated.

ARTICLE 14 - PAYMENTS TO CONTRACTOR

14.01 Progress Payments

- A. The Contractor shall prepare a schedule of values that will serve as the basis for progress payments. The schedule of values will be in a form of application for payment acceptable to Engineer. The unit price breakdown submitted with the bid will be used for unit price work. Break lump sum items into units that will allow for measurement of Work in progress.

14.02 Applications for Payments:

- A. Contractor shall submit an application for payment in a form acceptable to the Engineer, no more frequently than monthly, to Engineer. Applications for payment will be prepared and signed by Contractor. Contractor shall provide supporting documentation required by the Contract Documents. Payment will be paid for Work completed as of the date of the application for payment.
- B. Beginning with the second application for payment, each application shall include an affidavit of Contractor stating that all previous progress payments received on account of the Work have been applied on account to discharge Contractor's legitimate obligations associated with prior applications for payment.

14.03 Retainage

- A. The Owner shall retain [Percentage of Contract Price to be Held as Retainage 5% of each progress payment until the Work is substantially complete.

14.04 Review of Applications

- A. Within 10 days after receipt of each application for payment, the Engineer will either indicate in writing a recommendation for payment and present the application for payment to Owner or return the application for payment to Contractor indicating in writing Engineer's reasons for refusing to recommend payment. The Contractor will make the necessary corrections and resubmit the application for payment.
- B. Engineer will recommend reductions in payment reductions or off-sets which, in the opinion of the Engineer, are necessary to protect Owner from loss because the Work is defective and requires correction or replacement.
- C. The Owner is entitled to impose off-sets against payment based on any claims that have been made against Owner on account of Contractor's conduct in the performance of the Work, incurred costs, losses, or damages on account of Contractor's conduct in the performance of the Work, or liquidated damages that have accrued as a result of Contractor's failure to complete the Work.

14.05 Contractor's Warranty of Title

- A. Contractor warrants and guarantees that title to all Work, materials, and equipment furnished under the Contract will pass to Owner free and clear of (1) all liens and other title defects, and (2) all patent, licensing, copyright, or royalty obligations, no later than seven days after the time of payment by Owner.

14.06 Substantial Completion

- A. The Contractor shall notify Owner and Engineer in writing that the Work is substantially complete and request the Engineer issue a certificate of substantial completion when Contractor considers the Work ready for its intended use. Contractor shall at the same time submit to Owner and Engineer an initial draft of punch list items to be completed or corrected before final payment.
- B. Engineer will make an inspection of the Work with the Owner and Contractor to determine the status of completion. If Engineer does not consider the Work substantially complete, Engineer will notify Contractor and Owner in writing giving the reasons therefor.
- C. If Engineer considers the Work substantially complete or upon resolution of all reasons for non-issuance of a certificate identified in 14.06.B, Engineer will deliver to Owner a certificate of substantial completion which shall fix the date of substantial completion and include a punch list of items to be completed or corrected before final payment.

14.07 Final Inspection

- A. Upon written notice from Contractor that the entire Work is complete, Engineer will promptly make a final inspection with Owner and Contractor and will notify Contractor in writing of all particulars in which this inspection reveals that the Work, or agreed portion thereof, is incomplete or defective. Contractor shall immediately take such measures as are necessary to complete such Work or remedy such deficiencies.

14.08 Final Payment

- A. Contractor may make application for final payment after Contractor has satisfactorily completed all Work defined in the Contract, including providing all maintenance and operating instructions, schedules, guarantees, bonds, certificates or other evidence of insurance, certificates of inspection, annotated record documents and other documents.
- B. The final application for payment shall be accompanied (except as previously delivered) by:
 - 1. All documentation called for in the Contract Documents;
 - 2. Consent of the surety to final payment;
 - 3. Satisfactory evidence that all title issues have been resolved such that title to all Work, materials, and equipment has passed to Owner free and clear of any liens or other title defects, or will so pass upon final payment;
 - 4. A list of all disputes that Contractor believes are unsettled; and
 - 5. Complete and legally effective releases or waivers (satisfactory to Owner) of all lien rights arising out of the Work, and of liens filed in connection with the Work.

- C. The Work is complete (subject to surviving obligations) when it is ready for final payment as established by the Engineer's written recommendation of final payment.

14.09 Waiver of Claims

- A. The making of final payment will not constitute a waiver by Owner of claims or rights against Contractor.
- B. The acceptance of final payment by Contractor will constitute a waiver by Contractor of all claims and rights against Owner other than those pending matters that have been duly submitted.

ARTICLE 15 - SUSPENSION OF WORK AND TERMINATION

15.01 Owner May Suspend Work

- A. At any time and without cause, Owner may suspend the Work or any portion thereof for a period of not more than 60 consecutive days by written notice to Contractor and Engineer. Such notice will fix the date on which Work will be resumed. Contractor shall resume the Work on the date so fixed. Contractor shall be entitled to an adjustment in the Contract Price or an extension of the Contract Times, or both, directly attributable to any such suspension.

15.02 Owner May Terminate for Cause

- A. Contractor's failure to perform the Work in accordance with the Contract Documents or other failure to comply with a material term of the Contract Documents will constitute a default by Contractor and justify termination for cause.
- B. If Contractor defaults in its obligations, then after giving Contractor and any surety ten days written notice that Owner is considering a declaration that Contractor is in default and termination of the Contract, Owner may proceed to:
 - 1. Declare Contractor to be in default, and give Contractor and any surety notice that the Contract is terminated; and
 - 2. Enforce the rights available to Owner under any applicable performance bond.
- C. Owner may not proceed with termination of the Contract under Paragraph 15.02.B if Contractor within seven days of receipt of notice of intent to terminate begins to correct its failure to perform and proceeds diligently to cure such failure.
- D. Subject to the terms and operation of any applicable performance bond, if Owner has terminated the Contract for cause, Owner may exclude Contractor from the Site, take possession of the Work, incorporate in the Work all materials and equipment stored at the Site or for which Owner has paid Contractor but which are stored elsewhere, and complete the Work as Owner may deem expedient.
- E. In the case of a termination for cause, if the cost to complete the Work, including related claims, costs, losses, and damages, exceeds the unpaid contract balance, Contractor shall pay the difference to Owner.

