



PUTNAM COUNTY
INVITATION TO BID (ITB)

Bid Number: 19-42001-002	Project Name: Asphaltic Concrete Resurfacing & Soil-Cement Reclamation
Due Date and Time: October 21, 2019 Local Time: 10:00 AM	Number of Pages: <u>65</u>

ISSUING DEPARTMENT INFORMATION	
Putnam County County Manager's Office Issue Date: September 17, 2019 Phone: 706-485-5826 Fax: 706-923-2345	

INSTRUCTIONS TO BIDDERS	
Return Submittal to: Putnam County Board of Commissioners <u>ATTN:</u> Paul Van Haute County Manager 117 Putnam Drive Suite A Eatonton, GA 31024	Mark Face of Sealed Envelope/Package: Bid Number: 19-42001-002 Name of Company or Firm: _____ Special Instructions: Deadline for Questions: Oct. 14, 2019 – 5:00 PM <ul style="list-style-type: none"> • Pre-Bid Mtg: October 9, 2019; 3:00 PM • Email questions to Larry Kaiser at (owner's representative); kaiser@co-infra-services.com (call 404-909-5619 to confirm receipt of email) • Refer to Schedule of Events in bid package for additional instructions

BIDDERS MUST COMPLETE THE FOLLOWING	
Bidder Name/Address:	Authorized Bidder Signatory: (Please print name and sign in ink)
Bidder Phone Number:	Bidder FAX Number:
Bidder State I.D. Number:	Bidder E-mail Address:
BIDDERS MUST RETURN THIS COVER SHEET WITH BID RESPONSE	

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INVITATION TO BID
ASPHALTIC CONCRETE RESURFACING AND SOIL-CEMENT RECLAMATION

Putnam County is accepting sealed bids from qualified firms for **Asphaltic Concrete Resurfacing & Soil-Cement Road Reclamation** of various county roads and park facilities for the Putnam County Board of Commissioners in conformance with Title 32, Chapter 4, Article 4, Part 2 of the Official Code of Georgia Annotated. All work will be done in accordance with Georgia Department of Transportation's (GDOT) Standard Drawings, Standard Specifications, and Pay Items Index as standards and specifications for the construction and completion of the work required. All bidders must comply with all general and special requirements of the bid information and instructions enclosed herein. Work required under the Contract includes asphaltic concrete milling and resurfacing, shoulder rehabilitation and reconstruction, soil-cement reclamation, striping, traffic control and associated work tasks.

The project shall be Substantially Complete within **90 calendar** days from the date of issuance of Notice to Proceed. Liquidated damages of \$500 per day will be assessed if work is not completed within 90 calendar days (excluding weather delays) from the date of the Notice to Proceed.

Putnam County will receive sealed bids until **10:00 AM, October 21, 2019 at 117 Putnam Drive, Suite A, Eatonton, GA 31024; ATTN: Paul Van Haute – County Manager**. Bids received after this time will not be accepted. Bids will be opened and publicly read aloud in the Administration Building Board of Commissioner Room #301 at approximately 10:05 AM on October 14, 2019. All interested parties are invited to attend. A non-mandatory pre-bid conference will be held at **3:00 PM on October 9, 2019 at the Putnam County Administration Building; 117 Putnam Drive, Room 301, Eatonton, GA 31024**. All contractors are urged to attend. Apparent bid results will be posted on the county web site; <https://www.putnamcountyga.us>. Bids received after the above date and time or in any location other than that specified will not be accepted.

Bidding Documents are available for download from the Putnam County Board of Commissioners web site; <https://www.putnamcountyga.us>. Source of project funding is Local TSPLOST & GDOT LMIG.

Bids shall be presented in a sealed envelope with the bid number (19- 42001-002) and the name of the company or firm submitting clearly marked on the outside of the envelope. **ONE (1) ORIGINAL (PAPER) AND ONE (1) COPY (PAPER)**. Bids will not be accepted verbally, by fax or email.

Award will be made to the vendor submitting the lowest responsive, reliable and responsible bid. The Putnam County Board of Commissioners reserves the right to reject any or all bids and re-advertise, to waive any informalities or irregularities and to make an award as deemed in its best interest and based on prior experience and/or references. The written bid documents supersede any verbal or written prior communications between the parties.

All contractors shall submit with the bid, a bid bond in the amount of five percent (5%) of the total bid, made payable to Putnam County, Georgia. The selected contractor will be required to submit a one hundred percent (100%) performance bond and a one hundred percent (100%) payment bond upon being notified of an award.

Putnam County does not discriminate on the basis of disability in the admission or access to its programs or activities. Any requests for reasonable accommodations required by individuals to fully participate in any open meeting, program or activity of the Putnam County Government should be directed to the ADA Compliance Officer at 706-485-2776

All questions regarding the bid documents shall be made via email to the Project Manager; kaiser@co-infra-services.com. The Project Manager will acknowledge receipt of questions. If bidder does not receive acknowledgement, it's the bidder's responsibility to contact the Project Manager at 404-909-5619 to ensure questions are received. The deadline to submit questions is 5:00 PM on October 14, 2019. The County will post "Response to Questions and/or Addendum", if applicable, on the County web site no later than 5:00 PM on October 16, 2019.

PUTNAM COUNTY
Invitation to Bid 19-42001-002

BIDDING INSTRUCTIONS

FAILURE TO RETURN THE FOLLOWING BID DOCUMENTS COULD RESULT IN THE BID BEING DEEMED NON-RESPONSIVE AND BEING REJECTED:

Item	Description	Page(s)
1	Filled out and Signed Invitation to Bid	1
2	Bid Form and Addenda Acknowledgement (2 pages)	9-10
3	Bid Bond (3 pages)	11-13
4	Qualification Signature and Certification	15
5	List of Subcontractors	15
6	Contractor Documented Experience	16
7	Contractor & Sub-Contractor Affidavit and Agreement (E-Verify)	17-18
8	Bid Schedule (2 pages)	19
9	Disclosure Form	22
10	Certificate of Sponsor Drug-Free Workplace	22

INFORMATION AND INSTRUCTIONS

The purpose of this solicitation is to enter into a unit price contract with one firm to be the primary supplier of the 2018 LMIG & 2019 TSPLOST Asphaltic Resurfacing and Soil-Cement Reclamation Project.

No specification expressed or implied shall be construed as any type of restrictive specification that would limit competition.

Unless clearly shown as “no substitute” or any words to that effect, any items in these contract documents which have been identified, described or referenced by a brand name or trade name are for reference only. Such identification is intended to be descriptive, but not restrictive and is to indicate the general quality and characteristics of products that may be offered. Each bid item for which an equivalent item is proposed must be individually identified on the bid sheet with the following information: brand name, model or manufacturer’s number or identification regularly used in the trade. The County shall be the sole judge of the suitability of the proposed alternative and may consider function, design, materials, construction, workmanship, finishes, operating features, overall quality, local service facilities, warranty terms and service or other relevant features.

The County reserves the right to cancel the contract at any time with 30 days written notice.

Title to any supplies, materials, equipment or other personal property shall remain the Contractors’ until fully paid for by the County.

All items to be bid FOB, Putnam County, Georgia. No sales taxes are to be charged.

Any damage to any building or traffic control device, or equipment incurred during the course of work shall be repaired at the contractor’s expense to the complete satisfaction of Putnam County with no additional expense to the County. Unless otherwise approved by the County, the prime contractor shall perform **ALL** the asphalt resurfacing work. Other bid items can be subcontracted.

EVALUATION

The County intends to evaluate the Invitation-to-Bid (ITB) on the lowest submitted bid, reliable, responsible, and responsive vendor based on prior experiences and/or references. The County reserves the right to reject any bids submitted based on past experiences in the county on similar work tasks and/or based on references or information gathered from other city or county governments on similar work tasks and scope.

INSURANCE REQUIREMENTS

Within 10 days of Notice of Award, and at all times that this Contract is in force, the Contractor shall obtain, maintain and furnish the County Certificates of Insurance from licensed companies doing business in the State of Georgia with an A.M. Best Rating A-6 or higher and acceptable to the County.

Within 10 days of Notice of Award, and at all times that this Contract is in force, the Contractor shall obtain, maintain and furnish the County Certificates of Insurance from licensed companies doing business in the State of Georgia with an A.M. Best Rating A-6 or higher and acceptable to the County. Insurance requirements are provided below and included in the CONTRACT AGREEMENT (Section 7.K).

- (1) Requirements: The Contractor shall have and maintain in full force and effect for the duration of this Agreement, insurance insuring against claims for injuries to persons or damages to property which may arise from or in connection with the performance of the Work by the Contractor, its agents, representatives, employees or subcontractors. All policies shall be subject to approval by the County Attorney as to form and content. These requirements are subject to amendment or waiver if so approved in writing by the County.
- (2) Minimum Limits of Insurance: Contractor shall maintain the following insurance policies with limits no less than:
 - (a) Comprehensive General Liability of \$1,000,000 (one million dollars) limit per single occurrence, \$2,000,000 (two million dollars) umbrella, including coverage for bodily and personal injury, sickness, disease or death, injury to or destruction of property, including loss of use resulting therefrom, vandalism, property loss and theft.
 - (b) Comprehensive Automobile Liability (owned, non-owned, hired) of \$1,000,000 (one million dollars) combined single limit per occurrence for bodily and personal injury, sickness, disease or death, injury to or destruction of property, including loss of use resulting therefrom.
 - (c) Workers' Compensation limits as required by the State of Georgia and Employers Liability limits of \$1,000,000 (one million dollars) per accident.
- (3) Deductibles and Self-Insured Retentions: Any deductibles or self-insured retentions must be declared to and approved by the County in writing.
- (4) Other Insurance Provisions: The policy is to contain, or be endorsed to contain, the following provisions:

