

**ST. LUCIE COUNTY  
BOARD OF COUNTY COMMISSIONERS**

**INVITATION TO BID**

**BID NO.: 25-059**

**ROADWAY SURFACING, RECONSTRUCTION, AND PRESERVATION**



**Due Date: Wednesday, July 23, 2025**

**Due Time: 3:00 P.M.**

**PURCHASING DEPARTMENT**

**2300 Virginia Avenue**

**Fort Pierce, Florida 34982-5652**

**Ph (772) 462-1700 Fax (772) 462-1704**

**BOARD OF COUNTY COMMISSIONERS  
ST. LUCIE COUNTY, FLORIDA**

**CALL FOR BIDS**

Sealed bids will be received at the Purchasing Department, 2300 Virginia Avenue, Fort Pierce, FL 34982, until **3:00 P.M.** local time on **Wednesday, July 23, 2025** for the following:

**BID No. 25-059  
ROADWAY SURFACING, RECONSTRUCTION, AND PRESERVATION  
Public Works/ Road and Bridge**

Bid documents may be obtained via download from [www.DemandStar.com](http://www.DemandStar.com) or by contacting the Office of the Purchasing Department at 2300 Virginia Avenue, Fort Pierce, Florida, 34982, (772) 462-1700.

Bids may be either mailed or hand delivered to the St. Lucie County Purchasing Department, 2300 Virginia Avenue, 2<sup>nd</sup> Floor, Room 228, Fort Pierce, FL 34982. Any bids received after the above stated time will be returned to the bidder unopened.

**A Mandatory Pre-Bid Meeting will be held Tuesday, July 8, 2025 at 10:00 A.M. in the Road & Bridge Conference Room located at 3158 Will Fee Road, Fort Pierce, Fl. Only those contractors attending the pre-bid conference will be permitted to bid this project.**

The Board of County Commissioners reserves the right to waive any informalities or minor irregularities; reject any and all bids which are incomplete, conditional, obscure, or which contain additions not allowed for; accept or reject any proposal in whole or in part with or without cause; and accept the proposal which best serves the County.

For Bids, RFP's, Addenda Information, Bid Results and other information visit the St. Lucie County Purchasing Web Site at <http://www.stlucieco.gov>

St. Lucie County is an Equal Opportunity/Affirmative Action Employer.

Board of County Commissioners  
St. Lucie County, Florida  
By: Desiree Cimino, Purchasing Manager

PUBLISH: Sunday, June 22, 2025

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## **INSTRUCTIONS TO BIDDERS**

**In order to be considered responsive, all Bids must be made in accordance with these Instructions to Bidders**

### **1.0 Documents.**

Bona fide bidders may obtain bid documents via download from <http://www.DemandStar.com> or by contacting the Office of the Purchasing Division at 2300 Virginia Avenue, Fort Pierce, Florida 34982, (772) 462-1700. No partial sets will be issued.

### **2.0 Examination of Contract Documents and Site.**

It is the responsibility of each Bidder before submitting a Bid, to:

- 2.1 Examine the Contract Documents thoroughly,
- 2.2 Visit the site to become familiar with local conditions that may affect cost, progress, or performance, of the Work,
- 2.3 Consider federal, state and local Laws and Regulations that may affect cost, progress, or performance of the Work,
- 2.4 Study and carefully correlate the Bidder's observations with the Contract Documents, and
- 2.5 Notify the County of all conflicts, errors, or discrepancies in the Contract Documents.

Information and data reflected in the Contract Documents with respect to Underground Utilities at or contiguous to the site is based upon information and data furnished to the OWNER and the Design Consultant by owners of such Underground Utilities or others, and the OWNER does not assume responsibility for the accuracy or completeness thereof unless it is expressly provided otherwise.

Before submitting a Bid, each Bidder shall, at Bidder's own expense, make or obtain any additional examination, investigations, explorations, tests, and studies and obtain any additional information and data which pertain to the physical conditions (surface, subsurface, and Underground Utilities) at or contiguous to the site or otherwise which may affect cost, progress, or performance of the Work and which the Bidder deems necessary to determine its Bid for performing the Work in accordance with the time, price, and other terms and conditions of the Contract Documents.

The Contractor shall verify and familiarize himself with the lands upon which the Work is to be performed, rights-of-way and easements for access thereto and other lands designated for use by the Contractor in performing the Work and identified in the Contract Documents. All additional lands and access thereto required for temporary construction facilities or storage of materials and equipment are to be provided by the Contractor. Easements for permanent structures or permanent changes in existing structures are to be obtained by the County unless otherwise provided in the Contract Documents.

The Contractor shall verify and become familiar with the lands upon which the Work is to be performed, rights-of-way and easements for access thereto and other lands designated for use by the Contractor in performing the Work and identified in the Contract Documents. All additional lands and access thereto required for temporary construction facilities or storage of materials and equipment are to be provided by the Contractor. Easements for permanent structures or permanent changes in existing structures are to be obtained by the Owner unless otherwise provided in the Contract Documents.

A submission of a Bid shall constitute an incontrovertible representation by the Bidder that the Bidder has complied with every requirement of Article 2, "Examination of Contract Documents and

Site,” herein, and that without exception the Bid is premised upon performing the Work required by the Contract Documents with such means, methods, techniques, sequences, or procedures of construction as may be indicated in or required by the Contract Documents, and that the Contract Documents are sufficient in scope and detail to indicate and convey understanding of all terms and conditions for performance of the Work.

### **3.0 Questions.**

Submit all questions about the Drawings and Specifications to the Purchasing Department in writing via facsimile or email (email preferred). Replies will be issued to all bidders of record as Addenda to the Drawings and Specifications and will become part of the Contract. The County will not be responsible for oral clarification. Questions received after **5:00 p.m. on July 14, 2025**, cannot be answered. All questions shall be emailed to [ciminod@stlucieco.org](mailto:ciminod@stlucieco.org) to the attention of Desiree Cimino.

### **4.0 Substitutions.**

To obtain approval to use unspecified products, bidders shall submit written requests at least ten (10) days before the bid date and hour. Requests received after this time will not be considered. Requests shall clearly describe the product for which approval is asked, including all data necessary to demonstrate acceptability. If the product is acceptable, the Engineer will approve it in an Addendum issued to all prime bidders to whom Drawings and Specifications have been issued.

### **5.0 Addenda.**

Any Addenda prepared and issued by the County prior to opening of bids for the purpose of changing the intent of the plans and specifications or clarifying the meaning of same shall be binding in the same way as if written in the specifications. Any Addenda issued prior to the execution of the Contract, shall be binding upon the Contractor after the execution of the agreement.

### **6.0 Basis of Bid.**

No segregated bids or assignments will be considered. The bid shall be submitted on unit price and/or lump sum basis as indicated on the bid form. Where items of work are to be paid for on a unit price basis, estimated quantities are shown for the purpose of estimating total cost. Final payment quantities for unit price shall be those quantities actually constructed within limits of plan quantities and modifications thereof approved in writing in accordance with the General Conditions, Section 00700.

### **7.0 Preparation of Bids.**

Bids shall be made on unaltered Bid forms included herewith under Section 00300-Bid Form. Fill in all blank spaces and submit one (1) original. Bids shall be signed with name and typed signature below. Where bidder is a corporation, bids must be signed with the legal name of the corporation followed by the name of the state of incorporation and the legal signatures of the officers authorized to bind the corporation to a Contract. Bids submitted after the time and date specified shall not be considered and shall be returned unopened.

### **8.0 Bid Security. - NOT REQUIRED**

Bid security shall be made payable to the Board of County Commissioners, St. Lucie County, Florida, in the amount of 5% of the total contract amount. Security shall be either certified check, cashier's check, or bid bond issued by a surety licensed to conduct business in the State of Florida. Surety shall have a rating of A+ or A by "Best's Rating Guide." The accepted bidder's security will be retained until the agreement is executed and the required payment and performance bonds are

furnished. The Owner reserves the right to retain the security of any or all of the remaining bidders until the date stated on the bid form. If any accepted bidder refuses to enter into a contract, the Owner shall retain the difference between the amount specified in said Bid and such larger amount for which the Owner may in good faith contract with another party to perform the work covered by said Bid, not to exceed the amount of the Bid Security. Such Security shall be retained as liquidated damages but not as a penalty. The Bid Security shall be enclosed with the Sealed Bid.

#### **9.0 Public Construction Bond for Payment and Performance.**

The accepted Bidder shall furnish the Owner a Public Construction Bond in the amount of 100% of the total contract amount from a surety licensed to conduct business in the State of Florida. The Surety shall have an A+ or A rating under "Best's Rating Guide." The bond shall be submitted on the form furnished herewith under Section 00610. The Public Construction Bond shall guarantee that the Contract will be faithfully performed; that the Contractor will save the Owner harmless on account of all claims for damaged persons, property or premises arising out of his operation prior to the acceptance of the finished work; and that he will promptly make payment to all persons supplying him labor, materials, supplies and services used directly or indirectly by the Contractor in the prosecution of the work provided for in the Contract. The Public Construction Bond shall continue in effect for one (1) year after completion and acceptance of the work as guarantee against construction defects.

In the event the Surety Company becomes unsatisfactory to the Owner, the Owner may at its discretion, require the Contractor to issue a new bond in the same or lesser penal sum satisfactory to him, to be conditioned as above required. Upon the Contractor's failure to furnish such additional or new bond within ten (10) days from the date of written notice to do so, all payment under this Contract will be withheld until such additional bond is furnished. The cost of the bond shall be included by the Contractor in his bid.

#### **10.0 Submittal.**

Submit your bid in an opaque, sealed envelope. Identify the envelope with: (1) Project Name, (2) Name of Bidder, (3) Bid Number. Submit bid in accordance with the Invitation to Bid. All forms required for responsive bid shall be included, i.e. Bid, Bond, Public Entity Crimes Statement, Questionnaire, etc. It is the responsibility of the Bidder to ensure that the Bid is received in proper time. All Bids shall remain subject to acceptance for ninety (90) calendar days after the day of the Bid opening, but the County may, at the sole discretion of the County, release any Bid and return the Bid Security prior to that date.

#### **11.0 Withdrawal of Bid.**

The Bid may be withdrawn by the Bidder by means of a written request, signed by the Bidder or its duly authorized representative. Such written request must be delivered to the place stipulated in the Invitation to Bid for receipt of Bids prior to the Scheduled closing time for receipt of Bids.

#### **12.0 Bidder's Qualifications Questionnaire.**

All bidders shall fill out the enclosed Bidder's Qualifications Questionnaire and enclose it with the Bid.

#### **13.0 Disqualification.**

More than one Bid from an individual, firm, partnership, corporation, or association under the same or different names will not be considered. If the County believes that any Bidder is interested in more than one Bid for the work contemplated, all Bids in which such Bidder is interested shall be rejected. If the County believes that collusion exists among Bidders, all Bids shall be rejected.

#### **14.0 Governing Laws and Regulations.**

The Bidder shall be familiar with all Federal, State, and Local laws, ordinances, rules and regulations that in any manner affect the work. Ignorance on the part of the Bidder will in no way relieve him from responsibility from compliance with such laws and regulations.

#### **15.0 Trench Safety Act.**

The Contractor shall comply with the provisions of Chapter 90-96 of Laws of Florida (Trench Safety Act) and execute the included Trench Safety Act Compliance Statement.

#### **16.0 Patent Fees and Royalties.**

If the Contractor requires or desires to use any design, trademark, device, material or process covered by letter of patent or copyright, the Contractor and his surety shall indemnify and save harmless the County from any and all claims for infringement by reason of the use of any such patented design, device, trademark, copyright, material or process in connection with the work agreed to be performed under the contract and shall indemnify the County from any cost, expense, or damage which he may be obligated to pay reason of any infringement at any time during the prosecution of or after completion of the work.

#### **17.0 Licenses and Permits.**

The Contractor shall secure and pay for all construction related licenses, permits, and inspection fees required to perform the work. Dump fees will not be waived for County projects except for clean excavated fill as set forth in Paragraph 23.0, Delivery of Clean Excavated Fill. These costs are to be included in the unit prices for other pay items listed.

#### **18.0 Award.**

The award of the Contract, if it is awarded, shall be to the lowest responsive and responsible bidder whose qualifications indicate the award will be in the best interest of the County and whose bid complies with all prescribed requirements. The Contract shall not be awarded until the County has concluded such investigations as it deems necessary to establish the responsibility, qualifications, and financial ability of the Bidder to do the work in accordance with the Contract Documents to the satisfaction of the County within the time prescribed. The County reserves the right to reject the Bid of any Bidder who does not pass such investigation to the County's satisfaction. If the Contract is awarded, the County will give the accepted Bidder a Notice of Anticipated Award within the time Bids are to be held open as stated in the Bid form.

#### **19.0 Opening.**

Bids will be opened as announced in the Invitation to Bid.

#### **20.0 Execution of Contract.**

The Contract between Contractor and County shall utilize the form furnished herewith. The accepted Bidder shall assist and cooperate with the County in preparing the Contract, and within fifteen (15) calendar days following its presentation shall execute same and return it to the County along with the Public Construction Bond for payment and performance, Insurance Certificates, and any other documentation that may be required by the Contract Documents to be submitted at that time. The resulting Contract will include the terms included in Exhibit B and attached to this ITB.

## **21.0 Definitions.**

Whenever in these Specifications, the terms defined in Article I of the General Conditions are used (or pronouns used in place of them), their intent and meaning shall be interpreted as indicated in the General Conditions.

## **22.0 Certification of Competency.**

All Bidders shall provide proof that they are State Certified or State Registered, and a State Registered License shall be based on the possession of a St. Lucie County Certificate of Competency. Specialty contractors shall be required to provide proof of having obtained a St. Lucie County Certificate of Competency. **Possession of either a State Certification or County Competency card must be attained prior to bid submittal.** It is the responsibility of the bidder to confirm that they have all the proper licenses to perform the work. If the bidder has any uncertainty, they should submit the license to the Contractor Licensing Division of St. Lucie County, telephone 772-462-1672. Failure to comply with this condition shall result in rejection of the Bid.

## **23.0 Delivery of Clean Excavated Fill.**

The successful bidder will not be required to deliver all clean excavated fill removed during the Work and not required by the Work, to the St. Lucie County Landfill. The clean fill shall not contain any construction debris or vegetative growth. There will be no disposal fee for such clean fill. The Contractor shall, however, be responsible for the cost of transportation of the fill and should include this cost in any bid.

## **24.0 Quantities of Work.**

The County does not guarantee the amount of work or material that will be utilized during the contract term.

## **25.0 Contractor's Own Forces.**

No more than seventy-five percent (75%) of the dollar value of the total contract may be accomplished by Subcontractors. Balance of work must be accomplished by SUCCESSFUL BIDDER'S own forces. Each BIDDER must furnish with its Bid Form, a list of the items it proposes to subcontract and the estimated cost of these items.

## **26.0 Equal Opportunity.**

The County recognizes fair and open competition as a basic tenet of public procurement and encourages participation by minority and women business enterprises. The County requests minority and women business enterprises to submit evidence of such classification with their submittals.

## **27.0 Bonding and Insurance Requirements.**

### **INSURANCE REQUIREMENTS:**

The Contractor shall, at its own expense, procure and maintain throughout the term of this Agreement, and such insurance requirements shall provide coverage for the Contractor, its subcontractors, representatives, and anyone directly or indirectly employed by any of them, or by anyone for whose acts any of them may be liable, with insurers lawfully authorized to do business in Florida (which company or companies shall, at a minimum, have a rating of not less than "A-" as to management and "VIII" as to strength in the latest edition of Best's Insurance Guide), such insurance as will protect the Contractor from claims set forth below which may arise out of or result from the Contractor's operations under the Construction Agreement and for which the Contractor

may be legally liable, whether such operations be by the Contractor or by a Subcontractor or by anyone directly or indirectly employed by any of them, or by anyone for whose acts any of them may be liable. **The Contractor's types and amounts of insurance shall conform to the following minimum requirements:**

**Workers' Compensation/Employers' Liability** - Such insurance shall be no more restrictive than that provided by the Florida Workers Compensation Act. In addition to coverage for the Florida Workers' Compensation Act, where appropriate, coverage is to be included for the Federal Employer's Liability Act and any other applicable federal or state law. The Workers' Compensation policy must be endorsed to waive the insurer's right to subrogate against the County, and its members, officials, officers and employees.

The minimum limits (**inclusive of any amount provided by an umbrella or excess policy**) shall be:

Part One: "Statutory"  
Part Two: \$500,000 (Each Accident)  
\$500,000 (Disease-Each Employee)  
\$500,000 (Disease-Policy Limit)

**Commercial General Liability** - The limits are to be applicable only to work performed under the Contract and shall be those that would be provided with the attachment of the Amendment of Limits of Insurance (Designated Project or Premises) endorsement (ISO Form CG 25 01) to a Commercial General Liability policy. The County and the County's board members, officials, officers and employees shall be included as "Additional Insureds" on a form no more restrictive than ISO Form CG 20 10 (Additional Insured - Owners, Lessees, or Contractors).

The minimum limits (**inclusive of any amount provided by an umbrella or excess policy**) shall be:

Each Occurrence	\$1,000,000
Per Project Aggregate	\$2,000,000
General Aggregate	\$2,000,000
Products/Completed Operations Aggregate	\$2,000,000

Firm shall continue to maintain products/completed operations coverage in the amounts stated above through the entire period of repose under Chapter 95, Florida Statutes. The insurance shall be on a form no more restrictive than, and shall cover those sources of liability which would be covered by Coverage A of, the latest occurrence form edition of the Commercial General Liability Coverage Form (ISO Form CG 00 01), or of the occurrence Products/Completed Operations Liability Coverage Form (ISO Form CG 00 37), as filed for use in the State of Florida by ISO, without restrictive endorsements other than mandatory endorsements under an ISO filing.

**Automobile Liability** - Such insurance shall cover all owned, non-owned, and hired autos used in connection with the performance of the work and shall not be subject to any aggregate limit.

The minimum limits (inclusive of any amount provided by an umbrella or excess policy) shall be:

Each Occurrence Bodily Injury and Property Damage Liability Combined	\$1,000,000
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**Miscellaneous Provisions** - The insurance provided by Firm shall apply on a primary and non-contributory basis to any insurance or self-insurance maintained by the County. Any insurance, or self-insurance, maintained by the County shall be excess of the insurance provided by Firm.

The insurance maintained by Firm shall apply on a first dollar basis without application of a deductible or self-insured retention. Any deductible or self-insurance retention must be indicated on the Certificate of Insurance. Under limited circumstances and only with prior written approval,

the County may permit the application of a deductible or permit Firm to self-insure, in whole or in part, one or more of the insurance coverages required by this Agreement. In such instances, Firm shall pay on behalf of the County or the County's board members, officials, officers and employees any deductible or self-insured retention applicable to a claim.

Compliance with these insurance requirements shall not limit the liability of Firm or the remedies available to the County under the Construction Agreement or otherwise. If Firm obtains insurance with higher limits than the requirements herein, those higher limits shall apply.

**Evidence of Insurance Required Prior to Contract Execution** – Evidence of insurance shall be provided to the County prior to contract execution. Firm shall not commence any construction work until all insurance set forth above is in force and evidence of insurance acceptable to the County has been provided and approved by the County. **An appropriate Certificate of Insurance (identifying the Project) signed by an authorized representative of the insurer(s), with copies of the actual additional insured endorsement and notice of cancellation endorsement as issued on the policies, shall be satisfactory evidence of insurance.** With respect to Property Insurance, Firm shall provide a Certificate of Property Insurance form or other evidence satisfactory to the County. For the purposes of the Bid, if the Firm does not carry the required insurance, a letter from its insurance agent attesting that the Firm, if awarded the Project, can obtain such insurance, is required.

Until such insurance is no longer required by the Construction Agreement, Firm shall provide the County with renewal or replacement evidence of insurance at least thirty (30) days prior to the expiration or termination of such insurance. Firm shall, within thirty (30) days of a written request from the County, provide the County with a certified copy of the policy or policies providing the coverage required herein. Firm or its agent may redact or omit provisions of the policy that are not relevant to the insurance required herein.

Failure to establish and maintain the required insurance shall result in the termination of the Construction Agreement for cause.

Policies shall be endorsed to provide the County with 30 days' notice of cancellation.

Certificates of Insurance must be completed as follows:

Additional Insured:

St. Lucie County, its officers, agents and employees, and reference this specific Project.

Certificate Holder

St. Lucie County Board of County Commissioners

2300 Virginia Avenue

Fort Pierce FL 34982

Remainder of this page intentionally left blank.

**SECTION 00110 – BIDDER’S CHECKLIST (BID COVER PAGE)**

**THIS SHOULD BE THE FIRST PAGE OF YOUR BID**

**BIDS SHALL BE REJECTED AS NON-RESPONSIVE** if the following documents and/or attachments are not completely filled out and submitted with your bid.

**BID NO.**     25-059

**BID NAME: Roadway Surfacing, Reconstruction, and Preservation**

\_\_\_     **Bid Form** and Bidders’ Qualification Questionnaire

\_\_\_     Two (2) copies of either a State Certification or County Competency Card.

**BIDS MAY NOT BE CONSIDERED** and may be rejected as non-responsive if the following documents and/or attachments are not completely filled out and submitted with your bid.

**Before sending in your bid, please make sure you have completed all of the following:**

\_\_\_     Please complete in their entirety: Sections; 00110 (Bidder’s Checklist); 00200 (Bid Form and Bidder’s Qualification Questionnaire); 00454 (Confirmation of Drug Free Workplace); and 00455 (Non-Collusion Affidavit); and 00480 (Trench Safety Act Compliance Statement).

\_\_\_     Bid Form (Section 00200) must be complete and have an original signature (preferably signed in blue ink).

\_\_\_     Every page that has anything handwritten on it must be imprinted with the company’s name on the top right-hand corner of the page.

\_\_\_     Acknowledge in the bid any and all addendums issued and manually sign each addendum sheet and submit it with your bid.

\_\_\_     Erasures, as well as descriptive literature, brochures and/or data must be initialed by the person signing the bid.

\_\_\_     Enclose **One** (Original) Bid Package, and **One** (1) copy of the bid package, as well as two (2) sets of any descriptive literature, brochures and/or supporting data. Bidders are advised to make and retain a separate copy of this bid package for your files.

\_\_\_     Return bid in an opaque, sealed envelope Identify the envelope with: (1) Project Name, (2) Name of Bidder, (3) Bid Number. Submit bid in accordance with the Invitation to Bid. All forms required for responsive bid shall be included, i.e. Bid, Bond, Public Entity Crimes Statement, Questionnaire, etc. If using Fed-Ex or UPS, please keep bid in a separate sealed envelope when placing it in their packaging.

\_\_\_     If you desire a copy of the bid tabulation, include a **self-addressed, stamped envelope** for bid tabulation to be mailed back to you

\_\_\_     **PLEASE INITIAL AND RETURN WITH BID FORM**

**BID No. 25-059**  
**Roadway Surfacing, Reconstruction, and Preservation**

**1.0 SCOPE**

The Specifications consist of preparation and surfacing various County roads and final cleanup, associated appurtenances, and other related work.

The County will offer a two (2) year contract with three (3) one-year renewal options.

**PRICING**

The successful bidder shall furnish and apply product at the unit price indicated on the bid unit price form for the applicable distance to any location within St. Lucie County.

**PLANS**

There are no separate plans for this project. Sketches may accompany each individual project that may result from this bid.

**2.0 BID UNIT PRICE SCHEDULE**

All items in Group A must be bid in order to be considered responsive. Group B and Group C may be awarded to one or more contractors based on the best interest of the County.

The Contractor shall furnish all labor, superintendence, materials, plant, power, light, fuel, water, tools, appurtenances, equipment, supplies, and all other means of construction of properly performing the work.

Contractor shall complete all work as specified or indicated in the Contract Documents. The work is generally described as follows which shall include, but is not necessarily limited to the following:

<b>Group A - General (Required)</b>			
Item	Description	Unit	Unit Price
<b>Mobilization</b>			
101-1A	Work Order Total \$0.00 - \$50,000	LS	
101-1B	Work Order Total \$50,001 - \$100,000	LS	
101-1C	Work Order Total \$100,001 - \$500,000	LS	
101-1D	Work Order Total Over \$500,000	LS	
<b>Maintenance of Traffic</b>			
102-1A	Standard FDOT 600 Series MOT for Lane Closure	DA	
<b>Miscellaneous</b>			
104-13-1	Silt Fence Type III	LF	
110-7-1A	Mailbox (Remove and Replace)	EA	
339-1	Miscellaneous Asphalt	TN	
570-1	Performance Turf	SY	
577-70A	Shoulder Rework	SY	
918-331	Bituminous Patching Material	CF	
<b>ADA Standards</b>			
520-1-11	Concrete Curb & Gutter, Variable Height, Type F	LF	
522-2	Concrete Sidewalk & Driveways, 6"	SY	
527-2	Detectable Warnings	SF	

<b>Painted Pavement Markings</b>			
Item	Description	Unit	Unit Price
710-11-121	Standard, White, Solid 6"	LF	
710-11-122	Standard, White, Solid 8"	LF	
710-11-123	Standard, White, Solid 12"	LF	
710-11-124	Standard, White, Solid 18"	LF	
710-11-125	Standard, White, Solid 24"	LF	
710-11-131	Standard, White Skip 6"	LF	
710-11-141	Standard, White, Dotted/Guideline 6-10 Gap, 6"	LF	
710-11-16	Standard, White, Message	EA	
710-11-17	Standard, White, Arrows	EA	
710-11-18	Standard, White, Yield Line	LF	
710-11-221	Standard, Yellow, Solid 6"	LF	
710-11-222	Standard, Yellow, Solid 8"	LF	
710-11-223	Standard, Yellow, Solid 12"	LF	
710-11-224	Standard, Yellow, Solid 18"	LF	
710-11-225	Standard, Yellow, Solid 24"	LF	
710-11-231	Standard, Yellow, Skip 6"	LF	
710-11-241	Standard, Yellow, Dotted/Guideline 6-10 Gap, 6"	LF	

<b>Group B – Resurfacing/ Reconstruction</b>			
Item	Description	Unit	Unit Price
<b>Milling 0 to 2,500 Square Yards</b>			
327-70-1A	1" Average Depth	SY	
327-70-5A	2" Average Depth	SY	
327-70-4A	Variable Depths over 2"	SY	
<b>Milling 2,501 to 10,000 Square Yards</b>			
327-70-1B	1" Average Depth	SY	
327-70-5B	2" Average Depth	SY	
327-70-4B	Variable Depths over 2"	SY	
<b>Milling 10,001 to 20,000 Square Yards</b>			
327-70-1C	1" Average Depth	SY	
327-70-5C	2" Average Depth	SY	
327-70-4C	Variable Depths over 2"	SY	
<b>Milling over 20,001 Square Yards</b>			
327-70-1D	1" Average Depth	SY	
327-70-5D	2" Average Depth	SY	
327-70-4D	Variable Depths over 2"	SY	
<b>Asphalt Types from 0 to 2,500 Square Yards</b>			
334-1-131A	Superpave Asphaltic Concrete (Traffic C, SP 9.5), 1"	SY	
334-1-133A	Superpave Asphaltic Concrete (Traffic C, SP 9.5), 2"	SY	
334-1-134A	Superpave Asphaltic Concrete (Traffic C, SP 12.5), 2"	SY	
<b>Asphalt Types from 2,501 to 10,000 Square Yards</b>			
334-1-131B	Superpave Asphaltic Concrete (Traffic C, SP 9.5), 1"	SY	
334-1-133B	Superpave Asphaltic Concrete (Traffic C, SP 9.5), 2"	SY	
334-1-134B	Superpave Asphaltic Concrete (Traffic C, SP 12.5), 2"	SY	

<b>Asphalt Types from 10,001 to 20,000 Square Yards</b>			
334-1-131C	Superpave Asphaltic Concrete (Traffic C, SP 9.5), 1"	SY	
334-1-133C	Superpave Asphaltic Concrete (Traffic C, SP 9.5), 2"	SY	
334-1-134C	Superpave Asphaltic Concrete (Traffic C, SP 12.5), 2"	SY	
<b>Asphalt Types over 20,001 Square Yards</b>			
334-1-131D	Superpave Asphaltic Concrete (Traffic C, SP 9.5), 1"	SY	
334-1-133D	Superpave Asphaltic Concrete (Traffic C, SP 9.5), 2"	SY	
334-1-134D	Superpave Asphaltic Concrete (Traffic C, SP 12.5), 2"	SY	
<b>Full Depth Reclamation (FDR and Cold-in-Place (CIP) Recycling</b>			
120-1A	Excavation for Widening or Unsuitable Material	CY	
332-3	Cement - Cement Treatment	TN	
332-4	Asphaltic Emulsion - Emulsion Treated Base	GAL	
<b>Full Depth Reclamation (FDR) and Cold-in-Place (CIP) Recycling from 0 to 2,500 Square Yards</b>			
332-1A	Pulverization (FDR)	SY	
332-2A	Recycling Bituminous Paving (CIP)	SY	
<b>Full Depth Reclamation (FDR) and Cold-in-Place (CIP) Recycling from 2,501 to 10,000 Square Yards</b>			
332-1B	Pulverization (FDR)	SY	
332-2B	Recycling Bituminous Paving (CIP)	SY	
<b>Full Depth Reclamation (FDR) and Cold-in-Place (CIP) Recycling 10,001 to 25,000 Square Yards</b>			
332-1C	Pulverization (FDR)	SY	
332-2C	Recycling Bituminous Paving (CIP)	SY	
<b>Full Depth Reclamation (FDR) and Cold-in-Place (CIP) Recycling over 25,001 Square Yards</b>			
332-1D	Pulverization (FDR)	SY	
332-2D	Recycling Bituminous Paving (CIP)	SY	
<b>SAFETY EDGE</b>			
<b>Asphalt Types From 0-2,500 Square Yards</b>			
334-1-13E	Install Safety Edge (Traffic C, SP 9.5) 1"	SY	
334-1-13E	Install Safety Edge (Traffic C, SP 9.5) 2"	SY	
334-1-13E	Install Safety Edge (Traffic C, SP 12.5) 2"	SY	
<b>Asphalt Types From 2,501-10,000 Square Yards</b>			
334-1-13F	Install Safety Edge (Traffic C, SP 9.5) 1"	SY	
334-1-13F	Install Safety Edge (Traffic C, SP 9.5) 2"	SY	
334-1-13F	Install Safety Edge (Traffic C, SP 12.5) 2"	SY	
<b>Asphalt Types From 10,001-20,000 Square Yards</b>			
334-1-13G	Install Safety Edge (Traffic C, SP 9.5) 1"	SY	
334-1-13G	Install Safety Edge (Traffic C, SP 9.5) 2"	SY	
334-1-13G	Install Safety Edge (Traffic C, SP 12.5) 2"	SY	
<b>Asphalt Types over 20,001 Square Yards</b>			
334-1-13H	Install Safety Edge (Traffic C, SP 9.5) 1"	SY	
334-1-13H	Install Safety Edge (Traffic C, SP 9.5) 2"	SY	
334-1-13H	Install Safety Edge (Traffic C, SP 12.5) 2"	SY	

<b>Group C - Preservation/ Restoration</b>			
Item	Description	Unit	Unit Price
<b>Pavement Preservation</b>			
335-3A	Reclamite or Equivalent Pavement Rejuvenation	SY	
335-4A	Fog Seal	SY	
335-5A	Cape Seal	SY	
350-99A	Crack Sealing	GAL	
<b>Micro-Surfacing</b>			
335-1A	Single Application 0 to 15,000 Square Yards	SY	
335-1B	Single Application over 15,001 Square Yards	SY	
335-1C	Double Application 0 to 15,000 Square Yards	SY	
Item	Description	Unit	Unit Price
335-1D	Double Application over 15,001 Square Yards	SY	
335-1E	Rut Filling	TN	
<b>Chip Seal</b>			
335-2A	Single Application 0 to 15,000 Square Yards	SY	
335-2B	Single Application over 15,001 Square Yards	SY	
335-2C	Double Application 0 to 15,000 Square Yards	SY	
335-2D	Double Application over 15,001 Square Yards	SY	
335-2E	Variable Depths over 2" 0 to 15,000 Square Yards	SY	
335-2F	Variable Depths over 2" over 15,001 Square Yards	SY	

**BID UNIT PRICE SCHEDULE**

All bid items shall include all costs for furnishing to the owner all materials, equipment and supplies, permits and for all costs incurred in providing all work shown on the **Roadway Surfacing, Reconstruction, and Preservation** project outlined in the contract specifications for the construction.