15.03 Owner May Terminate for Convenience

- A. Upon seven days written notice to Contractor, Owner may, without cause and without prejudice to any other right or remedy of Owner, terminate the Contract. In such case, Contractor shall be paid for, without duplication of any items:
 - 1. Completed and acceptable Work executed in accordance with the Contract Documents prior to the effective date of termination, including fair and reasonable sums for overhead and profit on such Work;
 - 2. Expenses sustained prior to the effective date of termination in performing services and furnishing labor, materials, or equipment as required by the Contract Documents in connection with uncompleted Work, plus fair and reasonable sums for overhead and profit on such expenses; and
 - 3. Other reasonable expenses directly attributable to termination, including costs incurred to prepare a termination for convenience cost proposal.
- B. Contractor shall not be paid on account of loss of anticipated overhead, profits, or revenue, or other economic loss arising out of or resulting from such termination.

15.04 Contractor May Stop Work or Terminate

- A. If, through no act or fault of Contractor, (1) the Work is suspended for more than 90 consecutive days by Owner or under an order of court or other public authority, or (2) Owner fails for 30 days to pay Contractor any sum finally determined to be due, then Contractor may, upon seven days written notice to Owner, and provided Owner does not remedy such suspension or failure within that time, either stop the Work until payment is received, or terminate the Contract and recover payment from the Owner.

ARTICLE 16 - CONTRACTOR'S REPRESENTATIONS

16.01 Contractor Representations

- A. Contractor makes the following representations when entering into this Contract:
 - 1. Contractor has examined and carefully studied the Contract Documents, and any data and reference items identified in the Contract Documents.
 - 2. Contractor has visited the Site, conducted a thorough visual examination of the Site and adjacent areas, and become familiar with and is satisfied as to the general, local, and Site conditions that may affect cost, progress, and performance of the Work.
 - 3. Contractor is familiar with and is satisfied as to all Laws and Regulations that may affect cost, progress, and performance of the Work.
 - 4. Contractor has considered the information known to Contractor itself; information commonly known to contractors doing business in the locality of the Site; information and observations obtained from visits to the Site; the Contract Documents; and the Site-related reports and drawings identified in the Contract Documents, with respect to the effect of such information, observations, and documents on:
 - a. The cost, progress, and performance of the Work;

- b. The means, methods, techniques, sequences, and procedures of construction to be employed by Contractor; and
 - c. Contractor's safety precautions and programs.
- 5. Based on the information and observations referred to in the preceding paragraph, Contractor agrees that no further examinations, investigations, explorations, tests, studies, or data are necessary for the performance of the Work at the Contract Price, within the Contract Times, and in accordance with the other terms and conditions of the Contract.
- 6. Contractor is aware of the general nature of work to be performed by Owner and others at the Site that relates to the Work as indicated in the Contract Documents.
- 7. Contractor has given Engineer written notice of all conflicts, errors, ambiguities, or discrepancies that Contractor has discovered in the Contract Documents, and the written resolution thereof by Engineer is acceptable to Contractor.
- 8. The Contract Documents are generally sufficient to indicate and convey understanding of all terms and conditions for performance and furnishing of the Work.
- 9. Contractor's entry into this Contract constitutes an incontrovertible representation by Contractor that, without exception, all prices in the Contract are premised upon performing and furnishing the Work required by the Contract Documents.

ARTICLE 17 - MISCELLANEOUS

17.01 Cumulative Remedies

- A. The duties and obligations imposed by this Contract and the rights and remedies available hereunder to the parties hereto are in addition to, and are not to be construed in any way as a limitation of, any rights and remedies available to any or all of them which are otherwise imposed or available by Laws or Regulations, by special warranty or guarantee, or by other provisions of the Contract. The provisions of this paragraph will be as effective as if repeated specifically in the Contract Documents in connection with each particular duty, obligation, right, and remedy to which they apply.

17.02 Limitation of Damages

- A. Neither Owner, Engineer, nor any of their officers, directors, members, partners, employees, agents, consultants, or subcontractors, shall be liable to Contractor for any claims, costs, losses, or damages sustained by Contractor on or in connection with any other project or anticipated project.

17.03 No Waiver

- A. A party's non-enforcement of any provision shall not constitute a waiver of that provision, nor shall it affect the enforceability of that provision or of the remainder of this Contract.

17.04 Survival of Obligations

DELTA STATE UNIVERSITY
2022 CAIN-TATUM HALL PARKING LOT IMPROVEMENT PROJECT
CLEVELAND, MISSISSIPPI

- A. All representations, indemnifications, warranties, and guarantees made in, required by, or given in accordance with the Contract, as well as all continuing obligations indicated in the Contract, will survive final payment, completion, and acceptance of the Work or termination or completion of the Contract or termination of the services of Contractor.

17.05 Contractor's Certifications

- A. Contractor certifies that it has not engaged in corrupt, fraudulent, collusive, or coercive practices in competing for or in executing the Contract.

17.06 Controlling Law

- A. This Contract is to be governed by the law of the state in which the Project is located.

IN WITNESS WHEREOF, Owner and Contractor have signed this Contract.

This Contract will be effective on _____ (which is the Effective Date of the Contract).

OWNER:

_____ Delta State University

CONTRACTOR:

By: _____

By: _____

Title: _____

Title: _____

DELTA STATE UNIVERSITY
2022 CAIN-TATUM HALL PARKING LOT IMPROVEMENT PROJECT
CLEVELAND, MISSISSIPPI

Address for Giving Notice:

Address for Giving Notice:

ATTEST:

By: _____

By: _____

Title: _____

Title: _____

SECTION 315120 - EXCAVATION, BACKFILL, AND COMPACTION FOR PAVEMENT

PART 1 - GENERAL

1.1 SECTION INCLUDES

- A. Excavation to line, grade, and layout of sub-grade for proposed and future pavement areas, as indicated on the Construction Drawings.
- B. Fill to line, grade, and layout of sub-grade for proposed and future pavement areas, as indicated on the Construction Drawings.
- C. Compacting sub-grade materials as specified herein.