- (a) General Liability and Automobile Liability Coverage.
 - (i) The County and County Parties are to be covered as insureds. The coverage shall contain no special limitations on the scope of protection afforded to the County or County Parties.
 - (ii) The Contractor's insurance coverage shall be primary noncontributing insurance as respects to any other insurance or self-insurance available to the County or County Parties. Any insurance or self-insurance maintained by the County or County Parties shall be in excess of the Contractor's insurance and shall not contribute with it.
 - (iii) Any failure to comply with reporting provisions of the policies shall not affect coverage provided to the County or County Parties.
 - (iv) Coverage shall state that the Contractor's insurance shall apply separately to each insured against whom claim is made or suit is brought, except with respect to the limits of the insurer's liability.
 - (v) Coverage shall be provided on a "pay on behalf" basis, with defense costs payable in addition to policy limits. There shall be no cross liability exclusion.
 - (vi) The insurer agrees to waive all rights of subrogation against the County and County Parties for losses arising from Work performed by the Contractor for the County for General Liability coverage only.
- (b) Workers' Compensation Coverage: The insurer providing Workers' Compensation Coverage will agree to waive all rights of subrogation against the County and County Parties for losses arising from Work performed by the Contractor for the County.
- (c) All Coverages:
 - (i) Each insurance policy required by this clause shall be endorsed to state that coverage shall not be suspended, voided, canceled, reduced in coverage or in limits except after thirty (30) days prior written notice by certified mail, return receipt requested, has been given to the County.
 - (ii) Policies shall have concurrent starting and ending dates.
- (5) Acceptability of Insurers: Insurance is to be placed with insurers authorized to do business in the State of Georgia and with an A.M. Best's rating of no less than A:VI.
- (6) Verification of Coverage: Contractor shall furnish the County with certificates of insurance and endorsements to the policies evidencing coverage required by this clause prior to the start of Work. The certificate of insurance and endorsements shall be on a form utilized by Contractor's insurer in its normal course of business and shall be received and approved by the County within ten (10) days of the Notice of Award. The County reserves the right to

require complete, certified copies of all required insurance policies, at any time. The Contractor shall provide proof that any expiring coverage has been renewed or replaced at least two (2) weeks prior to the expiration of the coverage.

- (7) Subcontractors: Contractor shall include all subcontractors as insureds under its policies or shall furnish separate certificates and endorsements for each subcontractor. All coverage for subcontractors shall be subject to all of the requirements stated in this Agreement, including but not limited to naming the Parties as additional insureds.

- (8) Claims-Made Policies: Contractor shall extend any claims-made insurance policy for at least six (6) years after termination or final payment under the Agreement, whichever is later.

- (9) County as Additional Insured and Loss Payee: The County shall be named as an additional insured and loss payee on all policies required by this Agreement, except the County need not be named as an additional insured and loss payee on any Workers' Compensation policy.

BONDING REQUIREMENTS

Each bid must be accompanied with a **BID BOND** (bond only: certified checks or other forms are not acceptable) in an amount equal to five percent (5%) of the base bid, payable to Putnam County. Said bid bond guarantees the bidder will enter into a contract to construct the project strictly within the terms and conditions stated in this bid and in the bidding and contract documents, should the construction contract be awarded.

The Successful Bidder shall be required to furnish **PAYMENT AND PERFORMANCE BONDS** for the faithful performance of the contract and a bond to secure payment of all claims for materials furnished and/or labor performed in performance of the project, both in amounts equal to one hundred percent (100%) of the contract price.

Bonds shall be issued by a corporate surety appearing on the Treasury Department's most current list (Circular 570 as amended) and be authorized to do business in the State of Georgia. Bonds shall be on the forms provided by the County and subject to the review and approval of the County Attorney.

Date of Bond must not be prior to date of Contract. If Contractor is a Partnership, all partners shall execute Bond.

OATH

By signing a contract with Putnam County, the successful bidder understands and acknowledges the requirements set forth in O.C.G.A. §§ 32-4-122 and 36-91-21(e).

COST OF PREPARING A PROPOSAL

The costs for developing and delivering responses to this ITB and any subsequent presentations of the proposal as requested by the County are entirely the responsibility of the bidder. The County is not liable for any expense incurred by the bidder in the preparation and presentation of their proposal. All materials submitted in response to this ITB become the property of Putnam County.

[BIDDERS MUST RETURN THIS FORM WITH BID RESPONSE]

BID FORM and ADDENDA ACKNOWLEDGEMENT

**TO: COUNTY MANAGER
PUTNAM COUNTY
EATONTON, GEORGIA 31024**

Ladies and Gentlemen:

In compliance with your Invitation To Bid, the undersigned, hereinafter termed the Bidder, proposes to enter into a Contract with Putnam County, Georgia, to provide the necessary machinery, tools, apparatus, other means of construction, and all materials and labor specified in the Contract Documents or as necessary to complete the Work in the manner therein specified within the time specified, as therein set forth, for:

**Bid Number 19-42001-002
Asphaltic Concrete Resurfacing and Soil-Cement Reclamation**

The Bidder has carefully examined and fully understands the Contract, Specifications, and other documents hereto attached, has made a personal examination of the Site of the proposed Work, has satisfied himself as to the actual conditions and requirements of the Work, and hereby proposes and agrees that if his bid is accepted, he will contract with Putnam County in full conformance with the Contract Documents.

Unless otherwise directed, all work performed shall be in accordance with the Georgia Department of Transportation Standard Specifications, Construction of Transportation Systems (current edition). All materials used in the process of completion of the work included in the Contract will be furnished from Georgia Department of Transportation certified suppliers only.

It is the intent of this Bid to include all items of construction and all Work called for in the Specifications, or otherwise a part of the Contract Documents.

In accordance with the foregoing, the undersigned proposes to furnish and construct the items listed in the attached Bid schedule for the unit prices stated.

The Bidder agrees that the cost of any work performed, materials furnished, services provided or expenses incurred, which are not specifically delineated in the Contract Documents but which are incidental to the scope, intent, and completion of the Contract, shall be deemed to have been included in the prices bid for the various items scheduled.

The Bidder further proposes and agrees hereby to promptly commence the Work with adequate forces and equipment within ten (10) calendar days from receipt of Notice to Proceed and to s u b s t a n t i a l l y complete all Work within Ninety (90) calendar days from the Notice to Proceed. If weather affects the required completion schedule, The County and selected Bidder will negotiate a new completion date.

Attached hereto is an executed Bid Bond in the amount of _____ Dollars (\$
(Five Percent of Amount Bid). **Bid Bond Amount to be for the largest bid amount submitted.**

If this bid shall be accepted by Putnam County and the undersigned shall fail to execute a satisfactory contract in the form of said proposed Contract, and give satisfactory Performance and Payment Bonds or furnish satisfactory proof of carriage of the insurance required within ten days from the date of Notice of Award of the Contract, then Putnam County may, at its option, determine that the undersigned abandoned the Contract and there upon this bid shall be null and void, and the sum stipulated in the attached Bid Bond shall be forfeited to Putnam County as liquidated damages.

Bidder acknowledges receipt of the following addenda:

Addendum No.	Date viewed
_____	_____
_____	_____
_____	_____
_____	_____

Add additional pages as necessary for the Addendum.

Bidder further declares that the full name and resident address of Bidder's Principal is as follows:

Signed, sealed, and dated this _____ day of _____, 20_____

Bidder _____ (Seal)
Company Name

Bidder Mailing Address:

Signature: _____

Print Name: _____

Title: _____

[BIDDERS MUST RETURN THIS FORM WITH BID RESPONSE]

**BID BOND
PUTNAM COUNTY, GEORGIA**

BIDDER (Name and Address):

SURETY (Name and Address of Principal Place of Business):

OWNER (hereinafter referred to as the "County" (Name and Address):

Putnam County Board of Commissioners
ATTN: County Manager
117 Putnam Drive
Suite A
Eatonton, Georgia 31024

BID

BID DUE DATE:

PROJECT (Brief Description Including Location):

BOND

BOND NUMBER:

DATE (Not later than Bid due date):

PENAL SUM: _____
(Words) (Figures)

IN WITNESS WHEREOF, Surety and Bidder, intending to be legally bound hereby to the County, subject to the terms printed below or on the reverse side hereof, do each cause this Bid Bond to be duly executed on its behalf by its authorized officer, agent or representative.

BIDDER

SURETY

_____ (Seal)

_____ (Seal)

Bidder's Name and Corporate Seal

Surety's Name and Corporate Seal

By: _____

By: _____

Signature and Title:

Signature and Title:

(Attach Power of Attorney)

Attest: _____

Attest: _____

Signature and Title:

Signature and Title:

- Note:
- (1) Above addresses are to be used for giving any notice required by the terms of this Bid Bond.
 - (2) Any singular reference to Bidder, Surety, the County or any other party shall be considered plural where applicable.

1. Bidder and Surety, jointly and severally, bind themselves, their heirs, executors, administrators, successors and assigns to pay to the County upon Default of Bidder the penal sum set forth on the face of this Bond.
2. Default of Bidder shall occur upon the failure of Bidder to deliver within the time required by the Bidding Documents (or any extension of that time agreed to in writing by the County) the executed Agreement required by the Bidding Documents and any performance and payment Bonds required by the Bidding Documents.
3. This obligation shall be null and void if:
 - 3.1 The County accepts Bidder's Bid and Bidder delivers within the time required by the Bidding Documents (or any extension of that time agreed to in writing by the County) the executed Agreement required by the Bidding Documents and any performance and payment Bonds required by the Bidding Documents; or
 - 3.2 All Bids are rejected by the County; or
 - 3.3 The County fails to issue a Notice of Award to Bidder within the time specified in the Bidding Documents (or any extension of that time agreed to in writing by Bidder and, if applicable, consented to by Surety when required by paragraph 5 hereof).
4. Payment under this Bond will be due and payable upon Default by Bidder within 30 calendar days after receipt by Bidder and Surety of a written Notice of Default from the County, which Notice will be given with reasonable promptness and will identify this Bond and the Project and include a statement of the amount due.
5. Surety waives notice of, as well as any and all defenses based on or arising out of, any time extension to issue a Notice of Award agreed to in writing by the County and Bidder, provided that the total time, including extensions, for issuing a Notice of Award shall not in the aggregate exceed 180 days from Bid due date without Surety's written consent.
6. No suit or action shall be commenced under this Bond either prior to 30 calendar days after the Notice of Default required in paragraph 4 above is received by Bidder and Surety or later than one year after Bid due date.
7. Any suit or action under this Bond shall be commenced only in a court of competent jurisdiction located in the State of Georgia.
8. Notices required hereunder shall be in writing and sent to Bidder and Surety at their respective addresses shown on the face of this Bond. Such notices may be sent by personal delivery, commercial courier or by United States Registered or Certified Mail, return receipt requested, postage pre-paid, and shall be deemed to be effective upon receipt by the party

concerned.

