

A RESOLUTION BY THE BOARD OF COUNTY COMMISSIONERS OF ST. JOHNS COUNTY, FLORIDA, AUTHORIZING THE COUNTY ADMINISTRATOR, OR DESIGNEE, TO PIGGYBACK THE VOLUSIA COUNTY CONTRACT NO: 7101697-1 UNDER BID NO. 18-B-161RF AND EXECUTE AN AGREEMENT WITH PAVEMENT TECHNOLOGY, INC. FOR THE APPLICATION OF RECLAMITE® ASPHALT REJUVENATOR TO RESTORE AND PRESERVE ASPHALT ROADWAY DURABILITY TO VARIOUS IDENTIFIED ROADS IN ST. JOHNS COUNTY.

RECITALS

WHEREAS, the County seeks to enter into an agreement for provision of labor, materials, equipment, and supervision for the application of Reclamite® asphalt rejuvenator to restore and preserve asphalt roadway durability of various identified roads in St. Johns County; and

WHEREAS, in accordance with the St. Johns County Purchasing Manual, the County may utilize the piggyback of the Volusia County Contract No: 7101697-1 under Bid No. 18-B-161RF as the basis for negotiations to enter into an agreement with Pavement Technology, Inc. for the provision of the required services; and

WHEREAS, the County has identified eighteen roads that require rejuvenation to extend their useful life; and

WHEREAS, the services provided under the contract will be funded by Public Works' Pavement Management Program;

WHEREAS, the County has reviewed the terms, provisions, conditions and requirements of the Contract and finds that entering into the Contract serves a public purpose.

NOW, THEREFORE BE IT RESOLVED BY THE BOARD OF COUNTY COMMISSIONERS OF ST. JOHNS COUNTY, FLORIDA, as follows:

Section 1. The above Recitals are incorporated by reference into the body of this Resolution and such Recitals are adopted as finds of fact.

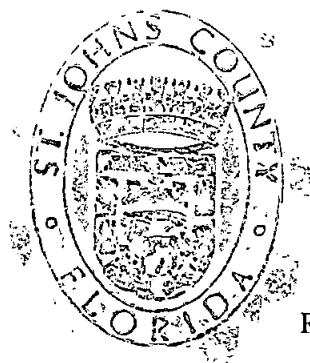
Section 2. The County Administrator, or designee, is hereby authorized to piggyback the Volusia County Contract, and enter into an agreement for the provision of labor, materials, and equipment for the application of Reclamite® asphalt rejuvenator to restore and preserve asphalt roadway durability of various identified roads in St. Johns County, for a term through the end of this fiscal year, expiring September 30, 2020.

Section 3. The County Administrator, or designee, is further authorized to execute a contract, in substantially the same form and format as attached, with Pavement Technology, Inc. for the provision of labor, materials, and equipment for the application of Reclamite® asphalt rejuvenator to restore and preserve asphalt roadway durability of various identified roads in St. Johns County.

Section 4. To the extent that there are typographical and/or administrative errors that do not change the tone, tenor, or concept of this Resolution, then this Resolution may be revised without subsequent approval by the Board of County Commissioners.

5<sup>th</sup> PASSED AND ADOPTED by the Board of County Commissioners of St. Johns County, Florida, this day of May, 2020.

ATTEST: Brandon Patty, Clerk  
By: Pam Halterman  
Deputy Clerk



BOARD OF COUNTY COMMISSIONERS OF ST. JOHNS COUNTY, FLORIDA  
By: Jeb S. Smith  
Jeb S. Smith, Chair

Rendition Date: 5/7/20



**PIGGYBACK CONTRACT AGREEMENT**  
**MISC 20-98; Pavement Reconstruction & Preservation**  
**Master Contract #: 20-MAS-PAV-11948**

This Contract Agreement, ("Agreement") is made as of this \_\_\_\_\_ day of \_\_\_\_\_, 2020, by and between **St. Johns County, FL** ("County"), a political subdivision of the State of Florida, with principal offices located at 500 San Sebastian View, St. Augustine, FL 32084, and **Pavement Technology, Inc.** ("Contractor"), authorized to do business in the State of Florida, with offices located at 24144 Detroit Road, Westlake, OH 44145; Phone: 800-333-6309; Fax: 440-892-0953; and Email: cdurante@pavetechinc.com.

In consideration of the mutual promises contained herein, the County and the Contractor agree as follows:

**ARTICLE 1 – DURATION and EXTENSION**

This Agreement shall become effective upon the Effective Date shall be in effect through and until 11:59PM on September 30, 2020, and may be extended as necessary to complete the required services, upon satisfactory performance by the Contractor, mutual agreement by both parties, and the availability of funds. While this Agreement may be extended as stated in this Article, it is expressly noted that the County is under no obligation to extend this Agreement. It is further expressly understood that the option of extension is exercisable only by the County, and only upon the County's determination that the Contractor satisfactorily performed the Services noted in the Contract Documents.

**ARTICLE 2 - ENUMERATION OF CONTRACT DOCUMENTS**

The term "Contract Documents" shall include Volusia County executed Contract No. 7101697-1, all Volusia County Bid Documents and any addenda/exhibits thereto incorporated in this contract as Exhibit "B"; all Specifications; this Agreement, any duly executed amendments, addenda, and/or exhibits hereto; and any and all Change Orders.

**ARTICLE 3 - SERVICES**

The Contractor's responsibility under this Agreement is to provide any and all labor, materials, equipment, and supervision necessary for the application of Reclamite® asphalt rejuvenator to restore and preserve asphalt roadway durability of various identified roads in St. Johns County, as specified in the cost proposal submitted by the Contractor detailed in Exhibit "A", approved by the County, and as otherwise provided in the Contract Documents.

Services provided by the Contractor shall be under the general direction of St. Johns County Engineering Division or other authorized County designee, who shall act as the County's representative throughout the duration of this Agreement.

**ARTICLE 4 – SCHEDULE**

The Contractor shall perform the required Services according to the schedule submitted and approved by the County. No changes to said schedule shall be made without prior written authorization from the County's representative.

**ARTICLE 5 – COMPENSATION/BILLING/INVOICES**

- A. The County shall compensate the Contractor an amount not to exceed two hundred seventy-eight thousand one hundred seventy-five dollars (\$278,175.00) according to the proposal, which shall include any and all direct and indirect costs, and reimbursable expenses. The maximum amount available as compensation to Contractor under this Agreement shall not exceed the amount stated above without the County's express written approval, and amendment to this Agreement.
- B. It is strictly understood that Contractor is not entitled to the above-referenced amount of compensation. Rather, Contractor's compensation is based upon Contractor's adhering to the Scope of Work, detailed in this Agreement. As such, the Contractor's compensation is dependent upon satisfactory completion and delivery of all work product and deliverables noted in the Scope of Work, and detailed in this Agreement.
- C. The Contractor shall bill the County for services satisfactorily performed, and materials satisfactorily delivered at the end of each month. The signature of the Contractor's authorized representative on the submitted invoice shall constitute the Contractor's certification to the County that:
  - 1. The Contractor has billed the County for all services rendered by it and any of its Contractors or sub-contractors through the date of the invoice;

2. As of the date of the invoice, no other outstanding amounts are due from the County to the Contractor for services rendered;
  3. The reimbursable expenses, if any, have been reasonably incurred; and
  4. The amount requested is currently due and owing.
- D. Though there is no billing form or format pre-approved by either the County, or the Contractor, bills/invoices submitted by the Contractor shall include a detailed written report of the Work accomplished in connection with the Scope of Work, and must be submitted with a Request for Payment Form 1550, as provided by the County. The County may return a bill/invoice from the Contractor, and request additional documentation/information. Under such circumstances, the timeframe for payment will be extended by the time necessary to receive a verified bill/invoice.
- E. The Contractor's acceptance of the County's payment of an invoiced amount shall release the County from any claim by the Contractor, or by the Contractor's sub-contractors, for work performed but not invoiced during the time period indicated on the invoice for which payment was issued.
- F. Unless otherwise notified, bills/invoices should be delivered to:
- St. Johns County Engineering Division  
Attn: Jason D. Sparks, P.E., Planning Chief Engineer  
2750 Industry Center Road  
St. Augustine, FL 32084
- G. FINAL INVOICE: In order for the County and the Contractor to reconcile/close their books and records, the Contractor shall clearly indicate "Final Invoice" on the Contractor's final bill/invoice to the County. Such indication establishes that all services have been satisfactorily performed and that all charges and costs have been invoiced to the County and that there is no further Work to be performed under this Agreement.

#### **ARTICLE 6 – TRUTH-IN-NEGOTIATION CERTIFICATE**

The signing of this Agreement by the Contractor shall act as the execution of a truth-in-negotiation certificate certifying that wage rates and other factual unit costs supporting the compensation are accurate, complete, and current as of the date of this Agreement.

The original contract price and any additions thereto shall be adjusted to exclude any significant sums by which the County determines the contract price was increased due to inaccurate, incomplete, or noncurrent wage rates and other factual unit costs. All such contract adjustments shall be made within one (1) year following the end of the Agreement.

#### **ARTICLE 7 – ARREARS**

The Contractor shall not pledge the County's credit or make it a guarantor of payment or surety for any contract, debt, obligation, judgement, lien, or any form of indebtedness. The Contractor further warrants and represents that it has no obligation or indebtedness that would impair its ability to fulfill the terms of this Agreement.

#### **ARTICLE 8 – TERMINATION**

- A. This Agreement may be terminated by the County without cause upon at least thirty (30) calendar days advance written notice to the Contractor of such termination without cause.
- B. This Agreement may be terminated by the Contractor with cause upon at least fourteen (14) calendar days advance written notice of such termination with cause. Such written notice shall indicate the exact cause for termination.

#### **ARTICLE 9 – NOTICE OF DEFAULT/RIGHT TO CURE**

- A. Should the County fail to perform (default) under the terms of this Agreement, then the Contractor shall provide written notice to the County, which such notice shall include a timeframe of no fewer than fifteen (15) business days in which to cure the default. Failure to cure the default within the timeframe provided in the notice of default (or any such amount of time as mutually agreed to by the parties in writing), shall constitute cause for termination of this Agreement.
- B. Should the Contractor fail to perform (default) under the terms of this Agreement, then the County shall provide

written notice to the Contractor, which such notice shall include a timeframe of no fewer than five (5) calendar days in which to cure the default. Failure to cure the default within the timeframe provided in the notice of default (or any such amount of time as mutually agreed to by the parties in writing), shall constitute cause for termination of this Agreement.

- C. Consistent with other provisions in this Agreement, Contractor shall be paid for services authorized and satisfactorily performed under this Contract up to the effective date of termination.
- D. Upon receipt of a notice of termination, except as otherwise directed by the County in writing, the Contractor shall:
  - 1. Stop work on the date to the extent specified.
  - 2. Terminate and settle all orders and subcontracts relating to the performance of the terminated work.
  - 3. Transfer all work in process, completed work, and other material related to the terminated work to the County.
  - 4. Continue and complete all parts of the work that have not been terminated.

#### **ARTICLE 10 – PERSONNEL**

The Contractor represents that it has, or shall secure at its own expense, all necessary personnel required to perform the Work as provided in the Contract Documents. It is expressly understood that such personnel shall not be employees of, or have any contractual relationship with the County.

All Work required hereunder shall be performed by the Contractor, or under its supervision. All personnel engaged in performing the Work shall be fully qualified and, if required, authorized or permitted under federal, state and local law to perform such Work.

Any changes or substitutions in the Contractor's key personnel must be made known to the County's representative and written approval granted by the County before said change or substitution can become effective.

The Contractor warrants that all Work shall be performed by skilled and competent personnel to the highest professional standards in the field. The Contractor is responsible for the professional quality, technical accuracy, and timely completion of all work performed hereunder, and shall correct or revise any errors or deficiencies in the Work, without additional compensation.

#### **ARTICLE 11 – SUBCONTRACTING**

The County reserves the right to approve the use of any subcontractor, or to reject the selection of a particular subcontractor, and to inspect all facilities of any subcontractors in order to make a determination as to the capability of the subcontractor to perform the Work described in the Contract Documents. The Contractor is encouraged to seek minority and women business enterprises for participation in subcontracting opportunities.

If a subcontractor fails to satisfactorily perform in accordance with the Contract Documents, and it is necessary to replace the subcontractor to complete the Work in a timely fashion, the Contractor shall promptly do so, subject to approval by the County.

The County reserves the right to disqualify any subcontractor, vendor, or material supplier based upon prior unsatisfactory performance.

#### **ARTICLE 12 – FEDERAL AND STATE TAX**

In accordance with Local, State, and Federal law, the County is exempt from the payment of Sales and Use Taxes. The County shall provide a tax exemption certificate to the Contractor upon request. The Contractor shall not be exempt from the payment of all applicable taxes in its performance under this Agreement. It is expressly understood by the County and by the Contractor that the Contractor shall not be authorized to use the County's Tax Exemption status in any manner.

The Contractor shall be solely responsible for the payment and accounting of any and all applicable taxes and/or withholdings including but not limited to Social Security payroll taxes (FICA), associated with or stemming from Contractor's performance under this Agreement.

#### **ARTICLE 13 – AVAILABILITY OF FUNDS**

The County's obligations under this Agreement are contingent upon the lawful appropriation of sufficient funds, for that purpose, by the St. Johns County Board of County Commissioners. Pursuant to the requirements of Section 129.07,

Florida Statutes, payment made under this Agreement shall not exceed the amount appropriate in the County's budget for such purpose in that fiscal year. Nothing in this Agreement shall create any obligation on the part of the Board of County Commissioners to appropriate such funds for the payment of services provided under this Agreement during any given County fiscal year. Moreover, it is expressly noted that the Contractor cannot demand that the County provide any such funds in any given County Fiscal Year.

#### **ARTICLE 14 - INSURANCE**

The Contractor shall not commence work under this Agreement until he/she has obtained all insurance required under this section and such insurance has been approved by the County. All insurance policies shall be issued by companies authorized to do business under the laws of the State of Florida. The Contractor shall furnish proof of Insurance to the County prior to the commencement of operations. The Certificate(s) shall clearly indicate the Contractor has obtained insurance of the type, amount, and classification as required by contract and that no material change or cancellation of the insurance shall be effective without thirty (30) days prior written notice to the County. Certificates shall specifically include the County as Additional Insured for all lines of coverage except Workers' Compensation and Professional Liability. A copy of the endorsement must accompany the certificate. Compliance with the foregoing requirements shall not relieve the Contractor of its liability and obligations under this Agreement.

Certificate Holder Address: St. Johns County, a political subdivision of the State of Florida  
500 San Sebastian View  
St. Augustine, FL 32084

The Contractor shall maintain during the life of this Agreement, Comprehensive General Liability Insurance with minimum limits of \$1,000,000 per occurrence, \$2,000,000 aggregate to protect the Contractor from claims for damages for bodily injury, including wrongful death, as well as from claims of property damages which may arise from any operations under this Agreement, whether such operations be by the Contractor or by anyone directly employed by or contracting with the Contractor.

The Contractor shall maintain during the life of this Agreement, Comprehensive Automobile Liability Insurance with minimum limits of \$1,000,000 combined single limit for bodily injury and property damage liability to protect the Contractor from claims for damages for bodily injury, including the ownership, use, or maintenance of owned and non-owned automobiles, including rented/hired automobiles whether such operations be by the Contractor or by anyone directly or indirectly employed by a Contractor.

The Contractor shall maintain during the life of this Agreement, adequate Workers' Compensation Insurance in at least such amounts as are required by the law for all of its employees (if three or more) per Florida Statute 440.02.

In the event of unusual circumstances, the County Administrator, or his designee, may adjust these insurance requirements.

#### **ARTICLE 15 - INDEMNIFICATION**

The Contractor shall indemnify and hold harmless the County, and its officers, and employees, from liabilities, damages, losses, and costs, including, but not limited to, reasonable attorneys' fees, to the extent caused by the negligence, recklessness, intentional/unintentional conduct or omission of the Contractor and other persons employed or utilized by the Contractor.

#### **ARTICLE 16 – SUCCESSORS AND ASSIGNS**

The County and the Contractor each binds itself and its partners, successors, executors, administrators and assigns to the other party of this Agreement and to the partners, successors, executors, administrators and assigns of such other party, in respect to all covenants of this Agreement. Except as above, neither the County nor the Contractor shall assign, sublet, convey or transfer its interest in this Agreement without the written consent of the other. Nothing herein shall be construed as creating any personal liability on the part of any officer or agent of the County, which may be a party hereto, nor shall it be construed as giving any rights or benefits hereunder to anyone other than the County and the Contractor.

#### **ARTICLE 17 – NO THIRD PARTY BENEFICIARIES**

It is expressly understood by the County, and the Contractor, and this Agreement explicitly states that no third party beneficiary status or interest is conferred to, or inferred to, any other person or entity.

#### **ARTICLE 18 – REMEDIES**

No remedy herein conferred upon any party is intended to be exclusive, or any other remedy, and each and every such remedy shall be cumulative and shall be in addition to every other remedy given hereunder or nor or hereafter existing at law or in equity or by statute or otherwise. No single or partial exercise by any party or any right, power, or remedy hereunder shall preclude any other or further exercise thereof.

In any action brought by either party for the enforcement of the obligations of the other party, the prevailing party shall be entitled to recover reasonable attorney's fees.

#### **ARTICLE 19 – CONFLICT OF INTEREST**

The Contractor represents that it presently has no interest and shall acquire no interest, either directly or indirectly, which would conflict in any manner with the performance of services required hereunder. The Contractor further represents that no person having any interest shall be employed for said performance.

The Contractor shall promptly notify the County, in writing, by certified mail, of all potential conflicts of interest for any prospective business association, interest or other circumstance, which may influence or appear to influence the Contractor's judgment or quality of services being provided hereunder. Such written notification shall identify the prospective business association, interest or circumstance, the nature of work that the Contractor may undertake and request an opinion of the County, whether such association, interest, or circumstance constitutes a conflict of interest if entered into by the Contractor.

The County agrees to notify the Contractor of its opinion by certified mail within thirty (30) days of receipt of notification by the Contractor. If, in the opinion of the County, the prospective business association, interest or circumstance would not constitute a conflict of interest by the Contractor, the County shall so state in the notification and the Contractor shall, at his/her option enter into said association, interest or circumstance and it shall be deemed not in conflict of interest with respect to services provided to the County by the Contractor under the terms of this Agreement.

#### **ARTICLE 20 – EXCUSABLE DELAYS**

The Contractor shall not be considered in default by reason of any delay in performance if such delay arises out of causes reasonably beyond the Contractor's control and without its fault or negligence. Such cases may include, but are not limited to: acts of God; the County's omissive and commissive failures; natural or public health emergencies; freight embargoes; and severe weather conditions.

If delay is caused by the failure of the Contractor's subcontractor(s) to perform or make progress, and if such delay arises out of causes reasonably beyond the control of the Contractor and its subcontractor(s) and is without the fault or negligence of either of them, the Contractor shall not be deemed to be in default.

Upon the Contractor's request, the County shall consider the facts and extent of any delay in performing the work and, if the Contractor's failure to perform was without its fault or negligence, the Contract Schedule and/or any other affected provision of this Agreement shall be revised accordingly; subject to the County's right to change, terminate, or stop any or all of the Work at any time.

#### **ARTICLE 21 – DISCLOSURE AND OWNERSHIP OF DOCUMENTS**

The Contractor shall deliver to the County for approval and acceptance, and before being eligible for final payment of any amounts due, all documents and materials prepared by and for the County under this Agreement.

All written and oral information not in the public domain, or not previously known, and all information and data obtained, developed, or supplied by the County, or at its expense, shall be kept confidential by the Contractor and shall not be disclosed to any other party, directly or indirectly, without the County's prior written consent, unless required by a lawful order. All drawings, maps, sketches, and other data developed, or purchased under this Agreement, or at the County's expense, shall be and remains the County's property and may be reproduced and reused at the discretion of the County.

The County and the Contractor shall comply with the provisions of Chapter 119, Florida Statutes (Public Records Law).

All covenants, agreements, representations and warranties made herein, or otherwise made in writing by any party

pursuant hereto, including but not limited to, any representations made herein relating to disclosure or ownership of documents, shall survive the execution and delivery of this Agreement and the consummation of the transactions contemplated hereby.

#### **ARTICLE 22 – INDEPENDENT CONTRACTOR RELATIONSHIP**

The Contractor is, and shall be, in the performance of all work services and activities under this Agreement, an independent Contractor, and not an employee, agent, or servant of the County. All persons engaged in any of the work or services performed pursuant to this Agreement shall at all times and in all places be subject to the Contractor's sole direction, supervision, and control.

The Contractor shall exercise control over the means and manner in which it and its employees perform the work, and in all respects the Contractor's relationship and the relationship of its employees to the County shall be that of an independent Contractor and not as employees or agents of the County. The Contractor does not have the power or authority to bind the County in any promise, agreement or representation other than specifically provided for in this Agreement.

#### **ARTICLE 23 – CONTINGENT FEES**

Pursuant to Section 287.055(6), Florida Statutes, the Contractor warrants that it has not employed or retained any company or person, other than a bona fide employee working solely for the Contractor to solicit or secure this Agreement and that it has not paid or agreed to pay any person, company, corporation, individual, or firm, other than a bona fide employee working solely for the Contractor, any fee, commission, percentage, gift, or any other consideration contingent upon or resulting from the award or making of this Agreement.

Violation of this section shall be grounds for termination of this Agreement. If this Agreement is terminated for violation of this section, the County may deduct from the contract price, or otherwise recover, the full amount of such fee, commission, percentage, gift, or other consideration.

#### **ARTICLE 24 – ACCESS AND AUDITS**

The Contractor shall maintain adequate records to justify all charges, expenses, and costs incurred in performing the work for at least three (3) years after completion of this Agreement. The County shall have access to such books, records, and documents as required in this section for the purpose of inspection or audit during normal business hours, at the County's cost, upon five (5) days written notice.

#### **ARTICLE 25 – NONDISCRIMINATION**

The Contractor warrants and represents that all of its employees are treated equally during employment without regard to race, color, religion, physical handicap, sex, age or national origin.

#### **ARTICLE 26 – ENTIRETY OF CONTRACTUAL AGREEMENT**

The County and the Contractor agree that this Agreement, signed by both parties sets forth the entire agreement between the parties, and that there are no promises or understandings other than those stated herein, or are incorporated by reference into this Agreement. None of the provisions, terms, conditions, requirements, or responsibilities noted in this Agreement may be amended, revised, deleted, altered, or otherwise changed, modified, or superseded, except by written instrument, duly executed by authorized representatives of both the County, and the Contractor.

#### **ARTICLE 27 – ENFORCEMENT COSTS**

If any legal action or other proceeding is brought for the enforcement of this Agreement, or because of an alleged dispute, breach, default or misrepresentation in connection with any provisions of this Agreement, the successful or prevailing party or parties shall be entitled to recover reasonable attorney's fees, court costs and all reasonable expenses even if not taxable as court costs (including, without limitation, all such reasonable fees, costs and expenses incident to appeals), incurred in that action or proceedings, in addition to any other relief to which such party or parties may be entitled.

#### **ARTICLE 28 – COMPLIANCE WITH APPLICABLE LAWS**

Both the County and the Contractor shall comply with any and all applicable laws, rules, regulations, orders, and policies of the County, State, and Federal Governments.

## **ARTICLE 29 – AUTHORITY TO PRACTICE**

The Contractor hereby represents and warrants that it has and shall continue to maintain all licenses and approvals required to conduct its business, and that it shall at all times, conduct its business activities in a reputable manner.

## **ARTICLE 30 – SEVERABILITY**

If any term or provision of this Agreement, or the application thereof to any person or circumstances shall, to any extent, be held invalid or unenforceable, the remainder of this Agreement, or the application of such items or provision, to persons or circumstances other than those as to which it is held invalid or unenforceable, shall not be affected and every other term and provision of this Agreement shall be deemed valid and enforceable to the extent permitted by law.

## **ARTICLE 31 - AMENDMENTS AND MODIFICATIONS**

No amendments or modifications of this Agreement shall be valid unless in writing and signed by each of the parties.

The County reserves the right to make changes in the work, including alterations, reductions therein or additions thereto. Upon receipt by the Contractor of the County's notification of a contemplated change, the Contractor shall: (1) if requested by the County, provide an estimate for the increase or decrease in cost due to the contemplated change; (2) notify the County of any estimated change in the completion date; and (3) advise the County in writing if the contemplated change shall effect the Contractor's ability to meet the completion dates or schedules of this Agreement. If the County instructs in writing, the Contractor shall suspend work on that portion of the project, pending the County's decision to proceed with the change. If the County elects to make the change, the County shall issue a Change Order for changes, or a contract change order, if the original contract is to be changed or amended the Contractor shall not commence work on any such change until such written change order has been issued and signed by each of the parties.

## **ARTICLE 32 – FLORIDA LAW & VENUE**

This Agreement shall be governed by the laws of the State of Florida. Any and all legal action necessary to enforce this Agreement shall be held in St. Johns County, Florida.

## **ARTICLE 33 – ARBITRATION**

The County shall not be obligated to arbitrate or permit any arbitration binding on the County under any of the Contract Documents or in connection with the project in any manner whatsoever.

## **ARTICLE 34 - NOTICES**

All notices required in this Agreement shall be sent by certified mail, return receipt requested, and if sent to the County shall be mailed to:

St. Johns County Purchasing Department  
**Attn: Leigh A. Daniels, CPPB, Assistant Purchasing Manager**  
500 San Sebastian View  
St. Augustine, FL 32084

and if sent to the Contractor shall be mailed to:

Pavement Technology, Inc.  
**Attn: Mr. Colin Durante, President**  
24144 Detroit Road  
Westlake, OH 44145

## **ARTICLE 35 - HEADINGS**

The heading preceding the articles and sections herein are solely for convenience of reference and shall not constitute a part of this Agreement, or affect its meaning, construction or effect.

## **ARTICLE 36 –PUBLIC RECORDS**

A. The cost of reproduction, access to, disclosure, non-disclosure, or exemption of records, data, documents, and/or materials, associated with this Agreement shall be subject to the applicable provisions of the Florida Public Records



Law (Chapter 119, Florida Statutes), and other applicable State and Federal provisions. Access to such public records, may not be blocked, thwarted, and/or hindered by placing the public records in the possession of a third party, or an unaffiliated party.

- B. In accordance with Florida law, to the extent that Contractor's performance under this Contract constitutes an act on behalf of the County, Contractor shall comply with all requirements of Florida's public records law. Specifically, if Contractor is expressly authorized, and acts on behalf of the County under this Agreement, Contractor shall:
- (1) Keep and maintain public records that ordinarily and necessarily would be required by the County in order to perform the Services;
  - (2) Upon request from the County's custodian of public records, provide the County with a copy of the requested records or allow the records to be inspected or copied within a reasonable time at a cost that does not exceed the cost as provided in Chapter 119, Florida Statutes, or as otherwise provided by law;
  - (3) Ensure that public records related to this Agreement that are exempt or confidential and exempt from public records disclosure requirements are not disclosed except as authorized by applicable law for the duration of this Agreement and following completion of this Agreement if the Contractor does not transfer the records to the County; and
  - (4) Upon completion of this Agreement, transfer, at no cost, to the County all public records in possession of the Contractor or keep and maintain public records required by the County to perform the Services.

If the Contractor transfers all public records to the County upon completion of this Agreement, the Contractor shall destroy any duplicate public records that are exempt or confidential and exempt from public records disclosure requirements. If the Contractor keeps and maintains public records upon completion of this Agreement, the Contractor shall meet all applicable requirements for retaining public records. All records stored electronically must be provided to the County, upon request from the County's custodian of public records, in a format that is compatible with the County's information technology systems.

Failure by the Contractor to comply with the requirements of this section shall be grounds for immediate, unilateral termination of this Agreement by the County.

**IF THE CONTRACTOR HAS QUESTIONS REGARDING THE APPLICATION OF CHAPTER 119, FLORIDA STATUTES, TO ITS DUTY TO PROVIDE PUBLIC RECORDS RELATING TO THIS AGREEMENT, CONTACT THE CUSTODIAN OF PUBLIC RECORDS AT: 500 San Sebastian View, St. Augustine, FL 32084, (904) 209-0805, [publicrecords@sjcfl.us](mailto:publicrecords@sjcfl.us)**

#### **ARTICLE 37 – USE OF COUNTY LOGO**

Pursuant to, and consistent with, County Ordinance 92-2 and County Administrative Policy 101.3, the Contractor may not manufacture, use, display, or otherwise use any facsimile or reproduction of the County Seal/Logo without express written approval St. Johns County, Florida.

#### **ARTICLE 38 – SURVIVAL**

It is explicitly noted that the following provisions of this Agreement, to the extent necessary, shall survive any suspension, termination, cancellation, revocation, and/or non-renewal of this Agreement, and therefore shall be both applicable and enforceable beyond any suspension, termination, cancellation, revocation, and/or non-renewal: (1) Truth-in-Negotiation; (2) Federal and State Taxes; (3) Insurance; (4) Indemnification; (5) Access and Audits; (6) Enforcement Costs; and (7) Access to Records.

#### **ARTICLE 39 – AUTHORITY TO EXECUTE**

Each party represents that it has the lawful authority to enter into this Agreement and has authorized the execution of this Agreement by the party's authorized representative shown below.

IN WITNESS WHEREOF, authorized representatives of the COUNTY, and CONTRACTOR have executed this Contract Agreement on the day and year below noted.

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**ST. JOHNS COUNTY, FL:**

Leigh A. Daniels, CPPB  
Printed Name of County Representative

Assistant Purchasing Manager  
Title of County Representative

\_\_\_\_\_  
Signature County Representative

\_\_\_\_\_  
Date of Execution

**CONTRACTOR:**

Pavement Technology, Inc.  
Company Name

\_\_\_\_\_  
Signature of Contractor Representative

\_\_\_\_\_  
Printed Name & Title

\_\_\_\_\_  
Date of Execution

**ATTEST:**  
**ST. JOHNS COUNTY, FL**  
**CLERK OF COURT**

\_\_\_\_\_  
Deputy Clerk

\_\_\_\_\_  
Date of Execution

**LEGALLY SUFFICIENT**

\_\_\_\_\_  
Deputy County Attorney

\_\_\_\_\_  
Date of Execution

**MISC 20-98; PAVEMENT RECONSTRUCTION & PRESERVATION  
MASTER CONTRACT #: 20-MAS-PAV-11948**

**EXHIBIT "A"**

**CONTRACTOR'S COST PROPOSAL**

**MISC 20-98; PAVEMENT RECONSTRUCTION & PRESERVATION  
MASTER CONTRACT #: 20-MAS-PAV-11948**

**EXHIBIT "B"**

**VOLUSIA COUNTY CONTRACT NO. 7101697-1**

**REQUEST FOR APPROVAL  
ST JOHNS COUNTY PURCHASING**

**SUBJECT:** Contract Piggyback - *Volusia County Contract # 7101697-1*

**SUGGESTED VENDOR:** Pavement Technology Inc. **ESTIMATE:** \$278,175

**REASON FOR REQUEST:**  
 A.  Standardization  
 B.  Spare Parts  
 C.  Replacement Parts  
 D.  Only Known Supplier  
 E.  Delay of Construction Contractor  
 F.  Environmental Urgency  
 G.  Public Safety Emergency  
 H.  Time Restriction  
 I.  Other

**PURCHASING POLICY NUMBER:**

**BUDGET ACCOUNT NO/DESCRIPTION:** **BUDGETED AMOUNT:** \$278,175

Public Works' Pavement Management Program is continually researching industry proven methods to perpetually sustain transportation network LOS. Pavement Technology delivers a solution which extends expected useful life of County operated and maintained asphalt roadways. Pavement preservation is an industry accepted methodology; restoring and preserving asphalt roadway durability. Transportation network asset management and fiscal sustainability is a number one priority for intelligently managing the public's valuable infrastructure investment.

**REQUISITIONER:** *[Signature]* **DATE:** 3/30/2020  
**DEPT. MANAGER:** Duane Kent, P.E., County Engineer **DATE:**

**DIVISION MANAGER:** *Jason D. Sparks* Jason Sparks, P.E., Planning Chief Engineer **DATE:** March 30, 2020

**PURCHASING REVIEW**

**DISPOSITION:** A.  Concurs with Request  
 B.  Does not concur with Request  
 C.  Requires approval(s) as listed below

**COMMENTS:** *Requires BAC approval to dig up back the Volusia County Contract for this project cost of \$278,175<sup>00</sup>, \$100K OR OVER requires BAC approval and award of contract.*

**BUYER:** **DATE:** **PURCHASING MANAGER:** *Assistant [Signature]* **DATE:** 3/31/20

**MANAGEMENT REVIEW**

**DISPOSITION:** A.  Concurs with Request  
 B.  Does not concur with Request

**COMMENTS:**

Brad Bradley, Assistant County Administrator **DATE:**  
 Joy Andrews, Assistant County Administrator **DATE:**  
 Hunter S. Conrad, County Administrator **DATE:**

(Use reverse side for additional comments)  
Return to Purchasing when completed.

Revised 01/08/20

# Pavement Technology, Inc.

24144 Detroit Rd.  
Westlake, Ohio 44145  
Phone: 800-333-6309 440-892-1895  
Fax: 440-892-0953

February 4, 2020

Mr. Jason Sparks, PE  
Chief Engineer  
St. Johns County  
2740 Industry Center Road  
St. Augustine, FL 32084

Dear Mr. Sparks:

We are pleased to offer our revised proposal to apply Reclamite® asphalt rejuvenator to the streets listed below in accordance with the Volusia County contract specifications. We have revised the proposal to reflect the priority set by the County to treat the roads that were paved during the 2016 & 2017 paving cycle. These roads are still good candidates but should be treated prior to aging much more. Please let me know which roads need to be removed from this list and we will send a final revised proposal to you at that time.

2016 Street	From	To	Square Yards	Amount	
Old Dixie Hwy	Valley Ridge Blvd	Ray Rd	19,008	\$16,156.80	Minor
Hilltop Rd	SR-207	End	9,622	\$8,178.70	Minor
Avenue A	Lewis Speedway	End	8,918	\$7,580.30	Local
Hardwood Landing Rd	CR-16A	End	14,549	\$12,366.65	Local
1st St	2nd St	4th	3,168	\$2,692.80	Local
2nd St	1st	End	1,901	\$1,615.85	Local
3rd St	1st	End	1,584	\$1,346.40	Local
4th St	1st	End	1,056	\$897.60	Local
Deer Park Blvd	SR-207	End	25,261	\$21,471.85	Local
E St Johns Ave	SR-207	N Main St	15,647	\$13,299.95	Local
<b>Total</b>			<b>100,714</b>	<b>\$85,606.90</b>	

**Major Roads**

2016 Street	From	To	Square Yards	Amount	Class
Palm Valley Rd	Valley Ridge Blvd	Preservation Trl	22,299	\$18,954.15	Major
Shores Blvd	US-1	Christina Dr	46,933	\$39,893.05	Major
County Road 13 S	CR-214	Racy Point Bridge	50,547	\$42,964.95	Major
Leo Maguire Pkwy	CR-210	Stonehedge Trl	13,376	\$11,369.60	Major

**Total** 133,155 \$113,181.75

2017 Street	From	To	Square Yards	Amount	Class
Don Manuel Rd	County Road 13 S	State Road 207	14,818	\$12,595.30	Major
Winifred Masters Rd	Beginning	End	10,554	\$8,970.90	Major
Federal Point Rd	Washington St	End	14,398	\$12,238.30	Major
Shores Blvd	Christina Dr	US-1	51,861	\$44,081.85	Major

**Total** 91,631 \$77,886.35

**Total** 325,500 \$276,675.00

Mobilization Charge \$ 1,500.00

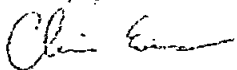
**Grand Total** \$278,175.00

Our unit price of \$0.85 per square yard is inclusive of traffic control, notification of residents and all labor and material necessary to complete the work.

Actual field measurements will determine final quantities.

Thank you for your continued interest in pavement preservation with Reclamite®.

Sincerely,



Chris Evers  
[cevers@pavetechinc.com](mailto:cevers@pavetechinc.com)

# Pavement Technology, Inc.

24144 Detroit Rd.  
Westlake, Ohio 44145

Phone: 800-333-6309 440-892-1895  
Fax: 440-892-0953

February 4, 2020

Mr. Jason Sparks, PE  
Chief Engineer  
St. Johns County  
2740 Industry Center Road  
St. Augustine, FL 32084

RE: Contract for Application of Asphalt Rejuvenating Agent on Various Street  
Locations in Volusia County, FL  
#18-B-161RF

Dear Mr. Sparks:

We are pleased to offer our proposal to apply Reclamite® Asphalt Rejuvenator to streets located in the St. Johns County, FL.

Enclosed find verification of our contract with Volusia County, Florida for the application of Reclamite® Asphalt Rejuvenating Agent. Pavement Technology, Inc. can offer to S. Johns County, the contract price of \$0.85 per square yard, from January 22, 2019 to January 22, 2022 per the attached documents.

We look forward to the opportunity to be of service to you and St. Johns County.

Sincerely,

*Colin Durante*

Colin Durante  
President  
[cdurante@pavetechinc.com](mailto:cdurante@pavetechinc.com)

Enclosure

cc: Chris Evers, John J. Schlegel





# Master Agreement

NO. 710 1697 - 1


TERM: 2019-01-22 to 2022-01-22

Page 1 of 2

Date Issued: 01/28/2019

<b>Vendor contact:</b> <b>Name:</b> John J. Schlegel <b>Phone:</b> 440-892-1895 <b>Ext.:</b> <b>E-mail:</b> jschlegel@pavetechinc.com		<b>County contact:</b> <b>Name:</b> RANDALL JACKSON <b>Phone:</b> 386-736-5967 <b>Ext.:</b> 2468 <b>E-mail:</b> WJackson@volusia.org		<b>Bill To:</b> <b>County of Volusia</b> PUBLIC WORKS-ENG & CONSTRUCTION 123 W. INDIANA AVE, RM 402 DELAND, FL 32720-4262	
<b>Vendor Name:</b> Pavement Technology, Inc. 24144 Detroit Road Westlake, OH 44145		<b>Vendor No.</b> VS7101		<b>Ship To:</b> ENGINEERING & CONSTRUCTION 123 W, INDIANA AVE., RM 402 DELAND, FL 32720-4262	
<b>Solicitation Number:</b> 18-B-161RF  <b>Award Date:</b> 01/22/19  <b>Award Authorization:</b> COUNCIL		<b>Purchasing</b> JENNIFER DITSLEAR <b>Phone:</b> 386-626-6627 <b>Ext.:</b> <b>E-mail:</b> jditslear@volusia.org		<b>Payment Terms:</b> Net 45 Days, FOB Dest, Freight allowed	
<b>Document Description:</b> Pavement reconstruction and preservation CC 1/22/2019					

Line Item	Commodity Code	Unit	Description	Unit Price or Contract Amount
1	74500	EA	***Work of each project shall be awarded to the low bidder for each category. Once notified by the Volusia County Project Manager, Contractor shall have 30 days to schedule work and 60 days from scheduling to begin working per specifications. If the work cannot be commenced within such time frame, the primary shall be deemed unavailable, and the project manager shall contact the next lowest bidder to determine availability.	0.000000

  
 \_\_\_\_\_  
 Jeaniene Jennings CPPB  
 Purchasing & Contracts Director

County of Volusia  
 Sales Tax Exemption Number  
 85-8012622393C-9

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A delivery order is required for the release of items / services from the referenced Master Agreement. If a solicitation number is referenced then the terms and conditions of said solicitation become part of the Master Agreement. Deviation from prices stated is not permitted without a signed corrected Change Order.  
 If vendor terms and conditions conflict with Count of Volusia Terms and Conditions, the County's Terms and Conditions prevail, See reverse side for terms and conditions.

Fog Sealing	Square Yard	No Bid	No Bid
<b>Item: TP-314</b>	<b>Unit</b>	<b>Zone 1 &amp; 2</b>	<b>Zone 3 &amp; 4</b>
<b>Rejuvenating Agent</b>			
Mobilization (Zone 1 & 2 grouped, Zone 3 & 4 grouped)	Each	\$1,500.00	
0-50,000 Square Yard			
Rejuvenating Agent	Square Yard	\$ 0.89	\$ 0.89
50,001-100,000 Square Yard			
Rejuvenating Agent	Square Yard	\$ 0.87	\$ 0.87
100,001+ Square Yard			
Rejuvenating Agent	Square Yard	\$ 0.85	\$ 0.85
<b>Item: TP-316</b>	<b>Unit</b>	<b>Zone 1 &amp; 2</b>	<b>Zone 3 &amp; 4</b>
<b>Asphaltic Surface Treatment - Chip Seal</b>			
Mobilization (Zone 1 & 2 grouped, Zone 3 & 4 grouped)	Each	No Bid	
0-50,000 Square Yard			
Chip Seal - Single Application	Square Yard	No Bid	No Bid
Chip Seal - Double Application	Square Yard	No Bid	No Bid
50,001-100,000 Square Yard			
Chip Seal - Single Application	Square Yard	No Bid	No Bid
Chip Seal - Double Application	Square Yard	No Bid	No Bid
100,001+ Square Yard			
Chip Seal - Single Application	Square Yard	No Bid	No Bid
Chip Seal - Double Application	Square Yard	No Bid	No Bid
<b>Item: TP-316A</b>	<b>Unit</b>	<b>Zone 1 &amp; 2</b>	<b>Zone 3 &amp; 4</b>
<b>Rejuvenating Scrub Seal</b>			
Mobilization (Zone 1 & 2 grouped, Zone 3 & 4 grouped)	Each	No Bid	
0-50,000 Square Yard			
Rejuvenating Scrub Seal (Single Application)	Square Yard	No Bid	No Bid
Rejuvenating Scrub Seal (Double Application)	Square Yard	No Bid	No Bid
50,001-100,000 Square Yard			
Rejuvenating Scrub Seal (Single Application)	Square Yard	No Bid	No Bid
Rejuvenating Scrub Seal (Double Application)	Square Yard	No Bid	No Bid
100,001+ Square Yard			
Rejuvenating Scrub Seal (Single Application)	Square Yard	No Bid	No Bid
Rejuvenating Scrub Seal (Double Application)	Square Yard	No Bid	No Bid
<b>Item: TP-317</b>	<b>Unit</b>	<b>Zone 1 &amp; 2</b>	<b>Zone 3 &amp; 4</b>
<b>Micro Surfacing</b>			
Mobilization (Zone 1 & 2 grouped, Zone 3 & 4 grouped)	Each	No Bid	
0-50,000 Square Yard			
Micro Surfacing - Single Application	Square Yard	No Bid	No Bid
Micro Surfacing - Double Application	Square Yard	No Bid	No Bid
Micro Surfacing - Rut Fill	Ton	No Bid	No Bid
50,001-100,000 Square Yard			
Micro Surfacing - Single Application	Square Yard	No Bid	No Bid
Micro Surfacing - Double Application	Square Yard	No Bid	No Bid
Micro Surfacing - Rut Fill	Ton	No Bid	No Bid
100,001+ Square Yard			
Micro Surfacing - Single Application	Square Yard	No Bid	No Bid
Micro Surfacing - Double Application	Square Yard	No Bid	No Bid
Micro Surfacing - Rut Fill	Ton	No Bid	No Bid
<b>Item: TP-317A</b>	<b>Unit</b>	<b>Zone 1 &amp; 2</b>	<b>Zone 3 &amp; 4</b>
<b>High Polymer Micro Surfacing</b>			
Mobilization (Zone 1 & 2 grouped, Zone 3 & 4 grouped)	Each	No Bid	
0-50,000 Square Yard			

**SUBMIT TO:**

**COUNTY OF VOLUSIA  
PURCHASING & CONTRACTS  
123 W. INDIANA AVE., RM. 302  
DELAND, FL 32720-4608**

AN EQUAL OPPORTUNITY EMPLOYER



# INVITATION TO BID

[www.volusia.org/purchasing](http://www.volusia.org/purchasing)

CONTACT PERSON:  
Ron Falanga ..... 386-822-5772  
Email: ..... RFalanga@volusia.org

DELAND: ..... 386-736-5935  
DAYTONA BEACH: ..... 386-257-6000  
NEW SMYRNA BEACH: ..... 386-423-3300

TITLE: <b>Pavement Reconstruction &amp; Preservation</b>	NUMBER: <b>18-B-161RF</b>	SUBMITTAL DEADLINE: <b>Tuesday, October 16, 2018 at 3:00 p.m., EST</b>
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DO NOT RESPOND TO THIS SOLICITATION ON LINE – SEE SECTION 2.5, *DELIVERY OF BIDS*

PRE BID DATE, TIME AND LOCATION:

There will be no pre-bid meeting held for this solicitation.

*SUBMITTALS RECEIVED AFTER  
ABOVE DATE AND TIME WILL NOT  
BE CONSIDERED*

FIRM'S NAME:

MAILING ADDRESS:

CITY – STATE – ZIP:

E-MAIL ADDRESS:

PHONE NUMBER:

FAX NUMBER:

The vendor acknowledges that information provided in this Bid is true and correct and agree to all terms and conditions contained in this Bid and related Exhibits.

✕ \_\_\_\_\_  
Authorized Signature Date

\_\_\_\_\_  
Printed Name

\_\_\_\_\_  
Title

FEDERAL I.D. or SOCIAL SECURITY NUMBER:

THIS FORM MUST BE COMPLETED AND RETURNED WITH YOUR RESPONSE

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The purpose of this Invitation to Bid (ITB) is to solicit competitive sealed Bids to furnish  
**Pavement Reconstruction & Preservation** for the County of Volusia, Florida.

**1.0 SCOPE OF WORK**

The work involved in these ongoing projects shall consist of reconstructing, reclaiming and preserving asphalt pavement throughout the County per the technical provisions of this ITB. There is no guarantee of the amount of work to be performed under the resulting master agreement(s). Contractors shall perform all work in accordance with specifications detailed in Attachment A – Technical Specifications.

**1.1 Exhibits**

- A. Exhibit I – General Conditions
- B. Exhibit II – Insurance Requirements

**1.2 Attachments**

- A. Attachment A – Technical Specifications
- B. Attachment B – Zone Map
- C. Attachment C – Pricing Sheet

**2.0 SPECIAL CONDITIONS**

**2.1 Bid Closing Date**

Bids must be received by the Volusia County Purchasing and Contracts Office, Room 302, Third Floor, 123 West Indiana Avenue, DeLand, FL, 32720-4608, no later than 3:00 p.m., EST, on Tuesday, October 16, 2018. Bids received after this time will not be considered.

**2.2 Proposed Schedule**

09/11/2018 ..... Invitation to Bid Available  
10/02/2018 ..... Last Day to Receive Written Questions  
10/16/2018 ..... Bid Closing Date

**2.3 Point of Contact**

All inquiries regarding this solicitation shall be directed to the procurement analyst in charge of this project as listed below:

Ron Falanga, Senior Procurement Analyst  
Telephone: ..... 386-822-5772  
Fax: ..... 386-736-5972  
E-mail: ..... [RFalanga@volusia.org](mailto:RFalanga@volusia.org)

## 2.4 Questions, Exceptions, and Addenda

It is incumbent upon each Bidder to carefully examine this solicitation's specifications, scope of work/service, terms, and conditions. Questions and exceptions concerning any Section of this Bid shall be directed by letter, facsimile transmission or by e-mail to the Procurement Analyst named above in section 2.3 who shall be the official point of contact for this Bid.

