

TERM BID PROPOSAL REQUEST DOCUMENTS

FOR

**CLAIBORNE COUNTY PORT COMMISSION
PORT GIBSON, MISSISSIPPI**

**SEPTEMBER 01, 2017 thru September 30, 2018
TERM BID
BID NO. 11-090117-093018**



ENGINEERS

ENGINEERS PLANNERS PROJECT MANAGERS

June 2017

BID CONDITIONS & SPECIFICATIONS FOR TERM BID CONTRACTS ON TERM BID, BID #11-090117-093018, FOR ALL ASPHALT PRODUCTS, MILLING, HOT PLANT MIX, ASPHALT IN PLACE, LIQUID ASPHALT, SCRUB SEAL, SLURRY SEAL AND MICRO-SURFACING SEAL CORRUGATED POLYMERIC PIPE & COUPLINGS, CRUSHED LIMESTONE, RIP-RAP, SAND & GRAVEL, TRAFFIC PAINT AND GLASS BEADS, PAVEMENT STRIPING & MARKINGS FOR BOARD OF SUPERVISORS OF CLAIBORNE COUNTY, MISSISSIPPI.

September 1, 2017 to September 30, 2018

**Board of Supervisors of Claiborne County,
Claiborne County Courthouse,
410 Market Street, Port Gibson, MS 39150**

- 1. This is a Sealed Bid Solicitation. Claiborne County Board of Supervisors, Mississippi will be accepting bids on TERM BID CONTRACT BID #11-090117-093018 FOR ALL ASPHALT PRODUCTS, MILLING, HOT PLANT MIX, ASPHALT IN PLACE, LIQUID ASPHALT, SCRUB SEAL, SLURRY SEAL AND MICRO-SURFACING SEAL CORRUGATED POLYMERIC PIPE & COUPLINGS, CRUSHED LIMESTONE, RIP-RAP, SAND & GRAVEL, TRAFFIC PAINT AND GLASS BEADS, PAVEMENT STRIPING & MARKINGS FOR PERIOD OF SEPTEMBER 1, 2017 THROUGH SEPTEMBER 30, 2018.**
- 2. The sealed bids will be received until 4:00 p.m., Friday August 4, 2017 and publicly opened in the Claiborne County Board Meeting at 10a.m., Monday, August 7, 2017.**
- 3. BIDS / PROPOSALS may be secured from Tommy Avant, County Engineer for Claiborne County, Mississippi at 126 East Amite Street, Jackson, Mississippi 39201. The cost is twenty-five dollars (\$25.00), non-refundable.**
- 4. PROPOSAL RESPONSES: All Contractors / suppliers must submit responses along with any exceptions or replacement/alternate items to the buyer's specifications, in writing as per the due date mentioned above.**
- 5. Bids / Proposals shall be enclosed in an envelope clearly labeled with your Company Name, BOARD OF SUPERVISORS – CLAIBORNE COUNTY, BID NO: 11-090117-093018. All Proposal Sheets must be attached and included in the submittal.**
- 6. MINORITY PARTICIPATION: IT IS THE INTENT OF CLAIBORNE COUNTY, MISSISSIPPI, in the interest of providing equal opportunity and participation to all segments of the community, to achieve a goal of minority participation in all activities and projects constructed or sponsored by Claiborne County. The bidder is responsible for specifying to percentage of minority/minority business participation in connection with all services/commodities provided in connection with this activity/project. It is the intent of Claiborne County that this participation be construed to mean that a percentage of the services and or commodities provided in this project shall be provided by a minority business and that said minority business shall receive at least that percentage of the compensation paid by Claiborne County for the services/commodities rendered in connection with this activity/project.**

Pursuant to State law, "minority business" is defined as a business, which is owned by a person who is a citizen or lawful permanent resident of the United States and who is:

- (i) African American: having origins in any of the black racial groups of Africa.**
- (ii) Hispanic: of Mexican, Puerto Rican, Central or South American, or other Spanish or Portuguese culture or origin, regardless of race.**
- (iii) Asian American: having origins in any of the original peoples of the Far East, Southeast Asia, the Indian subcontinent, or the Pacific Islands.**
- (iv) American Indian or Alaskan Native: having origins in any of the original people of North America.**

All persons/entities wishing to provide services/commodities to Claiborne County shall submit a specific hand-written statement describing their status and the manner in which they propose to comply with this provision with their Bid / Proposal due on August 4, 2017.

Failure to demonstrate compliance to the satisfaction of Claiborne County shall result in a proposal being deemed non-responsive to the specifications required by Claiborne County for the fulfillment of this activity/project.

Following the acceptance of a proposal for services/commodities, the successful candidate shall, within fifteen (15) days of such acceptance, substantiate compliance with these provisions by submitting a second written statement delineating the specific method(s) of compliance, including identities and areas of participation of minority participants. The Claiborne County Board of Supervisors shall have the authority and discretion to determine whether a proposal is responsive to this statement of intent.

8. **Laws and Regulations:** The bidder's attention is directed to the fact that all applicable State laws, Municipal ordinances, and the rules and regulations of all authorities having jurisdiction over the project shall apply to the Contract throughout, and they will be deemed to be included in the contract the same as though herein written out in full. If the agency is closed for any reason, including but not limited to: acts of God, strikes, lockouts, riots, acts of war, epidemics, governmental regulations superimposed after the fact, fire, earthquakes, floods, or other natural disasters (the "Force Majeure Events"), which closure prevents the opening of bids at the advertised date and time, all bids received shall be publicly opened and read aloud on the next business day that the agency shall be open and at the previously advertised time. The new date and time of the bid opening, as determined in accordance with this paragraph, shall not be advertised, and all Vendors/Contractors, upon submission of a bid proposal, shall be deemed to have knowledge of and shall have agreed to the provisions of this paragraph. Bids shall be received by the agency until the new date and time of the bid opening as set forth herein. The agency shall not be held responsible for the receipt of any bids for which the delivery was attempted and failed due to the closure of the agency as a result of a Force Majeure Event. Each Supplier/Vendor/Contractor shall be required to ensure the delivery and receipt of its bid by the agency prior to the new date and time of the bid opening.
9. **BID CONFORMATION:** Any Proposal / Bid that fails to conform to the essential requirements of the specifications shall be rejected. In discretionary cases, the Claiborne County Board of Supervisors shall be the determining factor in whether specifications are met. Each Proposal / Bid must be signed by an individual duly authorized to bind the bidder. Prices included in the Proposal / Bid / must include all material and labor, applicable permits and freight according to the specifications of each Material Group required to complete the Term Contract in its entirety. All material must meet or exceed all specifications.

Claiborne County is tax exempt and no taxes are to be included in the pricing numbers. Sales Tax and Federal Excise Tax are not to be included in the bid price.

The Claiborne County Board of Supervisors reserves the right to reject any and all bids.

10. **BID PRICES:** The Claiborne County Board of Supervisors, reserves the right to accept or reject any part or all of any bid submitted and waive any informalities therein, and to select the pricing system that is best suited for the County. All prices bid will be guaranteed delivered prices for the term of the contract.
11. **BID / PROPOSAL RESPONSES:** All suppliers must submit bids / proposals, in writing no later than Friday, August 4, 2017, 4:00 PM CDT. The following enclosed, Claiborne County Board of Supervisors documents shall be considered as a part of these specifications: All forms shall be properly and completely executed and returned in form of the bid / proposal to the office of Ms. Gloria Dotson, Chancery Clerk, Claiborne County, Claiborne County Courthouse, 410 Market Street, Port Gibson, MS 39150. Bid / proposal covers should include:

Firm Name: _____ Bid #11-090117-093018
Bidder: _____ Mailing Address: _____
City: _____ State: _____ Zip Code: _____

12. **DELIVERY LOCATION:** It is understood that the Supplier agrees to deliver all items on which bids are accepted to Claiborne County through the term on the contract starting September 1, 2017

through September 30, 2018 to various locations as directed by the Claiborne County Board of Supervisors or their assignee.

13. **ORDER FREQUENCY AND DELIVERY TIMES:** Each of the specifications has an estimated usage of each item. It is the responsibility of the awarded contractor / supplier to meet all delivery requirements requested by the County. Failure to meet specified or requested delivery times requested by the buyer shall be grounds to terminate the contract with the Contractor / Supplier at any time.
14. **CONTRACTOR RESPONSIBILITY:** It is understood that items will be disqualified that do not meet the specification or the accepted equal. If a product is purchased and it is later determined that the product fails to comply with these specifications and conditions, the item will be rejected and returned to the Contractor at the Contractor's expense. It is understood that in case of default by the Contractor, the Claiborne County Board of Supervisors may procure the articles or services from other sources and may deduct from any unpaid balance due the Contractor for the amount of the excess cost paid, and the price paid shall be considered the prevailing market price at the time such purchase is made. Continuous instances of default may result in cancellation of the contract.
15. All Contractors / Suppliers are to submit with this bid / proposal response due on Friday, August 4, 2017, by 4:00 PM CDT, and including the, all specifications, and any technical information of each item or any alternate item they intend to bid in this project along with their response.
16. **CONTACT INFORMATION:** Suppliers having any questions in regards to the specifications, delivery requirements or any item of this project, please contact the following.

Mr. Tommy Avant, P.E.
Claiborne County Engineer
IMS Engineers
126 E Amite Street
Jackson, MS 39201
Ph: 601-968-9194

tjavant@imsengineers.com / gford@imsengineers.com

17. These Specifications are not intended to exclude any Manufacturer, Supplier, are intended only to establish acceptable standards, and are not intended to limit the bidding.
18. **Contract:** Each Group will be awarded on the lowest and best-valued price submitted by the Suppliers with alternates (at the Claiborne County Board discretion) for each group. The term of the Contract will be from September 1, 2017 thru September 30, 2018. If Supplier is going to supply an alternate, they must submit the alternate by line item in writing with Specification Responses, along with all the requirements as stated in items listed in this bid document.
19. All Suppliers must conform to the Federal Safety Requirements in addition to the grades and quantities listed below. Usage amounts are estimated on the previous year usage and estimated for the term of the contract for the period from September 1, 2017 and ending September 30, 2018. If amount exceeds any of the estimated usage, the same price will apply through the term of contract.
20. All items must exceed or match specifications listed below in each product and must be comparable with or equivalent to the specifications issued by the Claiborne County Engineer. Any alternates for each product and be considered with other considerations of the bid.
21. All Materials are to be delivered to Claiborne County Road Department as stated in each group of items listed in the specifications and will include all freight to each location unless specified to be delivered to project site and specified in the individual product specifications. All freight charges are included in the bid price. All prices bid will be guaranteed delivered prices except Sales and Federal Excise Taxes.
22. All items have an estimated usage based on previous years usage and shall be priced individually

based on the usage numbers indicated below. This usage number is an estimated number and not guaranteed, or considered high or low with the estimated numbers. In the event the usage may increase or decrease the final bid price established from the awarded bid price will remain throughout the term of this contract.

23. The following is the list of Items and groups in this package for all suppliers to respond:

A. Non-Collusion Affidavit (Must be signed and Notarized):	Page #5
B. Group A: Asphalt Milling	Pages #6 & #7
C. Group B: Hot mix Asphalt	Pages #8-17
D. Group C: SCRUB SEAL, SLURRY SEAL AND MICRO-SURFACING SEAL	Pages #18-38
E. Group D: Asphalt Cement and Emulsified Asphalt:	Page #39
F. Group E: Clay Gravel / Crushed Limestone Seal Sizes #7, #8, and #89 Rip Rap	Pages # 40-43
G. Group F: Traffic Paint & Glass Beads	Pages #44-45
H. Group G: Pavement Stripping, Markings	Pages #46-48

See Next Page

AFFIDAVIT

(TO BE EXECUTED IN DUPLICATE)

STATE OF MISSISSIPPI

COUNTY OF _____

I, _____
(Name of person signing affidavit)

Individually, and in my capacity as _____
(Title)

of _____ being duly sworn, on oath do depose and say as follows:
(Name of firm, partnership or corp.)

- (a) That _____, Bidder on TERM BID CONTRACTS ON TERM BID CONTRACT BID #11-090117-093018 FOR **ASPHALT PRODUCTS, MILLING, HOT PLANT MIX, ASPHALT IN PLACE, LIQUID ASPHALT, SCRUB SEAL, SLURRY SEAL AND MICRO-SURFACING SEAL CORRUGATED POLYMERIC PIPE & COUPLINGS, CRUSHED LIMESTONE, RIP-RAP, SAND & GRAVEL, TRAFFIC PAINT AND GLASS BEADS, PAVEMENT STRIPING & MARKINGS** FOR CLAIBORNE COUNTY THE PERIOD OF SEPTEMBER 1, 2017 THROUGH SEPTEMBER 30, 2018 has not either directly or indirectly entered into any agreement, participated in any collusion, or otherwise taken any action in restraint of free competitive bidding in connection with this contract; nor have any of its officers, partners, employees or principal owners.
- (b) Further, that said neither legal entity nor any of its directors, officers, partners, principal owners, or managerial employees are currently debarred from bidding on public contracts by the State of Mississippi or any of its agencies; or by one or more of the other states or any of their agencies; or by any Federal agency.

Signature _____

Title _____

(SEAL)

Sworn before me this ____ day of _____, 2017

Notary Public

My commission expires: _____

NOTE: FAILURE TO PROPERLY SIGN AND NOTARIZE THIS AFFIDAVIT WILL DISQUALIFY THE BID.

**DETAILED SPECIFICATION SHEET FOR
"Group A"
ASPHALT MILLING, THROUGHOUT CLAIBORNE COUNTY
BOARD OF SUPERVISORS
CLAIBORNE COUNTY, MISSISSIPPI**

Gentlemen:

Pursuant to your advertisement, for Term Bids #11-090117-093018, **ASPHALT MILLING THROUGHOUT CLAIBORNE COUNTY for the term of September 1, 2017 - September 30, 2018 we submit the following response.**

_____ located at
(NAME OF VENDOR)
_____ do hereby
submit our proposal for furnishing, as ordered by the County, in accordance with the specifications listed below, ASPHALT MILLING THROUGHOUT CLAIBORNE COUNTY beginning September 1, 2017 and ending September 30, 2018 and/or until a new contract is accepted.