1.2 REFERENCE STANDARDS

- A. American Society for Testing and Materials (ASTM) Latest Edition
 - 1. D422 Standard Test Method For Particle - Size Analysis of Soil
 - 2. D 698 Laboratory Compaction Characteristics of Soil Using Standard Effort (12,400 ft-lb/ft³)
 - 3. D 1557 Laboratory Compaction Characteristics of Soil Using Modified Effort (56,000 ft-lb/ft³)
 - 4. lb/ft³ (2.700 kN.m/m³)
 - 5. D 2216 laboratory Determination of Water (Moisture) Content of Soil, Rock, and Soil Aggregate Mixtures
 - 6. D 2487 Classification of Soils for Engineering Purposes
 - 7. D 2922 Density of Soil and Soil-Aggregate In Place by Nuclear Methods (Shallow Depth)
 - 8. D 3017 Water Content of Soil and Rock in Place by Nuclear Methods (Shallow Depth)
 - 9. D 4318 liquid Limit, Plastic limit, and Plasticity Index of Soils
- B. American Association of State Highway and Transportation Officials (AASHTO) latest edition
 - 1. T 88 Particle Size Analysis of Soils
 - 2. Mississippi State Department of Transportation (DOT): Standard Specifications for Road and Bridge Construction, Latest Edition

1.3 QUALITY ASSURANCE

- A. A materials testing laboratory, selected and paid by Owner, will be retained to perform construction testing on filling operations and sub-grade analysis as specified in Section 312000 and as specified herein.

1.4 SUBMITTALS

- A. Shop drawings or details pertaining to excavating and filling for pavement are not required unless otherwise shown on Construction Drawings or if contrary procedures to Construction Documents are proposed.

- B. Submit 30-pound sample of each type of off-site material that will be used in backfilling in air-tight container to testing laboratory or gradation and certification of aggregate material that is to be used to independent testing laboratory for review.

1.5 EQUIPMENT

- A. Transport off-site materials to project using well-maintained and operating vehicles. Once on site, transporting vehicles shall stay on designated haul roads and shall at no time endanger improvements by rutting, overloading, or pumping.

PART 2 - PART 2 - PRODUCTS

2.1 MATERIALS

- A. Engineered fill material shall consist of imported, non-organic and debris-free, silty clays (CL), sandy clays (CL), or clayey sands (SC), having a Plasticity Index and Liquid Limit within the following ranges.

<u>Material</u>	<u>PI</u>	<u>LL</u>
Engineered Fill - Silty Clay (CL), Sandy Clay (CL), or Clayey Sand (SC)	5-25	35 Max.

PART 3 - PART 3 - EXECUTION

3.1 PREPARATION

- A. Identify lines, elevations, and grades necessary to construct pavements, curb, curb and gutter, bases, sidewalk, and roadways as shown on Construction Drawings.
- B. Protect benchmarks, property corners, and other survey monuments from damage or displacement. If marker needs to be removed it shall be referenced by licensed land surveyor and replaced, as necessary, by same.
- C. Locate and identify site utilities that have previously been installed and protect from damage.
- D. locate and identify existing utilities that are to remain and protect from damage.
- E. Over-excavate and properly prepare areas of sub-grade that, in the opinion of the testing laboratory or geotechnical engineer, are not capable of supporting proposed pavements.
- F. Refer to and ensure compliance with the requirements of the Geotechnical Investigation and Engineering Report included in the Project Manual. This report provides detailed information regarding all earthwork requirements for this project.

3.2 STRIPPING

- A. Complete stripping of all topsoil for the building and pavement areas and five (5) feet beyond these areas, to a depth of not less than six (6) inches, or as required to remove all vegetation and root materials, as determined by the geotechnical engineer.

3.2 EXCAVATION FOR PAVEMENTS AND SIDEWALKS

- A. If required to reach finished sub-grade elevation beneath pavements and sidewalks, excavate pavement areas to line and grade as shown on Construction Drawings.
- B. Dispose of excess or unsuitable excavated material in manner and location that is acceptable to Owner and local governing agencies.
- C. Perform excavation using capable, well-maintained equipment and methods acceptable to Owner and local governing agencies.

3.3 FILLING AND SUB-GRADE PREPARATION

- A. Areas beneath pavements and sidewalks which have been exposed by excavation or stripping (and prior to placing any required fill material), shall be scarified to minimum depth of 6-inches and compacted to minimum of 95 percent of maximum dry density, in accordance with ASTM D 698 at moisture content within 3 percent of optimum.
- B. Proof roll these areas to detect areas of insufficient compaction. Accomplish proof rolling by making minimum of 2 complete passes with fully loaded tandem-axle dump truck with a maximum loaded weight of 40 tons, or approved equal, in each of 2 perpendicular directions under supervision and direction of the material testing laboratory or geotechnical engineer. Excavate and re-compact areas of failure as specified herein.
- C. After completion of all compaction and proof rolling operations, place Engineered Fill Material to the depth required to reach finished pavement sub-grade elevation in lifts or layers not to exceed 8-inches loose measure (six inches compacted) and compacted to minimum density of 95 percent of maximum dry density, in accordance with ASTM D 698, at moisture content within 3 percent of optimum.
- D. Perform density testing in accordance with the requirements of Section 2300.
- E. Corrective measures for non-complying compaction: Remove and re-compact deficient areas or remove, moisture condition, replace and re-compact until proper compaction is obtained at no additional expense to Owner.

3.4 MAINTENANCE OF SUB-GRADE

- A. Verify finished sub-grade as to proper grade and stability for construction above subsequent layers of base and/or pavements.

- B. Protect sub-grade from excessive wheel loading during construction including concrete trucks, dump trucks, and other construction equipment.
- C. Prior to placement of subsequent layers, concrete slabs, paving or base material, the sub-grade shall be proof rolled. Remove areas of finished sub-grade found to be deficient, in the opinion of the testing laboratory or geotechnical engineer, to the depth required to reach a stable base. Replace in a manner which will comply with compaction requirements, by use of material equal to or better than the best sub-grade material on site.
- D. Surface of sub-grade after compaction shall be hard, uniform, smooth, stable and true to grade and cross section.

3.6 FINISH GRADING

- A. Finish grading shall be in accordance with Section 31 2000 and as specified herein.
- B. Check grading of paving areas by string line from grade stakes set a not more than 25 feet spacing. Tolerances of 0.10 feet will be allowed. Contractor shall provide all require field staking for verification of grade and elevation.

END OF SECTION 315120

SECTION 321123 – GRANULAR MATERIALS

PART 1 - GENERAL

1.1 SUMMARY

- A. Section Includes:
 - 1. Clay Gravel Material.
 - 2. Crushed Limestone Material.
 - 3. Other Granular Materials as indicated on the drawings or included in the bid schedule.
 - 4. Geotextile material beneath granular courses.