NOTE: This bid is on a unit price basis. The total estimated amount is for bid comparison purposes only. The contractor should field verify the actual site conditions prior to time of bidding and before submitting the bid proposal. The contractor should read the special conditions and the requirements for insurance before submitting a bid proposal. The contractor should verify the quantities to be included in the construction contract. Density testing shall be at the expense of St. Lucie County, except for failing tests, which shall be charged to the contractor.

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

Bidder (Company Name): \_\_\_\_\_

**By (Signature):** \_\_\_\_\_

By (Printed Name & Title): \_\_\_\_\_

Business Address \_\_\_\_\_

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

Business Phone Number \_\_\_\_\_

E-Mail Address \_\_\_\_\_

### 3.0 SPECIFICATIONS

#### BID ITEMS:

The governing specifications for this project are the most current revision of the State of Florida Department of Transportation Standard Specifications for Road and Bridge Construction, the FDOT Roadway and Traffic Design Standards, and the 2010 ADA (Americans with Disabilities Act) Standards for Accessible Design.

The following information is in addition to the specifications previously referenced.

#### **101-1D Mobilization/Demobilization**

The work specified in this section consists of the 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 establishment of temporary offices, buildings, safety equipment and first aid supplies, sanitary and other facilities, as required by these Specifications, the special provisions, and State and local laws and regulations. The CONTRACTOR will be responsible for providing the OWNER with a detailed and narrated preconstruction video (with an index identifying stationing) of the site prior to the start of construction. All costs for bonds, permits and any required insurance, and any other pre-construction expense necessary for the start of the work, as well the cost of the removal of the above items, shall be also be included in this Section. This item also includes any costs related to obtaining an NPDES permit if necessary.

At the pre-construction meeting, the CONTRACTOR shall submit a tentative work schedule as well as a list of subcontractors and emergency contact people and phone numbers.

**The project superintendent shall provide the ENGINEER with a cellular phone number for 24-hour access at the preconstruction meeting. It will be incumbent upon the CONTRACTOR to answer all calls, or respond to any missed call within thirty (30) minutes.**

The basis of payment for **Mobilization/Demobilization** shall be paid as per LUMP SUM in accordance with the following schedule:

- 101-1A Work Order Total \$0 - \$50,000
- 101-1B Work Order Total \$50,001 - \$100,000
- 101-1C Work Order Total \$100,001 - \$500,000
- 101-1D Work Order Total Over \$500,000

#### **102-1A Maintenance of Traffic (MOT)**

The bid price for this item shall include, but not be limited to, the requirements of Section 102 Maintenance of Traffic of the FDOT Standard Specifications (Latest Edition). The maintenance of traffic for this project shall be in accordance with the applicable FDOT index numbers (600 Series) and these documents: The Manual on Uniform Traffic Control Devices for Streets and Highways, U.S. Department of Transportation, and FHWA. These documents shall be followed in the design, application, installation, maintenance and removal. It shall include, but not be limited to all traffic control devices, warning devices, barriers, temporary reflective markers, temporary pavement markings, dust control, and all other items necessary to protect the public and workers from hazards within the project limits. Maintenance of Traffic items needed in addition to lane closures will be a pass-through charge and not subject to markup by the contractor.

At the Pre-Construction Meeting, the CONTRACTOR shall submit a detailed Maintenance of Traffic plan depicting the necessary traffic control devices for the specified detour route. This plan shall include the approval of any state or city agency owning or maintaining the roads to be utilized as a detour route. The CONTRACTOR shall provide access to driveways at all times.

- Any road closure requests must be APPROVED by the St. Lucie County Engineer a minimum of 2 weeks prior to implementation.
- The CONTRACTOR shall provide access to driveways at all times.
- The CONTRACTOR shall allow access for trash and postal services.
- The CONTRACTOR shall allow access for all emergency vehicles and school buses.

The basis of payment for **Maintenance of Traffic** shall be paid as per DAY.

**110-7-1A Mailbox:**

When removal and reinstallation of mailboxes is required to facilitate the work, permit each owner to remove the existing mailbox. Reinstall the mailboxes in accordance with the Standard Plans. The quantity to be paid for will be the number of mailboxes acceptably removed and reinstalled.

The basis of payment for **Mailboxes** shall be paid as per EACH.

**120-1 Excavation for Widening or Unsuitable Material:**

Excavate and construct embankments as required for the roadway, ditches, channel changes and borrow material. Use suitable excavated material or authorized borrow to prepare subgrades and foundations. Construct embankments in accordance with Standard Plans, Index 120-001. Compact and dress excavated areas and embankments.

Meet the requirements of Section 110 for excavation of material for clearing and grubbing and Section 125 for excavation and backfilling of structures and pipe.

The basis of payment for **Excavation for Widening or Unsuitable Materials** shall be paid as per CUBIC YARD.

**327-70-1A-D Milling of Existing Asphalt Pavement, 1" Average Depth:**

Remove existing asphalt concrete pavement by milling to improve the rideability and cross slope of the finished pavement, to lower the finished grade adjacent to existing curb before resurfacing, or to completely remove existing pavement.

Milled material will be delivered to St. Lucie County Road & Bridge Division. St. Lucie County Road & Bridge Division will specify a location for the contractor to deliver milled material.

The basis of payment for **Milling Existing Asphalt Pavement, 1" Average Depth** shall be paid as per SQUARE YARD.

- 327-70-1A Milling 0 to 2,500 Square Yards
- 327-70-1B Milling 2,501 to 10,000 Square Yards
- 327-70-1C Milling 10,001 to 20,000 Square Yards
- 327-70-1D Milling over 20,001 Square Yards

**327-70-4A-D Milling of Existing Asphalt Pavement, Variable Depths over 2”:**

Remove existing asphalt concrete pavement by milling to improve the rideability and cross slope of the finished pavement, to lower the finished grade adjacent to existing curb before resurfacing, or to completely remove existing pavement.

Milled material is to be delivered to St. Lucie County Road & Bridge Division.

The basis of payment for **Milling Existing Asphalt Pavement, Variable Depths over 2”** shall be paid as per SQUARE YARD.

- 327-70-4A Milling 0 to 2,500 Square Yards
- 327-70-4B Milling 2,501 to 10,000 Square Yards
- 327-70-4C Milling 10,001 to 20,000 Square Yards
- 327-70-4D Milling over 20,001 Square Yards

**327-70-5A-D Milling of Existing Asphalt Pavement, 2” Average Depth:**

Remove existing asphalt concrete pavement by milling to improve the rideability and cross slope of the finished pavement, to lower the finished grade adjacent to existing curb before resurfacing, or to completely remove existing pavement.

Milled material is to be delivered to St. Lucie County Road & Bridge Division.

The basis of payment for **Milling Existing Asphalt Pavement, 2” Average Depth** shall be paid as per SQUARE YARD.

- 327-70-2A Milling 0 to 2,500 Square Yards
- 327-70-2B Milling 2,501 to 10,000 Square Yards
- 327-70-2C Milling 10,001 to 20,000 Square Yards
- 327-70-2D Milling over 20,001 Square Yards

**332 Full Depth Reclamation**

**332-1 Description.**

This work in this Section consists of the preparation of a base course constructed by in-place pulverizing and blending of the existing bituminous pavement and a predetermined portion of the underlying materials, and the introduction of asphalt emulsion, cement, and other additives. Pulverize existing asphalt pavement and underlying base material by a method that does not damage the material below the design depth as shown in the Plans.

Refer to the Plans for site specific restrictions.

**332-2 Materials.**

**332-2.1 Base Material:** If field conditions necessitate the use of additional base material, use a base material meeting the requirements of Section 285.

**332-2.2 Asphalt Emulsion:** Use CSS-1h meeting the requirements of Section 916, AASHTO M 208, and approved by the State Materials Office (SMO) prior to use.

Use prime and tack coats meeting the requirements of Section 300.

**332-2.3 Portland Cement:** Add Type I or II Portland cement meeting the requirements of Section 921, in either a dry or slurry form, to the reclaimed mixture. Slurry made from Portland cement must contain a minimum of 30% dry solids content.

**332-2.4 Water:** Use water meeting the requirements of Section 923 for the base course compaction.

**332-2.5 Documents:** Submit copies of all material delivery tickets to the Engineer upon delivery to the project site.

**332-3 Qualifications.**

The Contractor performing the work must submit a list of at least three projects, successfully completed within the last three years, where work included a minimum of 7,000 square yards of full depth reclamation using emulsion and cement blend stabilization. For each project listed, provide the project location, the project owner’s name and the name, title, and current phone number of a project owner representative. Include documentation that verifies that the Specification criteria for each project was met.

**332-4 Mix Design.**

Prior to construction, obtain an adequate number of core samples from each type of material to develop the mix designs. Representative samples of the asphalt pavement material, underlying base material, and virgin materials, where applicable, must be supplied to a nationally accredited laboratory for testing to determine the proportions of asphalt emulsion, cement, and other additives, if necessary, needed to produce a mix design meeting the requirements of Table 332-1. Use cement at a minimum dosage rate of 1.0 percent and a maximum dosage rate of 1.5 percent based upon the maximum unit weight determined by the bulk specific gravity of Marshall specimens or the modified Proctor unit weight of the reclaimed material. Cement amounts greater than 1.5 percent will only be allowed if approved by the Engineer. The ratio of residual emulsified asphalt to cement shall be a minimum of 1.5:1.0. The optimum binder content will be the binder content that results in the highest wet Marshall stability while also having 70% retained Marshall stability compared to the dry Marshall stability and additionally the dry Marshall stability shall be a minimum of 3,500 pounds and not to exceed 6,000 pounds. The mix design must be signed and sealed by a Professional Engineer, registered in the State of Florida and submitted to the Engineer prior to use for approval.

Table 332-1 Mix Design Criteria		
Test	Test Method Number	Criteria
Gradation of reclaimed material	AASHTO T 27 and FM 1-T 011	Report
Determination of optimum binder content		
Compaction effort at optimum fluids content. Marshall Compactor; 50 blows/side or Superpave Gyratory Compactor, 100 mm diameter specimens, 30 gyrations. Density determination.	Asphalt Institute MS14, Appendix F ASTM D6926 AASHTO T 312 FM 1-T 166	Report
Marshall stability Cure at 60°C to constant weight. Test at 40°C at 48 +/-8 hours.	ASTM D6927	3,500 lb minimum stability; not to exceed 6,000 lb
Resistance of compacted bituminous mixture to moisture induced damage. 55 to 75% vacuum saturation, water bath at 25°C for 23 hours, last hour in water bath at 40°C.	AASHTO T 283 with modification of Marshall stability instead of tensile strength	70% minimum retained Marshall stability

Compressive Strength of Molded Soil-Cement Cylinders	ASTM D1633, FM 5-520	Minimum compressive strength multiplied by 0.85 $\geq$ 90 psi; 7- day maximum compressive strength $\leq$ 300 psi
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**332-5 Equipment.**

**332-5.1 Road Reclaimer:** Use a road reclaimer specifically designed for pavement reclaiming and capable of pulverizing and mixing pavement, base materials, and subgrade soil to a depth of 16 inches. It must have the capability of introducing and metering additives uniformly and accurately and have positive displacement pumps which can accurately meter the planned amount of asphalt emulsion into the mixture. The reclaiming machine must be capable of mixing the emulsified asphalt additive thoroughly with the RAP and soil materials. The pump must be interlocked with the ground speed of the machine. The asphalt metering system and water metering system must be capable of continuously monitoring flow and totaling the quantity of water and asphalt applied into the mixing chamber.

Additives, if specified, must be uniformly distributed and mixed with the pulverized material and any existing underlying material.

**332-5.2 Cement Spreader:** Uniformly spread the cement using a cement spreader equipped with a bag house and curtains. Other types of spreader equipment may be approved by the Engineer. Minimize the amount of airborne cement dust. Air pressure shall only be used to transfer the cement from the tanker into a holding bin or spreader truck. An integrated cement spreader system shall be required in urban and other sensitive areas.

**332-5.3 Motor Grader:** Use a motor grader of sufficient size and horsepower to adequately rough grade the pulverized base and rough and finish grade the mixed and compacted base. The equipment must be in good working order free from leaks and capable of maintaining an accurate grade and cross-slope.

**332-5.4 Rollers:** Use rollers in good working order free from leaks and capable of compacting the mix to the requirements of this Section.

**332-5.5 Additional equipment:** Use additional equipment as needed to complete the work in this Section.

**332-6 Construction.**

**332-6.1 Layout:** The Contractor is responsible for the string lining and layout of the roadway prior to reclaiming. Elevations of the existing roadway must be referenced at 100-foot intervals to ensure the roadway elevation is constructed in accordance with the Contract Documents. Existing structures shall be protected in accordance with Section 108.

**332-6.2 Weather and Seasonal Limitations:** Do not mix or place the base while the air temperature is below 40°F or when conditions indicate that the temperature may fall below 40°F within 24 hours. Do not mix or place the base when the weather is foggy or rainy or when the soil or subgrade is frozen.

**332-6.3 Widening Existing Shoulder Base:** Prior to pulverization, excavate the existing embankment as shown in the plans from the edge of the existing pavement to at least six inches beyond the planned new width of the base. Keep the bottom of the trench free of loose soil and vegetation.

If needed to increase material volume, place approved base material on 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 paved shoulder. Correct all areas of irregular grade or deficient thickness and remove and replace material contaminated with soil, organic material, or debris.

**332-6.4 Additional Material:** When additional material is to be added to correct cross slope deficiencies or change elevation as directed by the Engineer, use approved base material placed on the roadway prior to the final pass for pulverization and mix uniformly with the existing material.

**332-6.5 Pulverization:** Pulverize and blend the existing pavement and base material to the depth required so that all material is uniformly graded in accordance with AASHTO T 27 and FM 1-T 011 and meet the requirements of Table 332-2.

Table 332-2 Gradation Requirements for Pulverized Material	
Sieve Size	Percent Passing
3 inches	= 100
2 inches	≥ 95
No. 200	0 to 20

Material gradation may vary due to local aggregates and conditions. A minimum of two passes of the reclaimer is required. If approved by the Engineer, thick hot mix asphalt sections may be pre-cut with a milling machine. Perform as many passes necessary to achieve the required gradation requirements in accordance with Table 332-2.

Remove pulverized material to the depth shown in the Plans.

Incorporate the asphalt emulsion into the mix through the reclaimer uniformly and accurately metered so that all areas are of equal consistency and moisture content.

Control the moisture of the material to be compacted, as required. During wetting or drying operations, manipulate, as a unit, the entire width and depth of the course that is being compacted. Combine the reclaimed material and additives 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, permit the Engineer access to the mixing equipment in order to read the meter to verify the quantity of asphalt emulsion and cement applied during the day's work. Make field adjustments, as necessary, to the mix design to obtain a satisfactory reclaimed mixture of consistent composition and stability throughout the project. Submit daily printouts of cement spread rate and emulsion spread rate meeting the requirements of the mix design.

**332-6.6 Laboratory Testing:** Reclaimed base testing shall be performed as quickly as possible and completed after the material is pulverized and blended, prior to curing, in accordance with Table 332-3.

**332-6.7 Compaction:** After the material has been processed, compact the completed base course to conform with the finished lines, grades, and cross-section as required in the Plans. Apply water as necessary to ensure adequate moisture content at the time of mixing and compaction.

Determine the modified Proctor maximum density and optimum moisture content in accordance with FM 1-T 180. Construct a control strip of not less than 1,000 feet to develop proper rolling/compaction patterns and methods to obtain a minimum QC density of 96% of the modified Proctor maximum density by nuclear density testing in accordance with FM 1-T 310. Whenever there is a change in the reclaimed material, compaction method, equipment, mix design, or when unacceptable results occur, construct a new control strip of the same length. Control strips failing to meet Specification criteria may be required to be reworked, as determined by the Engineer. Acceptance of the control strips must be obtained prior to continuance with production. Furnish the proper number, weight, and type of rollers to obtain the required compaction of the reclaimed material. Begin rolling at the low side of the course, except leave three to six inches from any unsupported edge or edges unrolled initially to prevent distortion.

Correct any pavement showing or other unacceptable displacement. Take care in rolling the edges of the reclaimed mixture so the line and grade of the edges are maintained.

At the end of each day's production, construct a transverse joint formed by a header or by cutting back into the compacted material to form a vertical face free of loose material. Protect construction joints so that the placing, spreading, and compacting of base material will not damage previous work. Where it is necessary to operate or turn any equipment on the completed base course, protect and cover the finished surface using mats or wood planks to prevent damage.

**332-6.8 Thickness:** Report depth requirements in the Earthwork Records System (ERS) section of the Department's database measured to the nearest 0.25 inch. The difference between the individual measured depth thickness on the roadway and the plan target thickness must not exceed 3/4 inches. The difference between the LOT average (average of the three individual measured depth thickness) and the plan target thickness must not exceed 1/2 inch. Meet the frequency requirements for reclaimed base thickness of

332-7.7.

Measure the thickness while being witnessed by the Engineer. Meet the required plan mixing depths by ensuring the bottom of the base is at plan elevation during mixing and the top of the base is at plan elevation after final grading. When the thickness is not within the tolerances given, the Engineer will evaluate the area and determine if it must be reconstructed at the Contractor's expense or the deficiency deducted from the total material in place. With the approval of the Engineer, for areas of deficient thickness, an asphalt leveling course or overbuild may be used to correct deficiencies.

Determine test locations, including stations and offsets, using the Random Number generator approved by the Engineer. Notify the Engineer a minimum of 24 hours before checking mixing depths. Record the results as approved by the Engineer.

**332-6.9 Finishing:** After completing all base course operations, ensure the base course conforms to the required lines, grades, and cross section. The cured reclaimed base may be milled to achieve the desired lines, grades, and cross slope. If the Engineer identifies an objectionable surface irregularity, straightedge and correct all deficiencies, 50 feet on both sides (where possible), that are in excess of 3/8 inch over 15 feet in length within 72 hours of placement to the full depth of the reclaimed base, or as determined by the Engineer.

**332-6.10 Protection and Curing:** Protect and cure the completed base course by applying a prime coat at a rate of 0.10 to 0.15 gallons per square yard. Apply the prime coat after the completion of finishing operations and prior to opening to traffic. Keep the finished base course continuously moist until the prime coat is placed. At the time the prime coat is applied, ensure the surface is dense, free of all loose and extraneous material, and contains sufficient moisture to promote proper penetration of the bituminous material. Apply water in sufficient quantity to fill the surface voids immediately before the bituminous curing material is applied.

For base courses that have been milled, apply tack coat at a rate of 0.09 gallons per square yard prior to paving. To prevent equipment from marring or damaging the completed work, protect finished portions of base used by equipment. Do not allow traffic on the reclaimed base until it is assured the reclaimed base surface will not distort, shove, or ravel under the anticipated vehicular loading. Apply sand to primed surface as necessary to prevent tracking and broom off excess when installing temporary striping prior to opening to traffic. The Contractor shall be responsible for any damage caused to the base.

### **332-7 Quality Control Testing.**

Collect the required amounts of reclaimed base material to conduct QC lab testing at a minimum frequency referenced in 332-7.7 (Table 332-3). For construction of mainline, shoulder, turn lanes, and ramps, a LOT is defined as a single lift of finished base not to exceed 500 feet. Isolated compaction operations will be considered as separate LOTs. For multiple phase construction, a LOT shall not extend beyond the limits of the phase. Determine test locations, including stations and offsets, using the Random Number generator approved by the Engineer. Record QC test results in the ERS section of the Department's data base.

**332-7.1 Reclaimed Material Gradation Analysis:** Perform gradation analysis on the sample collected in 332-7 in accordance with AASHTO T 27 and FM 1-T 011. The sample must not include any additives. Meet the requirements of Table 332-2. If the requirements of Table 332-2 are not met, adjust the pulverization operation so that the resultant material will meet Specification requirements, or to the satisfaction of the Engineer.

**332-7.2 Modified Proctor Maximum Density Determination:** Determine modified Proctor maximum density and optimum moisture content by sampling and testing the material collected in 332-7 in accordance with FM 1-T 180.

**332-7.3 Density Testing Requirements:** Obtain a minimum QC density of 96% of the modified Proctor maximum density by nuclear density testing the full reclaimed base depth in accordance with FM 1-T 310. If one density test is below 96% of the modified Proctor maximum density, cease production and resolve the issue to the satisfaction of the Engineer before resuming production. Determine the in-place moisture content for each density test in accordance with FM 5-507 (Determination of Moisture Content by Means of a Calcium Carbide Gas Pressure Moisture Tester), or ASTM D4643 (Determination of Water Content of Soil and Rock by Microwave Oven Heating) for moisture determination. The test depth for density shall not be greater than 12 inches.

**332-7.4 Marshall Stability and Retained Marshall Stability:** Perform both Marshall stability and retained Marshall stability to the frequency referenced in 332-7.7 (Table 332-3). Meet the requirements of Table 332-1. If the Marshall stability or the retained Marshall stability does not meet the requirements of Table 332-1, cease production and resolve the issue to the satisfaction of the Engineer before resuming production.

**332-7.5 Surface Testing Requirements:** Test the finished surface of the base course with a 15-foot straightedge laid parallel to the centerline of the road. Correct all irregularities greater than 1/4 inch to the satisfaction of the Engineer. For high straightedge deficiencies only, the reclaimed base may be milled for the full lane width to a depth and length adequate to remove the deficiency. With the approval of the Engineer, an asphalt leveling course or overbuild may be used to correct low straightedge deficiencies.

Meet the requirements for cross slope measurement in accordance with Section 330, Table 330-3. Meet the frequency requirements for reclaimed base surface of 332-7.7.

**332-7.6 Additional Testing:** Additional sampling and testing may be required if significant changes in the characteristics of the reclaimed material are observed, such as a much coarser or finer gradation or a noticeable difference in asphalt content, or when there is considerable variability in the field test results.

**332-7.7 Frequency:** Conduct QC sampling and testing at a minimum frequency listed in the table below. The Engineer will perform Verification testing at a minimum frequency listed in the table below.

Test Name/Method	Quality Control	Verification
Modified Proctor Maximum Density (FM 1-T 180)	One per four consecutive LOTs	Witness QC
Gradation (AASHTO T 27/ FM 1-T 011)		
Marshall Stability (ASTM D6927)	One per four consecutive LOTs Break at 48+/- 8 hours	
Density (FM 1-T 310)	One per LOT	
Reclaimed Base Surface	Ten per LOT	
Reclaimed Base Thickness	Three per LOT	

**332-8 Acceptance.**

The Engineer may inspect and test any material, at points of production, distribution and use. The Engineer will base acceptance of the work on determining that the material requirements and the testing requirements of this Section and the placement requirements of the Plans have been met.

**332-9 Method of Measurement.**

The quantity to be paid for will be the area, in square yards, of base course constructed, completed, and accepted, including the areas of widened base.

**332-10 Basis of Payment.**

Price and payment will be full compensation for all work specified in this Section, including furnishing all labor, materials, tools, equipment, testing, and incidentals necessary to complete the work.

**332-11 Cement – Cement Treatment:**

When a blend of asphalt emulsion and Portland cement is specified the Portland cement shall be type I or II and conform to the latest standard requirements of ASTM C150 and AASHTO M85. When cement is added with the emulsion no more than 2.5% shall be used on the project, unless approved by the Engineer.

**332-12 Asphaltic Emulsion – Emulsion Treated Base:**

When the mix design calls for stabilization with asphalt emulsion, utilize CSS-1h or CMS-2h, meeting the requirements of AASHTO M 208-01 (2009) and approved by the State Materials Office prior to use.

Payment will be made under shall be paid as per SQUARE YARD:

120-1A	Excavation for Widening or Unsuitable Material	as per Cubic Yard
332-3	Cement - Cement Treatment	as per Ton
332-4	Asphaltic Emulsion - Emulsion Treated Base	as Per Gallon
332-1A	Pulverization (FDR) 0-2,500 Square Yards	as per Square Yard
332-2A	Recycling Bituminous Paving (CIP) 0-2,500 Square Yards	as Per Square Yard
332-1B	Pulverization (FDR) 2,501-10,000 Square Yards	as Per Square Yard
332-2B	Recycling Bituminous Paving (CIP) 2,501-10,000 Square Yards	as Per Square Yard
332-1C	Pulverization (FDR) 10,001-25,000 Square Yards	as Per Square Yard
332-2C	Recycling Bituminous Paving (CIP) 10,001-25,000 Square Yards	as Per Square Yard
332-1D	Pulverization (FDR) Over 25,001 Square Yards	as Per Square Yard
332-2D	Recycling Bituminous Paving (CIP) Over 25,001 Square Yards	as Per Square Yard

**334-1-131A-D Superpave Asphaltic Concrete (Traffic C, SP 9.5), 1”:**

Construct a Superpave Asphalt Concrete pavement with the type of mixture specified in the Contract Documents, or when offered as alternates, as selected. Superpave mixes are identified as Type SP-9.5, Type SP-12.5 or Type SP-19.0.

Obtain Superpave Asphalt Concrete from a plant that is currently on the FDOT Production Facility Listing. Producers seeking inclusion on the list shall meet the requirements of Section 105. Producers must meet the requirements of Section 320 for plant and equipment and the general construction requirements of Section 330.

The basis of payment for **Superpave Asphaltic Concrete (Traffic C, SP 9.5), 1”** shall be paid as per SQUARE YARD.

- 334-1-131A Asphalt 0 to 2,500 Square Yards
- 334-1-131B Asphalt 2,501 to 10,000 Square Yards
- 334-1-131C Asphalt 10,001 to 20,000 Square Yards
- 334-1-131D Asphalt over 20,001 Square Yards

**334-1-133A-D Superpave Asphaltic Concrete (Traffic C, SP 9.5), 2”:**

Construct a Superpave Asphalt Concrete pavement with the type of mixture specified in the Contract Documents, or when offered as alternates, as selected. Superpave mixes are identified as Type SP-9.5, Type SP-12.5 or Type SP-19.0.

Obtain Superpave Asphalt Concrete from a plant that is currently on the FDOT Production Facility Listing. Producers seeking inclusion on the list shall meet the requirements of Section 105. Producers must meet the requirements of Section 320 for plant and equipment and the general construction requirements of Section 330.

The basis of payment for **Superpave Asphaltic Concrete (Traffic C, SP 9.5), 2”** shall be paid as per SQUARE YARD.

- 334-1-133A Asphalt 0 to 2,500 Square Yards
- 334-1-133B Asphalt 2,501 to 10,000 Square Yards
- 334-1-133C Asphalt 10,001 to 20,000 Square Yards
- 334-1-133D Asphalt over 20,001 Square Yards

**334-1-134A-D Superpave Asphaltic Concrete (Traffic C, SP 12.5), 1”:**

Construct a Superpave Asphalt Concrete pavement with the type of mixture specified in the Contract Documents, or when offered as alternates, as selected. Superpave mixes are identified as Type SP-9.5, Type SP-12.5 or Type SP-19.0.

Obtain Superpave Asphalt Concrete from a plant that is currently on the FDOT Production Facility Listing. Producers seeking inclusion on the list shall meet the requirements of Section 105. Producers must meet the requirements of Section 320 for plant and equipment and the general construction requirements of Section 330.

The basis of payment for **Superpave Asphaltic Concrete (Traffic C, SP 12.5), 1”** shall be paid as per SQUARE YARD.

- 334-1-134A Asphalt 0 to 2,500 Square Yards
- 334-1-134B Asphalt 2,501 to 10,000 Square Yards
- 334-1-134C Asphalt 10,001 to 20,000 Square Yards
- 334-1-134D Asphalt over 20,001 Square Yards

**334-1-131E-H Superpave Asphaltic Concrete (Traffic C, SP 9.5), 1”:**

Construct a Superpave Asphalt Concrete pavement with the type of mixture specified in the Contract Documents, or when offered as alternates, as selected. Superpave mixes are identified as Type SP-9.5, Type SP-12.5 or Type SP-19.0.

Obtain Superpave Asphalt Concrete from a plant that is currently on the FDOT Production Facility Listing. Producers seeking inclusion on the list shall meet the requirements of Section 105. Producers must meet the requirements of Section 320 for plant and equipment and the general construction requirements of Section 330. Utilize an approved Safety EdgeSM system to create a sloped edge profile onto the roadway shoulder. Utilize an approved Safety EdgeSM system that compacts the AC and provides a sloped wedge equal to 1:1.2 to 1:2.0 measured from the pavement surface cross slope extended. The use of a single plate strike off is not allowed. The Safety EdgeSM shall be constructed monolithically with the AC pavement.

Utilize an approved Safety EdgeSM system that is adjustable to accommodate varying paving thicknesses.

All Safety EdgeSM systems to be used for the purpose of creating a Safety EdgeSM must meet the approval of the Engineer. The Engineer may require proof that the system has been used on previous projects with acceptable results or may require a test section constructed prior to the beginning of work to demonstrate the edge shape and compaction to the satisfaction of the Engineer.

#### Construction Methods

##### A Shoulder Preparation

Prior to placing asphalt or concrete pavement, prepare the shoulder material where the Safety EdgeSM will be placed to provide a foundation that will support the placement of the Safety EdgeSM in accordance with the owner agency's standard practice.

##### B. AC Density Adjacent to Safety EdgeSM

For AC pavements and overlays, the percent compaction of the AC adjacent to the Safety EdgeSM shall be in accordance with the owner agency unconfined longitudinal edge specification.

##### C. Shoulder Backing Material

Furnish, place and compact shoulder backing material to the top of the Safety EdgeSM as shown in Manual of Uniform Minimum Standards for Design, Construction and Maintenance for Streets and Highways Revised March 16, 2020 (Florida Green Book) Chapter 10 Page 10-8 & 10-9.