9. Surety shall cause to be attached to this Bond a current and effective Power of Attorney evidencing the authority of the officer, agent or representative who executed this Bond on behalf of Surety to execute, seal and deliver such Bond and bind the Surety thereby.

10. This Bond is intended to conform to all applicable statutory requirements. Any applicable requirement of any applicable statute that has been omitted from this Bond shall be deemed to be included herein as if set forth at length. If any provision of this Bond conflicts with any applicable statute, then the provision of said statute shall govern and the remainder of this Bond that is not in conflict therewith shall continue in full force and effect.

11. The term "Bid" as used herein includes a Bid, offer or proposal, as applicable under the particular circumstances.

12. The terms of this Bid Bond shall be governed by the laws of the State of Georgia

[BIDDERS MUST RETURN THIS FORM WITH BID RESPONSE]

QUALIFICATIONS SIGNATURE AND CERTIFICATION

I certify that this offer is made without prior understanding, agreement, or connection with any corporation, firm, or person submitting a proposal for the same materials, supplies, equipment, or services and is in all respects fair and without collusion or fraud. I understand collusive bidding is a violation of State and Federal Law and can result in fines, prison sentences, and civil damage awards. I agree to abide by all conditions of the proposal and certify that I am authorized to sign this proposal for the proposer. I further certify that the provisions of the Official Code of Georgia Annotated, including but not limited to Title 32, Chapter 4, Article 4, Part 2 and Sections 45-10-20 et seq. have not been violated and will not be violated in any respect.

Authorized Signature _____ Date _____

Print/Type Name _____

Print/Type Company Name Here _____

CORPORATE CERTIFICATE

I, _____, certify that I am the Secretary of the Corporation named as Contractor in the foregoing bid; that _____ who signed said bid in behalf of the Contractor, was then (title) _____ of said Corporation; that said bid was duly signed for and in behalf of said Corporation by authority of its Board of Directors, and is within the scope of its corporate powers; that said Corporation is organized under the laws of the State of _____.

This _____ day of _____, 20 _____

(Seal) (Signature)

[BIDDERS MUST RETURN THIS FORM WITH BID RESPONSE]

LIST OF SUBCONTRACTORS

I do _____, do not _____, propose to subcontract some of the work on this project. I propose to Subcontract work to the following subcontractor(s):

Company #1

Company Name: _____

Company Address: _____

Company President & Phone Number: _____

Company #2:

Company Name: _____

Company Address: _____

Company President & Phone Number: _____

Company #3:

Company Name: _____

Company Address: _____

Company President & Phone Number: _____

ATTACH ADDITIONAL PAGES AS NECESSARY

[BIDDERS MUST RETURN THIS FORM WITH BID RESPONSE]

DOCUMENTED EXPERIENCE

Provide a list of projects providing documented experience with asphalt resurfacing & soil-cement reclamation for a Georgia City or County on public right-of-way or publically owned land.

Description of Work	Date Completed	Company Name	Contact Person	Phone Number

Company Name _____

[BIDDERS MUST RETURN THIS FORM WITH BID RESPONSE]

EXHIBIT A

STATE OF GEORGIA

PUTNAM COUNTY

CONTRACTOR AFFIDAVIT AND AGREEMENT

By executing this affidavit, the undersigned contractor verifies its compliance with O.C.G.A. § 13-10-91, stating affirmatively that the individual, firm, or corporation which is contracting with Putnam County has registered with and is participating in a federal work authorization program, in accordance with the applicability provisions and deadlines established in O.C.G.A. § 13-10-91.

The undersigned further agrees that, should it employ or contract with any subcontractor(s) in connection with the physical performance of services pursuant to this contract with Putnam County, contractor will secure from such subcontractor(s) similar verification of compliance with O.C.G.A. § 13-10-91 on the Subcontractor Affidavit provided in Rule 300-10-01-.08 in the form attached hereto in this ITB. Contractor further agrees to maintain records of such compliance and provide a copy of each such verification to the Putnam County at the time the subcontractor(s) is retained to perform such service.

EEV / Basic Pilot Program User Identification Number

BY: Authorized Officer or Agent Date

Print Contractor Name

Title of Authorized Officer or Agent of Contractor

Printed Name of Authorized Officer or Agent

SUBSCRIBED AND SWORN
BEFORE ME ON THIS THE
____ DAY OF _____, 201_

Notary Public
My Commission Expires:

[BIDDERS MUST RETURN THIS FORM WITH BID RESPONSE]

EXHIBIT B

STATE OF GEORGIA

PUTNAM COUNTY

SUB- CONTRACTOR E-VERIFY

By executing this affidavit, the undersigned contractor verifies its compliance with O.C.G.A. § 13-10-91, stating affirmatively that the individual, firm, or corporation which is contracting with Putnam County has registered with and is participating in a federal work authorization program, in accordance with the applicability provisions and deadlines established in O.C.G.A. § 13-10-91.

The undersigned agrees that they shall be in compliance with O.C.G.A. § 13-10-91 on the Subcontractor Affidavit provided in Rule 300-10-01-.08. Sub-contractor further agrees to maintain records of such compliance and provide a copy of each such verification to Putnam County at the time the Contractor is retained to perform contract services with Putnam County.

EEV / Basic Pilot Program User Identification Number

BY: Authorized Officer or Agent Date

Print Sub- Contractor Name

Title of Authorized Officer or Agent of Sub-Contractor

Printed Name of Authorized Officer or Agent

SUBSCRIBED AND SWORN BEFORE ME
ON THIS THE
____ DAY OF _____, 201__

Notary Public (Seal):

My Commission Expires: _____

EXHIBIT A

(BIDDERS MUST RETURN THIS FORM WITH BID RESPONSE)

BID SCHEDULE OF ITEMS

PAY ITEM	ITFM DESCRIPTION	UNITS	QUANTITY	UNIT PRICE	TOTAL AMOUNT
150-000	TRAFFIC CONTROL	LS	1		
205-0001	UNCLASS EXCAVATION ②	CY	250		
210-0101	GRADING; ADJUST SHOULDER TO GRADE	LM	9.00		
210-0250	UNDERCUT EXCAVATION ①	CY	100		
301-2160	SOIL-CEMENT STABILIZED BASE COURSE; 8"	SY	25,000		
301-5000	PORTLAND CEMENT; 10 INCH DEPTH	TN	750		
402-1812	RECYCLED AC LEVELING, INCL. BM&HL & TACK COAT	TN	250		
402-3103	RECYCLED AC 9.5 MM SP, INCL BM&HL & TACK COAT (SP TYPE II, GP 2)	TN	5,296		
402-3130	RECYCLED AC 12.5 MM SP, GP 2 ONLY, INCL. BM&HL & TACK COAT	TN	6,792		
432-0206	MILL ASPHALT CONC. PVMT; 1.5 INCHES	SY	35,233		
446-2118	HIGH STRENGTH PVMT REINF FABRIC	SY	9,000		
461-8332	SEAL BRIDGE JOINTS (Old Phoenix bridge at Lake Oconee)	LS	1		
653-1704	THERMOPLASTIC SOLID TRAFFIC STRIPE, 24 INCH WHITE	LF	216		
653-1501	THERMOPLASTIC SOLID TRAFFIC STRIPE, 5 INCH, WHITE	LM	9.74		
653-1502	THERMOPLASTIC SOLID TRAFFIC STRIPE , 5 INCH, YELLOW	LM	8.13		
653-4502	THERMOPLASTIC SKIP TRAFFIC STRIPE,, 5 INCH, YELLOW	GLM	1.75		
				TOTAL BID	

NOTE: ① Undercut excavation pay item as needed for unforeseen conditions on Southshore

② Unclassified Excavation pay item for park and recreation projects

Print Total Bid Price: (print) _____

In compliance with the attached Specification, the undersigned offers and agrees that if this Bid is accepted, by the Putnam County Board of Commissioners within Ninety (90) days of the date of Bid opening, that he will furnish any or all of the Items upon which Prices are quoted, at the Price set opposite each Item, delivered to the designated point(s) within the time specified in the Bid Schedule.

COMPANY _____

ADDRESS _____

AUTHORIZED SIGNATURE _____

PRINT / TYPE NAME _____

TITLE _____

[BIDDERS MUST RETURN THIS FORM WITH BID RESPONSE]

DISCLOSURE FORM

This form is for disclosure of campaign contributions and family member relations with Putnam County officials/employees or Owner's Representative (Collaborative Infrastructure Service employees).

Please complete this form and return as part of your bid package when it is submitted.

Name of Bidder _____

Name and the official position of the Putnam County Official to whom the campaign contribution was made (Please use a separate form for each official to whom a contribution has been made in the past two (2) years.)

List the dollar amount/value and description of each campaign contribution made over the past two (2) years by the Applicant/Opponent to the named Putnam County Official.

Amount/Value	Description
_____	_____
_____	_____
_____	_____

Please list any family member that is currently (or has been employed within the last 12 months) by Putnam County and your relation:

[BIDDERS MUST RETURN THIS FORM WITH BID RESPONSE]

CERTIFICATION OF SPONSOR DRUG-FREE WORKPLACE

I hereby certify that I am a principle and duly authorized representative of _____
whose address _____
and it is also that:

1. The provisions of Section 50-24-1 through 50-24-6 of the Official Code of Georgia Annotated, relating to the “Drug-Free Workplace Act” have been complied with in full; and,
2. A drug-free workplace will be provided for the sponsor’s employees during the performance or the contract; and,
3. Each subcontractor hired by the SPONSOR shall be required to ensure that the subcontractor’s employees are provided a drug-free workplace. The SPONSOR shall secure from that subcontractor the following written certification: “As part of the subcontracting agreement with _____
_____ certifies to the SPONSOR that a drug-free workplace will be provided for the subcontractor’s employees during the performance of this contract pursuant to paragraph (7) of subsection (b) of the Official Code of Georgia Annotated Section 50-24-3; and,
4. It is certified that the undersigned will not engage in unlawful manufacture, sale, distribution, dispensation, possession, or use of a controlled substance or marijuana during the performance of the contract.