1.2 UNIT PRICE MEASUREMENT AND PAYMENT

- A. Unit Price or Lump Sum Payment:
 - 1. If the Project is set up in the Bid Form for Unit Price type payment, the following provisions will apply.
 - 2. If the Project is set up in the Bid Form for Lump Sum type payment, the following provisions do not apply.
- B. Granular Material Courses:
 - 1. Basis of Measurement: Per Ton, dry weight.
 - 2. Basis of Payment: Includes furnishing all materials, equipment, tools, labor, fuel, and all incidentals required for construction of granular material courses, complete, in-place and ready for final acceptance.
- C. Geotextile Material:
 - 1. Basis of Measurement: Per Square Yard, in-place.
 - 2. Basis of Payment: Includes furnishing all materials, equipment, tools, labor, fuel, and all incidentals required for construction of geotextile materials, complete, in-place and ready for final acceptance.

1.3 REFERENCES

- A. ASTM International:
 - 1. ASTM D1556 - Standard Test Method for Density and Unit Weight of Soil in Place by the Sand-Cone Method.
 - 2. ASTM D2167 - Standard Test Method for Density and Unit Weight of Soil in Place by the Rubber Balloon Method.
 - 3. ASTM D2922 - Standard Test Method for Density of Soil and Soil-Aggregate in Place by Nuclear Methods (Shallow Depth).
 - 4. ASTM D2940 - Standard Specification for Graded Aggregate Material for Bases or Subbases for Highways or Airports.
 - 5. ASTM D3017 - Standard Test Method for Water Content of Soil and Rock in Place by Nuclear Methods (Shallow Depth).

- B. Mississippi Department of Transportation Standard Specifications for Road and Bridge Construction, Latest Edition.

1.4 SUBMITTALS

- A. Samples: Submit, in air-tight containers, ten (10) lbs. sample of each type of crushed limestone material to testing laboratory.
- B. Materials Source: Submit name of aggregate materials suppliers.

1.5 QUALITY ASSURANCE

- A. Furnish each aggregate material from single source throughout the Work.
- B. Perform Work in accordance with Mississippi Department of Transportation (MDOT) Standard Specifications for Road and Bridge Construction, Latest Edition.

1.6 PROTECTION OF PUBLIC ROADS AND OTHER PROPERTY

- A. As stated in the General Condition to this Contract, the Contractor shall take any and all precautions to prevent damages to the site, adjacent lands or other property resulting from hauling, spreading, compacting of limestone, and all other activities associated with this project.
- B. The Contractor shall assume full responsibility for (a) damage to the Site; (b) damage to any such other adjacent areas used for Contractor's operations; (c) damage to any other adjacent land or areas; and (d) for injuries and losses sustained by the owners or occupants of any such land or areas; provided that such damage or injuries result from the performance of the Work or from other actions or conduct of the Contractor or those for which Contractor is responsible.
- C. If a damage or injury claim is made by the owner or occupant of any such land or area because of the performance of the Work, or because of other actions or conduct of the Contractor or those for which Contractor is responsible, Contractor shall (a) take immediate corrective or remedial action as required by the Engineer; (b) promptly attempt to settle the claim as to all parties through negotiations with such owner or occupant, or otherwise resolve the claim by arbitration or other dispute resolution proceeding, or at law; and (c) to the fullest extent permitted by Laws and Regulations, indemnify and hold harmless Owner and Engineer, and the officers, directors, members, partners, employees, agents, consultants and subcontractors of each and any of them from and against any such claim, and against all costs, losses, and damages (including but not limited to all fees and charges of engineers, architects, attorneys, and other professionals and all court or arbitration or other dispute resolution costs) arising out of or relating to any claim or action, legal or equitable, brought by any such owner or occupant against Owner, Engineer, or any other party indemnified hereunder to the extent caused directly or indirectly, in whole or in part by, or based upon, Contractor's performance of the Work, or because of other actions or conduct of the Contractor or those for which Contractor is responsible.

PART 2 - PRODUCTS

2.1 AGGREGATE MATERIALS

- A. Clay Gravel shall meet the requirements of the Mississippi Department of transportation specifications for Class 4, Group B granular material.
- B. Crushed Limestone No. 610 Material shall also meet the requirements of Section 307 of the MDOT Standard Specifications for Road and Bridge Construction, Latest Edition for No. 610 material.
- C. Crushed Limestone No. 1 Material shall also meet the requirements of Section 307 of the MDOT Standard Specifications for Road and Bridge Construction, Latest Edition for No. 1 material.
- D. Other Granular Materials, as indicated on the drawings or included in the Bid Schedule shall meet the applicable requirements of MDOT specifications.

2.2 GEOTEXTILE BENEATH AGGREGATE BASE COURSES

- A. If called for on the plans or included in the Bid Schedule, Geotextile beneath crushed limestone base courses shall conform to the physical requirements of Type VII, Woven, as shown on Table 1 under Section 714.13.11 of the MDOT specifications.

PART 3 - EXECUTION

3.1 EXAMINATION

- A. Verify compacted sub-base is dry and ready to support imposed loads.
- B. Verify sub-base has been inspected and tested. Confirm grades and elevations are correct.

3.2 PREPARATION

- A. Prior to construction, have all construction staked by a qualified surveyor. If discrepancies between actual conditions and plan dimensions or elevations are found, notify Engineer before proceeding with work.
- B. Correct irregularities in substrate gradient and elevation as specified under the appropriate specification section for the subgrade material.
- C. Do not place crushed stone on soft, irregular, or frozen surfaces.

3.3 PLACEMENT OF GEOTEXTILE

- A. If called for on the plans, install geotextile beneath granular base course in strict accordance with the manufacturer's recommendation. Overlap all joints and anchor the material as recommended by the manufacturer.

3.4 PLACEMENT OF GRANULAR MATERIALS

- A. Utilize methods of dumping, spreading, and compacting the crushed limestone layer which will protect the subgrade or geotextile from damage.
- B. Spread crushed stone over prepared subgrade or geotextile, in loose lifts not to exceed eight (8) inches and compact to one hundred (100) percent standard proctor density as determined by ASTM D698. Continue lifts until total compacted thickness is achieved as indicated on the Drawings.
- C. Maintain the moisture content of the material within two (2) percentage point of optimum during the compaction process.
- D. Use mechanical tamping equipment in areas inaccessible to compaction equipment.
- E. Fine grade the surface to lines, grades and dimensions indicated on the Drawings.