##### D. Handwork

Obtain approval in advance from the Engineer for short sections of handwork such as transitions at driveways, intersections, interchanges, and bridges.

The basis of payment for **Install Safety Edge Superpave Asphaltic Concrete (Traffic C, SP 9.5), 1"** shall be paid as per SQUARE YARD.

334-1-131E Safety Edge Oto 2,500 Square Yards  
334-1-131F Safety Edge 2,501 to 10,000 Square Yards  
334-1-131G Safety Edge 10,001 to 20,000 Square Yards  
334-1-131H Safety Edge over 20,001 Square Yards

#### **334-1-133E-H Superpave Asphaltic Concrete (Traffic C, SP 9.5), 2":**

Construct a Superpave Asphalt Concrete pavement with the type of mixture specified in the Contract Documents, or when offered as alternates, as selected. Superpave mixes are identified as Type SP-9.5, Type SP-12.5 or Type SP-19.0.

Obtain Superpave Asphalt Concrete from a plant that is currently on the FDOT Production Facility Listing. Producers seeking inclusion on the list shall meet the requirements of Section 105. Producers must meet the requirements of Section 320 for plant and equipment and the general construction requirements of Section 330.

Utilize an approved Safety EdgeSM system to create a sloped edge profile onto the roadway shoulder. Utilize an approved Safety EdgeSM system that compacts the AC and provides a sloped wedge equal to 1:1.2 to 1:2.0 measured from the pavement surface cross slope extended. The use of a single plate strike off is not allowed. The Safety EdgeSM shall be constructed monolithically with the AC pavement.

Utilize an approved Safety EdgeSM system that is adjustable to accommodate varying paving thicknesses.

All Safety EdgeSM systems to be used for the purpose of creating a Safety EdgeSM must meet the approval of the Engineer. The Engineer may require proof that the system has been used on previous projects with acceptable results or may require a test section constructed prior to the beginning of work to demonstrate the edge shape and compaction to the satisfaction of the Engineer.

#### Construction Methods

##### A. Shoulder Preparation

Prior to placing asphalt or concrete pavement, prepare the shoulder material where the Safety EdgeSM will be placed to provide a foundation that will support the placement of the Safety EdgeSM in accordance with the owner agency's standard practice.

##### B. AC Density Adjacent to Safety EdgeSM

For AC pavements and overlays, the percent compaction of the AC adjacent to the Safety EdgeSM shall be in accordance with the owner agency unconfined longitudinal edge specification.

##### C. Shoulder Backing Material

Furnish, place and compact shoulder backing material to the top of the Safety EdgeSM as shown in Manual of Uniform Minimum Standards for Design, Construction and Maintenance for Streets and Highways Revised March 16, 2020 (Florida Green Book) Chapter 10 Page 10-8 & 10-9.

##### D. Handwork

Obtain approval in advance from the Engineer for short sections of handwork such as transitions at driveways, intersections, interchanges, and bridges.

The basis of payment for **Install Safety Edge Superpave Asphaltic Concrete (Traffic C, SP 9.5), 2"** shall be paid as per SQUARE YARD.

334-1-133E Safety Edge Oto 2,500 Square Yards

334-1-133F Safety Edge 2,501 to 10,000 Square Yards

334-1-133G Safety Edge 10,001 to 20,000 Square Yards

334-1-133H Safety Edge over 20,001 Square Yards

**334-1-134E-H Superpave Asphaltic Concrete (Traffic C, SP 12.5), 2":**

Construct a Superpave Asphalt Concrete pavement with the type of mixture specified in the Contract Documents, or when offered as alternates, as selected. Superpave mixes are identified as Type SP-9.5, Type SP-12.5 or Type SP-19.0.

Obtain Superpave Asphalt Concrete from a plant that is currently on the FDOT Production Facility Listing. Producers seeking inclusion on the list shall meet the requirements of Section 105. Producers must meet the requirements of Section 320 for plant and equipment and the general construction requirements of Section 330.

Utilize an approved Safety EdgeSM system to create a sloped edge profile onto the roadway shoulder. Utilize an approved Safety EdgeSM system that compacts

the AC and provides a sloped wedge equal to 1:1.2 to 1:2.0 measured from the pavement surface cross slope extended. The use of a single plate strike off is not allowed. The Safety EdgeSM shall be constructed monolithically with the AC pavement.

Utilize an approved Safety EdgeSM system that is adjustable to accommodate varying paving thicknesses.

All Safety EdgeSM systems to be used for the purpose of creating a Safety EdgeSM must meet the approval of the Engineer. The Engineer may require proof that the system has been used on previous projects with acceptable results or may require a test section constructed prior to the beginning of work to demonstrate the edge shape and compaction to the satisfaction of the Engineer.

**Construction Methods**

**A Shoulder Preparation**

Prior to placing asphalt or concrete pavement, prepare the shoulder material where the Safety EdgeSM will be placed to provide a foundation that will support the placement of the Safety EdgeSM in accordance with the owner agency's standard practice.

**B. AC Density Adjacent to Safety EdgeSM**

For AC pavements and overlays, the percent compaction of the AC adjacent to the Safety EdgeSM shall be in accordance with the owner agency unconfined longitudinal edge specification.

**C. Shoulder Backing Material**

Furnish, place and compact shoulder backing material to the top of the Safety EdgeSM as shown in Manual of Uniform Minimum Standards for Design, Construction and Maintenance for Streets and Highways Revised March 16, 2020 (Florida Green Book) Chapter 10 Page 10-8 & 10-9.

**D. Handwork**

Obtain approval in advance from the Engineer for short sections of handwork such as

transitions at driveways, intersections, interchanges, and bridges.

The basis of payment for **Install Safety Edge Superpave Asphaltic Concrete (Traffic C, SP 12.5), 2"** shall be paid as per SQUARE YARD.

- 334-1-134E Safety Edge Oto 2,500 Square Yards
- 334-1-134F Safety Edge 2,501 to 10,000 Square Yards
- 334-1-134G Safety Edge 10,001 to 20,000 Square Yards
- 334-1-134H Safety Edge over 20,001 Square Yards

**335-3A Reclamite or Equivalent Pavement Rejuvenation:**

**Description:** 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.

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 a bid with a certified statement from the asphalt rejuvenator manufacturer showing that the asphalt rejuvenating emulsion conforms to the required physical and chemical requirements.

	Test Methods		Requirements	
	ASTM	AASHTO	Min	Max
Tests on Emulsion				
Viscosity @ 25°C, SFS	D-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>				30
Tests on Residue from Distillation:				

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 <sup>5</sup>	D-2006-70	-	0.3	0.6
PC/S Ratio <sup>5</sup>	D-2006-70	-	0.5	
Saturated Hydrocarbons, <sup>S5</sup>	D-2006-70	-	21	28

1. 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.
2. Test procedure identical with ASTM D-244-60 except that .02 Normal Calcium Chloride solution shall be used in place of distilled water.
3. Test procedure identical with ASTM D-244 except that distilled water shall be used in place of two percent sodium oleate solution.
4. 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 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 Lumberton 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.

5. Chemical Composition by ASTM Method D-2006-70:

PC + A<sub>1</sub> S + A<sub>2</sub>

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

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

The rejuvenating agent shall have a record 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 and that the asphalt rejuvenating agent has been proven to perform, as heretofore required, through field testing 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 and reasonable life expectancy.

**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 the asphalt binder.

The viscosity shall be reduced by a minimum of 25% for a pavement two years or less in age, and reduced by a minimum of 40% for a pavement greater than two years in age 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 inch of pavement. In addition, the treated areas shall be sealed in-depth to the intrusion of air and water.

The Engineer will require that untreated and treated core samples, a minimum of six inches in diameter, be removed by the Contractor at locations indicated by the Engineer. The treated core sample shall be taken in the same lane in close proximity to each untreated sample. A minimum of one untreated and treated core sample shall be taken for each pavement group or one per 50,000 square yards of treated pavement in each pavement group.

**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 0.04 to 0.5 gallons per square yard of surface, and with an allowable variation from any specified rate not to exceed 5% 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.

The rate of application shall be controlled by an onboard computer control system designed to uniformly and consistently control the selected application rate in gallons per square yard regardless of the forward speed of the distributor truck.

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 manufactured sand 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.

**Calibration:** Distributor- Prior to construction, calibrate the distributor in accordance with ASTM D2995- 99 in the presence of the Engineer. The distributor shall be moving forward at the proper application speed at the time the spray bar is opened. If at any time a nozzle becomes clogged or not spraying a proper pattern, the operation shall be immediately halted until repairs are made.

Sand Spreader- Prior to construction, calibrate the spreader in accordance with ASTM D5624-02, in the presence of the Engineer. The allowable deviation in the amount of manufactured sand spread on each of the rubber mats shall not exceed plus or minus 1 pound per square yard in the transverse direction, or plus or minus 1 pound per square yard in the longitudinal direction, from the design application rate.

#### **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 40° 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 application operation to make sure the road is free of standing water, dirt, loose aggregate and other debris. The surface shall be clean and dry prior to the application.

**Application of asphalt rejuvenating emulsion:** 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.

**Material Placement:** 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 parts rejuvenating agent to one 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 0.04 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 shall receive an additional uniformly applied treatment of the asphalt rejuvenating emulsion as directed 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.

**Test Strip for Application Rate:** Prior to start of the project, the contractor shall perform test strip applications as directed by the engineer. Test strips shall be performed for each pavement group of similar age and type within the project area.

The test strips shall be applied at a minimum width of 6 feet and for a length of 50 feet. A total of three test strips shall be applied at application rates of 0.04, 0.08 and 0.10 gallons per square yard, respectively. The time, in minutes, for essentially complete absorption of the asphalt rejuvenating emulsion shall be recorded for each test strip. The optimal rate to be used in a given area shall be that rate essentially absorbed within 30 minutes.

In the event that all three of the standard test rates are absorbed completely within the 30 minute timeframe, then the Contractor and the Engineer shall agree on a fourth test strip application rate.

Upon completion of the test strips for each pavement group, the Engineer will determine the final application rate to be applied to each pavement group.

**Sanding/Blotting:** After the rejuvenating emulsion has penetrated, and when recommended by the Contractor and approved by the Engineer, a coating of dry manufacture sand shall be applied to the surface in sufficient amount to protect the traveling public as required.

All manufactured sand used during the treatment must be removed no later than 24 hours after treatment of a roadway. 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 emulsion.

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

**Handling of Asphalt Rejuvenating Agent:** Contents in tank cars or storage tanks shall be circulated at least 45 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 after treatment. 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.

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.

**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, which 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.

**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 Engineer 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:** Asphalt rejuvenating emulsion at the Contract bid unit prices of measure is compensation in full for all costs of furnishing and applying the material as specified, including cleaning the existing pavement, stationing, purchase of aggregate, delivery of aggregate, all labor, equipment, and materials necessary for the placement of the asphalt rejuvenating emulsion, sweeping of any loose material after construction and other requirements as specified. Traffic control for maintaining traffic for constructing asphalt rejuvenating emulsion, removal and repair of test cores shall be considered incidental to the work unless specified elsewhere in the plans or proposal.

Payment for removal of untreated and treated cores shall be paid for as each at the unit price bid for Test Core Removal.

Payment for laboratory analysis of untreated and/or treated test cores shall be paid for as each at the unit price bid for Test Core Laboratory Analysis.

Payment will be made under:

The basis of payment for **Reclamite or Equivalent Pavement Rejuvenation** shall be paid as per SQUARE YARD.

335-3A Reclamite or Equivalent Pavement Rejuvenation

**335-1 Micro-Surfacing:**

335-1 Description.

Construct a micro surfacing pavement with the type of mixture specified in the Contract Documents. Micro surfacing is a mixture of polymer-modified emulsified asphalt, mineral aggregate, mineral filler, water, and other additives, properly proportioned, mixed and spread on a paved surface.

The mix shall be capable of being spread in variable thickness cross-sections (wedges, ruts, scratch courses and surfaces) which, after curing and initial traffic consolidation, resists compaction throughout the entire design tolerance range of asphalt binder content and variable thickness to be encountered. The end product shall maintain a skid-resistant surface in variable thick sections throughout the service life of the micro surfacing.

The mix shall be a quick-traffic system that will be able to accept straight rolling traffic one hour after application.

335-2 Materials.

**335-2.1 Emulsified Asphalt:**

**335-2.1.1 General Requirements:** Provide a quick-traffic, polymer-modified emulsified asphalt conforming to the requirements specified in AASHTO M 208 for CSS-1h as listed in Table 335-1. The cement mixing test shall be waived for this product.

The polymer material shall be co-milled into the asphalt or added to the emulsifier solution prior to the emulsification process. The amount of polymer modifier shall not be less than 3.0%

polymer solids based on the asphalt content (by weight) and will be certified by the emulsified asphalt supplier.

The Contractor’s Engineer and County representative may waive the five-day settlement test, provided job- stored emulsified asphalt is used within 36 hours from the time of the shipment or the stored material has had additional emulsified asphalt blended into it prior to use.

**335-2.1.2 Quality Tests:** The emulsified asphalt, and emulsified asphalt residue, shall meet the requirements of AASHTO M 208 for CSS-1h, with the following additions:

<b>Table 335-1 Quality Tests for Emulsified Asphalt</b>		
<b>AASHTO Test No.</b>	<b>Emulsified Asphalt Property</b>	<b>Specification Requirements</b>
AASHTO T 59	Residue after Distillation <sup>(1)</sup>	62% Minimum
AASHTO T 59	Cement Mixing	Not Required
<b>Quality Tests for Emulsified Asphalt Residue</b>		
AASHTO T 53	Softening Point	135°F (57°C) Minimum

(1) Maintain the test temperature at 350°F (177°C) for 20 minutes.

**335-2.1.3 Sampling, Certification, and Verification:** For the first load of emulsified asphalt produced for the project, the supplier shall submit a sample to the Contractor’s Engineer for testing before use. A pretest number will then be assigned by the Contractor’s Engineer, and the pretest number shall be furnished with all emulsified asphalt delivered to the project. At any time during application, the Contractor’s Engineer 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 Contractor’s Engineer may require the supplier to cease shipment of that pre-tested product. Further shipment of that pre-tested product to the owning agency’s projects will remain suspended until the cause of the problem is evaluated and corrected by the supplier to the satisfaction of the Contractor’s Engineer and County representative.

335-2.2 Aggregate:

**335-2.2.1 General:** Use an aggregate consisting of 100% crushed stone. The aggregate shall be a crushed stone such as granite, slag, limestone, chat, or other high-quality aggregate, or a combination thereof. To assure the material is 100 percent crushed, the parent aggregate will be larger than the largest stone in the gradation used. Use aggregate source(s) from the list of aggregates available on the Florida Department of Transportation’s website and also meeting the requirements of this specification.

The URL for obtaining the list of aggregates is: <ftp://ftp.dot.state.fl.us/fdot/smo/website/sources/frictioncourse.pdf>.

**335-2.2.2 Aggregate Quality Tests:** In addition to the requirements of FDOT Standard Specification Sections 901 and 902, meet the minimum aggregate requirements of Table 335-2.

<b>Table 335-2 Quality Tests for Aggregate</b>		
<b>AASHTO Test No.</b>	<b>Aggregate Property</b>	<b>Specification Requirements</b>
AASHTO T 176	Sand Equivalent	65 Minimum

AASHTO T 104	Soundness	15% Maximum using Na <sub>2</sub> SO <sub>4</sub> or 25% Maximum using MgSO <sub>4</sub>
AASHTO T 96	Abrasion Resistance <sup>(1)</sup>	30% Maximum

(1) The abrasion test will be performed on the parent aggregate.

**335-2.2.3 Gradation Requirements:** When tested in accordance with FM 1-T 027 and FM 1-T 011, the target (mix design) aggregate gradation, including the mineral filler, shall be within the gradation range for a Type II mixture shown in Table 335- 3, Column II.

Table 335-3 Mix Design Gradation Requirements		
Sieve Size	Type II Mix Design Range Percent Passing	Stockpile Tolerance from Mix Design Percent Passing
3/8 inch	100	N/A
No. 4	90 – 100	± 5%
No. 8	65 – 90	± 5%
No. 16	45 – 70	± 5%
No. 30	30 – 50	± 5%
No. 50	18 – 30	± 4%
No. 100	10 – 21	± 3%
No. 200	5 – 15	± 2%

The aggregate will be accepted from the stockpile located at the project. The stockpile will be accepted based on five quality control gradation tests conducted in accordance with FM 1-T 002. If the average of the five gradation tests is within the stockpile tolerances shown in Table 335-3, Column III for all of the sieve sizes, then the stockpile is accepted. If the average of the five gradation tests is not within the stockpile tolerances shown in Table 335-3, Column III, for any sieve size, remove the stockpiled material and replace it with new aggregate or blend other aggregate sources with the stockpiled material. Aggregates used in blending must meet the quality tests shown in Table 335-2 before blending and must be blended in a manner to produce a consistent gradation and sand equivalent value. If new aggregate is obtained or blending of aggregates is performed resulting in an aggregate that is not represented by the mix design, submit a new mix design to the Contractor's Engineer for approval prior to production of the mix.

The Contractor's Engineer may obtain stockpile samples at any time. If the average of five gradation tests conducted in accordance with FM 1-T 002 is not within the gradation tolerances shown in Table 335-3, Column III for any sieve size, cease production until the problem is corrected to the satisfaction of the Engineer.

Screen all stockpiled aggregates at the stockpile area prior to delivery to the paving machine to remove oversize material and non-desirable particles.

**335-2.3 Mineral Filler:** If mineral filler is utilized in the mix design, use non air-entrained Portland cement or hydrated lime that is free from lumps. The Engineer will accept the mineral filler by visual inspection. The type and amount of mineral filler 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 mineral filler may be permitted during production if it is found to result in better consistency or set times. Any changes to the percentage of mineral filler must meet the requirements of Table 335-5.

**335-2.4 Water:** Utilize water that is potable and free of harmful soluble salts, reactive chemicals, or any other contaminants.

**335-2.5 Additives:** Additives may be added to the mixture or any of the component materials to provide control of quick- trafficking properties. The additives to be used should be indicated on the mix design and be compatible with the other components of the mix.

**335-2.6 Crack Filler:** Utilize a crack filler meeting the material requirements of Developmental Specification Section 305.

**335-3 Mix Design.** Before work begins, the Contractor shall submit a mix design to the Engineer. The mix design must have an aggregate source used on five (5) similar projects and have been developed using the specific materials to be used on the project. The mix design shall be developed by an independent, accredited laboratory with no affiliation to the emulsion supplier and is endorsed by the International Slurry Surfacing Association (ISSA) and has experience in designing micro surfacing mixtures.

Submit the proposed mix design with supporting test data indicating compliance with all mix design criteria. Allow the Engineer a maximum of two weeks to either conditionally verify or reject the mix design.

Meet the requirements provided in Table 335-4. After the mix design has been approved, no substitutions to the mix design will be permitted, unless approved by the Engineer. The Engineer 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 Engineer 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.

<b>Table 335-4 Mix Design Testing Requirements</b>		
<b>ISSA Test No.</b>	<b>Property</b>	<b>Specification Requirements</b>
ISSA TB-139 <sup>(1)</sup>	Wet Cohesion: @ 30 Minutes Minimum (Set) @ 60 Minutes Minimum (Traffic <sup>1</sup> )	12 kg-cm Minimum 20 kg-cm or Near Spin Minimum
ISSA TB-109	Excess Asphalt by Loaded Wheel Tester (LWT) Sand Adhesion	50 g/ft <sup>2</sup> Maximum
ISSA TB-114	Wet Stripping	90% Minimum
ISSA TB-100	Wet-track Abrasion Loss: One-hour Soak Six-day Soak	50 g/ft <sup>2</sup> Maximum 75 g/ft <sup>2</sup> Maximum
ISSA TB-147	Lateral Displacement Specific Gravity after 1,000 Cycles of 125 lb.	5% Maximum 2.10 Maximum
ISSA TB-113 <sup>(1)</sup>	Mix Time @ 77°F (25°C)	Controllable to 120 Seconds Minimum

(1) The Cohesion test and Mixing Time test should be checked and reported for the highest temperatures expected during construction.

The mix design must clearly show the proportions of aggregate, emulsified asphalt, mineral filler, water, and additive usage based on the dry weight of the aggregate. Meet the mix design component material requirements provided in Table 335-5.

<b>Table 335-5 Mix Design Component Material Requirements</b>	
<b>Component Materials</b>	<b>Specification Requirements</b>
Residual Asphalt	5.5 to 10.5% (by dry weight of aggregate)
Mineral Filler	0.5 to 3.0% (by dry weight of aggregate)
Polymer-based Modifier	Minimum of 3.0% (solids based on asphalt weight content)
Additives	As needed
Water	As required to produce proper mix consistency

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 Contractor's Engineer. 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 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.

**335-4 Equipment.**

**335-4.1 General:** Maintain all equipment, tools, and machines used in the performance of this work in satisfactory working condition at all times to ensure a high-quality product.

**335-4.2 Mixing Equipment:** Use a machine specifically designed and manufactured to place micro surfacing. Truck mounted and self-loading continuous machines are acceptable. Mix the material with an automatic-sequenced, self-propelled micro surfacing mixing machine. It shall be a continuous-flow mixing unit able to accurately deliver and proportion the mix components through 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 all mix components to maintain an adequate supply to the proportioning controls. Four truck mounted machines will be required for all projects or roads one half mile or less in length.

Self-loading continuous machines shall be capable of loading materials while continuing to lay micro surfacing, thereby minimizing construction joints. Two self-loading machines will be required on all projects or roads greater than one half mile in length. Self-loading continuous machines shall be equipped to allow the operator to have full control of the forward and reverse speeds during applications of the micro surfacing material and shall 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.

**335-4.3 Proportioning Device:** Provide and properly mark individual volume or weight controls for proportioning each material to be added to the mix (i.e., aggregate, mineral filler, emulsified asphalt, additives, and water).

**335-4.4 Spreading Equipment:** Agitate and spread the mixture uniformly in the spreader box by means of twin-shafted paddles or spiral augers fixed in the spreader box. Provide a front seal

to ensure 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 and a free flow of material is provided to the rear strike-off. The spreader box shall have suitable means to hydraulically adjust the box width automatically while traveling behind the mixing unit, and be able to side shift the box to compensate for variations in the pavement geometry.

**335-4.4.1 Secondary Strike-off:** Provide a secondary strike-off 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.

**335-4.4.2 Rut-filling Equipment:** When required by the Contract Documents, micro surfacing material may be used to fill ruts, utility cuts, depressions in the existing surface, etc. When rutting or deformation is less than 1/2 inch, a full width scratch course may be applied with the spreader box using a metal or stiff rubber strike-off. Ruts of 1/2 inch or greater in depth shall be filled independently with a rut-filling box, either five or six feet in width. Ruts that are in excess of 1 1/2 inch in depth may require multiple applications with the rut-filling box to restore the cross-section.

When a rut box is used, emulsified asphalt content may be reduced by 0.5% of the mix design target. Any reduction of emulsified asphalt content must be within the tolerance of the job mix formulation listed in the mix design. Material placed with the rut-filling box shall have a 1/4 inch crown to allow for traffic consolidation. Before placing subsequent lifts, allow all rut-filling material to cure under traffic for at least 24 hours.

**335-4.5 Auxiliary Equipment:** Provide suitable surface preparation equipment, traffic control equipment, hand tools, and any other support and safety equipment necessary to perform the work.

**335-5 Calibration.** Calibrate each mixing unit to be used in the performance of the work in the presence of the Engineer prior to the start of construction. Previous calibration documentation covering the exact materials to be used may be acceptable, provided that no more than 60 days have lapsed. Document the individual calibration of each material at various settings, which can be related to the machine metering devices. Do not utilize any mixing unit on the project until the calibration has been completed and approved by the Engineer. Any component replacement affecting material proportioning requires that the machine be recalibrated. No machine will be allowed to work on the project until the calibration has been completed and accepted.

**335-6 Weather Limitations.** Do not apply micro surfacing if either the pavement or air temperature is below 50°F. Do not apply micro surfacing when there is the possibility that the finished product will freeze within 24 hours. Do not apply micro surfacing in the rain or when there is standing water on the pavement. The mixture shall not be applied when weather conditions prevent opening to traffic within a reasonable amount of time, as determined by the Engineer.

335-7 Surface Preparation.

**335-7.1 General:** Remove any thermoplastic striping materials and retro-reflective pavement markers in the areas to be micro surfaced. Provide temporary striping as necessary to comply with Contract Documents. Immediately prior to applying the micro surfacing, clear the surface of all loose material, silt spots, vegetation, and other material that will negatively affect the

quality of the micro surfacing, utilizing any standard cleaning method. If water is used for cleaning, allow any unsealed cracks to dry thoroughly before applying micro surfacing. Protect manholes, valve boxes, drop inlets and other service entrances from the micro surfacing mixture by a suitable method. The Engineer will approve the surface preparation prior to micro surfacing. No loose aggregate, either spilled from the lay-down machine or existing on the road, will be permitted.

**335-7.2 Cracks:** Pre-treat any cracks in the surface of the pavement with a crack filler meeting the requirements of FDOT Developmental Specification Section 305 prior to the application of the micro surfacing. Fill any cracks with a width greater than 1/4 inch. Do not overfill the cracks. Crack filling material must cure for a minimum of 30 days prior to application of the micro surfacing.

**335-7.3 Rumble Strips:** Where shoulders are not to be micro surfaced, prevent material from being applied to or entering any rumble strip depressions. If necessary, remove any material that enters the depressions. When rumble strips are to be micro surfaced, place a scratch course to fill the depressions prior to placing the final surface course.

**335-7.4 Tack Coat:** Place a tack coat on all collector roads prior to constructing a micro surfacing course. A tack coat is not required on residential roads or between the leveling (scratch) course and the surface course provided the surface course is placed within 30 days of the leveling (scratch) course. If required, the tack coat should be type SS, type CSS, or the micro surfacing emulsified asphalt. It may consist of one part emulsified asphalt to three parts water and should be applied with a standard distributor. The distributor shall be capable of applying the tack evenly at a rate of 0.05-0.15 gal/yd<sup>2</sup>.

335-8 Application.

**335-8.1 General:** Pre-wet the surface by fogging ahead of the spreader box with water. Adjust the rate of application of the fog spray to suit temperatures, surface texture, humidity, and dryness of the pavement.

The micro surfacing shall be of the desired consistency upon leaving the mixer. Carry a sufficient amount of material in all parts of the spreader box at all times so that complete coverage is obtained. Avoid overloading of the spreader box. Do not allow lumping, balling, or unmixed aggregate in the micro surfacing mixture.

Do not leave streaks, such as those caused by oversized aggregate, in the finished surface. If excess streaking develops, stop production until the situation has been corrected. Excessive streaking is defined as more than four drag marks greater than 1/2 inch wide and 4 inches long, or 1 inch wide and 3 inches long, in any 30 yd<sup>2</sup> area. Do not permit transverse ripples or longitudinal streaks of 1/4 inch in

depth or greater, when measured by placing a 10-foot straight edge over the surface.

**335-8.2 Rate of Application.** The average application rate shall be in accordance with Table 335-6, unless otherwise specified in the Contract Documents. Full width application rates must be maintained within  $\pm 2$  lbs/yd<sup>2</sup> of the specified rate. Application rates are based upon the weight of dry aggregate in the mixture. The maximum thickness of any single layer of micro surfacing at the edge of the pavement shall be 1/4 inch.

AGGREGATE TYPE	LOCATION	APPLICATION RATE(1)
Type II	Collectors, Local Roads, and Airport Runways	Single Application: 20-24 lbs/yd <sup>2</sup> Double Application (two lifts): Bottom: 14-18 lbs/yd <sup>2</sup> Top: 16-20 lbs/yd <sup>2</sup> Total: 30-34 lbs/yd <sup>2</sup>
	Scratch or Leveling Course	As Required --- 12 lbs/yd <sup>2</sup> (minimum)

(1) Application rates are based upon the weight of dry aggregate in the mixture.

**335-8.3 Joints:** Prevent excessive buildup, uncovered areas, or unsightly appearance on longitudinal and transverse joints. Provide suitable-width spreading equipment to produce a minimum number of longitudinal joints throughout the project. Place longitudinal joints on lane lines, where possible. Use half passes and odd-width passes only when absolutely necessary. Do not apply a half pass as the last pass of any area. Do not overlap longitudinal lane line joints by more than three inches. Do not construct joints having more than a 1/4 inch difference in elevation when measured by placing a 10-foot straight edge over the joint and measuring the elevation drop-off. Construct longitudinal joints so that water is not held at the joint. Construct transverse joints at the beginning and end project limits so that the elevation difference between the micro surfacing and the adjacent pavement does not exceed 1/4 inch.

**335-8.4 Mix Stability:** Produce a micro surfacing mixture that possesses 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. The mixture shall be free of excess water or emulsified asphalt and free of segregation of the emulsified asphalt and aggregate fines from the coarser aggregate. Do not spray water directly into the spreader box while applying micro surfacing material under any circumstances.

**335-8.5 Handwork:** Utilize hand squeegees to provide complete and uniform coverage of micro surfaced areas that cannot be reached with the mixing machine. Lightly dampen the area to be hand worked prior to mix placement, if necessary. Care shall be exercised to leave no unsightly appearance from handwork. When performing handwork, provide the same type of finish as that applied by the spreader box.

**335-8.6 Lines:** Construct straight lines along curbs and shoulders. Do not permit runoff on these areas. Keep lines at intersections straight to provide a good appearance. If necessary, utilize a suitable material to mask off the end of streets to provide straight lines. Edge lines shall not vary by more than 2 inches horizontally.

**335-8.7 Cleanup:** Remove micro surfacing mixture from all areas such as manholes, gutters, drainage structures, rumble strips, and as otherwise specified by the Engineer. On a daily basis, remove any debris resulting from the performance of the work.

**335-8.8 Post Sweeping:** If required by the Engineer, broom the surface of any loose material within 48 hours after the completion of the micro surfacing. If directed by the Engineer, perform this operation again approximately seven to ten days after completion of the micro surfacing as needed. Additionally, clean the surface, as necessary, prior to application of the final pavement markings.

335-9 Quality Assurance.

**335-9.1 Material Monitoring:** Provide a computerized material monitoring system with integrated material control devices that are readily accessible and positioned so the amount of each material used can be determined at any time. Ensure the computer system is functional at the beginning of work and during each calibration. Provide a back-up electronic materials counter that is capable of recording running count totals for each material being monitored. Equip the mixer with a radar ground measuring device. The computer system shall have the capability to record, display and print the following information:

1. Individual sensor counts for emulsion, aggregate, cement, water, and additive.
2. Aggregate, emulsion, and cement output in pounds per minute.
3. Ground travel distance.
4. Spread rate in pounds per square yard.
5. Percentages of emulsion, cement, water, and additive.
6. Cumulative totals of aggregate, emulsion, cement, water, and Additive.
7. Scale factor for all materials.

**335-9.2 Sampling and Testing:** The Engineer shall obtain one sample of micro-surfacing mixture each day of production. The Engineer shall test each sample in accordance with FM 5-563 and FM 1-T 030 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 in Table 335-7.