General I:

1. All bidders must be licensed and bonded to work in Claiborne County, MS. In addition, shall submit a copy of their license along with these documents.
2. All bidders must carry appropriate insurance (worker's compensation liability, etc.) to "SAVE HARMLESS" Claiborne County.
3. Approved Supplier will be responsible for obtaining any and all necessary permits.
4. The County reserves the right to request a performance bond at the time of the award.
5. It is the intent of this request to reach Contractors / Suppliers / Vendors normally in the asphalt milling business.
6. The County reserves the right to request a list of job references and current contracts.
7. All bidders shall include type of proposed equipment to be used if awarded the bid.
8. The scope of work shall consist of all equipment, labor, materials, tools, and needed to remove asphalt paving of various thicknesses in accordance to site requirements at various locations throughout Claiborne County, as directed by the County Engineer or his designated representative.
9. Individual Purchase Orders will be issued for each area of asphalt to be removed.
10. Work on each purchase order shall begin within five (5) working days after issuance, of the purchase order unless an extension is granted by the County Engineer.
11. The bidder shall be required to maintain traffic control on the portion of the Claiborne County Road system that is involved in the milling operations including flagman, flashing directional signals, traffic barricades, personnel, and traffic safety devices necessary to provide for the safety of the workers, the public, and the protections of the incomplete pavement milling until such time as that portion of the roadway may be released to the normal flow of traffic.
12. Claiborne County shall keep the milled material. Milled material will be property of Claiborne County and transported to a stockpile location provided by Claiborne County

PROCESSION OF THE WORK:

1. The Claiborne County Engineer, under the direction of the Board of Supervisors, shall determine what roads shall receive asphalt milling, and in what manner the milling shall proceed.
2. The County Engineer, in conjunction with the Contractor shall determine the sequence of operations and schedule the work.
3. The Contractor will be responsible for milling and removing millings from the worksite and storing at a location as directed and approved by the County Engineer.
4. The County Engineer will inspect the work and make all determinations regarding the control of the work.

Method of Measurement:

1. Pavement removed under this Bid will be measured for payment by the total number of square yards removed.
2. Price per square yard is to be based upon a minimum of _____ for each work site.

PRICE TO BE BID FOR PAVEMENT REMOVED PER SQUARE YARD WITH VARIOUS THICKNESSES:

PRODUCT TYPE	UNIT	PRICE
ASPHALT MILLING, THROUGHOUT CLAIBORNE COUNTY	PER SQUARE YARD	

General II:

1. The County reserves the right to cancel contract to purchase at any time for justifiable cause. Further, contract to purchase may be canceled for cause by either party upon thirty (30) days written notice.
2. Bids will only be accepted by bidding as per conditions in this bid / proposal solicitation.

**I CERTIFY THAT THE SERVICES OR MATERIALS OFFERED IN ASPHALT MILLING THROUGHOUT
CLAIBORNE COUNTY MEET OR EXCEED THE CURRENT MS
STANDARD SPECIFICATIONS FOR ROADS AND BRIDGES**

DATE: _____

VENDOR: _____

SIGNED BY (Name and Title) _____

ADDRESS: _____

TELEPHONE: _____ FAX: _____

CONTRACTOR'S LICENSE NUMBER: _____

**DETAILED SPECIFICATION SHEET FOR
"Group B"**

**HOT BITUMINOUS PLANT MIXES, PICK UP AT PLANT AND IN PLACE (FOR APPLICATION ON PREVIOUSLY
PREPARED BASE COURSE AND FOR OVERLAYING EXISTING PAVEMENT)
TO CLAIBORNE COUNTY BOARD OF SUPERVISORS
CLAIBORNE COUNTY, MISSISSIPPI**

Gentlemen:

Pursuant to your advertisement, for Term Bids #11-090117-093017, **HOT BITUMINOUS PLANT MIXES, PICK UP AT PLANT AND IN PLACE (FOR APPLICATION ON PREVIOUSLY PREPARED BASE COURSE AND FOR OVERLAYING EXISTING PAVEMENT)** for the term of September 1, 2017 – September 30, 2018 we submit the following response.

_____ located at
(NAME OF VENDOR)

_____ do hereby submit this proposal for furnishing, as ordered by the County, as set out below, **HOT BITUMINOUS PLANT MIXES PICK UP AT PLANT AND IN PLACE** for a period beginning September 1, 2017 and ending September 30, 2018 and/or until a new contract is accepted.

SECTION I DESCRIPTION:

Hot Bituminous Pavement, (ASPHALT IN PLACE) for application on previously prepared base course and overlay

PRODUCT TYPE	UNIT	PRICE
SURFACE MIX SC-1 TY-2 (II) ASPHALT IN PLACE, ANY LOCATION CLAIBORNE COUNTY	PER TON	
SURFACE MIX SC-1 TY-8 (VIII) ASPHALT IN PLACE, ANY LOCATION CLAIBORNE COUNTY	PER TON	
BASE COURSE, ST MIX ASPHALT IN PLACE ANY LOCATION CLAIBORNE COUNTY 12.5 MM	PER TON	
BASE COURSE, ST MIX ASPHALT IN PLACE ANY LOCATION CLAIBORNE COUNTY 19 MM	PER TON	
BINDER BASE ASPHALT IN PLACE, ANY LOCATION CLAIBORNE COUNTY 12.5 MM	PER TON	
TACK COAT IN PLACE, ANY LOCATION CLAIBORNE COUNTY	Per Gallon	

- 1) This work shall consist of all labor, materials, equipment and incidentals needed to construct bituminous surface courses in accordance with these specifications to include driveways, roads, parking areas or other projects at various locations throughout Claiborne County, as Directed by the County Engineer or his designated representative.
- 2) Individual Purchase Orders will be issued for each section of paving. Work on each Purchase Order shall begin within five (5) working days after issuance, unless an extension is granted by the County Engineer.
- 3) Should the amount of work requested exceed the capacity of one work crew, additional crews shall be added to accommodate the requirements of the owner. A maximum of seven (7) days notice will be given to schedule and mobilized additional crews to meet the demand. Failure to comply with this requirement may be reason to terminate the contract.

- 4) It is understood that it shall be the contractor's responsibility for traffic control at work sites.
- 5) It shall be the contractor's responsibility for quality control, testing asphalt to verify material meets specifications, providing the County with test reports and provide the County and or their designated testing company with corresponding samples of asphalt for random sampling to a private laboratory. Approved supplier shall be responsible for all costs associated with testing of the mix design. If Claiborne County selects to have an independent test performed, the County shall be responsible for said costs.
- 6) Tickets from certified scales shall be issued for each load from bidder's plant. Scale tickets shall be signed by a representative of the Claiborne County Engineer.
- 7) It is understood that paving construction orders include water sprinkling as required.
- 8) Hot Bituminous pavement mixes, SC-1, shall be mixed in accordance with Section 901-S-401, Section UTAP 411, MISSISSIPPI STANDARD SPECIFICATIONS FOR STATE AID ROAD AND BRIDGE CONSTRUCTION, 2004 or current edition as follows.
 - A. Plant mix pavements General Section 401
 - B. ST 19 mm Base Course Sections 401
 - C. ST 12.5 mm Binder Course Section 401
 - D. ST 9.5 mm Surface Course Section 401
 - E. ST 4.75 mm Surface Course Section 401
 - F. Ultra-Thin Asphalt Pavement (UTAP) Section 411
 - G. Tack coat Section 407
 - H. Tack Coat – Emulsified asphalt shall meet Section S-707.07, meeting requirements of Section 702, State Aid Standard Specifications, and 2004 edition.
 - I. Hot Bituminous Pavement – Conform to Special Provision 901-S-402-2, State Aid Standard Specifications, 2004 edition except that the Petroleum Asphalt Cement used in all mixtures shall be Grade PG 67-22 or equal.
 - J. All hot bituminous mixtures shall conform to the requirements set out in subsection S-703.06, State Aid Standard Specifications, 2004 edition for a SC-1 mix using tables found in Special Provision 901-S-401.

Sections 1 through 7 will be referred to as HMA throughout the rest of this section.

- 9) The term "course" used in the Section shall be understood to mean a layer of specified thickness shown on the plans and for which quantities are estimated on the plans and in the proposal as the basis for bidding. A course may, in some cases consist of a single layer, and in other cases, may consist of two or more layers depending on the finished thickness specified.
- 10) Quality Assurance Testing will be provided by the Supplier to insure all testing frequency and sampling is in accordance with these specifications. Approved supplier shall submit a design mix for testing prior to the beginning of any work or as instructed by the County Engineer or their designated representative. Approved supplier shall be responsible for all costs associated with the testing of the asphalt mix and to provide Claiborne County with a copy of the test report. Claiborne County reserves the right not to make payment for asphalt until said test reports have been provided and results verify the material meets specifications.

SECTION II HMA COURSE:

- 1) General: Where indicated on the Drawings this work shall consist of the construction of an HMA course in one or more layers composed of mineral aggregates mixed in a central mixing plant with bituminous materials in the proportions specified and placed hot. The HMA course shall be constructed on a prepared sub grade foundation or existing HMA course in accordance with these specifications and in close conformity with the thickness, lines, grades, and sections as shown on the plans.

- 2) The HMA course shall comply with Section 401 and/ or 411, Hot Mix Asphalt (HMA) - General, of the Mississippi Standard Specifications for Road and Bridge Construction, 2004 Edition.
- 3) The Contractor shall have his testing lab furnish to the Engineer a job mix formula for the project for approval before placing any material. The job mix formula shall have design data included proving that the design criteria can be met.
- 4) The job mix formula shall be set within the master range as indicated below. The job mix formula shall be maintained within the job mix tolerance and shall not exceed the limits of range.
 - A. The job mix formula as approved as tentative until a sufficient amount of the mixture has been processed through the plant, spread, and compacted.
 - B. After the job mix formula is approved, the mixture furnished to the project shall remain unchanged, within the tolerances specified for the mixture, throughout the duration of the job. No change in properties or proportions of any ingredient of the mix shall be made without written permission of the Engineer.
- 5) Coarse Aggregate Blend. Mechanically fractured faces by weight of the combined mineral aggregate coarser than the No 4 sieve see Table 1.

TABLE 1	
Mixture	PERCENT FRACTURED FACES, MINIMUM
25 mm	70 (one face)
19 mm*	80 (one face)
12.5 mm	90 (two face)
9.5 mm	90 (two face)
4.75 mm	90 (two-face)

- 6) Fine Aggregate Blend. Of all the material passing the No. 8 sieve and retained on the No. 200 sieve, not more than 60 percent shall pass the No. 30 sieve.
- 7) Uncrushed natural sand shall pass the 3/8" sieve and may be used excluding the content in RAP, in the percentages of the total mineral aggregate by weight set out in Table 2.

TABLE #2			
Mixture	Maximum Percentage of Natural Sand by Total Weight of Mineral Aggregate		
	HT	MT	ST
25 mm	10	10	20
19 mm	10	10	20
12.5 mm	10	10	20
9.5 mm	10	10	10
4.75 mm	25	30	35

- 8) The gradation of the mixture shall meet the following Design Master range requirements listed in Table 3 on next page #12.

See Table #3 Next Page

Design Master Range Table # 3

Mixture:	25 mm	19 mm	12.5 mm	9.5 mm	4.75 mm
Nominal Maximum	1 inch	3/4 inch	1/2 inch	3/8 inch	1/4 inch
Sieve Size:					
Sieve Size	Percent Passing				
1-1/2 inch	100				
1 inch	90-100	100			
3/4 inch	89 max.	90-100	100		
1/2 inch	-	89 max.	90-100	100	100
3/8 inch	-	-	89 max.	90-100	95-100
No. 4	-	-	-	89 max.	90-100
No. 8	16-50	18-55	20-60	22-70	-
No. 16	-	-	-	-	30-60
No. 200	4.0-9.0	4.0-9.0	4.0-9.0	4.0-9.0	6.0-12.0

- 9) Bituminous Materials shall be petroleum asphalt cement grade PG 67-22, unless otherwise specified and meet the applicable requirements of Section 702 for the grade specified.
- 10) Aggregate sources shall meet the applicable requirements of Section 703.
- 11) Hydrated Lime shall meet the requirements of Subsection 714.03.2 of the Mississippi Standard Specifications for Road and Bridge Construction, 2004 Edition.
- 12) Mineral Filler shall meet requirements of Section 703.16 of the Mississippi Standard Specifications for Road and Bridge Construction, 2004 Edition. Mineral Filler may be used as necessary to obtain desired properties; however, excessive use shall not be permitted in the mix.
- 13) Weather Limitations: The mixture shall not be placed when the weather conditions prevent the proper handling and finishing or the surface on which it is to be placed is wet or frozen. At the time of placement, the air and pavement surface temperature limitations shall be equal to or exceed that specified in the Table 2. When paving operations are discontinued because of rain, the mixture in transit shall be protected until the rain ceases. The surface on which the mixture is to be placed shall be swept to remove as much moisture as possible and the mixture may then be placed subject to removal and replacement at the Contractor's expense if contract requirements are not met.

TABLE # 4	
TEMPERATURE LIMITATIONS	
Compacted Thickness	Temperature
Less than 1 1/2 inches	55 ° F
1 1/2 inches to 2 inches	50 ° F
2 1/4 inches to 3 inches	45 ° F
Greater than 3 inches	40 ° F

- 14) Density: The density requirement for each completed lift on a lot to lot basis from density tests performed shall not be less than 92.0 percent nor more than 96.0 percent of the maximum density based on AASHTO T-209. When borderline results are obtained on density tests, it shall be the Contractor's responsibility to furnish and use the appropriate number, type, and size of rollers as necessary to consistently obtain the required density. When the furnished compactive effort does not

produce the required density, The Contractor shall make such approved adjustments as necessary to obtain the required density. Pavement samples obtained for determining density and/or correlation of the nuclear density gauge which have a thickness less than two times the maximum size aggregate permitted by the job-mix formula will not be used as a representative sample

- 15) Smoothness Tolerance shall conform to the designated grade and cross section within the tolerances set forth in Section 401.03.2-page number section 4-7 of the Mississippi Standard Specifications for Road and Bridge Construction, 2004 edition.

SECTION III Pre-Rolling:

Before application of base course, the sub-base shall be pre-rolled as may be required to determine possible presence of underlying soil failures.

SECTION IV TACK COAT (Required Full Width):

- 1) General: This work shall consist of preparing and treating an existing bituminous or concrete surface with bituminous material in accordance with these specifications and in close conformity with the lines shown on the plans or established by the Engineer. A tack coat shall be applied, for the full width of the course to be superimposed on a previously prepared, bonded, and bituminized road surface, or base, or concrete surface, or base. The tack coat may be omitted from a previously primed road when deemed by the Engineer to be unnecessary.
- 2) Tack coat is to be applied between each lift and course of asphalt pavement unless otherwise specified by the Engineer.
- 3) Tack coat shall be applied per the specifications listed in Section 407 of the Mississippi Standard Specifications for Road and Bridge Construction, 2004 Edition.
- 4) Separate Payment for tack coat shall be made. Tack coat will be paid for at the contract unit price per gallon, which price shall be full compensation for completing the work.