3.5 TOLERANCES

- A. Maximum Variation from plan grade: 1/4 inch
- B. Maximum variation from flat surface when measured with 10-foot straight edge: 1/4 inch.
- C. Maximum Variation from plan thickness: 1/4 inch.

3.6 FIELD QUALITY CONTROL

- A. Perform laboratory material proctor tests in accordance with ASTM D698.
- B. Perform in place compaction tests in accordance with the following:
 - 1. Density Tests: ASTM D2922.
 - 2. Moisture Tests: ASTM D3017.
- C. Frequency of Tests:
 - 1. In-Place Density Tests: One test per 1,500 square feet.
- D. When tests indicate Work does not meet specified requirements, remove Work, replace, and retest.
- E. Coordinate with Engineer and Materials Testing Agency for all required tests and inspections.

END OF SECTION 321123

SECTION 321216 - HOT MIX ASPHALT PAVEMENT

PART 1 - GENERAL

1.1 SUMMARY

- A. Section Includes:
 - 1. Asphalt materials.
 - 2. Asphalt paving base course, binder course, and surface course.
 - 3. Asphalt paving overlay for existing paving.
 - 4. Geotextile Underlayment beneath pavement overlays.
 - 5. Asphalt for pavement repairs.
 - 6. Cold milling of existing asphalt pavements.
 - 7. Traffic control during paving operations.

1.2 REFERENCE STANDARDS

- A. American Association of State Highway and Transportation Officials:
 - 1. AASHTO M17 - Standard Specification for Mineral Filler for Bituminous Paving Mixtures.
 - 2. AASHTO M29 - Standard Specification for Fine Aggregate for Bituminous Paving Mixtures.
 - 3. AASHTO M140 - Standard Specification for Emulsified Asphalt.
 - 4. AASHTO M208 - Standard Specification for Cationic Emulsified Asphalt.
 - 5. AASHTO M288 - Standard Specification for Geotextile Specification for Highway Applications.
 - 6. AASHTO M320 - Standard Specification for Performance-Graded Asphalt Binder.
 - 7. AASHTO M324 - Standard Specification for Joint and Crack Sealants, Hot Applied, for Concrete and Asphalt Pavements.
 - 8. AASHTO MP1a - Standard Specification for Performance-Graded Asphalt Binder.
- B. Asphalt Institute:
 - 1. AI MS-2 - Mix Design Methods for Asphalt Concrete and Other Hot- Mix Types.
 - 2. AI MS-19 - Basic Asphalt Emulsion Manual.
 - 3. AI SP-2 - Superpave Mix Design.
- C. MDOT Mississippi Department of Transportation
 - 1. Standard Specifications for Road and Bridge Construction, 2017 edition.
- D. FHWA Federal Highway Administration
 - 1. Manual of Uniform Traffic Control Devices, latest edition.

E. ASTM International:

1. ASTM C1371 - Standard Test Method for Determination of Emittance of Materials Near Room Temperature Using Portable Emissometers.
2. ASTM C1549 - Standard Test Method for Determination of Solar Reflectance Near Ambient Temperature Using a Portable Solar Reflectometer.
3. ASTM D242 - Standard Specification for Mineral Filler For Bituminous Paving Mixtures.
4. ASTM D692 - Standard Specification for Coarse Aggregate for Bituminous Paving Mixtures.
5. ASTM D946 - Standard Specification for Penetration-Graded Asphalt Cement for Use in Pavement Construction.
6. ASTM D977 - Standard Specification for Emulsified Asphalt.
7. ASTM D1073 - Standard Specification for Fine Aggregate for Bituminous Paving Mixtures.
8. ASTM D1188 - Standard Test Method for Bulk Specific Gravity and Density of Compacted Bituminous Mixtures Using Coated Samples
9. ASTM D2027 - Standard Specification for Cutback Asphalt (Medium-Curing Type).
10. ASTM D2397 - Standard Specification for Cationic Emulsified Asphalt.
11. ASTM D2726 - Standard Test Method for Bulk Specific Gravity and Density of Non-Absorptive Compacted Bituminous Mixtures.
12. ASTM D2950 - Standard Test Method for Density of Bituminous Concrete in Place by Nuclear Methods.
13. ASTM D3381 - Standard Specification for Viscosity-Graded Asphalt Cement for Use in Pavement Construction.
14. ASTM D3515 - Standard Specification for Hot-Mixed, Hot-Laid Bituminous Paving Mixtures.
15. ASTM D3549 - Standard Test Method for Thickness or Height of Compacted Bituminous Paving Mixture Specimens.
16. ASTM D3910 - Standard Practices for Design, Testing, and Construction of Slurry Seal.
17. ASTM D6690 - Standard Specification for Joint and Crack Sealants, Hot Applied, for Concrete and Asphalt Pavements.
18. ASTM E408 - Standard Test Methods for Total Normal Emittance of Surfaces Using Inspection-Meter Techniques.
19. ASTM E903 - Standard Test Method for Solar Absorptance, Reflectance, and Transmittance of Materials Using Integrating Spheres.
20. ASTM E1918 - Standard Test Method for Measuring Solar Reflectance of Horizontal and Low-Sloped Surfaces in the Field.
21. ASTM E1980 - Standard Practice for Calculating Solar Reflectance Index of Horizontal and Low-Sloped Opaque Surfaces.

1.3 SUBMITTALS

A. Product Data:

1. Submit product information for asphalt and aggregate materials.
2. Submit mix design with laboratory test results supporting design.

B. Manufacturer's Certificate: Certify products meet or exceed specification requirements.

1.4 QUALITY ASSURANCE

- A. Mixing Plant: Conform to Mississippi Department of Transportation (MDOT) Standard Specifications for Road and Bridge Construction, Latest Edition.

1.5 QUALIFICATIONS

- A. Installer: Company specializing in performing work of this section with a minimum of ten (10) years of experience.