<b>Table 335-7 Aggregate and Emulsified Asphalt - Acceptance Limits</b>	
<b>Aggregate</b>	<b>Tolerance from Mix Design Target Values</b>
Percent Passing No. 4 Sieve	± 6 percent
Percent Passing No. 8 Sieve	± 7 percent
Percent Passing No. 50 Sieve	± 6 percent
Percent Passing No. 200 Sieve	± 3.0 percent
<b>Emulsified Asphalt</b>	
Residual Asphalt Content of Mixture	± 0.6 percent

**335-9.3 Application Rate:** Control the application rate for micro surfacing on a lot basis to within the "Total" range specified in 335-6. A lot will be considered as 0.10 lane miles. No additional compensation will be paid for micro surfacing application rates placed in excess of the "Total" specified range. The unit price for each deficient lot will be reduced by ten percent for each lb/yd<sup>2</sup> rate less than the "Total" specified range. For application rates outside the "Total" specified range, stop production of the mixture and make adjustments to correct the problem to the satisfaction of the Contractor's Engineer prior to resuming production. Accept a pay reduction for deficient lot production or overlay the deficient area at full plan width and depth at no additional cost.

335-10 Basis of Payment.

**335-10.1 General:** The micro surfacing shall be paid for at the Contract unit price per square yard, completed and accepted. Such price and payment shall be full compensation for performing all micro surfacing work included in this section, and shall include the cost of all

materials, including the cost of the emulsified asphalt and aggregate. Crack sealing, if required, shall be paid for under the appropriate pay item.

335-10.2 Payment Items:

Payment will be made under **Micro-Surfacing**:

Item No. 335-1 Micro surfacing as Per square yard Item No.

The basis of payment for shall be paid as per SQUARE YARDS.

917-335-1A Single Application, 0 to 15,000 Square Yards

917-335-1B Single Application over 15,001 Square Yards

917-335-1C Double Application, 0 to 15,000 Square Yards

917-335-1D Double Application over 15,001 Square Yards

335-2 Rut fill/scratch course

Per ton

### **335-4A Chip Seal / Fog Seal**

**Scope of Work:** The work specified in this section consists of furnishing and applying a single, double or triple application of bituminous surface treatment on a paved roadway or on a prepared 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 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.

All aggregate, #89, #78 and #67 shall be treated prior to application with Emulsified Asphalt Grade CSS- 1H at the rate of 0.4% to 0.8% residual asphalt. All aggregate, clean broken stone, shall be pre-coated with an asphaltic material prior to the oil and chip process. All of the stone shall have 100% total coverage. A pugmill shall be used to pre-coat the stone. Stone having less than 100% total coverage shall not be used. The emulsified asphalt grade CSS-1H shall coat the entire surface of all of the aggregate. The pre-coating process is to take place at a location that is approved by the County. The County shall approve the pre-coated aggregate before the seal coat process begins.

All costs for the pre-coating and placement of aggregate shall be included in the cost of the items surface treatment CRS-2P and asphaltic pre-coated cover material, clean broken stone.

Payment shall not be made for the surface treatment/pre-coated cover material, clean broken stone unless a representative of the County is present to observe the pre-coating process.

**Liquid bituminous material for surface treatment:** CRS-2P liquid bituminous material conforming to AASHTO M 316-99. When CRS-2P is specified apply the following modifications:

- a) Distill the CRS-2P at 400°F for 20 min. and
- b) Provide Polymer-Modified Cationic Emulsified Asphalt, CRS-2P produced by using polymer modified base asphalt only. The emulsion shall be pumpable and suitable for application through a distributor truck.

The Cationic mixing grade shall be homogenous and of high quality. The material shall be prepared from straight-run Asphalt of high ductility and shall contain a rubber hydrocarbon additive derived from latex in addition to 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 polymer material shall be co-milled into the asphalt or added to the emulsifier solution prior to the emulsification process. The amount of polymer modifier shall not be less than 3.0% polymer solids based on the asphalt content (by weight) and will be certified by the emulsified asphalt supplier.

**Cationic Asphalt Emulsion**

Material Designation		
Test on Emulsion:	Minimum	Maximum
Viscosity, Saybolt Furol, 77 degrees F (25 C), s	---	---
Viscosity, Saybolt, 122 degrees F (50 C), s	100	400
Demulsibility, 35ml, 0.8 percent DSS, %	70	-
Sieve Test, %	-	0.1
Storage Stability	-	1
Residue by Distillation, 350°F max, %	65	---
Oil distillate, % by volume of emulsion	---	0.5
Residue Test, ASTM D 244 Low Temp	Minimum	Maximum

Penetration, 77°F, 100gr, 5 sec	70	150
Elastic Recovery, ASTM D 6084, method B, 77°F, 5 cm/min, %	50	-
Softening Point, °F	125	-
Solubility in Trichloroethylene, %	97.0	-

**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 with no affiliation to the emulsion supplier 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 (color, viscosity, non-homogeneous application, etc.). All samples shall be shipped and stored in clean air tight sealed wide mouth jars or bottles made of plastic.

**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 0.035 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. Two distributor trucks will be required on all projects.

**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 capable of extending to a width of 22 feet. 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.

**Rollers:** The contractor shall use one, ten (10) ton steel wheeled roller and two, 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 10' 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 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 0.38 - 0.45 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:** The second application of liquid bituminous material shall be applied at a rate of 0.38 - 0.42 gallons per square yard depending upon the size of the first layer of aggregate that the liquid is sprayed upon and the size of the aggregate being placed over the first application of surface treatment.
- **Variable Depth Chip Seal:** The third application of liquid bituminous material shall be applied at a rate of 0.32 - 0.38 gallons per square yard depending upon the size of the first two layers of aggregate that the liquid is sprayed upon and the size of the aggregate being placed over the first and second applications of surface treatment over 2".

**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 per square yard depending upon the type of road base and/or the size of the existing aggregate that is being resurfaced.

**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 0.1 to 0.15 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. If sanding is needed, the fog seal shall 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.

**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 rolling and blotting has been 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; 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 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 Chip Seal (Triple application) 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.

**Warranty of Chip Seal:** The Contractor shall provide the County upon final acceptance of the Cape Seal work, a warranty period of three (3) years which shall include all labor, materials, hauling, traffic control and striping to repair the defective areas. Defective areas shall include debonding/delamination, excessive raveling and aggregate loss exposing the old roadway surface. The Contractor shall perform all warranty work at no cost to the County. The Contractor shall have been doing business in the State of Florida for at least four years from the date of this bid and have full time experienced personnel to respond to any warranty issues within 24 hours. The Contractor can be called to perform work or warranty work at any time of the year as needed by the County. The Contractor must have a full-time presence with an office, experienced personnel and the proper equipment in Florida to respond 365 days a year.

The basis of payment **for Chip Seal and Fog Seal** shall be paid as per SQUARE YARD.

335-2A	Single Application 0 to 15,000 Square Yards
335-2B	Single Application over 15,001 Square Yards
335-2C	Double Application 0 to 15,000 Square Yards
335-2D	Double Application over 15,001 Square Yards
335-2E	Variable Depths over 2" 0 to 15,000 Square Yards
335-2F	Variable Depths over 2" over 15,001 Square Yards
335-4A	Fog Seal Square Yards

### **335-5A Cape Seal**

**Description:** The work specified in this section consists of furnishing and applying a single application of polymer modified bituminous surface treatment followed by a mixture of polymer-modified emulsified asphalt, mineral aggregate, mineral filler, water, and other additives, properly proportioned, mixed and spread on a paved surface, established by the County and in

substantial conformance with the limits established by the owner. This two-step process is called a Cape Seal.

Materials:

**Aggregates: for the first coat**, surface treatment crushed granite conforming to FDOT specifications section 901, table 1 for #89 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.

All aggregate, #89 shall be treated prior to application with Emulsified Asphalt Grade CSS-1H at the rate of 0.4% to 0.8% residual asphalt. All aggregate, clean broken stone, shall be pre-coated with an asphaltic material prior to the oil and chip process. All of the stone shall have 100% total coverage. A pugmill shall be used to pre-coat the stone. Stone having less than 100% total coverage shall not be used. The emulsified asphalt grade CSS-1H shall coat the entire surface of all of the aggregate. The pre-coating process is to take place at a location that is approved by the County. The County shall approve the pre-coated aggregate before the seal coat process begins.

All costs for the pre-coating and placement of aggregate shall be included in the cost of the item Cape Seal.

Payment shall not be made for the Cape Seal unless a representative of the County is present to observe the pre-coating process.

**Aggregates: for the final coat**, use an aggregate consisting of 100% crushed stone. The aggregate shall be a crushed stone such as granite, slag, limestone, chat, or other high-quality aggregate, or a combination thereof. To assure the material is 100 percent crushed, the parent aggregate will be larger than the largest stone in the gradation used. Use aggregate source(s) from the list of aggregates available on the Florida Department of Transportation's website and also meeting the requirements of this specification. The URL for obtaining the list of aggregates is: <ftp://ftp.dot.state.fl.us/fdot/smo/website/sources/frictioncourse.pdf>

In addition to the requirements of FDOT Standard Specification Sections 901 and 902, meet the minimum aggregate requirements of Table 62-1.

<b>Table 62-1 Quality Tests for Aggregate</b>		
<b>AASHTO Test No.</b>	<b>Aggregate Property</b>	<b>Specification Requirements</b>
AASHTO T 176	Sand Equivalent	65 Minimum
AASHTO T 104	Soundness	15% Maximum using Na <sub>2</sub> SO <sub>4</sub> or 25% Maximum using MgSO <sub>4</sub>
AASHTO T 96	Abrasion Resistance <sup>(1)</sup>	30% Maximum

(1) The abrasion test will be performed on the parent aggregate.

**Gradation Requirements:** When tested in accordance with FM 1-T 027 and FM 1-T 011, the target (mix design) aggregate gradation, including the mineral filler, shall be within the gradation range for a Type II mixture shown in Table 62-2, Column II.

<b>Table 62-2 Mix Design Gradation Requirements</b>		
Sieve Size	Type II Mix Design Range Percent Passing	Stockpile Tolerance from Mix Design Percent Passing
3/8 inch	100	N/A
No. 4	90 – 100	± 5%
No. 8	65 – 90	± 5%
No. 16	45 – 70	± 5%
No. 30	30 – 50	± 5%
No. 50	18 – 30	± 4%
No. 100	10 – 21	± 3%
No. 200	5 – 15	± 2%

The aggregate will be accepted from the stockpile located at the project. The stockpile will be accepted based on five quality control gradation tests conducted in accordance with FM 1-T 002. If the average of the five gradation tests is within the stockpile tolerances shown in Table 62-2, Column III for all of the sieve sizes, then the stockpile is accepted. If the average of the five gradation tests is not within the stockpile tolerances shown in Table 62-2, Column III, for any sieve size, remove the stockpiled material and replace it with new aggregate or blend other aggregate sources with the stockpiled material. Aggregates used in blending must meet the quality tests shown in Table 62-1 before blending and must be blended in a manner to produce a consistent gradation and sand equivalent value. If new aggregate is obtained or blending of aggregates is performed resulting in an aggregate that is not represented by the mix design, submit a new mix design to the Engineer for approval prior to production of the mix.

The Engineer may obtain stockpile samples at any time. If the average of five gradation tests conducted in accordance with FM 1-T 002 is not within the gradation tolerances shown in Table 62-2, Column III for any sieve size, cease production until the problem is corrected to the satisfaction of the Engineer.

Screen all stockpiled aggregates at the stockpile area prior to delivery to the paving machine to remove oversize material and non-desirable particles.

**Mineral Filler:** If mineral filler is utilized in the mix design, use non air-entrained Portland cement or hydrated lime that is free from lumps. The Engineer will accept the mineral filler by visual inspection. The type and amount of mineral filler 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 mineral filler may be permitted during production if it is found to result in better consistency or set times. Any changes to the percentage of mineral filler must meet the requirements of Table 62-4.

**Water:** Utilize water that is potable and free of harmful soluble salts, reactive chemicals, or any other contaminants.

**Additives:** Additives may be added to the mixture or any of the component materials to provide control of quick-trafficking properties. The additives to be used should be indicated on the mix design and be compatible with the other components of the mix.

**Mix Design:** Before work begins, the Contractor shall submit a mix design to the Engineer. The mix design must have an aggregate source used on five (5) similar projects and have been developed using the specific materials to be used on the project. The mix design shall be developed by an independent, accredited laboratory with no affiliation to the emulsion supplier and is endorsed

by the International Slurry Surfacing Association (ISSA) and has experience in designing such mixtures.

Submit the proposed mix design with supporting test data indicating compliance with all mix design criteria. Allow the Engineer a maximum of two weeks to either conditionally verify or reject the mix design.

Meet the requirements provided in Table 62-3. After the mix design has been approved, no substitutions to the mix design will be permitted, unless approved by the Engineer. The Engineer 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 Engineer 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.

<b>Table 62-3 Mix Design Testing Requirements</b>		
<b>ISSA Test No.</b>	<b>Property</b>	<b>Specification Requirements</b>
ISSA TB-139 <sup>(1)</sup>	Wet Cohesion: @ 30 Minutes Minimum (Set) @ 60 Minutes Minimum (Traffic)	12 kg-cm Minimum 20 kg-cm or Near Spin Minimum
ISSA TB-109	Excess Asphalt by Loaded Wheel Tester (LWT) Sand Adhesion	50 g/ft <sup>2</sup> Maximum
ISSA TB-114	Wet Stripping	90% Minimum
ISSA TB-100	Wet-track Abrasion Loss: One- hour Soak Six-day Soak	50 g/ft <sup>2</sup> Maximum 75 g/ft <sup>2</sup> Maximum
ISSA TB-147	Lateral Displacement Specific Gravity after 1,000 Cycles of 125 lb.	5% Maximum 2.10 Maximum
ISSA TB-113 <sup>(1)</sup>	Mix Time @ 77°F (25°C)	Controllable to 120 Seconds Minimum

(1) The Cohesion test and Mixing Time test should be checked and reported for the highest temperatures expected during construction.

The mix design must clearly show the proportions of aggregate, emulsified asphalt, mineral filler, water, and additive usage based on the dry weight of the aggregate. Meet the mix design component material requirements provided in Table 62-4.

<b>Table 62-4 Mix Design Component Material Requirements</b>	
<b>Component Materials</b>	<b>Specification Requirements</b>
Residual Asphalt	5.5 to 10.5% (by dry weight of aggregate)

Mineral Filler	0.5 to 3.0% (by dry weight of aggregate)
Polymer-based Modifier	Minimum of 3.0% (solids based on asphalt weight content)
Additives	As needed
Water	As required to produce proper mix consistency

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 Engineer. 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 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.

**Liquid bituminous material for the first coat:** CRS-2P liquid bituminous material conforming to AASHTO M 316-99. When CRS-2P is specified apply the following modifications:

- a.) Distill the CRS-2P at 400°F for 20 min. and
- b.) Provide Polymer-Modified Cationic Emulsified Asphalt, CRS-2P produced by using polymer modified base asphalt only. The emulsion shall be pumpable and suitable for application through a distributor truck.

The Cationic mixing grade shall be homogenous and of high quality. The material shall be prepared from an Asphalt of high ductility and shall contain a rubber hydrocarbon additive derived from latex in addition to carefully controlled amounts of selected diluents to promote work ability and minimize stripping. Additives that enhance pavement performance are subject to approval by the County. The polymer material shall be co-milled into the asphalt or added to the emulsifier solution prior to the emulsification process. The amount of polymer modifier shall not be less than 3.0% polymer solids based on the asphalt content (by weight) and will be certified by the emulsified asphalt supplier.

#### Cationic Asphalt Emulsion

Material Designation		
Test on Emulsion:	Minimum	Maximum
Viscosity, Saybolt Furol, 77 degrees F (25 C), s	---	---
Viscosity, Saybolt, 122 degrees F (50 C), s	100	400
Demulsibility, 35ml, 0.8 percent DSS, %	70	-
Sieve Test, %	-	0.1
Storage Stability	-	1
Residue by Distillation, 350°F max, %	65	---
Oil distillate, % by volume of emulsion	---	0.5
Residue Test, ASTM D 244 Low Temp	Minimum	Maximum
Penetration, 77°F, 100gr, 5 sec	70	150

Elastic Recovery, ASTM D 6084, method B, 77°F, 5 cm/min, %	50	-
Softening Point, °F	125	-
Solubility in Trichloroethylene, %	97.0	-

**Liquid bituminous material for the final coat:** Provide a quick-traffic, polymer-modified emulsified asphalt conforming to the requirements specified in AASHTO M 208 for CSS-1h as listed in Table 62-5. The cement mixing test shall be waived for this product.

The polymer material shall be co-milled into the asphalt or added to the emulsifier solution prior to the emulsification process. The amount of polymer modifier shall not be less than 3.0% polymer solids based on the asphalt content (by weight) and will be certified by the emulsified asphalt supplier.

The Engineer may waive the five-day settlement test, provided job-stored emulsified asphalt is used within 36 hours from the time of the shipment or the stored material has had additional emulsified asphalt blended into it prior to use.

**Quality Tests:** The emulsified asphalt, and emulsified asphalt residue, shall meet the requirements of AASHTO M 208 for CSS-1h, with the following additions:

<b>Table 62-5 Quality Tests for Emulsified Asphalt</b>		
<b>AASHTO Test No.</b>	<b>Emulsified Asphalt Property</b>	<b>Specification Requirements</b>
AASHTO T 59	Residue after Distillation <sup>(1)</sup>	62% Minimum
AASHTO T 59	Cement Mixing	Not Required
<b>Quality Tests for Emulsified Asphalt Residue</b>		
AASHTO T 53	Softening Point	135°F (57°C) Minimum

(1) Maintain the test temperature at 350°F (177°C) for 20 minutes.

**Sampling, Certification, and Verification:** For the first load of emulsified asphalt produced for the project, the supplier shall submit a sample to the Engineer for testing before use. A pretest number will then be assigned by the Engineer, and the pretest number shall be furnished with all emulsified asphalt delivered to the project.

At any time during application, the Engineer 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 Engineer may require the supplier to cease shipment of that pre-tested product. Further shipment of that pre-tested product to the owning agency's projects will remain suspended until the cause of the problem is evaluated and corrected by the supplier to the satisfaction of the Engineer.

**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 with no affiliation to the emulsion supplier for the analyzing of emulsion. The County 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 of substandard. All samples shall be shipped and stored in clean air tight sealed wide mouth jars or bottles made of plastic.

**Equipment:** Maintain all equipment, tools, and machines used in the performance of this work in satisfactory working condition at all times to ensure a high-quality product.

**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 0.035 to 1.5 gallons per square yard. The distributor shall be capable of applying bituminous material of variable widths up to twenty-four (24) 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. Two distributor trucks will be required on all projects.

**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 capable of extending to a width of 24 feet. 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.

**Rollers:** The contractor shall use three, 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.

**Sweepers:** A minimum of 2 vacuum sweepers shall be used on this project. In rural areas a self-propelled rotary broom can be used. It shall be equipped, maintained and operated so the pavement surface can be swept clean. The broom shall have an adjustment to control the downward pressure. In residential areas a vacuum street sweeper must be used, and all excess aggregate shall be swept within 24 to 48 hours after the first application of the Cape Seal has been applied.

**Mixing Equipment:** Truck mounted, and self-loading continuous machines are acceptable. Mix the material with an automatic-sequenced, self-propelled mixing machine. It shall be a continuous-flow mixing unit able to accurately deliver and proportion the mix components through 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 all mix components to maintain an

adequate supply to the proportioning controls. Four truck mounted machines of 12 cubic yard capacity, or larger, will be required for all projects or roads one half mile or less in length.

Self-loading continuous machines shall be capable of loading materials while continuing to lay micro surfacing, thereby minimizing construction joints. Two self-loading machines shall be required on all projects or roads greater than one half mile in length. Self-loading continuous machines shall be equipped to allow the operator to have full control of the forward and reverse speeds during applications of the material and shall 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 Device:** Provide and properly mark individual volume or weight controls for proportioning each material to be added to the mix (i.e., aggregate, mineral filler, emulsified asphalt, additives, and water).

**Spreading Equipment:** Agitate and spread the mixture uniformly in the spreader box by means of twin-shafted paddles or spiral augers fixed in the spreader box. Provide a front seal to ensure 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, and a free flow of material is provided to the rear strike-off. The spreader box shall have suitable means to hydraulically adjust the box width automatically while traveling behind the mixing unit and be able to side shift the box to compensate for variations in the pavement geometry.

**Secondary Strike-off:** Provide a secondary strike-off 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.

**Auxiliary Equipment:** Provide suitable surface preparation equipment, traffic control equipment, hand tools, and any other support and safety equipment necessary to perform the work.

**Calibration:** Calibrate each mixing unit to be used in the performance of the work in the presence of the Engineer prior to the start of construction. Previous calibration documentation covering the exact materials to be used may be acceptable, provided that no more than 60 days have lapsed.

Document the individual calibration of each material at various settings, which can be related to the machine metering devices. Do not utilize any mixing unit on the project until the calibration has been completed and approved by the Engineer. Any component replacement affecting material proportioning requires that the machine be recalibrated. No machine will be allowed to work on the project until the calibration has been completed and accepted

**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 10' straight edge) shall be the responsibility of the Contractor.

**Experience:** All contractors and their subcontractors shall be FDOT prequalified in the work classes of drainage, flexible paving, grading, and hot plant-mixed bituminous courses. Bidders must submit with the bid a minimum of five (5) Cape Seal project references from a City or County in the State of Florida that have been completed within the past three years. Bidders may be required to submit detailed information regarding the staff that they propose for this project.

The Contractor shall be capable of meeting all the requirements of this specification at the time of the bid. The Contractor shall have in their possession, in the State of Florida at the time of bidding, two (2) or more aggregate spreaders, two (2) distributors, four (4) truck mounted machines and two (2) self-loading machines as described in the equipment section of the specification. Staff shall have the option to inspect the Contractor's equipment and if found deficient, it shall be the basis for rejection of Contractor's bid.

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 cape seal 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 cape 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 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. Remove any thermoplastic striping materials and retro-reflective pavement markers in the areas to be cape sealed. Provide temporary striping as necessary to comply with Contract Documents. If water is used for cleaning, allow any unsealed cracks to dry thoroughly before applying cape seal. Protect manholes, valve boxes, drop inlets and other service entrances from the cape seal mixture by a suitable method. The Engineer will approve the surface preparation prior to cape seal. No loose aggregate, either spilled from the lay-down machine or existing on the road, will be permitted on the final application.

**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 0.32 -0.38 gallons per square yard depending on the composition of the existing road bed, surface texture and the size of the aggregate in use.

**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 22 – 28 lbs square yard depending upon the type of road that is being resurfaced.

**Rolling:** Immediately following the first application of the cover material, roll the entire surface with pneumatic rollers. Continue rolling as long as necessary to ensure thorough keying of the cover aggregate into the liquid bituminous material and 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 within 24 to 48 hours after the first application, before the final lift is applied.

**Application of Final Lift:** Pre-wet the surface by fogging ahead of the spreader box with water. Adjust the rate of application of the fog spray to suit temperatures, surface texture, humidity, and dryness of the pavement.

The material shall be of the desired consistency upon leaving the mixer. Carry a sufficient amount of material in all parts of the spreader box at all times so that complete coverage is obtained. Avoid overloading of the spreader box. Do not allow lumping, balling, or unmixed aggregate in the micro surfacing mixture. Do not leave streaks, such as those caused by oversized aggregate, in the finished surface. If excess streaking develops, stop production until the situation has been corrected. Excessive streaking is defined as more than four drag marks greater than 1/2 inch wide and 4 inches long, or 1 inch wide and 3 inches long, in any 30 yd<sup>2</sup> area. Do not permit transverse ripples or longitudinal streaks of 1/4 inch in depth or greater, when measured by placing a 10-foot straight edge over the surface.

**Rate of Application:** The average application rate shall be in accordance with Table 62-6, unless otherwise specified in the Contract Documents. Full width application rates must be maintained within  $\pm 2$  lbs/yd<sup>2</sup> of the specified rate. Application rates are based upon the weight of dry aggregate in the mixture. The maximum thickness of any single layer of micro surfacing at the edge of the pavement shall be 1/4 inch.

<b>AGGREGATE TYPE</b>	<b>LOCATION</b>	<b>APPLICATION RATE(1)</b>	
Type II	Collectors, Local Roads, and Airport Runways	Single Application:	
		26-30 lbs/yd <sup>2</sup>	

(1) Application rates are based upon the weight of dry aggregate in the mixture.

**Joints:** Prevent excessive buildup, uncovered areas, or unsightly appearance on longitudinal and transverse joints. Provide suitable-width spreading equipment to produce a minimum number of longitudinal joints throughout the project. Place longitudinal joints on lane lines, where possible. Use half passes and odd- width passes only when absolutely necessary. Do not apply a half pass as the last pass of any area. Do not overlap longitudinal lane line joints by more than three inches. Do not construct joints having more than a 1/4 inch difference in elevation when measured by placing a 10-foot straight edge over the joint and measuring the elevation drop-off. Construct longitudinal joints so that water is not held at the joint. Construct transverse joints at the beginning and end project limits so that the elevation difference does not exceed 1/4 inch.

**Mix Stability:** Produce a mixture that possesses 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. The mixture shall be free of excess water or emulsified asphalt and free of segregation of the emulsified asphalt and aggregate fines from the coarser aggregate. Do not spray water directly into the spreader box while applying material under any circumstances.

**Handwork:** Utilize hand squeegees to provide complete and uniform coverage of cape sealed areas that cannot be reached with the mixing machine. Lightly dampen the area to be hand worked prior

to mix placement, if necessary. Care shall be exercised to leave no unsightly appearance from handwork. When performing handwork, provide the same type of finish as that applied by the spreader box.

**Lines:** Construct straight lines along curbs and shoulders. Do not permit runoff on these areas. Keep lines at intersections straight to provide a good appearance. If necessary, utilize a suitable material to mask off the end of streets to provide straight lines. Edge lines shall not vary by more than 2 inches horizontally.

**Cleanup:** Remove cape seal material from all areas such as manholes, gutters, drainage structures, rumble strips, and as otherwise specified by the Engineer. On a daily basis, remove any debris resulting from the performance of the work.

Quality Assurance:

**Material Monitoring:** Provide a computerized material monitoring system with integrated material control devices that are readily accessible and positioned so the amount of each material used can be determined at any time. Ensure the computer system is functional at the beginning of work and during each calibration. Provide a back-up electronic materials counter that is capable of recording running count totals for each material being monitored. Equip the mixer with a radar ground measuring device. The computer system shall have the capability to record, display and print the following information:

1. Individual sensor counts for emulsion, aggregate, cement, water, and additive.
2. Aggregate, emulsion, and cement output in pounds per minute.
3. Ground travel distance.
4. Spread rate in pounds per square yard.
5. Percentages of emulsion, cement, water, and additive.
6. Cumulative totals of aggregate, emulsion, cement, water, and Additive.
7. Scale factor for all materials.

**Sampling and Testing:** The Engineer shall obtain one sample of micro surfacing mixture each day of production. The Engineer shall test each sample in accordance with FM 5-563 and FM 1-T 030 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 in Table 62-7.

<b>Table 62-7 Aggregate and Emulsified Asphalt - Acceptance Limits</b>	
<b>Aggregate</b>	<b>Tolerance from Mix Design Target Values</b>
Percent Passing No. 4 Sieve	± 6 percent
Percent Passing No. 8 Sieve	± 7 percent
Percent Passing No. 50 Sieve	± 6 percent
Percent Passing No. 200 Sieve	± 3.0 percent
<b>Emulsified Asphalt</b>	
Residual Asphalt Content of Mixture	± 0.6 percent

**Application Rate:** Control the application rate for micro surfacing on a lot basis to within the "Total" range specified in 62-6. A lot will be considered as 0.10 lane miles. No additional compensation will be paid for application rates placed in excess of the "Total" specified range. The unit price for each deficient lot will be reduced by ten percent for each lb/yd<sup>2</sup> rate less than the "Total"

specified range. For application rates outside the "Total" specified range, stop production of the mixture and make adjustments to correct the problem to the satisfaction of the Engineer prior to resuming production. Accept a pay reduction for deficient lot production or overlay the deficient area at full plan width and depth at no additional cost.

**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 rolling and blotting has been completed. The Contractor shall have on site an M.O.T. person with no less than an Intermediate certification and submit an M.O.T. plan indicating all facets of traffic control for the project area. The M.O.T. 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 as specified in the Bid Form including all items of work described herein. Any item necessary for Cape Seal, and not specifically listed in another item in the Bid Form, shall be included in this item. The prime contractor must perform at least 51% or more of the project that includes Cape Seal.

**Basis of Payment:** The quantities to be paid for under this Technical Provision shall be included in the **Square Yard price for Cape Seal** 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 Cape 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.

**Warranty:** The Contractor shall provide the County upon final acceptance of the Cape Seal work, a warranty period of three (3) years which shall include all labor, materials, hauling, traffic control and striping to repair the defective areas. Defective areas shall include debonding/delamination, excessive raveling and aggregate loss exposing the old roadway surface. The Contractor shall perform all warranty work at no cost to the County. The Contractor shall have been doing business in the State of Florida for at least four years from the date of this bid and have full time experienced personnel to respond to any warranty issues within 24 hours. The Contractor can be called to perform work or warranty work at any time of the year as needed by the County. The Contractor must have a full-time presence with an office, experienced personnel and the proper equipment in Florida to respond 365 days a year.

The basis of payment for **Cape Seal** shall be paid as per SQUARE YARD.  
335-3A Cape Seal

**350-99A      Crack Sealing:**

Clean and seal joints and cracks in asphalt concrete roadway surfaces using the Cut and Seal method or the Crack Fill method.

Each Bidder shall include in their bid the material that the Bidder proposes to utilize for this application.

The basis of payment for **Crack Seal** shall be paid as per GALLON.

**339-1      Miscellaneous Asphalt Pavement**

The bid price for this item shall include, but not be limited to, the requirements of Section 339 Miscellaneous Asphalt Pavement of the FDOT Standard Specifications (Latest Edition). The unit cost shall include, but not be limited to the required manpower, equipment, materials, shaping and compacting the foundation, soil sterilization treatment, shaping of the adjacent earth surfaces and any other items necessary as described within the plans.

The basis of payment for **Miscellaneous Asphalt Pavement** shall be paid as per TON.

**520-1-10      Concrete Curb & Gutter, Variable Height Type F**

The bid price for this item shall include, but not be limited to, the requirements of Section 520 Concrete Gutter, Curb Elements, and Traffic Separator of the FDOT Standard Specifications (Latest Edition). The unit cost shall include, but not be limited to the required manpower, equipment, materials, and any other items necessary to place the Type F Curb and Gutter as indicated on the plans. Includes all forming, contraction joint forming, expansion joint construction, steel reinforcement, finishing, backfilling and compaction.

The basis of payment for **Concrete Curb & Gutter, Type F** is per LINEAR FOOT.

**522-2      Concrete Sidewalk & Driveways, 6" Thick:**

The bid price for this item shall include, but not be limited to, the requirements of Section 522 Concrete Sidewalk and Driveways of the FDOT Standard Specifications (Latest Edition). The unit cost shall include all materials, manpower and equipment for installation.