SECTION V CONSTRUCTION:

- 1) Construction of asphalt pavements shall be in accordance with Paragraphs 401.03.3 through 403.03.13 of the Mississippi Standard Specifications for Road and Bridge Construction, 2004 Edition.
- 2) JOINTS: The formation of all joints shall be made in such a manner as to ensure a continuous bond between the courses and obtain the required density. All joints shall have the same texture as other sections of the course and meet the requirements for smoothness and grade.
- 3) The roller shall not pass over the unprotected end of the freshly laid mixture except when necessary to form a transverse joint. When necessary to form a transverse joint, it shall be made by means of placing a bulkhead or by tapering the course. The tapered edge shall be cut to its full depth and width on a straight line to expose a vertical face before placement of the adjacent lane. In both methods, all contact surfaces shall be given a tack coat of bituminous material before placing any fresh mixture against the joint.
- 4) Longitudinal joints which are irregular, damaged, uncompacted, or otherwise defective shall be cut back to expose a clean, sound surface for the full depth of the course. All contact surfaces shall be given a tack coat of bituminous material before placement of any fresh mixture against the joint.
- 5) Paving shall conform to the requirements of Special Provision 901-S-401.1 of the State Aid Standard Specifications, 2004 edition, except that the minimum density required shall be 92 percent, and 403.04 State Aid Standard Specifications, 2004 edition except that Subsection 403.03.5 is not applicable to this project.
- 6) The contractor shall remove all dirt and debris from the existing pavement surface prior to tacking and paving the road. Broom sweeping may be necessary as directed by the County Engineer or his designated representative.
- 7) Claiborne County reserves the right to require additional testing on asphalt in place. If Claiborne County requires such additional testing, final payment will not be made until core samples have been obtained, tested by the County's contracted laboratory, and said tests results are verified as

meeting specifications. All costs associated with core sampling testing services shall be paid by Claiborne County.

- 8) Asphalt placing operations shall not be commenced unless the outside air temperature in the shade is 50 degrees and rising. This requirement may be waived at the discretion of the Engineer.

SECTION VI GENERAL:

1) Composition of Mixtures:

- A. Unless otherwise specified or permitted, the HMA shall consist of a uniform mixture of asphalt, aggregate, hydrated lime, and when required necessary to obtain desired properties, anti-stripping agent and/or other materials.

The total amount of crushed limestone aggregate for mixtures, excluding 4.75 mm and UTAP mixtures, when used in the top lift, shall not exceed 50 percent of the total combined aggregate by weight.

Hydrated lime shall be used in all HMA at the rate of one percent (1%) by weight of the total dry aggregate including aggregate in RAP, if used. The aggregate, prior to the addition of the hydrated lime, shall contain sufficient surface moisture. If necessary, the Contractor shall add moisture to the aggregate according to the procedures set out in Subsection 401.03.2.1.2 of the Mississippi Standard Specifications for Road and Bridge Construction, 2004 Edition.

The Contractor shall obtain a shipping ticket for each shipment of hydrated lime. The Contractor shall provide the Engineer with a copy of each shipping ticket from the supplier, including the date, time and weight of hydrated lime shipped and used in hot mix asphalt production. An amount equal to twenty-five percent (25%) of the total value of HMA items performed during the initial estimate period in which the Contractor fails to submit the hydrated lime shipping tickets to the Engineer will be withheld from the Contractor's earned work. Non-conformance with this specification for successive estimate period(s) will result in the total value (100%) of HMA items performed during this period(s) being withheld from the Contractor's earned work. Monies withheld for this non-conformance will be released for payment on the next monthly estimate following the date the submittal of hydrated lime shipping tickets to the Engineer is brought back into compliance with this specification.

Mixtures will require the addition of an anti-stripping agent when the Tensile Strength Ratio (MT-63) and/or Boiling Water Test (MT-59) fail to meet the following criteria listed in Table 5.

TABLE # 5	
Tensile Strength Ratio (TSR - MT-63)	
Wet Strength / Dry Strength	85 Percent minimum
Interior Face Coating	95 Percent minimum
Boiling Water Test (MT-59)	
Particulate Coating	95 Percent minimum

Reclaimed asphalt pavement (RAP) materials may be used in the production of HMA in the percentages of the total mix by weight set out in the Table 3.

During HMA production, RAP shall be separated into coarse and fine aggregate stockpiles using 'A" sieve as the break point.

Crushed reclaimed concrete pavement may be used as an aggregate component of all HMA pavements. When crushed reclaimed concrete pavement is used as an aggregate component, controls shall be implemented to prevent segregation. Crushed reclaimed concrete pavement aggregate shall be separated into coarse and fine aggregate stockpiles using the 3/8" or 1/2" sieve as a break point unless otherwise approved by the Engineer in writing.

2) Personnel Requirements and Testing Requirements.

- A. The Contractor shall provide at least one Certified Asphalt Technician-I (CAT-I) full-time

during HMA production at each plant site used to furnish material to the project. Sampling shall be conducted by a certified technician or by plant personnel under the direct observation of a certified technician. All testing, data analysis and data posting will be performed by the CAT-I or by an assistant under the direct supervision of the CAT-I. The Contractor shall have a Certified Asphalt Technician-II (CAT-II) available to make any necessary process adjustments. Technician certification shall be in accordance with MDOT SOP TMD-22-10-00-000, MDOT HMA Technician Certification Program. An organizational chart, including names, telephone numbers, and current certification, of all those responsible for the quality control program shall be posted in the Contractor's laboratory while the asphaltic paving work is in progress.

- B. As a minimum, the Contractor's quality management program shall include the following:
1. Mechanically Fractured Face. Determine mechanically fractured face content of aggregates retained on the No. 4 sieve, at a minimum of one test per day of production.
 2. Mixture Gradation. Conduct extraction tests for gradation determination on the mixture. Sample according to the frequency in paragraph (8) and test according to Mississippi Test Method MT-31.
 3. Total Voids and VMA. Determine total voids and voids in mineral aggregate (VMA), at N Design, from the results of bulk specific gravity tests on laboratory compacted specimens. Sample according to the sampling frequency in paragraph (8) and test according to the latest edition of MDOT's Field Manual for HMA.
 4. Asphalt Content. Sample according to the sampling frequency in paragraph (8). Determine the asphalt content using one of the following procedures.
 - (A) Nuclear gauge per Mississippi Test Method MT-6
 - (B) Incinerator oven per AASHTO T 308, Method A.
 5. Stripping Tests. Conduct a minimum of one stripping test at the beginning of each job-mix production and thereafter, at least once per each two weeks of production according to Mississippi Test Method MT-63 and one stripping test per day of production according to Mississippi Test Method MT-59. Should either the TSR (MT-63) or the boiling water (MT-59) stripping test fail, a new anti-strip additive or rate shall be established or other changes made immediately that will result in a mixture which conforms to the specifications; otherwise, production shall be suspended until corrections are made.
 6. Density Test. For 19 mm, 12.5 mm and 9.5 mm mixtures, conduct density tests as necessary to control and maintain required compaction according to Mississippi Test Method MT -16, Method C (nuclear gauge), or AASHTO T-166. Note — The nuclear gauge may be correlated, at the Contractor's option, with the average of a minimum of five pavement sample densities. For 4.75 mm mixtures, conduct density tests as necessary to control and maintain required compaction according to AASHTO T-166. For UTAP shall be roll to refusal. Refusal is defined as the number of roller passes to maximize the in-place unit weight of the mixture. On the first day of production and every three production days thereafter, a 500-foot test strip shall be evaluated to determine the required number of roller passes. Three random sites within the test strip shall be selected and monitored with the nuclear density gauge to determine refusal.
 7. Quality Control Charts. Plot the individual test data, the average of the last four tests and the control limits for the following items as a minimum:

Mixture Gradation (Percent Passing) Sieves:
1/2 —in, 3/8-in, No. 8, No. 16, No. 30 and No. 200
Asphalt Content, Percent
Maximum Specific Gravity, Gmm
Total Voids @ NDesign, Percent
VMA @ N Design, Percent

NOTE: For 4.75 mm mixtures, Quality control Charts for mixture gradation are not required on the No. 8 and No. 30 sieves. For 4.75 mm mixtures, as a minimum, Quality

control Charts for mixture gradation shall be kept on the 3/8-in, No. 16 and No. 200 sieves. For all mixtures other 4.75 mm, Quality Control Charts for mixture gradation are not required on the No.16 sieve.

Keep charts up-to-date. Charts may be kept on a computer; however, charts shall be printed out when requested by the Engineer, Claiborne County County Engineer or the Engineer's Testing Lab. Note any process changes or adjustments on the Air Voids chart.

8. Sampling Frequency. Conduct those tests as required above at the following frequency for each mixture produced based on the estimated plant tonnage at the beginning of the day. These frequencies are for 19 mm, 12.5 mm, 9.5 mm, and 4.75 mm.

Total Estimated Production, tons	Number of Tests
50 - 800	1
801 - 1700	2
1701- 2700	3
2701 +	4

Sampling Frequency for UTAP

Total Estimated Production, tons	Number of Tests
0 - 500	1
501 - 1000	2
1001 - 1500	3
1501 - 2000	4
2001 +	5

Additional information can be found in the Mississippi Standard Specifications for Road and Bridge Construction, 2004 Edition. Section 401 — Hot Mix Asphalt (HMA) — General, Section 403 — Hot Mix Asphalt Pavement, Section 407 — Tack Coat, Special Provision No. 907-411-1 — Ultra —Thin Asphalt Pavement (UTAP), Section 700 — Materials and Tests, Section 702 — Bituminous Materials, Section 703 — Aggregates.

The Claiborne County Engineer shall witness and review the Contractor's lab technician's paper work and testing procedures for Quality Assurance.

SECTION VII

HOT BITUMINOUS PLANT MIXES PICK UP AT PLANT for a period beginning September 1, 2017 and ending September 30, 2018 and/or until a new contract is accepted.

- 1) Hot Bituminous pavement mixes, SC-1, shall be mixed in accordance with Section 901-S-401, Section UTAP 411, MISSISSIPPI STANDARD SPECIFICATIONS FOR STATE AID ROAD AND BRIDGE CONSTRUCTION, 2004 or current edition as follows.

- A. Plant mix pavements General Section 401
- B. ST 19 mm Base Course Section 401
- C. ST 12.5 mm Binder Course Section 401
- D. ST 9.5 mm Surface Course Section 401
- E. ST 4.75 mm Surface Course Section 401
- F. Ultra-Thin Asphalt Pavement (UTAP) Section 411
- G. Tack coat Section 407

- 2) Hot Bituminous Pavement – Conform to Special Provision 901-S-402-2, State Aid Standard Specifications, 2004 edition except that the Petroleum Asphalt Cement used in all mixtures shall be Grade PG 67-22 or equal.
- 3) All hot bituminous mixtures shall conform to the requirements set out in subsection S-703.06, State Aid Standard Specifications, 2004 edition for a SC-1 mix using tables found in Special Provision 901-S-401.
- 4) Hot Bituminous pavement mixes, SC-1, shall be mixed in accordance with Section 901-S-401.2, a MISSISSIPPI STANDARD SPECIFICATIONS FOR STATE AID ROAD AND BRIDGE CONSTRUCTION, 2004 or current edition.
- 5) Approved supplier shall submit a design mix for testing prior to the beginning of any work or as instructed by the County Engineer or their designated representative. Approved supplier shall be responsible for all costs associated with the testing of the asphalt mix and to provide Claiborne County with a copy of the test report.
- 6) Claiborne County reserves the right not to make payment for asphalt until said test reports have been provided and results verify the material meets specifications.
- 7) The following is for the Supplier to complete and answer all specifications and complete submit any alternate products only. Do not submit any prices in this document or you will be disqualified. All bids will be submitted by an Electronic Bid as stated in the above documents.

SC-1 HOT BITUMINOUS PLANT MIXES F.O.B.
LOADED ON COUNTY TRUCKS

PRODUCT TYPE	UNIT	PRICE
SURFACE MIX SC-1 TY-2 (II) ASPHALT - LOADED ON COUNTY TRUCKS	PER TON	
SURFACE MIX SC-1 TY-8 (VIII) ASPHALT LOADED ON COUNTY TRUCKS	PER TON	
BASE COURSE, ST MIX ASPHALT, LOADED ON COUNTY TRUCKS 12.5 MM	PER TON	
BASE COURSE, ST MIX ASPHALT, LOADED ON COUNTY TRUCKS 19. MM	PER TON	
BINDER BASE ASPHALT, ST MIX, LOADED ON COUNTY TRUCKS 12.5 MM	PER TON	
TACK COAT- LOADED ON COUNTY TRUCKS	Per Gallon	

- 9) The County reserves the right to place an inspector at each plant providing asphalt to the County, loaded on County Trucks from the Suppliers Plant.
- 10) The County reserves the right to cancel contract to purchase at any time for justifiable cause. Further, contract to purchase may be canceled for cause by either party upon thirty (30) days written notice.
- 11) Bids will only be accepted by bidding as per conditions in this bid / proposal solicitation.

I CERTIFY THE MATERIAL AND SERVICES OFFERED GROUP HOT BITUMINOUS PLANT MIXES , PICK UP AT PLANT AND IN PLACE (FOR APPLICATION ON PREVIOUSLY PREPARED BASE COURSE AND FOR OVERLAYING EXISTING PAVEMENT MEETS OR EXCEEDS THE FOREGOING SPECIFICATIONS.

DATE: _____

VENDOR: _____

SIGNED BY: _____

(Print Name and Title)

SIGNATURE: _____

ADDRESS: _____

TELEPHONE: _____ FAX: _____

EMAIL ADDRESS: _____

**DETAILED SPECIFICATION SHEET FOR
"Group C"
SCRUB SEAL, SLURRY SEAL, AND MICRO-SURFACING SEAL
TO CLAIBORNE COUNTY BOARD OF SUPERVISORS
CLAIBORNE COUNTY, MISSISSIPPI**

Gentlemen:

Pursuant to your advertisement, for Term Bids #11-090117-093018, HOT BITUMINOUS PLANT MIXES , PICK UP AT PLANT AND IN PLACE (FOR APPLICATION ON PREVIOUSLY PREPARED BASE COURSE AND FOR OVERLAYING EXISTING PAVEMENT) for the term of September 1, 2017 – September 30, 2018 we submit the following response.

located at

(NAME OF VENDOR)

do hereby submit this

proposal for furnishing, as ordered by the County, as set out below, **SCRUB SEAL, SLURRY SEAL, AND MICRO-SURFACING SEAL** for a period beginning September 1, 2017 and ending September 30, 2018 and/or until a new contract is accepted.