Questions and exceptions shall be submitted no later than fourteen (14) days before the closing date. Thereafter, no further questions or exceptions will be accepted or reviewed by the County and Bidders' right to submit questions or exceptions will terminate and any questions or exceptions not previously made shall be deemed waived. The issuance of a written addendum is the only official method by which interpretation, clarification, or additional information can be given and oral representations will not be binding on the County.

If it becomes necessary for the County to revise any part of this ITB, an addendum will be posted on the County's web site. It is each Bidder's responsibility to check the Volusia County web site for any addenda at [www.volusia.org/bidlist](http://www.volusia.org/bidlist). Each Bidder should ensure that they have received all addenda to this ITB before submitting their proposal. In their proposals, Bidders must provide proof of receipt of each addendum by signing and returning each addendum to the County. Failure to provide this proof may cause Bidder's proposal to be rendered non-responsive. Each addendum issued by the County shall become a material part of this solicitation.

## 2.5 Delivery of Bids

### **DO NOT RESPOND TO THIS SOLICITATION ON LINE**

All Bids shall be sealed and delivered or mailed to (faxes/e-mails will *not* be accepted):

County of Volusia, Florida  
Purchasing and Contracts Office, Room 302  
123 West Indiana Avenue, 3rd floor  
DeLand, Florida 32720-4608  
Mark package(s) "**Bid #18-B-161RF, Pavement Reconstruction & Preservation**"

**Note:** Please ensure that if a third party carrier (Federal Express, UPS, etc.) is used, that the third party is properly instructed to deliver the Bid Submittal **only** to Room 302, in the Purchasing and Contracts Office on the third (3rd) floor at the above address.

Bids mailed to 123 West Indiana Avenue via the United States Postal Service (USPS) are delivered to the Post Office, not to the physical address and, therefore, may not meet the requirements of Section 2.1. To be considered, a Bid must be received and accepted in the Purchasing and Contracts Office before the Bid closing date and time.

## 2.6 Bid Submittal Form

- A. See *Submittal Requirements* for complete details.
- B. Each Bidder shall submit three (3) complete sets of the Bid Submittal:

- **One (1)** hard copy marked "ORIGINAL"
- **One (1)** hard copy marked "COPY"

Note: It is not necessary to return every page of the original solicitation document with the hard copies of the Bid Submittal ORIGINAL and COPY; return only the pages that require signatures or information as detailed in Section 4.0.

- **One (1)** COMPLETE electronic copy on a CD or USB drive in PDF format (Excel spreadsheets shall not be recorded in PDF). The electronic copy of the Bid Submittal shall include all submittal requirements as detailed in Section 4.0.

Note the solicitation number and name of company on the CD or USB drive. Do not send confidential information, proprietary information, or trade secrets.

The Invitation to Bid page and the Bid Submittal Form must be signed by an official authorized to legally bind the Bidder to all Bid provisions. The Bid Submittal Form (Section 5.0) shall be signed by an authorized agent of the firm with documentation, such as a Memorandum of Authority, that the individual is authorized to commit the firm to a contract.

## 2.7 Definition of Responsive and Responsible for this Bid

Each Bid submittal shall be evaluated for conformance as responsive and responsible using the following criteria:

- A. Proper submittal of ALL documentation as required by this Bid. (Responsive)
- B. The greatest benefits to Volusia County as it pertains to: (Responsible)
  1. Total Cost;
  2. Delivery;
  3. Past Performance. In order to evaluate past performance, all Bidders are required to submit a list of three (3) references / relevant projects completed within the last three (3) years that are the same or similar in magnitude to this ITB. The County of Volusia shall not be listed as a reference;
  4. All technical specifications associated with this Bid; and
  5. Financial Stability: A Dun and Bradstreet report may be used by the County to evaluate Respondent's financial stability. All Respondents shall be prepared to supply a financial statement upon request, preferably a certified audit of the last available fiscal year.

Bidders are reminded that award may not necessarily be made to the lowest Bid. Rather, award will be made to the lowest responsive, responsible, Bidder whose Bid represents the best overall value to the County when considering all evaluation factors.

## 2.8 Local Preference Availability

This project is not funded by monies that prohibit the local preference provision and local preference does apply per Exhibit I, General Conditions and Instructions section 10. Local Preference.

## 2.9 Payment Terms

- A. The County will remit full payment on all undisputed invoices within forty-five (45) days from receipt by the appropriate person(s) (to be designated at time of Agreement) of the invoice(s) or receipt of all products or services ordered.
- B. Pursuant to Chapter 218, Florida Statutes, the County will pay interest not to exceed one percent (1%) per month on all undisputed invoices not paid within thirty (30) days after the due date.
- C. The County has the capability of Electronic Funds Transfer (EFT). List any discounts for prompt payment and/or willingness to accept Electronic Funds Transfer (EFT) and the discount to be applied to such payments. Contractors offering prompt payment discounts, for example, 1% - net 10, the discount shall be taken if the check issue date is within specified time period from date of invoice.

By submitting a Bid (offer) to the County of Volusia, Florida, the Contractor expressly agrees that, if awarded an Agreement, the County may withhold from any payment monies owed by the Contractor to the County for any legal obligation between the Bidder and the County including, but not limited to, real property taxes, personal property taxes, fees, and commissions.

## 2.10 Award Term

The County is looking to promote partnership relationships within the policies and procedures of public procurement. Pursuant toward that end, the successful Contractor(s) shall be awarded an Agreement for an initial three (3) year term with the option for two (2) subsequent one (1) year renewals. All renewals will be contingent upon mutual written agreement and, when applicable, approval of County Council.

## 2.11 Price Redeterminations

Once each year during the term of the Agreement, including any extension or renewal periods thereof, the Contractor may, but is not obligated to, petition the Director of Purchasing and Contracts for one or more price redeterminations where such price redetermination(s) is/are necessitated by documented increases in the cost of wages, fuel, or materials. Petitions for price redeterminations shall be made within thirty (30) days of the anniversary date of the Agreement (i.e., the calendar day and month when the Agreement became effective) and only after the Agreement has been in effect for at least one year. Any such petition shall be made pursuant to the provisions of this Section 2.11 and only for those price redetermination categories specified herein. Unless otherwise expressly set forth in this Agreement, no other price redeterminations shall be allowed. All price redeterminations, once issued, shall be prospective from the date of approval unless otherwise approved by a duly executed amendment to this Agreement.

- A. *Basis for Price Redeterminations.* The Contractor may petition the Director of Purchasing and Contracts for price redetermination based on the increased costs of wages, fuel, or materials. Price redeterminations will be based solely upon changes in pricing or costs documented by either the Employment Cost Index (ECI) or Producer Price Index (PPI), whichever is applicable, as published by the Bureau of Labor Statistics. The base index number for the ECI will be for the



quarter in which the ITB opens. The base index number for the PPI will be for the month the ITB opens. Any subsequent price redeterminations will use the last price redetermination approved for that price redetermination category as the "base index number." The County shall have the right to audit the Contractor's records, including, but not limited to, payroll, materials, and fuel cost records, to verify or otherwise investigate the validity of any price redetermination request.

- B. *Wage Price Redetermination.* When requesting a price redetermination based upon an increase in wage costs, the Contractor shall refer to and utilize the Employment Cost Index, Total Compensation, Private Industry, Index Number and Occupational Group as prepared by the Bureau of Labor Statistics in the U.S. Department of Labor <https://stats.bls.gov/data/>. The base figure will be tied to Installation, maintenance and repair occupations under the heading natural resources, construction and maintenance occupations. Wage price redetermination increases shall be granted only by reason of wage increases associated with the Contractor's employees or subcontractors performing work or services pursuant to the Agreement.
- C. *Minimum Wage Price Redetermination.* If the minimum wage increases during the term of the Agreement, including any renewal or extension period thereunder, the Contractor may petition the Director of Purchasing and Contracts for price redetermination for those job categories where the pay to the Contractor's employee(s) is the current minimum wage. Upon verification of the information provided, the County will grant an increase of exactly the amount of the minimum wage increase (not the percentage increase). The Contractor must increase the pay to the employee(s) by the amount the Contractor has requested, which shall not exceed the amount of the minimum wage increase. The amount paid to the Contractor will be the increase plus any written and documented increase in FICA, Medicare, and Workers' Compensation insurance. The Contractor must supply written documentation of any other increase that is beyond the scope and control of the Contractor. All written documentation must satisfy the reasonable expectations of the Director of Purchasing and Contracts and Internal Auditor.
1. *Example:* Minimum wage increases from \$7.31 to \$7.56 per hour. The Contractor may petition for an increase of \$0.25 per hour to be paid to the affected employee(s) and shall provide written and documented cost increases for FICA, Medicare and Workers' Compensation. The resulting increase in costs shall be incorporated into fees/rates billed to the County.

If the Contractor bills the County at a higher price according to any price redetermination granted by the County, and the Contractor fails to increase the hourly rate paid to the employee for the same period, the Contractor will be considered in Agreement default and the Agreement will be immediately terminated.

- D. *Fuel Price Redetermination.* If/when the price of fuel increases by a minimum of ten (10%) percent, the Contractor may petition the Director of Purchasing and Contracts for a fuel price redetermination. As a condition of petitioning for a fuel price increase, the Contractor shall be required to petition for a fuel price redetermination decrease if/when the price of fuel decreases by a minimum of ten (10%) percent. Failure to make such petition may be grounds for Agreement

termination and shall entitle the County to a refund of the cumulative increase in pay to the Contractor due to any prior fuel price redetermination increase(s). Fuel price redetermination must be based solely upon changes as documented by the Producer Price Index (PPI) for the commodities "Unleaded Gasoline - WPU057104" or "#2 diesel fuel - WPU057303," as such may be applicable to the Contractor's operations in connection with the Contractor's performance of the Agreement.

E. *Materials Price Redetermination.* At the anniversary date of the Agreement, the Contractor may petition the Director of Purchasing and Contracts for a materials price redetermination. As a condition of petitioning for a materials price increase, the Contractor shall be required to petition for a materials price redetermination decrease if/when the price of materials used by the Contractor in connection with the Agreement decreases. Failure to make such petition may be grounds for Agreement termination and shall entitle the County to a refund of the cumulative increase in pay to the Contractor due to any prior materials price redetermination increase(s). Materials price redetermination must be based solely upon changes as documented by the Producer Price Index (PPI) for the commodity "Asphalt paving mixture & block manufacturing – PCU324121324121", as published by the Bureau of Labor Statistics.

F. *Price Redetermination Calculation.* All Price Redeterminations shall be calculated as follows:

Example: Contractor indicated on the Submittal Form that thirty percent (30%) of the cost to provide the product/service is directly attributed to the redetermination category (wages, fuel, or materials).

Current applicable PPI	=	.....	\$200.50
Base index PPI	=	.....	- \$179.20
PPI increase dollars	=	.....	\$21.30

PPI increase percentage ( $\$21.30 \div \$179.20 = .1189$ ).....11.9%

Unit cost of the service is	.....	\$100.00
30% of \$100.00 is directly attributed to the redetermination category	....	\$30.00
$\$30.00 \times 11.9\%$	=	.....\$3.57
New unit price for the product/service is ( $\$100 + \$3.57$ )	.....	\$103.57

G. *Expiration Upon Failure to Agree to Price Redetermination.* If the County and the Contractor cannot agree to a price redetermination pursuant to the terms and conditions of this Section 2.11, then the Agreement will automatically expire without penalty or further expense to either party after a period of six (6) months following the Contractor's initial request for such price redetermination. Requests for price redeterminations not made in accordance with the provisions of this Section 2.11 shall be deemed null and void and shall not be a valid reason or pretext for expiration or termination of the Agreement. If the Agreement expires pursuant to the terms and conditions of this Section 2.11, the County reserves the right, at no expense, penalty, or consequence to the County, to award any remaining tasks thereunder to the next available most responsive and responsible Contractor.

## **2.12 Compliance with FEMA 2 CFR 200.318-326 and Appendix II Contract Provisions**

This Agreement and the products/services provided may be utilized in the event of declared State/Federal Emergency and Contractors shall be prepared to comply with the requirements of the FEMA Super Circular CFR 200.318-326 and Appendix II Contract Provisions as amended. These documents can be found on the Internet at:

<https://www.gpo.gov/fdsys/granule/CFR-2014-title2-vol1/CFR-2014-title2-vol1-sec200-318>

## **2.13 Termination**

- A. County may terminate this Agreement upon at least thirty (30) days prior written notice to Contractor.
- B. Contractor may terminate this Agreement upon at least one hundred eighty (180) days prior written notice to County.
- C. Upon receipt of notice of termination by the County from Contractor or upon delivery of notice of termination from the County to Contractor, Contractor shall:
  - 1. Stop work under the Agreement on the date and to the extent specified in County's Notice of Termination;
  - 2. Inform County of the extent to which performance is completed;
  - 3. Place no further orders or subcontracts for materials, services or facilities except as may be necessary for completion of such portion of the Work under the Agreement as is not terminated and with the prior approval of the County.
  - 4. Assign to the County, in the manner, at the times, and to the extent directed by the County, all of the right, title and interest of the Contractor under the orders and subcontracts so terminated.
- D. For all undisputed outstanding invoices submitted to the County prior to the effective date of the termination and subject to Section 2.10 - Award Term, Section 2.9 - Payment Terms and this Section 2.13 - Termination, the County shall cause payments to be made to Contractor within forty five (45) days of receipt of invoice. Contractor shall invoice the County for any sums Contractor claims to be owed by County under this Agreement for work performed from the last invoice to the effective date of termination. County shall review such invoice for payment and County shall pay any undisputed amount within forty five (45) days.
- E. With the approval of the County and to the extent required by the County, the Contractor shall, upon termination, settle all outstanding liabilities and all claims arising out of such termination. County's approval of such settlements shall be final for all the purposes of a termination under this Section 2.13- Termination. In addition, Contractor shall transfer title and deliver to the County, in the manner, at the times, and to the extent, if any, directed by the County, Deliverables, work-in-

progress, reports, models, studies, and other materials produced as a part of, or acquired in connection with the performance of the Work terminated.

- F. If Contractor fails to cure a breach within ten (10) calendar days after receipt of notice from the County of said breach, the County may take over the Work and complete the Work, and the Contractor shall be liable to the County for any increased cost of the Project reasonably incurred by the County to complete the Contractor's unfinished Work. As such, the County may apply unpaid Compensation due and owing to the Contractor prior to the default as a set off against the costs incurred by the County for taking over such Work.
- G. The right of termination provided to the County and the Contractor herein shall be cumulative of all other remedies available at law.
- H. All provisions of this Agreement which impose or contemplate continuing obligations on a party will survive the expiration or termination of this Agreement.

#### **2.14 New Material**

Unless otherwise provided for in this specification, the Contractor represents and warrants that the goods, materials, supplies, or components offered to the County under this Agreement are new, not used or reconditioned, and are not of such age or so deteriorated as to impair their usefulness or safety and that the goods, materials, supplies, or components offered are current production models of the respective manufacturer. If the Contractor believes that furnishing used or reconditioned goods, materials, supplies, or components will be in the County's interest, the Contractor shall so notify the County Procurement Analyst in writing no later than fourteen (14) working days prior to the date set for opening of Bids in accordance with section 2.4. The notice shall include the reasons for the request and any benefits that may accrue if the County authorizes the bidding of used or reconditioned goods, materials, supplies, or components.

#### **2.15 Damages**

Due to the nature of the services to be provided and the potential impact to the County for loss, the Contractor cannot disclaim consequential or special damages related to the performance of this Agreement. The Contractor shall be responsible and accountable for any and all damages, directly or indirectly, caused by the actions or inaction of its employees, staff, or Subcontractors. There are no limitations to this liability.

### **3.0 DEFINITIONS**

As used in this Bid, the following terms shall have the meanings set forth below:

**Agreement:** Result from this solicitation between the County and the Contractor, which is this Bid, along with any written addenda and other written documents, which are expressly incorporated by reference.

**Agreement Administrator:** The Director of Purchasing and Contracts or designee shall serve as Agreement Administrator. The Agreement Administrator shall be responsible for addressing any concerns within the scope of the Agreement. Any changes to the resulting

Agreement shall be made in writing and authorized by the Director of Purchasing and Contracts.

**Bid:** A Contractor's offer to the County in response to an invitation to bid (ITB) issued by a purchasing authority.

**Bidder:** One who submits a response to an invitation to bid (ITB).

**Contractor:** The person or entity duly authorized, upon award of an invitation to bid (ITB), to have an Agreement with the County to provide the product and/or services set forth herein and incurring liability for the same.

**Contractor's Project Manager:** The Project Manager has responsibility for administering this Agreement for the successful Bidder(s) and will be designated prior to the issue of the resulting Master Agreement or Purchase Order.

**County:** Shall mean the County of Volusia (a body corporate and politic and a subdivision of the State of Florida) including its districts, authorities, separate units of government established by law, ordinance or resolution, partners, elected and non-elected officials, employees, agents, volunteers, and any party with whom the County has agreed by contract to provide additional insured status.

**County's Project Manager(s):** The Project Manager(s) have responsibility for the day-to-day administration of the resulting Agreement for the County and will be designated prior to award of the resulting Master Agreement or Purchase Order.

**Day:** The word "day" means each calendar day or accumulation of calendar days.

**Director:** The Director of Purchasing and Contracts for the County of Volusia, FL.

**Master Agreement:** The payment vehicle through with the successful Bidder(s) shall be compensated. This Agreement will be issued in accordance with the specifications, terms, and conditions of this Bid document and shall be valid for a specified period of time with a specific dollar value, which shall not be exceeded annually.

**Person or Persons:** An individual, firm, partnership, corporation, association, executor, administrator, trustee, or other legal entity, whether singular or plural, masculine or feminine, as the context may require.

**Preference:** The method of the reducing the proposed Bid or quote price by a designated percentage for the sole purpose of determining the lowest price when compared to other prices submitted during a competitive solicitation.

**Protest:** See process at [www.volusia.org/purchasing](http://www.volusia.org/purchasing).

**Subcontractor:** A person other than a materialman or laborer who enters into a contract with a Contractor for the performance of any part of the Agreement documents.

**Sub-subcontractor:** A person other than a materialman or laborer who enters into a contract with a Subcontractor for the performance of any part of such Subcontractor's Agreement.

#### 4.0 SUBMITTAL REQUIREMENTS (*Submit in the following order*)

It is not necessary to return every page of this document with the Proposal; return *only* the pages that require signatures or information requested below.

- Completed Invitation to Bid Cover Page** signed by an authorized agent of the firm, as listed on the Florida Department of State, Division of Corporations' Sunbiz report available at [www.sunbiz.org](http://www.sunbiz.org) (Sunbiz), shall be required. If anyone other than the officers listed on the Sunbiz website will be signing this ITB, a memorandum of authority signed by an officer of the firm allocating authorization shall be required. If firm is not currently registered as a vendor in the State of Florida (Sunbiz), include documentation designation of contracting authority. The memorandum of authority shall be on the firm's letterhead and shall clearly state the name, title and contact information for the individual designated by the firm.
- Required Copies and Electronic Copy on CD or USB drive** (see Section 2.6)
- Provide a Florida Department of State, Division of Corporations' Sunbiz report** available at [www.sunbiz.org](http://www.sunbiz.org).
- Completed Bid Submittal Form** (use attached form Section 5.0).
- References** - List at least three (3) recent references where the proposed services has been provided within the past three (3) years. Use of the attached form (Section 6.0) will aid in evaluation. Unless specifically asked by the County, the County of Volusia shall not be listed as a reference.
- Business Tax Receipt (BTR)**

To be responsive to this solicitation, each Bidder who is currently required to have a Business Tax Receipt (BTR) at the time of submittal shall provide a copy of their current BTR in their response to this solicitation.

There are two exceptions to this Bid submission requirement:

1. If Bidder's business does not have a physical location in Lake, Orange, Osceola, Seminole, or Volusia County, no submission is required, *OR*
2. If Bidder's business type is exempt, submit with proposal a *Proof of Exemption* approved by the Volusia County Revenue Director (see Section 14.0).

For more information and to access *Ch. 114, Article I, Sect. 114-1* of the Volusia County Code of Ordinances, see [www.volusia.org/revenue/local-business-tax/business-tax-frequently-asked-questions.stm](http://www.volusia.org/revenue/local-business-tax/business-tax-frequently-asked-questions.stm)

- Insurance** - (See Exhibit II) Evidence of required insurance coverage or proof of insurability in the amounts indicated. If available, a properly completed ACORD Form is preferable. Final forms must contain the correct solicitation and/or project number and Volusia County contact person. Contractor shall provide the required insurance detailed

in Exhibit II for the entire Term of the agreement. Regardless of anything submitted as proof of insurance, Contractor shall comply with all requirements of Exhibit II.

Firms that have owner/operators that have filed a "Notice of Election to be Exempt" shall submit a copy with the proposal.

Incorporated and unincorporated firms that qualify for an exemption under the Florida Workers' Compensation law in Chapter 440, Florida Statutes, shall submit an executed *Hold Harmless Agreement* (see Section 15.0) relieving the County of liability in the event they and/or their employees are injured while providing goods and/or services to the County.

- Conflict of Interest Form** (use attached form Section 7.0) All Bidders shall properly complete, have notarized, and include with their Bid Submittal the attached statement disclosing any potential conflict of interest that the Bidder may have due to ownership, other clients, contracts, or interests associated with this project.
- Addenda** issued subsequent to the release of this solicitation must be signed and returned with the firm's Bid. Failure to return signed addenda may be cause for the Bid to be considered non-responsive.
- W-9** Include a completed W-9 form. If the firm is not registered with Volusia County, on-line registration is available at [www.volusia.org/purchasing](http://www.volusia.org/purchasing) under Vendor Self Service, which links to the registration site and the W-9 form can be accessed through this site as well.
- Certification Affidavit by Local Business (use attached forms 11.0 and 12.0)** All Bidders shall complete, have notarized, and include with their Bid Submittal the attached statement(s) confirming Local Preference Eligibility.
- Drug-Free Work Place form** (use attached form Section 8.0).
- Certification Regarding Debarment – Prime** (use attached form Section 9.0).
- Certification Regarding Debarment – Sub** *if applicable* (use attached form Section 10.0).
- CERTIFICATION REGARDING PROHIBITION AGAINST CONTRACTING WITH SCRUTINIZED COMPANIES** (use attached form in Section 15.0)

All Bidders shall be prepared to supply a financial statement upon request, preferably a certified audit, but a third party prepared financial statement and the latest D & B report will be accepted.

[THE REMAINDER OF THIS PAGE INTENTIONALLY LEFT BLANK]

**5.0 BID SUBMITTAL FORM**

TO: County of Volusia, Florida  
Office of Director of Purchasing and Contracts  
123 W. Indiana Avenue, Room 302  
DeLand, FL 32720-4608

The undersigned hereby declare(s) that [firm name] \_\_\_\_\_  
\_\_\_\_\_ has carefully examined the specifications to furnish **Pavement Reconstruction & Preservation**, for which Bid Submittals were advertised to be received **no later than 3:00 p.m., EST, on Tuesday, October 16, 2018**, and further declares that the firm will furnish the **Pavement Reconstruction & Preservation** according to specifications.

**Pricing shall be completed on Attachment C – Pricing Sheet**

The County reserves the right to negotiate with the awarded vendor for additional services similar in nature not known at the time of Bid closing.

Sole Proprietor  Yes  No Total number employees \_\_\_\_\_

F.O.B. Destination, freight allowed

The following information is required in order to be granted a price redetermination.

Assuming that the prices quoted include costs for vehicles, maintenance, repair, insurance, fuel, wages, insurances and other employee benefits, materials, overhead, operating expenses, etc., what percentage of the rate is **directly** attributed to the cost of fuel? \_\_\_\_\_%

Which does the firm use:  Diesel fuel or  Gasoline?

Assuming that the prices quoted include costs for vehicles, maintenance, repair, insurance, fuel, wages, materials, overhead, operating expenses, etc., what percentage of the rate is **directly** attributed to the cost of wages? \_\_\_\_\_%

Assuming that the prices quoted include costs for vehicles, maintenance, repair, insurance, fuel, wages, insurances and other employee benefits, materials, overhead, operating expenses, etc., what percentage of the rate is **directly** attributed to the cost of materials? \_\_\_\_\_%

Prompt payment discount, if applicable: \_\_\_\_\_ %, \_\_\_\_\_ Days; Net 45 Days

Do you accept electronic funds transfer (EFT)?  YES  NO

Do you offer a discount for electronic funds transfer (EFT)?  YES, \_\_\_\_\_ %  NO

The County of Volusia reserves the right to reject any or all proposals, to waive informalities, and to accept all or any part of any proposal as may be deemed to be in the best interest of the County.

I hereby certify that I have read and understand the requirements and terms and conditions of this Invitation to Bid No. 18-B-161RF, "**Pavement Reconstruction & Preservation**", including



all exhibits and attachments (as amended) and that I, as the Bidder, will comply with all requirements, and that I am duly authorized to execute this proposal/offer document and any Agreement(s) and/or other transactions required by award of this ITB.

Further, as attested to by below signature, I will provide the required insurance, per Exhibit II, Insurance, upon notification of recommendation of award.

---

The vendor acknowledges that information provided in this Bid is true and correct:

x

---

Authorized Signature

---

Printed Name

---

Title

Date

---

Company Name

---

Full Address

---

Telephone

Fax

E-mail Address

---

Dunn & Bradstreet #

Federal I.D. #

---

**6.0 REFERENCES**

Agency #1	
Address	
City, State, ZIP	
Contact Person	
E-mail	Phone:
Date(s) of Service	
Type of Service	
Comments:	
Agency #2	
Address	
City, State, ZIP	
Contact Person	
E-mail	Phone:
Date(s) of Service	
Type of Service	
Comments:	
Agency #3	
Address	
City, State, ZIP	
Contact Person	
E-mail	Phone:
Date(s) of Service	
Type of Service	
Comments:	

**7.0 CONFLICT OF INTEREST FORM**

I HEREBY CERTIFY that

1. I, *(printed name)* \_\_\_\_\_, am the *(title)* \_\_\_\_\_ and the duly authorized representative of the firm of *(Firm Name)* \_\_\_\_\_ whose address is \_\_\_\_\_, and that I possess the legal authority to make this affidavit on behalf of myself and the firm for which I am acting; and,
2. Except as listed below, no employee, officer, or agent of the firm have any conflicts of interest, real or apparent, due to ownership, other clients, contracts, or interests associated with this project; and,
3. This Bid Submittal is made without prior understanding, agreement, or connection with any corporation, firm, or person submitting a Bid for the same services, and is in all respects fair and without collusion or fraud.

EXCEPTIONS to items above (List): \_\_\_\_\_

Signature: \_\_\_\_\_

Printed Name: \_\_\_\_\_

Firm Name: \_\_\_\_\_

Date: \_\_\_\_\_

STATE OF \_\_\_\_\_

COUNTY OF \_\_\_\_\_

Sworn to and subscribed before me this \_\_\_\_ day of \_\_\_\_\_, 20\_\_\_\_, by \_\_\_\_\_, who is/are personally known to me or who has/have produced \_\_\_\_\_ as identification.

\_\_\_\_\_  
NOTARY PUBLIC – STATE OF \_\_\_\_\_

Type or print name:

\_\_\_\_\_  
Commission No.: \_\_\_\_\_

\_\_\_\_\_  
Commission Expires: \_\_\_\_\_

(Seal)

**8.0 DRUG-FREE WORK PLACE**

The undersigned firm, in accordance with Florida statute 287.087, hereby certifies that

\_\_\_\_\_ does:  
*(Name of Firm)*

1. Publish a statement notifying employees that the unlawful manufacture, distribution, dispensing, possession, or use of a controlled substance is prohibited in the workplace and specifying the actions that will be taken against employees for violations of such prohibition.
2. Inform employees about the dangers of drug abuse in the workplace, the business's policy of maintaining a drug-free workplace, any available drug counseling, rehabilitation, and employee assistance programs, and the penalties that may be imposed upon employees for drug abuse violations.
3. Give each employee engaged in providing the commodities or contractual services that are proposed a copy of the statement specified in subsection (1).
4. In the statement specified in subsection (1), notify the employees that, as a condition of working on the commodities or contractual services that are under proposal, the employee will propose by the terms of the statement and will notify the employer of any conviction of, or plea of guilty or nolo contendere to, any violation of Chapter 893 or of any controlled substance law of the United States or any state, for a violation occurring in the workplace no later than five (5) days after such conviction.
5. Impose a sanction on, or require the satisfactory participation in a drug abuse assistance or rehabilitation program if such is available in the employee's community, by any employee who is so convicted.
6. Make a good faith effort to continue to maintain a drug-free workplace through implementation of this section.

As the person authorized to sign the statement, I certify that this firm complies fully with the above requirements.

\_\_\_\_\_  
Name and Title

\_\_\_\_\_  
Date

\_\_\_\_\_  
Signature

\_\_\_\_\_  
Firm

\_\_\_\_\_  
Street address

\_\_\_\_\_  
City, State, Zip

**9.0 CERTIFICATION REGARDING DEBARMENT**

**Certification Regarding  
Debarment, Suspension,  
And Other Responsibility Matters  
Primary Covered Transactions**

**TO BE COMPLETED BY CONTRACTOR**

- A. The prospective primary participant (contractor) certifies to the best of its knowledge and belief, that it and its principals (subcontractors and suppliers):
1. Are not presently debarred, suspended, proposed for debarment, declared ineligible, or voluntarily excluded from covered transactions by any Federal department or agency;
  2. Have not within a three (3) year period preceding this bid proposal been convicted of or had a civil judgment rendered against them for commission of fraud or a criminal offense in connection with obtaining, attempting to obtain, or performing a public (Federal, State, or local) transaction or contract under a public transaction; violation of Federal or State antitrust statutes or commission of embezzlement, theft, forgery, bribery, falsification or destruction of records, making false statements, or receiving stolen property.
  3. Are not presently indicted for or otherwise criminally or civilly charged by a government entity (Federal, State, or local) with commission of any of the offenses enumerated in paragraph (A) (2) of this certification; and
  4. Have not within a three-year period preceding this bid proposal had one or more public transactions (Federal, State, or local) terminated for cause or default.
- B. Where the prospective primary participant is unable to certify to any of the statements in this certification, such prospective participant shall attach an explanation to this bid proposal.

\_\_\_\_\_  
Name and Title

\_\_\_\_\_  
Date

\_\_\_\_\_  
Signature

\_\_\_\_\_  
Firm

\_\_\_\_\_  
Street address

\_\_\_\_\_  
City, State, Zip

**10.0 CERTIFICATION REGARDING DEBARMENT (SUB)**

**Certification Regarding  
Debarment, Suspension, Ineligibility  
And Voluntary Exclusion  
TO BE COMPLETED BY ALL SUB-CONTRACTORS**

- A. The prospective participant (sub-contractor) certifies to the best of its knowledge and belief, that it and its principals (subcontractors and suppliers):
1. Are not presently debarred, suspended, proposed for debarment, declared ineligible, or voluntarily excluded from covered transactions by any Federal department or agency;
  2. Have not within a three (3) year period preceding this bid proposal been convicted of or had a civil judgment rendered against them for commission of fraud or a criminal offense in connection with obtaining, attempting to obtain, or performing a public (Federal, State, or local) transaction or contract under a public transaction; violation of Federal or State antitrust statutes or commission of embezzlement, theft, forgery, bribery, falsification or destruction of records, making false statements, or receiving stolen property.
  3. Are not presently indicted for or otherwise criminally or civilly charged by a government entity (Federal, State, or local) with commission of any of the offenses enumerated in paragraph (A) (2) of this certification; and
  4. Have not within a three-year period preceding this bid proposal had one or more public transactions (Federal, State, or local) terminated for cause or default.
- B. Where the prospective participant is unable to certify to any of the statements in this certification, such prospective participant shall attach an explanation to this bid proposal.

\_\_\_\_\_  
Name and Title

\_\_\_\_\_  
Date

\_\_\_\_\_  
Signature

\_\_\_\_\_  
Firm

\_\_\_\_\_  
Street address

\_\_\_\_\_  
City, State, Zip

**11.0 CERTIFICATION AFFIDAVIT BY CONTRACTOR AS LOCAL BUSINESS**

This form must be signed and sworn to in the presence of a notary public or other official authorized to administer oaths.

A. This sworn statement is submitted to County of Volusia, FL, Purchasing and Contracts;

By: \_\_\_\_\_  
(Authorized individuals name and title)

For: \_\_\_\_\_  
(Name of Company/Individual submitting sworn statement)

B. Local Preference Eligibility

- 1. Vendor has been in business for a minimum of six (6) months prior to the date of Bids or quote  Yes  No
- 2. Vendor has proof of local business in the form of a business tax receipt from a local jurisdiction per Volusia County Local Preference ordinance  Yes  No

**I understand that the submission of this form to the contracting officer for Volusia County, Florida, is valid through the end of term of the awarded Agreement. I also understand that failure to notify the County of Volusia of a change in address out of the local area may result in breach of Agreement.**

\_\_\_\_\_  
(Signature)

STATE OF \_\_\_\_\_

COUNTY OF \_\_\_\_\_

Sworn to and subscribed before me this \_\_\_\_\_ day of \_\_\_\_\_, 20\_\_\_\_, by \_\_\_\_\_, who is/are personally known to me or who has/have produced \_\_\_\_\_ as identification.

\_\_\_\_\_  
NOTARY PUBLIC – STATE OF \_\_\_\_\_  
Type or print name:

\_\_\_\_\_  
Commission No.:

\_\_\_\_\_  
Commission Expires:

(Seal)

**12.0 CERTIFICATION AFFIDAVIT BY SUB CONTRACTOR AS LOCAL BUSINESS**

This form must be signed and sworn to in the presence of a notary public or other official authorized to administer oaths.

A. This sworn statement is submitted to County of Volusia, FL, Purchasing and Contracts;

By: \_\_\_\_\_  
(Authorized individuals name and title)

For: \_\_\_\_\_  
(Name of Company/Individual submitting sworn statement)

B. Local Preference Eligibility

1. Vendor has been in business for a minimum of six (6) months prior to the date of Bids or quote  Yes  No
2. Vendor has proof of local business in the form of a business tax receipt from a local jurisdiction per Volusia County Local Preference ordinance  Yes  No

**I understand that the submission of this form to the contracting officer for Volusia County, Florida, is valid through the end of term of the awarded Agreement. I also understand that failure to notify the County of Volusia of a change in address out of the local area may result in breach of Agreement.**

\_\_\_\_\_  
(Signature)

STATE OF \_\_\_\_\_

COUNTY OF \_\_\_\_\_

Sworn to and subscribed before me this \_\_\_\_\_ day of \_\_\_\_\_, 20\_\_\_\_, by \_\_\_\_\_, who is/are personally known to me or who has/have produced \_\_\_\_\_ as identification.

\_\_\_\_\_  
NOTARY PUBLIC – STATE OF \_\_\_\_\_

Type or print name:

Commission No.: \_\_\_\_\_

Commission Expires: \_\_\_\_\_

(Seal)



**13.0 NOTIFICATION REGARDING PUBLIC ENTITY CRIME & DISCRIMINATORY VENDOR LIST REQUIREMENTS & DISQUALIFICATION PROVISION**

A. Pursuant to Florida Statutory requirements, potential Bidders are notified:

*287.133(2)(a)* A person or affiliate who has been placed on the convicted vendor list following a conviction for a public entity crime may not submit a Bid, proposal, or reply on a contract to provide any goods or services to a public entity; may not submit a Bid, proposal, or reply on a contract with a public entity for the construction or repair of a public building or public work; may not submit Bids, proposals, or replies on leases of real property to a public entity; may not be awarded or perform work as a contractor, supplier, subcontractor, or consultant under a contract with any public entity; and may not transact business with any public entity in excess of the threshold amount provided in s. 287.017 for CATEGORY TWO for a period of 36 months following the date of being placed on the convicted vendor list.

*287.133(2)(b)* A public entity may not accept any Bid, proposal, or reply from, award any contract to, or transact any business in excess of the threshold amount provided in s. 287.017 for CATEGORY TWO with any person or affiliate on the convicted vendor list for a period of 36 months following the date that person or affiliate was placed on the convicted vendor list unless that person or affiliate has been removed from the list pursuant to paragraph (3)(f). A public entity that was transacting business with a person at the time of the commission of a public entity crime resulting in that person being placed on the convicted vendor list may not accept any Bid, proposal, or reply from, award any contract to, or transact any business with any other person who is under the same, or substantially the same, control as the person whose name appears on the convicted vendor list so long as that person's name appears on the convicted vendor list.

*287.134(2)(a)* An entity or affiliate who has been placed on the discriminatory vendor list may not submit a Bid, proposal, or reply on a contract to provide any goods or services to a public entity; may not submit a Bid, proposal, or reply on a contract with a public entity for the construction or repair of a public building or public work; may not submit Bids, proposals, or replies on leases of real property to a public entity; may not be awarded or perform work as a contractor, supplier, subcontractor, or consultant under a contract with any public entity; and may not transact business with any public entity.

*287.134(2)(b)* A public entity may not accept any Bid, proposals, or replies from, award any contract to, or transact any business with any entity or affiliate on the discriminatory vendor list for a period of 36 months following the date that entity or affiliate was placed on the discriminatory vendor list unless that entity or affiliate has been removed from the list pursuant to paragraph (3)(f). A public entity that was transacting business with an entity at the time of the discrimination resulting in that entity being placed on the discriminatory vendor list may not accept any Bid, proposal, or reply from, award any contract to, or transact any business with any other entity who is under the same, or substantially the same, control as the entity whose name appears on the discriminatory vendor list so long as that entity's name appears on the discriminatory vendor list.

B. By submitting a proposal, the Bidder represents and warrants that the submission of its proposal does not violate Section 287.133, Florida Statutes (2005), nor Section 287.134, Florida Statutes (2005).

C. In addition to the foregoing, the Bidder represents and warrants that Bidder, Bidder's subcontractors and Bidder's implementer, if any, is not under investigation for violation of such statutes.

D. Bidder should read carefully all provisions of 287.133 and 287.134, Florida Statutes (2005).

14.0 PROOF OF EXEMPTION



BUSINESS SERVICES

REVENUE DIVISION

123 W. INDIANA AVE. • ROOM 103 • DELAND, FL 32720-4602

PHONE: 386-736-5938 • FAX: 386-822-5729

www.volusia.org/revenue

I certify that the business known as (business name) \_\_\_\_\_, providing \_\_\_\_\_ services, which is located at (street address) \_\_\_\_\_, (city) \_\_\_\_\_, falls under the business tax exemption described in:

- Florida Statute 205. 063, Florida Statute 205. 064, Florida Statute 205. 065, Florida Statute 205. 162, Florida Statute 205. 171, Florida Statute 205. 191, Florida Statute 205. 192

www.volusia.org/revenue/local-business-tax/business-tax-frequently-asked-questions.shtml

OR is the type of business indicated below:

- Child Care – Residential, Commercial Rentals, Door to Door/Peddler Sales, Insurance Adjuster, Agent, or Company, Pharmacist/Pharmacy (Prescription Drugs Only), Radio/Television Station, Religious Institution, Residential Rentals over 6months, Sale of Alcoholic Products only

(Authorized Signature)

(Printed Name)

STATE OF \_\_\_\_\_

COUNTY OF \_\_\_\_\_

Sworn to and subscribed before me this \_\_\_\_\_ day of \_\_\_\_\_, 20\_\_\_\_, by \_\_\_\_\_, who is/are personally known to me or who has/have produced \_\_\_\_\_ as identification.

NOTARY PUBLIC – STATE OF \_\_\_\_\_

Type or print name:

Commission No.: \_\_\_\_\_

Commission Expires: \_\_\_\_\_

(Seal)

A business that falls under one of the exempt classifications listed above is not required to have a Volusia County Business Tax Receipt.

Revenue Director/Designee

**15.0 CERTIFICATION REGARDING PROHIBITION AGAINST CONTRACTING WITH SCRUTINIZED COMPANIES**

I hereby certify that neither the undersigned entity, nor any of its wholly owned subsidiaries, majority-owned subsidiaries, parent companies, or affiliates of such entities or business associations, that exists for the purpose of making profit have been placed on the Scrutinized Companies that Boycott Israel List created pursuant to s. 215.4725 of the Florida Statutes, or are engaged in a boycott of Israel.

In addition, if this solicitation is for a contract for goods or services of one million dollars or more, I hereby certify that neither the undersigned entity, nor any of its wholly owned subsidiaries, majority- owned subsidiaries, parent companies, or affiliates of such entities or business associations, that exists for the purpose of making profit are on the Scrutinized Companies with Activities in Sudan List or the Scrutinized Companies with Activities in the Iran Petroleum Energy Sector List, created pursuant to s. 215.473 of the Florida Statutes, or are engaged in business operations in Cuba or Syria as defined in said statute.

I understand and agree that the County may immediately terminate any contract resulting from this solicitation upon written notice if the undersigned entity (or any of those related entities of respondent as defined above by Florida law) are found to have submitted a false certification or any of the following occur with respect to the company or a related entity: (i) it has been placed on the Scrutinized Companies that Boycott Israel List, or is engaged in a boycott of Israel, or (ii) for any contract for goods or services of one million dollars or more, it has been placed on the Scrutinized Companies with Activities in Sudan List or the Scrutinized Companies with Activities in the Iran Petroleum Energy Sector List, or it is found to have been engaged in business operations in Cuba or Syria.

Name of Respondent: \_\_\_\_\_

By: \_\_\_\_\_  
(Authorized Signature)

Title: \_\_\_\_\_

Date: \_\_\_\_\_

**16.0 HOLD HARMLESS AGREEMENT**

I, \_\_\_\_\_, (*print owner's name*), am the owner of \_\_\_\_\_ (*print company name*), an incorporated / unincorporated business operating in the State of Florida. As such, I am bound by all laws of the state of Florida, including but not limited to those regarding the workers' compensation law.

I hereby affirm that I or [the above-named business] employs fewer than four employees, all of whom are listed below, including myself, and therefore, the business is exempt from the statutory requirement for workers' compensation insurance for its employees. I certify that I will provide the County of Volusia with the name of each new employee together with all required waivers and releases for each prior to any employee being allowed to work to provide services under the contract set forth below. If any such employee is allowed to work without a signed waiver and release, such action will be a material breach of this Agreement. All signed waivers and releases shall be furnished before the commencement of any work by an employee or the undersigned to the County Project Manager or designated county representative.

On \_\_\_\_\_, 20\_\_\_\_, the County of Volusia and I or [the above-named business] entered into a contract for \_\_\_\_\_ (*please insert name of contract*), (hereinafter "Agreement") which is incorporated by reference herein.

On behalf of myself, my business, and the employees listed below, I and they hereby agree to waive and release any and all workers' compensation claims or liens under Chapter 440, Florida Statutes, against the County of Volusia and its agents, officials and employees, arising from any work or services provided under the Agreement whether or not it shall be alleged or determined that the act was caused by intention, or through negligence or omission of the County of Volusia or its agents, officials and employees or subcontractors.

In the event that a workers' compensation claim or lien is made against the County of Volusia and/or its agents, officials or employees by myself or my employees or agents as a result of any work or services performed under the Agreement, I agree to indemnify, keep and hold harmless the County of Volusia, Florida, its agents, officials and employees, against all injuries, deaths, losses, damages, claims, liabilities, judgments, costs and expenses, direct, indirect or consequential (including, but not limited to, fees and charges of attorneys and other professionals) arising out of the Agreement with the County of Volusia, whether or not it shall be alleged or determined that the act was caused by intention or through negligence or omission of the County of Volusia or its employees, agents, or subcontractors. I or the above-named business shall pay all charges of attorneys and all costs and other expenses incurred in connection

with the indemnity provided herein, and if any judgment shall be rendered against the County of Volusia in any action indemnified hereby, I or the above-named business shall, at my or its own expense, satisfy and discharge the same. The foregoing is not intended nor should it be construed as, a waiver of sovereign immunity of the COUNTY OF VOLUSIA under Section 768.28, Florida Statutes.

Owner: \_\_\_\_\_ (print name) \_\_\_\_\_ (signature)  
Employee 1: \_\_\_\_\_ (print name) \_\_\_\_\_ (signature)  
Employee 2: \_\_\_\_\_ (print name) \_\_\_\_\_ (signature)  
Employee 3: \_\_\_\_\_ (print name) \_\_\_\_\_ (signature)

STATE OF \_\_\_\_\_  
COUNTY OF \_\_\_\_\_

Sworn to and subscribed before me this \_\_\_\_ day of \_\_\_\_\_, 20\_\_\_\_, by \_\_\_\_\_, who is/are personally known to me or who has/have produced \_\_\_\_\_ as identification.

\_\_\_\_\_  
NOTARY PUBLIC – STATE OF

Type or print name: \_\_\_\_\_

Commission No.: \_\_\_\_\_

Commission Expires: \_\_\_\_\_

(Seal)

1. **SUBMISSION OF OFFERS:** All offers shall be submitted in a sealed envelope or package. The Invitation to Bid (ITB) number, title, and opening date shall be clearly displayed on the outside of the sealed envelope or package. The delivery of responses to the Volusia County Purchasing and Contracts Division Office prior to the specified date and time is solely and strictly the responsibility of the Bidder. Any submittal received in the Purchasing and Contracts Division Office after the specified date and time will not be considered.

Responses shall be submitted on forms provided by the County. Additional information may be attached to the submittal. Facsimile or electronic submissions are NOT acceptable. No offer may be modified after acceptance.

2. **BIDDER'S RESPONSIBILITY:** The Bidder, by submitting a Bid, represents that:
  - A. The Bidder has read and understands the ITB in its entirety and that the Bid is made in accordance therewith;
  - B. The Bidder possesses the capabilities, resources, and personnel necessary to provide efficient and successful service to the County;
  - C. The Bidder has made all investigations and examinations necessary to ascertain site and/or local conditions and requirements affecting the full performance of the Agreement and to verify any representations made by the County of Volusia, Florida, upon which the Bidder will rely. If the Bidder receives an award because of its Bid Submittal, failure to have made such investigations and examinations will in no way relieve the Bidder from its obligations to comply in every detail with all provisions and requirements of the Agreement, nor will a plea of ignorance of such conditions and requirements be accepted as a basis for any claim by the Bidder for additional compensation or relief; and,
  - D. The Bidder will be held responsible for any and all discrepancies, errors, etc., in discounts or rebates which are discovered during the Agreement term or up to and including three (3) fiscal years following the County's annual audit.
3. **EXECUTION OF OFFER:** Offer shall contain a manual signature in the space(s) provided of a representative authorized to legally bind the Bidder to the provisions therein. All spaces requesting information from the Bidder shall be completed. Responses shall be typed or printed in ink. Use of erasable ink or pencil is not permitted. Any correction made by the Bidder to any entry must be initialed.
4. **OPENING:** Pursuant to Section 119.071, Florida Statutes, Bids or proposals ("responses") and the completed tabulation will be available for inspection within thirty (30) days of response opening. Contact the Purchasing and Contracts Office during regular business hours to inspect responses and the completed tabulation or go to [www.volusia.org/bidlist](http://www.volusia.org/bidlist) for inspection of the completed tabulation. The foregoing notwithstanding, if, prior to the County's making responses available for inspection, the County rejects all responses and concurrently provides notice of the County's intent to reissue the solicitation, then the County may avail itself of the exemption for rejected responses set forth in Section 119.071, Florida Statutes, to the extent such Section may apply.