The basis of payment for **Concrete Sidewalk & Driveways, 6" Thick** shall be paid as per SQUARE YARD.

**570-1-2      Performance Turf, Sod**

The bid price for this item shall include, but not be limited to the requirements of Section 570 Performance Turf of the Supplemental FDOT Standard Specifications (Latest Edition) as well as all manpower, equipment, materials, and any other items necessary to perform the task. All disturbed areas shall be covered to match like kind. Also included in this item is any fertilizer and water needed. All disturbed areas shall be covered with a good stand of grass upon acceptance of the project by ST. LUCIE COUNTY BOCC. The CONTRACTOR will be responsible for repairing all washed-out and eroded areas and watering of the sod until such time as the project is accepted by the ST. LUCIE COUNTY BOCC.

The basis of payment for **Performance Turf (Sod)** shall be paid as per SQUARE YARD.

## PAVEMENT MARKINGS ITEMS

### **710-10 Painted Pavement Markings**

The bid price for this item shall meet the requirements of Section 710 Painted Pavement Markings of the FDOT Standard Specifications (Latest Edition). The unit cost shall include all cleaning and preparing of surfaces, furnishing of all materials, application, curing and protection of traffic, furnishing of all tools, machines and equipment for installation as shown on the plans.

The basis of payment for **Painted Pavement Markings** shall be paid as follows:

- 710-11-121 Standard, White, Solid 6", Linear Foot
- 710-11-122 Standard, White, Solid 8", Linear Foot
- 710-11-123 Standard, White, Solid 12", Linear Foot
- 710-11-124 Standard, White, Solid 18", Linear Foot
- 710-11-125 Standard, White, Solid 24", Linear Foot
- 710-11-131 Standard, White, Skip 6", Linear Foot
- 710-11-141 Standard, White, Dotted/Guidline 6-10 Gap 6", Linear Foot
- 710-11-16 Standard, White, Solid Message, Each
- 710-11-17 Standard, White, Solid Arrow, Each
- 710-11-18 Standard, White, Solid Yield Line", Linear Foot
- 710-11-221 Standard, Yellow, Solid 6", Linear Foot
- 710-11-222 Standard, Yellow Solid 8", Linear Foot
- 710-11-223 Standard, Yellow, Solid 12", Linear Foot
- 710-11-224 Standard, Yellow Solid 18", Linear Foot
- 710-11-225 Standard, Yellow, Solid 24", Linear Foot
- 710-11-231 Standard, Yellow, Skip 6", Linear Foot
- 710-11-241 Standard, Yellow, , Dotted/Guidline 6-10 Gap 6", Linear Foot

**BIDDER'S QUALIFICATION QUESTIONNAIRE**

**BID No. 25-059**

**PROJECT NAME: ROADWAY SURFACING, RECONSTRUCTION, AND PRESERVATION**

THE UNDERSIGNED GUARANTEES THE TRUTH AND ACCURACY OF ALL STATEMENTS AND ANSWERS HEREIN CONTAINED:

**BIDDER'S GENERAL INFORMATION:**

Bidder shall furnish the following information. Failure to comply with this requirement will render Bid non-responsive and may cause its rejection. Additional sheets shall be attached as required.

1. Bidder's Name, Principal Address, Phone and Fax Number:

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2. Number of years as a Contractor in this type of work: \_\_\_\_\_

3. Names and titles of all officers, partners or individuals doing business under trade name:

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Please provide proof of State Certification and/or State Registration by attaching copies of State Certifications. State Registrations shall also be accompanied by proof of St. Lucie County Certificate(s) of Competency by attaching copies of County Certificate(s) **Possession of either a State Certification or County Competency card must be attained prior to bid submittal.**

4. The business is a: \_\_\_\_\_ Sole Proprietorship \_\_\_\_\_ Partnership \_\_\_\_\_ Corporation

5. Name, address, and telephone number of Surety Company and agent who will provide the required bonds on this contract:

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6. What is the last project of this nature that you have completed?

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7. Have you ever failed to complete work awarded to you? If so, when, where and why?

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8. Have you personally inspected the proposed work and do you have a complete plan for its performance?

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9. List CM's or GC's your company has worked for within the past three years. (List 2 other than those shown below)

CM/GC No. 1	Contact Person:	Tel: Fax:
CM/GC No. 2	Contact Person:	Tel: Fax:

10. List three SIGNIFICANT PROJECTS completed within the past five years.

Project No. 1	Location:	Contract Amount:	Date Completed:
Contracting Agency	Contact Person:		Tel: Fax:

Project No. 2	Location:	Contract Amount:	Date Completed:
Contracting Agency	Contact Person:		Tel: Fax:

Project No. 3	Location:	Contract Amount:	Date Completed:
Contracting Agency	Contact Person:		Tel: Fax:

11. List two SIGNIFICANT PROJECTS currently under construction.

Project	Location:	Contract Amount:	Date Completed:
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No. 1

Contracting  
Agency

Contact  
Person:

Tel:  
Fax:

Project  
No. 2

Location:

Contract  
Amount:

Date  
Completed:

Contracting  
Agency

Contact  
Person:

Tel:  
Fax:

12. List the pertinent experience of the key individuals of your organization (continue on insert sheet, if necessary).

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13. State the name and licensing of the individual who will have personal supervision of the WORK.

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14. Will you sublet any part of this WORK? If so, give details.

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15. What equipment do you own that is available for the WORK? (Attach additional sheets as necessary)

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16. What equipment will you purchase for the proposed WORK?

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17. What equipment will you rent for the proposed WORK?

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The BIDDER acknowledges and understands that the information contained in response to this Qualification's Statement shall be relied upon by COUNTY in awarding the contract and such information is warranted by BIDDER to be true. The discovery of any omission or misstatement that materially affects the BIDDER'S qualifications to perform under the contract shall cause the COUNTY to reject the Bid, and if after the award, to cancel and terminate the award and/or contract.

The BIDDER also acknowledges that all information listed above may be checked by the COUNTY and authorizes all entities or persons listed above to answer any and all questions. BIDDER hereby indemnifies the COUNTY and persons or entities listed above and hold them harmless from any claim arising from such authorization or the exercise thereof, including the dissemination of information requested above.

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

Date \_\_\_\_\_

## **SECTION 00454 – CONFIRMATION OF DRUG-FREE WORKPLACE**

**IDENTICAL TIE BIDS:** Preference shall be given to businesses with drug-free workplace programs. Whenever two or more bids which are equal with respect to price, quantity, and service are received by the State or by any political subdivision for the procurement of commodities or contractual services, a bid received from a business that certifies that it has implemented a drug-free workplace program shall be given preference in the award process. Established procedures for processing tie bids will be followed if none of the tied vendors have a drug-free workplace program (Florida Statutes Section 287.087 Florida Statutes). In order to have a drug-free workplace program, a business shall:

In order to have a drug-free workplace program, a business shall:

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 prohibitions.
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 under Bid a copy of the statement specified in subsection (1).
4. In the statement specified in subsection (1), notify the employee that, as a condition of working on the commodities or Contractual services that are under bid, the employee will abide by the terms of the statement and will notify the employer of any conviction of, or plea of guilty or nolo contendens to, any violation of Chapter 893 Florida Statutes 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 the 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.

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Contractor's Signature

**SECTION 00455 – NON-COLLUSION AFFIDAVIT**

STATE OF FLORIDA

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

\_\_\_\_\_ being first duly sworn, deposes and says that:

1. BIDDER is the \_\_\_\_\_,

(Owner, Partner, Officer, Representative or Agent)

2. BIDDER is fully informed respecting the preparation and contents of the attached Bid and of all pertinent circumstances respecting such Bid;

3. Such Bid is genuine and is not a collusive or sham Bid;

4. Neither the said BIDDER nor any of its officers, partners, owners, agents, representative, employees or parties in interest, including this affidavit, have in any way colluded, conspired, connived or agreed, directly or indirectly, with any other BIDDER, firm or person to submit a collusive or sham Bid in connection with the Contract for which the attached Bid has been submitted; or to refrain from bidding in connection with such Contract; or have in any manner, directly or indirectly, sought by agreement or collusion, or communications, or conference with any BIDDER, firm, or person to fix the price or prices in the attached Bid or any other BIDDER, or to fix any overhead, profit, or cost element of the Bid Price or the Bid Price of any other BIDDER, or to secure through any collusion, conspiracy, connivance, or unlawful agreement any advantage against CITY, or any person interested in the proposed Contract;

5. The price of items quoted in the attached Bid are fair and proper and are not tainted by collusion, conspiracy, connivance, or unlawful agreement on the part of the BIDDER or any other of its agents, representatives, owners, employees or parties in interest.

By \_\_\_\_\_

Sworn to and subscribed before me on this \_\_\_\_\_ day of \_\_\_\_\_,

20\_\_\_\_ by \_\_\_\_\_ who is personally known to me or who has presented the following type of identification: \_\_\_\_\_.

\_\_\_\_\_  
Signature of Notary Public, State of Florida

\_\_\_\_\_  
Notary seal (stamped in black ink)  
OR

Printed, typed or stamped name of Notary  
and Commission Number

**SECTION 00610 – PUBLIC CONSTRUCTION BOND**

**BY THIS BOND**, We \_\_\_\_\_, as Principal, and \_\_\_\_\_  
\_\_\_\_\_, a Corporation, as Surety, are bound to the **ST. LUCIE COUNTY**, herein called "County", in the sum of for payment of which we bind ourselves, our heirs, personal representatives, successors, and assigns, jointly and severally.

**THE CONDITION OF THIS BOND** is that if Principal:

1. Performs the Contract dated \_\_\_\_\_ 20\_\_ between Principal and County for the construction of the **Roadway Surfacing, Reconstruction, and Preservation** project located within St. Lucie County, Florida, the Contract being made a part of this bond reference, at the times and in the manner prescribed in the Contract; and
2. Promptly makes payments to all claimants, as defined in Section 255.05(1), Florida Statutes, supplying Principal with labor, materials, or supplies, used directly or indirectly by Principal in the prosecution of the work provided for in the Contract; and
3. Pays County all losses, damages including but not limited to delay damages, expenses, costs, and attorney's fees, including appellate proceedings, that County sustains because of a default by Principal under the Contract; and
4. Performs the guarantee of all work and materials furnished under the Contract for the time specified in the Contract, then this bond is void; otherwise it remains in full force.

Any action instituted by a claimant under this bond for payment must be in accordance with the notice and time limitation provisions in Section 255.05(2), Florida Statutes.

Any changes in or under the contract documents and compliance or noncompliance with any formalities connected with the contract or the changes does not affect Surety's obligation under this bond.

Principal agrees to record this bond in the Official Records for St. Lucie County before the commencement of the work subject of this bond.

DATED ON: \_\_\_\_\_, 20\_\_.

PRINCIPAL: \_\_\_\_\_

Address: \_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_

By: \_\_\_\_\_

SURETY: \_\_\_\_\_

Address: \_\_\_\_\_  
\_\_\_\_\_

By: \_\_\_\_\_

(As Attorney-in-Fact)

**CERTIFICATES AS TO CORPORATE PRINCIPAL**

I, \_\_\_\_\_, certify that I am the Secretary of the Corporation named as Principal in the within bond; that \_\_\_\_\_ who signed the said bond on behalf of the Principal, was then \_\_\_\_\_ of said Corporation; that I know his signature, and his signature hereto is genuine; and that said bond was duly signed, sealed, and attested for and in behalf of said Corporation by authority of its governing body.

\_\_\_\_\_  
Secretary (Corporate Seal)

**STATE OF FLORIDA)**

**ss**

**COUNTY OF \_\_\_\_\_)**

The foregoing instrument was acknowledged before me this \_\_\_\_ day of \_\_\_\_\_, 20\_\_\_\_, by

\_\_\_\_\_, on behalf of the corporation (Surety). He/She  
[please check as applicable]

\_\_\_\_\_ is personally known to me,  
\_\_\_\_\_ his/her (state) \_\_\_\_\_ driver's license,  
\_\_\_\_\_ his/her \_\_\_\_\_ (type of identification) as identification,

who being by me first duly sworn upon oath, says that he/she is the Attorney-in-Fact, for the Principal and that he has been authorized by the Principal to execute the foregoing bond on behalf of the Principal named therein in favor of St. Lucie County, Florida.

Subscribed and sworn to before me this \_\_\_\_\_ day of \_\_\_\_\_, 20\_\_\_\_, A.D.

\_\_\_\_\_  
Notary Public State of Florida-at-Large

(Attach Power of Attorney)

## SECTION 00700 – GENERAL CONDITIONS

<u>Article</u>	<u>Title</u>
1.0	Definitions
2.0	Preliminary Matters
3.0	Correlation, Interpretation, and Intent of Contract Documents
4.0	Availability of Lands: Subsurface Conditions; Reference Points
5.0	Public Records
6.0	Bonds and Insurance
7.0	Contractor Responsibility
8.0	Subcontractors
9.0	County's Responsibilities
10.0	Consultant's Status During Construction
11.0	Changes in the Work
12.0	Change of Contract Price
13.0	Delays and Extensions of Time
14.0	Guarantee; Tests and Inspections
15.0	Payments and Completions
16.0	Suspension of Work and Termination
17.0	Miscellaneous
18.0	Public Entity Crimes
19.0	Punchlist Procedures
20.0	Audit
21.0	Indemnity
22.0	Indemnity of Florida East Coast Railroad Company and Insurance Requirements- If Applicable
23.0	Inspection
24.0	Public Construction Bond
25.0	Insurance
26.0	Non-Discrimination
27.0	E-Verity / Verification of Employment Status
28.0	Products or Materials with Recycled Content
29.0	Florida Produced Lumber
30.0	Asbestos-Free Materials
31.0	Dispute Resolution
32.0	Mediation
33.0	Antitrust Assignment

## GENERAL CONDITIONS

### 1 Definitions.

Wherever used in these General Conditions or in the other Contract Documents, the following terms shall have the meanings indicated which shall be applicable to both the singular and plural thereof:

- 1.1 Acceptance: By the COUNTY'S PROJECT MANAGER of the Work as being fully complete in accordance with the Contract Documents.
- 1.2 Contract: The written agreement between the OWNER and the CONTRACTOR covering the Work to be performed; the Contract Documents are attached to and made a part of the Contract. Also designated as the Agreement.
- 1.3 Addenda: Written or graphic instruments issued prior to the opening of bids, which modify or interpret the Contract Documents, Drawings and Specifications, by additions, deletions, clarifications or corrections.
- 1.4 Application for Payment: The form furnished by the COUNTY or the form accepted by the Consultant which is to be used by the CONTRACTOR in requesting progress payments and an affidavit of the CONTRACTOR that progress payments theretofore received from the COUNTY on account of the Work have been applied by the CONTRACTOR to discharge in full all of the CONTRACTOR'S obligations stated in prior Applications for Payment.
- 1.5 Approval: Accept as satisfactory.
- 1.6 Bid: The offer or proposal of the Bidder submitted on the prescribed form setting forth the prices for the Work to be performed.
- 1.7 Bid Documents - Includes the Invitation to Bid, Instructions to Bidders, Bid Form, and proposed Contract Documents (including all Addenda issued prior to receipt of Bids).
- 1.8 Bidder: Any person, firm or corporation submitting a Bid for the Work directly to the County.
- 1.9 Bonds: Bid, performance and payment bonds and other instruments of security, furnished by the CONTRACTOR and his surety in accordance with the Contract Documents and in accordance with the law of the place of the project and approved by the County Attorney.
- 1.10 Change Order: A written order to the CONTRACTOR executed on behalf of the COUNTY authorizing an addition, deletion or revision in the Work, or an adjustment in the Contract Price or the Contract Time issued after execution of the Contract.
- 1.11 County: St. Lucie County, its Board of County Commissioners, or Owner".
- 1.12 County's Representative: The person or persons designated by the COUNTY'S PROJECT MANAGER. The COUNTY'S PROJECT MANAGER. This may include the CONSULTANT.
- 1.13 Consultant: The person, firm or corporation named as such in the Contract Documents that acts as the County's authorized agent within the scope of work entrusted to them by the County.
- 1.14 Consultant's Representative: An authorized representative of the Consultant assigned to observe the work performed and materials furnished by the CONTRACTOR.

- 1.15 Contract: The written agreement between the COUNTY and the CONTRACTOR covering the Work to be performed; the Contract Documents are attached to and made a part of the Contract. Also designated as the Agreement.
- 1.16 Contract Documents: The Contract, Addenda, Instructions to Bidders, CONTRACTOR'S Bid, the Bonds, the Notice of Award, these General Conditions, the Supplementary Conditions, Special Conditions, the Specifications, Drawings, Modifications, and the Notice to Proceed.
- 1.17 Contract Price: The total moneys payable to the CONTRACTOR under the Contract Documents.
- 1.18 Contract Time: The number of calendar days stated in the Contract for the completion of the Work.
- 1.19 Contractor: The individual, partnership, corporation, joint-venture, or other legal entity with whom the COUNTY has entered into the Contract.
- 1.20 Day: A calendar day of twenty-four hours measured from midnight to the next midnight.
- 1.21 Defective Work: Work that is unsatisfactory, faulty, or deficient; or that does not conform to the Contract Documents; or that does not meet the requirements of any inspection, reference standard, test, or approval referred to in the Contract Documents; or WORK that has been damaged prior to the CONSULTANT'S recommendation of final payment.
- 1.22 Drawings: The drawings which show the character and scope of the Work to be performed and which have been prepared or approved by the CONSULTANT and are referred to in the Contract Documents. Shop Drawing are not Drawings as so defined.
- 1.23 Effective Date of the Contract: The date indicated in the Contract, but if no such date is indicated it means the date on which the Contract is signed by the last of the two parties to sign the Contract.
- 1.24 Field Order: A written order issued by the COUNTY'S PROJECT MANAGER or by the CONSULTANT which clarifies or interprets the Contract Documents in accordance with paragraph 9.3 or orders minor changes in the Work in accordance with paragraph 10.2.
- 1.25 Laws and Regulations: Laws, rules, codes, regulations, ordinances and/or orders promulgated by a lawfully constituted body authorized to issue such Laws and Regulations.
- 1.26 Modification: (a) A written amendment of the Contract Documents signed by both parties, (b) a Change Order, (c) a written clarification or interpretation issued by the CONSULTANT in accordance with paragraph 9.3 or (d) a written order for a minor change or alteration in the Work issued by the COUNTY'S PROJECT MANAGER or by the CONSULTANT pursuant to paragraph 10.2. A Modification may only be issued after execution of the Contract.
- 1.27 Notice of Award: The written notice by COUNTY to the apparent successful Bidder stating that upon compliance with the conditions precedent to be fulfilled by him within the time specified, COUNTY will execute and deliver the Contract to him.
- 1.28 Notice to Proceed: A written notice given by the COUNTY'S PROJECT MANAGER to the CONTRACTOR (with a copy to CONSULTANT) fixing the date on which the Contract Time will commence to run and on which CONTRACTOR shall start to perform his obligations under the Contract Documents.

- 1.29 Partial Utilization: Placing a portion of the WORK in service for the purpose for which it is intended (or a related purpose) before reaching Substantial Completion for all the WORK.
- 1.30 Project: The entire construction to be performed as provided in the Contract Documents.
- 1.31 Project Manager: The individual who is authorized to act on behalf of the COUNTY or CONTRACTOR.
- 1.32 Project Representative: (also Construction Observer, Resident Inspector, or Construction Inspector) One or more authorized representatives of the COUNTY assigned to observe the Work performed and materials furnished by the CONTRACTOR, or such other persons as may from time to time be appointed by the COUNTY'S PROJECT MANAGER as his representative(s). Nothing contained in these General Conditions shall be construed to grant to the Project Representatives the right or authority to modify, alter, revoke, enlarge, or relax the provisions of the Contract Documents in any manner, nor to approve or accept any portion of the completed work, or issue instructions contrary to the Plans and Specifications or the requirements of regulatory agencies having jurisdiction.
- 1.33 Samples: Physical examples which illustrate materials, equipment or workmanship and establish standards by which the Work will be judged.
- 1.34 Shop Drawings: All drawings, diagrams, illustrations, brochures, schedules and other data which are prepared by the CONTRACTOR, a Subcontractor, manufacturer, supplier or distributor and which illustrate the equipment, material or some portion of the Work and as required by the Contract Documents. Shop Drawings are not part of the Contract Documents and failure of the CONSULTANT or the COUNTY or any of his representatives to take exception to any product, material, system or installation depicted on Shop Drawings that are not in conformance with the requirements of the Contract Documents shall not constitute a Field Order or Change Order or any other Modification of the Contract Documents, and shall not relieve the CONTRACTOR from complying with any portion of the Contract Documents.
- 1.35 Special Conditions: When included as a part of the Contract Documents, Special Conditions refer only to the Work under this Contract. Special Conditions take precedent over the General Conditions.
- 1.36 Specifications: Those portions of the Contract Documents consisting of written technical descriptions of materials, equipment, construction systems, standards and workmanship as applied to the Work.
- 1.37 Sub-Bidder: One who submits a Bid to a BIDDER.
- 1.38 Subcontractor: An individual, firm or corporation having a direct contract with CONTRACTOR or with any other subcontractor for the performance of a part of the Work at the site.
- 1.39 Substantial Completion: For purposes of this Contract, and for compliance of those procedures, duties and obligations as set forth in Florida Statutes §218.70 and §218.735, the term Substantial Completion shall be as follows, in lieu of any other definition:
- 1.40 "Substantial Completion" is defined as that point where St. Lucie County is able to enjoy beneficial occupancy of the Work and where the Work has achieved that level of completion such that St. Lucie County is able to utilize the entire Project for its intended purposes, including but not limited to the completion of all specified systems and items relating to life safety and regulatory use, with the exception of incidental or incomplete items except where a lack of completion of such

incidental or incomplete items of Work will adversely affect the complete operation of other areas of the Work. Additional conditions (if any) needed to achieve Substantial Completion of the Work and which are project specific are as set forth in attached Technical Specifications.

- 1.41 Successful Bidder: The lowest, qualified, responsible and responsive BIDDER to whom COUNTY (on basis of COUNTY'S evaluation as hereinafter provided) makes an award.
- 1.42 Supplier: Any person or organization who supplies materials or equipment for the Work, including that fabricated to a special design, but who does not perform labor at the site.
- 1.43 Supplementary General Conditions: The part of the Contract Documents which amends or supplements these General Conditions
- 1.44 Surety: The corporate body which is bound with the CONTRACTOR and which engages to be responsible for the CONTRACTOR and his acceptable performance of the Work.
- 1.45 Underground Facilities: All pipelines, conduits, ducts, cables, wires, manholes, vaults, tanks, tunnels or other such facilities or attachments, and any encasements containing such facilities which have been installed underground to furnish any of the following services or materials; electricity, gases, steam, liquid petroleum products, telephone or other communications, cable television, sewage and drainage removal, traffic or other control systems or water.
- 1.46 Unit Price Work: Work to be paid for on the basis of unit prices.
- 1.47 Utilities: All pipelines, conduits, ducts, cables, wires, manholes, vaults, tanks, tunnels or other such facilities or attachments, and any encasements containing such facilities which have been installed underground or above ground to furnish any of the following services or materials: electricity, gases, steam, liquid petroleum products, telephone or other communications, cable television, water supply or distribution, sewage and drainage removal, traffic or other control systems.
- 1.48 Work: Any and all obligations, duties and responsibilities necessary to the successful completion of the Project assigned to or undertaken by CONTRACTOR under the Contract Documents, including all labor, materials, equipment and other incidentals, and the furnished thereof.
- 1.49 Work Change Directive: A written directive to CONTRACTOR, issued on or after the Effective Date of the Contract and signed by the COUNTY and recommended by the CONSULTANT, ordering an addition, deletion or revision in the WORK, or which references an emergency or unforeseen physical conditions under which the WORK is to be performed. A Work Change Directive may not change the Contract Price or the Contract Time, but is evidence that the parties expect that the change directed or documented by a Work Change Directive will be incorporated in a subsequently issued Change Order following negotiations by the parties as to its effect, if any, on the Contract Price or Contract Time.
- 1.50 Written Amendment: A written amendment of the Contract Documents, signed by the COUNTY and CONTRACTOR on or after the Effective Date of the Contract and normally dealing with the non-engineering or non-technical rather than strictly work-related aspects of the Contract Documents.
- 1.51 Written Notice: The term "Notice" as used herein shall mean and include all written notices, demands, instructions, claims, approvals, and disapprovals required to obtain compliance with Contract requirements.

## **2 Preliminary Matters.**

- 2.1 Award: The award of the Contract, if it is awarded, will be to the lowest qualified, responsible Bidder. No Notice of Award will be given until the COUNTY'S PROJECT MANAGER has concluded such investigations as he deems necessary to establish the responsibility, qualification and financial ability of the Bidders to do the Work in accordance with the Contract Documents to the satisfaction of the COUNTY'S PROJECT MANAGER within the time prescribed. The COUNTY reserves the right to reject the Bid of any Bidder who does not pass such investigation to the COUNTY'S satisfaction. In analyzing Bids, the COUNTY'S PROJECT MANAGER may take into consideration alternates and unit prices, if requested by the Bid forms.
- 2.2 Execution of Contract: At least three counterparts of the Contract and such other Contract Documents, including bonds, will be executed and delivered by CONTRACTOR to the Purchasing Department within 30 calendar days of receipt.
- 2.3 2.3 Forfeiture of Bid Security: Failure of the successful Bidder to execute and deliver the Contract and deliver the required Bonds and Insurance Certificates or other documentation as stipulated in paragraph 2.2 or in the Instructions to Bidders – Section 00100, shall be just cause for the COUNTY to annul the Notice of Award and declare the Bid and any security therefore forfeited.
- 2.4 2.4 Contractor's Pre-Start Representation: CONTRACTOR represents that he has familiarized himself with, and assumes full responsibility for having familiarized himself with, the nature and extent of the Contract Documents, Work, locality, and with all local conditions and federal, state and local laws, ordinances, rules and regulations that may in any manner affect performance of the Work, and represents that he has correlated his study and observations with the requirements of the Contract Documents. CONTRACTOR also represents that he has studied all surveys and investigation reports of subsurface and latent physical conditions referred to in the Specifications and made such additional surveys and investigations as he deems necessary for the performance of the Work at the Contract Price in accordance with the requirements of the Contract Documents and that he has correlated the results of all such data with the requirements of the Contract Documents.
- 2.5 Commencement of Contract Time: The Contract Time will commence to run on the date identified in the written notification by the COUNTY'S PROJECT MANAGER in the form of the Notice to Proceed.
- 2.6 Starting the Project: CONTRACTOR shall start to perform his obligations under the Contract Documents on the date when the Contract Time commences to run. No Work shall be done at the site prior to the date on which the Contract Time commences to run, except with the written consent of the COUNTY'S PROJECT MANAGER.
- 2.7 Before Starting Construction: Before undertaking each part of the Work, CONTRACTOR shall carefully study and compare the Contract Documents and check and verify pertinent figures shown thereon and all applicable field measurements. He shall at once report in writing to the CONSULTANT any conflict, error or discrepancy which he may discover; however, he shall not be liable to the COUNTY or the CONSULTANT for his failure to discover any conflict, error or discrepancy in the Drawings or Specifications, unless Contractor had actual knowledge thereof or should reasonably have known thereof. Work which is considered to be normal to the construction industry and should have been anticipated by the CONTRACTOR will not be eligible for reimbursement by change order.
- 2.8 Schedule of Completion: CONTRACTOR shall submit to the COUNTY'S PROJECT MANAGER, together with the executed Contract and other required documents, an estimated progress

schedule with earnings indicating the starting and completion dates of the various stages of the Work, and a preliminary schedule of Shop Drawing Submissions. No payments shall be made by COUNTY to CONTRACTOR until the estimated progress schedule has been reviewed and approved by the COUNTY'S PROJECT MANAGER. See paragraphs 6.27 through 6.32. The CONSULTANT shall review and return this schedule or require revisions thereto within 14 days of its submittal. Said progress schedule shall be updated by CONTRACTOR on a monthly basis.

- 2.9 Pre-Construction Conference: A pre-construction conference will be held, prior to any work being performed and prior to the commencement of the Contract Time, to review the above schedules, to establish procedures for handling Shop Drawings and other submissions and for processing Applications for Payment, and to establish a working understanding between the parties as to the Project. Present at the conference will be the COUNTY'S PROJECT MANAGER or his representative, CONSULTANT, Resident Project Representatives, CONTRACTOR and his Superintendent, and appropriate parties such as private utilities as deemed necessary.
- 2.10 Qualification of Subcontractors, Materialmen and Suppliers: Within ten (10) working days after bid opening, the CONTRACTOR will (if required) submit to the COUNTY'S PROJECT MANAGER and the CONSULTANT for acceptance a list of the names of Subcontractors and such other persons and organizations (including those who are to furnish principal items of materials or equipment) proposed for those portions of the Work as to which the identity of the Subcontractors and other persons and organizations must be submitted as specified in the Contract Documents. Within thirty working days after receiving the list, the CONSULTANT will notify the CONTRACTOR in writing if either the COUNTY'S PROJECT MANAGER or the CONSULTANT, after due investigation, has reasonable objection to any Subcontractor, person or organization on such list. The failure of the COUNTY'S PROJECT MANAGER or the CONSULTANT to make objection to any Subcontractor, person or organization on the list within thirty days of receipt shall constitute an acceptance of such Subcontractor, person or organization. Acceptance of any such Subcontractor, person or organization shall not constitute a waiver of any right of the COUNTY'S PROJECT MANAGER or the CONSULTANT to reject defective Work, material or equipment, or Work, material or equipment not in conformance with the requirements of the Contract Documents.

### **3 Correlation, Interpretation, and Intent of Contract Documents.**

- 3.1 Contract Documents Modifications: It is the intent of the Specifications and Drawings to describe a complete Project to be constructed in accordance with the Contract Documents. The Contract Documents comprise the entire Contract between the COUNTY and the CONTRACTOR. They may be altered only by a Modification.
- 3.2 Conflicts, Errors or Discrepancies: The Contract Documents are complementary; what is called for by one is as binding as if called for by all. If CONTRACTOR finds a conflict, error or discrepancy in the Contract Documents, he shall call it to the CONSULTANT'S attention in writing at once and before proceeding with the Work affected thereby; however, he shall not be liable to the COUNTY or CONSULTANT for his failure to discover any conflict, error or discrepancy in the Specifications or Drawings, unless CONTRACTOR had actual knowledge thereof or should reasonably have known thereof.
- 3.3 Furnish and Install: The words "furnish", "furnish and install", and "provide" or words with similar meaning shall be interpreted, unless otherwise specifically stated, to mean "furnish and install complete in place and ready for service".
- 3.4 Miscellaneous Items: Miscellaneous items and accessories which are not specifically mentioned, but which are essential to produce a complete and properly operating installation, or usable structure or plant, providing the indicated function, shall be furnished and installed without

change in the Contract Price. Such miscellaneous items and accessories shall be of the same quality standards, including material, style, finish, strength, class, weight and other applicable characteristics, as specified for the major component of which the miscellaneous item or accessory is an essential part, and shall be approved by the CONSULTANT before installation. The above requirements are not intended to include major components not covered by or inferable from the Drawings and Specifications.