General I:

1. All bidders must be licensed and bonded to work in Claiborne County, MS. In addition, shall submit a copy of their license along with these documents.
2. All bidders must carry appropriate insurance (worker's compensation liability, etc.) to "SAVE HARMLESS" Claiborne County.
3. Approved Supplier will be responsible for obtaining any and all necessary permits.
4. The County reserves the right to request a performance bond at the time of the award.
5. It is the intent of this request to reach Vendors normally in the SCRUB SEAL, SLURRY SEAL, AND MICRO-SURFACING SEAL business.
6. The County reserves the right to request a list of job references and current contracts.
7. All bidders shall include type of proposed equipment to be used if awarded the bid.
8. The scope of work shall consist of all equipment, labor, materials, tools, and needed to SCRUB SEAL, SLURRY SEAL, AND MICRO-SURFACING SEAL asphalt paving in accordance to site requirements at various locations throughout Claiborne County, as directed by the County Engineer or his designated representative.
9. Individual Purchase Orders will be issued for each area of asphalt to be SCRUB SEALED, SLURRY SEALED, AND MICRO-SURFACING SEALED.
10. Work on each purchase order shall begin within five (5) working days after issuance, of the purchase order unless an extension is granted by the County Engineer.
11. The bidder shall be required to maintain traffic control on the portion of the Claiborne County Road system that is involved SCRUB SEAL, SLURRY SEAL, AND MICRO-SURFACING SEAL operations. Including flagman, flashing directional signals, traffic barricades, personnel, and traffic safety devices necessary to provide for the safety of the workers, the public, and the protections of the incomplete pavement SCRUB SEAL, SLURRY SEAL, AND MICRO-SURFACING SEAL until such time as that portion of the roadway may be released to the normal flow of traffic.

PROCESSION OF THE WORK:

1. The Claiborne County Engineer, under the direction of the Board of Supervisors, shall determine what roads shall receive **SCRUB SEAL, SLURRY SEAL, AND MICRO-SURFACING SEAL**, and in what manner the milling shall proceed.
2. The County Engineer, in conjunction with the Contractor shall determine the sequence of operations and schedule the work.
3. The Contractor will be responsible for **SCRUB SEAL, SLURRY SEAL, AND MICRO-SURFACING SEAL** the worksite as directed and approved by the County Engineer.
4. The County Engineer will inspect the work and make all determinations regarding the control of the work.

SPECIFICATIONS:

1. Material shall meet the American Society for Testing and Materials (ASTM), American Association of State Highway Transportation Officials (AASHTO), International Slurry Seal Association (ISSA), and Section #405 of the Mississippi Department of Transportation most recent specifications for Road and Bridge Construction.

YES No

2. Quality control and quality testing are the responsibility of the contractor throughout every stage of the work, from production of aggregates to the final accepted product.

Yes No

3. Scrub Seal, Slurry Seal, and Micro-Surfacing Seal may not be applied when weather conditions will have a negative effect on the application unless approved by the Claiborne County Engineer.

Yes No

4. It shall be the contractor's responsibility to provide adequate traffic control measures, such as barricades, cones, advance warning signs, flag person, etc. as instructed by the Claiborne County Engineer during installation and to protect the public from uncured slurry.

Yes No

5. Notifying the surrounding home-owners and businesses that may be affected by construction will be coordinated by the Claiborne County Engineer and the contractor. The vendor may be responsible for notifying the affected parties of upcoming work.

Yes No

6. All work sites should be restored to their original integrity, including but not limited to manhole covers, valve covers, traffic markers, etc. The contractor shall remove all unused material and debris from the site prior to final acceptance.

Yes No

7. If low bidder cannot begin the work within 14 calendar days or as scheduled by the Claiborne County Engineer unless otherwise coordinated with the county from the receipt of the purchase order, Claiborne County reserves the right to request services from the next lowest bidder.

Yes No

SCRUB SEAL PROJECTS

Section 405, SCRUB SEAL, is hereby added to and made a part of the 2004 Edition of the Mississippi Standard Specifications for Road and Bridge Construction as follows:

The tables below provide a description of each bid item. Each item will be bid in square yards and figured on the size as stated in each line item on each table. Indicate Yes or No if you will be bidding each line. Pricing will include all cost and bid as square yards.

Scrub Seal Projects

Scrub Seal Projects	Price	Bid YES or NO
0 -50. 000 Square Yards		
51. 000 – 100.000 Square Yards		
Greater than 100.000 Square Yards		

POLYMER MODIFIED ASPHALT REJUVENATING SCRUB SEAL

Description. This work shall consist of, but not limited to, furnishing all labor, materials, equipment and transportation for the application of the polymer modified asphalt rejuvenating scrub seal inner layer. All ingredients shall be properly proportioned, mixed, and spread on the paved surface in accordance with this Specification and as directed by the Engineer.

Aggregate. The cover material for the seal shall be Size No. 89(stone), Subsection 903.22. If the scrub seal is to be utilized as an inner layer or for a riding surface of a low volume route, ADT less than or equal to 1000, the aggregate shall meet the requirements of Subsection 903.13 of the Standard Specifications. For use as the final riding surface on routes with an ADT greater than 1000, the aggregate shall meet the requirements of Standard Specification, Subsection 903.11, Grading "D".

Emulsion. The asphalt emulsion shall be CMS1P/L (CR), a polymer modified asphalt emulsion with a latex polymer and rejuvenating agent. It shall meet the following specifications.

Test on Emulsion	Method	Specification
Viscosity @77 (SFS)	ASTM D244	50 - 350
Residue, w%, minimum.	ASTM D244	67
pH	ASTM E70	2.0-5.0
Sieve, w%, max.	ASTM D244	0.1
Oil distillate, w%, max.	ASTM D244	0.5
Test on Residue ⁽¹⁾		
Viscosity @ 140°F, P, maximum.	ASTM D2170	2000
Penetration @ 39.2°F, minimum.	ASTM D5	40
Elastic Recovery on residue by distillation, %, minimum.	AASHTO T59, T301 ^(1,2)	50
Test on Latex:		
Tensile strength, die C dumbbell, psi, minimum	ASTM D412 ⁽³⁾	500
Swelling in rejuvenating agent, % maximum; 48 hours exposure @ 104°F	ASTM D471 ⁽⁴⁾ Modified	40% intact film
Test on rejuvenating agent:		
Flash point, COC , °F	ASTM D92	> 380
Hot Mix Recycling Agent Classification	ASTM D4552	See Section II

Section I. Emulsion Specification:

- (1) **Exception to AASHTO T59:** Bring the temperature on the lower thermometer slowly to 350° F plus or minus 10° F. Maintain at this temperature for 20 minutes. Complete total distillation in 60 plus or minus 5 minutes from first application of heat.

Tensile Strength Determination: Samples for testing for tensile strength in accordance with ASTM D412 shall be cut using a die dumbbell at a crosshead speed of 20 in/min.

- (2) **Elastic Recovery @ 10° C (50° F): Hour glass sides pull 20 cm, hold 5 minutes then cut, let sit 1 hour.**

- (3) **Tensile Strength Determination:** Samples for testing for tensile strength in accordance with ASTM D412 shall be cut using a die dumbbell at a crosshead speed of 20 in/min.

Latex Testing: Suitable substrate for film formation shall be polyethylene boards, silicone rubber sheeting, glass, or any substrate, which produces a cured film of uniform cross-section. Polymer film shall be prepared from latex as follows:

Resistance to Swelling: Polymer films shall be formed by using a 50 mil drawdown bar and drawing down 50 mils of the latex on polyethylene boards. Films shall be cured for 14 days at 75°F and 50% humidity. Samples for resistance to swelling in rejuvenating agent shall be 1" by 2" rectangles cut from the cured film. Cut at least three specimens for each sample to be tested for swelling. Fill 3- 8 oz ointment tins with at least a 1/2" deep of rejuvenating agent. Swelling samples shall be weighed and then placed in the ointment tins on top of the rejuvenating agent. Then, add at least another 1/2" deep of rejuvenating agent over each of the latex samples. The ointment tins shall be covered and placed in an oven at 104°F for the specified 48 hours +/- 15 minutes. The ointment tins are allowed to cool to 75°F and then the latex films are removed from the tins. Unabsorbed rejuvenating agent is removed from the intact latex film by scraping with a rubber policeman and blotting with paper towels. If the latex film does not remain intact during removal from the tins or while removing the unabsorbed rejuvenating agent the sample shall be rejected. After the rejuvenating agent is removed from the samples, they are then weighed. Percent swelling is reported as weight increase of the polymer film; report mass increase as a percent by weight of the original latex film mass upon exposure of films to the recycling agent.

Section II - Recycling Agent Specification

Test	Specification
Viscosity, 140F, CST	50-175
Flash Point, F, COC	380 Min.
Saturate, % by wt.	30 Max
Asphaltenes	1.0 Max.
Test on Residue	
Weight Change, %	6.5 Max.
Viscosity Ratio	3 Max

Section III- Material Certifications and Testing

The emulsion manufacturer shall submit certification that the emulsion meets the specification. The latex manufacturer, through the emulsion supplier and the contractor, shall submit to the Department test results from an approved laboratory and certification that the latex is cationic and meets the required specifications.

The manufacturer of the recycling agent, through emulsion supplier and the contractor, shall submit the test results on the recycling agent and certification that the recycling agent meets the required specifications.

Polymer films required for testing must be prepared by the same laboratory testing the latex performance requirements as outlined in the specification. The manufacturer of the recycling agent shall submit to the laboratory testing the latex a one-quart sample of the recycling agent for use in the swell test.

For the latex, certification must be from a laboratory with an ISO 17025 certification and accredited by IAS. Laboratories must be accredited in the test procedures specified above for the latex and the rejuvenating agent. Certifications and test results on the latex and the recycling agent shall be submitted with your Specification Response Package.

Certifications and test results on the emulsion must be submitted to the Department and approved prior to starting the work.

The Engineer may request 1-gallon samples of the rejuvenator, the polymer/latex, and the emulsion for testing during the life of the project.

Construction Requirements.

Preparation. The work shall be done in the following order: Prepare the pavement surface; apply the polymer modified asphaltic rejuvenating emulsion and scrub the applied emulsion with a scrub broom as specified in (Appendix 1); apply the aggregate, power broom the aggregate after the emulsion has cured and if necessary with a secondary broom when required as determined by the Engineer; roll the aggregate; and sweep up and dispose of excess aggregate. Excess aggregate shall be removed from the project unless otherwise approved by the Engineer.

Prior to the scrub seal operation, the Contractor shall remove all vegetation within the limits of the scrub seal installation. The use of herbicides will be allowed at the discretion of the Engineer.

If used, the herbicide shall be applied at least 10 days prior to the scrub seal operation, or as directed by the manufacturer of the approved herbicide. The application of the herbicide shall be performed in accordance with all applicable regulations. All fines or clean-up costs for unlawful misuse or discarding of herbicides shall be the sole responsibility of the Contractor. Mixtures and spread rates for the herbicides shall be determined by the manufacturer's specifications. Wash down of equipment or discarding of herbicides shall not enter the catch basins or positive drainage facilities.

Prior to the scrub seal operation, the Contractor shall remove all existing thermoplastic striping, thermoplastic legends and raised pavement markers within the scrub seal limits. When removing the raised pavement markers, the Contractor shall remove excessive adhesive left on the pavement caused from the removal of raised pavement markers. Removal shall be performed to the satisfaction of the Engineer.

Prior to the scrub seal operation, all drain inlet covers, monument covers, and all other utility covers shall be protected from the Contractor's scrub seal operations by applying a sheet of plastic over the exposed facilities, or other methods approved by the Engineer. All traces of plastic, residual emulsion and aggregate shall be removed from covered objects after the application of the scrub seal and/or prior to the final inspection of the project.

Immediately prior to the scrub sealing operations, the Contractor shall sweep the entire pavement surface.

Application. All incidental work such as surfacing of driveway aprons and returns shall be done concurrently with the surfacing of the roadway. The scrub seal shall be applied zero to four inches from the edge of the gutter. Where a curb exists without a gutter or where no curb or gutter exists, the scrub seal shall be applied from edge of pavement to edge of pavement. The edges of the scrub seal application shall be maintained in a neat and uniform line. Scrub seal shall not be applied on concrete gutters or pads unless directed by the Engineer.

The application of the polymer modified asphaltic rejuvenating emulsion shall be applied only when the ambient temperature is 40 degrees F and rising. The polymer modified asphaltic rejuvenating emulsion shall not be placed if the ambient temperature during a twenty four-hour curing period is expected to be below 40 degrees F.

The polymer modified asphaltic rejuvenating emulsion shall be applied with a distributor truck at a rate of 0.25 to 0.35 gallons per square yard. The actual emulsion application rate shall be determined from the surface demands and aggregate used. This rate shall be determined with a test strip by the Engineer, and manufacturer's representative if necessary.

The polymer modified asphaltic rejuvenating emulsion temperature when applied shall be between 140 and 185 degrees F. For smaller areas, the emulsion may be applied with a wand. The emulsion shall be immediately broomed to fill cracks and voids. The emulsion scrub broom shall be as described below.

For inner layer applications, the scrub seal shall be sufficiently cured prior to placing a bituminous overlay, micro-surfacing, or other asphalt surface treatments. The work shall be staged such that any seal coat inner-layer placed shall be covered by the succeeding surface treatment within 72 hours.

The status of being cured shall be determined by the ability to sweep all loose aggregate from the

surface without removing any aggregate adhered to the bituminous emulsion

Scrub Broom Equipment: Immediately following the application of the emulsion to the road surface, the material shall be scrubbed with a scrub broom for the purpose of forcing the emulsion into the existing surface and distributing the emulsion evenly over variable road surface contours.

The scrub broom frame shall be constructed of metal. The scrub broom shall be attached to and pulled by the distributor truck. The scrub broom must be equipped with a means of raising and lowering the scrub broom at desired points. It shall be towable in the elevated position. The broom assembly shall be such that it does not squeegee the emulsion off the roadway surface.

The main body of the scrub broom shall have a minimum frame size of 6.5 feet wide and 10 feet long. The maximum transverse rigid frame width at any point shall not exceed 6.75 feet. The nearest and furthest members, paralleling the back of the spreader truck, and diagonal members shall be equipped with street brooms. The leading member and the trailing member shall have brooms heads angled at 10 to 15 degrees off the centerline of the supporting member. The diagonal members shall have broom heads attached in line with the centerline of the supporting member. Each individual street broom attached to the scrub broom assembly shall be 3.5 inches wide x 6.5 inches high x 16 inches long and have stiff nylon bristles. Bristle height is to be maintained at a minimum of five inches (5"). The scrub broom shall be equipped with hinged wing assemblies attached to the main body not to exceed 4.5 feet per side, with diagonals and equipped with street brooms. The purpose of the maximum rigid frame width and the hinged wing extensions is not only for maximum width of 16 feet but to maintain the scrubbing process evenly as contours and cross-sections change across the existing road surface.

The application of the polymer modified asphaltic rejuvenating emulsion and scrub broom operation shall cease 40 feet prior to the end of the application. The remaining polymer modified asphaltic rejuvenating emulsion shall be drug out by the scrub broom, and the remaining emulsified material required to complete the pass shall be applied only by the spreader truck, at the specified rate.