In accordance with the American Disabilities Act and Section 286.26, Florida Statutes, persons with disabilities needing a special accommodation to participate in the proceedings, or an interpreter to participate in any proceedings, should contact the County's ADA Coordinator at 386-248-1760 for assistance at least two (2) business days before any meeting date.

Assisted listening system receivers are available for the hearing impaired, and can be obtained from the Deputy Clerk by contacting the County's ADA Coordinator at 386-248-1760. Read the full ADA Notice under The American with Disabilities Act (Title II), at [www.volusia.org/core/fileparse.php/4175/urlt/ADANotice.pdf](http://www.volusia.org/core/fileparse.php/4175/urlt/ADANotice.pdf). Read the [County of Volusia Grievance Procedure](#) under The Americans with Disabilities Act (Title II).

5. **Public Records Law.** Pursuant to section 119.0701(2)(a), Florida Statutes, the County is required to provide Contractor with this statement and establish the following requirements as contractual obligations pursuant to the Agreement:

**IF THE CONTRACTOR HAS QUESTIONS REGARDING THE APPLICATION OF CHAPTER 119, FLORIDA STATUTES, TO THE CONTRACTOR'S DUTY TO PROVIDE PUBLIC RECORDS RELATING TO THIS AGREEMENT, CONTACT THE CUSTODIAN OF PUBLIC RECORDS AT 386-736-5935, [purchasing@volusia.org](mailto:purchasing@volusia.org), by mail, Purchasing and Contracts Division, Attn: Public Records Custodian, 123 W. Indiana Ave. Rm. 302 DeLand, FL 32720.**

By entering into this Agreement, Contractor acknowledges and agrees that any records maintained, generated, received, or kept in connection with, or related to the performance of services provided under, this Agreement are public records subject to the public records disclosure requirements of section 119.07(1), Florida Statutes, and Article I, section 24 of the Florida Constitution. Pursuant to section 119.0701, Florida Statutes, any Contractor entering into a contract for services with the County is required to:

- A. Keep and maintain public records required by the County to perform the services and work provided pursuant to this Agreement.
- B. Upon request from the County's custodian of public records, provide the County with a copy of the requested records or allow the records to be inspected or copied within a reasonable time at a cost that does not exceed the cost provided in Chapter 119, Florida Statutes, or as otherwise provided by law.
- C. Ensure that public records that are exempt or confidential and exempt from public records disclosure requirements are not disclosed except as authorized by law for the duration of the Agreement term and following completion or termination of the Agreement if the Contractor does not transfer the records to the County.
- D. Upon completion or termination of the Agreement, transfer, at no cost, to the County all public records in the possession of the Contractor or keep and maintain public records required by the County to perform the service. If the Contractor transfers all public records to the County upon completion or termination of the Agreement, the Contractor shall destroy any duplicate public records that are exempt or confidential and exempt from public records disclosure requirements. If the Contractor keeps and maintains public records upon completion or termination of the Agreement, the Contractor shall meet all applicable requirements for retaining public records. All records stored electronically must be provided to the County, upon request from the County's custodian of public records, in a format that is compatible with the information technology systems of the County.

Requests to inspect or copy public records relating to the County's Agreement for services must be made directly to the County. If Contractor receives any such request, Contractor shall instruct the requestor to contact the County. If the County does not possess the records requested, the County shall immediately notify the Contractor of such request, and the Contractor must provide the records to the County or otherwise allow the records to be inspected or copied within a reasonable time.

Contractor acknowledges that failure to provide the public records to the County within a reasonable time may be subject to penalties under section 119.10, Florida Statutes. Contractor further agrees not to release any records that are statutorily confidential or otherwise exempt from disclosure without first receiving prior written authorization from the County. Contractor shall indemnify, defend, and hold the County harmless for and against any and all claims, damage awards, and causes of action arising from the Contractor's failure to comply with the public records disclosure requirements of section 119.07(1), Florida Statutes, or by Contractor's failure to maintain public records that are exempt or confidential and exempt from the public records disclosure requirements, including, but not limited to, any third party claims or awards for attorney's fees and costs arising therefrom. Contractor authorizes County to seek declaratory, injunctive, or other appropriate relief against Contractor from a Circuit Court in Volusia County on an expedited basis to enforce the requirements of this section.

6. **CLARIFICATION/CORRECTION OF ENTRY/MINOR IRREGULARITIES:** The County of Volusia reserves the right to allow for the clarification of questionable entries and the correction of OBVIOUS MISTAKES. The County

reserves the right to waive minor irregularities in Bid Submittals, providing such action is in the best interest of the County. Minor irregularities are defined as those that have no adverse effect on the County's best interests, and will not affect the outcome of the selection process by giving the Bidder an advantage or benefit not enjoyed by other Bidders.

7. **QUESTIONS, EXCEPTIONS, AND ADDENDA:** It is incumbent upon each Bidder to carefully examine this solicitation's specifications, scope of work/service, terms, and conditions. Questions and exceptions concerning any Section of this Bid shall be directed by letter, facsimile transmission or by e-mail to the Procurement Analyst named in the ITB who shall be the official point of contact for this Bid.

Questions and exceptions shall be submitted no later than fourteen (14) days before the closing date. Thereafter, no further questions or exceptions will be accepted or reviewed by the County and Bidders' right to submit questions or exceptions will terminate and any questions or exceptions not previously made shall be deemed waived. The issuance of a written addendum is the only official method by which interpretation, clarification, or additional information can be given and oral representations will not be binding on the County.

If it becomes necessary for the County to revise any part of this ITB, an addendum will be posted on the County's web site. It is each Bidder's responsibility to check the Volusia County web site for any addenda at [www.volusia.org](http://www.volusia.org). Each Bidder should ensure that they have received all addenda to this ITB before submitting their proposal. In their proposals, Bidders must provide proof of receipt of each addendum by signing and returning each addendum to the County. Failure to provide this proof may cause Bidder's proposal to be rendered non-responsive. Each addendum issued by the County shall become a material part of this solicitation.

8. **INCURRED EXPENSES:** This ITB does not commit the County to make an award nor shall the County be responsible for any cost or expense which may be incurred by any Bidder in preparing and submitting a reply, or any cost or expense incurred by any Bidder prior to the execution of a purchase order or Contract/Agreement.
9. **DISADVANTAGED BUSINESSES:** The County Council has adopted policies, which assure and encourage the full participation of Disadvantaged Business Enterprises (DBE) in the provision of goods and services. The County encourages joint ventures between majority-owned firms and qualified disadvantaged / minority / women-owned firms.
10. **LOCAL PREFERENCE:** The County Council has established a policy to encourage participation of local businesses in the provision of goods and services. The County will endeavor to assist local businesses to achieve this goal.

Effective January 1, 2012, Volusia County adopted a local Bid preference. A Bidder or prime contractor which has a permanent location at least six (6) months prior to the Bid closing, as proven by a business tax receipt, as stated in Volusia County Ordinance 2-269.5 in Lake, Orange, Osceola, Seminole or Volusia County ("Local"), shall be granted a preference of three percent (3%) of the total Bid price or quote. A Bidder which is a prime contractor and is utilizing subcontractors, and the Bid price or quote of the work to be performed by all subcontractors, that qualify as a local business, constitutes fifty-one percent (51%) or greater of the total work to be performed through subcontracting, a two percent (2%) Bid preference will apply. In the event that a prime contractor qualifies for a preference and subcontractor qualifies for a preference, the preference shall not exceed a total of five percent (5%). Preference shall not be given to Bids where the difference of the total Bid price or quote exceeds twenty-five thousand dollars (\$25,000.00) from the nearest competing Bid price or quote for that solicitation or if a county listed in 2-269.5 does not reciprocate, as stated in 2-269.5, the County will not offer a preference to this County.

This Section 10 does not apply to any purchase that is funded, in whole or in part, by an entity prohibiting local preference by grant agreement or applicable federal, state, or local law. Solicitations for emergency purchases subject to Section 2-275 of the Code are additionally exempt. All Bidders, including prime and subcontractors, awarded an Agreement as a part of this process must maintain its status as a local business through the term of the Agreement. Any Bidder, including prime and subcontractors, awarded an Agreement as a result of this preference will be required to post any job openings for this project with the Center for Business Excellence (CBE). Noncompliance with the requirements of this Section 10 will be deemed as a material breach and may be subject to Agreement termination or disqualification from bidding on future projects.



11. **PRICING:** Unless otherwise specified prices offered shall remain firm for a period of at least ninety (90) days from the date of bid opening prior to award; all pricing of goods shall include FOB DESTINATION, all packing, handling, shipping charges and delivery to any point(s) within the County to a secure area or inside delivery; all prices of services shall include all expenses necessary to provide the service at the location specified.
12. **UNUSUAL COSTS:** The Contractor may petition the County at any time for an additional rate adjustment on the basis of extraordinary and unusual changes in the costs of operation that could not reasonably be foreseen by a prudent operator and which, by all reasonable expectations, will continue for at least one (1) year. If the Contractor petitions for such an increase, the Contractor shall also petition for a rate reduction on the basis of extraordinary and unusual changes in the costs of operation that could not reasonably be foreseen by a prudent operator and which, by all reasonable expectations, will continue for at least one (1) year; failure to make such petition may be grounds for Agreement termination.  
  
The Contractor's request shall contain substantial proof and justification to support the need for the rate adjustment. The County may request from the Contractor, and the Contractor shall provide, such further information as may be reasonably necessary in making its determination. The County shall approve or deny the request, in whole or in part, within sixty (60) days of receipt of the request and all other additional information required by the County. Any price redetermination shall be solely based upon the documentation provided and the County reserves the right to rescind any price relief granted should the circumstances change and prices go down.
13. **ADDITIONAL TERMS & CONDITIONS:** The County of Volusia reserves the right to reject offers containing terms or conditions contradictory to those requested in the ITB specifications.
14. **TAXES:** County is exempt from Manufacturers' Federal Excise Tax (Exemption# 49-6000-885) and Florida sales tax (Exemption# 85-8012622393C-9). Certificates are available at [www.volusia.org/purchasing](http://www.volusia.org/purchasing). After accessing the foregoing website, select, "Doing Business with Volusia County" and "Consumer Certificate of Tax Exemption" from the available menu screens to see a copy of the certificates.
15. **PAYMENT TERMS:** Unless otherwise stated in the Special Conditions, the County will remit full payment on all undisputed invoices within forty-five (45) days from receipt by the appropriate person(s) (to be designated at time of Agreement) of the correct invoice(s) or receipt of all products or services ordered in accordance with F.S.S. 218.74
16. **DISCOUNTS:** All discounts except those for prompt payment shall be considered in determining the lowest net cost for evaluation purposes. All discounts shall remain firm for the term of the Agreement
17. **MEETS/MINIMUM SPECIFICATIONS:** The specifications listed in the scope of service are the minimum required performance specifications for this ITB; they are not intended to limit competition nor specify any particular Bidder, but to ensure that the County receives quality services. The Bidder represents that all offers to this ITB shall meet or exceed the minimum requirements specified.
18. **BRAND NAME OR EQUAL:** If items requested by this ITB have been identified in the specifications by a Brand Name "OR EQUAL" description, such identification is intended to be descriptive and not restrictive and is to indicate the quality and characteristics of products that will be acceptable. Offers proposing "equal" products will be considered for award if such products are clearly identified in the offer and are determined by the County to meet fully the salient characteristic requirements listed in the specifications.

Unless the Bidder clearly indicates in his/her offer that he/she is proposing an "equal" product, the offer shall be considered as offering the same brand name product referenced in the specifications.

If the Bidder proposes to furnish an "equal" product, the brand name of the product to be furnished shall be clearly identified. The evaluation of offers and the determination as to equality of the product offered shall be the responsibility of the County and will be based on information furnished by the Bidder. The Purchasing and Contracts Division is not responsible for locating or securing any information which is not identified in the response and reasonably available to the Purchasing and Contracts Division. To insure that sufficient information is available the Bidder shall furnish as part of the response all descriptive material necessary for the Purchasing

and Contracts Division to determine whether the product offered meets the salient characteristics required by the specifications and establish exactly what the Bidder proposes to furnish and what the County would be binding itself to purchase by making an award.

19. **SAMPLES:** When required, samples of products shall be furnished with response to the County at no charge. Samples may be tested and will not be returned to the Bidder. The result of any and all testing shall be made available upon written request.
20. **SILENCE OF SPECIFICATIONS:** The apparent silence of these specifications or any supplemental specifications as to details or the omission from same of any detailed description concerning any point, shall be regarded as meaning that only the best commercial practices are to prevail and that only materials of first quality and correct type, size, and design are to be used. All workmanship shall be first quality. All interpretations of specifications shall be made upon the basis of this statement.
21. **CHANGE IN SCOPE OF WORK/SERVICE:**
- A. The County may order changes in the work/service consisting of additions, deletions, or other revisions within the general scope of the Agreement. No claims may be made by the Contractor that the scope of the project or of the Contractor's services has been changed, requiring changes to the amount of compensation to the Contractor or other adjustments to the Agreement, unless such changes or adjustments have been made by written amendment or change order to the Agreement signed by the County Representative, County Director of Purchasing and Contracts, and the Contractor.
  - B. If the Contractor believes that any particular work/service is not within the scope of work/service of the Agreement, is a material change, or will otherwise require more compensation to the Contractor, the Contractor must immediately notify the County's Representative in writing of this belief. The Contractor and County shall negotiate modifications to the Agreement in good faith and agree upon equitable adjustment for any changes in services or other obligations required of the Contractor due to such modifications. The Contractor must assert its right to an adjustment under this clause within thirty (30) days from the date of receipt of the written order.
  - C. The County reserves the right to negotiate with the awarded Contractor(s) without completing the competitive bidding process for materials, products, and/or services similar in nature to those specified within this ITB for which requirements were not known when the ITB was released.
22. **GOVERNING LAWS/VENUE:** This Agreement shall be interpreted and construed in accordance with and governed by the laws of the state of Florida. Jurisdiction over and venue for any controversies or legal issues arising out of this Agreement shall, if in state court, be exclusively in the 7<sup>th</sup> Judicial Circuit in and for Volusia County, Florida, or, if in federal court, in the Middle District of Florida, Orlando Division. By entering into this Agreement, Contractor and County hereby expressly waive any rights either party may have to a trial by jury of any civil litigation related to this Agreement, and, unless otherwise expressly provided herein, each agrees to bear its own costs and attorney's fees relating to any dispute arising under this Agreement.
23. **ASSIGNMENT:** Contractor may not assign or otherwise convey Contractor's rights and/or obligations under this Agreement without obtaining County's prior written consent, which consent County may withhold, limit and/or condition in County's sole discretion, including, but not limited to, requiring the Contractor or his/her proposed successor in interest to post a performance bond. Any consent by the County under this Section shall be by written amendment to the Agreement in a form and substance specified by the County in its sole discretion. If Contractor desires to assign or otherwise convey its rights and/or obligations under this Agreement, Contractor shall no less than thirty (30) days prior to the assignment's proposed effective date, provide County with a written request for County's consent. Failure to provide such notice may result in the County assessing a processing fee of Five Hundred Dollars (US \$500.00); however, payment of such fee shall not entitle the Contractor to the County's acceptance or approval of its request for assignment.

Nothing herein shall preclude the right of the County to waive its rights under this Section but no waiver shall be granted by the County without a written and duly executed amendment to the Agreement.

24. **CONTENT OF INVITATION/RESPONSE:** The contents of this ITB, all terms, conditions, specifications, and requirements included herein and the accepted and awarded response thereto may be incorporated into an agreement to purchase and become legally binding. Any terms, conditions, specifications, and/or requirements specific to the item or service requested herein shall supersede the requirements of these "GENERAL CONDITIONS AND INSTRUCTIONS."
25. **DISCLOSURE OF BID CONTENT:** All material submitted becomes the property of the County and may be returned only at the County's option. The County has the right to use any or all ideas presented in any reply to this Bid. Selection or rejection of any Bid Submittal does not affect this right. The County of Volusia, Florida, is governed by the Public Record Law, Chapter 119, Florida Statutes (F.S.).
26. **LIMITATION OF LIABILITY/INDEMNIFICATION:** The Contractor shall indemnify, defend and hold harmless the County, including its districts, authorities, separate units of government established by law, ordinance or resolution, partners, elected and non-elected officials, employees, agents, volunteers, and any party with whom the County has agreed by contract to provide additional insured status from and against all claims, damages, losses, and expenses, including, but not limited to attorney's fees, arising out of, resulting from, or incident to Contractor's performance of its obligations in whole or part of this Agreement, unless such injury or damage is occasioned solely by the fault, negligence, or willful misconduct of the County.
- In all claims against County, including its districts, authorities, separate units of government established by law, ordinance or resolution, partners, elected and non-elected officials, employees, agents, volunteers, and any party with whom the County has agreed by contract to provide additional insured status, and any employee of Contractor or anyone directly or indirectly employed by Contractor or anyone for whose acts Contractor may be held legally liable, no indemnification obligation shall be limited in any way by any limitation on the amount or type of damages, compensation or benefits payable by or for Contractor, or any contractor, subcontractor or sub-subcontractor thereof under Florida's Workers' Compensation acts, disability benefit acts, or other employee benefit acts.
27. **INFRINGEMENT CLAIM:** For all licensed software or derivative works of the licensed software used by County under the resulting Agreement, Contractor agrees to protect, defend, indemnify, and hold harmless County, its agents, elected officials and employees of County from and against any and all claims, demands, actions, and causes or action which may arise asserting that all or any part of Contractor's licensed software or applications that are owned and licensed by Contractor to County for use thereof by County, infringes or misappropriates any third party's valid state patent, copyright, trademark, or any trade secret protected under United States law. In the event of an infringement claim, Contractor shall have the option: (i) to procure for County the right to continue using any product or service found to be infringing; (ii) to replace any such infringing product or service with a non-infringing product or service; or (iii) to modify such infringing product or service to make it non-infringing. Contractor shall have no obligation under this Section 27, if the Infringement Claim is based upon the use of the system in combination with other hardware or software applications not furnished by Contractor, or if such a claim arises from County's modification of the system without the authorization of Contractor.
28. **SOVEREIGN IMMUNITY:** County expressly retains all rights, benefits and immunities of sovereign immunity in accordance with Section 768.28, Florida Statutes (as amended). Notwithstanding anything set forth in any Section of this Agreement to the contrary, nothing in this Agreement shall be deemed as a waiver of immunity or limits of liability of the County beyond any statutory limited waiver of immunity or limits of liability which may have been or may be adopted by the Florida Legislature and the cap on the amount and liability of the County for damages, regardless of the number or nature of claims in tort, equity, or contract, shall not exceed the dollar amount set by the legislature for tort. Nothing in this Agreement shall inure to the benefit of any third party for the purpose of allowing any claim against the County, which claim would otherwise be barred under the doctrine of sovereign immunity or by operation of law.
29. **PATENTS, COPYRIGHT, AND ROYALTIES:** The supplier/provider, without exception, shall indemnify and save harmless the County of Volusia, its officers, agents and employees from liability of any nature of kind, including cost and expenses for or on account of any copyrighted, registered, patented, or unpatented invention, process, or article manufactured or used in the provision of goods and/or services, including use by the County of Volusia. If the supplier/provider uses any design, device, or materials covered by letters, patent, copyright, or registration,

it is mutually agreed and understood without exception that the quoted price shall include all royalties or costs arising from the use of such design, device, or materials in any way involved.

30. **USE OF COUNTY LOGO:** The County owns and retains all proprietary rights in its logos, trademarks, trade names, and copyrighted images (Intellectual Property). As such, nothing in this solicitation permits or shall be construed as authorizing Bidder to use or display County's Intellectual Property on Bidder's submittal documents or proposal (including any exhibits attached thereto) submitted to County by or on behalf of Bidder in response to this solicitation. The County has the right to redact the County Logo displayed on any proposal submitted.
31. **TRAINING:** Unless otherwise specified suppliers/providers may be required at the convenience of and at no expense to the County to provide training to County personnel in the operation and maintenance of any item purchased as a result of this ITB.
32. **ACCEPTANCE:** Products purchased as a result of this ITB may be tested for compliance with specifications. Items delivered not conforming to specifications may be rejected and returned at Bidder's expense. Those items and items not delivered by the delivery date specified in accepted offer and/or purchase order may be purchased on the open market. Any increase in cost may be charged against the Bidder.
33. **SAFETY WARRANTY:** Any awarded Contractor including dealers, distributors, and/or manufacturers shall be responsible for having complied with all Federal, State, and local standards, regulations, and laws concerning the product or service specified, and the use thereof, applicable and effective on the date of manufacture or use or date in service including safety and environmental standards as apply to both private industry and governmental agencies.
34. **SAFETY:** The Contractor shall take the necessary precautions and bear the sole responsibility for the safety of the methods employed by the Contractor in performing the work. The Bidder shall at all times comply with the regulations set forth by federal, state, and local laws, rules, and regulations concerning "OSHA" and all applicable state labor laws, regulations, and standards. The Contractor shall indemnify and hold harmless the County from and against all liabilities, suits, damages, costs, and expenses (including attorney's fees and court costs) which may be imposed on the County because of the Contractor, Subcontractor, or supplier's failure to comply with the regulations.
35. **WARRANTY:** The Bidder agrees that, unless otherwise specified, the product and/or service furnished as a result of this ITB and award thereto shall be covered by the most favorable commercial warranty the Bidder gives to any customer for comparable quantities of such products and/or services and that the right and remedies provided herein are in addition to and do not limit any rights afforded to the County of Volusia by any other provision of the ITB/offer.
36. **AWARD:** The County reserves the right to award the Agreement to the Bidder(s) that the County deems to offer the lowest/most responsive and responsible Bid(s), as defined the solicitation. The County is therefore not bound to accept a Bid based only on lowest price. In addition, the County has the sole discretion and reserves the right to cancel this ITB, to reject any/all Bids, to waive any/all informalities and/or irregularities, or to re-advertise with either the identical or revised specifications, if it is deemed to be in the best interest of the County to do so. Nothing prohibits the County from rejecting / rebidding when responses exceed budget and the County must change the solicitation to lower costs. The County also reserves the right to make multiple awards based on experience and qualifications or to award only a portion of the items and/or services specified, if deemed to be in the County's best interest or award only a portion of the solicitation.
37. **OTHER AGENCIES:** All Contractors awarded Agreements from this Bid may, upon mutual agreement, permit any municipality or other governmental agency to participate in the Agreement under the same prices, terms, and conditions, if agreed to by both parties. It is understood that at no time will any city, municipality, or other agency be obligated for placing an order for any other city, municipality, or agency; nor will any city, municipality, or agency be obligated for any bills incurred by any other city, municipality, or agency. Further, it is understood that each agency will issue its own purchase order to the awarded Contractor(s).
38. **FOB DESTINATION:** The F.O.B. point for this Agreement and for all purchases made under it shall be as specified by the using department (in accordance with the Bid Submittal Form), in Volusia County, Florida.

Delivery will not be complete until the using department has accepted each item. Delivery to a common carrier shall not constitute delivery to the ordering agency. All disputes shall be between the Contractor and the carrier.

39. **SPECIAL CONDITIONS:** County facilities are administrative facilities that provide services to the Volusia County public and any agencies that it serves. As such, activities in all buildings are critical to the provisioning of services to the public and shall not be interrupted by the Contractor's work activities.
40. **LICENSES, CERTIFICATES, AND PERMITS**
- A. The County reserves the right to require proof that the Bidder is an established business and is abiding by the ordinances, regulations, and laws of their community and the state of Florida, such as but not limited to: Business Tax Receipts, business licenses, Florida sales tax registration, Federal Employers Identification Number, Registration with the Florida Department of State, Division of Corporations' Sunbiz at [www.sunbiz.org](http://www.sunbiz.org), AND;
- B. The Bidder shall be required, upon notification of recommendation of award, to register with the Florida Department of State Division of Corporations at [www.sunbiz.org](http://www.sunbiz.org) in order to provide services under the resulting Agreement.
- C. If a license is required, the Bidder shall be licensed to perform the required work in accordance with the laws of the State of Florida and local ordinances. Bidder shall also verify that his/her subcontractors are licensed to perform the work in accordance with the laws of the State of Florida and local ordinances.
41. **RECORDS & RIGHT TO AUDIT:** County shall have the right to audit the books, records, and accounts of Contractor and its Subcontractors that are related to the resulting Contract. Contractor and its Subcontractors shall keep such books, records, and accounts as may be necessary in order to record complete and correct entries related to the resulting Contract. Contractor shall preserve and make available, at reasonable times for examination and audit by County, all financial records, supporting documents, statistical records, and any other documents pertinent to this Contract for a retention period of five (5) years after completion or termination of the Contract, and any renewals, as required by Item 65, General Records Schedule GS1-SL for State and Local Government Agencies, effective February 19, 2015 and the Florida Public Records Act (Chapter 119, Florida Statutes). Contractor shall, by written Contract, require its Subcontractors to agree to the requirements and obligations of this Section 40 Audits will be subject to applicable privacy and confidentiality laws and regulations and Contractor's privacy and confidentiality policies and procedures.
42. **CLAIM NOTICE:** The Contractor shall immediately report in writing to the County's designated representative or agent any incident that might reasonably be expected to result in any claim under any of the coverage mentioned herein. The Contractor agrees to cooperate with the County in promptly releasing reasonable information periodically as to the disposition of any claims, including a résumé of claims experience relating to all Contractor operations at the County project site. The designated representative for the County shall be:
- |            |   |
|------------|---|
| Name:      | County of Volusia, Florida              |
|            | Personnel/Risk Management Division      |
| Address:   | 230 North Woodland Boulevard, Suite 250 |
|            | DeLand, Florida 32720                   |
| Telephone: | 386-736-5963                            |
| Fax:       | 386-822-5006                            |
43. **WAIVER OF CLAIMS:** Once this Agreement expires, or final payment has been requested and made, the awarded Contractor shall have no more than thirty (30) calendar days to present or file any claims against the County concerning this Agreement. After that period, the County will consider the Contractor to have waived any right to claims against the County concerning this Agreement.
44. **COMPLIANCE WITH LAWS AND REGULATIONS:** The Contractor shall be responsible to know and to apply all applicable federal and state laws, all local laws, ordinances, rules, regulations, and all orders and decrees of bodies or tribunals having jurisdiction or authority which in any manner affect the work, or which in any way affect the conduct of the work. Contractor shall observe and comply with all such laws, ordinances, rules, regulations,

orders, and decrees for all work or services performed under this Agreement. The Contractor shall protect and indemnify County and all its officers, agents, servants, or employees against any liability or claim made against the County arising from or based on the violation of any such law, ordinance, rule, regulation, order, or decree caused or committed by Contractor, its representatives, Subcontractors, sub-consultants, professional associates, agents, servants, or employees.

At time of Bid submittal, Contractor shall hold the required licensure to be the prime Contractor for all work to be performed under the resulting Agreement. If Contractor proposes to use a Subcontractor or sub-consultant to perform any work under the resulting Agreement such subcontractor and/or sub-consultant shall, at the time of Bid submittal, hold the required licensure for all work to be performed under the resulting Agreement as a subcontractor and shall maintain such license(s) in full force and effect during the term of the resulting Agreement. All licenses and permits required to perform Contractor's duties under the resulting Agreement whether such license or permit is required by the federal government, State of Florida, Volusia County, or any municipality, shall be at Bidder's sole cost and expense, and shall not be a cost of the County. All required licenses and permits shall be maintained in full force and effect during the term of the resulting Agreement.

45. **SCRUTINIZED COMPANIES-FL STATUTE SECTION 287.135 AND 215.473:** Contractor must certify that the company is not participating in a boycott of Israel. For Contracts for goods or services of one million dollars or more, Contractor must also certify that Contractor is not on the Scrutinized Companies that Boycott Israel List, not on the Scrutinized Companies with Activities in Sudan List, and not on the Scrutinized Companies with Activities in the Iran Petroleum Energy Sector List, or has not been engaged in business operations in Cuba or Syria. Subject to limited exceptions provided in state law. The County will not contract for the provision of goods or services with (i) any company participating in a boycott of Israel, and, (ii) for Contracts for goods or services of one million dollars or more, any other scrutinized company as described above. Contractor must submit the certification form (See Section \_\_\_). Submitting a false certification shall be deemed a material breach of contract. The County shall provide notice, in writing, to the Contractor of the County's determination concerning the false certification. The Contractor shall have five (5) Calendar days from receipt of notice to refute the false certification allegation. If such false certification is discovered during the active contract term, the Contractor shall have ninety (90) days following receipt of the notice to respond in writing and demonstrate that the determination of false certification was made in error. If the Contractor does not demonstrate that the County's determination of false certification was made in error then the County shall have the right to terminate the Contract and seek civil remedies pursuant to Section 287.135, Florida Statutes, as amended from time to time.
46. **MODIFICATIONS DUE TO PUBLIC WELFARE OR CHANGE IN LAW:** The County shall have the power to make changes in the Agreement as the result of changes in law and/or ordinances of Volusia County to impose new rules and regulations on the Contractor under the Agreement relative to the scope and methods of providing services as shall, from time to time, be necessary and desirable for the public welfare. The County shall give the Contractor notice of any proposed change and an opportunity to be heard concerning those matters. The scope and method of providing services as referenced herein shall also be liberally construed to include, but is not limited to, the manner, procedures, operations and obligations, financial or otherwise, of the Contractor. In the event any future change in Federal, State or County law or the ordinances of Volusia County materially alters the obligations of the Contractor, or the benefits to the County, then the Agreement shall be amended consistent therewith. Should these amendments materially alter the obligations of the Contractor, then the Contractor or the County shall be entitled to an adjustment in the rates and charges established under the Agreement. Nothing contained in the Agreement shall require any party to perform any act or function contrary to law. The County and Contractor agree to enter into good faith negotiations regarding modifications to the Agreement, which may be required in order to implement changes in the interest of the public welfare or due to change in law. When such modifications are made to the Agreement, the County and the Contractor shall negotiate in good faith, a reasonable and appropriate adjustment for any changes in services or other obligations required of the Contractor directly and demonstrably due to any modification in the Agreement under this clause.
47. **RIGHT TO REQUIRE PERFORMANCE:**
- A. The failure of the County or Contractor at any time to require performance by the other of any provision hereof shall in no way affect the right of the County or Contractor thereafter to enforce same, nor shall waiver by the County of any breach of any provision hereof be taken or held to be a waiver of any succeeding breach of such provision or as a waiver of any provision itself.

- B. In the event of failure of the Contractor to deliver services in accordance with the Agreement terms and conditions, the County, after due written notice, may procure the services from other sources and hold the Contractor responsible for any resulting additional purchase and administrative costs. This remedy shall be in addition to any other remedies that the County may have.
48. **FORCE MAJEURE:** Neither party shall be liable for any failure or delay in the performance of its obligations under the Agreement to the extent such failure or delay necessarily results from the occurrence of a Force Majeure Event beyond the control or reasonable anticipation of either party, including, but not limited to, compliance with any unanticipated government law or regulation not otherwise in effect at the time of execution of this Agreement, acts of God, unforeseeable governmental acts or omissions, fires, strikes, natural disasters, wars, riots, transportation problems, and/or any other unforeseeable cause whatsoever beyond the reasonable control of the parties (and such cause being referred to as a "Force Majeure Event"). Accordingly, the parties further agree that:
- A. Upon the occurrence of Force Majeure Event, the non-performing party shall be excused from any further performance of those obligations under this Agreement that are affected by the Force Majeure Event for as long as (a) the Force Majeure Event continues; and (b) the non-performing party continues to use commercially reasonable efforts to recommence performance whenever and to whatever extent possible without delay.
- B. Upon the occurrence of a Force Majeure Event, the non-performing party shall notify the other party of the occurrence of such event and describe in reasonable detail the effect(s) of such event upon the party's performance of its obligations and duties pursuant to this Agreement. Such notice shall be delivered or otherwise communicated to the other party within two (2) business days following the failure or delay caused by the Force Majeure Event, or as soon as possible after such failure or delay if the Force Majeure Event precludes the non-performing party from providing notice within such time period.
- C. In the event of a Force Majeure Event, the time for performance by the parties under the applicable statement of work shall be extended for a period of time equal to the time lost by reason of such cause through execution of a Change Order pursuant to the terms of the Agreement.
49. **CONTRACTOR'S PERSONNEL:** During the performance of the Agreement, the Contractor agrees to the following:
- A. The Contractor shall not discriminate against any employee or applicant for employment because of race, religion, color, sex, age, handicap, or national origin, except when such condition is a bona fide occupational qualification reasonably necessary for the normal operations of the Contractor. The Contractor agrees to post in conspicuous places, visible to employees and applicants for employment, notices setting forth the provisions of this nondiscrimination clause.
- The Contractor, in all solicitations or advertisements for employees placed by or on behalf of the Contractor, shall state that such Contractor is an Equal Opportunity Employer;
- B. The Contractor shall be responsible for ensuring that its employees, agents, and subcontractors comply with all applicable laws and regulations and meet federal, state, and local requirements related to their employment and position;
- C. The Contractor certifies that it does not and will not during the performance of the Agreement employ illegal alien workers or otherwise violate the provisions of the federal Immigration Reform and Control Act of 1986, as amended;
- D. Notices, advertisements, and solicitations placed in accordance with federal law, rule, or regulation shall be deemed sufficient for the purpose of meeting the requirements of this Section 48;
- E. The Contractor shall include the provisions of the foregoing paragraphs A, B, C, and D, above, in every subcontract or purchase order so that the provisions will be binding upon each Contractor;

- F. The Contractor and any Subcontractor shall pay all employees working on this Agreement not less than minimum wage specified in the Fair Labor Standards Act (29 CFR 510-794) as amended;
- G. Any information concerning the County, its products, services, personnel, policies, or any other aspect of its business learned by the Contractor or personnel furnished by the Contractor in the course of providing services pursuant to the Agreement and exempt from disclosure pursuant to Section 119.01, F.S., shall be held in confidence and shall not be disclosed by the Contractor or any employee or agents of the Contractor or personnel furnished by the Contractor, without the prior written consent of the County; and
- H. Both Contractor and Subcontractors awarded an Agreement as a result of Section 10 **Local Preference**, shall register all open positions related to this Agreement with the Center for Business Excellence (CBE), and submit appropriate affidavit (see Special Conditions Section 11.0 and 12.0) showing compliance.

**50. COUNTY/CONTRACTOR RELATIONSHIP:**

- A. Any awarded Contractor shall provide the services required herein strictly under a contractual relationship with the County and is not, nor shall be, construed to be an agent or employee of the County. As an independent Contractor the awarded Contractor shall pay any and all applicable taxes required by law; shall comply with all pertinent Federal, State, and local statutes including, but not limited to, the Fair Labor Standards Act, The Americans with Disabilities Act, the Federal Civil Rights Act, and any and all relevant employment laws. The Contractor shall be responsible for all income tax, FICA, and any other withholdings from its employees' or Subcontractor's wages or salaries. Benefits for same shall be the responsibility of the Contractor including, but not limited to, health and life insurance, mandatory Social Security, retirement, liability/risk coverage, and workers' and unemployment compensation.
- B. The Contractor shall hire, compensate, supervise, and terminate members of its work force; shall direct and control the manner in which work is performed including conditions under which individuals will be assigned duties, how individuals will report, and the hours individuals will perform.
- C. The Contractor shall not be provided special space, facilities, or equipment by the County to perform any of the duties required by the Agreement, nor shall the County pay for any business, travel, or training expenses or any other Agreement performance expenses not explicitly set forth in the specifications.
- D. The Contractor, except as expressly set forth herein, shall not be exclusively bound to the County and may provide professional services to other private and public entities as long as it is not in direct conflict and does not provide a conflict of interest with the services to be performed for the County.

**51. DISQUALIFICATION OF BIDDERS:** One (1) Bid: Only one (1) Bid submittal from an individual firm, partnership or corporation under the same or under different name will be considered. If a Bidder submitted more than one (1) Bid for the work involved, all Bids submitted from such Bidder will be rejected. Collusion among Bidders: If it is believed that collusion exists among the Bidders, the Bids of all participants in such collusion shall be rejected and no participants in such collusion will be considered in future proposals for the same work.

**52. DEBARMENT: Purpose and Intent.** The county endeavors to solicit offers from, award contracts to, and consent to subcontracts with responsible vendors and contractors only. To further this policy, the county asserts its authority to debar certain vendors and contractors from participating in solicitations pursuant to the policies and procedures herein. The serious nature of debarment requires that this sanction be imposed only when it is in the public interest for the county's protection and not for purposes of punishment. Debarment is intended as a remedy in addition to, and not in substitution of, the evaluation of the responsibility of county vendors and contractors, and this policy and the procedures provided for herein shall not supplant or supersede county's authority to reject or otherwise terminate vendors or contractors based on findings of non-responsibility on a case-by-case basis. Further information regarding the County's policies and procedures in regards to DEBARMENT may be found at <https://www.volusia.org/core/fileparse.php/5896/urlt/Debarment-Policy-final-3-27-17.pdf>

**53.** For purposes of this ITB and evaluation of responses hereto the following shall apply: unit prices shall prevail over extended prices; written matter shall prevail over typed matter; numbers spelled in word form shall prevail over Arabic numerals ("one" over "1"). When not inconsistent with context words used in the present tense



include the future, words in the plural number include the singular number, and words in the singular number include the plural number. The word "shall" is always mandatory and not merely directory.

**54. DISPUTE RESOLUTION**

Good Faith Efforts to Resolve. The parties to this Agreement shall exercise their best efforts to negotiate and settle promptly any dispute that may arise with respect to this Agreement in accordance with the provisions set forth in this Section 53, Dispute Resolution. The Contractor and County Project Manager shall use reasonable efforts to arrange personal meetings and/or telephone conferences as needed, at mutually convenient times and places, to address and work toward resolution of issues that arise in performance of this Agreement and any applicable statement of Work or Services. Issues shall be escalated to successive management levels as needed.

Informal Dispute Resolution. If a dispute develops between the parties concerning any provision of this Agreement, or the interpretation thereof, or any conduct by the other party under these agreements, and the parties are unable to resolve such dispute within five (5) business days or longer, that party, known as the Invoking Party, through its applicable Project Manager, shall promptly bring the disputed matter to the attention of the non-Invoking Party's Project Manager or designated representative, as the case may be, of the other party in writing ("Dispute Notice") in order to resolve such dispute.

Discovery and Negotiation / Recommended Procedures. Upon issuance of a Dispute Notice, the Project Managers or designated representative shall furnish to each other all non-privileged information with respect to the dispute believed by them to be appropriate and germane. The Project Managers shall negotiate in an effort to resolve the dispute without the necessity of any formal proceeding. If such dispute is not resolved by the Project Managers or designated representative within five (5) County Work Days of issuance of the Dispute Notice, or such other time as may be mutually allowed by the Project Managers as being necessary given the scope and complexity of the dispute, the Project Managers may, depending upon the nature, scope, and severity of the dispute, escalate the dispute as indicated below:

County Work Days	Contractor's Representative	County Representative
10	Contractor's Project Manager	County's Project Manager
10	Contractor's Sr. Vice President of Sales	Director of Purchasing and Contracts
20	Contractor's COO or President	Deputy County Manager

Formal Dispute Resolution. At any point after issuance of a Dispute Notice under this section, either party may request and initiate formal non-binding mediation before a single mediator, which mediation shall be completed within thirty (30) days of initiation or such longer time as may be agreed upon by both parties as being necessary for the mutual selection of a mediator and scheduling of such mediation. Any such mediation shall be convened and conducted in accordance with the rules of practice and procedure adopted by the Supreme Court of Florida for court-ordered mediation, Rule 1.700 et seq. of the Florida Rules of Civil Procedure, and Chapter 44, Florida Statutes. If the dispute remains unresolved after conducting such mediation, then either party may proceed to finalize any pending termination remedies and commence litigation in a court of competent jurisdiction. Each party shall bear its own costs and attorney's fees for mediation or arbitration of an issue arising under this Agreement.

Right to Terminate Reserved. Regardless of the dispute resolution procedures provided for in this Section 53, Dispute Resolution, nothing herein shall affect, delay, or otherwise preclude a party from terminating this Agreement in accordance with the provisions of Special Conditions, Termination, it being understood that these dispute resolution procedures are intended as a means of resolving disputes both during the term of this Agreement and after termination or expiration thereof.

1. **Required Types of Insurance**

The Contractor shall purchase and maintain at its own expense, during the term of the Agreement, the types and amounts of insurance with limits no less than those shown below, in the form and from companies satisfactory to the County are detailed in *Figure 1* below. *Figure 1* is a listing and general summary of insurance policies required and is not intended to be comprehensive as to the requirements of each specific policy. Contractors shall review the additional requirements in this Exhibit II and ensure that the insurance policies comply with the specific terms and conditions therein.

**Figure 1:**

TYPE OF INSURANCE	
<b>WORKERS COMPENSATION</b> <input checked="" type="checkbox"/> Waiver of Subrogation <input type="checkbox"/> Longshore & Harbor Workers' Act, Jones Act, & Maritime Coverage Endorsement	Florida Statutory Coverage
<b>COMMERCIAL GENERAL LIABILITY</b> <input checked="" type="checkbox"/> Occurrence Basis <input checked="" type="checkbox"/> Blanket Contractual Liability <input checked="" type="checkbox"/> Waiver of Subrogation <input checked="" type="checkbox"/> County Additional Insured (Utilizing both ISO forms CG 20 37 for products & completed ops <u>and</u> CG 20 38 for premises & operations) <input type="checkbox"/> County Additional Named Insured <input checked="" type="checkbox"/> Independent Contractors <input type="checkbox"/> Blanket additional insured endorsement <input type="checkbox"/> Project specific <input type="checkbox"/> Location specific	EACH OCCURRENCE \$ 1,000,000
	GENERAL AGGREGATE \$ 2,000,000
	Premises-Operations \$ 1,000,000
	Products & Completed Ops \$ 1,000,000
	Personal & Adv Inj. \$ 1,000,000
	Fire Damage \$
	\$
<b>AUTO LIABILITY</b> <input checked="" type="checkbox"/> Any Auto <input checked="" type="checkbox"/> Contractor, its subcontractors & independent contractors shall name County as Additional Insured <input checked="" type="checkbox"/> Subcontractors & independent contractors shall maintain same policy limits, terms, conditions required of general contractor <input type="checkbox"/> MCS 90 <input type="checkbox"/> Broadened Pollution Liability Endorsement CA 99 48 03 06	Combined Single Limit \$ 1,000,000
	Bodily Injury (Per person) \$
	Bodily Injury (Per accident) \$
	Property Damage (Per Accident) \$
	\$
<i>Note: If contractor does not have "Coverage Symbol 1: Any Auto", contractor is limited to use of covered autos only.</i>	
<b>EXCESS LIABILITY</b> <input checked="" type="checkbox"/> Umbrella Form (Follow Form Basis) CGL & Auto <input checked="" type="checkbox"/> County Additional Insured <input type="checkbox"/> County Additional Named Insured <input type="checkbox"/> Project Specific <input type="checkbox"/> Location Specific	\$ 1,000,000 per Occurrence/Aggregate
<i>Note: If County cannot be added as additional insured, then policy shall be endorsed to provide additional insured status if required on the primary policy.</i>	

<b>CANCELLATION: Thirty (30) days written notice of cancellation is required to the Certificate Holder:</b>	
<b>Certificate Holder:</b>  County of Volusia Purchasing & Contracts Division 123 W. Indiana Avenue, Room 302 DeLand, FL 32720  ATTN: <u>Ron Falanga</u>	Risk Management Division  <hr style="width: 50%; margin: auto;"/>

- A. For the purposes of indemnification of the County or an endorsement or insurance coverage under this Agreement/Contract under which the County is a "named insured", "additional named insured", or "additional insured", the term "County" includes the County of Volusia (a body corporate and politic and a subdivision of the State of Florida), including its districts, authorities, separate units of government established by law, ordinance or resolution, partners, elected and non-elected officials, employees, agents, volunteers, and any party with whom the County has agreed by contract to provide additional insured status.
- B. Claims Made Basis Insurance Policies. All insurance policies written on a Claims Made Form shall maintain a retroactive date prior to or equal to the effective date of the Agreement. The Contractor shall purchase a Supplemental Extended Reporting Period ("SERP") with a minimum reporting period of not less than three (3) years in the event the policy is canceled, not renewed, switched to occurrence form, or any other event which requires the purchase of a SERP to cover a gap in insurance for claims which may arise under or related to the Agreement. The Contractor's purchase of the SERP shall not relieve the Contractor of the obligation to provide replacement coverage. In addition, the Contractor shall require the carrier immediately inform the Contractor, the County Risk Manager, and the Purchasing and Contracts Division of any contractual obligations that may alter its professional liability coverage under the Agreement.
- C. Risk Retention Groups and Pools. Contractor shall not obtain an insurance policy required under this Agreement from a Risk Retention Group or Pool.
- D. Minimum Required Policies and Limits. Minimum underlying policies, coverages, and limits shall include all policies listed in *Figure 1*.
- E. Additional Insured, Policies, Coverages, Limits, Primary and Non-Contributory Basis. Under all insurance policies where the County is required to be an additional insured, the coverage and limits provided to the County under Contractor's insurance policies shall be that listed in *Figure 1* or the Contractor's actual limits, whichever is higher. All coverage provided to the County as an additional insured by said policies shall be primary and shall not be additional to or contributing with any other insurance carried by or for the benefit of the County with any other insurance available to the County. The Contractor shall utilize ISO Form CG 20 38 04 13 or equivalent to provide additional insured status to the County and any party to whom the County is contractually bound to provide additional insured status under a commercial general liability policy.
- F. If the services provided require the disposal of any hazardous or non-hazardous materials off the job site, the disposal site operator must furnish a certificate of insurance for Pollution Legal Liability with coverage for bodily injury and property

damage for losses that arise from the facility that is accepting the waste under the Agreement.