Date: _____

Signature: _____

To report bid rigging activities call:

1-800-424-9071

The U.S. Department of Transportation (DOT) operates the above toll-free “hotline” Monday through Friday, 8:00 AM to 5:00 PM, Eastern Time. Anyone with the knowledge of possible bid rigging, bidder collusion, or other fraudulent activities should use the “hotline” to report such activities.

The “hotline” is part of the DOT’s continuing effort to identify and investigate highway construction contract fraud and abuse, and is operated under the direction of the DOT Inspector General. All information will be treated confidentially and caller anonymity will be respected.

GENERAL CONDITIONS

Unless otherwise directed, all work performed under this contract shall be in accordance with the Georgia Department of Transportation Standard Specifications, Construction of Transportation Systems (current edition), and Special Provisions modifying them, except as noted below.

SECTION 101

DEFINITION AND TERMS

Section 101.14
COMMISSIONER

Delete as written and substitute the following:
COUNTY MANAGER, PUTNAM COUNTY

Section 101.22
DEPARTMENT

Delete as written and substitute the following:
COUNTY MANAGER

Section 101.24
OWNER'S REPRESENTATIVE

Delete as written and substitute the following:
OWNER'S REPRESENTATIVE

Section 101.84

Add: OWNER'S REPRESENTATIVE

SECTION 102 BIDDING REQUIREMENTS AND CONDITIONS

Section 102.05 EXAMINATION OF PLANS,
SPECIFICATIONS, SPECIAL PROVISIONS,
AND SITE OF THE WORK

Add the following paragraph:

“The County will not be responsible for Bidders’ errors or misjudgment, nor for any information on local conditions or general laws and regulations.”

Section 102.07 REJECTION OF
PROPOSALS

Add the following subparagraphs

“I. The County reserves the right to reject any and all bids, to waive technicalities, and to make an award as deemed in its best interest. It is understood that all bids are made subject to this Agreement, that the County reserves the right to award the bid to the lowest,

responsible Bidder, and in arriving at this decision, full consideration will be given to the reputation of the Bidder, his financial responsibility, and work of this type successfully completed.

“J. The County also reserves the right to reject any and all bids from any person, firm, or corporation who is in arrears in any debt or obligation to Putnam County, Georgia.”

Section 102.08 PROPOSAL
GUARANTY

Substitute the following for the first sentence

“No bid will be considered unless it is accompanied by an acceptable bid bond in an amount not less than five percent (5%) of the amount bid and made payable to Putnam County, Georgia. Such Bid Bond shall be on the forms provided by the County.”

Add Section 102.15
ADDENDA AND INTERPRETATION

Delete in its entirety and substitute the following:

Bids shall be submitted on the Bid Form provided by the County.

The bid package as described in Notice to Contractors, Page 1 must be submitted with the bid. Failure to do so could result in the omission of pertinent documents and the rejection of the apparent low bid.”

Section 102.09
DELIVERY OF PROPOSALS:

Add the following as 102.15:

“No interpretation of the meaning of the Contract Documents will be made orally to any Bidder. Any request for such interpretation should be in writing addressed to the County Manager, The Putnam County Board of Commissioners, 117 Putnam Dr., Suite A, Eatonton, GA 31024; 706-485-5826(office). Each such interpretation shall be given in writing, separately numbered and dated, and furnished to each interested Bidder. Any request not received

in time to accomplish such interpretation and distribution will not be accepted.

SECTION 103

AWARD AND EXECUTION OF CONTRACT

Section 103.02 AWARD OF CONTRACT

Delete in its entirety and substitute the following:

“The contract, if awarded, shall be awarded to the lowest responsible bidder. Putnam County reserves the right to exercise exclusive discretion as to the responsibility of any bidder.

The contract shall be executed on the forms attached, will be subject to all requirements of the Contract Document, and shall form a binding Contract between the contracting parties.”

Section 103.05 REQUIREMENTS OF CONTRACT BONDS

Delete in its entirety and substitute the following:

“At the time of the execution of the contract, and as a part thereof, the successful bidder shall furnish Contract Bond Below: Performance Bond in the full amount of the contract. Payment Bond in the full amount of the contract. Maintenance bond in the amount of one-sixth (1/6) of the contract”.

Section 103.07 FAILURE TO EXECUTE CONTRACT

Delete in its entirety and substitute the following:

“Failure to execute the Contract Performance, Payment or Maintenance Bonds, or furnish satisfactory proof of carriage of the insurance required within ten days after the date of Notice of Award of the Contract, may be just cause for the annulment of the award and for the forfeiture of the proposal guaranty to Putnam County, not as a penalty, but as liquidation of damages sustained. At the discretion of the County, the award may then be made to the next lowest bidder, may be re-advertised, or constructed by County forces. The Contract and Contract bonds shall be executed in quadruplicate.”

SECTION 107 LEGAL REGULATIONS AND RESPONSIBILITY TO THE PUBLIC

Section 107.21 CONTRACTORS

RESPONSIBILITY FOR UTILITY
PROPERTY AND SERVICE

Add the following sentence to
Paragraph A:

“The Contractor is responsible for the location of above and below ground Utilities and structures which may be affected by the Work.”

SECTION 109

MEASUREMENT AND PAYMENT

Section 109.07 PARTIAL PAYMENTS

Delete the first sentence of the
Second Paragraph under ‘A. General’

As long as the gross value of completed work is less than 50% of the total Contract amount, or if the Contractor is not maintaining his construction schedule to the satisfaction of the Owner’s Representative, the Department shall retain 10% of the gross value of the work that has been completed as indicated by the current estimate certified by the Owner’s Representative for payment.

Section 109.08 FINAL PAYMENT

Delete in its entirety and substitute
the following.

“Final Payment: Upon completion by the Contractor of the work, including the receipt

of any final written submission of the Contractor and the approval thereof by the Department, the COUNTY will pay the Contractor a sum equal to 100 percent (100%) of the compensation set forth herein, less the total of all previous partial payments, paid or in the process of payment.

The Contractor agrees that acceptance of this final payment shall be in full and final settlement of all claims arising against the COUNTY for work done, materials furnished, costs incurred, or otherwise arising out of this Agreement and shall release the COUNTY from any and all further claims of whatever nature, whether known or unknown for and on account of said Agreement, and for any and all work done, and labor and materials furnished, in connection with same.”

*****NOTICE TO CONTRACTORS*****
EPD AIR QUALITY RULES ON OPEN BURNING REFER TO CHAPTER
391-3-1-02-05

For additional/information, please contact:

Georgia Department of Natural Resources
Environmental Protection Division
Air Protection Branch
4244 International Parkway, Suite 120
Atlanta, GA 30354
404/363-7000; 404/362-2534 – FAX

PROJECT DESCRIPTIONS AND WORK SCOPE/SPECIFICATIONS

PROJECT DESCRIPTIONS

The Putnam County Board of Commissioners (County) requests for interested parties to submit formal sealed bids/proposals for the TSPLOST Asphaltic Resurfacing & Soil-Cement Reclamation Project.

This project shall follow Georgia Department of Transportation Specifications. The most current GDOT Specifications apply to all work performed under this contract.

In case of discrepancy between the unit price and the total price on the completed Bid Schedule, the unit price will prevail and the total price will be corrected.

SPECIFICATIONS

Unless otherwise noted, all work associated with this contract shall meet the Georgia DOT standard specifications for construction materials, methods and procedures not specifically listed in this solicitation.

The following are special provisions prepared specifically for this contract and may be in conflict with parts of the standard specifications. If conflicts are evident the special provisions shall take precedence over the standard specifications.

PROSECUTION AND PROGRESS

The County requires that all work be completed no later than Ninety (90) calendar days after the issuance of the Notice-To-Proceed by the Owner's Representative.

Construction shall begin no later than 10 calendar days following the Notice to Proceed. The Contractor will mobilize with sufficient forces such that all construction identified as part of this contract shall be substantially completed within the calendar days indicated on the Bid Schedule. Inclement weather days will not count against the available calendar days.

Normal workday for this project shall be 9:00 am to 4:00 pm and the normal work week shall be Monday through Friday. The County will consider extended workdays or workweeks upon written request by the Contractor on a case by case basis. No work will be allowed on County recognized holidays.

The work will require bidder to provide all labor, administrative forces, equipment,

materials and other incidental items to complete all required work. The County shall perform a Final Inspection upon completion of all work. The Contractor will be allowed to participate in the Final Inspection. All repairs shall be completed by the Contractor at his expense prior to issuance of Final Acceptance. Retainage of 10% retainage will be held from each AFP submitted to the county.

The Contractor shall provide all materials, labor, and equipment necessary to perform the work without delay unto completion.

PERMITS AND LICENSES

The Contractor shall procure all permits and licenses, pay all charges, taxes and fees, and give all notices necessary and incidental to the due and lawful prosecution of the work.

OC/OA TESTING OF MATERIALS

The **Contractor** will be responsible for all quality control testing.

All materials and workmanship shall meet appropriate GDOT specifications. Materials quality control testing types will meet GDOT specifications. This includes in-field density testing. Test roll patterns will be performed on each road with the contractor selected material testing firm documenting the results. These results shall be provided to the Owner's Representative for each road on the day that the work commences. Results are to be emailed to the Owner's Representative. Lab testing shall be performed for the soil-cement base work; average compressive strength of 300 psi based on 3 test samples. Results provided to the county.

Contractor shall secure the services of a GDOT qualified materials testing firm to perform all required tests. All material testing work shall be considered incidental to the rest of the work and no separate payment will be made.

Contractor will be responsible for replacing any work performed with material from rejected sample lot at no cost to the County.

DEVIATION OF QUANTITIES

The quantities given are estimates only and will vary from those indicated. Payment will be made based on actual quantities of work completed and accepted. The County reserves the right to add or delete quantities at any time. Contractor will notify the County in writing if additional items are identified or quantities of contract items will exceed plan. At no time will contractor proceed with work outside the prescribed scope of services for which additional payment will be requested without the written authorization of the County.