Immediately following the scrubbing of emulsion, the aggregate shall be applied, spread evenly by a mechanical spreader at an application rate of 18 to 25 pounds per square yard. The actual aggregate application rate shall be as required by the surface demands and the emulsion used. The rate shall be adjusted, within the specified limit, so that no "bleed through" occurs during rolling. The application rate of the aggregate shall be determined by the Engineer, and manufacturer's representative if necessary.

A minimum of two self-propelled pneumatic-tired rollers shall be used for the required rolling of the aggregate. The pneumatic-tired rollers shall be in good working condition and actively rolling at all times during the scrub seal operation. The pneumatic-tired rollers shall be minimum 5-ton rollers. The pneumatic-tired rollers shall be operated in such a manner to properly seat and prevent the dislodging of newly applied aggregate.

Power sweeping must be done before the end of the day after scrub seal operations to remove any excess loose aggregate and prepare the roadway for temporary striping.

A second power sweeping may be directed by the Engineer on the previous days seal operation to remove any loose aggregate. Power sweeping must be done prior to any additional application of temporary striping.

The Contractor shall install temporary flexible chip seal markers prior to the scrub seal operation. There will be no direct payment for these markers; payment will be included in the items provided. The temporary flexible chip seal markers shall be commercially available adhesive flexible chip seal marker approved in writing by the Engineer.

Stockpile Sites. Sites for stockpiles of materials shall be grubbed and cleaned prior to storing the aggregates, and the ground shall be firm, smooth, and well drained. Stockpiles shall be checked prior to its incorporation into the work. As stockpiles are replenished, they shall be separated daily to verify gradation daily.

Equipment. The following equipment shall be used for the scrub-seal operations.

A. Asphalt Distributor: The asphalt distributor for application of the emulsion shall have a full circulation spray bar that is adjustable to at least sixteen feet (16') wide in two (2) feet increments and capable of heating and circulating the emulsion simultaneously. It must have computerized rate control for adjusting and controlling the application from the cab within 0.01 gallons per square yard increments. The distributor shall also be equipped with a volume measuring device and a thermometer for measuring the emulsion temperature in the tank.

B. Scrub Broom: A scrub broom as described herein shall be used to scrub the emulsion after application.

C. Aggregate Spreader: A self-propelled aggregate spreader with front discharge that can evenly distribute aggregate.

D. Roller: A minimum of two (2) pneumatic rollers weighing at least five (5) tons each.

E. Power Broom: Two (2) mechanically powered kick-brooms or vacuum type brooms.

F. Method of Measurement: Scrub seal shall be measured by the square yard.

Basis of Payment: Scrub seal, measured as prescribed above, will be paid for at the contract bid price per square yard, which shall be full compensation for furnishing all labor, materials, equipment, temporary markers, vegetation removal, cleaning of the surface, pre-sweeping, post-sweeping, doing all the work involved in mixing, applying and protecting the polymer modified asphaltic rejuvenating scrub seal, and all incidentals necessary to complete the work.

Scrub Seal Projects	Price Per Square Yard	Bid YES or NO
0 -50, 000 Square Yards		
51, 000 – 100,000 Square Yards		
Greater than 100,000 Square Yards		

PERFORMANCE AND MAINTENANCE

The contractor to whom the work is awarded is required to furnish an acceptable performance, maintenance and payment bond to the owner in amount equal to 100% of the estimated contract/purchase order amount as awarded not to exceed \$500,000.00. The bond shall be executed on a standard form, signed by a surety company payable to the Claiborne County Board of Supervisors and acceptable to the owner.

By virtue of my signature below, I fully understand the requirements of the provided specifications and other bid documents, submit my documents, and bid without exception.

FIRM NAME : _____

BY: _____

Mailing Address: _____

City: _____ **State:** _____ **Zip Code:** _____

Phone: _____ **Fax #:** _____ **Date:** _____

SLURRY SEAL PROJECTS

Section 405, SLURRY SEAL, is hereby added to and made a part of the 2004 Edition of the Mississippi Standard Specifications for Road and Bridge Construction as follows:

The tables below provide a description of each bid item. Each item will be bid in square yards and figured on the size as stated in each line item on each table. Indicate Yes or No if you will be bidding each line.

Slurry Seal Projects

Slurry Seal Projects	Price Per Square Yard	Bid YES or NO
0 -50, 000 Square Yards		
51, 000 – 100,000 Square Yards		
Greater than 100,000 Square Yards		

EMULSIFIED ASPHALT SLURRY SEAL SPECIAL PROVISION

DESCRIPTION: This section covers the materials, equipment, construction and application procedures for placing Slurry Seal material on existing paved surfaces. The slurry seal shall be a mixture of an asphalt emulsion, 100 percent crushed mineral aggregate, mineral filler, water and other additives for control of set time in the field. All ingredients shall be properly proportioned, mixed and spread on the paved surface in accordance with this Specification and as directed by the Engineer.

MATERIALS: The materials to be used and the specifications for them are as listed below:

AGGREGATE: Fine aggregate used in the slurry seal material shall meet the requirements of Subsection 703.02, and the Sand Equivalent Value shall not be less than 45 when tested in accordance with AASHTO Designation: T 176.

Course aggregate used in the slurry seal material shall meet the requirements of Subsection 703.03.

Aggregates shipped to the project shall be uniform and shall not require blending or pre-mixing at the storage area before use and shall meet the appropriate gradation as shown in Table No. 1.

MINERAL FILLER: The mineral filler shall be Portland cement or Hydrated Lime meeting the following requirements:

Portland cement Section 701
Hydrated Lime Subsection 714.03

CATIONIC ASPHALT EMULSION: The emulsified asphalt shall be a cationic type CSS-1H or CQS-1H meeting the following requirements.

Cationic Asphalt Emulsion: The emulsified asphalt shall be a cationic type CSS-1HP meeting the following requirements.	
Test on Emulsions Vis. Saybolt Furol at 77°F, sec.	20 min - 100 max
Storage Stability Test, 1-Day, % (a)	1 max
Settlement, 5-Day, % (b)	5 max
Particle Charge Test	Positive
Sieve Test, %	0.10 max
Residue, %	60 min
Tests on Residue From Distillation Test: (c)	
Penetration, 77°F, 100 g., 5 sec.	40 min - 90 max
Ductility, 77°F, 5 cm per min., cm	40 min
Solubility in Trichloroethylene, % (d)	97 min

- (a) The 24-hour (1-day) storage stability test may be used but does not predict that the 5-day settlement test will pass.
- (b) The test requirement for settlement may be waived when the emulsified asphalt is used in less than five days time, or the purchaser may require that the settlement test be run from the time the sample is received until it is used, if the elapsed time is less than five days.
- (c) Solubility test is to be performed on the base asphalt used for emulsion manufacture

TACK COAT: Normally, tack coat is not required unless the surface to be covered is concrete or is extremely dry and raveled. The emulsified asphalt should be the same grade and type as used for the slurry seal. The tack coat shall be placed using a standard distributor capable of evenly applying the emulsion. The tack coat shall be allowed to cure sufficiently before the application of slurry seal. If the tack coat is required, it will be noted on the plans or in the contract documents.

WATER: The water for the slurry seal mixture shall be potable and free from any contaminants detrimental to the mixture.

OTHER ADDITIVES: The emulsion manufacturer shall provide other additives as required to control the set time of the mixture in the field.

COMPOSITION OF MIXTURE: The Mix Design shall be supplied by the contractor. As a minimum, the design shall include the following: aggregate test properties, aggregate target gradation, results of Table 1 design requirements, design asphalt residue and mineral filler percentages based on dry weight of the aggregate. The Contractor shall submit to the Central Laboratory representative samples of each ingredient to be used in the slurry seal mixture for design verification. The samples shall include information relative to sources, type of materials and project number. No slurry seal work shall begin nor shall any mixture be accepted until the Laboratory has approved the slurry seal design. Acceptance of the design by the Engineer is solely for the purpose of quality control and in no way releases the Contractor from the responsibility to perform acceptable work under this specification.

The slurry seal material shall be a uniform mixture of aggregate, asphalt emulsion, mineral filler, water and other additives as required to control the set time in the field. The emulsion and aggregate shall be compatible so that a complete, uniform coating of the aggregate shall be obtained in the mixing unit. The mixture shall have sufficient working life to allow for proper placement at the existing ambient temperature and humidity. The Engineer shall require the mixture to be redesigned if replacement of a constituent, or change in gradation, is needed to produce an acceptable mixture. The constituents shall be proportioned to produce a uniform mixture meeting the requirements of Table No. 1. Reference to ISSA TB means International Slurry Surfacing Association Technical Bulletin.

TABLE NO. 1

Job Mix Formula and Design Limits

SLURRY SEAL

MIXTURE CONTROL TOLERANCES	GRADING REQUIREMENTS % PASSING	TYPE II	TYPE III
± 0	3/8" Sieve	100	100
± 6	No. 4 Sieve	90 – 100	70 - 95
± 5	No. 8 Sieve	65 – 90	45 - 70
± 5	No. 16 Sieve	45-70	30 - 50
± 4	No. 30 Sieve	30-50	20 - 35
± 4	No. 50 Sieve	18-30	12 - 25
± 3	No. 100 Sieve	10-21	7 - 18
± 3	No. 200 Sieve	5 – 15	5 - 12

SLURRY SEAL

TEST	ISSA TB NO.	SPECIFICATION
Mix Time @ 77°F (25°C)	TB 113	Controllable to 180 Seconds Minimum
Slurry Seal Consistency	TB 106	0.79 – 1.18 inches (2.0 – 3.0 cm)
Wet Cohesion @ 30 Minutes Minimum (Set) @ 60 Minutes Minimum (Traffic)	TB 139 (For quick-traffic systems)	12 kg-cm Minimum 20 kg-cm or Near Spin Minimum
Wet Stripping	TB 114	Pass (90% Minimum)
Wet-Track Abrasion Loss One-hour Soak	TB 100	75 g/ft ² (807 g/m ²) Maximum
Excess Asphalt by LWT Sand Adhesion	TB 109 (Critical in heavy-traffic areas)	50 g/ft ² (538 g/m ²) Maximum

Note 1: Percent residual asphalt and percent mineral filler shall be based on weight of dry aggregate.

Note 2: The gradation and percent residual asphalt as shown on the slurry seal mix design or as established by the Engineer shall be maintained within the listed Mixture Control Tolerances. Additionally, the aggregate shall remain within the master gradation band. Mineral filler shall not be used to satisfy the requirements as set forth in Table 1. Should these tolerances fail to be met, immediate adjustments will be made to bring the gradation and percent residual asphalt back within tolerances or the work will not be allowed to continue.

Note 3: The laboratory report shall also provide the following information, which shall be within the test parameters given:

<u>Test</u>	<u>Result</u>	<u>Test Method</u>
Mixing Time Test, Seconds @ 77°F, minimum	120	ISSA TB 113
Set Time Test, 30 minutes, minimum	12 kg-cm	ISSA TB 139
Early Rolling Traffic Time, 60 minutes, minimum	20 kg-cm	ISSA TB 139
Water Resistance Test, 30 minutes	No Discoloration	ISSA TB 102
Wet Stripping Test, % Coating, minimum	90	ISSA TB 114
System Compatibility	Pass	ISSA TB 115

Note 4: Gradation type shall be as specified in the plans and proposal.

EQUIPMENT: The Engineer shall approve all equipment, tools, and machines used in the performance of this work. No work shall be attempted with equipment that is malfunctioning. The Engineer may order that the work be discontinued if sufficient equipment and tools are not in use to place the materials satisfactorily.

MIXING EQUIPMENT: The paving mixture shall be blended by a self-propelled, positive, non-slipping aggregate delivery system (belt over chain) slurry seal mixing machine which shall be a continuous flow mixing unit able to accurately deliver and proportion the aggregate, asphalt emulsion, mineral filler, field control additives and water to a revolving multi-blade, twin shafted mixer and discharge the mixed

product on a continuous flow basis. The mixture shall be thoroughly blended so that no uncoated aggregate is visible upon discharge from the mixing unit. The machine shall be equipped with self loading devices, which provide for the loading of all materials while continuing to lay slurry seal, thereby minimizing construction joints. The machine shall be equipped with opposite side driving stations to optimize longitudinal alignment. The machine shall be equipped to allow the operator to have full hydrostatic control of the forward and reverse speed during the application of the slurry seal material. Continuous-run equipment will be required to ensure continuity of mix and reduction of start-up joints.

In some cases and with the Engineer's approval, truck mounted units may be used for short narrow roadways, crossovers and irregular areas. If truck mounted units are allowed, they shall be equipped with a positive, non-slipping aggregate delivery system (belt over chain) and have the capability of applying a minimum of 10 tons of aggregate without recharging the aggregate bin.

- 1. WATER PRESSURE SYSTEM:** The mixing machine shall be equipped with a water pressure system and nozzle type spray bar to provide a water spray ahead of and outside the spreader box when required.
- 2. CALIBRATION & PROPORTIONING DEVICES:** The machine shall be equipped with individual volume or mass controls or other gauging devices for measuring and proportioning each material added to the mix. Each material control device shall be calibrated, properly marked, and positively interlocked. The aggregate feed to the mixer shall be equipped with a revolution counter or similar device so that the amount of asphalt emulsion, aggregate and mineral filler used may be determined at any time. Each mixing unit shall be calibrated prior to commencement of the work. The calibrations shall be performed and verified in the presence of the Engineer or the Engineer's representative. Once calibrated, the aggregate and emulsion flows shall not be changed without the approval of the Engineer. The water and additive may be adjusted in the field to control the mix properties to produce an acceptable mix. With the Engineers approval, previous calibration documentation covering the exact materials to be used may be acceptable provided they were made within the last three (3) months.

- 3. EMULSION PUMP:** The emulsion pump shall be a heated, positive displacement type pump.

Attached to the machine shall be a hydraulically adjustable (adjustable while applying mixture) type spreader box with a positive screed adjustment for yield control. The box shall be attached to the mixer, equipped with ribbon flights mounted on an adjustable shaft to continually agitate and distribute the material throughout the box. The box will be equipped with curb bumpers and replaceable runners with a minimum of 5-foot long end runners. The box shall be equipped with a sufficient walkway to provide access to either side of the spreader box without walking through the freshly applied material. The box must be capable of laying mix to a width of 14 feet. The equipment shall provide sufficient turbulence to prevent the mix from setting in the box or causing excessive build-up or lumps. To prevent the loss of mixture from the box, the contractor shall attach flexible seals, front and rear, in contact with the road. The full width application box shall be equipped with a secondary strike-off located approximately 2 to 3 feet behind the primary strike-off to minimize transverse corrugations. The secondary strike-off shall have elevation and width adjustments similar to the primary strike-off. It shall have a pivot point where it can be tilted for texturing or raised completely off of the surface. The use of burlap drags or other drags necessary to obtain the desired surface texture, shall require approval by the Engineer. Drags having excessive build-up shall be replaced. Drags shall be kept in a completely flexible condition at all times.