- G. Workers' Compensation Insurance. Workers' Compensation insurance is required for all employees of the Contractor, employed or hired to perform or provide work or services under the Agreement or that is in any way connected with work or services performed under the Agreement, without exclusion for any class of employee, and shall comply fully with the Florida Workers' Compensation Law (Chapter 440, Florida Statutes, Workers' Compensation Insurance) and include Employers' Liability Insurance with limits no less than the statutory. Policy shall include a waiver of subrogation in favor of the County. If Contractor is using a "leased employee" or an employee obtained through a professional employer organization ("PEO"), Contractor is required to have such employees covered by worker's compensation insurance in accordance with Florida Worker's Compensation law and the insurance carrier of the PEO execute a waiver of subrogation in favor of the County, its employees and insurers.
- i. Contractor and its Subcontractors, or any associated or subsidiary company doing work on County property or under the Agreement must be named in the Workers' Compensation coverage or provide proof of their own Workers' Compensation coverage, without exclusion of any class of employee, and with a minimum of the statutory limits per occurrence for Employer's liability coverage. Further, if the Contractor's Subcontractors fail to obtain Workers' Compensation insurance and a claim is made against the County by the uncovered employee of said Subcontractor of the Contractor, the Contractor shall indemnify, defend, and hold harmless the County from all claims for all costs including attorney's fees and costs arising under said employee(s) Workers' Compensation insurance claim(s).
- H. Commercial General Liability Insurance. The Contractor shall acquire and maintain Commercial General Liability insurance, with limits of not less than the amounts shown above. Contractor shall not obtain an insurance policy wherein the policy limits are reduced by defense and claim expenses. Such insurance shall be issued on an occurrence basis and include coverage for the Contractor's operations, independent Contractors, Subcontractors and "broad form" property damage coverages protecting itself, its employees, agents, Contractors or subsidiaries, and their employees or agents for claims for damages caused by bodily injury, property damage, or personal or advertising injury, and products liability/completed operations including what is commonly known as groups A, B, and C. Such policies shall include coverage for claims by any person as a result of actions directly or indirectly related to the employment of such person or entity by the Contractor or by any of its Subcontractors arising from work or services performed under the Agreement. Public liability coverage shall include either blanket contractual insurance or a designated contract contractual liability coverage endorsement, indicating expressly the Contractor's Agreement to indemnify, defend and hold harmless the County as provided in the Agreement. The commercial general liability policy shall provide coverage to County when it is required to be named as an additional insured either by endorsement or pursuant to a blanket additional insured endorsement, for those sources of liability which would be covered by the latest edition of the standard Commercial General Liability Coverage Form (ISO Form CG 00 01), as filed for use in the State of Florida by the Insurance Services Office, without the attachment of any endorsements excluding or limiting coverage for Bodily Injury, Property Damage,

Products/Completed Operations, Independent Contractors, Property of County in Contractor's Care, Custody or Control or Property of County on which contracted operations are being performed, Explosion, Collapse or Underground hazards (XCU Coverage, Contractual Liability or Separation of Insureds. When County is added as additional insured by endorsement, ISO Endorsements CG 20 10 and CG 20 37 or their equivalent shall be used and shall provide such additional insured status that is at least as broad as ISO form CG 20 10 11 85. If County has agreed by separate contract to require Contractor to name another party as an additional insured, Contractor shall add said party as an additional insured to the commercial general liability policy by ISO Endorsement CG 20 38. Contractor shall require its subcontractors performing work under this Agreement to add the County and any other party that the County has agreed by separate contract to require Contractor to name as an additional insured to their Commercial General Liability policy as an additional insured by ISO Endorsement CG 20 38. All commercial general liability policies shall provide a waiver of subrogation in favor of the County and any other party required by this Agreement to be named as an additional insured. The commercial general liability policy shall be provided on a project or location specific basis for the location or project site where the work or services are to be performed under the Agreement. In the alternative, the commercial general liability policy shall be endorsed to provide the designated aggregate per location endorsement or equivalent on a form approved or requested by the County Risk Manager.

- I. Excess/Umbrella Liability. Umbrella or Excess Liability policies may be used to obtain the total limits of liability required to meet the required limits of coverage stated above. These policies shall be written on a follow form basis subject to the same terms, definitions, exclusions and conditions as the primary policies. These policies shall contain a dropdown coverage provision as well as a duty to defend. Evidence of such coverage should clearly demonstrate the underlying coverages/policies that are included.

The Contractor shall obtain an excess liability policy in addition to the scheduled underlying policies (commercial general liability, business auto liability, professional, and employers' liability) with a limit of no less than the amount shown above. This insurance shall name the County as an additional insured and include either blanket contractual or a designated contract contractual coverage endorsement, indicating expressly the Contractor's agreement to hold the County harmless. The commercial general liability policy shall be provided on a project or location specific basis for the location or project site where the work or services are to be performed under the Agreement. In the alternative, the commercial general liability policy shall be endorsed to provide the designated aggregate per location endorsement or equivalent on a form approved or requested by the County Risk Manager.

- J. Motor Vehicle Liability. The Contractor shall secure and maintain during the term of the Agreement motor vehicle coverage in the split limit amounts of no less than the amounts shown in *Figure 1* per person, per occurrence for bodily injury and for property damage or a combined single limit of the amount shown above with **"Any Auto"**, **Coverage Symbol 1, providing coverage for all autos operated regardless of ownership, and** protecting itself, its employees, agents or lessees, or subsidiaries and their employees or agents against claims arising from the ownership, maintenance, or use of a motor vehicle. The County shall be an additional insured under this policy when required in *Figure 1*.

- K. Primary and Excess Coverage. Any insurance required may be provided by primary and excess insurance policies.

2. Insurance Requirements

A. General Insurance Requirements:

- i. All insurance policies shall be issued by insurers licensed and/or duly authorized under Florida Law to do business in the State of Florida and all insuring companies are required to have a minimum rating of A- and a Financial category size of VIII or greater in the "Best Key Rating Guide" published by A.M. Best & Company, Inc.
- ii. Approval by County of any policy of insurance shall not relieve Contractor from its responsibility to maintain the insurance coverage required herein for the performance of work or services by the Contractor or its Subcontractors for the entire term of the Agreement and for such longer periods of time as may be required under other clauses of the Agreement.
- iii. Waiver of Subrogation. The Contractor hereby waives all rights against the County and its Subcontractors for damages by reason of any claim, demand, suit or settlement (including workers' compensation) for any claim for injuries or illness of anyone, or perils arising out of the Agreement. The Contractor shall require similar waivers from all its Subcontractors. Contractor's insurance policies shall include a waiver of subrogation in favor of the County. This provision applies to all policies of insurance required under the Agreement (including Workers' Compensation, and general liability).
- iv. County Not Liable for Paying Deductibles. For all insurance required by Contractor, the County shall not be responsible or liable for paying deductibles for any claim arising out of or related to the Contractor's business or any Subcontractor performing work or services on behalf of the Contractor or for the Contractor's benefit under the Agreement.
- v. Cancellation Notices. During the term of the Agreement, Contractor shall be responsible for promptly advising and providing the County Risk Manager and the Purchasing and Contracts divisions with copies of notices of cancellation or any other changes in the terms and conditions of the original insurance policies approved by the County under the Agreement within two (2) business days of receipt of such notice or change.
- vi. Deductibles. Contractors that maintain and administer a self-insured retention or a large deductible program exceeding the insurance requirements listed in this solicitation using a formal program to fund either program may submit an exception in accordance with Section 2.4 of ITB #18-B-161RF, Questions, Exceptions, and Addenda, to be considered for this solicitation.

The request must include a summary of the program's design, funding method, and the program's supporting financial information. If additional information is necessary, the County will request more specific information, which must be provided by the Contractor. The County Risk Manager will

review the information submitted and determine whether the program is acceptable to the County.

Contractors with no formal risk management program in place to manage and fund deductibles or self-insured retentions may not be considered. Subject to County approval, Contractor may obtain a letter of credit in the amount equivalent to the deductible, which shall remain in effect during the term of the Agreement at no additional cost to the County.

**3. Proof of Insurance**

- A. The Contractor shall be required to furnish evidence of all required insurance in the form of certificates of insurance, which shall clearly outline all hazards covered as itemized herein, the amounts of insurance applicable to each hazard and the expiration dates.
  - B. The Contractor shall furnish proof of insurance acceptable to the County prior to or at the time of execution of the Agreement and the Contractor shall not commence work or provide any service until the Contractor has obtained all the insurance required under the Agreement and such insurance has been filed with and approved by the County. Upon request from the County, the Contractor shall furnish copies of all requested policies and any changes or amendments thereto, immediately, to the County, the County Risk Manager, and Purchasing and Contracts Divisions, prior to the commencement of any contractual obligations. The Agreement may be terminated by the County, without penalty or expense to County, if at any time during the term of the Agreement proof of any insurance required hereunder is not provided to the County.
  - C. All certificates of insurance shall clearly indicate that the Contractor has obtained insurance of the type, amount and classification required by this Section. No work or services by Contractor or its Subcontractors shall be commenced until County has approved these policies or certificates of insurance. Further, the Contractor agrees that the County shall make no payments pursuant to the terms of the Agreement until all required proof or evidence of insurance has been provided to the County. The Agreement may be terminated by the County, without penalty or expense, if proof of any insurance required hereunder is not provided to the County.
  - D. The Contractor shall file replacement certificates with the County at the time of expiration or termination of the required insurance occurring during the term of the Agreement. In the event such insurance lapses, the County expressly reserves the right to renew the insurance policies at the Contractor's expense or terminate the Agreement but County has no obligation to renew any policies.
4. The provisions of this Exhibit II, shall survive the cancellation or termination of the Agreement.

**TECHNICAL PROVISION**  
**TP-101**  
**MOBILIZATION**

The work specified in this Technical Provision consists of the preparatory work and operations in mobilizing for beginning work on the project and shall conform with the requirements of Section 101 of the Florida Department of Transportation Standard Specifications for Road and Bridge Construction latest edition except as amended hereinafter.

Perform preparatory work and operations in mobilizing for beginning work on the project including, but not limited to, those operations necessary for the movement of personnel, equipment, supplies, and incidentals to the project site and for the preparation and posting of homeowner notifications, establishment of temporary offices, buildings, safety equipment and first aid supplies, and sanitary and other facilities. This item shall not include ongoing cost for above items.

Include the costs of all required permits, including the National Pollutant Discharge Elimination System permit, and any preconstruction expense necessary for the start of the work, excluding the cost of construction materials.

**Pre-Construction Conference:** A Pre-Construction Meeting will be held at a location selected by the County to verify and agree on the square yardage of the project prior to beginning work on any assigned task. Names and phone numbers of key personnel of both Contractor and Owner shall be exchanged at the Pre-Construction Meeting. An anticipated schedule for completion of the work, including an adequate breakdown of tasks for each roadway included in the assignment shall be provided to the owner for review and approval at the Pre-Construction meeting. Any necessary updates to emergency contacts information shall be exchanged promptly, throughout the construction period. All required paperwork must be submitted at or before the Pre-Construction Meeting and notices to businesses and residences as required in TP-102 shall be submitted for review and approval. Attendees must include, at minimum, the project superintendent and on-site foreman, the project inspector and other key personnel as may be needed for proper understanding of the project.

**Method of Measurement:** A pay item for Mobilization is listed in the bid form for work specified in this technical provision. Unit of measure for Mobilization will be each mobilization for each separate process. All work of a particular type per Task Authorization shall be completed with one mobilization fee. No separate mobilization will be considered for work defined above on the same Task Authorization when mobilization was measured on the same type of work previously.

**Basis of Payment:** Payment will be Each, as listed on the bid form for mobilization as measured above.



## TECHNICAL PROVISION

### TP 102

#### MAINTENANCE OF TRAFFIC (MOT) AND DUST ABATEMENT

The work specified in this Technical Provision consists of maintaining traffic within the project limits during the entire construction period and shall comply with the requirements of Section 102 of the Florida Department of Transportation Standard Specifications for Road and Bridge Construction latest edition, the Florida Department of Transportation Roadway and Traffic Design Standards latest edition, Index 600 series and 700 series, Florida Department of Transportation's Plans Preparation Manual, Chapter 10, Work Zone Traffic Control latest edition, and Part VI, The Federal Highway Administration's Manual on Uniform Traffic Control Devices latest edition except as amended hereinafter.

The Contractor's work shall include any temporary suspensions of work, preparing approved traffic control plans, providing facilities, devices, and operations as required for access to residences and businesses along the project and for the safety and convenience of the public and to minimize public nuisance, installing, and maintaining traffic control markings, signs, and safety devices, and any other special requirements for safe and expeditious movement of traffic in the project area and other impacted areas as specified herein.

Regardless of the MOT standards and specific traffic control plan used, it shall be the Contractor's responsibility to maintain the work zone in a safe condition.

**Work Zone Traffic Supervisor:** The Contractor shall provide, at no additional cost to the County, a Work Zone Traffic Supervisor who has successfully completed advanced training in Maintenance of Traffic, and in general conformance to Section 5-8.4 of the Florida Department of Transportation Standard Specifications for Road and Bridge Construction, latest edition. The Contractor shall provide a copy of the Work Zone Traffic Supervisor's training certification at the preconstruction conference. The Maintenance of Traffic Plan shall be installed, maintained and removed under the direct supervision of an individual who has successfully completed intermediate or advanced training in Maintenance of Traffic.

**Traffic Control Plan:** Preparing detailed work zone traffic control plans for the Engineer's approval is included in this Technical Provision. The plans prepared shall indicate a traffic control plan for each phase of the Contractor's activities. The Contractor may not begin work until a traffic control plan is approved in writing by the County. Traffic control plans modifications require the County's written approval. Except in an emergency, no changes to the approved plan are allowed until written approval is received. The approved traffic control plan shall be available on site at all times.

**Maintenance of Detours:** The Contractor shall repair, at his expense, all potholes and other localized failures on streets used as detour routes and haul roads to simplify construction operations.

**Replacement of Traffic and Street Signs:** The Contractor shall re-erect all existing traffic and street signs within the project site moved or relocated during construction.

**Replacement of Striping and Traffic Markings:** The contractor shall replace, upon completion of the work, all traffic stripes and pavement marks in their original locations unless directed otherwise by the County. Painted traffic stripes and markings are acceptable as detailed in these Technical Provisions.

**Specific Requirements:** The work and payments for MOT includes the following:

1. All existing roads will be kept open to two-way traffic during construction, except where otherwise approved in the MOT plan. The Contractor will maintain one lane of traffic minimum in each direction (each lane 11-foot wide minimum) at all times by using existing or constructing temporary pavement.
2. Temporary pavement will consist of six-inch thick suitable base and one-inch thick asphalt concrete surface.
3. Construction of major side streets should be phased similarly to maintain one lane of traffic in each direction (each lane 11-foot wide minimum) at all times by using existing or constructing temporary pavement.
4. The Contractor shall remove any existing striping conflicting with MOT during construction and provide adequate signing and/or striping.
5. Alternate access shall be provided to all residences and businesses whenever construction interferes with the existing means of access. The Contractor is not permitted to isolate residences or businesses.
6. Major intersections shall have through movements maintained at all times during construction except during short periods of time approved by the County Traffic Engineer's Representative.
7. Traffic shall be maintained on paved, dust free surfaces at all times.
8. The Contractor is responsible for establishing a work schedule so that any location under construction will not be left in hazardous condition at the completion of any work period.
9. When construction activities require flagmen for traffic control, the Contractor will employ the appropriate number of trained, competent flagmen, and will provide them with appropriate equipment in good condition.
10. Temporary approaches or crossings and intersections with trails, roads, streets, businesses, parking lots, residences, and garages will be provided and maintained in a safe condition by the Contractor. The Contractor shall take precautions to protect the work and the safety of the public.

11. All homeowners, residents and businesses affected by the construction shall be notified in writing by letter two (2) days in advance of the work and suitable signs shall be posted at each end of the project limits. The notice shall be of the door hanger type, which secures to the door handle of each location. Unsecured notices will not be allowed. The contractor shall also place the notice on the windshield of any parked cars on the street. Should work not occur on the specified day, a new notification shall be distributed. The notification shall state the time and date that the work will take place, a current phone number of the contractor's on-site supervisor and a brief description of work being performed. The contractor will be responsible for contacting local affected waste collection companies, United States Mail Carriers, United Parcel Services, Police and Law Enforcement, County and Municipal Fire Services etc. ahead of time to notify of the day that work is planned and how it may affect their operation. Failure to do so will result in delay of the operations.
12. Driveway blockage during construction shall be consciously minimized so as to reduce inconvenience to local residence. In no case shall a driveway be blocked without prior knowledge of the home or business owner or tenant.

**Dust Abatement:**

**General:** Dust abatement shall consist of applying, when ordered, water or dust palliative for abatement of dust nuisance originating within the project limits. The methods, materials, and procedures for dust abatement shall be subject to approval by the County Engineer. Dust abatement operations shall be performed by the Contractor at the time, location, and in the amount ordered by the County Engineer. Dust abatement operations shall be on-call for operation on a 12-hour per day, seven-day per week basis as necessary.

**Water:** Water used for dust control shall be furnished and applied by means of vehicle-mounted tanks equipped with suitable sprinkling devices and in the quantities ordered by the County Engineer. The water used for dust abatement may be obtained from any approved pond, lake, stream, or municipal water system. The water shall be free of excess silt, excess and harmful chemicals, acids, alkalis, or any substance which might be obnoxious to traffic or might be harmful to plant growth. Salt water shall not be used.

**Vehicle for Application:** The vehicle for applying water for dust abatement shall be equipped with an approved metering device, installed at such point on the vehicle as to measure the water at the time of its application. The vehicle may be equipped with a calibrated tank when approved by the County.

**Method of Measurement.**

No pay item is listed on the Bid Form for work required in this Technical Provision. The quantity to be paid shall be included in the quantities measured for which items as listed in this Technical Provision are incidental. This includes all items of work described herein and in Section 102 of the Florida Department of Transportation Standard Specifications for Road and Bridge Construction. These items include but are not limited

to driveway maintenance, temporary pavement marking, temporary signing, barricades and flagmen.

**Basis of Payment:**

The quantities to be paid for under this Technical Provision shall be included in the Unit Prices for work to which it is incidental, for instance Microsurfacing (Single application) or Painted Traffic Stripe. The unit prices include all work listed in their respective Technical Provision plus items listed in the contract, including all General Conditions, Special Conditions and Technical Provisions, including all items of work described herein, in the plans, and in Section 102 of the Florida Department of Transportation Standard Specifications for Road and Bridge Construction.

**TECHNICAL PROVISION****TP-271****FULL DEPTH RECLAMATION WITH PORTLAND CEMENT**

This work shall consist of the preparation of a stabilized base course composed of a mixture of the existing bituminous concrete pavement, existing base course material and cement and other additives. The manufacture of the stabilized base course shall be done by in-place pulverizing and blending of the existing pavement and base materials, and the introduction of cement or additives if called for in the Special Conditions. The process which results in a stabilized base course, shall be accomplished in accordance with these specifications and conform to the lines and grades established by the engineer.

Existing asphalt pavement shall be pulverized by a method that does not damage the material below the plan depth as shown on the appropriate roadway section.

**Materials:**

**RAP:** Materials must meet all requirements specified in the 2010 Florida Department of Transportation Standard Specifications for Road and Bridge Construction 283-2, except that 98% of all material is required to pass through a 50 mm (2 inch) sieve.

**Additional Base Materials:** Additional base materials may be needed for adjusting grade elevations as directed by the engineer, or for widening. When such additional material is required it shall be among those bases listed in FDOT Design Standards as General Use Optional Base Materials and meet applicable FDOT requirements for such.

**Portland Cement:** Portland Cement shall be type I or II and conform to the latest standard requirements of ASTM C150 and AASHTO M85, for the type specified.

**Water:** The water for the base course shall be clean and free from sewage, oil, acid, strong alkalis, or vegetable matter and it shall be in sufficient supply for mixing and curing. Water of questionable quality shall be tested in accordance with the requirements of AASHTO T 26.

**Soil:** The soil base to be reclaimed shall be evaluated by a professional geotechnical engineering laboratory to determine suitability in the stabilization process. The soil shall be free of roots, sod, weeds, and shall not contain gravel or stone retained on a 1-inch (25 mm) sieve, or more than 45% retained on a No. 4 (4.75 mm) sieve, as determined by ASTM C 136.

**Equipment:**

**Road Reclaimer:** Shall be originally designed for pavement reclaiming of a size equal to or larger than a Caterpillar Model RM-350B with comparable specifications including horsepower and rotor size. The reclaimer shall be capable of pulverizing and mixing pavement, base materials, and subgrade soil to depth of 16 inches. It shall have the capability of introducing and metering additives uniformly and accurately and that positive displacement pumps accurately meter the planned amount of water and cement material into the mixture. The reclaiming machine shall mix the cement additive thoroughly with the RAP and soil materials. The pump shall be mechanically or electronically interlocked with the ground speed of the machine. The cement metering system and water metering system shall be capable of continuously monitoring (GPM) flow, and totaling the quantity of water and cement applied into the mixing chamber. Additives shall be uniformly distributed and mixed with the pulverized material, any existing underlying material as specified.

**Motor Grader:** Shall be of sufficient size and horsepower to adequately rough grade the pulverized base and rough and finish grade the mixed and compacted base. The equipment shall be in good working

order free from leaks and capable of maintaining an accurate grade and cross-slope.

**Rollers:** Shall be in good working order free from leaks and capable of compacting the mix to the requirements of this specification: Vibratory rollers shall be a minimum of 10 tons and capable of rolling in either vibratory or static mode. Three wheel static rollers shall be a minimum of 11 tons. Pneumatic tire rollers shall have a minimum of 9 oscillating wheels with smooth, low pressure tires (pressure shall be equally matched in all tires within 5 PSI) and weigh at least 20 tons. Initial compaction shall be accomplished by either single or dual drum vibratory or three wheel roller static rollers.

**Cement Delivery Equipment:** Apply the cement by use of a mobile cement mixer trailer capable of mixing predetermined ratios of cement and water connected to the reclaimer for introduction into the pulverized base. Alternately, a cyclone, screw-type or pressure-manifold type distributors may be used with a curtain to accurately place the determined amount of cement onto the pulverized base for mixing.

**Additional equipment:** Additional equipment will be needed to complete the operations required by this technical provision. All equipment necessary for the successful completion of projects governed by this technical provision shall be included in the unit costs associated herein. Availability of quality assurance devices (such as a 15' straight edge) shall be the responsibility of the Contractor.

### **Construction:**

**Layout:** The Contractor will be responsible for the string lining and lay out of the roadway prior to paving. Elevations of the existing road must be referenced at sufficient intervals to ensure the roadway elevation is not changed in any location after final surface is placed. Method for layout and line and elevation reference must be approved by the engineer prior to beginning work. It is imperative that roadway elevations remain unchanged except cross slope correction or as approved by the engineer.

**Weather and Seasonal limitations:** The soil-cement base shall not be mixed or placed while the atmospheric temperature is below 35 F (2 C) or when conditions indicate that the temperature may fall below 35 F (2 C) within 24 hours, or when the weather is foggy or rainy, or when the soil or sub grade is frozen.

**Mix Design:** Prior to base course construction, a minimum of one (1) core sample must be taken for every 5,000 square yards of the roadway. Representative samples of the RAP material, underlying base material and virgin materials, where applicable, shall be supplied to a nationally accredited laboratory for preliminary testing to determine the optimum moisture content and proportions of cement needed to produce a finished base course with a mix design target of 300 PSI and a final in place base compressive strength of 200 to 400 PSI. Laboratory tests of material to be reclaimed and virgin materials for use as base shall be performed to determine compliance with 3-day and 7-day minimum compressive strength requirements of the mixture and the quantity of cement required in the mix. Test specimens containing various amounts of cement are to be compacted in accordance with ASTM D558, and the optimum moisture for each amount of cement is to be determined. Actual application quantities for the Portland cement will be derived from the mix design. The minimum compressive strength requirements of the mixture shall be determined by the engineer of record. The mix design and laboratory testing shall be performed by a geotechnical engineering laboratory and all reports sealed by a professional engineer.

**Widening:** When the existing base is to be widened, the Contractor shall excavate the shoulder from the edge of the existing pavement to at least 6 inches beyond the planned new width of the base prior to pulverization. All costs involved in collecting, hauling, and disposing of these materials shall be borne by the Contractor.

The bottom of the trench shall be kept free of loose soil and vegetation. Approved base material (those bases listed in FDOT Design Standards as General Use Optional Base Materials) shall be placed in the excavation uniformly and without loss or contamination. The Contractor shall correct all areas of irregular grade or deficient thickness and shall remove and replace material contaminated with soil, organic material, or debris.

After the final pass of the reclaimer, soil shall be drawn up against the widening material to close the excavation, and the shoulder shall be graded and compacted to produce a firm, even surface.

**Additional Material:** When additional material is to be added to correct cross slope deficiencies or change elevation as directed by the engineer, approved base material (those bases listed in FDOT Design Standards as General Use Optional Base Materials) shall be placed on the roadway prior to final pass for pulverization and mixed uniformly with the existing material.

**Pulverization:** The existing pavement and base material shall be pulverized and blended to the depth required so the entire mass of material shall be uniformly graded to the following gradation:

SIEVE SIZE	PERCENT PASSING
2"	98 - 100
1-1/2"	95

Material gradation may vary due to local aggregates and conditions. Multiple passes of the reclaimer may be necessary to achieve the required gradation.

The cement and water shall be introduced into the mix through the reclaimer uniformly and accurately and metered such that areas are of equal consistency and moisture content. Alternately, the cement may be introduced by means of a spreader bar with curtain on the cement distributor. Cement shall not be introduced by means of a spreader bar or hose from the cement delivery tanker. The reclaimed material, cement and water shall be combined in place to meet the requirements specified in such proportions that the reclaimed mixture is of acceptable composition and stability. Before the start and at the end of each day's work and at any time requested, the engineer must be permitted access to the mixing equipment in order to read the meter to verify the quantity of cement applied during the day's work. Field adjustments shall be made as necessary to the recommended mix design under the guidance of a knowledgeable and competent technician to obtain a satisfactory reclaimed mixture of consistent composition and stability throughout the Project.

After the material has been processed, it shall be compacted to the lines, grades, and depth required. Water may be applied to ensure optimum moisture content at the time of mixing and compaction.

**Compaction:** Commence rolling with self propelled rollers as required by this technical provision at the low side of the course, except leave 3 to 6 inches from any unsupported edge or edges unrolled initially to prevent distortion. Density readings shall be taken by Contractor's licensed nuclear gauge operator and witnessed by the Engineer/inspector. A control strip of not less than 500 feet shall be constructed to develop proper rolling/compaction patterns and methods to obtain desired density. Whenever there is a change in the reclaimed material or compaction method, equipment or unacceptable results occur, a new control strip shall be constructed, tested and analyzed.

Rollers shall move at a uniform speed that shall not exceed 8 km/hour (5 miles/hour). For static rollers, the drive drum normally shall be in the forward position or nearest to the paver. Vibratory rollers shall be operated at the speed, frequency and amplitude required to obtain the required density and prevent defects in the mat.

The number, weight and type of rollers furnished shall be sufficient to obtain the required compaction of the reclaimed material. The field density of the compacted mixture shall be at least 95 percent of the maximum density of laboratory specimens prepared from samples of the cement-treated base material taken from the material in place. The specimens shall be compacted in accordance with ASTM D 558. The in-place field density shall be determined in accordance with ASTM D 2922.

Any pavement shoving or other unacceptable displacement shall be corrected. The cause of the displacement shall be determined and corrective action taken immediately and before continuing rolling.

Care shall be exercised in rolling the edges of the reclaimed mixture so the line and grade of the edge are maintained.

At the end of each day's production, a transverse construction joint shall be formed by a header or by cutting back into the compacted material to form a true vertical face free of loose material. The protection provided for construction joints shall permit the placing, spreading, and compacting of base material without injury to the work previously laid. Where it is necessary to operate or turn any equipment on the completed base course, sufficient protection and cover shall be provided to prevent damage to the finished surface. A supply of mats or wooden planks shall be maintained and used as approved and directed by the Engineer.

**Finishing:** Finishing operations shall be completed and the base course shall conform to the required lines, grades, and cross section. If necessary, the surface shall be lightly scarified to eliminate any imprints made by the compacting or shaping equipment. The surface shall then be recompacted to the required density. Correct all irregularities greater than 1/2" over ten feet to the satisfaction of the engineer.

**Protection and Curing:** After the base course has been finished as specified herein, it shall be protected against drying for a period of 5 to 7 days by the application of a prime coat as specified in FDOT Standard Specifications section 300 at a rate of not less than 0.15 gal/sy. The curing method shall begin as soon as possible, but no later than 24 hours after the completion of finishing operations. The finished base course shall be kept moist continuously until the curing material is placed.

At the time the prime coat is applied, the surface shall be dense, free of all loose and extraneous material, and shall contain sufficient moisture to prevent penetration of the bituminous material. Water shall be applied in sufficient quantity to fill the surface voids immediately before the bituminous curing material is applied.

The curing material shall be maintained and re-applied as needed by the Contractor during the 7-day protection period so that all of the soil-cement will be covered effectively during this period. Finished portions of soil-cement that are used by equipment in constructing an adjoining section shall be protected to prevent equipment from marring or damaging the completed work.

When the air temperature may be expected to reach the freezing point, sufficient protection from freezing shall be given the soil-cement for 7 days after its construction and until it has hardened.

**Thickness:** The average thickness of the base constructed during one day shall be within 1/2 inch (12 mm) of the thickness required, except that the thickness of any one point may be within 3/4 inch (19 mm) of that required. Where the average thickness shown by the measurements made in one day's construction is not within the tolerance given, the Engineer shall evaluate the area and determine if, in his/her opinion, it shall be reconstructed at the Contractor's expense or the deficiency deducted from the total material in place.

**Sampling and Testing:**

<b>Control Testing for Full Depth Reclamation Field Sampling and Testing</b>			
<b>Type of Test</b>	<b>Method</b>	<b>Frequency</b>	<b>Size and Location</b>
RAP and Soil Cement Base Gradation	ASTM D-136	Each 3000 SY (not less than once per day)	20 lb min sampled from hopper
Moisture Density Relationship of Soil Cement Mixtures	ASTM D-558	Each 1000 SY (not less than once per day)	33 lb min sampled from pulverized base
Compressive Strength of Molded Soil Cement Cylinders	ASTM D-1633	Each 3000 SY (not less than once per day)	33 lb min sampled from pulverized and mixed base
In-place Field Density	ASTM D-2922	Each 250 SY (not less than once per day)	Random locations after spreading and compacting



The depth of Reclaimed Bituminous Base Course shall be determined by measuring uncompacted reclaimed material immediately behind the screed in conjunction with measuring the milling depth prior to placement of reclaimed material. One depth measurement for each 250 square yards of completed base course shall be made. Any section deficient by 0.5 in (12 mm) or more from the specified depth shall be removed and satisfactorily replaced by the contractor at no additional cost. At the county's option, cores may be taken by the engineer in the finished product to further ensure base thickness meets requirements.

All delivery tickets and notes regarding any materials brought to the project site to complete this Contract must be given to the Engineer/Inspector upon delivery to the project site.

Additional sampling and testing may be required if major changes in RAP characteristics are observed, such as a much coarser or finer gradation or a noticeable difference in asphalt content, or when considerable variability is occurring in the field test results.

### **Traffic Control**

The Contractor shall furnish all necessary traffic control, barricades, signs and flagmen, to ensure the safety of the traveling public and to all working personnel. Traffic shall not travel on freshly reclaimed base until rolling and blotting has been completed. The Contractor shall submit an MOT plan indicating all facets of traffic control for the project area. The MOT plan must be approved in writing by the County prior to commencing any work. All traffic control shall be in accordance with the FDOT Roadway Design Standards, most current edition and TP-102. MOT and associated devices shall be checked daily and periodically throughout the project for compliance; and where adjustments or corrections are needed, prompt revisions shall be made.

### **Method of Measurement:**

If a pay item is listed on the Bid Form for work required in this Technical Provision, the quantity to be paid shall be as specified in the Bid Form including all items of work described herein. Any item necessary for Full Depth Reclamation with Cement, and not specifically listed in another item in the Bid Form, shall be included in the SY Price for Pulverization including but not limited to shaping, compacting, finish grading, prime coat, sanding prime coat... Cost for introduction of cement into the mixture shall be included in the per TN cost for Cement. Cost for excavation for widening will be included in the CY Price for Excavation. Cost for additional materials needed for widening or adjustment of grade as directed by the engineer shall be included in the CY Price for General Use Optional Base Material.

### **Basis of Payment:**

The quantities to be paid for under this Technical Provision shall be included in the Square Yard price for Full Depth Reclamation (Pulverization), the per Ton price for Cement, the per Cubic Yard price for Excavation and the per Cubic Yard price for General Use Optional Base Material. The Unit prices include all items listed in the contract, including all General Conditions, Special Conditions and Technical Provisions pertaining to Full Depth Reclamation with Cement, including all items of work described herein. No additional payment will be provided for any item necessary for the completion of this contract as detailed in the specifications.

**TECHNICAL PROVISION****TP-282****Full Depth Reclamation with Emulsion**

This work shall consist of the preparation of a stabilized base course composed of a mixture of the existing bituminous pavement, existing base course material and emulsified asphalt and other additives.

**Description:** The manufacture of the stabilized base course shall be done by in-place pulverizing and blending of the existing pavement and base materials, and the introduction of emulsion and additives as called for in the design mix formula. The process shall be accomplished in accordance with these specifications and conform to the depths, lines and grades established by the engineer.

Existing asphalt pavement shall be pulverized by a method that does not damage the material below the specified depth.

**Materials:**

**RAP (Reclaimed Asphalt Pavement):** The existing asphalt pavement incorporated into the finished base after mixing shall meet all requirements specified in the Florida Department of Transportation Standard Specifications for Road and Bridge Construction (latest edition), section 283-2, except that 98% of all material is required to pass through a 50 mm (2 inch) sieve.

**Additional Base Materials:** Additional base materials may be needed for adjusting grade elevations as directed by the engineer, or for widening. When such additional material is required it shall be among those bases listed in FDOT Design Standards (latest edition) as General Use Optional Base Materials and meet applicable FDOT requirements for such.

**Asphalt Emulsion:** Asphalt emulsion, type CSS-1h or CMS-2h, meeting the requirements of AASHTO M 208-01, shall be utilized. The contractor shall certify the liquid bituminous material meets this specification.

The County will require the Contractor to sample and test each load of emulsion prior to delivery. The Contractor will also provide a sample of the emulsion, on site, prior to commencing work. The County will require the Contractor to provide sample containers and a local independent testing laboratory for the analyzing of emulsion. The Contractor will be responsible for the cost of the testing. The County reserves the right to require testing of any shipment of emulsion. All samples shall be shipped and stored in clean air tight sealed wide mouth jars or bottles made of plastic. The County may require base prepared containing emulsified asphalt found to be outside of specification requirements to be removed and replaced at the sole expense of the contractor or left in place at no pay.

**Portland Cement:** Portland cement in either a dry or slurry form may be added to the reclaimed mixture if required by the mix design. Slurry made from Portland cement shall contain a minimum of 30% dry solids content. Cement used for full depth reclamation shall be Type I or II and conform to the latest standard requirements of AASHTO M85, for the type specified. Cement shall be limited to no more than 1.5 percent by dry weight of reclaimed material. Cement amounts greater than 1.5 percent will only be allowed if approved by the Engineer.

**Water:** The water for the base course compaction shall be clean and free from sewage, oil, acid, strong alkalies, or vegetable matter and it shall be in sufficient supply for mixing and curing. Water of questionable quality shall be tested in accordance with the requirements of AASHTO T 26.

**Base:** The base to be reclaimed shall be evaluated by a professional geotechnical engineering laboratory to determine suitability in the stabilization process. The soil shall be free of roots, sod and weeds. Cost for evaluation shall be borne by the owner, and results provided to the Contractor at the pre-construction conference.

**Mix Design:** Prior to construction, obtain an adequate number of core samples to develop the mix design(s). Representative samples of the asphalt pavement material, underlying base material, and virgin materials, where applicable, shall be supplied to a nationally accredited laboratory for testing to determine the proportions of asphalt emulsion, and other additives, if necessary, needed to produce a mix design meeting the requirements in the following table. The optimum binder content shall be the binder content that results in the highest wet tensile strength while also having 70% retained tensile strength compared to the dry strength and additionally has a minimum 1800 pounds Marshall stability. The mix design shall be signed and sealed by a professional engineer and submitted to the Engineer prior to use for approval.

Mix Design Criteria		
Property	Test Procedure	Specification
Gradation of Reclaimed Material	AASHTO T27-11	Report
Optimum Binder Content		
Compaction effort at optimum fluids content. Marshall Compactor; 50 blows/side or Superpave Gyrotory Compactor, 100 mm diameter specimens, 30 gyrations. Density determination.	Asphalt Institute MS 14, Appendix F. ASTM D6926-10 AASHTO T 312-12 FM 1-T 166	Report
Marshall stability Cure at 60°C to constant weight, Test at 40°C	ASTM D6927-06	1800 lbs. Min
Resistance of compacted bituminous mixture to moisture induced damage. Vacuum saturation of 55% to 75%, water bath 25°C 23 hours, last hour at 40°C water bath	AASHTO T283-07 (2011)	70% Min retained tensile strength

**Equipment:**

**Road Reclaimer:** Shall be originally designed for pavement reclaiming of a size equal to or larger than a Caterpillar Model RM-350B with comparable specifications including horsepower and rotor size. The reclaimer shall be capable of pulverizing and mixing pavement, base materials, and subgrade soil to depth of 16 inches. It shall have the capability of introducing and metering additives uniformly and accurately and that positive displacement pumps accurately meter the planned amount of emulsion into the mixture. The reclaiming machine shall mix the emulsified asphalt additive thoroughly with the RAP and soil materials. The pump shall be mechanically or electronically interlocked with the ground speed of the machine. The asphalt metering system and water metering system shall be capable of continuously monitoring (GPM) flow, and totaling the quantity of water and asphalt emulsion applied into the mixing chamber. Additives shall be uniformly distributed and mixed with the pulverized material, any existing underlying material as specified. 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.

**Motor Grader:** Shall be of sufficient size and horsepower to adequately rough grade the pulverized base and rough and finish grade the mixed and compacted base. The equipment shall be in good working order free from leaks and capable of maintaining an accurate grade and cross-slope.

**Rollers:** Shall be in good working order free from leaks and capable of compacting the mix to the requirements of this specification: Vibratory rollers shall be a minimum of 10 tons and capable of rolling in either vibratory or static mode. Three wheel static rollers shall be a minimum of 11 tons. Pneumatic tire rollers shall have a minimum of 9 oscillating wheels with smooth, low pressure tires (pressure shall be equally matched in all tires within 5 PSI) and weigh at least 20 tons. Initial compaction shall be accomplished by either single or dual drum vibratory or three wheel roller static rollers.

**Additional equipment:** Provide additional equipment needed to complete the operations required by this technical provision. Availability of quality assurance devices (such as a 15' straight edge) shall be the responsibility of the Contractor.

**Construction:**

**Layout:** The Contractor shall be responsible for the string lining and lay out of the roadway prior to paving. Elevations of the existing road must be referenced at sufficient intervals to ensure the roadway elevation is not changed in any location after final surface is placed. Method for layout and line and elevation reference shall be approved by the County prior to beginning work. It is imperative that roadway elevations remain unchanged except cross slope correction or as approved by the engineer.

**Weather and Seasonal limitations:** The base shall not be mixed or placed while the atmospheric temperature is below 50° F or when conditions indicate that the temperature may fall below 50° F within 24 hours, or when the weather is foggy or rainy, or when the soil or sub grade is frozen.

**Widening:** When the existing base is to be widened, excavate the shoulder from the edge of the existing pavement to at least 6 inches beyond the planned new width of the base prior to pulverization. The bottom of the trench shall be kept free of loose soil and vegetation.

Approved base material (those bases listed in FDOT Design Standards as General Use Optional Base Materials) shall be placed onto the existing pavement so it can be mixed in with the existing pavement and base material during the pulverization operation to make a homogeneous base course across the entire width of the road, including the widening area. Correct all areas of irregular grade or deficient thickness and remove and replace material contaminated with soil, organic material, or debris.

After the final pass of the reclaimer, soil shall be drawn up against the widening material to close the excavation, and the shoulder shall be graded and compacted to produce a firm, even surface.

**Additional Material:** When additional material is to be added to correct cross slope deficiencies or change elevation as directed by the engineer, approved base material (those bases listed in FDOT Design Standards as General Use Optional Base Materials) shall be placed on the roadway prior to final pass for pulverization and mixed uniformly with the existing material.

**Pulverization:** The existing pavement and base material shall be pulverized and blended to the depth required so the entire mass of material shall be uniformly graded to the following gradation:

Sieve Size	Min Percent Passing
3"	100
2"	95
Number 4	55
No. 200	20

Material gradation may vary due to local aggregates and conditions. A minimum of two passes of the reclaimer are required, additional passes may be necessary to achieve the required gradation. If material removal is required to maintain roadway elevation or correct cross slope, removal shall be done prior to the final pass of the reclaimer. Injection shall occur on the final pass of the reclaimer.

The asphalt emulsion shall be introduced into the mix through the reclaimer uniformly and accurately and metered such that areas are of equal consistency and moisture content. The reclaimed material and additives shall be combined in place to meet the requirements specified in such proportions that the reclaimed mixture is of acceptable composition and stability. Before the start and at the end of each day's work and at any time requested, the County engineer or designee shall be permitted access to the mixing equipment in order to read the meter to verify the quantity of asphalt emulsion applied during the day's work. Field adjustments shall be made as necessary to the

recommended mix design under the guidance of a knowledgeable and competent technician or superintendent to obtain a satisfactory reclaimed mixture of consistent composition and stability throughout the Project.

After the material has been processed, it shall be compacted to the lines, grades, and depth required. Water may be applied to ensure optimum moisture content at the time of mixing and compaction.

**Compaction:** Commence rolling with self propelled rollers as required by this technical provision at the low side of the course, except leave 3 to 6 inches from any unsupported edge or edges unrolled initially to prevent distortion. Density readings shall be taken by Contractor's licensed nuclear gauge operator and witnessed by the Engineer/inspector. A control strip of not less than 500 feet shall be constructed to develop proper rolling/compaction patterns and methods to obtain desired density. Whenever there is a change in the reclaimed material or compaction method, equipment or unacceptable results occur, a new control strip shall be constructed, tested and analyzed.

The number, weight and type of rollers furnished shall be sufficient to obtain the required compaction of the reclaimed material. The field density of the compacted mixture shall be at least 96.0% of the maximum density of laboratory specimens prepared from samples of the base material taken from the material in place. The specimens shall be compacted in accordance with AASHTO T312. The in-place field density shall be determined in accordance with ASTM D 2922.

Any pavement shoving or other unacceptable displacement shall be corrected. The cause of the displacement shall be determined and corrective action taken immediately and before continuing rolling. Care shall be exercised in rolling the edges of the reclaimed mixture so the line and grade of the edge are maintained.

At the end of each day's production, a transverse construction joint shall be formed by a header or by cutting back into the compacted material to form a true vertical face free of loose material. The protection provided for construction joints shall permit the placing, spreading, and compacting of base material without injury to the work previously laid. Where it is necessary to operate or turn any equipment on the completed base course, sufficient protection and cover shall be provided to prevent damage to the finished surface. A supply of mats or wooden planks shall be maintained and used as approved and directed by the Engineer.

**Finishing:** Finishing operations shall be completed and the base course shall conform to the required lines, grades, and cross section. If necessary, the surface shall be lightly scarified to eliminate any imprints made by the compacting or shaping equipment. The surface shall then be recompact to the required density. Correct all irregularities greater than 1/2" over ten feet to the satisfaction of the engineer.

**Protection and Curing:** After the base course has been finished as specified herein, it shall be protected by the application of a prime coat as specified in FDOT Standard Specifications section 300 at a rate of not less than 0.15 gal/sy. The curing method shall begin as soon as possible, but no later than 24 hours after the completion of finishing operations. The finished base course shall be kept moist continuously until the curing material is placed.

At the time the prime coat is applied, the surface shall be dense, free of all loose and extraneous material, and shall contain sufficient moisture to prevent penetration of the bituminous material. Water shall be applied in sufficient quantity to fill the surface voids immediately before the bituminous curing material is applied.

Finished portions of base that are used by equipment in constructing an adjoining section shall be protected to prevent equipment from marring or damaging the completed work.

**Thickness:** The average thickness of the base constructed during one day shall be within 1/2" of the thickness required, except that the thickness of any one point may be within 3/4" of that required. Where the average thickness shown by the measurements made in one day's construction is not within the tolerance given, the Engineer shall evaluate the area and determine if, in his/her opinion, it shall be reconstructed at the Contractor's expense or the deficiency deducted from the total material in place.

**Sampling and Testing:**

<b>Control Testing for Full-Depth Reclamation Field Sampling and Testing</b>		
Type of Testing	Frequency	Sample Location & Size
RAP Gradation: 3", 2", No. 4 and No.200	Each 3,000 SY or Min once per day	Random locations after spreading prior to compaction
Moisture-Density Relationship of Reclaimed Base	Each 3,000 SY or Min once per day <sup>1</sup>	Sample at point of each Nuclear Density Measurement
In-Place Field Density <sup>3</sup>	Each 250 Square yards <sup>1</sup>	Random locations after spreading and Compaction operations
Moisture Added to RAP <sup>4</sup>	Each 1,000 Square yards <sup>1</sup>	Reclaimed Lift Depth Sample at Point of each Nuclear Density Measurement

**Table A Notes**

1. Additional sampling and testing may be required if major changes in RAP characteristics are observed.
2. Sample RAP in accordance with ASTM D979 or AASHTO T168 procedures for Sampling Bituminous Paving Mixtures.
3. Target densities for reclaimed mix compaction are established by the laboratory compaction of specimens in accordance with ASTM D558. The compacted field density shall be determined in accordance with ASTM D 2922. Dry density shall be determined by correcting the gauge wet density using the procedure in Note 4.
4. The moisture content shall be determined by AASHTO T110 for Moisture or Volatile Distillates in Bituminous Paving Mixtures. Also, the moisture content appears can be determined adequately by weighing and drying to a constant weight using a forced draft oven as for ASTM D 2216 or AASHTO T 265 or by microwave oven drying as for ASTM D 4643.
5. For each length or lot size quantity specified, materials sampling shall be completed on a random basis using the procedures of ASTM D 3365 for Random Sampling of Construction Materials.

The depth of Reclaimed Bituminous Base Course shall be determined by measuring compacted reclaimed material immediately behind the final rollers in conjunction with measuring the milling depth prior to placement of reclaimed material. One depth measurement for each 250 square yards of completed base course shall be made. Any section deficient by 0.5 in (12 mm) or more from the specified depth shall be removed and satisfactorily replaced by the contractor at no additional cost. At the county's option, cores may be taken by the engineer in the finished product to further ensure base thickness meets requirements.

All delivery tickets and notes regarding any materials brought to the project site to complete this Contract must be given to the Engineer/Inspector upon delivery to the project site.

**Traffic Control**

The Contractor shall furnish all necessary traffic control, barricades, signs and flagmen, to ensure the safety of the traveling public and to all working personnel. Traffic shall not travel on freshly reclaimed base until rolling and blotting has been completed. The Contractor shall submit an MOT plan addressing all facets of traffic control for the project area. The MOT plan shall be approved in writing by the County prior to commencing any work. All traffic control shall be in accordance with the FDOT Roadway Design Standards, most current edition and TP-102. MOT and associated devices shall be checked daily and periodically throughout the project for compliance; and where adjustments or corrections are needed, prompt revisions shall be made.

Unless specifically approved prior to construction in writing by the County Engineer, all roadways shall be returned to traffic the same day and all lane closures removed and roadway lanes fully opened.