1.6 PROTECTION OF PUBLIC ROADS AND OTHER PROPERTY

- A. As stated in the General Condition to this Contract, the Contractor shall take any and all precautions to prevent damages to the site, adjacent lands or other property resulting from hauling, placement and compaction of asphalt pavement and from all other activities associated with this project.
- B. The Contractor shall assume full responsibility for (a) damage to the Site; (b) damage to any such other adjacent areas used for Contractor's operations; (c) damage to any other adjacent land or areas; and (d) for injuries and losses sustained by the owners or occupants of any such land or areas; provided that such damage or injuries result from the performance of the Work or from other actions or conduct of the Contractor or those for which Contractor is responsible.
- C. If a damage or injury claim is made by the owner or occupant of any such land or area because of the performance of the Work, or because of other actions or conduct of the Contractor or those for which Contractor is responsible, Contractor shall (a) take immediate corrective or remedial action as required by the Engineer; (b) promptly attempt to settle the claim as to all parties through negotiations with such owner or occupant, or otherwise resolve the claim by arbitration or other dispute resolution proceeding, or at law; and (c) to the fullest extent permitted by Laws and Regulations, indemnify and hold harmless Owner and Engineer, and the officers, directors, members, partners, employees, agents, consultants and subcontractors of each and any of them from and against any such claim, and against all costs, losses, and damages (including but not limited to all fees and charges of engineers, architects, attorneys, and other professionals and all court or arbitration or other dispute resolution costs) arising out of or relating to any claim or action, legal or equitable, brought by any such owner or occupant against Owner, Engineer, or any other party indemnified hereunder to the extent caused directly or indirectly, in whole or in part by, or based upon, Contractor's performance of the Work, or because of other actions or conduct of the Contractor or those for which Contractor is responsible.

PART 2 - PRODUCTS

2.1 HOT MIX ASPHALT

- A. Aggregates for Hot Mix Asphalt:

1. All aggregates used in hot mix asphalt mixtures shall meet the requirements of Section 401.02.1.2 of the MDOT Standard Specifications for Road and Bridge Construction.

B. Bituminous Materials:

1. All bituminous materials for hot mix asphalt mixtures shall meet the requirements of Section 401.02.1.3 of the MDOT Standard Specifications for Road and Bridge Construction.

2.2 COMPOSITION OF HOT MIX ASPHALT MIXTURES

- A. All hot mix asphalt mixes shall conform to the applicable provisions of Section 401.02.3 of the MDOT Standard Specifications for Road and Bridge Construction, for the type and mixes indicated on the drawings and/or included in the Bid Schedule.

2.3 TACK COAT

- A. Material for tack coats shall conform to Section 401.023.1.3 of the MDOT Standard Specifications for Road and Bridge Construction.
- B. Geotextile Fabric for underseal of asphalt pavements shall meet the applicable requirements of Section 409.02 of the MDOT Standard Specifications for Road and Bridge Construction.

2.4 GEOTEXTILE UNDERLAYMENT BENEATH HOT MIX ASPHALT OVERLAY COURSE

- A. Geotextile Underlayment beneath Hot Mix asphalt overlay course shall conform to the requirements for Type IV, under Table 1 in Section 714.13.11 of the MDOT Standard Specification for Road and Bridge Construction, Latest Edition.

2.5 SOURCE QUALITY CONTROL

- A. Submit proposed mix design of each class of mix for review prior to beginning of Work.
- B. Test samples in accordance with MDOT requirements.

PART 3 - EXECUTION

3.1 EXAMINATION

- A. Verify utilities indicated under paving are installed with excavations and trenches backfilled and compacted.
- B. Verify compacted subgrade or subbase is dry and ready to support paving and imposed loads.

1. Proof roll subbase with a minimum two perpendicular passes to identify soft spots.
 2. Remove soft subbase and replace as specified for the appropriate material.
- C. Verify gradients and elevations of base are correct.
- D. Verify curb and gutter, manholes, drainage inlets, valve boxes, manhole covers are in correct position and elevation.
- 3.2 TRAFFIC CONTROL
- A. Paving contractor shall install and maintain all required traffic control measures in accordance with MDOT and MUTCD standards or as indicated on the drawings.
- 3.3 DEMOLITION
- A. If required, saw cut and notch existing paving to form a straight and neat edge.
- B. Clean existing paving to remove foreign material, excess joint sealant and crack filler from paving surface.
- C. Repair surface defects in existing paving to provide uniform surface to receive new paving.
- 3.4 COLD MILLING OF EXISTING ASPHALT PAVEMENTS
- A. Cold milling of existing asphalt pavements shall be performed where indicated on the drawings or as directed.
- B. All cold milling of existing asphalt pavement shall be performed in strict accordance with Section 406 of the MDOT Standard Specifications for Road and Bridge Construction.
- C. Mill existing pavement such that the finished surface conforms to the lines, grades, and cross sections indicated. The maximum allowable deviation of the finished milled pavement surfaces from plan finish grade will be 1/4 inch. The maximum allowable deviation from plan finished grade when checked with a 10-foot straight edge shall be 1/4 inch.
- D. Provide a cold-milling equipment which can mill the existing pavement to the specified depth, smoothness, and grade. Milling equipment shall be equipped with transverse slope and dust control. Milling equipment shall have the capability of applying water to minimize dust during milling operation. The milling machine shall not damage any part of the pavement structure that is not to be removed.
- E. Provide a power broom or other suitable cleaning equipment capable of removing and cleaning loose material from the pavement surface. Remove all milled asphalt from the project site and dispose of in accordance with applicable law.

3.5 AMBIENT CONDITIONS

- A. Do not place asphalt mixture when ambient air or base surface temperature is less than five-five (55) degrees F, or surface is wet or frozen.

3.6 INSTALLATION

- A. Hot Mix Asphalt Pavements
 - 1. Install hot mix asphalt pavement in strict accordance with Section 403 of the MDOT Standard Specifications for Road and Bridge Construction.
- B. Geotextile Underlayment Beneath Hot Mix Asphalt Overlays.
 - 1. Install geotextile underlayment beneath hot mix asphalt overlays in strict accordance with Section 403 of the MDOT Standard Specifications for Road and Bridge Construction

3.7 TOLERANCES

- A. Smoothness: Hot Mix asphalt pavements shall meet the smoothness requirements of Section 403.03.2 of the MDOT Standard Specifications for Road and Bridge Construction.
- B. Thickness: Hot Mix asphalt pavements shall meet the thickness requirements of Section 403.03.3 of the MDOT Standard Specifications for Road and Bridge Construction.
- C. Density: Hot Mix asphalt pavements shall meet the density requirements of Section 401.02.6.4.1 of the MDOT Standard Specifications for Road and Bridge Construction.