AUXILIARY EQUIPMENT: Suitable surface cleaning equipment, barricading equipment, hand tools and other support equipment shall be provided by the Contractor as necessary to perform the work.

STOCKPILING AND STORAGE:

AGGREGATE STORAGE: The mineral aggregate shall be handled in such a manner as to prevent segregation, mixing of the various materials or sizes, and contamination with foreign materials. The

grading of aggregates proposed for use and as supplied to the project shall be uniform. Suitable equipment of acceptable size shall be furnished by the Contractor to maintain the stockpiles and prevent segregation of aggregates. The aggregate shall be passed over a scalping screen immediately prior to transfer to the slurry seal mixing machine to remove oversized material. In addition, the scalping screen unit, when payment for slurry seal is to be by the ton of aggregate and gallon of asphalt emulsion, shall be equipped with certified scales capable of providing an automated ticket printout for each truck load of material delivered to the slurry seal machine. Each ticket shall include the project number, ticket number, truck number, date and batch weight of material loaded.

STORAGE OF BITUMINOUS MATERIAL: The bituminous storage shall be adequate to meet the requirements of the production rate. All equipment used in the storage and handling of bituminous material shall be kept in a clean condition at all times and shall be operated in such a manner that there will be no contamination with foreign matter.

Construction Requirements: It shall be the responsibility of the Contractor to produce, transport and place the specified materials in accordance with these specifications and as approved by the Engineer. The finished slurry seal shall have a uniform texture free from excessive scratch marks, tears or other surface irregularities. The cured mixture shall adhere fully to the underlying surface. Based upon a visual examination or test results the Engineer may reject any work due to poor workmanship, loss of texture, raveling or apparent instability.

SEASONAL AND WEATHER LIMITATIONS: No slurry seal shall be performed from December 1 and March 1 of each year.

The slurry seal mixture shall be spread only when both the pavement surface and the ambient temperature is at least 50°F and rising and the weather is not foggy or rainy and there is no forecast of temperatures below 32°F within 48 hours from the time of placement. The Contractor shall supply a surface temperature thermometer.

SURFACE PREPARATION: The area to be surfaced shall be thoroughly cleaned of vegetation, loose aggregate and soil. Manholes, valve boxes and other service entrances shall be protected from the surfacing material. Unless otherwise directed by the Engineer, pre-wetting of the surface will be required. Water shall be sprayed ahead of and outside of the spreader box at a acceptable rate to dampen the surface without any free flowing water ahead of the spreader box.

TACK COAT: The tack coat, when required, shall be diluted at the rate of one part emulsion and three parts water and shall be applied with an asphalt distributor. The application rate shall be 0.05 to 0.10 gallons of diluted emulsion per square yard. When required, tack coat will not be measured for separate payment; costs shall be included in other items bid.

APPLICATION: The paving mixture shall be spread on the prepared surface in such a way to leave a uniform finished surface. The Contractor shall use squeegees and lutes to spread the mixture in areas inaccessible to the spreader box and areas requiring hand spreading. A sufficient amount of material shall be carried at all times in all parts of the spreader box to ensure complete coverage.

Adjustments to the additive will be permitted if necessary to provide a slower setting time when hand spreading is needed. If hand spreading is necessary, the mixture shall be poured in a small windrow along one edge of the surface to be covered and then spread uniformly by a hand squeegee or lute. A smooth, neat seam shall be provided where two passes meet. Excess material shall immediately be removed from ends of each run.

TRAFFIC CONTROL: The Contractor shall maintain traffic control as necessary to prevent damage to the mixture. Any such damage done by traffic to the mixture shall be repaired by the Contractor at the Contractor's expense.

WORKMANSHIP: Excessive buildup, uncovered areas, or unsightly appearance shall not be permitted on longitudinal or transverse joints. Longitudinal joints shall be placed on lane lines and excessive overlap shall not be permitted. Care shall be taken to insure straight lines along the roadway centerline, lane lines, shoulders or edge lines. Lines at intersections shall be kept straight to provide a neat and uniform appearance.

1. **FINISHED SURFACE:** The finished slurry seal shall have a uniform texture free from excessive scratch marks, tears, or other surface irregularities. Excessive tear marks are considered as four marks that are $\geq 1/2"$ in width and $\geq 6"$ in length per 100 square yards, or any marks $\geq 1"$ in width or $\geq 4"$ in length. The edges of the slurry seal shall be neat in appearance and longitudinal alignment shall be parallel to the roadway centerline.
2. **JOINTS AND SEAMS:** The longitudinal and transverse joints shall be neat in appearance and uniform. Transverse joints shall be constructed as butt-type joints. No excessive buildup, uncovered areas or unsightly appearance will be permitted on longitudinal or transverse joints. Longitudinal joints shall be placed on lane lines when possible. Gaps between applications shall not be permitted. Joints will be considered acceptable if no more than a $1/2"$ vertical space exists between the pavement surface and a 4-foot straight edge placed perpendicular on the longitudinal joint, and no more than $1/4"$ for a transverse joint.
3. **IRREGULAR AREAS:** Areas, which cannot be reached with the mixing machine, shall be surfaced using hand tools to provide complete and uniform coverage. The area to be hand worked shall be cleaned and lightly dampened prior to mix placement. Care shall be exercised in areas that require handwork so that the finished surface is uniform in texture, dense and of overall neat appearance comparable to that produced by the spreader box. Slurry Seal material required to repair deficiencies due to unsatisfactory workmanship shall not be paid for but shall be entirely at the contractor's expense. When transitions are included as part of the work, then these areas are to be surfaced prior to application of the main line. This shall include intersections, turnouts, radii, ramps etc.

AGGREGATE RATE: The target spread rate for all full width slurry seal shall be controlled to within plus or minus two pounds per square yard of spread rate and shall be based on the weight of dry aggregate. Unless otherwise approved by the Engineer, the full width spread rate shall be 18 pounds (for Type II) and 22 pounds (for Type III) per square yard. A five-percent (5%) reduction in unit price will be applied for each pound of aggregate per square yard outside the spread rate tolerances established above for each day's placement of material. In lieu of pay reduction, the Contractor may elect to overlay the deficient area at no additional costs to the County. Continued operation and placement of materials outside the spread rate tolerances shall not be allowed. The Contractor shall make adjustments as necessary in the placement operation to maintain production within the tolerances given.

METHOD OF MEASUREMENT BASIS OF PAYMENT: The prices shall be full compensation, furnishing all materials, for preparation, mixing and applying these materials, all labor, equipment, tools, test design, clean up and incidentals necessary to complete the work as specified herein.

Bids will be taken as a total price per square yard,

Slurry Seal Projects	Price Per Square Yard	Bid YES or NO
0 -50, 000 Square Yards		
51, 000 – 100,000 Square Yards		
Greater than 100,000 Square Yards		

PERFORMANCE AND MAINTENANCE

The contractor to whom the work is awarded is required to furnish an acceptable performance, maintenance and payment bond to the owner in amount equal to 100% of the estimated contract/purchase order amount as awarded and not to exceed \$500,000.00. The bond shall be executed on a standard form, signed by a surety company payable to the Claiborne County Board of Supervisors and acceptable to the owner.

By virtue of my signature below, I fully understand the requirements of the provided specifications and other bid documents, submit my documents, and bid without exception.

FIRM NAME: _____

BY: _____

Mailing Address: _____

City: _____ **State:** _____ **Zip Code:** _____

Phone: _____ **Fax #:** _____ **Date:** _____

**DETAILED SPECIFICATION SHEET FOR FURNISHING THE COUNTY
MICRO SURFACING SEAL**

MICRO-SURFACING SEAL

Section 405, Micro-Surfacing, is hereby added to and made a part of the 2004 Edition of the Mississippi Standard Specifications for Road and Bridge Construction as follows:

SECTION 907-405 - MICRO-SURFACING

DESCRIPTION: This section covers the materials, equipment, construction and application procedures for placing micro-surfacing material for filling ruts and for surfacing existing paved surfaces. The micro-surfacing shall be a mixture of a latex-modified asphalt emulsion, 100 percent crushed mineral aggregate, mineral filler, water and other additives for control of set time in the field. All ingredients shall be properly proportioned, mixed and spread on the paved surface in accordance with this Specification and as directed by the Engineer.

MATERIALS: The materials to be used and the specifications for them are as listed below:

AGGREGATE: Fine aggregate used in the micro-surfacing material shall meet the requirements of Subsection 703.02, and the Sand Equivalent Value shall not be less than 65 when tested in accordance with AASHTO Designation: T 176.

Course aggregate used in the micro-surfacing material shall meet the requirements of Subsection 703.03.

Aggregates shipped to the project shall be uniform and shall not require blending or pre-mixing at the storage area before use and shall meet the appropriate gradation as shown in Table No. 1.

MINERAL FILLER: The mineral filler shall be Portland cement or Hydrated Lime meeting the following requirements:

Portland cement Section 701

Hydrated Lime Subsection 714.03

CATIONIC ASPHALT EMULSION: The emulsified asphalt shall be a cationic type CSS-1HP meeting the following requirements.

Cationic Asphalt Emulsion. The emulsified asphalt shall be a cationic type CSS-1HP meeting the following requirements.	
Test on Emulsions Vis. Saybolt Furol at 77°F, sec.	20 min - 100 max
Storage Stability Test, 1-Day, % (a)	1 max
Settlement, 5-Day, % (b)	5 max
Particle Charge Test	Positive
Sieve Test, %	0.10 max
Residue, %	62 min
Tests on Residue From Distillation Test: (c)	
Penetration, 77°F, 100 g., 5 sec.	40 min - 90 max
Ductility, 77°F, 5 cm per min., cm	40 min
Solubility in Trichloroethylene, % (d)	97 min
Softening Point, °F	135 min

(a) The 24-hour (1-day) storage stability test may be used but does not predict that the 5-day settlement test will pass.

(b) The test requirement for settlement may be waived when the emulsified asphalt is used in less than five days time, or the purchaser may require that the settlement test be run from the time the sample is received until it is used, if the elapsed time is less than five days.

(c) The residue from the emulsified asphalt shall be obtained in accordance with AASHTO Designation: T59 except that the maximum test temperature shall not exceed 350°F and the duration shall not exceed 20 minutes.

(d) Solubility test is to be performed on the base asphalt used for emulsion manufacture

LATEX RUBBER ADDITIVE (LIRA): The LRA shall be a latex in a centrifuged latex form. The supplier of the emulsion shall provide certification that the LRA meets the following requirements:

Test	Results	Test Method
Rubber Solids content, Minimum % by weight	60	ASTM Designation: D 1417
Brookfield Viscosity, cps Maximum	5000	ASTM Designation: D 1417
Total Ash, Maximum %	3.5	ASTM Designation: D 297

The LRA shall be co-milled with the asphalt cement during the manufacture of the emulsified asphalt to produce a homogeneous mixture. The LRA shall be added in the necessary proportions to result in 3.0% neat latex by weight of residual asphalt cement in the emulsion. The LRA modified emulsified asphalt, upon standing undisturbed for a period of 24 hours, shall show no separation of emulsion and LRA, no color striations, but shall be a uniform color throughout.

TACK COAT: Normally, tack coat is not required unless the surface to be covered is concrete or is extremely dry and raveled. The emulsified asphalt should be the same grade and type as used for the micro-surfacing. The tack coat shall be placed using a standard distributor capable of evenly applying the emulsion. The tack coat shall be allowed to cure sufficiently before the application of micro-surfacing. If the tack coat is required, it will be noted on the plans or in the contract documents.

WATER: The water for the micro-surfacing mixture shall be potable and free from any contaminants detrimental to the mixture.

OTHER ADDITIVES: The emulsion manufacturer shall provide other additives as required to control the set time of the mixture in the field.

COMPOSITION OF MIXTURE: The Mix Design shall be supplied by the contractor. As a minimum, the design shall include the following: aggregate test properties, aggregate target gradation, results of Table 1 design requirements, design asphalt residue and mineral filler percentages based on dry weight of the aggregate. The Contractor shall submit to the Central Laboratory representative samples of each ingredient to be used in the micro-surfacing mixture for design verification. The samples shall include information relative to sources, type of materials and project number. No micro-surfacing work shall begin nor shall any mixture be accepted until the Laboratory has approved the micro-surfacing design. Acceptance of the design by the Engineer is solely for the purpose of quality control and in no way releases the Contractor from the responsibility to perform acceptable work under this specification.

The micro-surfacing material shall be a uniform mixture of aggregate, LRA-modified emulsion, mineral filler, water and other additives as required to control the set time in the field. The emulsion and aggregate shall be compatible so that a complete, uniform coating of the aggregate shall be obtained in the mixing unit. The mixture shall have sufficient working life to allow for proper placement at the existing ambient temperature and humidity. The Engineer shall require the mixture to be redesigned if replacement of a constituent, or change in gradation, is needed to produce an acceptable mixture. The constituents shall be proportioned to produce a uniform mixture meeting the requirements of Table No. 1. Reference to ISSA TB means International Slurry Surfacing Association Technical Bulletin.

TABLE NO. 1			
Job Mix Formula and Design Limits			
MICRO-SURFACING			
MIXTURE CONTROL TOLERANCES	GRADING REQUIREMENTS	TYPE II	TYPE III
	% PASSING		
<u>±0</u>	3/8" Sieve	100	100
<u>±6</u>	No. 4 Sieve	90 – 100	70 - 95
<u>±5</u>	No. 8 Sieve	65 – 90	45 - 70
<u>±5</u>	No. 16 Sieve	45-70	30 - 50
<u>±4</u>	No. 30 Sieve	30-50	20 - 35
<u>±4</u>	No. 50 Sieve	18-30	12 - 25
<u>±3</u>	No. 100 Sieve	10-21	7 - 18
<u>±3</u>	No. 200 Sieve	5 – 15	5 - 12

DESIGN REQUIREMENTS			
+0.50	Range for Residual Asphalt, %	6.0 - 9.0	6.0 - 9.0
	Range for Mineral Filler, %	0.5 - 3.0	0.5 - 3.0
	Wet Track Abrasion Loss (Maximum)	50 g/ft ²	50 g/ft ²
	ISSA TB 100 1 hour soak	75 g/ft ²	75 g/ft ²
	ISSA TB 100 6 day soak		
	Vertical Displacement (Maximum)	10%	10%
	ISSA TB 147A or 147C		
	Excess Asphalt by LWT (Maximum)		
	ISSA TB 109	50 g/ft ²	50 g/ft ²
	System Compatibility TB 144	11 grade points minimum	11 grade points minimum

Note 1: Percent residual asphalt and percent mineral filler shall be based on weight of dry aggregate.

Note 2: The gradation and percent residual asphalt as shown on the micro-surfacing design or as established by the Engineer shall be maintained within the listed Mixture Control Tolerances. Additionally, the aggregate shall remain within the master gradation band. Mineral filler shall not be used to satisfy the requirements as set forth in Table 1. Should these tolerances fail to be met, immediate adjustments will be made to bring the gradation and percent residual asphalt back within tolerances or the work will not be allowed to continue.