UTILITIES

Contractor shall be responsible for coordinating any utility relocation necessary to the completion of the work.

GENERAL CONSTRUCTION GUIDELINES

1. **The Prime Contractor shall be required to perform 100% of the actual resurfacing work** included in the Schedule of Items and will not be allowed to sublet this item. Subletting of the additional work tasks such as milling, shoulder reconstruction, etc., is permitted by Putnam County. All work shall be in accordance with Section 108.01 of the Standard Specifications of the Georgia Department of Transportation.
2. The contractor shall be required to give 24 hour notice to the Owner's Representative before proceeding with paving on any road.
3. The contractor shall be required to email a work schedule every Friday before 5pm during the course of the resurfacing contract to the Owner's Representative. This paving schedule shall outline the anticipated work activities planned for the following week and locations in which this work will take place.
4. Prior to paving or striping, the Contractor shall install the appropriate post-mounted road construction signs on each road. These signs will remain in place until approved for removal by the Owner's Representative.
5. Control and testing of materials will be the contractors' responsibility for all mix provided in accordance with sections 106, 400, 402 and related special provisions of the Georgia Department of Transportation Standard Specifications. The cost of such testing shall be included in the unit price of the material being used, and no additional compensation will be made.
6. All driveways and intersections shall be tied-in with surface mix at the time of paving for a sufficient distance to provide a smooth transition from the new pavement to the existing surface. On residential or commercial driveways (dirt/stone or asphalt surfaces), the minimum length of tie-in shall be 5 feet. The width of paving shall coincide with the existing width of the driveway unless otherwise noted by the Owners Representative. Unless approved by the Owner's Representative, all intersections will be pulled back a minimum of a spreader length (12'). The tied-in area shall be cleaned and tacked prior to paving, and the material placed and compacted in such a manner to eliminate edge raveling.
7. Putnam County does not commit to furnishing full-time inspection or testing of the work in progress or at material sources. Lack of inspection and/or testing by the County will in no way relieve the Contractor of his responsibility to provide quality workmanship in accordance with the Specifications.

8. The contractor shall furnish, install, maintain and remove all necessary traffic signs, barricades, lights, signals, cones and other traffic control devices, and all flagging and other means of traffic protection and guidance as required by the Standard Specifications of the Georgia Department of Transportation. Such work shall be considered incidental to the overall contract, and no additional compensation will be made.

9. On roads without curb and gutter, the contractor shall be required to knock down any windrows created by the clipping operation. This work shall be done following resurfacing, at such time that the mix has sufficiently cured to prevent damage by no later than 15 days after resurfacing takes place except as otherwise noted in the Bid Specifications and/or Special Provisions. Such work shall be incidental to the cost of the resurfacing work being performed and no additional payment shall be made. Shoulder preparation details to be discussed in the subsequent section.

10. The contractor will be required to re-establish the traffic striping. All personnel and equipment required for maintaining temporary traffic control, public convenience and safety will not be paid for separately and shall be incidental to other pay items.

11. Milled surface may be left at the end of each work day with reflective tape or temporary paint placed on the milled surface and use of appropriate work zone signage for “uneven pavement” or similar signage. Temporary centerline reflective traffic tape shall be applied immediately after resurfacing. Tape shall be placed every 100 feet on-center. Temporary centerline and edge line striping shall be placed within 3 calendar days after paving occurs (regardless of the asphalt layer placed). Permanent striping (PAINT or THERMOPLASTIC) shall be placed within 15 days of the final asphalt surface paving (adherence to GDOT requirements for striping). Lack of adherence to these requirements for milling surface exposure to traffic or temporary or permanent striping will result in a penalty to the contractor of \$500 per day and will be applied to the subsequent Application for Payment (AFP) unless the county is presented with extenuating circumstances and the county agrees with these extenuating circumstances.

GRADING- SHOULDER ADJUST TO-GRADE AFTER RESURFACING

1. After asphalt has sufficiently cured to prevent damage, but not to exceed 30 working days, the contractor shall re-grade the shoulder area along the road edge of sufficient width to dress to the pavement edge and flush with the new pavement surface. The shoulder reconstruction is required due to clipping of the roadway edges prior to resurfacing and/or striping. The contractor shall then place "Select Material" in sufficient quantity to supplement the existing “clipped” soil material. Contractor will be required to provide this material, from off-site and haul it to the job site with all associated costs included in the bid unit price for "Grade; Shoulder Adjust to Grade". Clipping shall be minimized to limit shoulder grading as directed by Owner’s Representative.

2. Contractor shall then use the material to construct a shoulder which is level with the new pavement for a maximum distance of three (3) feet from the edge of pavement, and then tapered down to the existing ground line.

3. The Contractor will be responsible for the relocation of any mailboxes except permanent structures such as brick which are affected by shoulder reconstruction work. The costs for mailbox resets or replacement of damaged mailboxes due to the contraction activities will be considered incidental to the overall contract, and no additional compensation will be made for this work.
4. The shoulder soil shall be stabilized sufficiently to allow penetration and growth of the hydro-seeding.
5. Loose asphalt, as well as any stone material, larger than 3 inches in diameter will be picked up and hauled off by the contractor. Pieces of woody debris or other deleterious material that will hinder shoulder reworking shall be removed.
6. All constructed areas shall then be hydro seeded with seed, fertilizer and Wood Fiber Mulch, in accordance with Section 700; and maintained by the Contractor until sufficient permanent growth cover is established, including regrading and reseeded, if necessary, at no additional cost to Putnam County. In particular areas subject to high volumes of water runoff, the contractor will, when directed by the Owner's Representative, install erosion control netting, to help establish vegetation. Cost of this material and its installation shall be incidental to shoulder reconstruction, with no additional compensation paid.
7. In addition to the above shoulder construction, all mailboxes shall have asphaltic concrete "Mailbox Turnouts" constructed to allow for ease of mailbox carrier access and as directed by the Owner's Representative. Grading and preparation of mailbox turnout areas will be considered incidental to the overall contract, and no additional compensation will be made for this work. These turnouts will vary in width of length. The intent is to ensure that the mail carrier can enter and exit the turnout without rutting the shoulder.

MILL ASPHALT CONCRETE PAVEMENT

1. This work shall consist of milling and removing existing asphaltic concrete pavement prior to resurfacing, at locations designated by the Owner's Representative, primarily to remove various types of pavement distress before resurfacing occurs.
2. All work shall be performed in accordance with the Georgia Department of Transportation Standard Specifications, Section 432, with the exception of the required lighting system for night work, and other exceptions noted herein.
3. Milling to a depth of 1.5 inches to occur over the entire area of each road unless otherwise noted on Table A. At those noted locations, the Owner's Representative will

identify during construction or pre-mark the milling project limits

4. The contractor will give the County a minimum of 24 hour notice before proceeding on milling a particular road.
5. After milling is completed, all loose and flaking masses of asphalt shall be removed.
6. The removal and disposal of the milled material will be the responsibility of the contractor and done to the satisfaction of the Owner's Representative and his time allowances.
7. The contractor shall erect and maintain signs warning of uneven pavement, for the period of time between the milling and paving operations.
8. The above milling work shall be paid for by the square yard of Mill Asphaltic Concrete Pavement; 1.5 inches and shall include all milling disposal and required traffic control. If less milling is required due to lack of existing asphalt thickness, the contractor and county shall agree to a revised unit price to reflect a mill depth less than the bid package requirements.
9. The cleaning, tacking and paving of the milled area prior to resurfacing will be paid for at the bid unit price per ton for the particular type of asphalt used.
10. The Contractor and County shall measure all work and determine the total pavement area in square yards, to establish the basis of payment for the milling work.

HOT MIX RECYCLED ASPHALTIC CONCRETE

1. All work shall be performed in accordance with the Georgia Department of Transportation Standard Specifications-Section 402
2. The work performed and materials furnished, as prescribed by these specifications, will be paid for at Contract Unit Price per ton for the type of mix being placed. This payment shall be full compensation for providing all materials, hauling and necessary crushing, processing, placing, rolling, and finishing of the recycled mixture, and labor, tools, equipment, and incidentals necessary to complete the work. Any milling of existing asphaltic concrete pavements required by the County, prior to placement of the asphaltic concrete will be performed as per the Specifications for Mill Asphaltic Concrete Pavement, and paid for at the unit price for that item.
3. Topping shall be tapered/feathered so as to tie into existing asphalt driveways with the best possible ride and aesthetic result. Tie-ins shall be marked on the ground and approved by the County prior to paving. Where driveways are stone, tie-into driveway

shall provide a smooth transition to the paved roadway but no less than 5 feet in travel length and across the entire width of the driveway.

4. The Contractor shall be responsible to repair any damage to driveways caused by the Contractor's operations at no additional cost to the County.

5. The Contractor is to maintain the existing roadway cross slopes, grades and super-elevations on each roadway unless otherwise directed by the Owner's Representative.

6. Table A identifies the spread rate and asphalt type for each road

BITUMINOUS TACK COAT

1. This work shall consist of the placement of bituminous tack on all areas that are milled, resurfaced and the vertical surfaces of patch areas.

2. The cost of bituminous tack shall be included in the cost of asphalt. Bituminous tack is not measured as a separate pay item.

3. NTSS-1HM trackless tack or equivalent shall be used.

4. All surfaces shall be cleaned completely and thoroughly before any tack is applied. Tack shall not be applied when the pavement is wet. Bituminous tack coat shall be applied between .05 to 0.1 gallons per square yard.

PAVEMENT MIX DESIGN

1. The plant mix materials from which the asphaltic pavement is manufactured and the plant at which it is manufactured shall meet the requirements of the State of Georgia Department of Transportation (GDOT), Standard specifications, Articles 820; 802; 883; 831; 828; and 882.

2. Load tickets that meet Georgia Department of Transportation Specifications must accompany all delivered materials. The Contractor must supply copies of all asphalt tickets to the County on a daily basis. The JMF's shall be provided to the Owner's Representative for approval a minimum of fourteen (14) days before resurfacing occurs. **The contractor shall receive approval from GDOT of the job mix formulas before resurfacing can commence.**

FULL DEPTH RECLAMATION CEMENT TREATED BASE

Full depth cement treated base reclamation work scope shall be utilized on

Southshore Road. The County will require that this work be accomplished either as the first project to be undertaken when the contract is signed or be constructed simultaneously with other resurfacing projects in the ITB.