- 3.5 Trades Work: The Work of all trades under this Contract shall be coordinated by the CONTRACTOR in such a manner as to obtain the best workmanship possible for the entire Project, and all components of the Work shall be installed or erected in accordance with the best practices of the particular trade.
- 3.6 Manufacturer's Literature: Manufacturer's literature, when referenced, shall be dated and numbered and is intended to establish the minimum requirements acceptable. Whenever reference is given to codes, or standard specifications or other data published by regulating agencies or accepted organizations, including but not limited to National Electrical Code, applicable State Building Code, Federal Specifications, ASTM Specifications, various institute specifications, and the like, it shall be understood that such reference is to the latest edition, including addenda in effect on the date of Bid. However, no provision of any referenced standard specification, manual or code (whether or not specifically incorporated by reference in the contract documents) shall be effective to change the duties and responsibilities of the COUNTY, CONTRACTOR, or CONSULTANT, or any of their consultants, agents or employees from those set forth in the Contract Documents, nor shall it be effective to assign to the CONSULTANT, or any of the CONSULTANT'S consultants, agents or employees, any duty or authority to supervise or direct the furnishing or performance of the work or any duty or authority to undertake responsibility contrary to the provisions of these General Conditions.
- 3.7 Brand Names: Brand names where used in the technical specifications, are intended to denote the standard of quality required for the particular material or product. The term "equal" or "equivalent", when used in connection with brand names, shall be interpreted to mean a material or product that is similar and equal in type, quality, size, capacity, composition, finish, color and other applicable characteristics to the material or product specified by trade name, and that is suitable for the same use and capable of performing the same function, in the opinion of the CONSULTANT, as the material or product so specified. Determination of whether an item is "equal" or "equivalent" shall be solely at the discretion of the CONSULTANT with the concurrence of the COUNTY'S PROJECT MANAGER. Proposed equivalent items must be approved by CONSULTANT before they are purchased or incorporated in the Work. Failure of the CONSULTANT or the COUNTY'S PROJECT MANAGER to find an item "equal" or "equivalent" shall not entitle the CONTRACTOR to a change in contract price. Approval of an item as "equal" or "equivalent" shall entitle the COUNTY to a credit if use of the approved item results in a savings in material and/or labor cost to the CONTRACTOR. (When a brand name, catalog number, model number, or other identification, is used without the phrase "or equal", the CONTRACTOR shall use the brand specified.)

#### **4 Availability of Lands: Subsurface Conditions; Reference Points.**

- 4.1 Availability of Lands: The COUNTY will furnish, as indicated in Contract Documents, the lands upon which the Work is to be done, rights-of-way and easements for access thereto, and such other lands, which are designated for the use of the CONTRACTOR. Easements for permanent structures or permanent changes in existing facilities will be obtained and paid for by the COUNTY, unless otherwise specified in the Contract Documents. Other access to such lands or rights-of-way for the CONTRACTOR'S convenience shall be the responsibility of the CONTRACTOR. The

CONTRACTOR will provide for all additional lands and access thereto that may be required for temporary construction facilities or storage of materials and equipment.

4.2 Not used - Reserved.

4.3 Subsurface Conditions: The CONTRACTOR acknowledges that he has investigated prior to bidding and satisfied himself as to the conditions affecting the Work, including but not restricted to those bearing upon transportation, disposal, handling and storage of materials, availability of labor, water, electric power, roads and uncertainties of weather, river stages, tides, water tables or similar physical conditions at the site, the conformation and conditions of the ground, the character of equipment and facilities needed preliminary to and during prosecution of the Work. The CONTRACTOR further acknowledges that he has satisfied himself as to the character, quality and quantity of surface and subsurface materials or obstacles to be encountered insofar as this information is reasonably ascertainable from an inspection of the site, including all exploratory work done on behalf of the COUNTY on the site or any contiguous site, as well as from information presented by the Drawings and Specifications made a part of this Contract, or any other information made available to him prior to receipt of Bids. Any failure by the CONTRACTOR to acquaint himself with the available information will not relieve him from responsibility for estimating properly the difficulty or cost of successfully performing the Work. The COUNTY and CONSULTANT assume no responsibility for any conclusions or interpretations made by the CONTRACTOR on the basis of the information made available by the COUNTY or CONSULTANT.

4.4 Differing Site Conditions:

4.4.1 The CONTRACTOR shall promptly, and before such conditions are disturbed, notify the COUNTY'S PROJECT MANAGER in writing of:

4.4.1.1 subsurface or latent physical conditions at the site differing materially from those indicated in this contract, or

4.4.1.2 unknown physical conditions at the site; of an unusual nature, differing materially from those ordinarily encountered and generally recognized as inherent in work of the character provided for in this contract. The COUNTY'S PROJECT MANAGER shall promptly investigate the conditions, and if he finds that such conditions do materially so differ and cause an increase or decrease in the Contractor's cost of, or the time required for, performance of any part of the work under this contract, whether or not changed as a result of such conditions, an equitable adjustment shall be made and the contract modified in writing accordingly.

4.4.2 No claim of the CONTRACTOR under this clause shall be allowed unless the CONTRACTOR has given the notice required in 4.4.1 above; provided, however, the time prescribed therefore may be extended by the COUNTY.

4.4.3 No claim by the CONTRACTOR for an equitable adjustment hereunder shall be allowed if asserted after final payment under this contract.

4.5 Physical Conditions - Underground Facilities: The information and data shown or indicated in the Contract Documents with respect to existing Underground Facilities at or contiguous to the site is based on information and data furnished to COUNTY or CONSULTANT by the owners of such Underground Facilities or by others. Unless it is otherwise expressly provided in the Special Conditions:

- 4.5.1 COUNTY and CONSULTANT shall not be responsible for the accuracy or completeness of any such information or data; and,
  - 4.5.2 CONTRACTOR shall have full responsibility for reviewing and checking all such information and data, for locating all Underground Facilities shown or indicated in the Contract Documents, for coordination of the Work with the owners of such Underground Facilities during construction, for the safety and protection thereof as provided in paragraph 7.43 and repairing any damage thereto resulting from the Work, the cost of all of which will be considered as having been included in the Contract Price. No additional compensation will be allowed the Contractor because of the existence of utility lines, which are not shown on drawings.
  - 4.5.3 If an Underground Facility is uncovered or revealed at or contiguous to the site which was not shown or indicated in the Contract Documents, CONTRACTOR shall, promptly after becoming aware thereof and before performing any Work affected thereby (except in an emergency as permitted by paragraph 7.26) identify the owner of such Underground Facility and give written notice thereof to that owner and to the COUNTY'S PROJECT MANAGER and CONSULTANT.
- 4.6 Existing Structures: The plans show the locations of all known surface and subsurface structures. However, the COUNTY and CONSULTANT assume no responsibility for failure to show any or all of these structures on the Plans, or to show them in their exact location. It is mutually agreed that such failure shall not be considered sufficient basis for claims for additional compensation for extra work or for increasing the pay quantities in any manner whatsoever, unless the obstruction encountered is such as to necessitate changes in the lines or grades, or requires the building of special work, provisions for which are not made in the Plans and Proposal in which case the provisions in these Specifications for extra work shall apply.

## **5 Public Records.**

The Contractor shall allow public access to all documents, papers, letters, or other material subject to the provisions of Chapter 119, Florida Statutes, and made or received by the Contractor in conjunction with this Contract.

## **6 Bonds and Insurance.**

- 6.1 Public Construction Bond: CONTRACTOR shall furnish a public construction bond as security for the faithful performance and payment of all his obligations under the Contract Documents. This Bond shall be in an amount at least equal to the Contract Price and in such form and with such sureties as are acceptable to OWNER. Bond forms for the aforementioned securities are a part of the Contract Documents and CONTRACTOR shall insure that each executed copy of the bond form is complete and sealed. The Bond shall remain in effect at least until one year after the date when final payment becomes due, except as otherwise provided by Law or Regulation or by the Contract Documents. CONTRACTOR shall also furnish such other Bonds as are required by the Contract Documents. All Bonds shall be in the forms prescribed by Law or Regulation or by the Contract Documents and be executed by such sureties licensed to do business in Florida, satisfactory to St. Lucie County and with an "A" rating or better as published by Best Insurance Reports. All Bonds signed by an agent must be accompanied by a certified copy of the authority to act.
- 6.2 Contractor's Insurance: The CONTRACTOR shall provide the OWNER with insurance certificates, as set forth in the Contract, certifying that all required insurance is in force; and such insurance certificates shall include provisions that the insurance shall not be canceled, allowed to expire or

be materially changed without giving the OWNER'S PROJECT MANAGER advance notice by registered mail.

6.2.1 The Contractor shall maintain all insurance during the life of this Contract as set forth in the Contract.

6.3 Cancellation and Re-Insurance: If any insurance should be canceled or changed by the insurance company or should any insurance expire during the period of this Contract, the CONTRACTOR shall be responsible for securing other acceptable insurance to provide the coverage specified in this section to maintain continuous coverage during the life of this Contract.

## **7 Contractor Responsibility.**

7.1 The Contractor is an independent contractor and is not an employee or agent of the County. Nothing in this Contract shall be interpreted to establish any relationship other than that of an independent contractor, between the County and the Contractor, its employees, agents, subcontractors, or assigns, during or after the performance of this Contract. The Contractor shall take the whole responsibility for the means, methods, techniques, sequences, and production of the Work.

7.2 The Contractor shall bear all losses resulting to him, or its, on account of the amount or character of the Work, or because of the nature of the ground beneath, in or on which the Work is done is different from what was assumed or expected, or because of bad weather, or because of errors or omissions in his or its bid on the Contract price, or except as otherwise provided in the Contract Documents because of any other causes whatsoever. Execution of this Contract by the Contractor is a representation that the Contractor has visited the site, has conducted a sufficient investigation of the surface and sub-surface conditions in order to submit its bid, has become familiar with the local conditions under which the Work is to be performed, and correlated personal observations with the requirements of the Contract Documents.

7.3 The Contractor shall protect the entire Work, all materials under the Contract and the County's property (including machinery and equipment) in, or on, or adjacent to the site of the Work until final completion and Work, from the action of the elements, acts of other contractors, or except as otherwise provided in the Contract Documents, and from any other causes whatsoever; should any damage occur by reason of any of the foregoing, the Contractor shall repair at his, or its, own expenses to the satisfaction of the County or its Project Manager. Neither the County nor its officers, employees or agents assume any responsibility for collection of indemnities or damages from any person or persons causing injury to the Work of the Contractor.

7.4 At his or its expense, the Contractor shall take all necessary precautions (including without limitation) the furnishing of guards, fences, warnings signs, walks, flags, cables and lights for the safety of and the prevention of injury, loss and damage to persons and property (including without limitation) in the term persons, members of the public, the County and its employees and agents, the Project Manager and his employees, Contractor's employees, his or its subcontractors and their respective employees, other contractors, their sub-contractors and respective employees, on, about or adjacent to the premises where said Work is being performed, and shall comply with all applicable provisions of safety laws, rules, ordinances, regulations and orders of duly constituted public authorities and building codes.

7.5 The Contractor assumes all risk of loss, damage and destruction to all of his or its materials, tools appliances and property of every description and that of his or its subcontractors and of their respective employees or agents, and injury to or death of the Contractor, his or its employees, subcontractors or their respective employees or agents, including legal fees, court costs or other legal expenses, arising out of or in connection with the performance of this Contract.

- 7.6 Supervision and Superintendence: The CONTRACTOR will supervise and direct the Work. He will be solely responsible for the means, methods, techniques, sequences and procedures of construction. The CONTRACTOR will employ and maintain on the Work a qualified supervisor or superintendent who shall have been designated in writing by the CONTRACTOR as the CONTRACTOR'S representative at the site. The supervisor shall have full authority to act on behalf of the CONTRACTOR and all communications given to the supervisor shall be as binding as if given to the CONTRACTOR. The supervisor shall be present on the site at all times as required to perform adequate supervision and coordination of the Work. (Copies of written communications given to the Superintendent shall be mailed to the Contractor's home office.)
- 7.7 Labor, Materials and Equipment: The CONTRACTOR will provide competent, suitably qualified personnel to survey and lay out the Work and perform construction as required by the Contract Documents. He will at all times maintain good discipline and order at the site. Except in connection with the safety or protection of persons or the Work or property at the site or adjacent thereto, and except as otherwise indicated in the Contract Documents, all Work at the site shall be performed during regular working hours, and CONTRACTOR will not permit overtime work or the performance of Work on Saturday, Sunday or any legal holiday, observed by St. Lucie County, without the COUNTY'S PROJECT MANAGER'S written consent.
- 7.8 Materials and Equipment: The CONTRACTOR will furnish all materials, equipment, labor, transportation, construction equipment and machinery, tools, appliances, fuel, power, light, heat, telephone, water and sanitary facilities and all other facilities and incidentals necessary for the execution, testing, initial operation and completion of the Work. All material stored on the job site shall remain the responsibility of the CONTRACTOR until incorporated into the work. The COUNTY will not reimburse the CONTRACTOR for materials lost, stolen, or damaged while stored on the job site.
- 7.9 Condition of Materials: All materials and equipment will be new. When special makes or grades of material which are normally packaged by the supplier or manufacturer are specified or approved, such materials shall be delivered to the site in their original packages or container with seals unbroken and labels intact.
- 7.10 Installation / Assembly: All materials and equipment shall be applied, installed, connected, erected, used, cleaned and conditioned in accordance with the instructions of the applicable manufacturer, fabricator or processors, except as otherwise provided in the Contract Documents.
- 7.11 Materials, Equipment, Products, and Substitutions: Materials, equipment and products incorporated in the Work must be approved for use before being purchased by the CONTRACTOR. The CONTRACTOR shall submit to the CONSULTANT and the COUNTY'S PROJECT MANAGER a list of proposed materials, equipment or products, together with such samples as may be necessary for him to determine their acceptability and obtain his approval, within ninety calendar days after award of Contract unless otherwise stipulated in the Special Conditions. No request for payment for "or equal" equipment will be approved until this list has been received and approved by the CONSULTANT.
- 7.11.1 Whenever a material, article or piece of equipment is identified on the Drawings or Specifications by reference to brand name or catalogue number, it shall be understood that this is referenced for the purpose of defining the performance or other salient requirements, and that other products of equal capacities, quality and function may be considered. The CONTRACTOR may request the substitution of a material, article, or piece of equipment of equal substance and function for those referred to in the Contract Documents by reference to brand name or catalogue number, and if, in the opinion of the CONSULTANT and COUNTY, such material, article, or piece of equipment is of equal

substance and function to that specified, the CONSULTANT with concurrence of the COUNTY'S PROJECT MANAGER may approve its substitution and use by the CONTRACTOR. Incidental changes or extra component parts required to accommodate the substitute will be made by the CONTRACTOR without an increase in the Contract Price or Contract Time. The CONTRACTOR shall reimburse the COUNTY for charges of the CONSULTANT and CONSULTANT'S consultants for evaluating each proposed substitution. These costs shall include transportation to operating installation at factories, etc.

- 7.11.2 No substitute shall be ordered or installed without the written approval of the CONSULTANT with the COUNTY'S PROJECT MANAGER'S concurrence.
- 7.11.3 Delay caused by obtaining approvals for substitute materials will not be considered justifiable grounds for an extension of construction time.
- 7.11.4 Should any work or materials, equipment or products not conform with requirements of the Drawings and Specifications or become damaged during the progress of the Work, such Work or materials shall be removed and replaced, together with any work disarranged by such alterations, at any time before completion and acceptance of the Project. All such work shall be done at the expense of the CONTRACTOR.
- 7.11.5 No materials or supplies for the Work shall be purchased by the CONTRACTOR or by any Subcontractor subject to any chattel mortgage or under a conditional sale or other agreement by which an interest is retained by the Seller. The CONTRACTOR warrants that he has good title to all materials and supplies used by him in the Work.
- 7.12 Concerning Subcontractors: The CONTRACTOR will not employ any Subcontractor, other person or organization of the types referred to in paragraph 2.10 (whether initially or as a substitute) against whom the COUNTY or the CONSULTANT may have reasonable objection, nor will the CONTRACTOR be required to employ any Subcontractor against whom he has reasonable objection. The CONTRACTOR will not make any substitution for any Subcontractor who has been accepted by the COUNTY'S PROJECT MANAGER and the CONSULTANT, unless the CONSULTANT determines that there is good cause for doing so.
- 7.13 Responsibility: The CONTRACTOR shall be fully responsible for all acts and omissions of his Subcontractors and of persons and organizations directly or indirectly employed by them and of persons and organizations for whose acts any of them may be liable to the same extent that he is responsible for the acts and omissions of persons directly employed by him. Nothing in the Contract Documents shall create any contractual relationship between COUNTY or CONSULTANT and any Subcontractor or other person or organization having a direct contract with CONTRACTOR, nor shall it create any obligation on the part of COUNTY or CONSULTANT to pay or to see to the payment of any moneys due any Subcontractor or other person or organization, except as may otherwise be required by law. COUNTY or CONSULTANT may furnish to any Subcontractor or other person or organization, to the extent practicable, evidence of amounts paid to CONTRACTOR on account of specific Work done in accordance with the schedule of values.
- 7.14 Division of Work: The divisions and sections of the Specifications and the identifications of any Drawings shall not control the CONTRACTOR in dividing the Work among Subcontractors or delineating the Work to be performed by any specific trade.
- 7.15 Terms and Conditions: The CONTRACTOR agrees to bind specifically every Subcontractor to the applicable terms and conditions of the Contract Documents for the benefit of the COUNTY.

- 7.16 Agreement: All Work performed for the CONTRACTOR by a Subcontractor shall be pursuant to any appropriate agreement between the CONTRACTOR and the Subcontractor.
- 7.17 Responsibility: The CONTRACTOR shall be responsible for the coordination of the trades, Subcontractors and materialmen engaged upon His Work.
- 7.17.1 The CONTRACTOR shall cause appropriate provisions to be inserted in all subcontracts relative to the Work to bind Subcontractors to the CONTRACTOR by the terms of these General Conditions and other Contract Documents insofar as applicable to the Work of Subcontractors, and to give the CONTRACTOR the same power as regards terminating any subcontract that the COUNTY may exercise over the CONTRACTOR under any provisions of the Contract Documents.
- 7.17.2 The COUNTY or CONSULTANT will not undertake to settle any differences between the CONTRACTOR and his Subcontractors or between Subcontractors.
- 7.17.3 If in the opinion of the COUNTY'S PROJECT MANAGER or CONSULTANT, any Subcontractor on the Project proves to be incompetent or otherwise unsatisfactory, he shall be replaced if and when directed in writing.
- 7.18 Patent, Fees and Royalties: The CONTRACTOR will pay all license fees and royalties and assume all costs incident to the use of any invention, design, process or device which is the subject of patent rights or copyrights held by others. He will indemnify and hold harmless the COUNTY and CONSULTANT and anyone directly or indirectly employed by either of them from and against all claims, damages, losses and expenses (including attorney's fees) arising out of any infringement of such rights during or after completion of the Work, and shall defend all such claims in connection with any alleged infringement of such rights.
- 7.19 Patent Rights: The CONTRACTOR shall be responsible for determining the application of patent rights and royalties on materials, appliances, articles or systems prior to bidding. However, he shall not be responsible for such determination on systems, which do not involve purchase by him of materials, appliances and articles.
- 7.20 Permits: The CONTRACTOR will secure and pay for all construction permits and licenses and will pay all governmental charges and inspection fees necessary for the prosecution of the Work, which are applicable at the time of his Bid. The COUNTY shall assist the CONTRACTOR, when necessary, in obtaining such permits and licenses. The CONTRACTOR will also pay all public utility charges. The Contractor shall be responsible for obtaining dewatering permits as required. CONTRACTOR shall be responsible for complying with the South Florida Water Management District, Florida Department of Environmental Protection, United States Environmental Protection Agency and any other regulatory agency requirements including financial responsibility (fines, etc.).
- 7.21 The following is a list of permits that have been submitted by and/or received by the Owner and a copy is provided in APPENDIX A in these Specifications:
- 7.22 Florida Department of Environmental Protection (FDEP) Water Construction Permit (obtained & included)
- 7.23 Laws and Regulations: The CONTRACTOR will give all notices and comply with all laws, ordinances, rules and regulations applicable to the Work. If the CONTRACTOR observes that the Specifications or Drawings are at variance therewith, he will give the CONSULTANT prompt written notice thereof, and any necessary changes shall be adjusted by an appropriate Modification. If the

CONTRACTOR performs any Work knowing it to be contrary to such laws, ordinances, rules and regulations, and without such notice to the CONSULTANT, he will bear all costs arising therefrom; however, it shall not be his primary responsibility to make certain that the Drawings and Specifications are in accordance with such laws, ordinances, rules and regulations.

- 7.24 Taxes: Cost of all sales and other taxes for which the CONTRACTOR is liable under the Contract shall be included in the Contract Price stated by the CONTRACTOR.
- 7.25 Record Drawings: The CONTRACTOR will keep one record copy of all Specifications, Drawings, Addenda, Modifications, and Shop Drawings at the site in good order and annotated to show all changes made during the construction process. These shall be available to the CONSULTANT and shall be delivered to him for the COUNTY upon completion of the project. It shall be used for this purpose only. Final acceptance of the project will be withheld until approval of the documents is made by the COUNTY'S PROJECT MANAGER.
- 7.26 Safety and Protection: The CONTRACTOR will be responsible for initiating, maintaining and supervising all safety precautions and programs in connection with the Work. He will take all necessary precautions for the safety of, and will provide the necessary protection to prevent damage, injury or loss to:
  - 7.26.1 All employees on the Work and other persons who may be affected thereby,
  - 7.26.2 All the Work and all materials or equipment to be incorporated therein, whether in storage on or off the site, and
  - 7.26.3 Other property at the site or adjacent thereto, including trees, shrubs, lawns, walks, pavements, roadways, structures and utilities not designated for removal, relocation or replacement in the course of construction.
- 7.27 Superintendent: The CONTRACTOR will designate a responsible member of his organization at the site whose duty shall be the prevention of accidents. This person shall be the CONTRACTOR'S superintendent unless otherwise designated in writing by the CONTRACTOR to the COUNTY'S PROJECT MANAGER.
- 7.28 Emergencies: In emergencies affecting the safety of persons or the Work or property at the site or adjacent thereto, the CONTRACTOR, without special instruction or authorization from the CONSULTANT or the COUNTY'S PROJECT MANAGER, is obligated to act, at his discretion, to prevent threatened damage, injury or loss. If the CONTRACTOR believes that additional work done by him in an emergency which arose from causes beyond his control entitles him to an increase in the Contract Price or an extension of the Contract Time, he may make a claim therefore as provided in Articles 11 and 12.
- 7.29 Shop Drawings and Samples: After checking and verifying all field measurements, the CONTRACTOR will submit to the CONSULTANT and the COUNTY'S PROJECT MANAGER for review, in accordance with the accepted schedule of Shop Drawing submissions (see paragraph 2.8) copies (or at the CONSULTANT'S option, one reproducible copy) of all Shop Drawings, which shall have been checked by and stamped with the approval of the CONTRACTOR. The data shown on the Shop Drawings will be complete with respect to dimensions, design criteria, materials of construction and the like to enable the CONSULTANT to review the information as required.
- 7.30 Samples: The CONTRACTOR will also submit to the CONSULTANT for review, with such promptness as to cause no delay in Work, all samples required by the Contract Documents. All samples will have been checked by and stamped with the approval of the CONTRACTOR,

identified clearly as to material, manufacturer, any pertinent catalog numbers and the use for which intended.

- 7.31 Deviations: At the time of each submission, the CONTRACTOR will in writing call the CONSULTANT'S attention to any deviations that the Shop Drawings or sample may have from the requirements of the Contract Documents.
- 7.32 Conformance Review: The CONSULTANT will review with reasonable promptness Shop Drawings and samples, but his review shall be only for conformance with the design concept of the Project and for compliance with the information given in the Contract Documents. The review of a separate item as such will not indicate review of the assembly in which the item functions. The CONTRACTOR will make any corrections required by the CONSULTANT and will return the required number of corrected copies of Shop Drawings and resubmit new samples until the review is satisfactory to the CONSULTANT. The CONTRACTOR shall direct specific attention in writing or on resubmitted Shop Drawings to revisions other than the corrections called for by the CONSULTANT on previous submissions. The CONTRACTOR'S stamp of approval on any Shop Drawings or sample shall constitute a representation to the COUNTY and the CONSULTANT that the CONTRACTOR has either determined and verified all quantities, dimensions, field construction criteria, materials, catalogue numbers and similar data or he assumes full responsibility for doing so, and that he has reviewed or coordinated each Shop Drawing or sample with the requirements of the Work and the Contract Documents. Shop Drawings submitted without the CONTRACTOR'S stamp or specific written indication will be returned without action. Shop Drawings and submittal data will be reviewed two times, thereafter all further review time will be charged to the CONTRACTOR.
- 7.33 Approval: No work requiring a Shop Drawing or sample submission shall be commenced until the submission has been reviewed and approved by the CONSULTANT. A copy of each Shop Drawing and each approved sample shall be kept in good order by the CONTRACTOR at the site and shall be available to the CONSULTANT.
- 7.34 Specific Deviations: The CONSULTANT'S review of Shop Drawings or samples shall not relieve the CONTRACTOR from his responsibility for any deviations from the requirements of the Contract Documents unless the CONTRACTOR has in writing called the CONSULTANT'S attention to such deviation at the time of submission and the CONSULTANT has given written approval to the specific deviation, nor shall any review by the CONSULTANT relieve the CONTRACTOR from responsibility for errors or omissions in the Shop Drawings.
- 7.35 Site Clean Up: The CONTRACTOR shall clean up behind the Work as much as is reasonably possible as the Work progresses. Upon completion of the Work, and before acceptance of and final payment for the Project by the COUNTY, the CONTRACTOR shall remove all his surplus and discarded materials, excavated material and rubbish from the roadways, sidewalks, parking areas, lawns and all adjacent property; shall clean his portion of Work involved in any building under this Contract, so that no further cleaning by the COUNTY is necessary prior to his occupancy; shall restore all property, both public and private, which has been disturbed or damaged during the prosecution of the Work; and shall leave the whole in a neat and presentable condition.
- 7.36 Building Clean-up: Clean-up operations shall consistently be carried on by the CONTRACTOR at all times to keep the premises free from accumulation of waste materials and rubbish. Upon completion of the Work he shall remove all rubbish, tools, scaffolding, surplus materials, etc., from the building and shall leave his work "broom clean", or its equivalent, unless more exactly specified elsewhere in the Contract. The CONTRACTOR shall do the following special cleaning for all trades upon completion of the Work:

- 7.36.1 Remove putty stains and paint from and wash and polish all glass. Do not scratch or otherwise damage glass.
  - 7.36.2 Remove all marks, stains, fingerprints and other soil and dirt from painted, stained and decorated work.
  - 7.36.3 Remove all temporary protections and clean and polish floors.
  - 7.36.4 Clean and polish all hardware for all trades; this shall include removal of all stains, dust, dirt, paint, etc.
- 7.37 General: In case of dispute, the COUNTY may remove the rubbish and charge the cost to the CONTRACTOR.
- 7.38 Public Convenience and Safety: The CONTRACTOR shall, at all times, conduct the Work in such a manner as to insure the least practicable obstruction to public travel. The convenience of the general public and of the residents along and adjacent to the area of the Work shall be provided for in a satisfactory manner, consistent with the operation and local conditions. "Street Closed" signs shall be placed immediately adjacent to the Work, in a conspicuous position, at such locations as traffic demands. At any time that streets are required to be closed, Contractor shall obtain approval to close the street from the appropriate regulatory agencies having jurisdiction. The CONTRACTOR shall notify law enforcement agencies, fire departments, and parties operating emergency vehicles before the street is closed and again as soon as it is opened. Approval from the Board of County Commissioners shall be coordinated through the office of the Director of the Public Works Department including notification of the news media and affected property owners. Access to fire hydrants and other fire extinguishing equipment shall be provided and maintained at all times. Traffic paths shall be maintained for local traffic.
- 7.39 Sanitary Provisions: The CONTRACTOR shall furnish necessary toilet conveniences, secluded from public observation, for use of all personnel on the Work, whether or not in his employ. They shall be kept in a clean and sanitary condition and shall comply with the requirements and regulations of the Public Authorities having jurisdiction. He shall commit no public nuisance. Temporary sanitary facilities shall be removed upon completion of the Work and the premises shall be left clean.
- 7.40 Indemnification: To the extent of the insurance requirements set forth in the Contract, the CONTRACTOR will indemnify and hold harmless the COUNTY and the CONSULTANT and their agents and employees and interested third parties from and against all claims, damages, losses and expenses direct, indirect or consequential, including but not limited to fees and charges of engineers, architects, attorneys and other professionals and court costs arising out of or resulting from the performance of the Work, provided that any such claim, damage, loss or expense (a) is attributable to bodily injury, sickness, disease or death, or to injury to or destruction of tangible property (other than Work itself) including the loss of use resulting therefrom and (b) is caused in whole or in part by any negligent act or omission of the CONTRACTOR, any Subcontractor, anyone directly or indirectly employed by any of them or anyone for whose acts any of them may be liable, regardless of whether or not it is caused in part by a party indemnified hereunder.
- 7.41 Claims: In any and all claims against the COUNTY or the CONSULTANT or any of their agents or employees, by any employee of the CONTRACTOR, any Subcontractor, anyone directly or indirectly employed by any of them or anyone for whose acts any of them may be liable, the indemnification obligation under paragraph 7.38 shall not be limited in any way by any limitation on the amount or type of damages, compensation or benefits payable by or for the CONTRACTOR

or any Subcontractor under worker's compensation acts, disability benefit acts or other employee benefit acts.