3.8 FIELD QUALITY CONTROL

- A. Test all hot mix asphalt pavements in accordance with the applicable provisions of the MDOT Standard Specifications for Road and Bridge Construction.

END OF SECTION 321216

SECTION 321723 - PAVEMENT MARKINGS

PART 1 - GENERAL

1.1 SUMMARY

- A. Section Includes:
 - 1. Pavement Striping.
 - 2. Legend.
 - 3. Glass Beads.
 - 4. Raised Pavement Markers.

1.2 REFERENCE STANDARDS

- A. American Association of State Highway and Transportation Officials:
 - 1. AASHTO M247 - Standard Specification for Glass Beads Used in Traffic Paint.
- B. ASTM International:
 - 1. ASTM D34 - Standard Guide for Chemical Analysis of White Pigments.
 - 2. ASTM D126 - Standard Test Methods for Analysis of Yellow, Orange, and Green Pigments Containing Lead Chromate and Chromium Oxide Green.
 - 3. ASTM D562 - Standard Test Method for Consistency of Paints Measuring Krebs Unit (KU) Viscosity Using a Stormer-Type Viscometer.
 - 4. ASTM D711 - Standard Test Method for No-Pick-Up Time of Traffic Paint.
 - 5. ASTM D713 - Standard Practice for Conducting Road Service Tests on Fluid Traffic Marking Materials.
 - 6. ASTM D969 - Standard Test Method for Laboratory Determination of Degree of Bleeding of Traffic Paint.
 - 7. ASTM D1301 - Standard Test Methods for Chemical Analysis of White Lead Pigments.
 - 8. ASTM D1394 - Standard Test Methods for Chemical Analysis of White Titanium Pigments.
 - 9. ASTM D1475 - Standard test Method for Density of Liquid Coatings, Inks, and Related Products.
 - 10. ASTM D1640 - Standard Test Methods for Drying, Curing, or Film Formation of Organic Coatings at Room Temperature.
 - 11. ASTM D2202 - Standard Test Method for Slump of Sealants.
 - 12. ASTM D2371 - Standard Test Method for Pigment Content of Solvent-Reducible Paints.
 - 13. ASTM D2621 - Standard Test Method for Infrared Identification of Vehicle Solids From Solvent-Reducible Paints.
 - 14. ASTM D2743 - Standard Practices for Uniformity of Traffic Paint Vehicle Solids by Spectroscopy and Gas Chromatography.
- C. Mississippi Department of Transportation Standard Specifications for Road and Bridge Construction, Latest Edition.

1.3 SUBMITTALS

- A. Product Data: Submit paint formulation for each type of paint.
- B. Manufacturer's Certificate: Certifying that [paint materials meet the requirements of the specifications for approval by the Engineer.
- C. Manufacturer's Instructions: Submit instructions for application temperatures, eradication requirements, application rate, line thickness, type of glass beads, bead embedment and bead application rate, and any other data on proper installation.

1.4 QUALITY ASSURANCE

- A. Perform Work in accordance with the Mississippi Department of Transportation Standard Specifications for Road and Bridge Construction, Latest Edition.
- B. Obtain paint materials from a single source for the entire project.

1.5 QUALIFICATIONS

- A. Applicator: Company specializing in performing work of this section with minimum five years of documented experience.

1.6 DELIVERY, STORAGE, AND HANDLING

- A. Invert containers several days prior to use when paint has been stored more than 2 months. Minimize exposure to air when transferring paint. Seal drums and tanks when not in use.
- B. Glass Beads. Store glass beads in cool, dry place. Protect from contamination by foreign substances.

1.7 AMBIENT CONDITIONS

- A. Do not apply materials when surface and ambient temperatures are outside temperature ranges required by paint product manufacturer.
- B. Do not apply exterior coatings during rain or snow when relative humidity is outside humidity ranges, or moisture content of surfaces exceed those required by paint product manufacturer.

PART 2 - PRODUCTS

2.1 PAINTED PAVEMENT MARKINGS

- A. Materials for painted pavement markings shall meet the requirements of Section 710 of the Mississippi Department of Transportation Standard Specifications for Road and Bridge Construction, Latest Edition.

2.2 THERMOPLASTIC PAVEMENT MARKINGS

- A. Materials for thermoplastic pavement markings shall meet the requirements of Section 720 of the Mississippi Department of Transportation Standard Specifications for Road and Bridge Construction, Latest Edition.

2.3 GLASS BEADS

- A. Glass Beads shall meet the requirements for Class "A" glass beads under Section 720.01 of the Mississippi Department of Transportation Standard Specifications for Road and Bridge Construction, Latest Edition.

2.4 RAISED PAVEMENT MARKERS

- A. Raised Pavement Markers shall meet the requirements of Section 627 of the MDOT Standard Specifications for Road and Bridge Construction.

PART 3 - EXECUTION

3.1 EXAMINATION

- A. Do not apply paint to pavement surfaces until it has cured for a minimum of 28 days.

3.2 SURFACE PREPARATION

- A. Surface preparation shall be in accordance with the applicable provisions of the MDOT Standard Specifications for Road and Bridge Construction for the type of pavement markings being applied.
- B. Prior to construction, have all construction staked by a qualified surveyor. If discrepancies between actual conditions and plan dimensions or elevations are found, notify Engineer before proceeding with work.
- C. Maintenance and Protection of Traffic:
 - 1. Prevent interference with marking operations and to prevent traffic on newly applied markings before markings dry.
 - 2. Maintain travel lanes between 7:00 AM to 9:00 AM, and between 4: 00PM and 6:00 PM.
 - 3. Maintain access to adjacent facilities requiring access.
- D. Surface Preparation.
 - 1. Clean and dry paved surface prior to painting.
 - 2. Blow or sweep surface free of dirt, debris, oil, grease or gasoline.
 - 3. Spot location of final pavement markings as specified and as indicated on Drawings by applying pavement spots 25 feet on center.
 - 4. Notify Engineer after placing pavement spots and minimum 3 days prior to applying traffic lines.

3.3 APPLICATION

- A. All aspects of the application of pavement markings shall be in accordance with the applicable provisions of the MDOT Standard Specifications for Road and Bridge Construction for the type of pavement markings being applied.