**Method of Measurement:**

If a pay item is listed on the Bid Form for work required in this Technical Provision, the quantity to be paid shall be as specified including all items of work described herein. Any item necessary for Full Depth Reclamation with Asphalt Emulsion and not specifically listed in another item in the bid form, shall, be included in the SY cost for Pulverization including but not limited to shaping, compacting, finish grading, prime coat, sanding prime coat, etc. Cost for introduction of asphaltic cement into the mixture shall be included in the per GL cost for Asphalt Emulsion. Cost for excavation for widening will be included in the CY Price for Excavation. Cost for additional materials needed for widening or adjustment of grade as directed by the engineer shall be included in the CY Price for General Use Optional Base Material.

**Basis of Payment:**

The quantities to be paid for under this Technical Provision shall be included in the Square Yard price for Full Depth Reclamation (Pulverization), the per Gallon price for Asphalt Emulsion, the per Cubic Yard price for Excavation and the per Cubic Yard price for General Use Optional Base Material. The Unit prices include all items listed in the ITB including all General Conditions, Special Conditions and Technical Provisions pertaining to Full Depth Reclamation with Asphalt Emulsion, including all items of work described herein. No additional payment will be provided for any item necessary for the completion of this ITB as detailed in the specifications.

**TECHNICAL PROVISION**  
**TP-309**  
**CRACK SEALING**

The work covered by these specifications consists of furnishing all labor, equipment and materials necessary to perform all operations in connection with the cleaning and sealing of construction and random cracks.

**Material:** Utilize Rubberized Joint Sealing Material meeting the requirements of Modified AASHTO M173. Utilize Asphalt Rubber Sealing Compound meeting the requirements of ASTM D5078.

**Equipment**

**Kettle:** The kettle shall be an oil-jacketed double wall kettle equipped with agitator and 2 inch hot asphalt pump. Provide separate thermometers for oil bath and melting chamber. Provide a pump for circulating the transfer oil bath. Do not allow the operating temperature in the kettle to exceed the flash point of the sealing material.

**Compressor:** Utilize an air compressor capable of maintaining a minimum of 100 PSI at 150 CFM, measured at the source and equipped with traps that will maintain the compressed air free of oil and water.

**Extruder:** Provide an extruder capable of providing variable width overband from 2 to 4 inches where overband process is utilized. Where the pavement being sealed will be overlaid within six months of sealant application, the sealant placement shall be recessed 1/4" in the crack or joint reservoir with no overband.

**Construction**

No crack sealing material shall be applied when pavement temperature is below 40° F, unless a heat lance is utilized to adequately heat the crack. No material shall be placed on wet surfaces.

Vegetation and other deleterious materials shall be removed prior to sealing utilizing a motorized wire brush. All cracks shall be cleaned of loose dirt and debris with a compressor.

Where overbanding is required, fill joints and cracks in such a manner to provide a 2" band centered over the joint. The thickness of the material shall not exceed 1/8" to 1/16". Material shall be leveled by means of a squeegee or a dish mounted on the delivery wand.

When traffic requires immediate use of the roadway, a boiler slag aggregate shall be broadcast over cracks to prevent sealer pickup.



All workmanship shall be of the highest quality, and excess spilled sealer shall be removed from the pavement surface by approved methods and discarded. Any workmanship determined to be below standards of the particular craft involved will not be accepted, and will be corrected and/or replaced as required by the county.

**Traffic Control:** The Contractor shall furnish all necessary traffic control, barricades, signs and flagmen, to ensure the safety of the traveling public and to all working personnel. Traffic shall not travel on affected areas until all operations have been completed and the sealer has dried or cover aggregate placed such that tire pickup will not occur. The Contractor shall submit an MOT plan indicating all facets of traffic control for the project area. The MOT plan must be approved in writing by the County prior to commencing any work. All traffic control shall be in accordance with TP-102. MOT and associated devices shall be checked daily and periodically throughout the project for compliance; and where adjustments or corrections are needed, prompt revisions shall be made.

**Method of Measurement:** If a pay item is listed on the Bid Form for work required in this Technical Provision, the quantity to be paid shall be per Gallon or as specified in the Bid Form including all items of work described herein. Any item necessary for Crack Sealing, and not specifically listed in another item in the Bid Form, shall be included in this item.

**Basis of Payment:** The quantities to be paid for under this Technical Provision shall be included in the per Gallon unit price for Crack Sealing or as listed in the Bid Form. The Unit price includes all items listed in the contract, including all General Conditions, Special Conditions and Technical Provisions pertaining to Crack Sealing, including all MOT as described in TP-102 and all items of work described herein. No additional payment will be provided for any item necessary for the completion of this contract as detailed in the specifications.

## TECHNICAL PROVISION

## TP-313a

## Rejuvenating Fog Seal

The work specified in this section consists of furnishing and applying a rejuvenating fog seal on existing roads at application rates described here-in.

**Description:** Rejuvenating Fog seals are a method of adding asphalt to an existing pavement surface to improve sealing or waterproofing while replacing softer fractions of the asphalt lost through manufacture, placement and oxidation due to weathering. They help prevent further stone loss by holding aggregate in place and create a superior bond to underlying asphalts through the softening of the top layer.

**Materials:**

**Liquid emulsified bituminous material:** A polymer modified liquid bituminous material containing rejuvenating agent conforming to the following requirements. The contractor shall certify the liquid bituminous material meets this specification. Additionally, the emulsion supplier shall receive quarterly certificates of analysis from both the polymer and rejuvenating agency manufacturers. The COAs will be provided to the agency upon request.

Property	Test Procedure (AASHTO)	Specification (min) (max)	
<b>Emulsion Properties</b>			
Viscosity, Saybolt-Furol, @ 77°F, SFS	T59	10	100
Storage, 24 hour, %	T59		1
Oil Distillate, %	T59		0.5
Sieve Test, %	T59		0.1
Residue by Distillation <sup>(1)</sup> @ 350°F, %	T59	30	
<b>Residue Properties From Distillation</b>			
Penetration @ 4°C, 200g weight, 60 sec	T49	30	
<b>Residue Properties From Low Temp Evaporation</b>			
MSCR @ 52°C, J <sub>nr</sub> @ 3.2/ kPa	T315		2.0
<b>Polymer Properties<sup>(2)</sup></b>			
Swelling in rejuvenating agent, % max weight increase: 48 hrs	ASTM D471 Mod <sup>(2)</sup>		40%
Tensile Strength (psi)	ASTM D412a Mod <sup>(2)</sup>	800	
Glass Transition Temperature (T <sub>g</sub> ) – Midpoint by DSC (°C)	ASTM D7426 Mod <sup>(2)</sup>	0	
Latex Density at 23°C (g/cm <sup>3</sup> )	ASTM D6937 Mod <sup>(2)</sup>	1.00	1.05
Latex pH	ASTM E70 Mod <sup>(2)</sup>	6.0	8.0
<b>Test on Rejuvenating Agent</b>			
Flash Point, COC, °F	T48	380	
Viscosity, 140 °F, CST	201	50	175
Saturate, % by wt	ASTM D2007		30
Asphaltenes	ASTM D2007		1.0
<b>Test on Rejuvenating Residue</b>			
Weight change, %w	ASTM D2872		6.5
Viscosity Ratio (RTFO/Orig.)	ASTM D2170		3

1. Exception to AASHTO T59: Bring the temperature on the lower thermometer slowly to 350° F plus or minus 10° F. Maintain this temperature for 20 minutes. Complete the total distillation in 60 plus or minus 5 minutes.
2. Use these modifications for Polymer Properties testing:

**ASTM D471 Standard Test Method for Rubber Property-Effect of Liquids:  
Modifications for Polymer Testing, Resistance to Swelling:**

1. Using a syringe, place 0.8 gm of latex into a 18 mm diameter DSR mold.
2. Allow the sample to dry at ambient lab conditions (air conditioned) on the bench for 72 hours. Sample should be easily removable from the mold.
3. Take the "button" out of the mold and place the sample into a forced air oven at 40°C (104°F) for 48 hours (on release paper). If at the end of the ambient dry, the sample sticks to the mold, place it into the oven and check it after 1-2 hours.
4. After 48 hours cool and weigh the sample to the nearest 0.0001 gram and record the weight.
5. Put ½ inch of Rejuvenating Agent into a 3 oz penetration tin.
6. Place the "button" on the Rejuvenating Agent, and add another ½ inch Of Rejuvenating Agent, so that the "button" is covered.
7. Put the cap on the penetration tin and place it into the 40°C oven for 48 hours. .
8. Remove the "button from the Rejuvenating Agent, blot surface of the "button" to remove excess Rejuvenating Agent, cool the "button" to room temperature and weigh it.
9. Calculate weight gain of the "button", express as %.

**ASTM D412A Standard Test Methods for Vulcanized Rubber and Thermoplastic  
Elastomers-Tension: Modifications**

1. To prepare the polymer film, dilute the waterborne polymer to 40% Total Solids Content and pour 57 g into a Teflon or silicone release mold of dimensions 7" X 7" X ¼".
2. Allow to dry at 23°C (73 °F) and 50% RH (controlled conditions) for 7 – 10 days total time, during which time the film should be flipped around once, preferably after 3 or 4 days. The film should be transparent in the end.
3. To drive out any residual water, place the film in an oven at 50°C for 30 min. Dried film thickness should be 25 mil +/- 5 mils. Discard films <20 mil.
4. Cut out dumbbell-shaped test specimens of dimension 75 mm total length, 25 mm mid-section (L) and 4 mm width of mid-section.
5. Grip in Instron machine with gap size 1 inch, use 8 inch/min cross-head speed.

**ASTM D7426 Standard Test Method for Assignment of the DSC Procedure for  
Determining Tg of a Polymer or an Elastomeric Compound Modifications**

Use between 3 – 30 mg dry polymer. Instrument used is TA Q2000 Differential Scanning Calorimeter (DSC). Heating rate is 20°C/min.

**ASTM D6937 Standard Test Method for Determining Density of Emulsified Asphalt:  
Modifications**

Replace "Emulsified Asphalt" with "Latex" in text of test method. The testing temperature used should be 25 +/- 3° C. The calculation in Section 7 should be as follows:

Calculation:

$$D = (W_f - W_t) * 0.1$$

$$S.G. = D / 8.337$$

Where: W<sub>f</sub> = Weight of filled cup (g)

W<sub>t</sub> = Weight of empty cup (g)

**ASTM E70 Standard Test Method for pH of Aqueous Solutions with the Glass Electrode:  
Modifications**

1. A pH meter with automatic temperature measurement should be used in the evaluation with a calomel cell assembly or combination electrode. Calibration should be made using the procedure with the pH meter, according to ASTM method, prior to testing the pH of the latex. In Section 9, the procedure for measuring pH of the latex should be as follows:

- (a) Place the electrode and probe into the dispersion that is to be measured and swirl the sample cup or beaker gently. (You may also use the probe in a stirring motion.)
- (b) Wait for the reading to stabilize (usually less than a minute) and read/record this value. Note the temperature if not utilizing an ATC probe.
- (c) Take the Electrode and ATC probes from the sample and rinse thoroughly with de-ionized water. Pat dry and place back into appropriate solution recommended by electrode manufacturer for storage.

#### **End of Test Modifications**

Each load of emulsified asphalt shall be accompanied with a Certificate of Analysis/Compliance to assure that it meets the requirements of this specification. COA shall include, at a minimum, required emulsion properties and percentage of polymer solids in the emulsion.

**Material Samples:** The County will require the Contractor to sample and test each load of emulsion prior to delivery. The Contractor will also provide a sample of the emulsion, on site, prior to commencing work. The County will require the Contractor to provide sample containers and a local Independent testing laboratory for the analyzing of emulsion. The Contractor will be responsible for the cost of the testing. The County reserves the right to test any shipment of emulsion that is believed to be substandard. All samples shall be shipped and stored in clean air tight sealed wide mouth jars or bottles made of plastic. If requested by the County, samples of rejuvenator and polymer shall also be provided in sample containers for testing by the County. Cost of polymer and rejuvenator testing shall be borne by the County. Where these tests identify material outside specification requirements, the County shall require the supplier to cease shipment of that pre-tested product. Further shipment of that pre-tested product will remain suspended until the cause of the problem is evaluated and corrected by the supplier to the satisfaction of the County. Further, the County may require the material placed containing the emulsified asphalt outside of specification requirements to be removed and replaced at the sole expense of the contractor or left in place at no pay.

#### **Equipment:**

**Distributor:** The liquid bituminous material shall be applied with a truck mounted, pressure distributor that has been calibrated within the previous twelve (12) months, for transverse and longitudinal application rate. The distributor shall be equipped, maintained and operated so that the bituminous material can be applied at controlled temperatures and rates from .03 to .22 gallons per square yard with nozzles adjusted to allow minimum overlap of 3x. The distributor shall be capable of applying bituminous material of variable widths up to sixteen (16) feet. The distributor shall uniformly apply the bituminous material to the specified rate with a maximum allowed variation of 0.015 gallons per square yard. Distributor equipment shall include tachometer, accurate volume measuring device, a calibrated tank and a thermometer for measuring the temperature of the tank's contents. Distributors shall be equipped with an asphalt pump and full circulating spray bars adjustable laterally and vertically. Distributors and transport trailers shall be equipped with a sampling valve. Distributor trucks shall be of the pressure type with insulated tanks. The use of gravity distributors will not be permitted. The valves shall be operated by levers so that one or all valves may be quickly opened or closed in one operation. The valves which control the flow from nozzles shall act positively so as to provide a uniform unbroken spread of bituminous material on the surface. The distributor shall be equipped with a computer controlled DMI to provide for accurate and rapid determination and control of the amount of bituminous material being applied. The distributor shall be capable of carefully monitoring application rates with computer generated reports registering speed in feet per minute, trip/total distance in feet, and application rate.

**Sand Truck:** The truck used for sanding shall be equipped with a spreader that allows the sand to be uniformly distributed onto the pavement. The spreader shall be able to apply 1/2 pound to 3 pounds of sand per square yard in a single pass. The spreader shall be adjustable so as not to broadcast sand onto driveways, tree lines or lawns. The sand to be used shall be free flowing, without any leaves, dirt, stones, etc. Any wet sand shall be rejected from the job site.

**Additional equipment:** Additional equipment may be needed to complete the operations required by this technical provision. All equipment necessary for the successful completion of projects governed by this technical provision shall be included in the unit costs associated herein. Availability of quality assurance devices shall be the responsibility of the Contractor.

### **Construction:**

**Layout:** The Contractor will be responsible for the lay out of the roadway and project planning and sequencing to meet traffic control requirements prior to placement of the sealer.

**Weather and Seasonal limitations:** The fog seal shall not be applied to a wet surface or when rain is occurring or the threat of rain is present immediately before placement. The surface treatment shall not be applied when the ambient temperature or pavement temperature are less than 60° F.

If rain occurs prior to the emulsion breaking, the area shall be re-fogged at no cost to the County. Further, the contractor's traffic control and project monitoring shall continue until the emulsion applied has broke and the resultant surface is not slippery or dangerous to vehicular travel.

**Preparation of Surface:** The contractor will be responsible for blowing and/or sweeping the road immediately ahead of the fog seal operation to make sure the road is free of sand, dust, loose aggregate and other debris. The surface shall be clean and dry prior to the application.

**Application of bituminous material:** The emulsion shall not be diluted.

Properly calibrated distributor trucks with 1/8" to 3/16" opening spray nozzles shall be used to apply the emulsion. The emulsion shall be heated to the manufacturer's recommendation. The emulsion shall be sprayed at a rate as directed in the field by the County. Application will be determined dependant upon the surface conditions.

**Tight Surface (low absorbance and relatively smooth) - .06 - .10 gal/sy**

**Open Surface (relatively porous and absorbent with open voids) - .08 - .14 gal/sy**

**Exceptions:** When fog seal is required as a subsequent treatment to chip seal, OGCM, or other method described in this contract, materials, equipment and application shall be as described in this technical provision and as amended in the technical provision appropriate to the work the fog seal is subsequent to. If discrepancies occur, the County shall determine the appropriate specification.

**Sanding/Blotting:** After the fog seal has penetrated and sufficiently broke, a coating of dry sand may be applied to the surface in sufficient amount to protect the traveling public. Application will be at the direction of the County and paid separately.

**Contractor's Quality Control Plan:** Provide and follow a QC plan that will maintain QC for production and construction processes. Provide the County with a copy of the QC plan for review and approval before the pre-construction meeting. Include, at a minimum, the following items:

- Source materials used on the project.
- Sampling and testing methods used to determine compliance with material specifications.
- Equipment to be used on the project.
- Calibration method used to determine compliance with this specification.
- Pavement cleaning and preparation procedure.
- Plan for protecting fog seal from damage by traffic.
- Procedure for monitoring initial acceptance requirements.
- An action plan demonstrating adjustments of the operation for adverse environmental conditions or out of specification materials or procedures.

**Traffic Control:** The Contractor shall furnish all necessary traffic control, barricades, signs and flagmen, to ensure the safety of the traveling public and to all working personnel. Traffic shall not travel on fresh fog seal until material is sufficiently broke such that tire pickup does not occur. The Contractor shall submit an MOT plan indicating all facets of traffic control for the project area. The MOT plan must be approved in writing by the County prior to commencing any work. All traffic control shall be in accordance with TP-

102. MOT and associated devices shall be checked daily and periodically throughout the project for compliance; and where adjustments or corrections are needed, prompt revisions shall be made.

**Documentation:** Complete a daily report that includes the following information:

- Job number
- Route/Street Name(s)
- Owner's On-Site Representative Name
- Date
- Air temperature – Min/Max (during application)
- Unit weight of emulsified asphalt (pounds per gallon)
- Beginning and ending application locations
- Length and width in feet
- Total area (square yards)
- Gallons of emulsified asphalt
- Application rate (pounds/gallons per square yard)
- Contractor's authorized signature
- Emulsified asphalt bill of lading(s)

**Method of Measurement:** If a pay item is listed on the Bid Form for work required in this Technical Provision, the quantity to be paid shall be as specified in the Bid Form including all items of work described herein. Any item necessary for Rejuvenating Fog Seal, and not specifically listed in another item in the Bid Form, shall be included in this item.

**Basis of Payment:** The quantities to be paid for under this Technical Provision shall be included in the per Gallon or SY price for Rejuvenating Fog Seal, the per Cubic Yard price for sanding or as listed in the Bid Form. The Unit price includes all items listed in the contract, including all General Conditions, Special Conditions and Technical Provisions pertaining to Rejuvenating Fog Seal, including all items of work described herein. No additional payment will be provided for any item necessary for the completion of this contract as detailed in the specifications.

**REVISED TECHNICAL PROVISION**  
**TP-314**  
**ASPHALT REJUVENATION SPECIFICATION**

The work specified in this section shall consist of furnishing all labor, material, and equipment necessary to perform all operations for the application of an asphalt rejuvenating agent to asphaltic concrete surface courses.

**Description:** The rejuvenation of surface courses shall be by spray application of a maltene based cationic rejuvenating agent composed of petroleum oils and resins emulsified with water. All work shall be in accordance with the specifications, the applicable drawings, and subject to the terms and conditions of this contract.

**Materials:**

The asphalt rejuvenating agent shall be an emulsion composed of a petroleum resin oil base uniformly emulsified with water. Each bidder must submit with his bid a certified statement from the asphalt rejuvenator manufacturer showing that the asphalt rejuvenating emulsion conforms to the required physical and chemical requirements.

<u>Tests</u>	<u>SPECIFICATIONS</u>		<u>Requirements</u>	
	<u>Test Method</u>		<u>Min.</u>	<u>Max.</u>
	<u>ASTM</u>	<u>AASHTO</u>		
<u>Tests on Emulsion:</u>				
Viscosity @ 25	□C, SFSD-244	T-59	15	40
Residue, % W <sup>1</sup>	D-244(Mod.)	T-59(Mod)	60	65
Miscibility Test <sup>2</sup>	D-244(Mod.)	T-59(Mod)	No Coagulation	
Sieve Test, %W <sup>3</sup>	D-244(Mod.)	T-59(Mod)	-	0.1
Particle Charge Test	D-244	T-59	Positive	
Percent Light Transmittance <sup>4</sup>	GB	GB	-	30
<u>Tests on Residue from Distillation:</u>				
Flash Point, COC, □C	D-92	T-48	196	-
Viscosity @ 60 □C, cSt	D-445	-	100	200
Asphaltenes, %w	D-2006-70	-	-	1.00
Maltene Dist. Ratio	D-2006-70	-	0.3	0.6
$\frac{PC + A_1^5}{S + A_2}$				
PC/S Ratio <sup>5</sup>	D-2006-70	-	0.5	-
Saturated Hydrocarbons, S <sup>5</sup>	D-2006-70	-	21	28

<sup>1</sup> ASTM D-244 Modified Evaporation Test for percent of residue is made by heating 50 gram sample to 149 C (300 F) until foaming ceases, then cool immediately and calculate results.

<sup>2</sup> Test procedure identical with ASTM D-244-60 except that .02 Normal Calcium Chloride solution shall be used in place of distilled water.

<sup>3</sup> Test procedure identical with ASTM D-244 except that distilled water shall be used in place of two percent sodium oleate solution.

<sup>4</sup> Test procedure is attached.

<sup>5</sup> Chemical composition by ASTM Method D-2006-70:

PC = Polar Compounds, A<sub>1</sub> = First Acidaffins

A<sub>2</sub> = Second Acidaffins, S = Saturated Hydrocarbons

**Material Performance:** The asphalt rejuvenating agent shall have the capability to penetrate the asphalt pavement surface. The asphalt rejuvenating agent shall be absorbed and incorporated into the asphalt binder. Verification that said incorporation of the asphalt rejuvenating agent into the asphalt binder has been effected shall be by analysis of the chemical properties of said asphalt binder i.e. viscosity shall be improved to the following extent. The viscosity shall be reduced by a minimum of forty, (40%) percent as determined by dynamic shear rheometer (DSR) method for asphalt testing in accord with AASHTO T315-05. This analysis shall apply to extracted asphalt binder, taken from cores extracted fifteen to thirty days following application, in the upper 3/8" of pavement. In addition the treated areas shall be sealed in-depth to the intrusion of air and water.

The rejuvenating agent shall have a record of at least five years of satisfactory service as an asphalt rejuvenating agent and in-depth sealer. Satisfactory service shall be based on the capability of the material to decrease the viscosity of the asphalt binder and provide an in-depth seal.

The bidder must submit with his bid the manufacturer's certification that the material proposed for use is in compliance with the specification requirements. The bidder must submit with his bid previous use documentation and test data conclusively demonstrating that the rejuvenating agent has been used successfully for a period of five years by government agencies such as Cities, Counties, etc; and that the asphalt rejuvenating agent has been proven to perform, as heretofore required, through field testing by government agencies as to the required change in asphalt binder viscosity. Testing data shall be submitted indicating such product performance on a sufficient number of projects to insure product consistency. In addition, testing data shall be submitted to indicate said product performance over a testing period of three years to insure reasonable life expectancy.

#### **Equipment:**

**Distributor:** The distributor for spreading the emulsion shall be self-propelled, and shall have pneumatic tires. The distributor shall be designed and equipped to distribute the asphalt rejuvenating agent uniformly on variable widths of surface at readily determined and controlled rates from 0.05 to 0.5 gallons per square yard of surface, and with an allowable variation from any specified rate not to exceed 5 percent of the specified rate.

Distributor equipment shall include full circulation spray bars, pump tachometer, volume measuring device and a hand hose attachment suitable for application of the emulsion manually to cover areas inaccessible to the distributor. The distributor shall be equipped to circulate and agitate the emulsion within the tank.

A check of distributor equipment as well as application rate accuracy and uniformity of distribution shall be made when directed by the Engineer.

**Sand Truck:** The truck used for sanding shall be equipped with a spreader that allows the sand to be uniformly distributed onto the pavement. The spreader shall be able to apply 1/2 pound to 3 pounds of sand per square yard in a single pass. The spreader shall be adjustable so as not to broadcast sand onto driveways or to lawns.

The sand to be used shall be free flowing, without any leaves, dirt, stones, etc. Any wet sand shall be rejected from the job site.

Any equipment that is not maintained in full working order, or is proven inadequate to obtain the results prescribed, shall be repaired or replaced at the direction of the Engineer.

#### **Construction:**

##### **Layout:**

The Contractor will be responsible for the lay out of the roadway and project planning and sequencing to meet traffic control requirements prior to paving.



**Weather and Seasonal limitations:**

The asphalt-rejuvenating agent shall not be applied to a wet surface or when rain is occurring or the threat of rain is present immediately before placement. The surface treatment shall not be applied when the temperature is less than 50 degrees Fahrenheit in the shade. When applying emulsions, the temperature of the surface shall be a minimum of 59°F, and no more than 140°F.

If unexpected rain occurs prior to material penetration and sanding, the agent shall be reapplied at no cost to the county. Further, the contractor's traffic control and project monitoring shall continue until the application has penetrated, area has been sanded and the resultant surface is not slippery or dangerous to vehicular travel.

**Preparation of Surface:**

The contractor will be responsible for blowing or sweeping the road immediately ahead of the fog seal operation to make sure the road is free of loose aggregate and other debris. The surface shall be clean and dry prior to the application.

The asphalt-rejuvenating agent shall be applied by a distributor truck at the temperature recommended by the manufacturer and at the pressure required for the proper distribution. The emulsion shall be so applied that uniform distribution is obtained at all points of the areas to be treated. Distribution shall be commenced with a running start to insure full rate of spread over the entire area to be treated. Areas inadvertently missed shall receive additional treatment as may be required by hand sprayer application.

Application of asphalt rejuvenating agent shall be on one-half width of the pavement at a time. When the second half of the surface is treated, the distributor nozzle nearest the center of the road shall overlap the previous application by at least one-half the width of the nozzle spray. In any event the centerline construction joint of the pavement shall be treated in both application passes of the distributor truck.

Before spreading, the asphalt rejuvenating agent shall be blended with water at the rate of two (2) parts rejuvenating agent to one (1) part water, by volume or as specified by the manufacturer. The combined mixture of asphalt rejuvenating agent and water shall be spread at the rate of 0.05 to 0.10 gallons per square yard, or as approved by the Engineer following field testing.

Where more than one application is to be made, succeeding applications shall be made as soon as penetration of the preceding application has been completed and the Engineer grants approval for additional applications.

Grades or super elevations of surfaces that may cause excessive runoff, in the opinion of the Engineer, shall have the required amounts applied in two or more applications as directed.

After the street has been treated, the area within one foot of the curb line on both sides of the road, when directed by the Engineer, shall receive an additional treatment of the asphalt rejuvenating emulsion. Said treatment shall be uniformly applied by a method acceptable to the Engineer.

After the rejuvenating emulsion has penetrated, a coating of dry sand shall be applied to the surface in sufficient amount to protect the traveling public as required by the Engineer.

The Contractor shall furnish a quality inspection report showing the source, manufacturer, and the date shipped, for each load of asphalt rejuvenating agent. When directed by the Engineer, the Contractor shall take representative samples of material for testing.

**Applicator Experience:** The asphalt-rejuvenating agent shall be applied by an experienced applicator. A project superintendent knowledgeable and experienced in application must be in control of each day's work.

**Weather and Seasonal limitations:** The temperature of the asphalt rejuvenating emulsion, at

the time of application shall be as recommended by the manufacturer. The asphalt-rejuvenating agent shall be applied only when the existing surface to be treated is thoroughly dry and when it is not threatening to rain. The asphalt-rejuvenating agent shall not be applied when the ambient temperature is below 40° F.

**Handling of Asphalt Rejuvenating Agent:** Contents in tank cars or storage tanks shall be circulated at least forty-five minutes before withdrawing any material for application. When loading the distributor, the asphalt rejuvenating agent concentrate shall be loaded first and then the required amount of water shall be added. The water shall be added into the distributor with enough force to cause agitation and thorough mixing of the two materials. To prevent foaming, the discharge end of the water hose or pipe shall be kept below the surface of the material in the distributor that shall be used as a spreader. The distributor truck will be cleaned of all of its asphalt materials, and washed out to the extent that no discoloration of the emulsion may be perceptible. Cleanliness of the spreading equipment shall be subject to the approval and satisfaction of the Engineer.

**Street Sweeping:** The Contractor shall be responsible for sweeping and cleaning of the streets prior to, and after treatment.

Prior to treatment, the street will be cleaned of all standing water, dirt, leaves, foreign materials, etc. This work shall be accomplished by hand brooming, power blowing or other approved methods. If in the opinion of the Engineer hand cleaning is not sufficient, a self-propelled street sweeper shall be used.

All sand used during the treatment must be removed no later than 48 hours after treatment of the street. This shall be accomplished by a combination of hand and mechanical sweeping. All turnouts, cul-de-sacs, etc. must be cleaned of any material to the satisfaction of the Engineer. Street sweeping will be included in the price bid per square yard for asphalt rejuvenating agent.

If, after sand is swept and in the opinion of the Engineer a hazardous condition exists on the roadway, the contractor must apply additional sand and sweep same no later than 24 hours following reapplication. No additional compensation will be allowed for reapplication and removal of sand.

#### **Traffic Control:**

The Contractor shall furnish all necessary traffic control, barricades, signs and flagmen, to ensure the safety of the traveling public and to all working personnel. Traffic shall not travel on fresh Asphalt Rejuvenator until penetration, in the opinion of the Engineer, has become complete and the area is suitable for traffic. The Contractor shall submit an M.O.T. plan indicating all facets of traffic control for the project area. The MOT plan must be approved in writing by the County prior to commencing any work. All traffic control shall be in accordance with the FDOT Roadway Design Standards, most current edition and TP-102. M.O.T. and associated devices shall be checked daily and periodically throughout the project for compliance; and where adjustments or corrections are needed, prompt revisions shall be made.

#### **Method of Measurement:**

If a pay item is listed on the Bid Form for work required in this Technical Provision, the quantity to be paid shall be per Square Yard of Asphalt Rejuvenating Agent or as specified in the Bid Form including all items of work described herein. Any item necessary for Asphalt Rejuvenator as detailed in this specification, and not specifically listed in another item in the Bid Form, shall be included in this item.

#### **Basis of Payment:**

The quantities to be paid for under this Technical Provision shall be included in the per Square Yard price for Asphalt Rejuvenator or as listed in the Bid Form. The Unit price includes all items

listed in the contract, including all General Conditions, Special Conditions and Technical Provisions pertaining to Asphalt Rejuvenator, including all items of work described herein. No additional payment will be provided for any item necessary for the completion of this contract as detailed in the specifications.

**Resident Notification:** The contractor shall distribute by hand, a typed notice to all residences and businesses on the street to be treated. The notice will be delivered no more than 24 hours prior to the treatment of the road. The notice will have a local phone number that residents may call to ask questions. The notice shall be of the door hanger type that secures to the door handle of each dwelling. Unsecured notices will not be allowed. The contractor shall also place the notice on the windshield of any parked cars on the street. Hand distribution of this notice will be considered incidental to the contract.

## Exhibit A

### PROCEDURE FOR DETERMINING PERCENT LIGHT TRANSMITTANCE ON ASPHALT REJUVENATING AGENT

#### A. SCOPE

This procedure covers the determination of percent light transmittance of the asphalt rejuvenating agent.

#### B. APPARATUS

- 1) Container may be either glass, plastic or metal having a capacity of 6,000 ml.
- 2) Graduated cylinder, 1,000 ml, or greater
- 3) Light transmittance measuring apparatus, such as Bausch and Lomb or Lumetron spectrophotometer
- 4) Graduated pipette having 1 ml capacity to 0.01 ml accuracy
- 5) Suction bulb for use with pipette
- 6) Test tubes compatible with spectrophotometer, 3/4" X 6, Bausch and Lomb, Catalog No. 33-17- 81, (B&L)

#### C. CALIBRATION OF SPECTROPHOTOMETER

- 1) Calibrate spectrophotometer as follows: (a) Set wavelength at 580 mu, (b) Allow spectrophotometer to warm-up thirty minutes, (c) Zero percent light transmittance (%LT) scale, (d) Rinse test tube three times with tap water and fill to top of circle marking on B&L test tube or approximately 2/3 full, (e) Place tube in spectrophotometer and set %LT scale at 100, and (f) repeat steps (c) and (e) two times or until no further adjustments are necessary.

#### D. PROCEDURE

- 1) Shake, stir or otherwise thoroughly mix emulsion to be tested. Place sample of emulsion in beaker and allow to stand one minute.
- 2) Place 2,000 ml tap water in container.
- 3) Suck 1.00 ml emulsion into pipette using suction bulb. Wipe off outside of pipette.
- 4) Using suction bulb, blow emulsion into container.
- 5) Rinse pipette by sucking in diluted emulsion solution and blowing out.
- 6) Clean pipette with soap or solvent and water. Rinse with acetone.
- 7) Stir diluted emulsion thoroughly.
- 8) Rinse out tube to be used with the diluted emulsion three times and fill to top of circle.
- 9) Calibrate spectrophotometer.
- 10) Place diluted emulsion sample tube in spectrophotometer, cover and read %LT to nearest tenth.
- 11) Repeat steps 9 and 10 until three identical consecutive readings are achieved.
- 12) The elapsed time between addition of emulsion to dilution of water and final %LT reading should not exceed 5 minutes.

TECHNICAL PROVISION

TP-316

Asphaltic Surface Treatment (Chip Seal)

The work specified in this section consists of furnishing and applying a single or double application of bituminous surface treatment on a prepared sub-grade or road base, compacted to the lines, grades, and thickness established by the County and in substantial conformance with the limits established by the owner.

Description: Chip Seal is a pavement surface treatment option that combines a layer of liquid asphalt emulsion or polymer modified liquid asphalt emulsion placed on a prepared base with a layer of aggregate spread and compacted while the asphalt is still liquid.

Materials

**Aggregates:** Crushed granite conforming to FDOT specifications section 901, table 1 for #89, #78 or #67 gradation for coarse aggregates except as modified herein. The aggregate shall be washed granite obtained from a source approved by the owner. Sampling and testing of aggregate shall be the responsibility of the contractor. Copies of test results from the aggregate supplier shall be furnished to the owner prior to the start of the surface treatment.

Test on Aggregate	AASHTO	ASTM	Specification
Flat and Elongated Particles in Cover Coat Aggregate		D 4791	Ratio – 3:1 <12%
Fractured Face	T 335	D 5821	100%
Resistance to Degradation of Small-Size Coarse Aggregate by Abrasion and Impact in the Los Angeles Machine	T 96	C 131	25% Max

**Liquid bituminous material for surface treatment:** CRS-2h or CRS-2P liquid bituminous material conforming to FDOT specification section 916 except as modified herein. The CRS-2P bituminous material shall be polymer modified prior to emulsification. The contractor shall certify the liquid bituminous material meets the aforementioned FDOT specification.

The material shall contain carefully controlled amounts of selected diluents to promote workability and minimize stripping. Additives that enhance pavement performance are subject to approval by the County. The contractor shall certify the liquid bituminous material meets the specification. Further, the emulsion supplier shall receive quarterly certificates of analysis from both the polymer and rejuvenating agent manufacturers. The COAs will be provided to the City upon request.

Material Designation	CRS-2P		
	AASHTO Test	Min	Max
<b>Test on Emulsion:</b>			
Viscosity, Saybolt, 122 °F (50 C), sfs	T59	100	400
Storage Stability Test, 24-h, %	T59		1.0
Sieve test, %	T59		0.1
Demulsibility, %	T59	40.0	
% residue by volume of emulsion	T59	65.0	
% oil distillate by volume of emulsion	T59		0.5
<b>Tests on Residue from Distillation:</b>			
Penetration, 77 °F, 100 g., 5 sec.	T49	100	175
Elastic Recovery, %	T301	50	
Ductility, 77°F, 5 cm/min, cm	T51	125	
Polymer Solids Content	T302	2.5	
Solubility in trichloroethylene	T44	97.5	

Material Designation	CRS-2H		
Test on Emulsion:	AASHTO Test	Min	Max
Viscosity, Saybolt, 122 degrees F (50 C), s	T59	100	400
Storage Stability Test, 24-h, %*	T59		1
Demulsibility, %	T59	40	
% residue by volume of emulsion	T59	65	
% oil distillate by volume of emulsion	T59		0.5
Tests on Residue from Distillation:			
Penetration, 77 °F, 100 g., 5 sec.	T49	40	90
Solubility in Trichloroethylene, %	T44	97.5	
Ductility, 77 °F, 5 cm./min., cm.	T51	40	

Each load of emulsified asphalt shall be accompanied with a Certificate of Analysis/Compliance to assure that it meets the requirements of this specification. COA shall include, at a minimum, required emulsion properties and percentage of polymer solids in the emulsion.

**Material Samples:** The City will require the Contractor to sample and test each load of emulsion prior to delivery. The Contractor will also provide a sample of the emulsion, on site, prior to commencing work. The City will require the Contractor to provide sample containers and a local Independent testing laboratory for the analyzing of emulsion. The Contractor will be responsible for the cost of the testing. The City reserves the right to test any shipment of emulsion that is believed to be substandard. All samples shall be shipped and stored in clean air tight sealed wide mouth jars or bottles made of plastic. Where these tests identify material outside specification requirements, the City shall require the supplier to cease shipment of that pre-tested product. Further shipment of that pre-tested product will remain suspended until the cause of the problem is evaluated and corrected by the supplier to the satisfaction of the City. Further, the City may require the material placed containing the emulsified asphalt outside of specification requirements to be removed and replaced at the sole expense of the contractor or left in place at no pay.

**Equipment**

**Distributor:** The liquid bituminous material shall be applied with a truck mounted, pressure distributor that has been calibrated within the previous twelve (12) months, for transverse and longitudinal application rate. The distributor shall be equipped, maintained and operated so that the bituminous material can be applied at controlled temperatures and rates from .035 to 1.5 gallons per square yard. The distributor shall be capable of applying bituminous material of variable widths up to sixteen (16) feet. The distributor shall uniformly apply the bituminous material to the specified rate with a maximum allowed variation of 0.015 gallons per square yard. Distributor equipment shall include tachometer, accurate volume measuring device, a calibrated tank and a thermometer for measuring the temperature of the tank’s contents. Distributors shall be equipped with a heating device, asphalt pump and full circulating spray bars adjustable laterally and vertically. Distributors and transport trailers shall be equipped with a sampling valve. Distributor trucks shall be of the pressure type with insulated tanks. The use of gravity distributors will not be permitted. The valves shall be operated by levers so that one or all valves may be quickly opened or closed in one operation. The valves which control the flow from nozzles shall act positively so as to provide a uniform unbroken spread of bituminous material on the surface. The distributor shall be equipped with devices and charts to provide for accurate and rapid determination and control of the amount of bituminous material being applied and with a bitometer of the auxiliary wheel type registering speed in feet per minute, and trip and total distance in feet.

**Aggregate Spreader:** The aggregate spreader shall be a self-propelled unit capable of uniformly spreading the aggregate at the required rate on a minimum width of six (6”) inches wider than the width of the lane to be treated. The spreader shall be calibrated within the previous twelve (12) months for transverse and longitudinal application. The spreader shall be equipped with a computer-controlled aggregate/chip spreader in order to ensure the appropriate aggregate coverage at varying speeds, unless approved otherwise by Engineer.

**Pneumatic Tire Rollers:** The contractor shall use eight (8) to twelve (12) ton self-propelled pneumatic tire rollers with oscillating wheels and low pressure, smooth tires. Maintain the inflation of the tires such that in

no two tires the air pressure varies more than 5 psi. The rollers will be equipped with an operating water system and coco pads. A sufficient number of rollers and a sufficient number of passes shall be used to ensure cover aggregate is properly rolled.

**Self-Propelled Rotary Power Broom:** The self-propelled rotary broom shall be designed, equipped, maintained and operated so the pavement surface can be swept clean. The broom shall have an adjustment to control the downward pressure.

**Additional equipment:** Additional equipment will be needed to complete the operations required by this technical provision. All equipment necessary for the successful completion of projects governed by this technical provision shall be included in the unit costs associated herein. Availability of quality assurance devices (such as a 15' straight edge) shall be the responsibility of the Contractor.

## Construction

**Layout:** The Contractor will be responsible for the string lining and lay out of the roadway prior to paving.

**Weather and Seasonal limitations:** The surface treatment shall not be applied to a wet surface or when rain is occurring or the threat of rain is present immediately before placement. The surface treatment shall not be applied when the temperature is less than 50 degrees Fahrenheit in the shade. When applying emulsions, the temperature of the surface shall be a minimum of 55°F, and no more than 140°F.

**Preparation of Surface:** The chip seal material shall be placed on a firm unyielding prepared roadway. The Contractor shall be responsible for clipping back shoulders and removing overburden or any other vegetation or debris to ensure that the road is free of organic and deleterious material. The contractor shall be responsible for removal of all thermoplastic striping or signage on the surface of the roadway, and all Reflective Pavement Markers prior to beginning operation. Prior to the scrub seal operation, all drain inlet covers, monument covers, and all other utility covers shall be protected from the operation by applying a sheet of plastic over the exposed facilities, or other methods approved by the County. 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 final inspection of the project. The contractor will be responsible for blowing or sweeping the road immediately ahead of the chip seal operation to make sure the road is free of loose aggregate and other debris.

**Application of bituminous material:** Liquid bituminous material shall be applied by means of a pressure type distributor in a uniform, continuous spread over the section to be treated. The distributor shall be moving forward at the proper speed when the liquid is discharged onto the pavement to provide an even and consistent application at the rate prescribed. If any areas are deficient the operation shall be stopped and corrected immediately. The liquid shall not be applied more than two hundred (200') feet in advance of the aggregate spreader when the ambient air temperature is above 75 degrees or one hundred (100') feet if the air temperature is below 75 degrees.

- **Single Chip Seal:** Application of the liquid bituminous material shall be applied at a rate of .20 - .50 gallons per square yard depending on the composition of the existing road bed, surface texture and the size of the aggregate in use.
- **Double Chip Seal:** Application of the liquid bituminous material shall be applied at a rate of .50 - .95 gallons per square yard depending on the composition of the existing road bed, surface texture and the size of the aggregate in use. The first application of a double chip shall contain 40% of the emulsion of the total seal, while the second application contains 60% of the emulsion.

**Application of cover aggregate:** Immediately following the spray application of the liquid bituminous material, cover aggregate shall be spread over the liquid material at a rate of 18 – 30 lbs square yard depending upon the type of road base and/or the size of the existing aggregate that is being resurfaced.

During the first day of production and at least once a week thereafter, the application rate of the aggregate shall be verified by the contractor and witnessed by the county to assure that the appropriate application rate of the aggregate is applied. The rate can be verified by placing a tarp of at least 1.0 yd<sup>2</sup> area on the roadway

surface. After allowing the aggregate spreader to pass over the tarp, the aggregate on the tarp should be collected and weighed to determine the weight of aggregate. The measured weight should then be compared to the target weight.

Upon determining the target weight, it should be compared to the actual measured weight. If the difference in the target weight and the actual measured weight is over 1.5 pounds, the aggregate distributor should be adjusted such that the spread rate is within the above tolerance. The above procedure shall be repeated until the spread rate is within the allowable tolerance.

If at any point during production, excessive aggregate is noted, the aggregate application rate should be verified and the spread rate adjusted. The intent is to minimize the amount of excess aggregate. Excess aggregate removed from the roadway surface after brooming shall be removed from the job site and should not be reused in the aggregate operation.

**Rolling:** Immediately following the first application of the cover material, roll the entire surface with a pneumatic roller, followed immediately with the steel drum roller. Cover the entire surface one time with the steel drum roller. Then, roll the cover material again with the pneumatic roller. Continue rolling as long as necessary to ensure thorough keying of the cover aggregate into the liquid bituminous material. Eliminate the steel drum when rolling the second application of cover aggregate. Apply the second application of liquid and cover material the same day as the first application, as far as it is practicable and consistent with the setting of the liquid bituminous material.

**Sweeping:** After rolling of the first application of cover aggregate, lightly broom the loose aggregate in a manner not to dislodge the aggregate embedded in the liquid. Sweep loose material from road bed. Following second application again broom loose aggregate from the road bed prior to the application of the fog seal. If temperatures exceed 85 degrees, it may be necessary to wait 24 hours before sweeping the first application of chip seal.

**Fog Seal:** Upon direction from the engineer, fog seal is to be applied as a separate pay item. When surface treatment has set, a fog seal is to be applied at a rate of .1 to .15 gallons per square yard to the entire surface treatment. The liquid for fog seal shall be a cationic mixing type emulsion diluted forty (40%) percent with water. Fog seal shall then be lightly sanded at a rate of plus or minus two (2) pounds per square yard by means of a mechanical spreader.

**General Performance:** Provide completed pavement which performs to the satisfaction of the engineer without bleeding, rutting, shoving, raveling, stripping, or showing other types of pavement distress or unsatisfactory performance.

**Contractor's Quality Control Plan:** Provide and follow a QC plan that will maintain QC for production and construction processes. Provide the City with a copy of the QC plan for review and approval before the pre-construction meeting. Include, at a minimum, the following items:

- Source materials used on the project.
- Sampling and testing methods used to determine compliance with material specifications.
- Equipment to be used on the project.
- Calibration method used to determine compliance with this specification.
- Pavement cleaning and preparation procedure.
- Plan for protecting chip seal from damage by traffic.
- Procedure for monitoring initial acceptance requirements.
- An action plan demonstrating adjustments of the operation for adverse environmental conditions or out of specification materials or procedures.

**Traffic Control:** The Contractor shall furnish all necessary traffic control, barricades, signs and flagmen, to ensure the safety of the traveling public and to all working personnel. Traffic shall not travel on fresh mix until all placement operations are completed. The Contractor shall submit an M.O.T plan indicating all facets of traffic control for the project area. The MOT plan must be approved in writing by the County prior to commencing any work. All traffic control shall be in accordance with the FDOT

Roadway Design Standards, most current edition and TP-102. M.O.T. and associated devices shall be checked daily and periodically throughout the project for compliance. Where adjustments or corrections are needed, prompt revisions shall be made.

**Notes:**

Contractor shall use a string line or other approved method to insure straightness of all paving operations, any deficiencies must be removed by saw cutting the edge of pavement in a straight line; all longitudinal joints shall be in the center of the road. Difficulties and problems shall be reported to the Owner in a timely manner so as to avoid serious impacts to the project.

The Contractor shall construct a two (2) foot apron at all driveways

**Documentation:** Complete a daily report that includes the following information:

- Job number
- Route/Street Name(s)
- Owner's On-Site Representative Name
- Date
- Air temperature – Min/Max (during application)
- Unit weight of emulsified asphalt (pounds per gallon)
- Beginning and ending application locations
- Length and width in feet
- Total area (square yards)
- Aggregate weight
- Gallons of emulsified asphalt
- Application rate (pounds/gallons per square yard)
- Contractor's authorized signature
- QC aggregate properties (if required)
- Asphalt emulsified asphalt bill of lading(s)

**Method of Measurement:**

If a pay item is listed on the Bid Form for work required in this Technical Provision, the quantity to be paid shall be as specified in the Bid Form including all items of work described herein. Any item necessary for Chip Seal, and not specifically listed in another item in the Bid Form, shall be included in this item. Should the contractor be directed to place Fog Seal as a secondary application to Chip Seal, it shall be measured separately as listed in the Technical Provision for Fog Seal

**Basis of Payment:**

The quantities to be paid for under this Technical Provision shall be included in the Square Yard price for Chip Seal (Single application), Chip Seal (Double application) or as listed in the Bid Form. The Unit price includes all items listed in the contract, including all General Conditions, Special Conditions and Technical Provisions pertaining to Chip Seal, including all items of work described herein. No additional payment will be provided for any item necessary for the completion of this contract as detailed in the specifications, except that at the direction of the county, Fog Seal shall be applied and paid separately as listed in the Technical Provision for Fog Seal.