- 7.42 **Obligation:** The obligations of the CONTRACTOR under paragraph 7.38 shall not extend to the liability of the CONSULTANT'S negligent acts, errors or omissions or those of his employees or agents.
- 7.43 **Responsibility for Connecting to Existing Work:** It shall be the express responsibility of the CONTRACTOR to connect his Work to each part of the existing work or work previously installed as required by the Drawings and Specifications to provide a complete installation.
- 7.44 **Work in Street, Highway and Other Rights-of-Way:** Excavation, grading, fill, storm drainage, paving and any other construction or installations in rights-of-way of streets, highways, public carrier lines, utility lines (either aerial, surface or subsurface), etc., shall be done in accordance with requirements of these Specifications and authorities having jurisdiction. The CONTRACTOR will be responsible for obtaining all permits necessary for the work. Upon completion of the Work, CONTRACTOR shall present to CONSULTANT certificates, in triplicate, from the proper authorities stating that the Work has been done in accordance with their requirements.
- 7.44.1 The COUNTY will cooperate with the CONTRACTOR in obtaining action from any utilities or public authorities involved in the above requirements.
- 7.45 **Cooperation with Governmental Departments, Public Utilities, Etc.:** The CONTRACTOR shall be responsible for making all necessary arrangements with governmental departments, public utilities, public carriers, service companies and corporations owning or controlling roadways, railways, water, sewer, gas, electrical, cable television, telephone, and telegraph facilities such as pavements, tracks, piping, wires, cables, conduits, poles, guys, etc., including incidental structures connected therewith, that are encountered in the Work in order that such items may be properly shored, supported and protected, or the CONTRACTOR may relocate them with Utility Owner's approval, if he so desires. The CONTRACTOR shall give all proper notices, shall comply with requirements of such parties in the performance of his Work, shall permit entrance of such parties on the Project in order that they may perform their necessary work, and shall pay all charges and fees made by such parties for this work.
- 7.45.1 The CONTRACTOR'S attention is called to the fact that there may be delays on the Project due to work to be done by governmental departments, public utilities, and others in repairing or moving poles, conduits, etc. The CONTRACTOR shall cooperate with the above parties, in every way possible, so that the construction can be completed in the least possible time.
- 7.45.2 The CONTRACTOR shall have made himself familiar with all codes, laws, ordinances and regulations which in any manner affect those engaged in the Work, or materials and equipment used in or upon the Work, or in any way affect the conduct of the Work, and no plea of misunderstanding will be considered on account of his ignorance thereof.
- 7.46 **Use of Premises:** CONTRACTOR shall confine his apparatus, storage of materials, and operations of his workmen to limits indicated by law, ordinances, permits, and directions of the COUNTY'S REPRESENTATIVE, and shall not unnecessarily encumber any part of the site.
- 7.46.1 CONTRACTOR shall not overload or permit any part of any structure to be loaded with such weight as will endanger its safety, nor shall he subject any part of the Work to stresses or pressures that will endanger it.

- 7.46.2 CONTRACTOR shall enforce the COUNTY'S PROJECT MANAGER'S instructions in connection with signs, advertisements, fires and smoking.
- 7.46.3 CONTRACTOR shall arrange and cooperate with COUNTY in routing and parking of automobiles of his employees, Subcontractors and other personnel, and in routing material delivery trucks and other vehicles to the Project site.
- 7.47 Protection of Existing Property Improvements: Any existing surface or subsurface improvements, such as pavements, curbs, sidewalks, pipes or utilities, footings, or structures (including portions thereof), trees and shrubbery, not indicated on the Drawings or noted in the Specifications as being removed or altered shall be protected from damage during construction of the Project. Any such improvements damaged during construction of the Project, whether or not such improvements appear on the drawings, shall be restored to a condition equal, or better, to that existing at time of award of Contract. Such restoration or repair shall be at the sole expense of the Contractor, and no claim for an increase in the Contract Price shall be allowed.
- 7.48 Temporary Heat: The CONTRACTOR shall provide heat, fuel and services as necessary to protect all work and materials, within all habitable areas of permanent building construction, for all contracts against injury from dampness and cold until final acceptance of all work and materials for the Project, unless building is fully occupied by the COUNTY prior to such acceptance, in which case the COUNTY shall assume all expenses of heating from date of full occupancy. Unless otherwise specifically permitted by Special Conditions, the permanent heating system shall not be used to provide temporary heat. CONTRACTOR'S proposed methods of heating shall be submitted for approval.

## **8 Subcontractors.**

- 8.1 The COUNTY may perform additional work related to the Project by itself, or it may let other direct contracts therefore which shall contain General Conditions similar to these. The CONTRACTOR will afford the other contractors who are parties to such direct contracts (or the COUNTY, if it is performing the additional work himself), reasonable opportunity for the introduction and storage of materials and equipment and the execution of work, and shall properly connect and coordinate his Work with theirs.
- 8.2 In the event Contractor requires the services of any contractor or professional associate in connection with the Work to be performed under this Contract, the Contractor shall secure the written approval of the County Project Manager before engaging such contractor or professional associate.
- 8.3 If any part of the CONTRACTOR'S work depends for proper execution or results upon the work of any such other CONTRACTOR (or the COUNTY), the CONTRACTOR will promptly report to the COUNTY'S REPRESENTATIVE in writing any defects or deficiencies in such work that render it unsuitable for such proper execution and results.
- 8.4 The CONTRACTOR will do all cutting, fitting, and patching of his Work that may be required to make its several parts come together properly and fit it to receive or be received by such other work. The CONTRACTOR will not endanger any work of others by cutting, excavating or otherwise altering their work and will only cut or alter their work with the written consent of the CONSULTANT and of the other contractors whose work will be affected.
- 8.5 If the performance of additional work by other contractors or the COUNTY is not noted in the Contract Documents prior to the execution of the Contract, written notice thereof shall be given to the CONTRACTOR prior to starting any such additional work. If the CONTRACTOR believes that the performance of such additional work by the COUNTY or others involves him in additional

expense or entitles him to an extension of the Contract Time, he may make a claim therefore as provided in Articles 11 and 12.

- 8.6 Where practicable, the CONTRACTOR shall build around the work of other separate Contractors.
- 8.7 Cooperation is required in the use of site facilities and in the detailed execution of the Work. The CONTRACTOR shall coordinate his operations with those of any other CONTRACTORS for the best interest of the Work in order to prevent delay in the execution thereof.
- 8.8 The CONTRACTOR shall keep himself informed of the progress of the work of other Contractors. Should lack of progress or defective workmanship on the part of other Contractors interfere with his operations, the CONTRACTOR shall notify the COUNTY'S REPRESENTATIVE immediately. Lack of such notice to the COUNTY'S REPRESENTATIVE will be construed as acceptance by the CONTRACTOR of the status of the work of other Contractors as being satisfactory for proper coordination of his own Work.
- 8.9 CONTRACTOR shall give notices of the progress of his work so as to allow other contractors adequate opportunity to properly direct and coordinate their work. All such notices shall be submitted to the COUNTY'S REPRESENTATIVE with copies to other Contractors on the Project Site sufficiently ahead of job progress to permit adequate time for the other Contractors to coordinate their work.

## **9 County's Responsibilities.**

- 9.1 The COUNTY will issue all communications to the CONTRACTOR through the CONSULTANT, COUNTY'S PROJECT MANAGER or COUNTY'S REPRESENTATIVE (Project Manager).
- 9.2 In case of termination of the employment of the CONSULTANT, the COUNTY'S PROJECT MANAGER will appoint an engineer against whom the CONTRACTOR makes no reasonable objection, whose status under the Contract Documents shall be that of the former CONSULTANT. Any dispute in connection with such appointment shall be subject to arbitration, if mutually agreeable.
- 9.3 The COUNTY will furnish the data required of it under the Contract Documents promptly and shall make payments to the CONTRACTOR promptly after they are due as provided in Article 14.
- 9.4 COUNTY'S duties in respect of providing lands and easements and providing engineering surveys to establish reference points are set forth in Section 4.0 and the Special Conditions.
- 9.5 In connection with the COUNTY'S right to stop Work or suspend Work, see paragraph 16.1. Paragraph 16.4 deals with the COUNTY'S right to terminate services of the CONTRACTOR under certain circumstances.
- 9.6 The COUNTY shall have the right to take possession of and use any completed or partially completed portions of the Work, notwithstanding the fact that the time for completing the entire Work or any portion thereof may not have expired; but such taking possession and use shall not be deemed an acceptance of any Work not completed in accordance with the Contract Documents. If such prior use increases the cost of or delays the Work, the CONTRACTOR shall be entitled to such extra compensation or extension of time or both, except by prior agreement, as the CONSULTANT may determine. See paragraph 15.7.
- 9.7 COUNTY'S responsibility in respect of certain inspections, tests and approvals is set forth in paragraphs 10.5, 10.6, and 14.3 through 14.8.

## **10 Consultant's Status During Construction.**

- 10.1 County's Representative: The CONSULTANT (if specifically designated), or a specifically designated employee of the COUNTY, shall act as the COUNTY'S REPRESENTATIVE during the construction period. The duties and responsibilities and the limitations of authority of the CONSULTANT as one of the COUNTY'S REPRESENTATIVES during construction are set forth in Articles 1 through 17 of these General Conditions and shall not be extended without written consent of the COUNTY'S PROJECT MANAGER and the CONSULTANT.
  - 10.1.1 The CONSULTANT'S decision with the consent of the COUNTY'S PROJECT MANAGER in matters relating to aesthetics, shall be final, if within the terms of the Contract Documents.
  - 10.1.2 Except as may be otherwise provided in the Contract or elsewhere in the Contract Documents, all claims, counter-claims, disputes and other matters in question between the COUNTY and the Contractor arising out of or relating to the Contract or the breach thereof will be decided in a court of competent jurisdiction with the State in which the COUNTY is located.
- 10.2 Visits to Site: The CONSULTANT will make periodic visits to the site to observe the progress and quality of the executed Work and to determine, in general, if the Work is proceeding in accordance with the Contract Documents. He will not be required to make continuous on-site observations to check the quality or quantity of the Work. His efforts will be directed toward ascertaining on behalf of the COUNTY that the completed Project will conform to the requirements of the Contract Documents. On the basis of his on-site observations as an experienced and qualified design professional, he will keep the COUNTY informed of the progress of the Work and will endeavor to guard the COUNTY against defects and deficiencies in the Work.
- 10.3 Clarifications and Interpretations: The CONSULTANT will issue with reasonable promptness such written clarifications or interpretations of the Contract Documents (in the form of Drawings or otherwise) as he may determine necessary, which shall be consistent with or reasonably inferable from the overall intent of the Contract Documents. If the CONTRACTOR believes that a written clarification and interpretation entitles him to an increase in the Contract Price or extension of Contract Time, he may make a claim therefore as provided in Articles 11 and 12.
- 10.4 Measurement of Quantities: All Work completed under the Contract will be measured by the CONSULTANT'S or COUNTY'S REPRESENTATIVE or PROJECT REPRESENTATIVE according to the United States Standard Measures. All linear surface measurements will be made horizontally or vertically as required by the item measured.
- 10.5 Rejecting Defective Work: The CONSULTANT, COUNTY'S REPRESENTATIVE or PROJECT REPRESENTATIVE will have authority to disapprove or reject Work which is "defective" (which term is hereinafter used to describe Work that is unsatisfactory, faulty or defective, or does not conform to the requirements of the Contract Documents or does not meet the requirements of any inspection, test or approval referred to in the Contract Documents, or has been damaged prior to final acceptance). They will also have authority to require special inspection or testing of the Work as they may individually or severally deem necessary, whether or not the Work is fabricated, installed or completed.
- 10.6 Correction of Defective Work: Upon presentation of a Defective Work Notice to the Contractor's Representative from the COUNTY'S REPRESENTATIVE, the contractor shall have fourteen (14) days to begin corrective action and repairs. If the Contractor believes that the necessary corrective action should not begin at the end of that fourteen (14) day period, he shall submit to the COUNTY'S PROJECT MANAGER, with a copy to the COUNTY'S CONSULTANT, a schedule for review with an explanation for not wanting to comply with the fourteen (14) day requirement.

The COUNTY'S PROJECT MANAGER shall determine if the Contractor's request is valid, and shall reply to the Contractor. If the Contractor refuses to comply with the fourteen (14) day requirement (or an agreed upon schedule), the COUNTY has the right to do either (or more) of the following:

The COUNTY has the right to correct any work so performed by the CONTRACTOR and deduct the expenses for doing so from the final payment due the CONTRACTOR, or

The COUNTY will hold back final payment due CONTRACTOR until such time as the work is completed to the satisfaction of the COUNTY'S PROJECT MANAGER and in compliance with the County's specifications. The COUNTY'S PROJECT MANAGER shall have the sole discretion to determine if the work is satisfactory and in compliance with specifications.

**The remedies contained herein are not exclusive and the OWNER reserves the right to pursue any and all other remedies it deems applicable.**

- 10.7 Shop Drawings: In connection with the CONSULTANT'S responsibility as to Shop Drawings and samples, see paragraphs 7.27 through 7.32, inclusive.
- 10.8 Change Orders: In connection with the CONSULTANT'S responsibility for Change Orders, see Articles 10, 11 and 12.
- 10.9 Payments: In connection with the CONSULTANT'S responsibilities in respect to Application for Payment, etc., see Article 14.

## **11 Changes in the Work.**

- 11.1 Without invalidating the Contract, the COUNTY'S PROJECT MANAGER may, at any time or from time to time, order additions, deletions or revisions in the Work. Upon request of the COUNTY'S PROJECT MANAGER, or at the request of the CONSULTANT with the concurrence of the COUNTY'S PROJECT MANAGER, the CONSULTANT shall issue a Request for Proposal to the CONTRACTOR detailing the proposed additions, deletions or revisions to the Work. The CONTRACTOR shall provide a binding proposal to the CONSULTANT for the items requested. This proposal shall include any increases or decreases in Contract Time or Contract Price and shall include any additional modifications required by virtue of the requested change, whether or not such additional modifications were specifically identified in the Request for Proposal. The CONSULTANT shall review the Proposal and submit it together with his comments to the COUNTY'S PROJECT MANAGER. The COUNTY'S PROJECT MANAGER shall then instruct the CONSULTANT to 1) modify the Request for Proposal, or 2) instruct the CONSULTANT to withdraw the Request for Proposal, or 3) arrange for a Change Order to be issued, in accordance with the provisions of Articles 10 and 11 of these General Conditions, covering the additions, deletions or revisions covered by the Proposal.
- 11.2 The CONSULTANT with the COUNTY'S PROJECT MANAGER'S approval may authorize minor changes or alterations in the Work not involving extra cost and not inconsistent with the overall intent of the Contract Documents. These may be accomplished by a Field Order. If the CONTRACTOR believes that any minor change or alterations authorized by the CONSULTANT entitles him to an increase in the Contract Price or extension of Contract Time, he shall treat the Field Order as a Request for Proposal and issue a Proposal for the changes in Contract Price and Contract Time prior to proceeding with the Work covered in the Field Order. The procedures outlined in paragraph 11.1 shall then be followed. Acceptance of the Final Payment by the CONTRACTOR shall constitute acknowledgment by the CONTRACTOR that all payments due for modifications required under Field Orders have been incorporated into the Final Payment.

- 11.3 Additional Work performed by the CONTRACTOR without authorization of a Change Order will not entitle him to an increase in the Contract Price or an extension of the Contract Time, except in the case of an emergency as provided in paragraph 7.26.
- 11.4 The COUNTY will execute appropriate Change Orders prepared by the CONSULTANT covering changes in the Work to be performed as provided in paragraphs 11.1 and 11.2, and Work performed in an emergency as provided in paragraph 7.26.
- 11.5 It is the CONTRACTOR'S responsibility to notify his surety of any changes affecting the general scope of the Work or change in the Contract Price and the amount of the applicable bonds shall be adjusted accordingly. The CONTRACTOR will furnish proof of such adjustment to the COUNTY.

## **12 Change of Contract Price**

- 12.1 The Contract Price constitutes the total compensation payable to the CONTRACTOR for performing the Work. All duties, responsibilities and obligations assigned to or undertaken by the CONTRACTOR shall be at his expense without changing the Contract Price.
- 12.2 The COUNTY'S PROJECT MANAGER may, at any time, without notice to the sureties, by Field Order pursuant to a Proposal from the Contractor or by properly executed Change Order, make any change in the Work within the general scope of the contract, including but not limited to changes:
  - 12.2.1 In the specifications (including drawings and designs);
  - 12.2.2 In the method or manner of performance of the work;
  - 12.2.3 In the COUNTY-furnished facilities, equipment, materials, services or site; or
  - 12.2.4 Directing acceleration in the performance of the work.
  - 12.2.5 Any other written order or an oral order (which terms as used in this paragraph shall include direction, instruction, interpretation or determination) from the COUNTY'S PROJECT MANAGER, which causes any such change shall be treated as a Field Order under this clause, provided that the CONTRACTOR shall follow the procedures outlined in paragraph 11.2.

Except as herein provided, no order, statement, or conduct of the COUNTY shall be treated as a change under this clause or entitle the Contractor to an equitable adjustment hereunder.

If any change under this clause causes an increase or decrease in the CONTRACTOR'S cost of, or the time required for, the performance of any part of the work under this contract, whether or not changed by any order, an equitable adjustment shall be made and the contract modified in writing accordingly: Provided, however, that except for the claims based on defective specifications, no claim for any Change Order under paragraph 11.2 above shall be allowed for any costs incurred more than 20 days before the CONTRACTOR gives written notice as therein required: And provided further, that in the case of defective specifications for which the COUNTY is responsible, the equitable adjustment shall include any increased cost reasonably incurred by the CONTRACTOR in attempting to comply with such defective specifications.

No claim by the CONTRACTOR for an equitable adjustment hereunder shall be allowed if asserted after final payment under this contract.

Change Orders involving a decrease in Contract Price or an increase in Contract Price of less than \$50,000.00 or less may be executed by the County Administrator, provided that the total Contract Price including all increases and decreases does not exceed the project budget previously approved by the Board of County Commissioners of St. Lucie County.

Change Orders involving a change in Contract Price, of more than \$50,000.00 shall be executed by the Board of County Commissioners of St. Lucie County.

- 12.3 The value of any Work covered by a Change Order or of any claim for an increase or decrease in the Contract Price shall be determined in one of the following ways:
  - 12.3.1 Where the Work involved is covered by unit prices contained in the Contract Documents, by application of unit prices to the quantities of the items involved. Should the quantity of Work be significantly increased or decreased from that stipulated in the Contract Documents, the COUNTY'S PROJECT MANAGER or the CONTRACTOR may request adjustment of the unit price(s) by negotiation.
  - 12.3.2 By negotiated lump sum.
  - 12.3.3 The actual cost for labor, direct overhead, materials, supplies, equipment, and other services necessary to complete the work plus a fixed amount to be agreed upon, but not to exceed 15% of the other costs, to cover administrative costs and profit.
- 12.4 The term Cost of the Work means the sum of all costs necessarily incurred and paid by the CONTRACTOR in the proper performance of the Work. Except as otherwise may be agreed to in writing by the COUNTY'S PROJECT MANAGER such costs shall be in amounts no higher than those prevailing in the locality of the Project, shall include only the following items and shall not include any of the costs itemized in paragraph 12.5:
- 12.5 Payroll costs for employees in the direct employ of CONTRACTOR in the performance of the Work under schedules of job for employees not employed full time on the Work shall be apportioned on the basis of their time spent on the Work. Payroll costs shall include, but not be limited to, salaries and wages plus the cost of fringe benefits which shall include social security contributions, unemployment, excise and payroll taxes, worker's compensation, health and retirement benefits, bonuses, sick leave, vacation and holiday pay applicable thereto. Such employees shall include superintendents and foremen at the site. The expenses of performing work after regular working hours on Sunday or legal holidays shall be included in the above to the extent authorized by the COUNTY'S PROJECT MANAGER.
- 12.6 Cost of all materials and equipment furnished and incorporated in the Work, including costs of transportation and storage thereof, and manufacturers' field services required in connection therewith.
- 12.7 All cash discounts shall accrue to CONTRACTOR unless the COUNTY deposits funds with CONTRACTOR with which to make payments, in which case the cash discounts shall accrue to the COUNTY.
- 12.8 All trade discounts, rebates and refunds, and all returns from sale of surplus materials and equipment shall accrue to the COUNTY, and CONTRACTOR shall make provisions so that they may be obtained.
- 12.9 Payments made by CONTRACTOR to the Subcontractors for Work performed by Subcontractors. If required by the COUNTY'S PROJECT MANAGER, CONTRACTOR shall obtain competitive bids from Subcontractors acceptable to him and shall deliver such Bids to the COUNTY'S PROJECT

MANAGER who will then determine with the advice of Consultant, which Bids will be accepted. If a subcontract provides that the Subcontractor is to be paid on the basis of Cost of Work Plus a Fee, the Cost of the Work shall be determined in accordance with paragraphs 12.4 and 12.5. All subcontracts shall be subject to the other provisions of the Contract Documents insofar as applicable.

12.10 Costs of special consultants (including, but not limited to, engineers, architects, testing laboratories, surveyors, lawyers and accountants) employed for services specifically related to the Work.

12.11 Supplemental costs including the following:

12.11.1 The proportion of necessary transportation, traveling and subsistence expenses of CONTRACTOR'S employees incurred in discharge of duties connected with the Work.

12.11.2 Cost, including transportation and maintenance, of all materials, supplies, equipment, machinery, appliances, office and temporary facilities at the site and hand tools not owned by the workers, which are consumed in the performance of the Work, and cost less market value of such items used but not consumed which remain the property of CONTRACTOR.

12.11.3 Rentals of all construction equipment and machinery and the parts thereof whether rented from CONTRACTOR or others in accordance with rental agreements approved by the COUNTY'S PROJECT MANAGER with the advice of CONSULTANT, and the costs of transportation, loading, unloading, installation, dismantling and removal thereof - All in accordance with terms of said rental agreements. The rental of any such equipment, machinery or parts shall cease when the use thereof is no longer necessary for the Work.

12.11.4 Sales, use or similar taxes related to the Work, and for which CONTRACTOR is liable, imposed by any governmental authority.

12.11.5 Deposits lost for causes other than CONTRACTOR'S negligence, royalty payments and fees for permits and licenses. Costs for permits and licenses must be shown as a separate item.

12.11.6 Losses, damages and expenses, not compensated by insurance or otherwise, sustained by CONTRACTOR in connection with the execution of, and to, the Work, provided they have resulted from causes other than the negligence of CONTRACTOR, any Sub-contractor, or anyone directly or indirectly employed by any of them or for whose acts any of them may be liable. Such losses shall include settlements made with the written consent and approval of the COUNTY'S PROJECT MANAGER. No such losses, damages and expenses shall be included in the Cost of the Work for the purpose of determining CONTRACTOR'S Fee. If, however, any such loss or damage requires reconstruction and CONTRACTOR is placed in charge thereof, he shall be paid for his services a fee proportionate to that stated in paragraph 12.6.2.

12.11.7 Minor expenses such as long distance telephone calls, telephone service at the site, expressage, and similar petty cash items in connection with the Work.

12.11.8 Cost of premiums for additional Bonds and Insurance be required because of changes in the Work.

12.12 The term Cost of the Work shall not include any of the following:

- 12.12.1 Payroll costs and other compensation of CONTRACTOR'S officers, executives, principals (of partnership and sole proprietorships), general managers, engineer, architects, estimators, lawyers, auditors, accountants, purchasing and contracting agents, expeditors, timekeepers, Clerks and other personnel employed by CONTRACTOR whether at the site or in his principal or a branch office for general administration of the Work and not specifically included in the schedule referred to in subparagraph 12.4.1 - all of which are to be considered administrative costs covered by the CONTRACTOR'S Fee.
- 12.12.2 Expenses of CONTRACTOR'S principal and branch offices other than his office at the site.
- 12.12.3 Any part of CONTRACTOR'S capital expenses, including interest on CONTRACTOR'S capital employed for the Work and charges against CONTRACTOR for delinquent payments.
- 12.12.4 Cost of premiums for all bonds and for all insurance policies whether or not CONTRACTOR is required by the Contract Documents to purchase and maintain the same (except as otherwise provided in subparagraph 12.4.5.8).
- 12.12.5 Costs due to the negligence of CONTRACTOR, any Subcontractor, or anyone directly or indirectly employed by any of them or for whose acts any of them may be liable, including but not limited to, the correction of defective work, disposal of materials or equipment wrongly supplied and making good any damage to property.
- 12.12.6 Other overhead or general expense costs of any kind and the costs of any item not specifically and expressly included in paragraph 12.4.
- 12.13 The CONTRACTOR'S Fee which shall be allowed to CONTRACTOR for his administrative expenses, general overhead and profit shall be determined as follows:
- 12.13.1 A mutually acceptable firm fixed price; or if none can be agreed upon,
- 12.13.2 A mutually acceptable fixed fee based on the estimate of the various portions of the Cost of the Work.
- 12.13.3 In no case shall the CONTRACTOR'S Fee exceed 15% of the cost of the additional work being performed.
- 12.14 The amount of credit to be allowed by CONTRACTOR to the COUNTY for any such change, which results in a net decrease in cost, will be the amount of the actual net decrease. When both additions and credits are involved in any one change, the net shall be computed to include overhead and profit, identified separately, for both additions and credits.
- 12.15 Whenever the cost of any Work is to be determined pursuant to paragraphs 12.4 and 12.5, CONTRACTOR will submit in form prescribed by CONSULTANT an itemized cost breakdown together with supporting data.
- 12.16 Allowances: It is understood that the CONTRACTOR has included in the Contract Price all allowances so named in the Contract Documents and shall cause the Work so covered to be done by such materialmen, suppliers or Subcontractors and for such sums within the limit of the allowances as the CONSULTANT may approve. Upon final payment, the Contract Price shall be adjusted as required and an appropriate Change Order issued. The CONTRACTOR agrees that the original Contract Price includes such sums as he deems proper for costs and profit on account of cash allowances. No demand for additional cost or profit in connection therewith will be allowed.

12.16.1 These allowances shall cover the cost to the CONTRACTOR, less any applicable trade discount, of the materials and equipment required by the allowance delivered at the site, and all applicable taxes.

12.16.2 The CONTRACTOR'S costs for unloading and handling on the site, labor, installation costs, overhead, profit and other expenses contemplated for the original allowance shall be included in the Contract Price and not in the allowance.

12.16.3 Whenever the cost, as described in 12.9.1 above, is more than or less than the allowance, the Contract Price shall be adjusted accordingly by Change Order. The amount of the Change Order will recognize changes, if any, in handling costs on the site, labor, installation costs, overhead, profit and other expenses, except that whenever unit price allowances are stipulated for brick, the Change Order will not include any cost as described in 12.5 above.

### **13 Delays and Extensions of Time.**

13.1 All time limits stated in the Contract Documents are of the essence of the Contract.

13.2 As the CONTRACTOR'S only remedy for delay, the COUNTY may grant an extension of the contract time, when a controlling item of work is delayed by any factors contemplated or not contemplated at the time of the bid. Such extension of time may be allowed for delays occurring during the contract time period or authorized extension of the contract time.

13.3 All claims for extension of time shall be made in writing to the CONSULTANT. Claims for delay due to inclement weather shall be made by the 10th day of the month following the month of the delay. All other claims shall be made no more than twenty (20) days after the commencement of the delay. Claims made beyond these time limits shall be null and void. Requests for extension of time shall be fully documented and shall include copies of daily logs, letters, shipping orders, delivery tickets, and other supporting information. In case of a continuing cause of delay only one (1) claim is necessary. Normal working weeks are based on a five (5) day week.

13.4 The right is reserved by the COUNTY to have other work performed by other contractors and to permit public utility companies and others to do work during the construction, and within the limits of, or adjacent to the project. The CONTRACTOR shall conduct his operations and cooperate with such other parties so that interference with such other work will be reduced to a minimum. Should a difference of opinion arise as to the rights of the CONTRACTOR and others working within the limits of, or adjacent to the project, the CONSULTANT will decide as to the relative priority of all concerned.

13.5 All authorized extensions of time shall be done by Change Order.

### **14 Guarantee; Tests and Inspections.**

14.1 Guarantee: The CONTRACTOR shall guarantee all materials and equipment furnished and Work performed for a period of one (1) year from the date when final payment becomes due. The CONTRACTOR warrants and guarantees for a period of one (1) year from the date when final payment becomes due that the completed system is free from all defects due to faulty materials or workmanship and the CONTRACTOR shall promptly make such corrections as may be necessary by reason of such defects including the repairs of any damage to other parts of the system resulting from such defects. The COUNTY'S PROJECT MANAGER will give notice of observed defects with reasonable promptness. In the event that the CONTRACTOR should fail to make such repairs, adjustments, or the Work that may be made necessary by such defects, the COUNTY may do so and charge the CONTRACTOR the cost thereby incurred. The Public Construction BOND shall

remain in full force and effect through the guarantee period. Express warranties are set forth in the Special Conditions, or in the Technical Specifications.

- 14.2 Access to Work: CONSULTANT and CONSULTANT'S representatives, other representatives of the COUNTY, testing agencies and governmental agencies with jurisdictional interests will have access to the Work at reasonable times for their observation, inspecting and testing. CONTRACTOR shall provide proper and safe conditions for such access.
- 14.3 Tests and Inspections: Other than as provided for in paragraph 14.5, COUNTY shall pay for all tests, except that any test not meeting specification requirements shall be charged to the CONTRACTOR and deducted from any monies due him.
  - 14.3.1 An independent Testing Laboratory shall be selected by the COUNTY to provide testing services as directed by the CONSULTANT. All inspections, tests or approvals required by Laws or Regulations of any authority having jurisdiction shall be performed by organizations acceptable to those authorities having jurisdiction.
  - 14.3.2 The Testing Laboratory shall mail copies of all test reports independently to the COUNTY, CONSULTANT, and the CONTRACTOR.
- 14.4 CONTRACTOR shall give CONSULTANT and the COUNTY'S PROJECT MANAGER timely notice of readiness of the Work for all required inspections, tests or approvals.
- 14.5 If Laws or Regulations of any public body having jurisdiction require any Work (or part thereof) to specifically be inspected, tested or approved independently of the requirements of the COUNTY, CONSULTANT, and the Contract Documents, CONTRACTOR shall assume full responsibility therefore, pay all costs in connection therewith and furnish CONSULTANT and the COUNTY'S PROJECT MANAGER the required certificates of inspection, testing or approval. CONTRACTOR shall also be responsible for and shall pay all costs in connection with any inspection or testing required in connection with the COUNTY'S PROJECT MANAGER'S or CONSULTANT'S acceptance of a Supplier or materials or equipment proposed to be incorporated in the Work, or of materials or equipment submitted for approval prior to CONTRACTOR'S purchase thereof, for incorporation in the Work.
- 14.6 If any Work (including the work of others) that is to be inspected, tested or approved is covered without written concurrence of the Project Representative, it must, if requested by the COUNTY'S PROJECT MANAGER, be uncovered for observation. Such uncovering shall be at CONTRACTOR'S expense.
- 14.7 Neither observations by CONSULTANT nor inspections, tests or approvals by others, including the Project Representative, COUNTY'S REPRESENTATIVE or COUNTY'S PROJECT MANAGER, shall relieve CONTRACTOR from CONTRACTOR'S obligations to perform the Work in accordance with the Contract Documents.
- 14.8 County's Project Representative (Inspector): A County Project Representative will be assigned to all projects.
  - 14.8.1 The Project Representative shall inspect all construction and materials, and shall inspect preparation, fabrication or manufacture of components, and materials and supplies.
  - 14.8.2 The Project Representative is not authorized to revoke, alter or waive any requirements of the specifications, but is authorized and expected to call to the attention of CONSULTANT and/or Contractor any failure of work or materials to conform to the Drawings and

Specifications. Inspectors shall have no authority to permit deviation from or to modify any of the provisions of the Drawings or Specifications without the written permission or instruction of the COUNTY with the concurrence of the CONSULTANT, or to delay the Contractor by failure to observe the materials and work with reasonable promptness.

14.8.3 The Project Representative shall have the authority to reject materials or suspend the work until questions of issue can be resolved to the County's satisfaction.

14.8.4 The Project Representative shall in no case neither act as foreman, give advice or perform other duties for the Contractor nor interfere with the management of the work.