The County contracted with United Testing to perform compressive testing and cement content for Southshore Road. Attached is Exhibit E which provides the test results and report on the CTB analysis. These test results and report should be used as guidance only. The Contractor is responsible for verify the results and performing its own report and analysis to either substantiate or deviate from the analysis.

Exhibit F identifies the specifications for full depth reclamation & cement-treated base.

Portland cement shall be thoroughly mixed to a depth of ten (10) inches and compacted to a minimum of 98% of the standard proctor maximum dry density

BRIDGE JOINTS

Contractor shall replace bridge joints on Old Phoenix Road. Reference section 461 in the GDOT Specification for details. Milling Old Phoenix Rd bridge deck shall occur before deck joints are replaced. Joints to be replaced before deck is resurfaced.

SCHEDULE OF EVENTS

FOR REFERENCE ONLY - DO NOT SUBMIT WITH BID RESPONSE

Event:	Date:
Release of ITB	Tuesday, September 17, 2019
Non-Mandatory Pre-Bid Conference	October 9, 2019; 3:00 PM
Deadline for Written Questions *	October 14, 2019; 5:00 PM
<p>*Submit questions via email to Larry Kaiser; kaiser@co-infra-services.com</p>	
Putnam County to post on county web site “Response to Questions” and/or Addendum	October 16, 2019; 5:00 PM

Bids Due: October 21, 2019; 10:00 AM

Bids are due to:	Putnam County Board of Commissioners Attn: Paul Van Haute 117 Putnam Drive Suite A Eatonton, GA 31024
Contract Award (On/about)	November 1, 2019
Notice to Proceed Issued (On/about)	November 1, 2019

EXHIBIT B

QUANTITY ESTIMATE TABLE

EXHIBIT B

Putnam 2018 SPLOST/LMIG Scope of Work Remaining																	
Road Segment	From	To	Avg. Width (feet)	Length (miles)	Milling (SY)	Asphalt Leveling; 12.5 mm (TN)	Asphalt 12.5mm (TN) Spread Rate (SY)	Asphalt 9.5mm Type 2 (TN) Spread Rate (SY)	Non-Woven Geotextile Fabric (SY)	Grading Adjust Shoulder to Grade (Lane Miles)	Reclamation (SY)	Cement (TN)	Striping (Miles): T- Thermoplastic; P- Paint				
													Double Yellow Center (Mile)	Edge White (Mile)	Skip Yellow (GLM)	Stop Bars (LF)	RR Crossing (EA)
Lakemore Drive	State Route 44	Cul-de-sac	20	0.55	3200	0	0	572 (165)	1500	1.10	0	0	1.1 (T)	1.1 (T)	0	24 (T)	0
Lake Drive	Address 117	Cul-de-sac of Address 145	20	0.32	4140	0	0	342 (165)	0	0.64	0	0	.54 (T)	.64 (T)	0	0	0
River Lake Ct	River Lake Drive	Cul-de-sac	20	0.15	1760	0	0	680 (165)	0	0.3	0	0	.3 (T)	.3 (T)	0	48 (T)	0
River Lake Drive	Crowe St	East River Bend Drive	20	0.96	8300	250	0	1001 (165)	3500	1.92	0	0	1.27 (T)	1.92 (T)	.65	48 (T)	0
North Rock Island Drive	Harbor Drive	Cul-de-sac	20	0.41	2700	0	0	480 (165)	2000	0.82	0	0	.82 (T)	.82 (T)	0	24 (T)	0
Oconee Ct.	Intersection of East River bend Drive at cul-de-sac.	Cul-de-sac	20	0.03	1367	0	0	124 (165)	0	0.06	0	0	0	0	0	0	0
Old Phoenix Road. ****	100 Feet Before Bridge Over Lake Oconee	100 Feet After Bridge Over Lake Oconee	22	0.15	1866 (1.25 in. AC on deck to be removed & 200 ft. EB & 200 ft WB approach to deck)	0	0	135 (135)	0	0	0	0	.30 (T)	.30 (T)	0	0	0
Putnam Rec Department	All Lots and Car Path	All Lots and Car Path	NA	NA	10,400 * Widen car path to 18 feet	*	1,942 (220)	0	0	0	0	0	2 (T) Parking Lot Striping	2 (T) Parking Lot Striping	0	48 (T)	0
Animal Shelter	Parking Lot	Parking Lot	NA	NA	N/A	**	175 (220)	0	0	0	0	0	0	1 (T) Parking Lot Striping	0	24 (T)	0
Oconee Springs Park	S Spring Rd	Dejarnette Rd (Road and Parking Lot)	NA	NA	N/A	***	920 (220)	0	0	0	0	0	0	0	0	0	0
Recreation Park Road	Oak St	Putnam Rec Department	20	0.2	1500	0	485 (220)	0	2000	0.4	0	0	.4 (T)	.4 (T)	0	24 (T)	0
South Shore Road	Twin Bridges Road	Blue Gill Road	22	1.88	0	0	3270 (275)	1962 (165)	0	3.76	25,000	750	3.2 (T)	3.76 (T)	1.1 (T)	24 (T)	0

TOTAL 4.65 35,233 250 6,792 5,296 9,000 9.00 25,000 750 8.13 9.74 1.75 216 0

Note: * 772 tons
 ** 70 tons
 *** 400 tons

Full Depth Reclamation required - Southshore Road	LMIG FUNDED
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EXHIBIT C

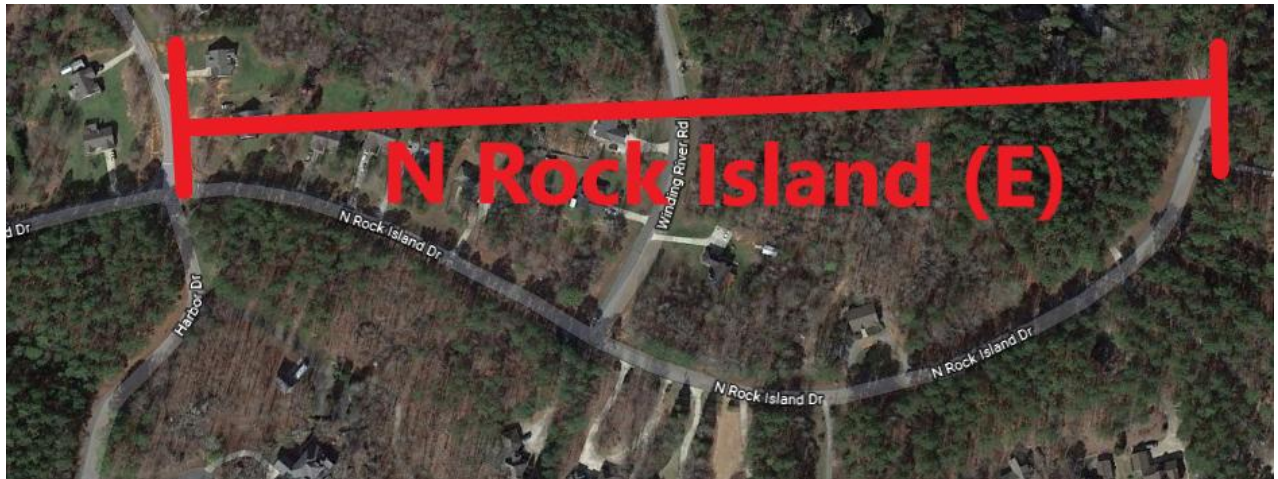
PROJECT LOCATION MAPS

LOCATION MAPS

Putnam 2019 Road Sections

Map Station	Road Segment	From	To
A	Lakemore Drive	State Route 44	Cul-de-sac
B	Lake Drive	Address 117	Cul-de-sac of Address 145
C	River Lake Ct	River Lake Drive	Cul-de-sac
D	River Lake Drive	Crowe St	East River Bend Drive
E	North Rock Island Drive	Harbor Drive	Cul-de-sac
F	Oconee Ct.	Intersection of East River bend Drive at cul-de-sac.	Cul-de-sac
G	Old Phoenix Road. ****	100 Feet Before Bridge Over Lake Oconee	100 Feet After Bridge Over Lake Oconee
H	Putnam Rec Department	All Lots and Car Path	All Lots and Car Path
I	Animal Shelter	Parking Lot	Parking Lot
J	Oconee Springs Park	S Spring Rd	Dejarnette Rd (Road and Parking Lot)
K	Recreation Park Road	Oak St	Putnam Rec Department
L	South Shore Road	Twin Bridges Road	Blue Gill Road







H) Putnam County Recreation Department



I) Putnam County Animal Shelter



J) Oconee Springs Park





EXHIBIT D

SOIL-CEMENT TEST RESULTS

EXHIBIT D

March 21, 2019

Mr. Paul Van Haute
Putnam County
County Manager
117 Putnam Drive
Suite A
Eatonton, Georgia 31024

Via Email: kaiser@co-infra-services.com

RE: **Southshore Road (Full Depth Reclamation: Soil Cement Analysis)**
Eatonton, Putnam County, Georgia
Project ID: PCBOC-19-GA-03141-01

Dear Mr. Kaiser:

We are submitting this letter to document that United Consulting has completed the Soil Cement Analysis for the **Southshore Road (Full Depth Reclamation)** project in Eatonton, Putnam County Georgia.

Three Full Depth Reclamation samples were collected on March 05, 2019. Samples were collected at:

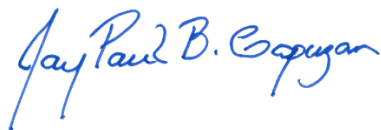
- Sample 1 @ 5,000 LF south from the intersection of Twins Bridges Rd. and Southshore Rd.
- Sample 2 @ 1,500 LF north from the intersection of Bluegill Rd and SouthshoreRd.
- Sample 3 @ 3,000 LF north from the intersection of Bluegill Rd and SouthshoreRd.