TECHNICAL PROVISION

TP-316a

Asphaltic Surface Treatment (Rejuvenating Scrub Seal)

The work specified in this section consists of furnishing and applying a single or double application of bituminous surface treatment on a prepared sub-grade, road base or roadway, compacted to the lines, grades, and thickness established by the County and in substantial conformance with the limits established by the owner.

Description: Scrub Seal is a chip seal that utilizes an emulsion drag broom, used to rehabilitate roads with extensive cracking without having to apply crack seal prior to chip sealing. This process utilizes a cationic, polymer modified asphalt rejuvenating emulsion.

Materials:

**Liquid bituminous material for surface treatment:** For scrub seal applications, and the first lift of double applications, a liquid bituminous material conforming to the requirements in the scrub table shall be utilized. If project requirements dictate a second lift on top of the scrub seal application, CRS-2P conforming to the requirements of the CRS-2P table below shall be utilized. The contractor shall certify the liquid bituminous material meets the specification. Further, the emulsion supplier shall receive quarterly certificates of analysis from both the polymer and rejuvenating agent manufacturers. The COAs will be provided to the County upon request.

Material Designation	CRS-2P		
	AASHTO Test	Min	Max
<b>Test on Emulsion:</b>			
Viscosity, Saybolt, 122 °F (50 °C), sfs	T59	100	400
Storage Stability Test, 24-h, %*	T59		1.0
Sieve test, %	T59		0.1
Demulsibility, %	T59	70.0	
% residue by volume of emulsion	T59	65.0	
% oil distillate by volume of emulsion	T59		0.5
<b>Tests on Residue from Distillation:</b>			
Penetration, 77 °F, 100 g., 5 sec.	T49	90	150
Elastic Recovery, %	T301	50	
Ductility 77 °F, 5 cm/min, cm	T51	50	
Polymer Solids Content, %	T302	2.5	
Solubility in Trichloroethylene	T44	97.5	

Material Designation - Cationic Asphalt Emulsion		Scrub		
Emulsion Properties	Test	Min	Max	
Viscosity, Saybolt Furol, 77° F (25° C), SFS	T59	50	350	
Storage Stability Test, 24-h, %	T59		1	
Oil Distillate, %	T59		0.5	
Sieve Test, %	T59		0.1	
Residue by Distillation <sup>(1)</sup> @ 350°F, %	T59	60		
<b>Residue Properties from Distillation:</b>	<b>T59</b>			
Penetration, 4°C (39.2°F), 200 g., 60 sec	T49	30		
<b>Residue Properties from Low Temp Evaporation:</b>	<b>PP72-11, Procedure B</b>			
MSCR @ 52°C, J <sub>nr</sub> @ 3.2kPa	ASTM D7405		4.0	

<b>Polymer Properties:</b>			
Swelling in rejuvenating agent, % max weight increase: 48 hours	ASTM D471 Mod <sup>(2)</sup>		40%
Tensile Strength, PSI	ASTM D412A Mod <sup>(2)</sup>	800	
Glass Transition Temperature (T <sub>g</sub> ) – Midpoint by DSC (°C)	ASTM D7426 Mod <sup>(2)</sup>	0	
Latex Density @ 23°C, (g/cm <sup>3</sup> )	ASTM D6937 Mod <sup>(2)</sup>	1.00	1.05
Latex pH	ASTM E70 Mod <sup>(2)</sup>	6.0	8.0
<b>Rejuvenating Agent Properties</b>			
Flash Point, COC, °F	T48	380	
Viscosity, 140 °F, CST	T201	50	175
Saturate, % by weight	ASTM D2007		30
Asphaltenes	ASTM D2007		1.0
<b>Test on Residue from RTFO</b>			
Weight change, %w	ASTM D2872		6.5
Viscosity Ratio (RTFO/Orig.)	ASTM D2170		3

**Test Modifications:**

1. Exception to AASHTO T59: Bring the temperature on the lower thermometer slowly to 350 °F plus or minus 10 °F. Maintain this temperature for 20 minutes. Complete the total distillation in 60 plus or minus 5 minutes.
2. ASTM D471 Standard Test Method for Rubber Property-Effect of Liquids: Modifications for Polymer Testing, Resistance to Swelling:
  - a. Using a syringe, place 0.8 gm of latex into an 18 mm diameter DSR mold.
  - b. Allow the sample to dry at ambient lab conditions (air conditioned) on the bench for 72 hours. Sample should be easily removable from the mold.
  - c. Take the “button” out of the mold and place the sample into a forced air oven at 40°C (104°F) for 48 hours (on release paper).  
If at the end of the ambient dry, the sample sticks to the mold, place it into the oven and check it after 1-2 hours.
  - d. After 48 hours cool and weigh the sample to the nearest 0.0001 gram and record the weight.
  - e. Put ½ inch of Rejuvenating Agent into a 3 oz penetration tin.
  - f. Place the “button” on the Rejuvenating Agent, and add another ½ inch Of Rejuvenating Agent, so that the “button” is covered.
  - g. Put the cap on the penetration tin and place it into the 40°C oven for 48 hours.
  - h. Remove the “button from the Rejuvenating Agent, blot surface of the “button” to remove excess Rejuvenating Agent, cool the “button” to room temperature and weigh it.
  - i. Calculate weight gain of the “button”, express as %.
3. ASTM D412A Standard Test Methods for Vulcanized Rubber and Thermoplastic Elastomers-Tension: Modifications
  - a. To prepare the polymer film, dilute the waterborne polymer to 40% Total Solids Content and pour 57 g into a Teflon or silicone release mold of dimensions 7” X 7” X ¼”.
  - b. Allow to dry at 23°C (73 °F) and 50% RH (controlled conditions) for 7 – 10 days total time, during which time the film should be flipped around once, preferably after 3 or 4 days. The film should be transparent in the end.
  - c. To drive out any residual water, place the film in an oven at 50°C for 30 min. Dried film thickness should be 25 mil +/- 5 mils. Discard films <20 mil.
  - d. Cut out dumbbell-shaped test specimens of dimension 75 mm total length, 25 mm mid-section (L) and 4 mm width of mid-section.
  - e. Grip in Instron machine with gap size 1 inch, use 8 inch/min cross-head speed.
4. ASTM D7426 Standard Test Method for Assignment of the DSC Procedure for Determining T<sub>g</sub> of a Polymer or an Elastomeric Compound Modifications
  - a. Use between 3 – 30 mg dry polymer. Instrument used is TA Q2000 Differential Scanning Calorimeter (DSC). Heating rate is 20°C/min.

5. ASTM D6937 Standard Test Method for Determining Density of Emulsified Asphalt: Modifications
- a. Replace "Emulsified Asphalt" with "Latex" in text of test method. The testing temperature used should be 25 +/- 3oC. The calculation in Section 7 should be as follows:
    - i. Calculation:
$$D = (W_f - W_t) * 0.1$$
$$S.G. = D / 8.337$$
Where: Wf = Weight of filled cup (g)  
Wt = Weight of empty cup (g)

6. ASTM E70 Standard Test Method for pH of Aqueous Solutions with the Glass Electrode: Modifications
- a. A pH meter with automatic temperature measurement should be used in the evaluation with a calomel cell assembly or combination electrode. Calibration should be made using the procedure with the pH meter, according to ASTM method, prior to testing the pH of the latex. In Section 9, the procedure for measuring pH of the latex should be as follows:
    - i. Place the electrode and probe into the dispersion that is to be measured and swirl the sample cup or beaker gently. (You may also use the probe in a stirring motion.)
    - ii. Wait for the reading to stabilize (usually less than a minute) and read/record this value. Note the temperature if not utilizing an ATC probe.
    - iii. Take the Electrode and ATC probes from the sample and rinse thoroughly with de-ionized water. Pat dry and place back into appropriate solution recommended by electrode manufacturer for storage.

**End of Test Modifications:**

Each load of emulsified asphalt shall be accompanied with a Certificate of Analysis/Compliance to assure that it meets the requirements of this specification. COA shall include, at a minimum, required emulsion properties and percentage of polymer solids in the emulsion.

**Material Samples:** The County will require the Contractor to sample and test each load of emulsion prior to delivery. The Contractor will also provide a sample of the emulsion, on site, prior to commencing work. The County will require the Contractor to provide sample containers and a local Independent testing laboratory for the analyzing of emulsion. The Contractor will be responsible for the cost of the testing. The County reserves the right to test any shipment of emulsion that is believed to be substandard. All samples shall be shipped and stored in clean air tight sealed wide mouth jars or bottles made of plastic. If requested by the County, samples of rejuvenator and polymer shall also be provided in sample containers for testing by the County. Cost of polymer and rejuvenator testing shall be borne by the county. Where these tests identify material outside specification requirements, the County shall require the supplier to cease shipment of that pre-tested product. Further shipment of that pre-tested product will remain suspended until the cause of the problem is evaluated and corrected by the supplier to the satisfaction of the County. Further, the County may require the material placed containing the emulsified asphalt outside of specification requirements to be removed and replaced at the sole expense of the contractor or left in place at no pay.

**Aggregates:** Crushed granite conforming to FDOT specifications section 901, table 1 for #89, #78 or #7 gradation for coarse aggregates except as modified herein. The aggregate shall be washed granite obtained from a source approved by the County. Sampling and testing of aggregate shall be the responsibility of the contractor. Copies of test results from the aggregate supplier shall be furnished to the County prior to the start of the surface treatment.

Test on Aggregate	AASHTO	ASTM	Specification
Flat and Elongated Particles in Cover Coat Aggregate		D 4791	Ratio – 3:1 <12%
Fractured Face	T 335	D 5821	100%
Resistance to Degradation of Small-Size Coarse Aggregate by Abrasion and Impact in the Los Angeles Machine	T 96	C 131	25% Max

**Equipment:**

**Distributor:** The liquid bituminous material shall be applied with a truck mounted, pressure distributor that has been calibrated within the previous twelve (12) months, for transverse and longitudinal application rate. The distributor shall be equipped, maintained and operated so that the bituminous material can be applied at controlled temperatures and rates from .035 to 1.5 gallons per square yard. The distributor shall be capable of applying bituminous material of variable widths up to sixteen (16) feet. The distributor shall uniformly apply the bituminous material to the specified rate with a maximum allowed variation of 0.015 gallons per square yard. Distributor equipment shall include tachometer, accurate volume measuring device, a calibrated tank and a thermometer for measuring the temperature of the tank’s contents. Distributors shall be equipped with a heating device, asphalt pump and full circulating spray-bars adjustable laterally and vertically. Distributors and transport trailers shall be equipped with a sampling valve. Distributor trucks shall be of the pressure type with insulated tanks. The use of gravity distributors will not be permitted. The valves shall be operated by levers so that one or all valves may be quickly opened or closed in one operation. The valves which control the flow from nozzles shall act positively so as to provide a uniform unbroken spread of bituminous material on the surface. The distributor shall be equipped with devices and charts to provide for accurate and rapid determination and control of the amount of bituminous material being applied and with a bitumeter of the auxiliary wheel type registering speed in feet per minute, and trip and total distance in feet.

**Aggregate Spreader:** The aggregate spreader shall be a self-propelled unit capable of uniformly spreading the aggregate at the required rate on a minimum width of six (6”) inches wider than the width of the lane to be treated. The spreader shall be calibrated within the previous twelve (12) months for transverse and longitudinal application. The spreader shall be equipped with a computer-controlled aggregate/chip spreader in order to ensure the appropriate aggregate coverage at varying speeds, unless approved otherwise by Engineer.

**Scrub Broom:** A scrub broom as described herein and depicted in the attached diagram shall be used to scrub the emulsion after application. 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 to the next area of construction. The weight of the broom assembly shall be such that it does not squeegie the emulsion off the roadway surface.

The main body of the scrub broom shall have a frame size as shown in the diagram at the end of this technical provision. The nearest and furthest members, paralleling the back of the distributor truck, and diagonal members shall be equipped with street brooms. The leading member and the trailing member shall have broom heads angled at 10 to 15 degrees off the centerline of the supporting member as shown in the scrub broom schematic at the end of this technical provision. 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 and shall maintain the scrubbing process evenly as contours and cross-sections change across the existing road surface.

**Pneumatic Tire Rollers:** The contractor shall use eight (8) to twelve (12) ton self-propelled pneumatic tire

rollers with oscillating wheels and low pressure, smooth tires. Maintain the inflation of the tires such that in no two tires the air pressure varies more than 5 psi. The rollers will be equipped with an operating water system and scrubbing pads. A sufficient number of rollers and a sufficient number of passes shall be used to ensure cover aggregate is properly rolled.

**Self-Propelled Rotary Power Broom:** The self-propelled rotary broom shall be designed, equipped, maintained and operated so the pavement surface can be swept clean. The broom shall have an adjustment to control the downward pressure.

**Additional equipment:** Additional equipment will be needed to complete the operations required by this technical provision. All equipment necessary for the successful completion of projects governed by this technical provision shall be included in the unit costs associated herein. Availability of quality assurance devices (such as a 15' straight edge) shall be the responsibility of the Contractor.

### **Construction:**

**Layout:** The Contractor will be responsible for the string lining and lay out of the roadway prior to paving.

**Weather and Seasonal limitations:** The surface treatment shall not be applied to a wet surface or when rain is occurring or the threat of rain is present immediately before placement. The surface treatment shall not be applied when the ambient temperature or pavement temperature is less than 60°F

**Preparation of Surface:** The chip seal material shall be placed on a firm unyielding prepared roadway. The Contractor shall be responsible for clipping back shoulders and removing overburden or any other vegetation or debris to ensure that the road is free of organic and deleterious material. Cracks in the existing roadway shall be cleaned and blown free of loose or deleterious materials prior to paving. The contractor shall be responsible for removal of all thermoplastic striping or signage on the surface of the roadway, and all Reflective Pavement Markers prior to beginning operation. 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 final inspection of the project. The contractor will be responsible for blowing or sweeping the road immediately ahead of the chip seal operation to make sure the road is free of loose aggregate and other debris.

**Application of bituminous material:** Liquid bituminous material shall be applied at a rate as directed by the county by means of a pressure type distributor in a uniform, continuous spread over the section to be treated. The distributor shall be moving forward at the proper speed when the liquid is discharged onto the pavement to provide an even and consistent application at the rate prescribed. If any areas are deficient the operation shall be stopped and corrected immediately. The liquid shall not be applied more than one hundred (100') feet in advance of the aggregate.

- **Single Chip Seal:** Application of the liquid bituminous material shall be applied at a rate of .20 - .50 gallons per square yard depending on the composition of the existing road bed, surface texture and the size of the aggregate in use.
- **Double Chip Seal:** Application of the liquid bituminous material shall be applied at a rate of .50 - .95 gallons per square yard depending on the composition of the existing road bed, surface texture and the size of the aggregate in use. The first application of a double chip shall contain 40% of the emulsion of the total seal, while the second application contains 60% of the emulsion.

The temperature of the asphalt emulsion when applied shall be between 140°F and 180°F. For smaller areas, the emulsion may be applied with a wand. On Single Chip Seals, and the first lift of Double Chip Seals, the emulsion shall be immediately broomed to fill cracks and voids. The emulsion scrub broom shall be as described herein.

On Single Chip Seals, and the first lift of Double Chip Seals, the application of the asphalt emulsion for scrub seal and scrub broom operation shall cease an appropriate distance from the end of the application as determined by the contractor. The remaining asphalt emulsion for scrub seal shall be dragged out by the

scrub broom, and the remaining emulsified material required to complete the pass shall be applied only by the distributor truck, at the specified rate.

**Application of cover aggregate:** Immediately following the spray application of the liquid bituminous material, cover aggregate shall be spread over the liquid material at a rate of 16 – 30 lbs square yard as directed by the county depending upon the type of road base and/or the size of the existing aggregate that is being resurfaced.

During the first day of production and at least once a week thereafter, the application rate of the aggregate shall be verified by the contractor and witnessed by the county to assure that the appropriate application rate of the aggregate is applied. The rate can be verified by placing a tarp of at least 1.0 yd<sup>2</sup> area on the roadway surface. After allowing the aggregate spreader to pass over the tarp, the aggregate on the tarp should be collected and weighed to determine the weight of aggregate. The measured weight should then be compared to the target weight.

If the difference in the target weight and the actual measured weight is over 1.5 pounds, the aggregate distributor should be adjusted such that the spread rate is within the above tolerance. The above procedure shall be repeated until the spread rate is within the allowable tolerance.

If at any point during production, excessive aggregate is noted, the aggregate application rate should be verified and the spread rate adjusted. The intent is to minimize the amount of excess aggregate. Excess aggregate removed from the roadway surface after brooming shall be removed from the job site and should not be reused in the aggregate operation.

**Rolling:** Immediately following the first application of the cover material, roll the entire surface with a pneumatic roller followed immediately with the steel drum roller. Cover the entire surface one time with the steel drum roller. Then, roll the cover material again with the pneumatic roller. Continue rolling as long as necessary to ensure thorough keying of the cover aggregate into the liquid bituminous material. Eliminate the steel drum when rolling the second application of cover aggregate. Apply the second application of liquid and cover material the same day as the first application, as far as it is practicable and consistent with the setting of the liquid bituminous material. The County may waive the requirement for a steel drum roller given proper seating of aggregate with the pneumatic roller.

**Sweeping:** After rolling of the first application of cover aggregate, lightly broom the loose aggregate in a manner not to dislodge the aggregate embedded in the liquid. Sweep loose material from road bed. Following second application again broom loose aggregate from the road bed prior to the application of the fog seal. If temperatures exceed 85 degrees, it may be necessary to wait 24 hours before sweeping the first application of chip seal.

**Fog Seal:** Upon direction from the engineer, fog seal is to be applied as a separate pay item. When surface treatment has set, a fog seal is to be applied at a rate of .1 to .15 gallons per square yard to the entire surface treatment. The liquid for fog seal shall be a cationic type emulsion diluted forty (40%) percent with water. Fog seal shall then be lightly sanded at a rate of plus or minus two (2) pounds per square yard by means of a mechanical spreader.

**General Performance:** Provide completed pavement which performs to the satisfaction of the engineer without bleeding, rutting, shoving, raveling, stripping, or showing other types of pavement distress or unsatisfactory performance.

**Contractor's Quality Control Plan:** Provide and follow a QC plan that will maintain QC for production and construction processes. Provide the County with a copy of the QC plan for review and approval before the pre-construction meeting. Include, at a minimum, the following items:

- Source materials used on the project.
- Sampling and testing methods used to determine compliance with material specifications.
- Equipment to be used on the project.
- Calibration method used to determine compliance with this specification.
- Pavement cleaning and preparation procedure.
- Plan for protecting chip seal from damage by traffic.

- Procedure for monitoring initial acceptance requirements.
- An action plan demonstrating adjustments of the operation for adverse environmental conditions or out of specification materials or procedures.

**Traffic Control:** The Contractor shall furnish all necessary traffic control, barricades, signs and flagmen, to ensure the safety of the traveling public and to all working personnel. Traffic shall not travel on fresh mix until all placement operations are completed. The Contractor shall submit an MOT plan indicating all facets of traffic control for the project area. The MOT plan must be approved in writing by the County prior to commencing any work. All traffic control shall be in accordance with TP-102. MOT and associated devices shall be checked daily and periodically throughout the project for compliance. Where adjustments or corrections are needed, prompt revisions shall be made.

**Notes:**

Contractor shall use a string line or other approved method to insure straightness of all paving operations, any deficiencies must be removed by saw cutting the edge of pavement in a straight line; all longitudinal joints shall be in the center of the road. Difficulties and problems shall be reported to the owner in a timely manner so as to avoid serious impacts to the project.

The Contractor shall construct a two (2) foot apron at all driveways

**Documentation:** Complete a daily report that includes the following information:

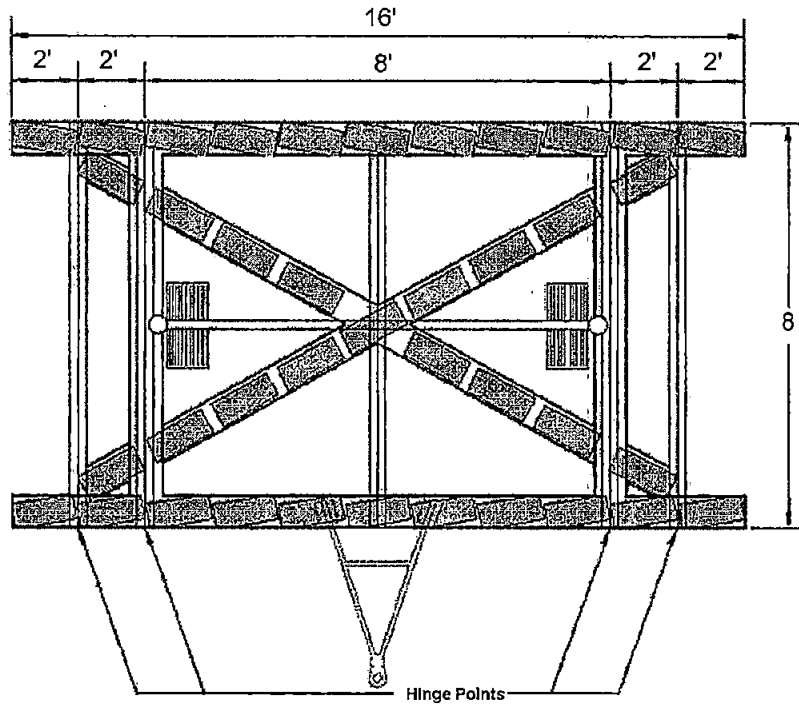
- Job number
- Route/Street Name(s)
- Owner's On-Site Representative Name
- Date
- Air temperature – Min/Max (during application)
- Unit weight of emulsified asphalt (pounds per gallon)
- Beginning and ending application locations
- Length and width in feet
- Total area (square yards)
- Aggregate weight
- Gallons of emulsified asphalt
- Application rate (pounds/gallons per square yard)
- Contractor's authorized signature
- QC aggregate properties (if required)
- Emulsified asphalt bill of lading(s)

**Method of Measurement:**

If a pay item is listed on the Bid Form for work required in this Technical Provision, the quantity to be paid shall be as specified in the Bid Form including all items of work described herein. Any item necessary for Rejuvenating Scrub Seal, and not specifically listed in another item in the Bid Form, shall be included in this item. Should the contractor be directed to place Fog Seal as a secondary application to Chip Seal, it shall be measured separately as listed in the Technical Provision for Fog Seal

**Basis of Payment:**

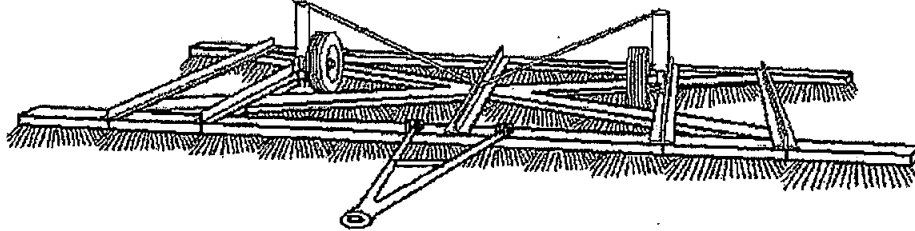
The quantities to be paid for under this Technical Provision shall be included in the Square Yard price for Rejuvenating Scrub Seal (Single application), Rejuvenating Scrub Seal (Double application) or as listed in the Bid Form. The Unit price includes all items listed in the contract, including all General Conditions, Special Conditions and Technical Provisions pertaining to Rejuvenating Scrub Seal, including all items of work described herein. No additional payment will be provided for any item necessary for the completion of this contract as detailed in the specifications, except that at the direction of the county, Fog Seal shall be applied and paid separately as listed in the Technical Provision for Fog Seal.



 Street Broom w/ Nylon Bristles

Lift For Wheels (Typical)

Note: Wheels are up and the broom is in the scrub position.



## Scrub Broom



**TECHNICAL PROVISION**

**TP-317**

**Micro Surfacing**

The work specified in this section consists of placement of a polymer modified Micro Surfacing on a prepared existing paved road, placed within the lines, grades, and thickness established by the County.

Description: Micro Surfacing is a polymer-modified cold-mix paving system consisting of a mixture of dense-graded aggregate, polymer modified asphalt emulsion, water, additives and mineral fillers placed in a slurry state to extend the service life of both urban and rural roads within the County.

**Materials:**

**Emulsified Asphalt:** Quick-set cationic type CSS or CQS emulsion with natural or synthetic polymer modifiers conforming to the requirements specified in AASHTO M208 or ASTM D2397 for CQS-1h or CSS-1h,

Property	Test Method	Minimum	Maximum
Viscosity, Saybolt Furol @ 25° C, Sec.	AASHTO T59	20.0	100.0
Particle Charge		Positive	---
Sieve Test	AASHTO T59	---	0.1
Softening Point	AASHTO T53	135°F (57°C)	---
Kinematic Viscosity @ 275°F (135° C)	AASHTO T201	650 cSt/sec.	---
Distillation:			
Oil distillate, by volume, %	AASHTO T59	---	0.5
Residue from Distillation, %	AASHTO T59	62.0	---
Penetration, 25°C, 100g, 5 sec.	AASHTO T49	40.0	90.0
Ductility, 77° F, 50 mm/ sec.	AASHTO T51	70.0	---

It shall pass all applicable storage and settlement tests. The cement mixing test shall be waived for this emulsion. The polymer material shall be milled or blended into the asphalt or emulsifier solution prior to the emulsification process.

The five-day (5) settlement test may be waived, provided job stored emulsion is used within thirty-six (36) hours from the time of the shipment, or the stored material has had additional emulsion blended into it prior to use.

Three percent (3%) polymer solids, based on asphalt weight, pre blended prior to emulsification is considered minimum.

Each load of emulsified asphalt shall be accompanied with a Certificate of Analysis/Compliance to assure that it is the same as that used in the mix design. COA shall include, at a minimum, required emulsion properties and percentage of polymer solids in the emulsion.

For the first load of emulsified asphalt produced for the project, the supplier shall submit a sample to the County for testing before use. At any time during application, the County may sample and test all subsequent loads of emulsified asphalt delivered to the project to verify and determine compliance with specification requirements. Where these tests identify material outside specification requirements, the County shall require the supplier to cease shipment of that pre-tested product. Further shipment of that pre-tested product will remain suspended until the cause of the problem is evaluated and corrected by the supplier to the satisfaction of the County. Further, the County may require the material placed containing the emulsified asphalt outside of specification requirements to be removed and replaced at the sole expense of the contractor or left in place at no pay.

**Aggregate:** Use an aggregate consisting of 100% crushed granite. To assure the material is totally crushed, one-hundred percent (100%) of the parent aggregate will be larger than the largest stone in the gradation to be used.

In addition to the requirements of FDOT Standard Specification Sections 901 and 902, when aggregate is tested according to the following test, it should meet these minimum requirements:

AASHTO Test No.	ASTM Test No.	Quality	Specification
AASHTO T176	ASTM D2419	Sand Equivalent	65 Min
AASHTO T104	ASTM C88	Soundness	15% Max w/Na <sub>2</sub> SO <sub>4</sub> 25% Max w/MgSO <sub>4</sub>
AASHTO T96	ASTM C131	Abrasion Resistance	30% Max

The abrasion test is to be run on the parent aggregate. The aggregate should meet state-approved polishing values. Proven performance may justify the use of aggregates that may not pass all of the above tests, subject to approval by the county.

When tested in accordance with AASHTO T27 (ASTM C136) and AASHTO T11 (ASTM C117), the target (mix design) aggregate gradation (including the mineral filler) shall be within one of the following bands.

Sieve Size	Type II Percent Passing	Type III Percent Passing	Stockpile Tolerance
3/8 (9.5 mm)	100	100	
#4 (4.75 mm)	90 - 100	70 - 90	± 5 %
#8 (2.36 mm)	65 - 90	45 - 70	± 5 %
#16 (1.18 mm)	45 - 70	28 - 50	± 5 %
#30 (600 um)	30 - 50	19 - 34	± 5 %
#50 (300 um)	18 - 30	12 - 25	± 4 %
#100 (150 um)	10 - 21	7 - 18	± 3 %
#200 (75 um)	5 - 15	5 - 15	± 2 %

The job mix (target) gradation shall be within the gradation band for the desired type. After the target gradation has been submitted (this should be the gradation that the mix design is based on), then the percent passing each sieve shall not vary by more than the stockpile tolerance shown in the above table for each individual sieve, and still remain within the gradation band. It is recommended that the percent passing shall not go from the high end to the low end of the range for any two consecutive screens.

The aggregate will be accepted at the job location stockpile or when loading into the support units for delivery to the lay-down machine. The stockpile shall be accepted based on five gradation tests according to AASHTO T2 (ASTM D75). If the average of the five tests is within the gradation tolerances, then the materials will be accepted. If the tests show the material to be out, the contractor will be given the choice to either remove the material or blend other aggregate with the stockpiled material to bring it into specification. Materials used in blending must meet the quality tests before blending and must be blended in a manner to produce a consistent gradation. If blending is used, it will require that a new mix design be performed. The contractor shall supply copies of the aggregate tickets to the customer within 24 hours of delivery to the job site.

Screening shall be required at the stockpile prior to delivery to the paving machine if there are any problems created by having oversize material in the mix.

**Mineral filler:** (if required) shall be any recognized brand of non-air entrained Portland cement or hydrated lime that is free from lumps. It may be accepted upon visual inspection. The type and amount of mineral filler needed shall be determined by a laboratory mix design and will be considered as part of the aggregate gradation. An increase or decrease may be permitted when the Micro Surfacing is being placed if it is found to be necessary for better consistency or set times, upon approval by the county and the original mix design engineer.

**Water:** Potable and free of harmful or deleterious materials.

**Additives:** Additives may be added to the emulsion mix or any of the component materials to provide the control of the quick-traffic properties. They must be included as part of the mix design and be compatible with the other components of the mix.

**Mix Design:** The Contractor shall submit to the County for approval a complete mix design prepared and certified by a laboratory which has experience in designing Micro Surfacing and signed and sealed by a professional engineer. After the mix design has been approved, no substitution will be permitted, unless approved by the County. Compatibility of the aggregate, polymer-modified emulsion, mineral filler, and other additives shall be verified by the mix design. The mix design shall be made with the same aggregate gradation that the contractor will provide on the project. Required tests and values are as follows:

ISSA Test No.	Description	Specification
ISSA TB-113	Mix Time @ 77°F (25°C)	Controllable to 120 Seconds Min
ISSA TB-139	Wet Cohesion	
	@ 30 Minutes Minimum (Set) @ 60 Minutes Minimum (Traffic)	12 Kg-cm Min 20 Kg-cm Min or Near Spin
ISSA TB-109	Excess Asphalt by LWT Sand Adhesion	50 g/ft <sup>2</sup> Max (538 g/m <sup>2</sup> Max)
ISSA TB-114	Wet Stripping	Pass (90% Min)
ISSA TB-147	Lateral Displacement	5% Max
	Specific Gravity after 1,000 Cycles of 125 lbs (56.71 Kg)	2.10% Max
ISSA TB-100	Wet-Track Abrasion Loss	
	One-hour Soak Six-day Soak	50 g/ft <sup>2</sup> (538 g/m <sup>2</sup> ) Max 75 g/ft <sup>2</sup> (807 g/m <sup>2</sup> ) Max

The Wet Track Abrasion test is performed under laboratory conditions as a component of the mix design process. The purpose of this test is to determine the minimum asphalt content of a micro surface system. The Wet Track Abrasion Test is not recommended as a field quality control or acceptance test.

The mixing test is used to predict how long the material can be mixed in the machines before it begins to break. It is more for information to be used by the contractor than for quality of the end product.

The mixing test and set-time test should be checked at the highest temperatures expected during construction.

The mix design should report the quantitative effects of moisture content on the unit weight of the aggregate (bulking effect). The report must clearly show the proportions of aggregate, mineral filler

(minimum and maximum), water (minimum and maximum), additive usage, and polymer-modified asphalt emulsion based on the dry weight of the aggregate.

All the component materials used in the mix design shall be representative of the materials proposed by the contractor to be used on the project. The percentages of each individual material required and allowable tolerance for each shall be shown in the laboratory report.

Component Materials	Limits
Residual Asphalt	7% to 10.5% by dry weight of aggregate
Mineral Filler	0.5 to 3% by dry weight of aggregate
Polymer-Based Modifier	Min 3% solids based on bitumen weight content
Additives	As needed
Water	As required to produce proper mix consistency

After the mix design has been approved, no substitutions to the mix design will be permitted, unless approved by the County. The County will consider inadequate field performance of a mix as sufficient evidence that the properties of the mix related to the mix design have changed. The project will be stopped until it is demonstrated that those properties, or issues, have been sufficiently addressed. The County may require the material represented by the inadequate field performance to be removed and replaced at the sole expense of the contractor or left in place at no pay.

The materials (aggregates, emulsion, mineral filler, and additives) must be from the same source, grade, and type used to develop the approved mix design. Any substitutions or alternate supplies must be preapproved by the County. Changes in the aggregate source or emulsion supplier requires a new mix design. Blending, co-mingling and otherwise combining materials from two or more sources, grades, or types not noted in the approved mix design is strictly prohibited. Aggregate stockpiles and emulsion material should be located at or near the job site in sufficient quantity for the job or designated parts of the job.

**Equipment:**

**Mixing Equipment:** The machine shall be specifically designed and manufactured to lay Micro Surfacing. The material shall be mixed by an automatic-sequenced, self-propelled Micro Surfacing mixing machine, which shall be able to accurately deliver and proportion the aggregate, emulsified asphalt, mineral filler, control setting additive, and water to a revolving multi-blade, double-shafted mixer and to discharge the mixed product on a continuous-flow basis.

The machine shall have sufficient storage capacity for aggregate, emulsified asphalt, mineral filler, control additive and water to maintain an adequate supply to the proportioning controls.

If continuous mix paving machines are required for the project, the machine shall be equipped to allow the operator to have full control, from the rear of the machine, of the forward and reverse speeds during applications of the Micro Surfacing material and be equipped with opposite-side driver stations to assist in alignment. The self-loading device, opposite-side driver stations, and forward and reverse speed controls shall be original equipment manufacturer design.

**Proportioning Devices:** Individual volume or weight controls for proportioning each material to be added to the mix (i.e. aggregate, mineral filler, emulsified asphalt, additive, and water) shall be provided and properly marked. These proportioning devices are used in material calibration and determining the material output at any time.

**Spreading Device:** The mixture shall be agitated and spread uniformly in the surfacing box by means of twin-shafted paddles or spiral augers fixed in the spreader box. A front seal shall be provided to insure no loss of the mixture at the road contact point. The rear seal shall act as a final strike-off and shall be

adjustable. The spreader box and rear strike-off shall be so designed and operated that a uniform consistency is achieved to produce a free flow of material to the rear strike-off. The spreader box shall have suitable means provided to side shift the box to compensate for variations in the pavement geometry.

**Secondary Strike-off:** A secondary strike-off shall be provided to improve surface texture. The secondary strike-off shall have the same adjustments as the spreader box. No burlap drags will be permitted on the final applications.

**Rut-Filling Box:** When required, before the final surface course is placed, preliminary Micro Surfacing material may be required to fill ruts, utility cuts, depressions in the existing surface, etc. Ruts of one-half (½) inch or greater in depth shall be filled independently with a rut-filling spreader box, either five foot (5) or six foot (6) width. For irregular or shallow rutting of less than one-half (½) inch depth, a full-width scratch-coat pass may be used as directed by the County. Ruts that are in excess of one and one-half (1-½) inches in depth may require multiple placements with the rut-filling spreader box to restore the cross-section. All rut-filling level-up material should cure under traffic for at least a twenty-four (24) hour period before additional material is placed on top of the level-up.

**Auxiliary Equipment:** Suitable surface preparation equipment, traffic control equipment, hand tools, and any other support and safety equipment shall be provided by the contractor as necessary, (or as the County requires) to perform the work.

**General:** Each mixing unit to be used in the performance of the work shall be calibrated in the presence of the County prior to construction. Previous calibration documentation covering the exact materials to be used may be acceptable, provided that no more than sixty (60) days have lapsed. The documentation shall include an individual calibration of each material at various settings, which can be related to the machine metering devices. No machine will be allowed to work on the project until the calibration has been completed and/or accepted.

All equipment, tools, and machines used in the performance of this work shall be maintained in satisfactory working condition at all times to ensure a high-quality product. Availability of quality assurance devices (such as a 15' straight edge) shall be the responsibility of the Contractor.

### **Construction:**

**Weather Limitations:** Micro Surfacing shall not be applied if either the pavement or air temperature is below 50°F and falling, but may be applied when both pavement and air temperatures are above 45°F and rising. No Micro Surfacing shall be applied when there is the possibility that the finished product will freeze within 24 hours. The mixture shall not be applied when weather conditions prolong opening to traffic beyond a reasonable time or as directed by the County.

**Surface Preparation:** Immediately prior to applying the Micro Surfacing, the surface shall be cleared of all loose material, silt spots, vegetation, and other objectionable material. Any standard cleaning method will be acceptable. If water is used, cracks shall be allowed to dry thoroughly before applying Micro Surfacing. Manholes, valve boxes, drop inlets and other service entrances shall be protected from the Micro Surfacing by a suitable method. The County shall approve the surface preparation prior to surfacing. No dry aggregate either spilled from the lay-down machine or existing on the road, will be permitted. Remove any thermoplastic traffic striping or reflective pavement markers in the areas to be Micro Surfaced.

**Tack Coat:** The County may require placement of a tack coat prior to paving. If required, the tack coat shall consist of one part emulsified asphalt to three parts water and shall be applied with a standard distributor. The emulsified asphalt should be CQS or CSS grade, or the slurry seal emulsion. The distributor shall be capable of applying the dilution evenly at a rate of 0.05 to 0.15 gal/yd<sup>2</sup>. The tack coat shall be allowed to cure sufficiently before the application of Micro Surfacing. If a tack coat is required, it shall be billed as a separate pay item.

**Cracks:** Unless otherwise instructed by the county, treat cracks wider than 0.25" in the pavement surface with an approved crack sealer prior to application of the Micro Surface.

**Application:** A 500 lb minimum test strip shall be placed in conditions similar to those expected to be encountered during the project unless specifically waived by the County. The test strip shall demonstrate that the equipment used, crew selected and materials to be incorporated into the product are performing as required to meet specifications.

The surface shall be pre-wetted ahead of the spreader box. The rate of application of the spray shall be adjusted during the day to suit temperatures, surface texture, humidity, and dryness of the pavement.

The Micro Surfacing shall be of the desired consistency upon leaving the mixer. A sufficient amount of material shall be carried in all parts of the spreader at all times so that a complete coverage is obtained. Overloading of the spreader shall be avoided. No lumping, balling, or unmixed aggregate shall be permitted.

No streaks, such as those caused by oversized aggregate, shall be left in the finished surface. If excess streaking develops, the job will be stopped until the contractor proves to the Project Manager or his/her designee that the situation has been corrected. Excessive streaking is defined as more than four drag marks greater than one-half (1/2) inch wide and four inches (4) long, or one inch (1) wide and three (3) inches long, in any 30 yd<sup>2</sup> area. No transverse ripples or longitudinal streaks of one-fourth (1/4) inch in depth will be permitted, when measured by placing a ten (10) foot straight edge over the surface.

The Micro Surfacing mixture shall be of the proper consistency at all times, so as to provide the application rate required by the surface condition. The average application rate, as measured by the Project Manager, shall be in accordance with the following table:

Aggregate Type	Location	Suggested Application Rates
Single application	Urban and Residential Streets	Type II - 18 - 22 lb/yd <sup>2</sup> Type III - 22 - 26 lb/yd <sup>2</sup>
Double application	Urban, Residential, and Primary Routes	Type II - 32 - 40 lb/yd <sup>2</sup> Type III - 42 - 50 lb/yd <sup>2</sup>
Rut Fill	Wheel Ruts	Tonnage As Required and Approved by County

Application rates are based upon the weight of dry aggregate in the mixture. Application rates are affected by the unit weight of the aggregate. The contractor shall calculate the yield of the course placed at least three times per day. The county shall randomly determine the timing for the readings used to calculate application rate.

Single applications shall be applied in single passes, and Double applications in two, full width passes. When two passes are used, the first pass (scratch course) is made using a metal or stiff rubber strike-off and applying only what the surface demands for leveling. The second course is applied at 15 – 30 lb/yd<sup>2</sup>.

**Opening to Traffic:** Micro Surfacing shall be capable of producing an emulsified asphalt paving mixture that will cure at a rate which will permit straight rolling traffic on the pavement within one hour after application without damaging the pavement surface. Any damage done by traffic to the Micro Surfacing shall be repaired by the contractor at his expense.

**Joints:** No excess buildup, uncovered areas, or unsightly appearance shall be permitted on longitudinal or transverse joints. The contractor shall provide suitable-width spreading equipment to produce a minimum number of longitudinal joints throughout the project. When possible, longitudinal joints shall be placed on lane lines. Half passes and odd-width passes will be used only in minimum amounts. If half passes are used, they shall not be the last pass of any paved area. A maximum of three (3) inches shall be allowed for overlap of longitudinal lane line joints. Also, the joint shall have no more than a one-fourth (1/4) inch

difference in elevation when measured by placing a ten (10) foot straight edge over the joint and measuring the elevation drop-off.

**Mix Stability:** The Micro Surfacing shall possess sufficient stability so that premature breaking of the material in the spreader box does not occur. The mixture shall be homogeneous during and following mixing and spreading. It shall be free of excess water or emulsion and free of segregation of the emulsion and aggregate fines from the coarser aggregate. Under no circumstances shall water be sprayed directly into the lay-down box while laying Micro Surfacing material.

**Handwork:** Areas which cannot be reached with the machine shall be surfaced using hand squeegees to provide uniform coverage. If necessary, the area to be hand worked shall be lightly dampened prior to mix placement. Care shall be exercised to leave no unsightly appearance from hand work. The same type of finish as applied by the spreader box shall be required.

**Edgelines:** Care shall be taken to ensure straight lines along curbs and shoulders. No runoff on these areas will be permitted. Lines at intersections will be kept straight to provide a good appearance. If necessary, a suitable material will be used to mask off the end of streets to provide straight lines. Edge lines shall not vary by more than ± 2 inches horizontal variance in any 96 feet of length.

**Clean-up:** All areas, such as man-ways, gutters, and intersections, shall have the Micro Surfacing mix removed as specified by the County. The contractor shall, on a daily basis, remove any debris associated with the performance of the work, completely and thoroughly to the satisfaction of the County. In addition, the contractor shall, at the request of the County pressure wash any area such as, curb and gutter, private driveways, etc. removing any and all stains associated with the placement of the Micro Surfacing.

**General Performance:**

Provide completed pavement which performs to the satisfaction of the County without bleeding, rutting, shoving, raveling, stripping, or showing other types of pavement distress or unsatisfactory performance.

**Contractor's Quality Control Plan:** Provide and follow a QC plan that will maintain QC for production and construction processes. Provide the County with a copy of the QC plan for review and approval before the pre-construction meeting. Include, at a minimum, the following items:

- Source materials used on the project.
- Sampling and testing methods used to determine compliance with material specifications.
- Equipment to be used on the project.
- Calibration method used to determine compliance with the mix design.
- Pavement cleaning and preparation procedure.
- Plan for protecting slurry seal mixture from damage by traffic.
- Procedure for monitoring initial acceptance requirements.
- An action plan demonstrating adjustments of the slurry seal operation for adverse environmental conditions.

**Testing:** The County may obtain one or more samples of Micro Surfacing mixture for each day of production. Tests samples shall be collected and performed in accordance with AASHTO T308 and AASHTO T30 to determine the residual asphalt content and the gradation of the sample. Evaporate all water from the sample prior to testing. Determine the deviation of the test results for each sample from the mix design target values. Compare the deviation from the mix design to the mixture control tolerances shown here:

Aggregate and Emulsified Asphalt - Acceptance Limits	
Aggregate	Tolerance from Mix Design Target Values
Percent Passing No. 4 Sieve	+6%
Percent Passing No. 8 Sieve	+7%

Percent Passing No. 50 Sieve	+6%
Percent Passing No. 200 Sieve	+3%
<b>Emulsified Asphalt</b>	
Residual Asphalt Content of Mixture	+0.5%
Residual Asphalt Content of (daily average)	± 0.2%
Application Rate (1,000 ft yield checks)	-2 lb/yd <sup>2</sup>
Sand Equivalent Test (ASTM D2419)	7% from mix design (not less than 60)

**Documentation:** Complete a daily report that includes the following information:

- Job number
- Route/Street Name(s)
- Owner’s On-Site Representative Name
- Date
- Air temperature – Min/Max (during application)
- Unit weight of emulsified asphalt (pounds per gallon)
- Beginning and ending application locations
- Counter readings (beginning, ending, and total difference)
- Total area (square yards)
- Aggregate weight
- Gallons of emulsified asphalt
- Application rate (pounds per square yard)
- Contractor’s authorized signature
- QC aggregate properties (if required)
- Asphalt emulsified asphalt bill of lading(s)

**Traffic Control:**

The Contractor shall furnish all necessary traffic control, barricades, signs and flagmen, to ensure the safety of the traveling public and to all working personnel. Traffic shall not travel on fresh mix until all operations have been completed and the micro surface is sufficiently dry to keep vehicular traffic from marking the mat. The Contractor shall submit an MOT plan indication all facets of traffic control for the project area. The MOT plan must be approved in writing by the County prior to commencing any work. All traffic control shall be in accordance with the FDOT Roadway Design Standards, most current edition and TP-102. MOT and associated devices shall be checked daily and periodically throughout the project for compliance; and where adjustments or corrections are needed, prompt revisions shall be made. The Contractor shall construct a two (2) foot apron at all driveways

**Method of Measurement:**

If a pay item is listed on the Bid Form for work required in this Technical Provision, the quantity to be paid shall be as specified in the Bid Form including all items of work described herein. Any item necessary for Micro Surfacing, and not specifically listed in another item in the Bid Form, shall be included in this item.

**Basis of Payment:**

The quantities to be paid for under this Technical Provision shall be included in the Square Yard price for Micro Surfacing (Single application), Micro Surfacing (Double application), the per Ton price for Micro Surfacing (Rut filling) and the Square Yard price for Tack Coat or as listed in the Bid Form. The Unit price includes all items listed in the contract, including all General Conditions, Special Conditions and Technical Provisions pertaining to Micro Surfacing, including all items of work described herein. No additional payment will be provided for any item necessary for the completion of this contract as detailed in the specifications.



**TECHNICAL PROVISION**

**TP-317a**

**High Polymer Micro Surfacing**

The work specified in this section consists of placement of a highly polymer modified Micro Surfacing on a prepared existing paved road, placed within the lines, grades, and thickness established by the County.

Description: High Polymer Micro Surfacing is a polymer-modified cold-mix paving system that begins as a mixture of dense-graded aggregate, polymer modified asphalt emulsion, water, and mineral fillers placed in a slurry state at ambient air temperature to extend the service life of both urban and rural roads within the County. Standard Micro Surfacing contains modified asphalt emulsion at a rate of 3% solids while highly modified systems contain a minimum of 6%.