Note 3: The laboratory report shall also provide the following information, which shall be within the test parameters given:

<u>Test</u>	<u>Result</u>	<u>Test Method</u>
Mixing Time Test, Seconds @ 77°F, minimum	120	ISSA TB 113
Set Time Test, 30 minutes, minimum	12 kg-cm	ISSA TB 139
Early Rolling Traffic Time, 60 minutes, minimum	20 kg-cm	ISSA TB 139
Water Resistance Test, 30 minutes	No Discoloration	ISSA TB 102
Wet Stripping Test, % Coating, minimum	90	ISSA TB 114
System Compatibility	Pass	ISSA TB 115

Note 4: Gradation type shall be as specified in the plans and proposal.

EQUIPMENT: The Engineer shall approve all equipment, tools, and machines used in the performance of this work. No work shall be attempted with equipment that is malfunctioning. The Engineer may order that the work be discontinued if sufficient equipment and tools are not in use to place the materials satisfactorily.

MIXING EQUIPMENT: The paving mixture shall be blended by a self-propelled, positive, non-slipping aggregate delivery system (belt over chain) micro-surfacing mixing machine which shall be a continuous flow mixing unit able to accurately deliver and proportion the aggregate, LRA-modified emulsion, mineral filler, field control additives and water to a revolving multi-blade, twin shafted mixer and discharge the mixed product on a continuous flow basis. The mixture shall be thoroughly blended so that no uncoated aggregate is visible upon discharge from the mixing unit. The machine shall be equipped with self loading devices, which provide for the loading of all materials while continuing to lay micro-surfacing, thereby minimizing construction joints. The machine shall be equipped with opposite side driving stations to optimize longitudinal alignment. The machine shall be equipped to allow the operator to have full hydrostatic control of the forward and reverse speed during the application of the micro-surfacing material. Continuous-run equipment will be required to ensure continuity of mix and reduction of start-up joints.

In some cases and with the Engineer's approval, truck mounted units may be used for short narrow roadways, crossovers and irregular areas. If truck mounted units are allowed, they shall be equipped with a positive, non-slipping aggregate delivery system (belt over chain) and have the capability of applying a minimum of 10 tons of aggregate without recharging the aggregate bin.

- 1. Water Pressure System:** The mixing machine shall be equipped with a water pressure system and nozzle type spray bar to provide a water spray ahead of and outside the spreader box when required.
- 2. Calibration & Proportioning Devices.** The machine shall be equipped with individual volume or mass controls or other gauging devices for measuring and proportioning each material added to the mix. Each material control device shall be calibrated, properly marked, and positively interlocked. The aggregate feed to the mixer shall be equipped with a revolution counter or similar device so that the amount of asphalt emulsion, aggregate and mineral filler used may be determined at any time. Each mixing unit shall be calibrated prior to commencement of the work. The calibrations shall be performed and verified in the presence of the Engineer or the Engineer's representative. Once calibrated, the aggregate and emulsion flows shall not be changed without the approval of the Engineer. The water and additive may be adjusted in the field to control the mix properties to produce an acceptable mix. With the Engineers approval, previous calibration documentation covering the exact materials to be used may be acceptable provided they were made within the last three (3) months.
- 3. Emulsion Pump.** The emulsion pump shall be a heated, positive displacement type pump attached to the machine shall be a hydraulically adjustable (adjustable while applying mixture) type spreader box with a positive screed adjustment for yield control. The box shall be attached to the mixer, equipped with ribbon flights mounted on an adjustable shaft to continually agitate and distribute the material throughout the box. The box will be equipped with curb bumpers and replaceable runners with a minimum of 5-foot long end runners. The box shall be equipped with a sufficient walkway to provide access to either side of the spreader box without walking through

the freshly applied material. The box must be capable of laying mix to a width of 14 feet. The equipment shall provide sufficient turbulence to prevent the mix from setting in the box or causing excessive build-up or lumps. To prevent the loss of mixture from the box, the contractor shall attach flexible seals, front and rear, in contact with the road. The full width application box shall be equipped with a secondary strike-off located approximately 2 to 3 feet behind the primary strike-off to minimize transverse corrugations. The secondary strike-off shall have elevation and width adjustments similar to the primary strike-off. It shall have a pivot point where it can be tilted for texturing or raised completely off of the surface. The use of burlap drags or other drags necessary to obtain the desired surface texture, shall require approval by the Engineer. Drags having excessive build-up shall be replaced. Drags shall be kept in a completely flexible condition at all times.

AUXILIARY EQUIPMENT: Suitable surface cleaning equipment, barricading equipment, hand tools and other support equipment shall be provided by the Contractor as necessary to perform the work.

STOCKPILING AND STORAGE:

AGGREGATE STORAGE The mineral aggregate shall be handled in such a manner as to prevent segregation, mixing of the various materials or sizes, and contamination with foreign materials. The grading of aggregates proposed for use and as supplied to the project shall be uniform. Suitable equipment of acceptable size shall be furnished by the Contractor to maintain the stockpiles and prevent segregation of aggregates. The aggregate shall be passed over a scalping screen immediately prior to transfer to the micro-surfacing mixing machine to remove oversized material. In addition, the scalping screen unit, when payment for micro surfacing is to be by the ton of aggregate and gallon of asphalt emulsion, shall be equipped with certified scales capable of providing an automated ticket printout for each truckload of material delivered to the micro surfacing machine. Each ticket shall include the project number, ticket number, truck number, date and batch weight of material loaded.

STORAGE OF BITUMINOUS MATERIAL: The bituminous storage shall be adequate to meet the requirements of the production rate. All equipment used in the storage and handling of bituminous material shall be kept in a clean condition at all times and shall be operated in such a manner that there will be no contamination with foreign matter.

CONSTRUCTION REQUIREMENTS: It shall be the responsibility of the Contractor to produce, transport and place the specified materials in accordance with these specifications and as approved by the Engineer. The finished micro-surfacing shall have a uniform texture free from excessive scratch marks, tears or other surface irregularities. The cured mixture shall adhere fully to the underlying surface. Based upon a visual examination or test results the Engineer may reject any work due to poor workmanship, loss of texture, raveling or apparent instability.

SEASONAL AND BAD WEATHER LIMITATIONS: No micro-surfacing shall be performed from December 1 and March 1.

The micro-surfacing mixture shall be spread only when both the pavement surface and the ambient temperature is at least 50°F and rising and the weather is not foggy or rainy and there is no forecast of temperatures below 32°F within 48 hours from the time of placement. The Contractor shall supply a surface temperature thermometer.

SURFACE PREPARATION: The area to be surfaced shall be thoroughly cleaned of vegetation, loose aggregate, and soil. Manholes, valve boxes and other service entrances shall be protected from the surfacing material. Unless otherwise directed by the Engineer, pre-wetting of the surface will be required. Water shall be sprayed ahead of and outside of the spreader box at a acceptable rate to dampen the surface without any free flowing water ahead of the spreader box.

TACK COAT: The tack coat, when required, shall be diluted at the rate of one part emulsion and three parts water and shall be applied with an asphalt distributor. The application rate shall be 0.05 to 0.10 gallons of diluted emulsion per square yard. When required, tack coat will not be measured for separate payment; costs shall be included in other items bid.

APPLICATION: The paving mixture shall be spread on the prepared surface in such a way to leave a uniform finished surface. Care shall be taken when filling ruts to restore the designed profile of the pavement cross section. Excess crowning or overfilling of the rut area will not be permitted. The

Contractor shall use squeegees and lutes to spread the mixture in areas inaccessible to the spreader box and areas requiring hand spreading. A sufficient amount of material shall be carried at all times in all parts of the spreader box to ensure complete coverage.

Adjustments to the additive will be permitted if necessary to provide a slower setting time when hand spreading is needed. If hand spreading is necessary, the mixture shall be poured in a small windrow along one edge of the surface to be covered and then spread uniformly by a hand squeegee or lute. A smooth, neat seam shall be provided where two passes meet. Excess material shall immediately be removed from ends of each run.

TRAFFIC CONTROL: The emulsified asphalt shall be formulated in such a way to allow the paving mixture to cure at a rate, which will permit straight rolling traffic on the pavement within one hour after application without damaging the pavement surface. The Contractor shall maintain traffic control as necessary to prevent damage to the mixture. Any such damage done by traffic to the mixture shall be repaired by the Contractor at the Contractor's expense.

RUT FILLING AND LEVELING COURSE: When required, before the final surface course is placed, preliminary micro-surfacing materials shall be required to fill ruts, utility cuts, depressions in the existing surface, etc. Ruts greater than 1/2" in depth shall be filled independently with a rut filling spreader box either 5-foot or 6-foot in width. For irregular or shallow rutting 1/2" or less in depth, a leveling course may be used as directed by the Engineer. The spreader box used for the leveling course shall be the same as used for the surface course; however, a steel or high density strike-off shall be used in lieu of a flexible rubber. Using a rut fill spreader box, each individual rut fill shall be crowned to compensate for traffic compaction at a rate of 1/8" per 1" of rut depth. Rut filling shall be placed and opened to traffic a minimum of 24 hours prior to surfacing. All materials, mixture composition, equipment, and construction procedures and requirements shall be as specified above.

WORKMANSHIP: Excessive buildup, uncovered areas, or unsightly appearance shall not be permitted on longitudinal or transverse joints. Longitudinal joints shall be placed on lane lines and excessive overlap shall not be permitted. Care shall be taken to insure straight lines along the roadway centerline, lane lines, shoulders or edge lines. Lines at intersections shall be kept straight to provide a neat and uniform appearance.

1. **Finished Surface.** The finished micro-surfacing shall have a uniform texture free from excessive scratch marks, tears, or other surface irregularities. Excessive tear marks are considered as four marks that are $\geq 1/2"$ in width and $\geq 6"$ in length per 100 square yards, or any marks $\geq 1"$ in width or $\geq 4"$ in length. The edges of the micro-surfacing shall be neat in appearance and longitudinal alignment shall be parallel to the roadway centerline.
2. **Joints and Seams.** The longitudinal and transverse joints shall be neat in appearance and uniform. Transverse joints shall be constructed as butt-type joints. No excessive buildup, uncovered areas or unsightly appearance will be permitted on longitudinal or transverse joints. Longitudinal joints shall be placed on lane lines when possible. Gaps between applications shall not be permitted. Joints will be considered acceptable if no more than a 1/2" vertical space exists between the pavement surface and a 4-foot straight edge placed perpendicular on the longitudinal joint, and no more than 1/4" for a transverse joint.
3. **Irregular Areas.** Areas, which cannot be reached with the mixing machine, shall be surfaced using hand tools to provide complete and uniform coverage. The area to be hand worked shall be cleaned and lightly dampened prior to mix placement. Care shall be exercised in areas that require handwork so that the finished surface is uniform in texture, dense and of overall neat appearance comparable to that produced by the spreader box. Micro-surfacing material required to repair deficiencies due to unsatisfactory workmanship shall not be paid for but shall be entirely at the contractor's expense. When transitions are included as part of the work, then these areas are to be surfaced prior to application of the main line. This shall include intersections, turnouts, radii, ramps etc.

AGGREGATE APPLICATION RATE: The target spread rate for all full width micro-surfacing not intended, as a leveling course shall be controlled to within plus or minus two pounds per square yard of spread rate and shall be based on the weight of dry aggregate. Unless otherwise approved by the Engineer, the

full width spread rate shall be 18 pounds (for Type II) and 25 pounds (for Type III) per square yard. A five-percent (5%) reduction in unit price will be applied for each pound of aggregate per square yard outside the spread rate tolerances established above for each day's placement of material. In lieu of pay reduction, the Contractor may elect to overlay the deficient area at no additional costs to the County. Continued operation and placement of materials outside the spread rate tolerances shall not be allowed. The Contractor shall make adjustments as necessary in the placement operation to maintain production within the tolerances given.

METHOD OF MEASUREMENT BASIS OF PAYMENT: The prices shall be full compensation, furnishing all materials, for preparation, mixing and applying these materials, all labor, equipment, tools, test design, clean up and incidentals necessary to complete the work as specified herein.

Bids will be taken as a total price per square Yard. All Items below shall be considered in the calculation per Square Yard.

Micro Surfacing Projects	Price Per Square Yard	Bid YES or NO
0 -50, 000 Square Yards		
51, 000 – 100,000 Square Yards		
Greater than 100,000 Square Yards		

PERFORMANCE AND MAINTENANCE

The contractor to whom the work is awarded is required to furnish an acceptable performance, maintenance and payment bond to the owner in amount equal to 100% of the estimated contract/purchase order amount as awarded and not to exceed \$500,000.00.

The bond shall be executed on a standard form, signed by a surety company payable to the Claiborne County Board of Supervisors, and acceptable to the owner.

By virtue of my signature below, I fully understand the requirements of the provided specifications and other bid documents, submit my documents, and bid without exception.

FIRM NAME: _____

BY: _____

Mailing Address: _____

City: _____ **State:** _____ **Zip Code:** _____

Phone: _____ **Fax #:** _____ **Date:** _____

End of Document

“Group D”

ASPHALT CEMENT AND EMULSIFIED ASPHALT SPECIFICATIONS

Estimated usage will be **120,000 gallons delivered in 3,500-gallon loads.**

The Contract Term will be from **September 1, 2017 - September 30, 2018**

As per Mississippi State Aid Specifications

ASPHALT CEMENT AND EMULSIFIED ASPHALT	Per Gallon as Specified	Bid Yes/No
All grades AC		
CRS-2 Emulsified Asphalt		
CRS-2 P Emulsified Asphalt		
RC-250 Cutback Asphalt		

***ALL THE ABOVE PRICES ARE TO INCLUDE FREIGHT.

I CERTIFY THE MATERIAL AND SERVICES OFFERED GROUP ASPHALT CEMENT AND EMULSIFIED ASPHALT SPECIFICATIONS MEETS OR EXCEED THE FOREGOING SPECIFICATIONS.

DATE: _____

VENDOR: _____

SIGNED: _____

(Print Name and Title)

SIGNATURE: _____

ADDRESS: _____

TELEPHONE: _____ FAX: _____

EMAIL ADDRESS: _____

“Group E”
CLAY GRAVEL/ CRUSHED LIMESTONE SEAL SIZES 7, 8 and 89
RIP RAP ROCK SIZES 100, 200, 300 and 400

Estimated usage 7,000 tons.

The Contract Term will be from September 1, 2017 – September 30, 2018

Mississippi State Aid Specifications

The limestone is to meet the specifications as listed in Section 703.14 of the Mississippi Standard Specifications for Road and Bridge Construction Mississippi State Highway Department 1990 edition. The limestone will be delivered and placed at the aforementioned locations, with stockpiling to be accomplished by the Claiborne County or others.