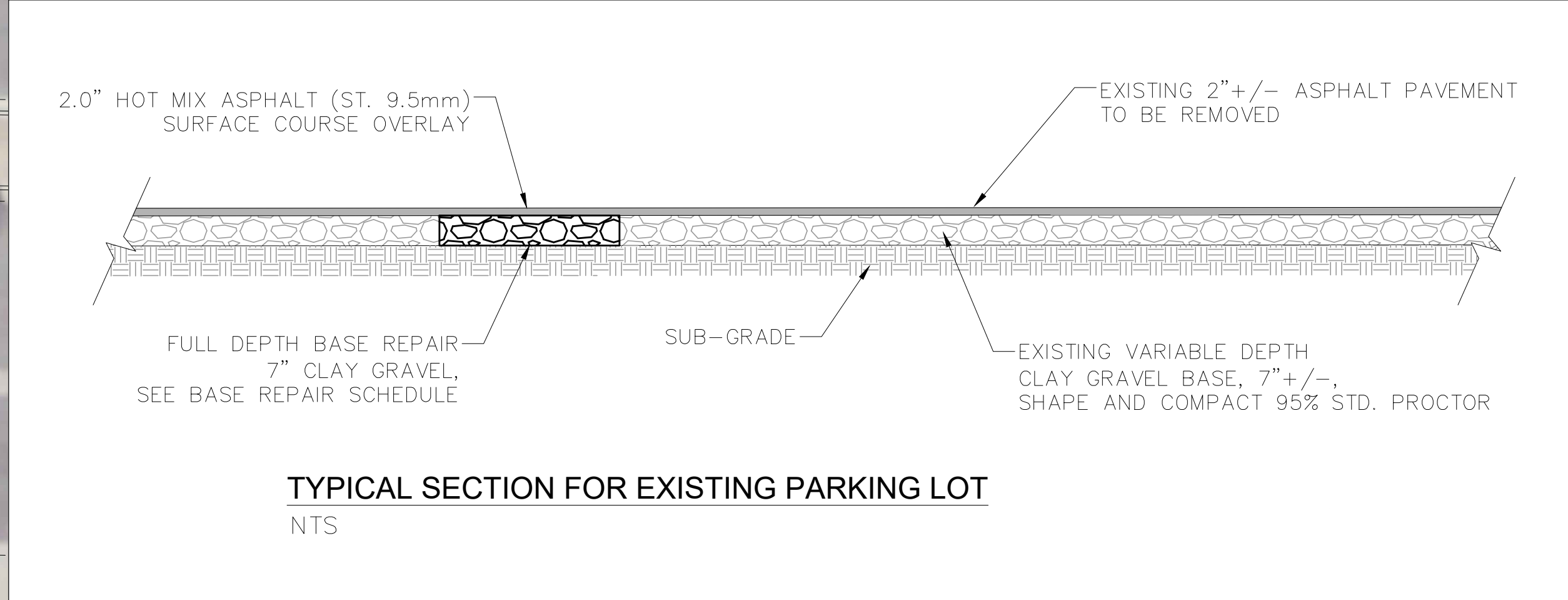
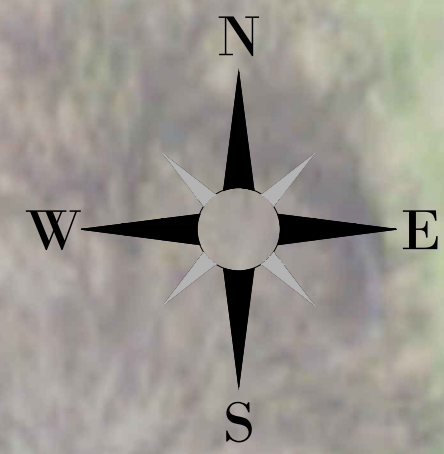
3.4 TOLERANCES

- A. Tolerances for pavement markings shall be in accordance with the applicable provisions of the MDOT Standard Specifications for Road and Bridge Construction for the type of pavement markings being applied.

3.5 FIELD QUALITY CONTROL

- A. Field Quality Control for pavement markings shall be in accordance with the applicable provisions of the MDOT Standard Specifications for Road and Bridge Construction for the type of pavement markings being applied.

END OF SECTION 321723



BASE REPAIR SCHEDULE			
LOCATE	DIMENSIONS	UNCLASSIFIED EXCAVATION (CY)	CLAY GRAVEL (TN)
1	4' x 7'	0.48	0.97
2	3' x 4'	0.21	0.42
3	4' x 3'	0.26	0.53
4	2' x 2'	0.09	0.18
5	17' x 13'	4.78	9.67
6	2' x 5'	0.31	0.62
7	6' x 8'	0.82	1.65
8	19' x 8'	3.29	6.65
9	6' x 6'	0.62	1.24
10	5' x 6'	0.51	1.04
11	5' x 6'	0.51	1.04
12	19' x 8'	3.29	6.65
13	31' x 21'	14.07	28.49
TOTAL		29.24	59.15

SUMMARY OF QUANTITIES		
DESCRIPTION	QUANTITY	UNIT
HOT MIX APSHALT	169.00	TN
ASPHALT REMOVAL	1531.00	SY
UNCLASSIFIED EXCAVATION	29.24	CY
BASE REPAIR	59.15	TN
STRIPING (WHITE)	684.00	LF
ADA SYMBOLS (BLUE)	3.00	EA
ADA HATCH (BLUE)	75.00	LF

GENERAL NOTES:

- ANY EXCESS OR OBJECTIONABLE MATERIAL SHALL BE DISPOSED OF OUTSIDE THE PROJECT LIMITS AT CONTRACTOR'S EXPENSE. COST FOR EXCAVATION AND DISPOSAL TO BE PAID FOR AS UNCLASSIFIED EXCAVATION (F.M.).
- TACK COAT IS REQUIRED BEFORE PLACING HOT MIX ASPHALT. COST TO BE INCLUDED IN OTHER BID ITEMS, NOT A SEPARATE PAY ITEM.
- CONTRACTOR SHALL SHAPE AND COMPACT BASE UPON COMPLETION OF ASPHALT PAVEMENT REMOVAL. CONTRACTOR SHALL THEN PERFORM PROOF ROLL, WITH ENGINEER PRESENT, TO DELINEATE AREAS FOR BASE REPAIR.