**Materials:**

**Emulsified Asphalt:** Quick-set cationic type CSS or CQS emulsion with natural or synthetic polymer modifiers conforming to the requirements specified below:

Property	AASHTO Test Method	Minimum	Maximum
<b>Asphalt Base Properties</b>			
Original DSR, kPa ( $G^*/\sin \delta$ , 10 rad./sec) @ 76°C	T135	1.0	
<b>Emulsion Properties</b>			
Viscosity, Saybolt Furol @ 122° F, SFS	T59	15.0	150.0
Particle Charge		Positive	---
Sieve Test	T59	---	0.1
Residue by Evaporation	T59	62.0	---
<b>Residue Properties from Low Temperature Evaporation</b>			
PP72-11, Procedure B			
MSCR @ 64°C, Recovery @ 3.2 kPa, %	M332	80.0	---
J <sub>nr</sub> @ 3.2/kPa	M332	---	0.5

It shall pass all applicable storage and settlement tests. The cement mixing test shall be waived for this emulsion. The polymer material shall be milled or blended into the asphalt or emulsifier solution prior to the emulsification process.

The five-day (5) settlement test may be waived, provided job stored emulsion is used within thirty-six (36) hours from the time of the shipment, or the stored material has had additional emulsion blended into it prior to use.

Six percent (6%) polymer solids, based on asphalt weight, pre blended prior to emulsification is considered minimum.

Each load of emulsified asphalt shall be accompanied with a Certificate of Analysis/Compliance to assure that it is the same as that used in the mix design. COA shall include, at a minimum, required emulsion properties and percentage of polymer solids in the emulsion.

For the first load of emulsified asphalt produced for the project, the supplier shall submit a sample to the County for testing before use. At any time during application, the County may sample and test all subsequent loads of emulsified asphalt delivered to the project to verify and determine compliance with specification requirements. The cost of testing will be paid by the contractor. Where these tests identify material outside specification requirements, the County shall require the supplier to cease shipment of that pre-tested product. Further shipment of that pre-tested product will remain suspended until the cause of the problem is evaluated and corrected by the supplier to the satisfaction of the County. Further, the County may require the material

placed containing the emulsified asphalt outside of specification requirements to be removed and replaced at the sole expense of the contractor or left in place at no pay.

**Aggregate:** Use an aggregate consisting of 100% crushed granite. To assure the material is totally crushed, one-hundred percent (100%) of the parent aggregate will be larger than the largest stone in the gradation to be used.

In addition to the requirements of FDOT Standard Specification Sections 901 and 902, when aggregate is tested according to the following test, it should meet these minimum requirements:

AASHTO Test No.	ASTM Test No.	Quality	Specification
AASHTO T176	ASTM D2419	Sand Equivalent	65 Min
AASHTO T104	ASTM C88	Soundness	15% Max w/Na <sub>2</sub> SO <sub>4</sub> 25% Max w/MgSO <sub>4</sub>
AASHTO T96	ASTM C131	Abrasion Resistance	30% Max
AASHTO T278/279		Polish Value	31 Min

The abrasion test is to be run on the parent aggregate. The aggregate shall meet state-approved polishing values. Proven performance may justify the use of aggregates that may not pass all of the above tests, subject to approval by the county.

When tested in accordance with AASHTO T27 (ASTM C136) and AASHTO T11 (ASTM C117), the target (mix design) aggregate gradation (including the mineral filler) shall be within one of the following bands.

Sieve Size	Type II Percent Passing	Type III Percent Passing	Stockpile Tolerance
¾ (9.5 mm)	100	100	
#4 (4.75 mm)	90 – 100	70 - 90	± 6 %
#8 (2.36 mm)	65 – 90	45 – 70	± 5 %
#16 (1.18 mm)	45 – 70	30 - 50	± 5 %
#30 (600 um)	30 – 50	20 - 35	± 4 %
#50 (330 um)	18 – 30	12 - 25	± 4 %
#100 (150 um)	10 – 21	7 - 18	± 3 %
#200 (75 um)	5 – 15	5 - 15	± 3 %

The job mix (target) gradation shall be within the gradation band for the desired type. After the target gradation has been submitted (this should be the gradation that the mix design is based on), then the percent passing each sieve shall not vary by more than the stockpile tolerance shown in the above table for each individual sieve, and still remain within the gradation band. It is recommended that the percent passing shall not go from the high end to the low end of the range for any two consecutive screens.

The aggregate will be accepted at the job location stockpile or when loading into the support units for delivery to the lay-down machine. The stockpile shall be accepted based on five gradation tests according to AASHTO T2 (ASTM D75). If the average of the five tests is within the gradation tolerances and one sand equivalent test meets the requirements the materials will be accepted. If the tests show the material to be out, the contractor will be given the choice to either remove the material or blend other aggregate with the stockpiled material to bring it into specification. Materials used in blending must meet the quality tests before blending and must be blended in a manner to produce a consistent gradation. If blending is used, it will require that a new mix design be performed. The contractor shall supply copies of the aggregate tickets to the customer within 24 hours of

delivery to the job site. The cost of testing will be paid by the contractor.

Screening shall be required at the stockpile prior to delivery to the paving machine if there are any problems created by having oversize material in the mix.

**Mineral filler:** (if required) shall be any recognized brand of non-air entrained Portland cement or hydrated lime that is free from lumps. It may be accepted upon visual inspection. The type and amount of mineral filler needed shall be determined by a laboratory mix design and will be considered as part of the aggregate gradation. An increase or decrease may be permitted when the Micro Surfacing is being placed if it is found to be necessary for better consistency or set times, upon approval by the county and the original mix design engineer.

**Water:** Potable and free of harmful or deleterious materials.

**Additives:** Additives may be added to the emulsion mix or any of the component materials to provide the control of the quick-traffic properties. They must be included as part of the mix design and be compatible with the other components of the mix.

**Mix Design:** The Contractor shall submit to the County for approval a complete mix design prepared and certified by a laboratory which has experience in designing Micro Surfacing and signed and sealed by a professional engineer. After the mix design has been approved, no substitution will be permitted, unless approved by the County. Compatibility of the aggregate, polymer-modified emulsion, mineral filler, and other additives shall be verified by the mix design. The mix design shall be made with the same aggregate gradation that the contractor will provide on the project. Required tests and values are as follows:

ISSA Test No.	Description	Specification
ISSA TB-100	Wet-Track Abrasion Loss One-hour Soak Six-day Soak	50 g/ft <sup>2</sup> (538 g/m <sup>2</sup> ) Max 75 g/ft <sup>2</sup> (807 g/m <sup>2</sup> ) Max
ISSA TB-102	Water Resistance, 30 Min	No Discoloration
ISSA TB-109	Excess Asphalt by LWT Sand Adhesion	50 g/ft <sup>2</sup> Max (538 g/m <sup>2</sup> Max)
ISSA TB-113	Mix Time @ 77°F (25°C)	Controllable to 120 Seconds Min
ISSA TB-114	Wet Stripping	Pass (90% Min)
ISSA TB-115	System Compatibility	Pass
ISSA TB-139	Wet Cohesion @ 30 Minutes Min (Set) @ 60 Minutes Min (Traffic)	12 Kg-cm Min 20 Kg-cm Min or Near Spin
ISSA TB-144	System Compatibility, Min Grade	11 points
ISSA TB-147A	Vertical Displacement	10% Max

The Wet Track Abrasion test is performed under laboratory conditions as a component of the mix design process. The purpose of this test is to determine the minimum asphalt content of a micro surface system. The Wet Track Abrasion Test is not recommended as a field quality control or acceptance test.

The mixing test is used to predict how long the material can be mixed in the machines before it begins to break. It is more for information to be used by the contractor than for quality of the end product.

The mixing test and set-time test should be checked at the highest temperatures expected during construction.

The mix design should report the quantitative effects of moisture content on the unit weight of the aggregate (bulking effect). The report must clearly show the proportions of aggregate, mineral filler (minimum and

maximum), water (minimum and maximum), additive usage, and polymer-modified asphalt emulsion based on the dry weight of the aggregate.

All the component materials used in the mix design shall be representative of the materials proposed by the contractor to be used on the project. The percentages of each individual material required shall be shown in the laboratory report.

Component Materials	Limits
Residual Asphalt	6% to 9% by dry weight of aggregate
Mineral Filler	0.5 to 3% by dry weight of aggregate
Polymer-Based Modifier	Min 6% solids based on bitumen weight content
Additives	As needed
Water	As required to produce proper mix consistency

After the mix design has been approved, no substitutions to the mix design will be permitted, unless approved by the County. The County will consider inadequate field performance of a mix as sufficient evidence that the properties of the mix related to the mix design have changed. The project will be stopped until it is demonstrated that those properties, or issues, have been sufficiently addressed. The County may require the material represented by the inadequate field performance to be removed and replaced at the sole expense of the contractor or left in place at no pay.

The materials (aggregates, emulsion, mineral filler, and additives) must be from the same source, grade, and type used to develop the approved mix design. Any substitutions or alternate supplies must be preapproved by the County. Changes in the aggregate source or emulsion source requires a new mix design. Blending, comingling and otherwise combining materials from two or more sources, grades, or types not noted in the approved mix design is strictly prohibited. Aggregate stockpiles and emulsion material should be located at or near the job site in sufficient quantity for the job or designated parts of the job.

**Equipment:**

**Mixing Equipment:** The machine shall be specifically designed and manufactured to lay Micro Surfacing. The material shall be mixed by an automatic-sequenced, self-propelled Micro Surfacing mixing machine, which shall be able to accurately deliver and proportion the aggregate, emulsified asphalt, mineral filler, control setting additive, and water to a revolving multi-blade, double-shafted mixer and to discharge the mixed product on a continuous-flow basis.

The machine shall have sufficient storage capacity for aggregate, emulsified asphalt, mineral filler, control additive and water to maintain an adequate supply to the proportioning controls.

If continuous mix paving machines are required for the project, the machine shall be equipped to allow the operator to have full control, from the rear of the machine, of the forward and reverse speeds during applications of the Micro Surfacing material and be equipped with opposite-side driver stations to assist in alignment. The self-loading device, opposite-side driver stations, and forward and reverse speed controls shall be original equipment manufacturer design.

**Proportioning Devices:** Individual volume or weight controls for proportioning each material to be added to the mix (i.e. aggregate, mineral filler, emulsified asphalt, additive, and water) shall be provided and properly marked. These proportioning devices are used in material calibration and determining the material output at any time.

**Spreading Device:** The mixture shall be agitated and spread uniformly in the surfacing box by means of twin-shafted paddles or spiral augers fixed in the spreader box. A front seal shall be provided to insure no loss of the mixture at the road contact point. The rear seal shall act as a final strike-off and shall be adjustable. The spreader box and rear strike-off shall be so designed and operated that a uniform consistency is achieved to

produce a free flow of material to the rear strike-off. The spreader box shall have suitable means provided to side shift the box to compensate for variations in the pavement geometry.

**Secondary Strike-off:** A secondary strike-off shall be provided to improve surface texture. The secondary strike-off shall have the same adjustments as the spreader box. No burlap drags will be permitted on the final applications.

**Rut-Filling Box:** When required, before the final surface course is placed, preliminary Micro Surfacing material may be required to fill ruts, utility cuts, depressions in the existing surface, etc. Ruts of one-half ( $\frac{1}{2}$ ) inch or greater in depth shall be filled independently with a rut-filling spreader box, either five foot (5) or six foot (6) width. For irregular or shallow rutting of less than one-half ( $\frac{1}{2}$ ) inch depth, a full-width scratch-coat pass may be used as directed by the County. Ruts that are in excess of one and one-half ( $1\frac{1}{2}$ ) inches in depth may require multiple placements with the rut-filling spreader box to restore the cross-section. All rut-filling level-up material should cure under traffic for at least a twenty-four (24) hour period before additional material is placed on top of the level-up.

**Auxiliary Equipment:** Suitable surface preparation equipment, traffic control equipment, hand tools, and any other support and safety equipment shall be provided by the contractor as necessary, (or as the County requires) to perform the work.

**General:** Each mixing unit to be used in the performance of the work shall be calibrated in the presence of the County prior to construction. Previous calibration documentation covering the exact materials to be used may be acceptable, provided that no more than sixty (60) days have lapsed. The documentation shall include an individual calibration of each material at various settings, which can be related to the machine metering devices. No machine will be allowed to work on the project until the calibration has been completed and/or accepted.

All equipment, tools, and machines used in the performance of this work shall be maintained in satisfactory working condition at all times to ensure a high-quality product. Availability of quality assurance devices (such as a 15' straight edge) shall be the responsibility of the **Contractor**.

### **Construction:**

**Weather Limitations:** Micro Surfacing shall not be applied if either the pavement or air temperature is below 50°F and falling, but may be applied when both pavement and air temperatures are above 45°F and rising. No Micro Surfacing shall be applied when there is the possibility that the finished product will freeze within 24 hours. The mixture shall not be applied when weather conditions prolong opening to traffic beyond a reasonable time or as directed by the County.

**Surface Preparation:** Immediately prior to applying the Micro Surfacing, the surface shall be cleared of all loose material, silt spots, vegetation, and other objectionable material. Any standard cleaning method will be acceptable. If water is used, cracks shall be allowed to dry thoroughly before applying Micro Surfacing. Manholes, valve boxes, drop inlets, and other service entrances shall be protected from the Micro Surfacing by a suitable method. The County shall approve the surface preparation prior to surfacing. No dry aggregate either spilled from the lay-down machine or existing on the road, will be permitted. Remove any thermoplastic traffic striping or reflective pavement markers in the areas to be Micro Surfaced.

**Tack Coat:** The County may require placement of a tack coat prior to paving. If required, the tack coat shall consist of one part emulsified asphalt to three parts water and shall be applied with a standard distributor. The emulsified asphalt should be CQS or CSS grade, or the Micro Surface emulsion. The distributor shall be capable of applying the dilution evenly at a rate of 0.05 to 0.15 gal/yd<sup>2</sup>. The tack coat shall be allowed to cure sufficiently before the application of micro surfacing.

**Cracks:** Unless otherwise instructed by the County, treat cracks wider than 0.25" in the pavement surface with an approved crack sealer prior to application of the Micro Surface.

**Application:** A 500 lb minimum test strip shall be placed in conditions similar to those expected to be

encountered during the project unless specifically waived by the County. The test strip shall demonstrate that the equipment used, crew selected and materials to be incorporated into the product are performing as required to meet specifications.

The surface shall be pre-wetted ahead of the spreader box. The rate of application of the spray shall be adjusted during the day to suit temperatures, surface texture, humidity, and dryness of the pavement.

The Micro Surfacing shall be of the desired consistency upon leaving the mixer. A sufficient amount of material shall be carried in all parts of the spreader at all times so that a complete coverage is obtained. Overloading of the spreader shall be avoided. No lumping, balling, or unmixed aggregate shall be permitted.

No streaks, such as those caused by oversized aggregate, shall be left in the finished surface. If excess streaking develops, the job will be stopped until the contractor proves to the Project Manager or his/her designee that the situation has been corrected. Excessive streaking is defined as more than four drag marks greater than one-half (1/2) inch wide and four inches (4) long, or one inch (1) wide and three (3) inches long, in any 29.9 yd<sup>2</sup> area. No transverse ripples or longitudinal streaks of one-fourth (1/4) inch in depth will be permitted, when measured by placing a ten (10) foot straight edge over the surface.

The Micro Surfacing mixture shall be of the proper consistency at all times, so as to provide the application rate required by the surface condition. The average application rate, as measured by the Project Manager, shall be in accordance with the following table:

Aggregate Type	Location	Suggested Application Rates
Single application	Urban and Residential Streets	Type II - 18 - 22 lb/yd <sup>2</sup> Type III - 22 - 26 lb/yd <sup>2</sup>
Double application	Urban, Residential, and Primary Routes	Type II - 32 - 40 lb/yd <sup>2</sup> Type III - 42 - 50 lb/yd <sup>2</sup>
Rut Fill	Wheel Ruts	Tonnage As Required and Approved by County

Application rates are based upon the weight of dry aggregate in the mixture. Application rates are affected by the unit weight of the aggregate. The contractor shall calculate the yield of the course placed at least three times per day. The county shall randomly determine the timing for the readings used to calculate application rate.

Single applications shall be applied in single passes, and Double applications in two, full width passes. When two passes are used, the first pass (scratch course) is made using a metal or stiff rubber strike-off and applying only what the surface demands for leveling. The second course is applied at 15 - 30 lb/yd<sup>2</sup>.

**Opening to Traffic:** Micro Surfacing shall be capable of producing an emulsified asphalt paving mixture that will cure at a rate which will permit straight rolling traffic on the pavement within one hour after application without damaging the pavement surface. Any damage done by traffic to the Micro Surfacing shall be repaired by the contractor at his expense.

**Joints:** No excess buildup, uncovered areas, or unsightly appearance shall be permitted on longitudinal or transverse joints. The contractor shall provide suitable-width spreading equipment to produce a minimum number of longitudinal joints throughout the project. When possible, longitudinal joints shall be placed on lane lines. Half passes and odd-width passes will be used only in minimum amounts. If half passes are used, they shall not be the last pass of any paved area. A maximum of three (3) inches shall be allowed for overlap of longitudinal lane line joints. Also, the joint shall have no more than a one-fourth (1/4) inch difference in elevation when measured by placing a ten (10) foot straight edge over the joint and measuring the elevation drop-off.

**Mix Stability:** The Micro Surfacing shall possess sufficient stability so that premature breaking of the material in the spreader box does not occur. The mixture shall be homogeneous during and following mixing and spreading. It shall be free of excess water or emulsion and free of segregation of the emulsion and aggregate fines from the coarser aggregate. Under no circumstances shall water be sprayed directly into the lay-down box while laying Micro Surfacing material.

**Handwork:** Areas which cannot be reached with the machine shall be surfaced using hand squeegees to provide uniform coverage. If necessary, the area to be hand worked shall be lightly dampened prior to mix placement. Care shall be exercised to leave no unsightly appearance from hand work. The same type of finish as applied by the spreader box shall be required.

**Edgelines:** Care shall be taken to ensure straight lines along curbs and shoulders. No runoff on these areas will be permitted. Lines at intersections will be kept straight to provide a good appearance. If necessary, a suitable material will be used to mask off the end of streets to provide straight lines. Edge lines shall not vary by more than ± 2 inches horizontal variance in any 100 feet of length.

**Clean-up:** All areas, such as man-ways, gutters, and intersections, shall have the Micro Surfacing mix removed as specified by the County. The contractor shall, on a daily basis, remove any debris associated with the performance of the work, completely and thoroughly to the satisfaction of the County. In addition, the contractor shall, at the request of the County pressure wash any area such as, curb and gutter, private driveways, etc. removing any and all stains associated with the placement of the Micro Surfacing.

**General Performance:** Provide completed pavement which performs to the satisfaction of the County without bleeding, rutting, shoving, raveling, stripping, or showing other types of pavement distress or unsatisfactory performance.

**Contractor’s Quality Control Plan:** Provide and follow a QC plan that will maintain QC for production and construction processes. Provide the County with a copy of the QC plan for review and approval before the pre-construction meeting. Include, at a minimum, the following items:

- Source materials used on the project.
- Sampling and testing methods used to determine compliance with material specifications.
- Equipment to be used on the project.
- Calibration method used to determine compliance with the mix design.
- Pavement cleaning and preparation procedure.
- Plan for protecting Micro Surface mixture from damage by traffic.
- Procedure for monitoring initial acceptance requirements.
- An action plan demonstrating adjustments of the Micro Surface operation for adverse environmental conditions.

**Testing:** The County may obtain one or more samples of Micro Surfacing mixture for each day of production. Tests samples shall be collected and performed in accordance with AASHTO T308 and AASHTO T30 to determine the residual asphalt content and the gradation of the sample. Evaporate all water from the sample prior to testing. Determine the deviation of the test results for each sample from the mix design target values. Compare the deviation from the mix design to the mixture control tolerances shown here:

Aggregate and Emulsified Asphalt - Acceptance Limits	
Aggregate	Tolerance from Mix Design Target Values
Percent Passing No. 4 Sieve	+/-6%
Percent Passing No. 8 Sieve	+/-7%
Percent Passing No. 50 Sieve	+/-6%
Percent Passing No. 200 Sieve	+/-3%

<b>Emulsified Asphalt</b>	
Residual Asphalt Content of (single test)	± 0.5%
Residual Asphalt Content of (daily average)	± 0.2%
Application Rate (1,000 ft yield checks)	- 2 lb/yd <sup>2</sup>
Sand Equivalent Test (ASTM D2419)	7% from mix design (not less than 60)

**Documentation:** Complete a daily report that includes the following information:

- Job number
- Route/Street Name(s)
- Owner’s On-Site Representative Name
- Date
- Air temperature – Min/Max (during application)
- Unit weight of emulsified asphalt (pounds per gallon)
- Beginning and ending application locations
- Counter readings (beginning, ending, and total difference)
- Length and width in feet
- Total area (square yards)
- Aggregate weight
- Gallons of emulsified asphalt
- Application rate (pounds per square yard)
- Contractor’s authorized signature
- QC aggregate properties (if required)
- Emulsified asphalt bill of lading(s)

**Traffic Control:** The Contractor shall furnish all necessary traffic control, barricades, signs and flagmen, to ensure the safety of the traveling public and to all working personnel. Traffic shall not travel on fresh mix until all operations have been completed and the micro surface is sufficiently dry to keep vehicular traffic from marking the mat. The Contractor shall submit an MOT plan indication all facets of traffic control for the project area. The MOT plan must be approved in writing by the County prior to commencing any work. All traffic control shall be in accordance with the FDOT Roadway Design Standards, most current edition and TP-102. MOT and associated devices shall be checked daily and periodically throughout the project for compliance; and where adjustments or corrections are needed, prompt revisions shall be made. The Contractor shall construct a two (2) foot apron at all driveways.

**Acceptance:** Allow the County access to in-progress work for quality assurance review and testing. Upon completion of work, schedule an inspection with the County. The County will note deficiencies. Any deficiencies identified during this process will be addressed by the Contractor at no additional cost.

**Method of Measurement:** If a pay item is listed on the Bid Form for work required in this Technical Provision, the quantity to be paid shall be as specified in the Bid Form including all items of work described herein. Any item necessary for High Polymer Micro Surfacing, and not specifically listed in another item in the Bid Form, shall be included in this item.

**Basis of Payment:** The quantities to be paid for under this Technical Provision shall be included in the Square Yard price for High Polymer Micro Surfacing (Single application), High Polymer Micro Surfacing (Double application), Tack Coat, and the per Ton price for High Polymer Micro Surfacing (Rut filling) or as listed in the Bid Form. The Unit price includes all items listed in the contract, including all General Conditions, Special Conditions and Technical Provisions pertaining to High Polymer Micro Surfacing, including all items of work described herein. No additional payment will be provided for any item necessary for the completion of this contract as detailed in the specifications.



**TECHNICAL PROVISION**

**TP-318a**

**Highly Modified Slurry Seal**

The work specified in this section consists of placement of a highly polymer modified Slurry Seal on a prepared existing paved road, placed within the lines, grades, and thickness established by the County.

Description: Highly Modified Slurry Seal is a polymer-modified cold-mix paving system that begins as a mixture of dense-graded aggregate, polymer modified asphalt emulsion, water, and mineral fillers placed in a slurry state to extend the service life of both urban and rural roads within the County. Highly Modified Slurry Seal as specified herein contains modified asphalt emulsion at a rate of 6% minimum.

**Materials:**

**Emulsified Asphalt:** Quick-set cationic type CSS or CQS emulsion with natural or synthetic polymer modifiers conforming to the requirements specified below:

Property	AASHTO Test Method	Min	Max
<b>Asphalt Base Properties</b>			
Original DSR, kPa (G*/sin δ, 10 rad./sec) @ 76°C	T315	1.0	
<b>Emulsion Properties</b>			
Viscosity, Saybolt Furol @ 122° F, SFS	T59	15.0	150.0
Particle Charge		Positive	---
Sieve Test	T59	---	0.1
Residue by Evaporation	T59	62.0	---
<b>Residue Properties from Low Temperature Evaporation</b>			
PP72-11, Procedure B			
Original DSR, kPa (G*/sin δ, 10 rad./sec) @ 76°C	T315	1.0	
Original DSR, deg (phase angle δ, 10 rad./sec) @ 76°C	T315		60.0

It shall pass all applicable storage and settlement tests. The cement mixing test shall be waived for this emulsion. The polymer material shall be milled or blended into the asphalt or emulsifier solution prior to the emulsification process.

The minimum amount and type of polymer modifier shall be determined by the laboratory performing the mix design. The minimum amount required will be based on asphalt weight content and will be certified by the emulsion supplier. A six percent (6%) polymer solids, based on asphalt weight, pre blended prior to emulsification is considered minimum.

The five-day (5) settlement test may be waived, provided job stored emulsion is used within thirty-six (36) hours from the time of the shipment, or the stored material has had additional emulsion blended into it prior to use.

Each load of emulsified asphalt shall be accompanied with a Certificate of Analysis/Compliance to assure that it is the same as that used in the mix design.

For the first load of emulsified asphalt produced for the project, the supplier shall submit a sample to the County for testing before use. At any time during application, the County may sample and test all subsequent loads of emulsified asphalt delivered to the project to verify and determine compliance with specification requirements. The cost of testing shall be paid by the contractor. Where these tests identify material outside specification requirements, the County shall require the supplier to cease shipment of that pre-tested product. Further shipment of that pre-tested product will remain suspended until the cause of the problem is evaluated and corrected by the supplier to the satisfaction of the County. Further, the material placed containing the emulsified asphalt outside of specification requirements shall be removed and

replaced at the sole expense of the contractor or his supplier.

**Aggregate:** Use an aggregate consisting of 100% crushed granite. To assure the material is totally crushed, one-hundred percent (100%) of the parent aggregate will be larger than the largest stone in the gradation to be used.

In addition to the requirements of FDOT Standard Specification Sections 901 and 902, when aggregate is tested according to the following test, it should meet these minimum requirements:

AASHTO Test No.	ASTM Test No.	Quality	Specification
AASHTO T176	ASTM D2419	Sand Equivalent	55 Min
AASHTO T104	ASTM C88	Soundness	15% Max w/ Na <sub>2</sub> SO <sub>4</sub> 25% Max w/ MgSO <sub>4</sub>
AASHTO T96	ASTM C131	Abrasion Resistance	30% Max
AASHTO T278, T279		Polish Value	31 Min

The abrasion test is to be run on the parent aggregate. The aggregate shall meet state-approved polishing values. Proven performance may justify the use of aggregates that may not pass all of the above tests, subject to approval by the county.

When tested in accordance with AASHTO T27 (ASTM C136) and AASHTO T11 (ASTM C117), the target (mix design) aggregate gradation (including the mineral filler) shall be within one of the following bands.

Sieve Size	Type I Percent Passing	Type II Percent Passing	Type III Percent Passing	Stockpile Tolerance
¾ (9.5 mm)	100	100	100	
#4 (4.75 mm)	100	90 - 100	70 - 90	± 5 %
#8 (2.36 mm)	90 - 100	65 - 90	45 - 70	± 5 %
#16 (1.18 mm)	65 - 90	45 - 70	28 - 50	± 5 %
#30 (600 um)	40 - 65	30 - 50	19 - 34	± 5 %
#50 (300 um)	25 - 42	18 - 30	12 - 25	± 4 %
#100 (150 um)	15 - 30	10 - 21	7 - 18	± 3 %
#200 (75 um)	10 - 20	5 - 15	5 - 15	± 2 %

The job mix (target) gradation shall be within the gradation band for the desired type. After the target gradation has been submitted (this should be the gradation that the mix design is based on), then the percent passing each sieve shall not vary by more than the stockpile tolerance shown in the above table for each individual sieve, and still remain within the gradation band. It is recommended that the percent passing shall not go from the high end to the low end of the range for any two consecutive screens.

The aggregate will be accepted at the job location stockpile or when loading into the support units for delivery to the lay-down machine. The stockpile shall be accepted based on five gradation tests according to AASHTO T2 (ASTM D75). If the average of the five tests is within the gradation tolerances and one sand equivalent test meets the requirements the materials will be accepted. If the tests show the material to be out, the contractor will be given the choice to either remove the material or blend other aggregate with the stockpiled material to bring it into specification. Materials used in blending must meet the quality tests before blending and must be blended in a manner to produce a consistent gradation. If blending is used, it

will require that a new mix design be performed. The contractor shall supply copies of the aggregate tickets to the customer within 24 hours of delivery to the job site. The cost of the testing shall be paid by the contractor.

Screening shall be required at the stockpile prior to delivery to the paving machine if there are any problems created by having oversize material in the mix.

**Mineral filler:** (if required) shall be any recognized brand of non-air entrained Portland cement or hydrated lime that is free from lumps. It may be accepted upon visual inspection. The type and amount of mineral filler needed shall be determined by a laboratory mix design and will be considered as part of the aggregate gradation. An increase or decrease of less than one percent (1%) may be permitted when the Slurry is being placed if it is found to be necessary for better consistency or set times.

**Water:** Potable and free of harmful or deleterious materials.

**Additives:** Additives may be added to the emulsion mix or any of the component materials to accelerate or retard the break of the Slurry Seal. They must be included as part of the mix design and be compatible with the other components of the mix.

**Mix Design:** The Contractor shall submit to the County for approval a complete mix design prepared and certified by a laboratory which has experience in designing Slurry Seal Systems and signed and sealed by a professional engineer. After the mix design has been approved, no substitution will be permitted, unless approved by the County. Compatibility of the aggregate, polymer-modified emulsion, mineral filler, and other additives shall be verified by the mix design. The mix design shall be made with the same aggregate gradation that the contractor will provide on the project. Required tests and values are as follows:

ISSA Test No.	Description	Specification
ISSA TB-100	Wet-Track Abrasion Loss One-hour Soak	38 g/ft <sup>2</sup> Max
ISSA TB-102	Water Resistance, 30 Minutes	No Discoloration
ISSA TB-109	Excess Asphalt by LWT Sand Adhesion	50 g/ft <sup>2</sup> Max
ISSA TB-113	Mix Time @ 77°F (25°C)	Controllable to 180 Seconds Min
ISSA TB-114	Wet Stripping	Pass (90% Min)
ISSA TB-115	System Compatibility	Pass
ISSA TB-139	Set Time, 30 Minutes, Min	12 kg/cm
ISSA TB-139	Early Rolling Traffic Times, 60 Minutes.	20 kg/cm
<b>To be conducted at Recommended Job Mix Formula</b>		
TX-245-F	Cantabro Mass Loss - %	2.0% Max
EN-12697-26 (c)	Indirect Tensile Stiffness Modulus – MPa	10,000 Min
AASHTO T166	Bulk Specific Gravity	2.100 – 2.400

The Wet Track Abrasion test is performed under laboratory conditions as a component of the mix design process. The purpose of this test is to determine the minimum asphalt content of a slurry seal system. The Wet Track Abrasion Test is not recommended as a field quality control or acceptance test.

The mixing test is used to predict how long the material can be mixed in the machines before it begins to break. It is more for information to be used by the contractor than for quality of the end product.

The mixing test and set-time test should be checked at the highest temperatures expected during

construction.

The Indirect Tensile Stiffness Modulus and the Cantabro Mass Loss samples are to be prepared by ISSA TB-148 Martial Compaction only (30 blows per side) and tested in dry condition at 25°C.

The mix design should report the quantitative effects of moisture content on the unit weight of the aggregate (bulking effect). The report must clearly show the proportions of aggregate, mineral filler (minimum and maximum), water (minimum and maximum), additive usage, and polymer-modified asphalt emulsion based on the dry weight of the aggregate.

All the component materials used in the mix design shall be representative of the materials proposed by the contractor to be used on the project. The percentages of each individual material required shall be shown in the laboratory report.

Component Materials	Limits
Residual Asphalt (% dry weight of aggregate)	Type I – 10% to 16% Type II – 7.5% to 13.5% Type III – 6.5% to 12%
Mineral Filler	0.0 to 3% (Based on dry weight of aggregate)
Polymer-Based Modifier	Minimum of 6% solids based on bitumen weight content
Additives	As needed
Water	As required to produce proper mix consistency

**MIX TOLERANCES**

Tolerances for the slurry seal mixture are as follows:

- a. After the residual asphalt content is determined, a variation ±0.5% by weight of dry aggregate will be permitted.
- b. The rate of application shall not vary more than ± 2 lb/yd<sup>2</sup> when the surface texture does not vary significantly.

After the mix design has been approved, no substitutions to the mix design will be permitted, unless approved by the County. The County will consider inadequate field performance of a mix as sufficient evidence that the properties of the mix related to the mix design have changed, and the County will no longer allow the use of the mix design. The project will be stopped until it is demonstrated that those properties, or issues, have been sufficiently addressed. The material represented by the inadequate field performance will be removed and replaced at no cost to the County.

The materials (aggregates, emulsion, mineral filler, and additives) must be from the same source, grade, and type used to develop the approved mix design. Any substitutions or alternate supplies must be preapproved by the County. Changes in the aggregate source or emulsion source requires re-validating the mix design and the performance properties. Blending, co-mingling and otherwise combining materials from two or more sources, grades, or types not noted in the approved Mix Design is strictly prohibited. Aggregate stockpiles and emulsion material should be located at or near the job site in sufficient quantity for the job or designated parts of the job.

## Equipment:

**Mixing Equipment:** The machine shall be specifically designed and manufactured to apply slurry systems. The material shall be mixed by an automatic-sequenced, self-propelled slurry mixing machine of either truck-mounted or continuous-run design, which shall be able to accurately deliver and proportion the aggregate, emulsified asphalt, mineral filler, control setting additive, and water to a revolving multi-blade, double-shafted mixer and to discharge the mixed product on a continuous-flow basis.

The machine shall have sufficient storage capacity for aggregate, emulsified asphalt, mineral filler, control additive and water to maintain an adequate supply to the proportioning controls.

If continuous-run equipment is used, the machine shall be equipped to allow the operator to have full control, from the rear of the machine, of the forward and reverse speeds during applications of the slurry material and be equipped with opposite-side driver stations to assist in alignment. The self-loading device, opposite-side driver stations, and forward and reverse speed controls shall be original equipment manufacturer design.

The county shall decide which type of equipment best suits the specific project. In some cases, truck-mounted machines may be more suited, i.e. cul-de-sacs, small narrow roadways, parking lots, etc. On some projects, continuous-run equipment may be chosen due to the continuity of mix and the reduction of start-up joints.

**Proportioning Devices:** Individual volume or weight controls for proportioning each material to be added to the mix (i.e. aggregate, mineral filler, emulsified asphalt, additive, and water) shall be provided and properly marked. These proportioning devices are used in material calibration and determining the material output at any time.

**Spreading Device:** The mixture shall be agitated and spread uniformly in the surfacing box by means of twin-shafted paddles or spiral augers fixed in the spreader box. A front seal shall be provided to insure no loss of the mixture at the road contact point. The rear seal shall act as a final strike-off and shall be adjustable. The spreader box and rear strike-off shall be so designed and operated that a uniform consistency is achieved to produce a free flow of material to the rear strike-off. The spreader box shall have suitable means provided to side shift the box to compensate for variations in the pavement geometry.

A burlap drag or other approved screed may be attached to the rear of the spreader box to provide a highly textured uniform surface. A drag stiffened by hardened slurry is ineffective and should be replaced immediately.

**Auxiliary Equipment:** Suitable surface preparation equipment, traffic control equipment, hand tools, and any other support and safety equipment shall be provided by the contractor as necessary, (or as the County requires) to perform the work.

**General:** Each mixing unit to be used in the performance of the work shall be calibrated in the presence of the County prior to construction. Previous calibration documentation covering the exact materials to be used may be acceptable, provided that no more than sixty (60) days have lapsed. The documentation shall include an individual calibration of each material at various settings, which can be related to the machine metering devices. No machine will be allowed to work on the project until the calibration has been completed and/or accepted.

All equipment, tools, and machines used in the performance of this work shall be maintained in satisfactory working condition at all times to ensure a high-quality product. Availability of quality assurance devices (such as a 15' straight edge) shall be the responsibility of the **Contractor**.

## Construction:

**Weather Limitations:** Slurry paving shall not be applied if either the pavement or air temperature is below 50°F and falling, but may be applied when both pavement and air temperatures are above 45°F and rising. No slurry seal shall be applied when there is the possibility that the finished product will freeze within 24 hours. The mixture shall not be applied when weather conditions prolong opening to traffic beyond a reasonable time or as directed by the County.

**Surface Preparation:** Immediately prior to applying the slurry seal, the surface shall be cleared of all loose material, silt spots, oil spots, vegetation, and other objectionable material. Any standard cleaning method will be acceptable. If water is used, cracks shall be allowed to dry thoroughly before applying slurry seal. Manholes, valve boxes, drop inlets and other service entrances shall be protected from the slurry by a suitable method. The County shall approve the surface preparation prior to surfacing. No dry aggregate either spilled from the lay-down machine or existing on the road, will be permitted. Remove any thermoplastic traffic striping or reflective pavement markers in the areas to be slurry sealed.

**Tack Coat:** The County may require placement of a tack coat prior to paving. If required, the tack coat shall consist of one part emulsified asphalt to three parts water and shall be applied with a standard distributor. The emulsified asphalt should be SS or CSS grade, or the slurry seal emulsion. The distributor shall be capable of applying the dilution evenly at a rate of 0.05 to 0.15 gal/yd<sup>2</sup>. The tack coat shall be allowed to cure sufficiently before the application of slurry seal.

**Cracks:** Unless otherwise instructed by the County, treat cracks wider than 0.25" in the pavement surface with an approved crack sealer prior to application of the slurry seal.

**Application:** A 500 If minimum test strip shall be placed in conditions similar to those expected to be encountered during the project unless specifically waived by the County. The test strip shall demonstrate that the equipment used, crew selected and materials to be incorporated into the product are performing as required to meet specifications.

The surface shall be pre-wetted ahead of the spreader box. The rate of application of the spray shall be adjusted during the day to suit temperatures, surface texture, humidity, and dryness of the pavement. No pooling or standing water shall be paved over.

The slurry seal shall be of the desired consistency upon leaving the mixer. A sufficient amount of material shall be carried in all parts of the spreader at all times so that a complete coverage is obtained. Overloading of the spreader shall be avoided. No lumping, balling, or unmixed aggregate shall be permitted.

No streaks, such as those caused by oversized aggregate or broken mix shall be left in the finished surface. If excess streaking develops, the job will be stopped until the contractor proves to the County that the situation has been corrected. Excessive streaking is defined as more than four drag marks greater than one-half (½) inch wide and four inches (4) long, or one inch (1) wide and three (3) inches long, in any 30 yd<sup>2</sup> area. No transverse ripples or longitudinal streaks of one-fourth (¼) inch in depth will be permitted, when measured by placing a ten (10) foot straight edge over the surface.

The slurry mixture shall be of the proper consistency at all times, so as to provide the application rate required by the surface condition. The average application rate shall be in accordance with the following table:

Aggregate Type	Location	Application Rates
TYPE I	Parking Areas, Urban and Residential Streets	8 – 12 lb/sy <sup>2</sup>
TYPE II	Urban and Residential Streets	10 - 18 lb/yd <sup>2</sup>
TYPE III	Urban, Residential, and Primary Routes	15 - 22 lb/yd <sup>2</sup>

Application rates are based upon the weight of dry aggregate in the mixture. Application rates are affected

by the unit weight of the aggregate. The contractor shall calculate the yield of the course placed at least three times per day. The county shall randomly determine the timing for the readings used to calculate application rate.

**Opening to Traffic:** Slurry Seal shall be capable of producing an emulsified asphalt paving mixture that will cure at a rate which will permit straight rolling traffic on the pavement within two (2) hours after application without damaging the pavement surface. Any damage done by traffic to the Slurry shall be repaired by the contractor at his/her expense.

**Joints:** No excess buildup, uncovered areas, or unsightly appearance shall be permitted on longitudinal or transverse joints. The contractor shall provide suitable-width spreading equipment to produce a minimum number of longitudinal joints throughout the project. When possible, longitudinal joints shall be placed on lane lines. Half passes and odd-width passes will be used only in minimum amounts. If half passes are used, they shall not be the last pass of any paved area. A maximum of three (3) inches shall be allowed for overlap of longitudinal lane line joints. Also, the joint shall have no more than a one-fourth (1/4) inch difference in elevation when measured by placing a ten (10) foot straight edge over the joint and measuring the elevation drop-off.

**Mix Stability:** The slurry seal shall possess sufficient stability so that premature breaking of the material in the spreader box does not occur. The mixture shall be homogeneous during and following mixing and spreading. It shall be free of excess water or emulsion and free of segregation of the emulsion and aggregate fines from the coarser aggregate. Under no circumstances shall water be sprayed directly into the lay-down box while laying slurry material.

**Handwork:** Areas which cannot be reached with the machine shall be surfaced using hand squeegees to provide uniform coverage. If necessary, the area to be hand worked shall be lightly dampened prior to mix placement. Care shall be exercised to leave no unsightly appearance from hand work. The same type of finish as applied by the spreader box shall be required.

**Edgelines:** Care shall be taken to ensure straight lines along curbs and shoulders. No runoff on these areas will be permitted. Lines at intersections will be kept straight to provide a good appearance. If necessary, a suitable material will be used to mask off the end of streets to provide straight lines. Edge lines shall not vary by more than  $\pm 2$  inches horizontal variance in any 100 feet of length.

**Clean-up:** All areas, such as man-ways, gutters, and intersections, shall have the slurry mix removed as specified by the County. The contractor shall, on a daily basis, remove any debris associated with the performance of the work, completely and thoroughly to the satisfaction of the County. In addition, the contractor shall, at the request of the County pressure wash any area such as, curb and gutter, private driveways, etc. removing any and all stains associated with the placement of the Slurry Seal.

**General Performance:** Provide completed pavement which performs to the satisfaction of the county without bleeding, rutting, shoving, raveling, stripping, or showing other types of pavement distress or unsatisfactory performance.

**Contractor's Quality Control Plan:** Provide and follow a QC plan that will maintain QC for production and construction processes. Provide the County with a copy of the QC plan for review and approval before the pre-construction meeting. Include, at a minimum, the following items:

- Source materials used on the project.
- Sampling and testing methods used to determine compliance with material specifications.
- Equipment to be used on the project.
- Calibration method used to determine compliance with the mix design.
- Pavement cleaning and preparation procedure.
- Plan for protecting slurry seal mixture from damage by traffic.
- Procedure for monitoring initial acceptance requirements.
- An action plan demonstrating adjustments of the slurry seal operation for adverse environmental conditions.

**Testing:** The County may obtain one or more samples of slurry mixture for each day of production. Tests samples shall be collected and performed in accordance with AASHTO T308 and AASHTO T30 to determine the residual asphalt content and the gradation of the sample. Evaporate all water from the sample prior to testing. Determine the deviation of the test results for each sample from the mix design target values. Compare the deviation from the mix design to the mixture control tolerances shown here:

Aggregate and Emulsified Asphalt - Acceptance Limits	
Aggregate	Tolerance from Mix Design Target Values
Percent Passing No. 4 Sieve	±6%
Percent Passing No. 8 Sieve	±7%
Percent Passing No. 50 Sieve	±6%
Percent Passing No. 200 Sieve	±3%
Emulsified Asphalt	Tolerance from Mix Design Target Values
Residual Asphalt Content of (single test)	± 0.5%
Residual Asphalt Content of (daily average)	± 0.2%
Application Rate (1,000 ft yield checks)	-2 lb/yd <sup>2</sup>
Sand Equivalent Test (ASTM D2419)	7% from mix design (not less than 60)

**Documentation:** Complete a daily report that includes the following information:

- Job number
- Route/Street Name(s)
- Owner's On-Site Representative Name
- Date
- Air temperature – Min/Max (during application)
- Unit weight of emulsified asphalt (pounds per gallon)
- Beginning and ending application locations
- Counter readings (beginning, ending, and total difference)
- Length and width in feet
- Total area (square yards)
- Aggregate weight
- Gallons of emulsified asphalt
- Application rate (pounds per square yard)
- Contractor's authorized signature
- QC aggregate properties (if required)
- Asphalt emulsified asphalt bill of lading(s)

**Traffic Control:** The Contractor shall furnish all necessary traffic control, barricades, signs and flagmen, to ensure the safety of the traveling public and to all working personnel. Traffic shall not travel on fresh mix until all operations have been completed and the slurry surface is sufficiently dry to keep vehicular traffic from marking the mat. The Contractor shall submit an MOT plan indicating all facets of traffic control for the project area. The MOT plan must be approved in writing by the County prior to commencing any work. All traffic control shall be in accordance with the FDOT Roadway Design Standards, most current edition and TP-102. MOT and associated devices shall be checked daily and periodically throughout the project for compliance; and where adjustments or corrections are needed, prompt revisions shall be made. The Contractor shall construct a two (2) foot apron at all driveways



**Acceptance:** Allow the County access to in-progress work for quality assurance review and testing. Upon completion of work, schedule an inspection with the County. The County will note deficiencies. Any deficiencies identified during this process will be addressed by the Contractor at no additional cost.

**Method of Measurement:** If a pay item is listed on the Bid Form for work required in this Technical Provision, the quantity to be paid shall be as specified in the Bid Form including all items of work described herein. Any item necessary for Slurry Seal, and not specifically listed in another item in the Bid Form, shall be included in this item.

**Basis of Payment:** The quantities to be paid for under this Technical Provision shall be included in the Square Yard price for High Polymer Slurry Seal and Tack Coat, or as listed in the Bid Form. The Unit price includes all items listed in the contract, including all General Conditions, Special Conditions and Technical Provisions pertaining to Slurry Seal, including all items of work described herein. No additional payment will be provided for any item necessary for the completion of this contract as detailed in the specifications.

**Technical Special Provisions****SECTION 327  
MILLING OF EXISTING ASPHALT PAVEMENT**

For work related to this specification, utilize the Florida Department of Transportation (FDOT) Standard Specifications for Road and Bridge Construction (Standard Specs), Dated 2014, except as amended herein. The purpose of this Technical Special Provision (TSP) is generally to remove those references to adjusted pay factors as may be present, and certain aspects of contractor quality control and relate the contractual obligations to between contractor and County as opposed to between contractor and FDOT. Other technical changes may also be included herein. When a section is included in this specification, only those sentences included shall be deemed changed. If a sentence is not included in this TSP, no change has been made. In places where additions are made, or sentences are stricken, this TSP will note that.

Where reference is made to "Engineer" or "Department", the word "County" or "County Representative" as applicable shall be substituted. Where reference is made to specifications within Division I of the FDOT Standard Specs, this contract and its appropriate sections shall be the target.

**327-1 Description.**

Take ownership of milled material, unless otherwise noted in the plans or in the bid form.

**327-3 Construction.**

**327-3.1 General:** When milling to improve rideability or cross slope, remove the existing pavement to the average depth specified in the Plans or in the bid form, in a manner that will restore the pavement surface to a uniform cross-section and longitudinal profile. The County Representative may require the use of a stringline, straight edge or other proofing tool to ensure maintaining the proper alignment.