CRUSHED LIMESTONE 7, 8, AND 89, Delivered to locations		
CRUSHED LIMESTONE SIZE # 7	Bid YES or NO	Price Per ton FOB
Claiborne County Road Department, 2011 Hwy 18 East, Port Gibson, MS 39150		

CRUSHED LIMESTONE 7, 8, AND 89, Delivered to locations		
CRUSHED LIMESTONE SIZE # 8	Bid YES or NO	Price Per ton FOB
Claiborne County Road Department, 2011 Hwy 18 East, Port Gibson, MS 39150		

CRUSHED LIMESTONE 7, 8, AND 89, Delivered to locations		
CRUSHED LIMESTONE SIZE # 89	BID YES or NO	Price Per ton FOB
Claiborne County Road Department, 2011 Hwy 18 East, Port Gibson, MS 39150		

RIP RAP ROCK SIZES 100,200,300 AND 400 Delivered to locations		
RIP RAP ROCK SIZE # 100	BID YES or NO	Price Per ton FOB
Claiborne County Road Department, 2011 Hwy 18 East, Port Gibson, MS 39150		
RIP RAP ROCK SIZES 100,200,300 AND 400 Delivered to locations		
RIP RAP ROCK SIZE # 200	BID YES or NO	Price Per ton FOB
Claiborne County Road Department, 2011 Hwy 18 East, Port Gibson, MS 39150		
RIP RAP ROCK SIZES 100,200,300 AND 400 Delivered to locations		
RIP RAP ROCK SIZE # 300	BID YES or NO	Price Per ton FOB
Claiborne County Road Department, 2011 Hwy 18 East, Port Gibson, MS 39150		
RIP RAP ROCK SIZES 100,200,300 AND 400 Delivered to locations		
RIP RAP ROCK SIZE # 400	BID YES or NO	Price Per ton FOB
Claiborne County Road Department, 2011 Hwy 18 East, Port Gibson, MS 39150		

Continued next Page

CLAY GRAVEL

Estimated usage with be 10,000 tons.

The Contract Term will be from September 1, 2017 – September 30, 2018 Mississippi State Aid
Specifications

Item		Price	Bid Yes or No
Per ton F. O. B., gravel pit. (Seller loads)			
Per ton F. O. B., gravel pit. (Buyer loads)			
Gravel Delivered to lot Price per Ton FOB by location.			
Gravel Delivered to lot Price per Ton FOB by location.			
Gravel Delivered to lot Price per Ton FOB by location.			
Gravel Delivered to lot Price per Ton FOB by location.			

The Clay Gravel is to meet the specifications of the Mississippi Department of Transportation Class 4 Group B and will be delivered and placed at the aforementioned locations, with stockpiling to be accomplished by the Claiborne County Public Works Department or others. Moisture tests performed by contractor when requested by Department. Must have scales to insure accurate quantity and supply tickets to Claiborne County upon delivery.

CLAY GRAVEL

The clay gravel material is to meet the following graduation requirements:

Percentage (by weight) Passing Square Mesh Sieves

Class		4
Passing 3"		100
1 ½"		85 – 100
1"		65 – 100
½"		35 – 90

No. 4		30 – 75
No. 10		30 – 57

Material Passing the No. 10 Sieve

Class		4
No. 10		100
No. 40		20 – 90
No. 60		15 – 80
No. 200		6 – 40

Material passing the No. 40 Sieve shall meet the following:

Group Symbol	LL Max.	Min.	Max.
B	25		8

I CERTIFY THE MATERIAL AND SERVICES OFFERED GROUP CLAY GRAVEL/ CRUSHED LIMESTONE SEAL SIZES 7, 8 and 89 RIP RAP ROCK SIZES 100, 200, 300 and 400 MEETS OR EXCEEDS THE FOREGOING SPECIFICATIONS.

DATE: _____

VENDOR: _____

SIGNED _____
(Print Name and Title)

SIGNATURE: _____

ADDRESS: _____

TELEPHONE: _____ FAX: _____

EMAIL ADDRESS: _____

“Group F”
TRAFFIC PAINT

Estimated usage for term of contract is 14,000 gallons.

The Contract Term will be from **September 1, 2017 – September 30, 2018**

Mississippi State Highway Department Code

Reflective, 55 Gallon Containers

Traffic Paint	PRICE	SIZE	BID YES/NO
<u>FDTW – 4 white</u>		Reflective, 55 Gallon Containers	
<u>FDTY – 4 yellow</u>		Reflective, 55 Gallon Containers	

TRAFFIC PAINT:

All traffic paint shall conform to Mississippi State Highway Department Specifications as set forth in Section S-710 as tested in conformance with Mississippi State Highway Department Standard Operating Procedures TMD-30-01-00-000 and TMD-30-02-01-000.

Delivery shall be made to:

Claiborne County Road Department

2011 Hwy 18 East, Port Gibson, MS 39150

Contrary to the Specifications and Standard Operating Procedures, the certifications shall be addressed to the County Engineer, .

I CERTIFY THE MATERIAL AND SERVICES OFFERED GROUP TRAFFIC PAINT MEETS OR EXCEED THE FOREGOING SPECIFICATIONS.

DATE: _____

VENDOR: _____

SIGNED _____

(Print Name and Title)

SIGNATURE: _____

ADDRESS: _____

TELEPHONE: _____ FAX: _____

EMAIL ADDRESS: _____

GLASS BEADS

Estimated usage will be 10 tons.

Contract Dates: September 1, 2017 – September 30, 2018

Mississippi State Aid Specifications

<u>GLASS BEADS</u>	PRICE	SIZE	BID YES or No
1. Glass beads meeting the new requirements for Mississippi State Aid Specifications (Class B High Visibility Beads per Mississippi DOT SP 907-720-5)		50-pound bag	
2. Glass beads meeting the previous requirements for Mississippi State Aid Specifications (Class A Standard Glass beads per Mississippi DOT SP 907-720-5)		50-pound bag	

Delivery shall be made to:

**Claiborne County Road Department
2011 Hwy 18 East, Port Gibson, MS 39150**

I CERTIFY THE MATERIAL AND SERVICES OFFERED GROUP GLASS BEADS MEETS OR EXCEED THE FOREGOING SPECIFICATIONS.

DATE: _____

VENDOR: _____

SIGNED _____

(Print Name and Title)

SIGNATURE: _____

ADDRESS: _____

TELEPHONE: _____ FAX: _____

EMAIL ADDRESS: _____

“GROUP G”
TRAFFIC PAINT PAVEMENT STRIPPING AND MARKING

Gentlemen:

Pursuant to your advertisement, for Term Bids #11-090117-093018, **TRAFFIC PAINT STRIPPING AND MARKING** for the term of September 1, 2017 - September 30, 2018 we submit the following response.

_____ located at

(NAME OF VENDOR)

_____ do hereby submit our proposal for furnishing, as ordered by the County, in accordance with the specifications listed below, **TRAFFIC PAINT STRIPPING AND MARKING THROUGHOUT CLAIBORNE COUNTY** beginning September 1, 2017 and ending September 30, 2018 and/or until a new contract is accepted.

General I:

1. All bidders must be licensed and bonded to work in Claiborne County, MS. In addition, shall submit a copy of their license along with these documents.
2. All bidders must carry appropriate insurance (worker's compensation liability, etc.) to "SAVE HARMLESS" Claiborne County.
3. Approved Supplier will be responsible for obtaining all necessary permits.
4. The County reserves the right to request a performance bond at the time of the award.
5. It is the intent of this request to reach Vendors normally in the Traffic Stripping and Marking business.
6. The County reserves the right to request a list of job references and current contracts.
7. All bidders shall include type of proposed equipment to be used if awarded the bid.
8. The scope of work shall consist of all equipment, labor, materials, tools, and needed to strip, mark, and install traffic signal induction loops. All work must be in accordance 2004 Edition of the Mississippi Standard Specifications for Road and Bridge Construction.
9. Individual Purchase Orders will be issued for each area or project for as specified in the Purchase order.
10. Work on each purchase order shall begin within fifteen (15) working days after issuance, of the purchase order unless an extension is granted by the County Engineer.
11. The bidder shall be required to maintain traffic control including flagman, flashing directional signals, traffic barricades, personnel, and traffic safety devices necessary to provide for the safety of the workers, the public, and the protections until such time as that portion of the roadway may be released to the normal flow of traffic.

Procession of the Work:

1. The Claiborne County Engineer, under the direction of the Board of Supervisors, shall determine what roads shall receive stripping, marking, and required Traffic induction loops.
2. The Engineer, in conjunction with the Contractor shall determine the sequence of operations and schedule the work.
3. The Contractor will be responsible for the worksite as directed and approved by the County Engineer.
4. The County Engineer or designated person will inspect the work and make all determinations regarding the control of the work.

Technical Specifications for all material requirements, construction requirements and construction testing shall be accomplished in strict compliance with Mississippi Standard Specifications for State

Aid Road and Bridge Construction, 2004 Edition, adopted by the Office of State Aid Road Construction and the Federal Highway Administration.

The tables below provide a description of each bid item. Each item will be bid as stated under cost of each section with the Quantity stated in each line item on each table. On each table, indicate YES or NO indicating you are bidding that line item. Do not place any pricing in table.

ITEM NO.	DESCRIPTION	Quantity	Cost
(Skip Yellow) 4" Wide 90 Mils			
S-621-D	Wide Thermoplastic Traffic Stripe	Less than 1.0 mile /mile	per_____/mile
S-621-D	Wide Thermoplastic Traffic Stripe	1.1 miles to 5.0 miles	per_____/mile
S-621-D	Wide Thermoplastic Traffic Stripe	5.1 miles to 10.0 miles	per_____/mile
S-621-D	Wide Thermoplastic Traffic Stripe	10.1 miles to 20.0 miles	per_____/mile
S-621-D	Wide Thermoplastic Traffic Stripe	more than 20.0 miles	per_____/mile
(Continuous White) 4" Wide 60 Mils			
S-621-C	Wide Thermoplastic Edge Stripe	Less than 1.0 mile	per_____/mile
S-621-C	Wide Thermoplastic Edge Stripe	1.1 miles to 5.0 miles	per_____/mile
S-621-C	Wide Thermoplastic Edge Stripe	5.1 miles to 10.0 miles	per_____/mile
S-621-C	Wide Thermoplastic Edge Stripe	10.1 miles to 20.0 miles	per_____/mile
S-621-C	Wide Thermoplastic Edge Stripe	more than 20.0 miles	per_____/mile
(Continuous Yellow) 4" Wide 90 Mils			
S-621-E-1	Wide Thermoplastic Traffic Stripe	Less than 1.0 mile	per_____/mile
S-621-E-1	Wide Thermoplastic Traffic Stripe	1.1 miles to 5.0 miles	per_____/mile
S-621-E-1	Wide Thermoplastic Traffic Stripe	5.1 miles to 10.0 miles	per_____/mile
S-621-E-1	Wide Thermoplastic Traffic Stripe	10.1 miles to 20.0 miles	per_____/mile
S-621-E-1	Wide Thermoplastic Traffic Stripe	more than 20.0 miles	per_____/mile
(White Legend) 120 Mils			
S-621-SH-1	Thermoplastic Legend	Less than 40.0 L.F.	per_____/L.F.
S-621-SH-1	Thermoplastic Legend	40.1 L.F. to 500 L.F.	per_____/L.F.
S-621-SH-1	Thermoplastic Legend	500.1 L.F. to 2,000 L.F.	per_____/L.F.
S-621-SH-1	Thermoplastic Legend	more than 2,000 L.F.	per_____/L.F.
(White Legend) 120 Mils			
S-621-H-2	Thermoplastic Legend	Less than 500 S.F	per_____/S.F.
S-621-H-2	Thermoplastic Legend	501 S.F to 1000 S.F.	per_____/S.F.
S-621-H-2	Thermoplastic Legend	1001 S.F to 2000 S.F.	per_____/S.F.

Two-Way Reflective High Performance Yellow/Red/White Raised Markers	
Two-Way Reflective High Performance Yellow Raised	per_____/Each
Two-Way Reflective High Performance White/Clear Raised	per_____/Each
Two-Way Red/Yellow Reflective High Performance Yellow Raised Markers	per_____/Each
Temporary Two-Way Yellow Overlay Markers	per_____/Each

TEMPORARY TRAFFIC PAINT ONLY

<u>TEM NO.</u>	<u>DESCRIPTION</u>	<u>Quantity</u>	<u>Cost</u>
(Skip Yellow) 4" Wide Temporary			
S-621-D	Wide Thermoplastic Traffic Stripe	Less than 1.0 mile /mile	per_____/mile
S-621-D	Wide Thermoplastic Traffic Stripe	1.1 miles to 5.0 miles	per_____/mile
S-621-D	Wide Thermoplastic Traffic Stripe	5.1 miles to 10.0 miles	per_____/mile
S-621-D	Wide Thermoplastic Traffic Stripe	10.1 miles to 20.0 miles	per_____/mile
S-621-D	Wide Thermoplastic Traffic Stripe	more than 20.0 miles	per_____/mile
(Continuous White) 4" Wide Temporary			
<u>S-621-C</u>	Wide Thermoplastic Edge Stripe	Less than 1.0 mile	per_____/mile
<u>S-621-C</u>	Wide Thermoplastic Edge Stripe	1.1 miles to 5.0 miles	per_____/mile
<u>S-621-C</u>	Wide Thermoplastic Edge Stripe	5.1 miles to 10.0 miles	per_____/mile
<u>S-621-C</u>	Wide Thermoplastic Edge Stripe	10.1 miles to 20.0 miles	per_____/mile
<u>S-621-C</u>	Wide Thermoplastic Edge Stripe	more than 20.0 miles	per_____/mile
(Continuous Yellow) 4" Wide Temporary			
S-621-E-1	Wide Thermoplastic Traffic Stripe	Less than 1.0 mile	per_____/mile
S-621-E-1	Wide Thermoplastic Traffic Stripe	1.1 miles to 5.0 miles	per_____/mile
S-621-E-1	Wide Thermoplastic Traffic Stripe	5.1 miles to 10.0 miles	per_____/mile
S-621-E-1	Wide Thermoplastic Traffic Stripe	10.1 miles to 20.0 miles	per_____/mile
S-621-E-1	Wide Thermoplastic Traffic Stripe	more than 20.0 miles	per_____/mile
<u>Temporary Two-Way Reflective High Performance Yellow Raised Markers</u>			
Temporary Two-Way Yellow Overlay Markers			per_____/Each

I CERTIFY THE MATERIAL AND SERVICES OFFERED GROUP TRAFFIC PAINT PAVEMENT STRIPPING, MARKING.

DATE: _____

VENDOR: _____

SIGNED _____

(Print Name and Title)

SIGNATURE: _____

ADDRESS: _____

TELEPHONE: _____ FAX: _____

EMAIL ADDRESS: _____