A Soil Cement Series Analysis was performed on each of the samples to determine the soil to cement ratio needed to meet the required PSI strength. Our test showed that a minimum 6% cement to soil ratio is needed to meet the required PSI strength.

If you have any questions, please feel free to contact our office.

Sincerely,

UNITED CONSULTING



Jay Paul B. Gapuzan
Project Manager/Materials Testing Services

JG/ls

UNCONFINED COMPRESSION TEST OF SOIL-CEMENT

ASTM D-1633

PROJECT: Southshore Road (Full Depth Reclamation)
PROJECT No.: PCBOC-19-GA-03141-01
SAMPLE No.: Soil Cement Sample #1 @ 3%
TESTING DATE: 3/20/2019
TESTED BY: JG

SPECIMEN CONDITIONS / TEST RESULTS	
1. DIAMETER	4.01 in.
2. HEIGHT	4.57 in.
3. CORRECTION FACTOR	1.00
4. UNCONFINED COMPRESSIVE STRENGTH	253.8 psi

UNCONFINED COMPRESSION TEST OF SOIL-CEMENT

ASTM D-1633

PROJECT: Southshore Road (Full Depth Reclamation)
PROJECT No.: PCBOC-19-GA-03141-01
SAMPLE No.: Soil Cement Sample #1 @ 5%
TESTING DATE: 3/20/2019
TESTED BY: JG

SPECIMEN CONDITIONS / TEST RESULTS	
1. DIAMETER	4.01 in.
2. HEIGHT	4.58 in.
3. CORRECTION FACTOR	1.00
4. UNCONFINED COMPRESSIVE STRENGTH	323.8 psi

UNCONFINED COMPRESSION TEST OF SOIL-CEMENT

ASTM D-1633

PROJECT: Southshore Road (Full Depth Reclamation)
PROJECT No.: PCBOC-19-GA-03141-01
SAMPLE No.: Soil Cement Sample #1 @ 6%
TESTING DATE: 3/20/2019
TESTED BY: JG

SPECIMEN CONDITIONS / TEST RESULTS	
1. DIAMETER	4.01 in.
2. HEIGHT	4.58 in.
3. CORRECTION FACTOR	1.00
4. UNCONFINED COMPRESSIVE STRENGTH	389.4 psi

UNCONFINED COMPRESSION TEST OF SOIL-CEMENT

ASTM D-1633

PROJECT: Southshore Road (Full Depth Reclamation)
PROJECT No.: PCBOC-19-GA-03141-01
SAMPLE No.: Soil Cement Sample #2 @ 3%
TESTING DATE: 3/20/2019
TESTED BY: JG

SPECIMEN CONDITIONS / TEST RESULTS	
1. DIAMETER	4.01 in.
2. HEIGHT	4.59 in.
3. CORRECTION FACTOR	1.00
4. UNCONFINED COMPRESSIVE STRENGTH	245.3 psi

UNCONFINED COMPRESSION TEST OF SOIL-CEMENT

ASTM D-1633

PROJECT: Southshore Road (Full Depth Reclamation)
PROJECT No.: PCBOC-19-GA-03141-01
SAMPLE No.: Soil Cement Sample #2 @ 5%
TESTING DATE: 3/20/2019
TESTED BY: JG

SPECIMEN CONDITIONS / TEST RESULTS	
1. DIAMETER	4.01 in.
2. HEIGHT	4.59 in.
3. CORRECTION FACTOR	1.00
4. UNCONFINED COMPRESSIVE STRENGTH	315.6 psi

UNCONFINED COMPRESSION TEST OF SOIL-CEMENT

ASTM D-1633

PROJECT: Southshore Road (Full Depth Reclamation)
PROJECT No.: PCBOC-19-GA-03141-01
SAMPLE No.: Soil Cement Sample #2 @ 6%
TESTING DATE: 3/20/2019
TESTED BY: JG

SPECIMEN CONDITIONS / TEST RESULTS	
1. DIAMETER	4.01 in.
2. HEIGHT	4.59 in.
3. CORRECTION FACTOR	1.00
4. UNCONFINED COMPRESSIVE STRENGTH	387.9 psi

UNCONFINED COMPRESSION TEST OF SOIL-CEMENT

ASTM D-1633

PROJECT: Southshore Road (Full Depth Reclamation)
PROJECT No.: PCBOC-19-GA-03141-01
SAMPLE No.: Soil Cement Sample #3 @ 3%
TESTING DATE: 3/20/2019
TESTED BY: JG

SPECIMEN CONDITIONS / TEST RESULTS	
1. DIAMETER	4.01 in.
2. HEIGHT	4.58 in.
3. CORRECTION FACTOR	1.00
4. UNCONFINED COMPRESSIVE STRENGTH	256.8 psi

UNCONFINED COMPRESSION TEST OF SOIL-CEMENT

ASTM D-1633

PROJECT: Southshore Road (Full Depth Reclamation)
PROJECT No.: PCBOC-19-GA-03141-01
SAMPLE No.: Soil Cement Sample #3 @ 5%
TESTING DATE: 3/20/2019
TESTED BY: JG

SPECIMEN CONDITIONS / TEST RESULTS	
1. DIAMETER	4.01 in.
2. HEIGHT	4.59 in.
3. CORRECTION FACTOR	1.00
4. UNCONFINED COMPRESSIVE STRENGTH	323.9 psi

UNCONFINED COMPRESSION TEST OF SOIL-CEMENT

ASTM D-1633

PROJECT: Southshore Road (Full Depth Reclamation)
PROJECT No.: PCBOC-19-GA-03141-01
SAMPLE No.: Soil Cement Sample #3 @ 6%
TESTING DATE: 3/20/2019
TESTED BY: JG

SPECIMEN CONDITIONS / TEST RESULTS	
1. DIAMETER	4.01 in.
2. HEIGHT	4.59 in.
3. CORRECTION FACTOR	1.00
4. UNCONFINED COMPRESSIVE STRENGTH	393.7 psi

EXHIBIT E

FULL DEPTH RECLAMATION CEMENT TREATED BASE SPECIFICATIONS

EXHIBIT E

SPECIFICATION FOR FULL DEPTH RECLAMATION WITH PORTLAND CEMENT

1. GENERAL

1.1 Description. Full-depth reclamation (FDR) with cement, shall consist of pulverizing and mixing existing asphalt pavement and base course material with Portland cement, soil and water to produce a dense, hard, cement treated base. It shall be proportioned, mixed, placed, compacted, and cured in accordance with this specification, and shall conform to the lines, grades, thicknesses, and typical cross sections shown in the plan.

1.2 Caveat. This specification is intended to serve as a guide to format and content for normal FDR construction. Most projects have special features or requirements that should be incorporated in the project documents.

2. MATERIALS

2.1 Recycled Asphalt Pavement (RAP) and Base Material. Shall consist of the existing asphalt pavement, existing base course material and/or subgrade material. The base course and subgrade material shall not contain roots, topsoil, or any material deleterious to its reaction with cement. The particle distribution of the processed material shall be such that 100% passes a 3-inch (75 mm) sieve, at least 95% passes a 2-inch (50 mm) sieve, and at least 55% passes a No. 4 (4.75 mm) sieve.

2.1.1. Mix Design - Remove samples of RAP and RAM to the specified depth and perform appropriate testing to establish mix design. Submit mix design to the Owner/Representative (O/R) for approval one week before the planned start of work. Approval of the mix design by the O/R is solely for monitoring quality control and in no way releases the Contractor from his responsibilities.

Mix Design Development - Samples must be obtained inclusive of the depth to be recycled. Sampled materials must be properly processed and prepared to closely simulate field conditions. A Qualified Technical Representative will analyze the samples and provide the following information as part of the mix design to the O/R:

- A. Location core samples.
- B. Thickness and description of existing pavement and aggregate layers to be reclaimed.
- C. A selected matrix of soils testing standards.

- Moisture Content AASHTO T265 - Mechanical and Hydrometer
- Particle Size Analysis of Soils AASHTO T88-90 - Liquid Limit, Plastic Limit AASHTO T89
- Unconfined Compression AASHTO T208 - To be performed only if more than 20% of the underlying subgrade is to be included in the Portland Cement stabilized layer.

2.2 Portland Cement. Shall comply with the latest specifications for portland cement (ASTM C 150, ASTM C 1157, or AASHTO M 85) or blended hydraulic cements (ASTM C 595, ASTM C 1157, or AASHTO M 240).

2.3 Water. Shall be free from substances deleterious to the hardening of the cement-treated material.

3. EQUIPMENT

3.1 Description. FDR may be constructed with any machine or combination of machines or equipment that will produce a satisfactory product meeting the requirements for pulverization, cement and water application, mixing, compacting, finishing, and curing as provided in this specification.

3.2 Mixing Methods. Mixing shall be accomplished in place, using single-shaft or multiple-shaft mixers. Agricultural disks or motor graders are not acceptable mixing equipment.

3.3 Cement Proportioning. Spreading of the portland cement shall be done with a spreader truck designed to spread dry particulate such as portland cement to insure a uniform distribution. Spreaders or distributors used shall be able to demonstrate a consistent and accurate application rate, as well as dust control during application. The mechanical cement spreader shall be capable of dispensing a measured quantity of cement +/- 3 lbs per square yard in advance of the pulverizer just prior to each pass of the stabilizing operation. The pulverizer shall abut or slightly overlap (.5") previous pass to ensure a continuous homogeneous mass of granular material and cement. Cement spreader does not have to abut or overlap previous pass as long as the calculated quantity of cement is dispersed in front of the pulverizer.

3.4 Application of Water. Water may be applied through the mixer or with water trucks equipped with pressure-spray bars. If using the spray bar system, road base shall be pre-wet to obtain optimum moisture content prior to the dispensing of cement.

3.5 Compaction. The processed material shall be compacted with one or a combination of the following: Tamping or grid roller, pneumatic-tire roller, steel-wheel roller, vibratory roller, or vibrating-plate compactor. The full depth recycled material shall be rolled with a vibratory pad/tamping foot roller and a vibratory steel drum soil compactor. The pad/tamping foot roller drum shall have a minimum of 112 tamping feet 73 mm [3 in] in height, a minimum contact area per foot of 110 cm² [17 in²], and a minimum width of 2.15 m [84 in]. The vibratory steel drum roller shall have a minimum 2.15 meter [84 in] width single drum.