*(Append to paragraph three)*

In the absence of plans for this project or any portion thereof, longitudinal and cross slope shall match the original slope, or conform to the slopes directed by the County Representative in the field.

**327-3.2 Quality Control Requirements:**

*(Append to end)*

The County Representative may waive any or all portions of this section for any portion of the project. This does not prohibit the County Representative from requiring individual measurements as may be deemed necessary at any location, or from requiring the entire procedure for portions of the project.

**327-3.3 Verification:**

*(Append to end)*



**Technical Special Provisions**

The County Representative may waive any or all portions of this section for any portion of the project if verification is not deemed necessary. This does not relieve the contractor of repairs necessary from any area not meeting the minimum requirements of this specification. The contractor may request verification as may be needed to ensure accuracy of contractor's equipment or methods.

**327-5 Method of Measurement.**

The quantity to be paid for will be the field measured quantity area, in square yards, over which milling is completed and accepted.

**327-6 Basis of Payment.**

Price and payment will be full compensation for all work specified in this Section, including hauling off and stockpiling or otherwise disposing of the milled material.

**Payment will be made under:**

Item No. 327- 70- Milling Existing Asphalt Pavement - per square yard.

**TECHNICAL PROVISION****TP-710****PAINTED TRAFFIC STRIPES AND MARKINGS**

The work under this Technical Provision consists of painting reflectorized traffic stripes, including edge stripes and traffic guide.

The placing of painted traffic stripes and markings as shown on the plans shall conform to the requirements of Section 710 of the Florida Department of Transportation Standard Specifications for Road and Bridge Construction latest edition, and in accordance with Florida Department of Transportation, Roadway and Traffic Design Standards (index appropriate for proposed work) latest edition except as amended herein.

It shall be the responsibility of the contractor to perform precise measurements and drawings prior to beginning work such that pavement markings can be replaced in their exact locations. Unless otherwise directed by the engineer, replace all markings in their respective locations at the lengths and widths in place prior to beginning work within the same day the markings are removed.

**Method of Measurement:** The quantity to be paid for under this Technical Provision shall be number of per each or per lineal foot of the payment items, completed and accepted.

No measurement as a part of this technical provision will be provided for temporary traffic stripes or messages needed for temporary control of traffic prior to final striping.

Measurement for Skip Traffic Striping and Guidelines will be the Net Lineal Feet for the color and width placed as listed in the bid form.

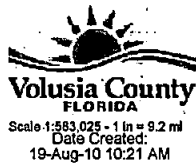
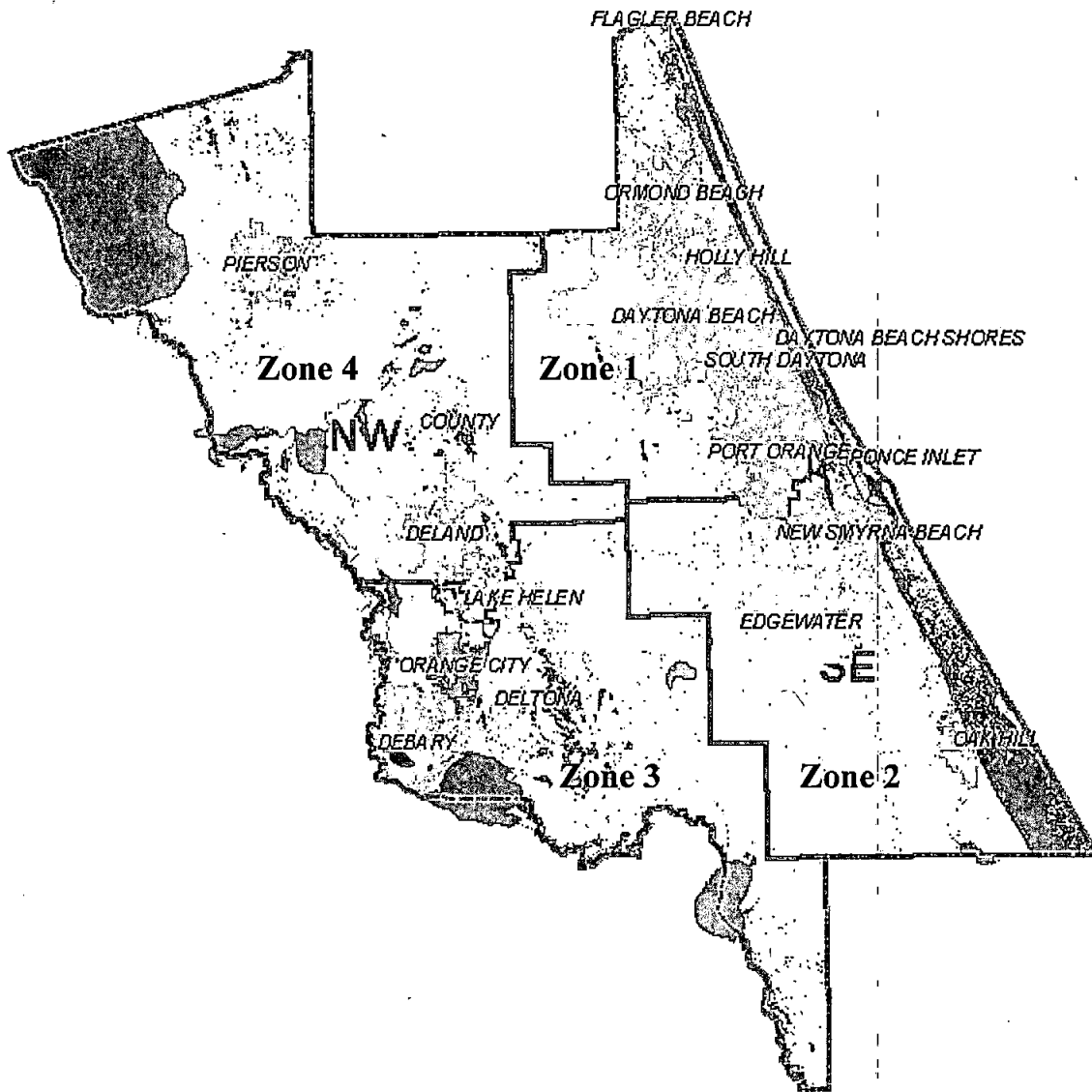
**Basis of Payment:** If a payment item is listed on the Bid Form for work required under this Technical Provision, payment shall as specified in the Bid Form.

The Contract price of the various payment items shall be full compensation for all work specified in this Technical Provision including: cleaning and preparing surfaces, materials, application, curing/protecting all items, protection from traffic, furnishing tools, machines and equipment, and all incidentals needed to complete the work.

When the work described as included in the work of this Technical Provision is not specifically listed on the Bid Form the cost of performing that work shall be included in the contract unit prices for the various items of work to which it is incidental.

No compensation as a part of this technical provision will be provided for temporary traffic stripes needed for temporary control of traffic prior to final striping.

**End of TP-710**



DISCLAIMER: This product is for informational purposes and may not have been prepared for, or be suitable for legal, engineering, or surveying purposes. Users of this information should review or consult the primary data and information sources to ascertain the usability of the information. Use at your own risk.  
SOURCE: PARCEL DATA, VOLUSIA COUNTY PROPERTY APPRAISER

CONTRACTOR NAME:

TYPE NAME HERE

Item: TP-234	Unit	Zone 1 & 2	Zone 3 & 4
<b>Base Repair per FDOT Section 234 (Latest)(except no pay factor adjustments apply)</b>			
Mobilization (Zone 1 & 2 grouped, Zone 3 & 4 grouped)	Each		
<b>0-100 Square Yard</b>			
SuperPave Asphalt Concrete	Ton		6
0" to 3" depth	Square Yard		
3" to 5" depth	Square Yard		
5" to 8" Depth	Square Yard		
<b>101-500 Square Yard</b>			
SuperPave Asphalt Concrete	Ton		
0" to 3" depth	Square Yard		
3" to 5" depth	Square Yard		
5" to 8" Depth	Square Yard		
<b>501+ Square Yard</b>			
SuperPave Asphalt Concrete	Ton		
0" to 3" depth	Square Yard		
3" to 5" depth	Square Yard		
5" to 8" Depth	Square Yard		
<b>Item: TP-271 &amp; 282</b>			
<b>Full Depth Reclamation</b>			
Mobilization (Zone 1 & 2 grouped, Zone 3 & 4 grouped)	Each		
Excavation for Widening or Unsuitable Material	Cubic Yard		
General Use Optional Base Material	Cubic Yard		
<b>0-10,000 Square Yard</b>			
Pulverization	Square Yard		
Cement - Cement Treated Base	Ton		
Asphalt Emulsion - Emulsion Treated Base	Gallon		
<b>10,001-25,000 Square Yard</b>			
Pulverization	Square Yard		
Cement - Cement Treated Base	Ton		
Asphalt Emulsion - Emulsion Treated Base	Gallon		
<b>25,001+ Square Yard</b>			
Pulverization	Square Yard		
Cement - Cement Treated Base	Ton		
Asphalt Emulsion - Emulsion Treated Base	Gallon		
<b>Item: TP-309</b>			
<b>Crack Sealing</b>			
Mobilization (Zone 1 & 2 grouped, Zone 3 & 4 grouped)	Each		
<b>0-500 Gallon</b>			
Crack Sealing	Gallon		
<b>501-2,000 Gallon</b>			
Crack Sealing	Gallon		
<b>2,001+ Gallon</b>			
Crack Sealing	Gallon		
<b>Item: TP-313A</b>			
<b>Rejuvenating Fog Seal</b>			
Mobilization (Zone 1 & 2 grouped, Zone 3 & 4 grouped)	Each		
Sanding/Blotting	Cubic Yard		
<b>0-25,000 Square Yard</b>			
Fog Sealing	Square Yard		
<b>25,001-50,000 Square Yard</b>			
Fog Sealing	Square Yard		
<b>50,001+ Square Yard</b>			

Fog Sealing	Square Yard		
<b>Item: TP-314</b>	<b>Unit</b>	<b>Zone 1 &amp; 2</b>	<b>Zone 3 &amp; 4</b>
<b>Rejuvenating Agent</b>			
Mobilization (Zone 1 & 2 grouped, Zone 3 & 4 grouped)	Each		
<b>0-50,000 Square Yard</b>			
Rejuvenating Agent	Square Yard		
<b>50,001-100,000 Square Yard</b>			
Rejuvenating Agent	Square Yard		
<b>100,001+ Square Yard</b>			
Rejuvenating Agent	Square Yard		
<b>Item: TP-316</b>	<b>Unit</b>	<b>Zone 1 &amp; 2</b>	<b>Zone 3 &amp; 4</b>
<b>Asphaltic Surface Treatment - Chip Seal</b>			
Mobilization (Zone 1 & 2 grouped, Zone 3 & 4 grouped)	Each		
<b>0-50,000 Square Yard</b>			
Chip Seal - Single Application	Square Yard		
Chip Seal - Double Application	Square Yard		
<b>50,001-100,000 Square Yard</b>			
Chip Seal - Single Application	Square Yard		
Chip Seal - Double Application	Square Yard		
<b>100,001+ Square Yard</b>			
Chip Seal - Single Application	Square Yard		
Chip Seal - Double Application	Square Yard		
<b>Item: TP-316A</b>	<b>Unit</b>	<b>Zone 1 &amp; 2</b>	<b>Zone 3 &amp; 4</b>
<b>Rejuvenating Scrub Seal</b>			
Mobilization (Zone 1 & 2 grouped, Zone 3 & 4 grouped)	Each		
<b>0-50,000 Square Yard</b>			
Rejuvenating Scrub Seal (Single Application)	Square Yard		
Rejuvenating Scrub Seal (Double Application)	Square Yard		
<b>50,001-100,000 Square Yard</b>			
Rejuvenating Scrub Seal (Single Application)	Square Yard		
Rejuvenating Scrub Seal (Double Application)	Square Yard		
<b>100,001+ Square Yard</b>			
Rejuvenating Scrub Seal (Single Application)	Square Yard		
Rejuvenating Scrub Seal (Double Application)	Square Yard		
<b>Item: TP-317</b>	<b>Unit</b>	<b>Zone 1 &amp; 2</b>	<b>Zone 3 &amp; 4</b>
<b>Micro Surfacing</b>			
Mobilization (Zone 1 & 2 grouped, Zone 3 & 4 grouped)	Each		
<b>0-50,000 Square Yard</b>			
Micro Surfacing - Single Application	Square Yard		
Micro Surfacing - Double Application	Square Yard		
Micro Surfacing - Rut Fill	Ton		
<b>50,001-100,000 Square Yard</b>			
Micro Surfacing - Single Application	Square Yard		
Micro Surfacing - Double Application	Square Yard		
Micro Surfacing - Rut Fill	Ton		
<b>100,001+ Square Yard</b>			
Micro Surfacing - Single Application	Square Yard		
Micro Surfacing - Double Application	Square Yard		
Micro Surfacing - Rut Fill	Ton		
<b>Item: TP-317A</b>	<b>Unit</b>	<b>Zone 1 &amp; 2</b>	<b>Zone 3 &amp; 4</b>
<b>High Polymer Micro Surfacing</b>			
Mobilization (Zone 1 & 2 grouped, Zone 3 & 4 grouped)	Each		
<b>0-50,000 Square Yard</b>			

High Polymer Micro Surfacing - Single Application	Square Yard		
High Polymer Micro Surfacing - Double Application	Square Yard		
High Polymer Micro Surfacing - Rut Fill	Ton		
<b>50,001-100,000 Square Yard</b>			
High Polymer Micro Surfacing - Single Application	Square Yard		
High Polymer Micro Surfacing - Double Application	Square Yard		
High Polymer Micro Surfacing - Rut Fill	Ton		
<b>100,001+ Square Yard</b>			
High Polymer Micro Surfacing - Single Application	Square Yard		
High Polymer Micro Surfacing - Double Application	Square Yard		
High Polymer Micro Surfacing - Rut Fill	Ton		
<b>Item: TP-318A</b>	<b>Unit</b>	<b>Zone 1 &amp; 2</b>	<b>Zone 3 &amp; 4</b>
<b>High Polymer Slurry Surfacing</b>			
Mobilization (Zone 1 & 2 grouped, Zone 3 & 4 grouped)	Each		
<b>0-50,000 Square Yard</b>			
High Polymer Slurry Surfacing - Single Application	Square Yard		
High Polymer Slurry Surfacing - Double Application	Square Yard		
High Polymer Slurry Surfacing - Rut Fill	Ton		
<b>50,001-100,000 Square Yard</b>			
High Polymer Slurry Surfacing - Single Application	Square Yard		
High Polymer Slurry Surfacing - Double Application	Square Yard		
High Polymer Slurry Surfacing - Rut Fill	Ton		
<b>100,001+ Square Yard</b>			
High Polymer Slurry Surfacing - Single Application	Square Yard		
High Polymer Slurry Surfacing - Double Application	Square Yard		
High Polymer Slurry Surfacing - Rut Fill	Ton		
<b>Item: TP-327</b>	<b>Unit</b>	<b>Zone 1 &amp; 2</b>	<b>Zone 3 &amp; 4</b>
<b>Milling of Existing Asphalt Pavements</b>			
Mobilization (Zone 1 & 2 grouped, Zone 3 & 4 grouped)	Each		
<b>0-5,000 SY</b>			
Milling (0 to 1")	Square Yard		
Milling (1" to 3")	Square Yard		
Milling (3" +)	Square Yard		
<b>5,001-15,000 SY</b>			
Milling (0 to 1")	Square Yard		
Milling (1" to 3")	Square Yard		
Milling (3" +)	Square Yard		
<b>15,001+ SY</b>			
Milling (0 to 1")	Square Yard		
Milling (1" to 3")	Square Yard		
Milling (3" +)	Square Yard		
<b>Item: TP-710</b>	<b>Unit</b>	<b>Zone 1 &amp; 2</b>	<b>Zone 3 &amp; 4</b>
<b>Painted Traffic Stripe</b>			
Painted Traffic Stripe (6" Yellow) price per Liner Foot (LF)	LF		
Painted Traffic Stripe (6" White) price per Liner Foot (LF)	LF		
Painted Traffic Stripe (12" White) price per Liner Foot (LF)	LF		
Painted Traffic Stripe (18" Yellow) price per Liner Foot (LF)	LF		
Painted Traffic Stripe (18" White) price per Liner Foot (LF)	LF		
Painted Traffic Stripe (24" White) price per Liner Foot (LF)	LF		
Painted Pavement Message (EA)	EA		
Painted Arrow (EA)	EA		
Reflective Pavement Markers (EA)	EA		





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October 5, 2018

**ADDENDUM NO. 1**  
**Pavement Reconstruction & Preservation**  
**ITB No. 18-B-161RF**

The purpose of this addendum is to provide the following clarifications, changes, modifications and/or additions to the solicitation documents. This addendum is an integral part of the Solicitation/Contract Documents.

**\*\*NOTICE\*\***

**Clarifications:**

**Exhibit II – Insurance Requirements.** Delete from page 4 of 6, Section 1. H. Commercial General Liability Insurance, the last two (2) sentences which read, *“The commercial general liability policy shall be provided on a project or location specific basis for the location or project site where the work or services are to be performed under the Agreement. In the alternative, the commercial general liability policy shall be endorsed to provide the designated aggregate per location endorsement or equivalent on a form approved or requested by the County Risk Manager.”*

**REVISED ATTACHMENT A – Technical Specifications** is attached and replaces Attachment A – Technical Specifications. Revised Attachment A updates TP314 Specifications (pages 24-28).

**Questions Received:**

**HIGH POLYMER MICRO SURFACING TECHNICAL SPECIFICATIONS (Questions 1 – 4):**

**Q1:** APS believes the only polymer that meets the exact properties specified is manufactured by Kraton Corporation, which has an exclusive supply agreement with Ergon Asphalt & Emulsions, Inc. Accordingly, all bidders must buy their emulsion from Ergon. Is the County aware of any other manufacturer that makes a product meeting these specifications?

**Response:** Volusia County is not aware of Kraton Corporation or any other company's agreements. This is a standard industry product and other competitive emulsions manufacturers are able to produce and provide polymers that meet the specification set forth.

**Q2:** Specifically, it is our understanding that a Krayton Polymer is the only product that can pass the following three tests: Original DSR, kPa, (G\*/sin  $\alpha$ , 10 rad./sec) @ 76 degrees C AASHTO Test T135; MSCR @ 64 degrees C, Recovery @ 3.2 kPa, % AASHTO Test M332; and Jnr @ 3.2 kPa AASHTO Test M332. What is the specific reason for requiring a polymer that meets the above test?

**Response:** The specifications for these products are more defining, which better assures the desired improved performance.

**Q3:** Will the county accept an equivalent product that meets the performance standards even if it does not meet the exact specified properties?

**Response:** County will accept any product that meets the specification set forth.

**Q4:** Is this specification intended to require the use of an Ergon product?

**Response:** No.

#### **HIGHLY MODIFIED SLURRY SEAL (Questions 5 – 8):**

**Q5:** APS believes the only polymer that meets the exact properties specified is manufactured by Kraton Corporation, regarding Highly Modified Slurry Seal, which has an exclusive supply agreement with Ergon Asphalt & Emulsions, Inc. Accordingly, all bidders must buy their emulsion from Ergon. Is the County aware of any other manufacturer that makes a product meeting these specifications?

**Response:** Volusia County is not aware of Kraton Corporation or any other company's agreements. This is a standard industry product and other competitive emulsions manufacturers are able to produce and provide polymers that meet the specification set forth.

**Q6:** Is this specification intended to require the use of an Ergon product?

**Response:** No.

**Q7:** Will the county accept an equivalent product that meets the performance standards even if it does not meet the exact specified properties?

**Response:** County will accept any product that meets the specification set forth.

**Q8:** The specifications for Highly Modified Slurry Seal refer to AASHTO test method T315 for the original DSR. The specifications for High Polymer Micro surfacing refer to test method T135, but contain the same test properties. Is one of these a typographical error? If so, which and what was intended?

**Response:** T315 is intended for both.

#### **REJUVENATING FOG SEAL (Questions 9 – 11):**

**Q9:** The specifications note that "Reclamite as manufactured by Golden Bear Oil, a division of Tricor Refining, LLC for the asphalt rejuvenating agent is the standard for these specifications." Golden Bear Oil and Tricor Refining, LLC are subsidiaries of Ergon Asphalt & Emulsions, Inc. Is the County aware of any non-Ergon product that meets the specifications of this section?

**Response:** References to Golden Bear Oil, and D&D Emulsion, Inc. have been removed from TP314 Specifications. Attachment A – Technical Specifications is replaced with **REVISED Attachment A – Technical Specifications.**

**Q10:** Will the county accept an equivalent product that meets the performance standards even if it does not meet the exact specified properties?

**Response:** County will accept any product that meets the specification set forth.

**Q11:** Is this specification intended to require the use of an Ergon product?

**Response:** No.

**ASPHALTIC SURFACE TREATMENT (REJUVENATING SCRUB SEAL) (Questions 12 – 14):**

**Q12:** It is believed that Ergon Asphalt & Emulsions, Inc. has the exclusive right to purchase the polymer that meets the properties contained in the Polymer Properties section of specification using the specified test methods. Is the County aware of any alternative product that meets these specifications?

**Response:** This is a standard industry product and other competitive emulsions manufacturers are able to produce and provide polymers that meet the specification set forth.

**Q13:** Will the County accept an alternative product that meets the performance requirements even if it does not meet the exact specified Polymer Properties?


**Response:** County will accept any product that meets the specification set forth.

**Q14:** Is this specification intended to require the use of an Ergon product?

**Response:** No.

**All other terms and conditions remain unchanged.**

If any questions, please contact the staff member responsible for this project, Ron Falanga, Senior Procurement Analyst, at phone: (386) 822-5772 or via e-mail: [RFalanga@volusia.org](mailto:RFalanga@volusia.org).

  
Kathy Williams, CPPO, CPPB, MBA  
Procurement Manager  
Purchasing and Contracts Division

<b><u>Please sign and return with proposal 18-B-161RF</u></b>	
Vendor:	_____
Signed by (Name/Position):	_____
Phone No.:	_____ Date: _____

***FALLURE TO RETURN THIS FORM WITH THE BID SUBMITTAL MAY CAUSE THE PROPOSAL TO BE RENDERED NON-RESPONSIVE***



**COUNTY OF VOLUSIA  
PURCHASING & CONTRACTS DIVISION**  
123 West Indiana Avenue, Room 302  
DeLand, Florida 32720-4608  
(386) 736-5935 ♦ Fax: (386) 736-5972  
[www.volusia.org](http://www.volusia.org)

October 10, 2018

**ADDENDUM NO. 2  
Pavement Reconstruction & Preservation  
ITB No. 18-B-161RF**

The purpose of this addendum is to provide the following clarifications, changes, modifications and/or additions to the solicitation documents. This addendum is an integral part of the Solicitation/Contract Documents.

**\*\*NOTICE\*\***

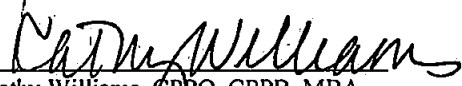
**Questions Received:**

**Q1:** Did the county use a third party consultant to review the specifications of the bid?

**Response:** The third party consultant used for this ITB is PRI Asphalt Technologies, Inc. of 6408 Badger Drive, Tampa, FL 33610-2004.

**All other terms and conditions remain unchanged.**

If any questions, please contact the staff member responsible for this project, Ron Falanga, Senior Procurement Analyst, at phone: (386) 822-5772 or via e-mail: [RFalanga@volusia.org](mailto:RFalanga@volusia.org).

  
Kathy Williams, CPPO, CPPB, MBA  
Procurement Manager  
Purchasing and Contracts Division

<b><u>Please sign and return with proposal 18-B-161RF</u></b>	
Vendor: _____	
Signed by (Name/Position): _____	
Phone No.: _____	Date: _____

**FAILURE TO RETURN THIS FORM WITH THE BID SUBMITTAL MAY CAUSE THE PROPOSAL TO BE RENDERED NON-RESPONSIVE**



ALL BIDS ACCEPTED BY THE COUNTY OF VOLUSIA ARE SUBJECT TO THE COUNTY'S TERMS AND CONDITIONS. ANY AND ALL ADDITIONAL TERMS AND CONDITIONS SUBMITTED BY THE BIDDERS ARE REJECTED AND SHALL HAVE NO FORCE AND EFFECT. BIDS FROM THE VENDORS LISTED HEREIN ARE THE ONLY BIDS RECEIVED TIMELY AS OF THE CLOSING DATE AND TIME. ALL OTHER BIDS SUBMITTED IN RESPONSE TO THIS SOLICITATION, IF ANY, ARE HEREBY REJECTED AS LATE

18-B-161RF

Pavement Reconstruction & Preservation  
Closing Date: 10/16/2018 Closing Time: 3:00 p.m.  
Projected Council Date: 12/4/2018

**RECOMMENDATION OF AWARD**

Primary and Secondary Indicated by highlighted sections

Opened by: J. Duckworth Tabulated by: R. Falanga Posted: 11/07/18

Response #1	Response #2	Response #3	Response #4
Asphalt Paving Systems, Inc. 9021 Wire Road Zephyrhills, FL 33540 813-788-0010 dkaanonaps@gmail.com Robert Capoferri	Fahrner Asphalt Sealers, LLC 2800 Mecca Drive Plover, WI 54467 715-341-2868 mark.rohrbach@fahrnerasphalt.com Troy Carlson	Hallfax Paving, Inc. PO Box 730549 Ormond Beach, FL 32173 386-676-0200 hallfaxpaving@flrr.com Thomas Dorrance	Pavement Technology, Inc. 24144 Detroit Road Westlake, Ohio 44145 440-892-1895 inlamer@pavtechinc.com Susan Durante

Item: TP-234	Unit	Zone 1 & 2	Zone 3 & 4	Zone 1 & 2	Zone 3 & 4	Zone 1 & 2	Zone 3 & 4	Zone 1 & 2	Zone 3 & 4
Base Repair per FDOT Section 234 (Latest)(except no pay factor adjustments apply)									
Mobilization (Zone 1 & 2 grouped, Zone 3 & 4 grouped)	Each	\$	5,500.00	No Bid		\$	3,000.00	No Bid	
0-100 Square Yard									
SuperPave Asphalt Concrete	Ton	\$	75.00	No Bid	No Bid	\$	350.00	No Bid	No Bid
0" to 3" depth	Square Yard	\$	115.00	No Bid	No Bid	\$	100.00	No Bid	No Bid
3" to 5" depth	Square Yard	\$	120.00	No Bid	No Bid	\$	100.00	No Bid	No Bid
5" to 8" Depth	Square Yard	\$	125.00	No Bid	No Bid	\$	100.00	No Bid	No Bid
101-500 Square Yard									
SuperPave Asphalt Concrete	Ton	\$	75.00	No Bid	No Bid	\$	250.00	No Bid	No Bid
0" to 3" depth	Square Yard	\$	110.00	No Bid	No Bid	\$	75.00	No Bid	No Bid
3" to 5" depth	Square Yard	\$	115.00	No Bid	No Bid	\$	75.00	No Bid	No Bid
5" to 8" Depth	Square Yard	\$	120.00	No Bid	No Bid	\$	75.00	No Bid	No Bid
501+ Square Yard									
SuperPave Asphalt Concrete	Ton	\$	75.00	No Bid	No Bid	\$	150.00	No Bid	No Bid
0" to 3" depth	Square Yard	\$	110.00	No Bid	No Bid	\$	75.00	No Bid	No Bid
3" to 5" depth	Square Yard	\$	115.00	No Bid	No Bid	\$	75.00	No Bid	No Bid
5" to 8" Depth	Square Yard	\$	120.00	No Bid	No Bid	\$	75.00	No Bid	No Bid
<b>Item: TP-271 &amp; 282</b>	<b>Unit</b>	<b>Zone 1 &amp; 2</b>	<b>Zone 3 &amp; 4</b>	<b>Zone 1 &amp; 2</b>	<b>Zone 3 &amp; 4</b>	<b>Zone 1 &amp; 2</b>	<b>Zone 3 &amp; 4</b>	<b>Zone 1 &amp; 2</b>	<b>Zone 3 &amp; 4</b>
Full Depth Reclamation									
Mobilization (Zone 1 & 2 grouped, Zone 3 & 4 grouped)	Each	\$	7,000.00	No Bid	No Bid	No Bid	No Bid	No Bid	No Bid
Excavation for Widening or Unsuitable Material	Cubic Yard	\$	65.00	No Bid	No Bid	No Bid	No Bid	No Bid	No Bid
General Use Optional Base Material	Cubic Yard	\$	50.00	No Bid	No Bid	No Bid	No Bid	No Bid	No Bid
0-10,000 Square Yard									
Pulverization	Square Yard	\$	11.12	No Bid	No Bid	No Bid	No Bid	No Bid	No Bid
Cement - Cement Treated Base	Ton	\$	150.00	No Bid	No Bid	No Bid	No Bid	No Bid	No Bid
Asphalt Emulsion - Emulsion Treated Base	Gallon	\$	2.50	No Bid	No Bid	No Bid	No Bid	No Bid	No Bid
10,001-25,000 Square Yard									
Pulverization	Square Yard	\$	10.41	No Bid	No Bid	No Bid	No Bid	No Bid	No Bid
Cement - Cement Treated Base	Ton	\$	150.00	No Bid	No Bid	No Bid	No Bid	No Bid	No Bid
Asphalt Emulsion - Emulsion Treated Base	Gallon	\$	2.50	No Bid	No Bid	No Bid	No Bid	No Bid	No Bid
25,001+ Square Yard									
Pulverization	Square Yard	\$	10.05	No Bid	No Bid	No Bid	No Bid	No Bid	No Bid
Cement - Cement Treated Base	Ton	\$	150.00	No Bid	No Bid	No Bid	No Bid	No Bid	No Bid
Asphalt Emulsion - Emulsion Treated Base	Gallon	\$	2.50	No Bid	No Bid	No Bid	No Bid	No Bid	No Bid
<b>Item: TP-309</b>	<b>Unit</b>	<b>Zone 1 &amp; 2</b>	<b>Zone 3 &amp; 4</b>	<b>Zone 1 &amp; 2</b>	<b>Zone 3 &amp; 4</b>	<b>Zone 1 &amp; 2</b>	<b>Zone 3 &amp; 4</b>	<b>Zone 1 &amp; 2</b>	<b>Zone 3 &amp; 4</b>
Crack Sealing									
Mobilization (Zone 1 & 2 grouped, Zone 3 & 4 grouped)	Each	\$	500.00	\$	1,500.00	No Bid	No Bid	No Bid	No Bid
0-500 Gallon									
Crack Sealing	Gallon	\$	15.00	\$	18.50	No Bid	No Bid	No Bid	No Bid
501-2,000 Gallon									
Crack Sealing	Gallon	\$	15.00	\$	16.50	No Bid	No Bid	No Bid	No Bid
2,001+ Gallon									
Crack Sealing	Gallon	\$	15.00	\$	15.00	No Bid	No Bid	No Bid	No Bid

Item: TP-313A	Unit	Zone 1 & 2	Zone 3 & 4	Zone 1 & 2	Zone 3 & 4	Zone 1 & 2	Zone 3 & 4	Zone 1 & 2	Zone 3 & 4
Rejuvenating Fog Seal									
Mobilization (Zone 1 & 2 grouped, Zone 3 & 4 grouped)	Each	\$ 500.00		\$ 400.00		No Bid		No Bid	
Sanding/Blotting	Cubic Yard	\$ 0.15	\$ 0.15	\$ 25.00	\$ 25.00	No Bid	No Bid	No Bid	No Bid
0-25,000 Square Yard									
Fog Sealing	Square Yard	\$ 0.45	\$ 0.45	\$ 1.15	\$ 1.15	No Bid	No Bid	No Bid	No Bid
25,001-50,000 Square Yard									
Fog Sealing	Square Yard	\$ 0.45	\$ 0.45	\$ 1.10	\$ 1.10	No Bid	No Bid	No Bid	No Bid
50,001+ Square Yard									
Fog Sealing	Square Yard	\$ 0.45	\$ 0.45	\$ 1.05	\$ 1.05	No Bid	No Bid	No Bid	No Bid
Item: TP-314	Unit	Zone 1 & 2	Zone 3 & 4	Zone 1 & 2	Zone 3 & 4	Zone 1 & 2	Zone 3 & 4	Zone 1 & 2	Zone 3 & 4
Rejuvenating Agent									
Mobilization (Zone 1 & 2 grouped, Zone 3 & 4 grouped)	Each	No Bid		No Bid		No Bid		\$ 1,500.00	
0-50,000 Square Yard									
Rejuvenating Agent	Square Yard	No Bid	No Bid	No Bid	No Bid	No Bid	No Bid	\$ 0.89	\$ 0.89
50,001-100,000 Square Yard									
Rejuvenating Agent	Square Yard	No Bid	No Bid	No Bid	No Bid	No Bid	No Bid	\$ 0.87	\$ 0.87
100,001+ Square Yard									
Rejuvenating Agent	Square Yard	No Bid	No Bid	No Bid	No Bid	No Bid	No Bid	\$ 0.85	\$ 0.85
Item: TP-316	Unit	Zone 1 & 2	Zone 3 & 4	Zone 1 & 2	Zone 3 & 4	Zone 1 & 2	Zone 3 & 4	Zone 1 & 2	Zone 3 & 4
Asphaltic Surface Treatment - Chip Seal									
Mobilization (Zone 1 & 2 grouped, Zone 3 & 4 grouped)	Each	\$ 1,500.00		\$ 1,750.00		No Bid		No Bid	
0-50,000 Square Yard									
Chip Seal - Single Application	Square Yard	\$ 1.68	\$ 1.68	\$ 2.33	\$ 2.33	No Bid	No Bid	No Bid	No Bid
Chip Seal - Double Application	Square Yard	\$ 2.78	\$ 2.78	\$ 4.30	\$ 4.30	No Bid	No Bid	No Bid	No Bid
50,001-100,000 Square Yard									
Chip Seal - Single Application	Square Yard	\$ 1.68	\$ 1.68	\$ 2.29	\$ 2.29	No Bid	No Bid	No Bid	No Bid
Chip Seal - Double Application	Square Yard	\$ 2.78	\$ 2.78	\$ 4.22	\$ 4.22	No Bid	No Bid	No Bid	No Bid
100,001+ Square Yard									
Chip Seal - Single Application	Square Yard	\$ 1.68	\$ 1.68	\$ 2.20	\$ 2.20	No Bid	No Bid	No Bid	No Bid
Chip Seal - Double Application	Square Yard	\$ 2.78	\$ 2.78	\$ 4.20	\$ 4.20	No Bid	No Bid	No Bid	No Bid
Item: TP-316A	Unit	Zone 1 & 2	Zone 3 & 4	Zone 1 & 2	Zone 3 & 4	Zone 1 & 2	Zone 3 & 4	Zone 1 & 2	Zone 3 & 4
Rejuvenating Scrub Seal									
Mobilization (Zone 1 & 2 grouped, Zone 3 & 4 grouped)	Each	\$ 1,500.00		\$ 1,750.00		No Bid		No Bid	
0-50,000 Square Yard									
Rejuvenating Scrub Seal (Single Application)	Square Yard	\$ 1.68	\$ 1.68	\$ 2.92	\$ 2.92	No Bid	No Bid	No Bid	No Bid
Rejuvenating Scrub Seal (Double Application)	Square Yard	\$ 3.29	\$ 3.29	\$ 5.25	\$ 5.25	No Bid	No Bid	No Bid	No Bid
50,001-100,000 Square Yard									
Rejuvenating Scrub Seal (Single Application)	Square Yard	\$ 1.68	\$ 1.68	\$ 2.89	\$ 2.89	No Bid	No Bid	No Bid	No Bid
Rejuvenating Scrub Seal (Double Application)	Square Yard	\$ 3.29	\$ 3.29	\$ 5.18	\$ 5.18	No Bid	No Bid	No Bid	No Bid
100,001+ Square Yard									
Rejuvenating Scrub Seal (Single Application)	Square Yard	\$ 1.68	\$ 1.68	\$ 2.88	\$ 2.88	No Bid	No Bid	No Bid	No Bid
Rejuvenating Scrub Seal (Double Application)	Square Yard	\$ 3.29	\$ 3.29	\$ 5.08	\$ 5.08	No Bid	No Bid	No Bid	No Bid
Item: TP-317	Unit	Zone 1 & 2	Zone 3 & 4	Zone 1 & 2	Zone 3 & 4	Zone 1 & 2	Zone 3 & 4	Zone 1 & 2	Zone 3 & 4
Micro Surfacing									
Mobilization (Zone 1 & 2 grouped, Zone 3 & 4 grouped)	Each	\$ 1,350.00		\$ 1,750.00		No Bid		No Bid	
0-50,000 Square Yard									
Micro Surfacing - Single Application	Square Yard	\$ 1.83	\$ 1.83	\$ 2.65	\$ 2.65	No Bid	No Bid	No Bid	No Bid
Micro Surfacing - Double Application	Square Yard	\$ 2.90	\$ 2.90	\$ 4.75	\$ 4.75	No Bid	No Bid	No Bid	No Bid
Micro Surfacing - Rut Fill	Ton	\$ 125.00	\$ 125.00	\$ 150.00	\$ 150.00	No Bid	No Bid	No Bid	No Bid
50,001-100,000 Square Yard									
Micro Surfacing - Single Application	Square Yard	\$ 1.83	\$ 1.83	\$ 2.62	\$ 2.62	No Bid	No Bid	No Bid	No Bid
Micro Surfacing - Double Application	Square Yard	\$ 2.90	\$ 2.90	\$ 4.70	\$ 4.70	No Bid	No Bid	No Bid	No Bid
Micro Surfacing - Rut Fill	Ton	\$ 125.00	\$ 125.00	\$ 150.00	\$ 150.00	No Bid	No Bid	No Bid	No Bid
100,001+ Square Yard									
Micro Surfacing - Single Application	Square Yard	\$ 1.83	\$ 1.83	\$ 2.60	\$ 2.60	No Bid	No Bid	No Bid	No Bid
Micro Surfacing - Double Application	Square Yard	\$ 2.90	\$ 2.90	\$ 4.61	\$ 4.61	No Bid	No Bid	No Bid	No Bid
Micro Surfacing - Rut Fill	Ton	\$ 125.00	\$ 125.00	\$ 150.00	\$ 150.00	No Bid	No Bid	No Bid	No Bid

Item: TP-317A	Unit	Zone 1 & 2	Zone 3 & 4	Zone 1 & 2	Zone 3 & 4	Zone 1 & 2	Zone 3 & 4	Zone 1 & 2	Zone 3 & 4
High Polymer Micro Surfacing									
Mobilization (Zone 1 & 2 grouped, Zone 3 & 4 grouped)	Each	\$	1,350.00	\$	1,750.00		No Bid		No Bid
0-50,000 Square Yard									
High Polymer Micro Surfacing - Single Application	Square Yard	\$ 1.93	\$ 1.93	\$ 3.20	\$ 3.20	No Bid	No Bid	No Bid	No Bid
High Polymer Micro Surfacing - Double Application	Square Yard	\$ 3.00	\$ 3.00	\$ 5.53	\$ 5.53	No Bid	No Bid	No Bid	No Bid
High Polymer Micro Surfacing - Rut Fill	Ton	\$ 125.00	\$ 125.00	\$ 175.00	\$ 175.00	No Bid	No Bid	No Bid	No Bid
50,001-100,000 Square Yard									
High Polymer Micro Surfacing - Single Application	Square Yard	\$ 1.93	\$ 1.93	\$ 3.15	\$ 3.15	No Bid	No Bid	No Bid	No Bid
High Polymer Micro Surfacing - Double Application	Square Yard	\$ 3.00	\$ 3.00	\$ 5.48	\$ 5.48	No Bid	No Bid	No Bid	No Bid
High Polymer Micro Surfacing - Rut Fill	Ton	\$ 125.00	\$ 125.00	\$ 175.00	\$ 175.00	No Bid	No Bid	No Bid	No Bid
100,001+ Square Yard									
High Polymer Micro Surfacing - Single Application	Square Yard	\$ 1.93	\$ 1.93	\$ 3.10	\$ 3.10	No Bid	No Bid	No Bid	No Bid
High Polymer Micro Surfacing - Double Application	Square Yard	\$ 3.00	\$ 3.00	\$ 5.40	\$ 5.40	No Bid	No Bid	No Bid	No Bid
High Polymer Micro Surfacing - Rut Fill	Ton	\$ 125.00	\$ 125.00	\$ 175.00	\$ 175.00	No Bid	No Bid	No Bid	No Bid
Item: TP-318A	Unit	Zone 1 & 2	Zone 3 & 4	Zone 1 & 2	Zone 3 & 4	Zone 1 & 2	Zone 3 & 4	Zone 1 & 2	Zone 3 & 4
High Polymer Slurry Surfacing									
Mobilization (Zone 1 & 2 grouped, Zone 3 & 4 grouped)	Each	\$	1,350.00	\$	1,750.00		No Bid		No Bid
0-50,000 Square Yard									
High Polymer Slurry Surfacing - Single Application	Square Yard	\$ 1.93	\$ 1.93	\$ 2.80	\$ 2.80	No Bid	No Bid	No Bid	No Bid
High Polymer Slurry Surfacing - Double Application	Square Yard	\$ 3.00	\$ 3.00	\$ 4.90	\$ 4.90	No Bid	No Bid	No Bid	No Bid
High Polymer Slurry Surfacing - Rut Fill	Ton	\$ 125.00	\$ 125.00	\$ 175.00	\$ 175.00	No Bid	No Bid	No Bid	No Bid
50,001-100,000 Square Yard									
High Polymer Slurry Surfacing - Single Application	Square Yard	\$ 1.93	\$ 1.93	\$ 2.75	\$ 2.75	No Bid	No Bid	No Bid	No Bid
High Polymer Slurry Surfacing - Double Application	Square Yard	\$ 3.00	\$ 3.00	\$ 4.81	\$ 4.81	No Bid	No Bid	No Bid	No Bid
High Polymer Slurry Surfacing - Rut Fill	Ton	\$ 125.00	\$ 125.00	\$ 175.00	\$ 175.00	No Bid	No Bid	No Bid	No Bid
100,001+ Square Yard									
High Polymer Slurry Surfacing - Single Application	Square Yard	\$ 1.93	\$ 1.93	\$ 2.73	\$ 2.73	No Bid	No Bid	No Bid	No Bid
High Polymer Slurry Surfacing - Double Application	Square Yard	\$ 3.00	\$ 3.00	\$ 4.78	\$ 4.78	No Bid	No Bid	No Bid	No Bid
High Polymer Slurry Surfacing - Rut Fill	Ton	\$ 125.00	\$ 125.00	\$ 175.00	\$ 175.00	No Bid	No Bid	No Bid	No Bid
Item: TP-327	Unit	Zone 1 & 2	Zone 3 & 4	Zone 1 & 2	Zone 3 & 4	Zone 1 & 2	Zone 3 & 4	Zone 1 & 2	Zone 3 & 4
Milling of Existing Asphalt Pavements									
Mobilization (Zone 1 & 2 grouped, Zone 3 & 4 grouped)	Each	\$	3,500.00		No Bid	\$	2,500.00		No Bid
0-5,000 SY									
Milling (0 to 1")	Square Yard	\$ 5.08	\$ 5.08	No Bid	No Bid	\$ 3.00	\$ 3.00	No Bid	No Bid
Milling (1" to 3")	Square Yard	\$ 5.44	\$ 5.44	No Bid	No Bid	\$ 3.00	\$ 3.00	No Bid	No Bid
Milling (3" +)	Square Yard	\$ 5.70	\$ 5.70	No Bid	No Bid	\$ 3.00	\$ 3.00	No Bid	No Bid
5,001-15,000 SY									
Milling (0 to 1")	Square Yard	\$ 3.65	\$ 3.65	No Bid	No Bid	\$ 2.00	\$ 2.00	No Bid	No Bid
Milling (1" to 3")	Square Yard	\$ 5.44	\$ 5.44	No Bid	No Bid	\$ 2.00	\$ 2.00	No Bid	No Bid
Milling (3" +)	Square Yard	\$ 5.70	\$ 5.70	No Bid	No Bid	\$ 2.00	\$ 2.00	No Bid	No Bid
15,001+ SY									
Milling (0 to 1")	Square Yard	\$ 3.05	\$ 3.05	No Bid	No Bid	\$ 2.00	\$ 2.00	No Bid	No Bid
Milling (1" to 3")	Square Yard	\$ 4.36	\$ 4.36	No Bid	No Bid	\$ 2.00	\$ 2.00	No Bid	No Bid
Milling (3" +)	Square Yard	\$ 4.56	\$ 4.56	No Bid	No Bid	\$ 2.00	\$ 2.00	No Bid	No Bid
Item: TP-710	Unit	Zone 1 & 2	Zone 3 & 4	Zone 1 & 2	Zone 3 & 4	Zone 1 & 2	Zone 3 & 4	Zone 1 & 2	Zone 3 & 4
Painted Traffic Stripe									
Painted Traffic Stripe (6" Yellow) price per Liner Foot (LF)	LF	\$ 0.40	\$ 0.40	\$ 0.50	\$ 0.50	\$ 2.00	\$ 2.00	No Bid	No Bid
Painted Traffic Stripe (6" White) price per Liner Foot (LF)	LF	\$ 0.40	\$ 0.40	\$ 0.50	\$ 0.50	\$ 2.00	\$ 2.00	No Bid	No Bid
Painted Traffic Stripe (12" White) price per Liner Foot (LF)	LF	\$ 3.50	\$ 3.50	\$ 1.25	\$ 1.25	\$ 3.00	\$ 3.00	No Bid	No Bid
Painted Traffic Stripe (18" Yellow) price per Liner Foot (LF)	LF	\$ 4.50	\$ 4.50	\$ 1.75	\$ 1.75	\$ 4.00	\$ 4.00	No Bid	No Bid
Painted Traffic Stripe (18" White) price per Liner Foot (LF)	LF	\$ 4.50	\$ 4.50	\$ 1.75	\$ 1.75	\$ 4.00	\$ 4.00	No Bid	No Bid
Painted Traffic Stripe (24" White) price per Liner Foot (LF)	LF	\$ 5.50	\$ 5.50	\$ 3.00	\$ 3.00	\$ 5.00	\$ 5.00	No Bid	No Bid
Painted Pavement Message (EA)	EA	\$ 65.00	\$ 65.00	\$ 175.00	\$ 175.00	\$ 100.00	\$ 100.00	No Bid	No Bid
Painted Arrow (EA)	EA	\$ 55.00	\$ 55.00	\$ 95.00	\$ 95.00	\$ 65.00	\$ 65.00	No Bid	No Bid
Reflective Pavement Markers (EA)	EA	\$ 5.00	\$ 5.00	\$ 4.75	\$ 4.75	\$ 10.00	\$ 10.00	No Bid	No Bid
RECOMMENDATION OF AWARD PRIMARY:	Asphalt Paving Systems, Inc.; Fahrner Asphalt Sealers, LLC; Halifax Paving, Inc.; and Pavement Technology, Inc.								
RECOMMENDATION OF AWARD SECONDARY:	Asphalt Paving Systems, Inc.; Fahrner Asphalt Sealers, LLC; and Halifax Paving, Inc.								

Contractors shall be offered work on the indicated items.