4. CONSTRUCTION REQUIREMENTS

4.1 General

4.1.1 Preparation. Prior to the start of the reclamation, all utilities and drainage systems shall be relocated as necessary.

Methods, equipment, tools, and any machinery to be used during construction shall be approved by the Engineer prior to the start of the project. Prior to the actual reclaiming of the roadway, drop inlets or catch basins that might be affected shall be sufficiently barricaded to prevent reclaimed subbase material, silt or runoff from plugging the drainage system.

Sufficient surface drainage must be provided for each stage of construction so that ponding does not occur on the reclaimed sub-base course prior to the placement of bituminous concrete.

Reclamation shall be accomplished by means of a self-propelled, traveling rotary reclaimer or equivalent machine capable of cutting through existing bituminous concrete pavement to depths of up to 15 inches with one pass. The machine shall be equipped with an adjustable grading blade leaving its path generally smooth for initial compaction. Equipment such as road planers or cold milling machines designed to mill or shred the existing bituminous concrete, rather than crush or fracture it, shall not be allowed.

Existing bituminous concrete pavement and any underlying granular material must be pulverized and mixed so as to form a homogenous mass of reclaimed sub-base material which will bond together when compacted.

In areas where the vertical or horizontal geometry of the proposed roadway is different than that of the existing, the roadway shall be reclaimed in-place and the reclaimed material sub-base placed in windrows or stockpiled while any filling or excavation is performed. When the proposed sub-grade elevation is achieved, the reclaimed sub-base material will be placed back onto the roadway in lifts no greater than five (5) inches in depth before being compacted.

Reshaping using the reclaimed sub-base material should be minimized in order to insure that the roadway has a uniform thickness of reclaimed sub-base material throughout. Unless otherwise specified, when reshaping of the roadway is required, it should be performed utilizing additional sub-base or processed aggregate base. The reclaimed sub-base material shall be compacted prior to the placement of any additional granular material used (sub-base or processed aggregate base). Subsequent to the compaction of the reclaimed sub-base material, any reshaped material or additional material placed on the roadway should not exceed five (5) inches in depth before being compacted.

The reclaimed sub-base material shall be compacted to the requirements above prior to the placement of traffic on the roadway.

A motor grader shall be used for shaping, fine grading, and finishing the surface of the reclaimed material or any other granular materials placed to form the surface prior to paving.

Any surface irregularities which develop during or after the above described work shall be corrected until it is brought to a firm and uniform surface satisfactory to the Engineer.

4.1.2 Mixing and Placing. FDR processing shall not commence when the soil aggregate or sub-grade is frozen, or when the air temperature is below 40°F (4°C). Moisture in the base course material at the time of cement application shall not exceed the quantity that will permit a uniform and intimate mixture of the pulverized asphalt, base material and cement during mixing operations, and shall be within 2% of the optimum moisture content for the processed material at start of compaction.

The operation of cement application, mixing, spreading, compacting, and finishing shall be continuous and completed within 2 hours from the start of mixing. Any processed material that has not been compacted and finished shall not be left undisturbed for longer than 30 minutes.

4.2.2 Scarifying. Before cement is applied, initial pulverization or scarification may be required to the full depth of mixing. Scarification or pre-pulverization is a requirement for the following conditions:

- 1) When the processed material is more than 3% above or below optimum moisture content. When the material is below optimum moisture content, water shall be added. The pre-pulverized material shall be sealed and properly drained at the end of the day or if rain is expected.
- 2) For slurry application of cement, initial scarification shall be done to provide a method to uniformly distribute the slurry over the processed material without excessive runoff or ponding.

4.2.3 Application of Cement. The specified quantity of cement shall be applied uniformly in a manner that minimizes dust and is satisfactory to the engineer. If cement is applied as a slurry, the time from first contact of cement with water to application on the soil shall not exceed 60 minutes. The time from cement placement on the soil to start of mixing shall not exceed 30 minutes.

4.2.4 Mixing. Mixing shall begin as soon as possible after the cement has been spread and shall continue until a uniform mixture is produced. The mixed material shall meet the following gradation conditions:

- 1) The final mixture (bituminous surface, granular base, and sub-grade soil) shall be pulverized such that 100% passes the 3-inch (75 mm) sieve, at least 95% passes the 2-in. (50 mm) sieve, and at least 55% passes the No. 4 (4.75 mm) sieve. No more than 50% of the final mixed material shall be made of the existing bituminous material unless approved by the engineer and included in a mixture design. Additional material can be added to the top or from the sub-grade to improve the mixture gradation, as long as this material was included in the mixture design.
- 2) The final pulverization test shall be made at the conclusion of mixing operations. Mixing shall be continued until the product is uniform in color, meets gradation requirements, and is at the required moisture content throughout. The entire operation of cement spreading, water application, and mixing shall result in a uniform pulverized asphalt, soil, cement, and water mixture for the full design depth and width.

4.3 Compaction. The processed material shall be uniformly compacted to a minimum of 98% of maximum density based on a moving average of five consecutive tests with no individual test below 96%. Field density of compacted material can be determined by nuclear method in the direct transmission mode (ASTM D 2922, AASHTO T 310), sand cone method (ASTM D 1556, AASHTO T 191), or rubber balloon method (ASTM D 2167). Optimum moisture and maximum

density shall be determined prior to start of construction and also in the field during construction by a moisture-density test (ASTM D 558 or AASHTO T 134).

At the start of compaction, the moisture content shall be within 2% of the specified optimum moisture. No section shall be left undisturbed for longer than 30 minutes during compaction operations. All compaction operations shall be completed within 2 hours from start of mixing.

4.4 Finishing. As compaction nears completion, the surface of the FDR material shall be shaped to the specified lines, grades, and cross sections. If necessary or as required by the engineer, the surface shall be lightly scarified or broom-dragged to remove imprints left by equipment or to prevent compaction planes. Compaction shall then be continued until uniform and adequate density is obtained.

During the finishing process the surface shall be kept moist by means of water spray devices that will not erode the surface. Compaction and finishing shall be done in such a manner as to produce a dense surface free of compaction planes, cracks, ridges, or loose material. All finishing operations shall be completed within 4 hours from start of mixing.

4.5 Curing. Finished portions of the FDR base that are traveled on by equipment used in constructing an adjoining section shall be protected in such a manner as to prevent equipment from marring or damaging completed work.

After completion of final finishing, the surface shall be cured by application of a bituminous or other approved sealing membrane, or by being kept continuously moist for a period of 7 days with a water spray that will not erode the surface of the FDR base. If curing material is used, it shall be applied as soon as possible, but not later than 24 hours after completing finishing operations. The surface shall be kept continuously moist prior to application of curing material.

For bituminous curing material, the FDR base surface shall be dense, free of all loose and extraneous materials, and shall contain sufficient moisture to prevent excessive penetration of the bituminous material. The bituminous material shall be uniformly applied to the surface of the completed cement treated material. The exact rate and temperature of application for complete coverage, without undue runoff, shall be specified by the engineer.

Should it be necessary for construction equipment or other traffic to use the bituminous-covered surface before the bituminous material has dried sufficiently to prevent pickup, sufficient sand cover shall be applied before such use.

Sufficient protection from freezing shall be given the cement-treated material for 7 days after its construction or as approved by the engineer. Contractor assumes all materials and costs to keep FDR base moist for a period of (7) seven days, or until the base course is applied.

4.6 Traffic. Completed portions of FDR base can be opened immediately to low-speed local traffic and to construction equipment, provided the curing material or moist curing operations are not impaired, and provided the FDR base is sufficiently stable to withstand marring or permanent deformation. The section can be opened up to all traffic after the FDR base has received a curing compound or subsequent surface and is sufficiently stable to withstand marring or permanent deformation. If continuous moist curing is employed in lieu of a curing compound or subsequent surfacing within 7 days, the FDR base can be opened to all traffic after the 7-day moist curing period, provided the FDR base has hardened sufficiently to prevent marring or permanent deformation.

4.7 Surfacing. Subsequent pavement layers (asphalt, chip-seal, or concrete) can be placed any time after finishing, as long as the soil-cement is sufficiently stable to support the required construction equipment without marring or permanent distortion of the surface.

4.8 Maintenance. The contractor shall maintain the cement-treated material in good condition until all work is completed and accepted. Such maintenance shall be done by the contractor at his own expense.

Maintenance shall include immediate repairs of any defects that may occur. If it is necessary to replace any processed material, the replacement shall be for the full depth, with vertical cuts, using either cement-treated material or concrete. No skin patches will be permitted.

5. INSPECTION AND TESTING

5.1 Description. The contractor shall make such inspections and tests as deemed necessary to ensure the conformance of the work to the contract documents. These inspections and tests may include, but shall not be limited to:

Recycling operations including recycling speed, yield monitoring, monitoring treatment depth, procedures for avoiding recycling and curing in inclement weather, methods to ensure that segregation is minimized, procedures for mix design modification, grading and compacting operations, and cement application procedure.

Density testing of the recycled material will be performed using the nuclear method.

Only those materials, machines, and methods meeting the requirements of the contract documents shall be used unless otherwise approved by the engineer.

All testing of processed material or its individual components, unless otherwise provided specifically in the contract documents, shall be in accordance with the latest applicable ASTM or AASHTO specifications in effect as of the date of advertisement for bids on the project.

6. MEASUREMENT AND PAYMENT

6.1 Measurement. This work will be measured:

- 1) In square yards (meters) of completed and accepted FDR base course as determined by the specified lines, grades, and cross sections shown on the plans.
- 2) In tons (tonnes) or cwt of cement incorporated into the FDR base course in accordance with the instructions of the engineer.

6.2 Payment. This work will be paid for at the contract unit price per square yard (meter) of FDR base course and at the contract unit price per ton (ton) or cwt of cement furnished, multiplied by the quantities obtained in accordance with Section 6.1. Such payment shall constitute full reimbursement for all work necessary to complete the FDR base course, including watering, curing, inspection and testing assistance, and all other incidental operations.