## **15 Payments and Completions.**

15.1 The County shall make payments on account of the Contract as follows:

Once each month progress payments shall be made during the process of construction in amounts not to exceed ninety percent (90%) of the amount due on the Contract on the basis of Work completed as certified by the Contractor and approved by the County's designated employee or Agent, as set forth above, Pursuant to Sections 218.72 (7) and (8), Florida Statutes, payment application or payment requests must be made in the form provided for in the Bid Documents and shall be fully executed and notarized. Contractor shall submit a proper payment application to the County's Project Manager by the 25<sup>th</sup> day of each month. The application shall be for the dollar amount of the Work complete on the last day preceding the submission of the application. If an Agent must approve the payment request or invoice prior to submission to the County, then Payment to the Contractor shall be due within twenty-five (25) business days after the date on which the payment request or invoice is stamped as received as provided in Section 218.74(1), Florida Statutes. The Contractor may send the County an overdue notice and if the payment request or invoice is not rejected within four (4) business days after delivery of the overdue notice, the payment or invoice is deemed accepted, except for any portion deemed fraudulent or misleading. If no Agent is required to approve the payment request or invoice prior to submission to the County, then payment is due within twenty (20) business days after the date on which payment request or invoice is stamped as received in accordance with Section 218.74(1), Florida Statutes.

The County may reject the payment request or invoice in writing within twenty (20) business days after the date on which the payment request or invoice is stamped as received as provided in Section 218.74(1), Florida Statutes, which shall specify the deficiency and the action necessary to correct the deficiency and to make the payment request or invoice proper. Payment of a corrected payment request or invoice, or rejection thereof, shall be made ten (10) business days after the date the corrected payment request or invoice is stamped as received as provided in Section 218.74(1), Florida Statutes. All applications for payment submitted by the Contractor shall reference the County's Contract number. The parties agree that any payments withheld as liquidated damages or for any other reason allowed by this Contract, shall not be governed by the Florida Prompt Payment Act, Sections 217.70-80, Florida Statutes.

If a dispute between the County and the Contractor cannot be resolved by the procedure in this subsection, then the dispute must be resolved in accordance with the dispute resolution procedure set forth in Subsection 31 of this Contract. If the County disputes a portion of the payment request or invoice, then the undisputed portion shall be paid timely in accordance with this subsection.

As a part of this Contract, if the Contractor receives payment then the Contractor must remit undisputed payment due to subcontractors and suppliers within ten (10) days after contractor's receipt of payment. A subcontractor who receives payment must remit undisputed payment due

to those subcontractors and suppliers within seven (7) days after subcontractor's receipt of payment.

Prior to final payment, a consultant evaluation form must be completed by the County's Project Manager. Additionally, all Releases of Liens must be submitted and, if applicable, a written certification of the project engineer that the project has been completed per plans and specs must be presented to the Board of County Commissioners for final acceptance. Prior to final payment or any progress payment, the County may require that a Consent of Surety be provided.

- 15.2 Contractor's Warranty of Title: The CONTRACTOR warrants and guarantees that title to all Work and equipment covered by an Application for Payment, whether incorporated in the Project or not, will have passed to the COUNTY prior to the making of the Application for Payment, free and clear of all liens, claims, security interests and encumbrances (hereafter in these General Conditions referred to as "Liens"); and that no work or equipment covered by an Application for Payment will have been acquired by the CONTRACTOR or by any other person performing the Work at the site or furnishing equipment for the Project, subject to an agreement under which an interest therein or encumbrance thereon is retained by the seller or otherwise imposed by the CONTRACTOR or such other person.
- 15.3 Approval of Payments: The CONSULTANT'S approval of any payment requested in an Application for Payment shall constitute a representation by him to the COUNTY, based on the CONSULTANT'S on-site observations of the Work in progress as an experienced and qualified design professional and on his review of the Application for Payment and the supporting data, that the Work has progressed to the point indicated; that, to the best of his knowledge, information and belief, the quality of the Work is in accordance with the Contract Documents (subject to an evaluation of the Work as a functioning Project upon Substantial Completion, to the results of any subsequent tests called for in the Contract Documents and any qualifications stated in his approval); and that the CONTRACTOR is entitled to payment of the amount approved. However, by approving any such payment the CONSULTANT shall not thereby be deemed to have represented that he made exhaustive or continuous on-site observations to check the quality or the quantity of the Work, or that he has reviewed the means, methods, techniques, sequences, and procedures of construction or that he has made any examination to ascertain how or for what purpose the CONTRACTOR has used the money paid or to be paid to him on account of the Contract Price, or that title to any Work or equipment has passed to the COUNTY free and clear of any Liens.
- 15.4 The CONTRACTOR shall make the following certification on each request for payment:
- "I hereby certify that the labor and materials listed on this request for payment have been used in the construction of this work or that all equipment included in this request for payment and not yet incorporated into the construction are now on the site or stored at an approved location; and payment received from the last request for payment has been used to make payments to all first tier subcontractors and suppliers except as listed below."
- 15.5 The CONSULTANT'S approval of final payment shall constitute an additional representation by him to the COUNTY that the conditions precedent to the CONTRACTOR'S being entitled to final payment as set forth in paragraph 15.11 have been fulfilled.
- 15.6 The CONSULTANT may refuse to approve the whole or any part of any payment if, in his opinion, he is unable to make such representations to the COUNTY. He may also refuse to approve any such payment, or, because of subsequently discovered evidence or the results of subsequent inspection or tests, nullify any such payment previously approved, to such extent as may be necessary in his opinion to protect the COUNTY from loss because:

- 15.6.1 The Work is defective, or complete Work has been damaged requiring correction or replacement,
- 15.6.2 The Work for which payment is requested cannot be verified,
- 15.6.3 Claims or Liens have been filed or there is reasonable evidence indicating the probable filing thereof,
- 15.6.4 The Contract Price has been reduced because of Modifications,
- 15.6.5 The COUNTY has been required to correct defective Work or complete the Work in accordance with paragraph 10.6,
- 15.6.6 Of unsatisfactory prosecution of the Work, including failure to clean up as required by paragraphs 7.38, 7.39 and 7.40,
- 15.6.7 Of persistent failure to cooperate with other Contractors on the Project and persistent failure to carry out the Work in accordance with the Contract Documents,
- 15.6.8 Of liquidated damages payable by the CONTRACTOR, or
- 15.6.9 Of any other violation of, or failure to comply with, the provisions of the Contract Documents.
- 15.7 Prior to Substantial Completion, the COUNTY, with the approval of the CONSULTANT and with the concurrence of the CONTRACTOR, may use any completed or substantially completed portion of the Work. Such use shall not constitute an acceptance of such portions of the Work.
- 15.8 The COUNTY shall have the right to enter the premises for the purpose of doing work not covered by the Contract Documents. This provision shall not be construed as relieving the CONTRACTOR of the sole responsibility for the care and protection of the Work, or the restoration of any damaged Work except such as may be caused by agent or employees of the COUNTY.
- 15.9 Upon completion and acceptance of the Work the CONSULTANT shall issue a certificate attached to the final payment request that the Work has been accepted by him under the conditions of the Contract Documents. The entire balance found to be due the CONTRACTOR, including the retained percentages, but except such sums as may be lawfully retained by the COUNTY, shall be paid to the CONTRACTOR within thirty (30) days of completion and acceptance of the Work.
- 15.10 The CONTRACTOR will indemnify and save the COUNTY or the COUNTY'S agents harmless from all claims growing out of the lawful demands of Subcontractors, laborers, workmen, mechanics, materialmen, and furnishers of machines and parts thereof, equipment, tools, and all supplies, incurred in the furtherance of the performance of the Work. The CONTRACTOR shall, at the COUNTY'S PROJECT MANAGER'S request, furnish satisfactory evidence that all obligations of the nature designated above have been paid, discharged, or waived. If the CONTRACTOR fails to do so the COUNTY may, after having notified the CONTRACTOR, either pay unpaid bills or withhold from the CONTRACTOR'S pay from the CONTRACTOR'S unpaid compensation a sum of money deemed reasonably sufficient to pay any and all such lawful claims until satisfactory evidence is furnished that all liabilities have been fully discharged whereupon payment to the CONTRACTOR shall be resumed in accordance with the terms of the Contract Documents, but in no event shall the provisions of this sentence be construed to impose any obligations upon the COUNTY to either the CONTRACTOR, his Surety, or any third party. In paying any unpaid bills of the CONTRACTOR, any payment so made by the COUNTY shall be considered as a payment made

under the Contract Documents by the COUNTY to the CONTRACTOR and the COUNTY shall not be liable to the CONTRACTOR for any such payments made in good faith.

15.11 Acceptance of Final Payment as Release: The acceptance by the CONTRACTOR of final payment shall be and shall operate as a release to the COUNTY of all claims and all liability to the CONTRACTOR other than claims in stated amounts as may be specifically excepted by the CONTRACTOR for all things done or furnished in connection with this Work and for every act and neglect of the COUNTY and others relating to or arising out of this Work. Any payment, however, final or otherwise, shall not release the CONTRACTOR or his sureties from any obligations under the Contract Documents or the Public Construction Bond and Payment and Performance Bonds.

## **16 Suspension of Work and Termination.**

16.1 County May Suspend Work: The COUNTY'S PROJECT MANAGER may, at any time and without cause, suspend the Work or any portion thereof for a period of not more than ninety days by notice in writing to the CONTRACTOR and the CONSULTANT which shall fix the date on which Work shall be resumed. The CONTRACTOR will resume the Work on the date so fixed. The CONTRACTOR will be allowed an increase in the Contract Price or an extension of the Contract Time, or both, directly attributable to any suspension if he makes a claim therefore as provided in Articles 11 and 12.

16.2 County May Stop Work: The COUNTY or his REPRESENTATIVE may stop the Work or any portion thereof when it has been determined that the Contractor is not complying with the Drawings or Specifications or the intent thereof. The Stop Work order may be verbal and the CONTRACTOR shall cease work immediately except for leaving the Work area in a safe and acceptable condition. A verbal Stop Work order will be confirmed in writing. The CONTRACTOR will not be allowed an increase in the contract price or an extension of the Contract time during the Stop Work period. A Start Work order may be verbal and will be confirmed in writing.

16.3 Work During Inclement Weather: No work shall be done under these Specifications except by permission of the COUNTY'S PROJECT MANAGER when the weather is unfit for good and careful work to be performed. Should the severity of the weather continue, the CONTRACTOR, upon the direction of the COUNTY'S PROJECT MANAGER, shall suspend all work until instructed to resume operations by the COUNTY'S PROJECT MANAGER and the CONTRACT Time shall be extended to cover the duration of the order. Work damaged during periods of suspension due to inclement weather shall be repaired and/or replaced by the CONTRACTOR. Any compensation for repairs or replacements shall be subject to approval of the COUNTY'S PROJECT MANAGER.

16.4 County May Terminate: If the CONTRACTOR is adjudged bankrupt or insolvent, or if he makes a general assignment for the benefit of his creditors, or if a trustee or receiver is appointed for the CONTRACTOR or for any of his property, or if he files a petition to take advantage of any debtor's act, or to reorganize under the bankruptcy or similar laws, or if he fails to supply sufficient skilled workmen or suitable materials or equipment, or if he fails to make prompt payments to Subcontractors or for labor, materials or equipment or he disregards laws, ordinances, rules, regulations or orders of any public body having jurisdiction, or if he disregards the authority of the CONSULTANT, or if he otherwise violates any provision of the CONTRACT Documents, then the COUNTY may, without prejudice to any other right or remedy and after giving the CONTRACTOR and his surety seven days' written notice, terminate the services of the CONTRACTOR and take possession of the Project and of all materials, equipment, tools, construction equipment and machinery thereon owned by the CONTRACTOR, and finish the Work by whatever method he may deem expedient. In such case the CONTRACTOR shall not be entitled to receive any further payment until the Work is finished. If the unpaid balance of the Contract Price exceeds the direct and indirect costs of completing the Project, including compensation for

additional professional services, such excess shall be paid to the CONTRACTOR. If such costs exceed such unpaid balance, the CONTRACTOR or the Surety will pay the difference to the COUNTY. Such costs incurred by the COUNTY will be determined by the CONSULTANT and incorporated in a Change Order.

- 16.5 Where the CONTRACTOR'S services have been so terminated by the COUNTY, said terminations shall not affect any rights of the COUNTY against the CONTRACTOR then existing or which may thereafter accrue. Any retention or payment of moneys by the COUNTY due the CONTRACTOR will not release the CONTRACTOR from liability.
- 16.6 Upon seven (7) days written notice to the CONTRACTOR and the CONSULTANT, the COUNTY may, without cause and without prejudice to any other right or remedy, elect to abandon the Project and terminate the Contract. In such case, the CONTRACTOR shall be paid for all Work executed and any expense sustained plus a reasonable profit.
- 16.7 Removal of Equipment: In the case of termination of this Contract before completion, for any cause whatever, the CONTRACTOR, if notified to do so by the COUNTY'S PROJECT MANAGER, shall promptly remove any part or all of this equipment and supplies from the property of the COUNTY. Should the CONTRACTOR not remove such equipment and supplies, the COUNTY shall have the right to remove them at the expense of the CONTRACTOR. Equipment and supplies shall not be construed to include such items for which the CONTRACTOR has been paid in whole or in part.
- 16.8 Contractor May Stop Work or Terminate: If, through no act or fault of the CONTRACTOR, the Work is suspended for a period of more than ninety days by the COUNTY, or under an order of court or other public authority as a result of actions by others not under the control of the CONTRACTOR, or the CONSULTANT fails to act on any Application for Payment within thirty days after it is submitted, or the COUNTY fails to pay the CONTRACTOR any sum approved by the CONSULTANT or awarded by arbitrators within thirty days of its approval and presentation, then the CONTRACTOR may, upon seven days written notice to the COUNTY'S PROJECT MANAGER and the CONSULTANT, terminate the Contract and recover from the COUNTY payment for all Work executed and any expense sustained plus a reasonable profit. In addition and in lieu of terminating the Contract, if the CONSULTANT has failed to act on an Application for Payment or the COUNTY has failed to make any payment as aforesaid, the CONTRACTOR may upon twenty-one (21) days' notice to the COUNTY'S PROJECT MANAGER and the CONSULTANT stop the Work until he has been paid all amounts then due.
- 16.9 County Furnished Equipment: In case the COUNTY furnishes equipment to the CONTRACTOR to install, but fails to deliver it to the CONTRACTOR as required by SPECIAL CONDITIONS, and in case such failure causes the CONTRACTOR additional expense or need for extension of time, the CONTRACTOR may make such claims upon the COUNTY and obtain adjustments as provided herein.
- 16.10 Liquidated Damages: It is mutually agreed between the parties hereto that time is of the essence in the performance of this Contract. In the event the construction of the Work is not completed within the time herein specified the County will suffer damages, the amount of which is difficult if not impossible to ascertain. It is agreed, therefore, that from the compensation otherwise to be paid to the Contractor, the County may retain the sum of \$xxx.00 per calendar day for each day thereafter, Sundays and holidays included, that the Work remains uncompleted. This sum shall represent liquidated damages which the County will have sustained per calendar day from the inconvenience and expense caused to the County by the delay in the completion of the Work. This sum is not a penalty, being the liquidated damages, the County will have sustained in event of such default by the Contractor. The County reserves the right to additionally recover direct job

site expenses incurred during the period of any delay. The Contractor shall be liable for liquidated damages even if the Contract is terminated by the County for cause or if the Contractor abandons the Work. The liability of the Contractor and its surety or sureties for damages provided by this Article is joint and several.

**17 Miscellaneous.**

- 17.1 Whenever any provision of the Contract Documents requires the giving of written notice it shall be deemed to have been validly given if delivered in person to the individual or to a member of the firm or to an officer of the corporation for whom it is intended, or if delivered at or sent by registered or certified mail, postage prepaid, to the last business address known to him who gives the notice.
- 17.2 All Specifications, Drawings and copies thereof furnished by the CONSULTANT shall remain his property. They shall not be used on another Project, and, with the exception of those sets which have been signed in connection with the execution of the Contract, shall be returned to him on request upon completion of the Project.
- 17.3 The duties and obligations imposed by these General Conditions, Special Conditions and Supplemental Conditions and the rights and remedies available hereunder, and, in particular but without limitation, the warranties, guarantees and obligations imposed upon CONTRACTOR and those in the Special Conditions and the rights and remedies available to them which are otherwise imposed or available by law, by special guarantee or by other provisions of the Contract Documents, and the provisions of this paragraph will be as effective as if repeated specifically in the Contract Documents in connection with each particular duty, obligation, right and remedy to which they apply. All representations, warranties and guarantees made in the Contract Documents will survive final payment and termination or completion of the Contract.
- 17.4 Should the COUNTY or the CONTRACTOR suffer injury or damage to its person or property because of any error, omission or act of the other or of any of his employees or agents or others for whose acts he is legally liable, claim shall be made in writing to the other party within a reasonable time of the first observance of such injury or damage.
- 17.5 The Contract Documents shall be governed by the law of the State of Florida.
- 17.6 Before the Contractor disposes of any existing improvements or equipment which is to be removed as a portion of the work, and for which disposition is not specifically provided for elsewhere in these Specifications, he will contact the COUNTY and determine if the removal items are to be salvaged. Items to be salvaged by the COUNTY will be neatly stockpiled or stored in a neat and acceptable manner at the construction site easily accessible to the COUNTY. Equipment and materials which will not be salvaged by the COUNTY shall become the property of the Contractor to be removed from the site and disposed of in an acceptable manner.

**18 Public Entity Crimes.**

- 18.1 Any 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 on a contract to provide any goods or services to the County, may not submit a bid on a contract to the County for the construction or repair of a building or public work, may not submit bids on leases of real property to the County, may not be awarded or perform work as a contractor, supplier, subcontractor, or consultant under contract with the County, and may not transact business with the County in excess of \$10,000.00 for a period of thirty-six (36) months from the date of being placed on the convicted list.

18.2 The County will not intentionally award publicly-funded contracts to any contractor who knowingly employs unauthorized alien workers, constituting a violation of the employment provisions contained in U.S.C. Section 1324a(e) [Section 274A9e) of the Immigration and Nationality Act (AINA@)]. The County shall consider the employment by any contractor of unauthorized aliens a violation of Section 274A(e) of the INA. Such a violation by the Recipient of the employment provisions contained in Section 274A(e) of the INA shall be grounds for unilateral cancellation of this Agreement by the County.

## **19 Punchlist Procedures.**

19.1 Per Section 218.735(7), Florida Statutes., Punchlist procedures to render the Work complete,

## **20 Audit.**

The Contractor agrees that the County or any of its duly authorized representatives shall, until the expiration of three (3) years after expenditure of funds under this Contract, have access to and the right to examine any directly pertinent books, documents, papers, and records of the Contractor involving transactions related to this Contract. The Contractor agrees that payment(s) made under this Contract shall be subject to reduction for amounts charged thereto which are found on the basis of audit examination not to constitute allowable costs under this Contract. The Contractor shall refund by check payable to the County the amount of such reduction of payments. All required records shall be maintained until an audit is completed and all questions arising therefrom are resolved, or three (3) years after completion of the project and issuance of the final certificate, whichever is sooner.

## **21 Indemnity.**

21.1 Contractor agrees to pay on behalf of, protect, defend, reimburse, indemnify and hold the County, its agents, employees, elected officers and representatives and each of them, (hereinafter collectively and for the purposes of this paragraph, referred to as "County"), free and harmless at all times from and against any and all claims, liability, expenses, losses, costs, fines and damages, including attorney's fees, and causes of action of every kind and character against County by reason of any damage to property or the environment, or bodily injury (including death) incurred or sustained by any party hereto, or of any party acquiring any interest hereunder, any agent or employee of any party hereto or of any party acquiring an interest hereunder, and any third or other party whomsoever, or any governmental agency, arising out of or in incident to or in connection with Contractor's performance under this Contract, the condition of the premises, Contractor's acts, or omissions or operations hereunder, or the performance, non-performance or purported performance of the Contractor of any breach of the terms of this Contract to the extent caused by the negligence, recklessness, or intentional wrongful misconduct of the Contractor and persons employed or utilized by the Contractor.

21.2 Contractor further agrees to pay on behalf of and hold harmless and indemnify County for any fines, citations, court judgments, insurance claims, restoration costs or other liability resulting from its activities on the project, whether or not Contractor was negligent or even knowledgeable of any events precipitating a claim or arising as a result of any situation involving Contractor's activities to the extent caused by the negligence, recklessness, or intentional wrongful misconduct of the Contractor and persons employed or utilized by the Contractor.

21.3 Said indemnification by Contractor shall be extended to include all deliverers, suppliers, furnishers of material or anyone acting for, on behalf of, or at the request of Contractor. Contractor recognizes the broad nature of this indemnification and hold harmless clause and voluntarily makes this covenant. This indemnification and hold harmless survives acceptance of the Work. This clause of the Contract will extend beyond the term of the Agreement for a period of ten (10) years after the date of the acceptance of the Work by the County.

## **22 Indemnity of Florida East Coast Railroad Company and Insurance Requirements-If Applicable.**

22.1 If the Work performed under this Contract requires a permit from Florida East Coast Railway Company ("FEC"), the Contractor by execution and delivery hereof, agrees that it shall and will at all times hereafter, defend and save harmless FEC from and against all judgments, and all loss, claims, damages, costs, charges, and expenses ("Costs") which it may suffer, sustain, or in any wise be subjected to on account of or occasioned by the operations of the Contractor, or any of the subcontractors, or both, whether directly or indirectly under, or pursuant to, this construction contract, including any such Costs arising from the death, bodily injury of, as follows:

22.1.1 Of any person, including without limitation upon the generality of the foregoing description, employees and officers of Florida East Coast Railway Company, employees and officers of material men, employees and officers of the Contractor, employees and officers of all subcontractors, and from loss, damage, injury and loss of use of any real or personal property (a) in which Florida East Coast Railway Company has any ownership interest, and (b) personal property in the custody of Florida East Coast Railway Company under any transportation contracts; including without limitation upon the generality of the two (2) foregoing enumerations, all railroad equipment commonly described as rolling stock and the contents of the same.

22.1.2 In furtherance of its obligation to indemnify, defend and save harmless, Contractor shall procure and keep in effect comprehensive general liability insurance in the limits of \$2,000,000.00 each occurrence for bodily injury or death and \$2,000,000.00 property damage each occurrence, covering all obligations of Contractor to indemnify the Railway by Contractual Assumed Liability Endorsement. Alternatively, Contractor may procure and keep in effect during the life of this construction contract, as aforesaid Railroad Protective Liability Policies ensuring the Railway directly as insured against losses and damages with the limits specified in this paragraph.

In addition to the above, Contractor shall, at its cost and expenses, maintain a Workman's Compensation Insurance Policy as required in the State of Florida.

22.2 All such insurance, directly or indirectly for the benefit of the Railway, shall be in a form satisfactory to Railway's Manager of Insurance and issued by a casualty company/insurance company authorized to do business in the State of Florida that has a "Best's" rating of A or A+ and a financial category size of Class XII or higher.

## **23 Inspection.**

The project will be inspected by the Project Manager and will be rejected if it is not in conformity with the Contract provisions. Rejected Work will be immediately corrected by the Contractor. When the Work is substantially completed, the Contractor shall notify the County in writing that the Work shall be ready for final inspection on a definite date, at least three (3) calendar days thereafter, which shall be stated in such notice.

## **24 Public Construction Bond.**

24.1 The Contractor shall, upon execution and return of this Contract to the County, furnish to the County a public construction bond using the attached for or incorporating all of the terms and conditions set forth in the form and covering the faithful performance of this Contract and the payment of all obligations arising hereunder in the amount of one hundred percent (100%) of the Contract amount. The liability of the Contractor and its surety or sureties for the faithful performance of this Contract and the payment of all obligations arising hereunder is joint and several. The Contractor shall record the public construction in the Official Records for St. Lucie County and provide the County with a copy of the recorded bond.

24.2 The public construction bond required hereunder shall meet the following minimum standards:

24.2.1 The surety issuing the bond must be licensed to do business in the State of Florida, hold a certificate of authorization to write surety s in the State, hold a currently valid certificate of authority issued by the United States Department of the Treasury, and otherwise be in compliance with the provisions of the Florida Insurance Code.

24.2.2 The attorney-in-fact must provide a certified copy of his or her power of attorney to sign the bond.

24.2.3 The name, address and telephone number of the surety and its agent must be listed on the bond.

24.2.4 For contracts up to \$499,999.99 the surety shall have twice the minimum surplus and capital required by the Florida Insurance Code at the time the bid is issued for the Work, otherwise the surety shall have the following minimum ratings:

<u>Contract Amount</u>	<u>Best Key Rating</u>
\$500,000 to \$2,499,999.99	Class XII A or better
Over \$2,500,000.00	Class XIV or better

24.2.5 The Bond shall specifically incorporate and acknowledge the Surety's responsibility for liquidated damages.

## **25 Insurance.**

Insurance requirements will be as noted in Section 6.0 – Bonding & Insurance Requirements

## **26 Non-Discrimination.**

Contractor covenants and agrees that Contractor shall not discriminate against any employee or applicant for employment to be employed in the performance of the Contract with respect to hiring, tenure, terms, conditions or privileges of employment, or any matter directly or indirectly related to employment because of age, sex, or physical handicaps (except where based on a bona fide occupational qualification); or because of marital status, race, color, religion, national origin or ancestry.

## **27 E-Verify / Verification of Employment Status.**

27.1 **Effective January 1, 2021**, As required by Section 448.095(2)(a), the Contractor and subcontractor shall register with and use the E-Verify System to verify the work authorization status of all newly hired employees. The County, Contractor, or subcontractor may not enter into a Contract unless each party to the Contract registers with and uses the E-Verify System. The Contractor shall provide documentation of their compliance of this requirement to the County upon request.

27.2 If the Contractor enters into a contract with a subcontractor, the subcontractor must provide the Contractor with an affidavit stating that the subcontractor does not employ, contract with, or subcontract with an unauthorized alien. The Contractor shall maintain a copy of such affidavit for the duration of this Contract.

27.3 The County will not intentionally award contracts to any contractor who knowingly employs unauthorized alien workers, constituting a violation of the employment provisions of the Immigration and Nationality Act ("INA"). The County shall consider the employment by the Contractor of unauthorized aliens a violation of 8 U.S.C. Section 1324a(e) [Section 274A(e) of the

INA]. The Contractor agrees that such violation by the Contractor shall be grounds for the unilateral cancellation of this Contract by the County.

## **28 Products or Material with Recycled Content.**

28.1 Contractor is required to procure products or materials with recycled content with respect to Work performed or products supplied under the contract when those products or materials are available at reasonable prices. A decision to not procure such items must be based on a determination that such procurement

28.1.1 Is not available within a reasonable period of time;

or

28.1.2 Fails to meet the performance standards set forth in the applicable specifications or fails to meet the reasonable performance standards of the agency.

28.2 Contractor shall provide the County with a written Statement indicating what recycled products were used or supplied. If a decision was made not to use recycled products, Contractor shall provide County with a written statement indicating the basis for the decision using the above criteria.

## **29 Florida Produced Lumber.**

Where applicable Contractor agrees to comply with the provisions of Section 255.20, Florida Statutes, and as may be amended from time to time.

## **30 Asbestos-Free Materials.**

Contractor shall not use any asbestos or asbestos-based fiber materials in the Work performed under this Contract.

## **31 Dispute Resolution.**

Any disputes relating to interpretation of the terms of this Contract or a question of fact or arising under this Contract shall be resolved through good faith efforts upon the part of the Contractor and the County or its Project Manager. At all times, the Contractor shall carry on the work and maintain its progress schedule in accordance with the requirements of the Contract and the determination of the County or its representatives, pending a final resolution of the dispute, including, if necessary, any determination by a Court of competent jurisdiction. Any dispute which is not resolved by mutual agreement shall be decided by the County Administrator. For purposes of the Florida Prompt Payment Act, the dispute resolution proceeding is to be commenced within forty-five (45) days after the date the payment request or proper invoice was received by the County. The dispute resolution procedure shall be considered commenced when the County sends the Contractor notification that the process has begun, not the date of the hearing. The County Administrator shall reduce the final decision to writing within sixty (60) days after the date the payment request was received by the County. The decision of the County shall be final and conclusive unless determined by a court of competent jurisdiction to be fraudulent, capricious, arbitrary, so grossly erroneous as to necessarily imply bad faith, or not be supported by substantial evidence. If the County does not commence the dispute resolution procedure within the time required, a Contractor may give written notice to the County and if the County does not commence the dispute resolution within four (4) business days after such notice, any amounts resolved in favor of the contractor shall bear mandatory interest from the date the payment request or invoice was submitted to the County and any objection to the payment request or invoice shall be deemed waived. Any waiver of an objection does not relieve the Contractor of its contractual obligations. Section 218.76(2)(b), Florida Statutes.

**32 Mediation.**

Prior to initiating any litigation concerning this Contract, the parties agree to submit the disputed issue or issues to a mediator for non-binding mediation. The parties shall agree on a mediator chosen from a list of certified mediators available from the Clerk of Court for St. Lucie County. The fee of the mediator shall be shared equally by the parties. To the extent allowed by law, the mediation process shall be confidential and the results of the mediation or any testimony or argument introduced at the mediation shall not be admissible as evidence in any subsequent proceeding concerning the disputed issue.

**33 Antitrust Assignment.**

The Contractor and the County and the State of Florida recognize that in actual economic practice, overcharges resulting from antitrust violations are in fact usually borne by the State of Florida and local governments. Therefore, the Contractor assigns to the State of Florida and the County any and all claims for such overcharges as to goods, materials or services purchased in connection with the Contract.

## SUPPLEMENTAL CONDITIONS

### WORK SCHEDULES AND OVERTIME

The Contractor shall attend a Pre-Construction meeting. Two (2) weeks prior to scheduling a Pre-Construction meeting, the Contractor shall submit, for approval, a work schedule listing the order of the streets and estimated duration of work to be completed on each street, along with maintenance of traffic plans for each street demonstrating how he intends to progress with construction within the contract limits.

No work shall be done between the hours of 3:30 P.M. and 7:00 A.M., nor on Saturday, Sunday, or legal holidays observed by St. Lucie County, in any case without the written approval or permission of the Project Manager. The normal work shift for County Inspectors shall begin at 7:00 A.M. and end at 3:30 P.M. Monday through Friday. Any work performed before or after the normal work shift, or on Saturday, Sunday, or legal holidays shall be considered overtime and shall be paid for by the Contractor. If permission is obtained from the County's Project Manager to work between 3:30 P.M. and 7:00 A.M., the Contractor shall bear all expenses for Inspection. Such overtime inspection expenses will be recovered by deductions from periodic partial payments.

The Contractor will be issued a formal Notice to Proceed at or shortly after the Pre-Construction Meeting. The Contractor shall proceed with work at the specified job location within 10 calendar days of receipt of the written Notice to Proceed and Purchase Order. After the initial notification, the Contractor shall provide service in accordance with the approved work schedule. After commencing work, the work shall continue without any interruptions until completion.

The Contractor must give the Project Manager a minimum of twenty-four (24) hours written notice of any paving operation, listing the date, time, and road location the Contractor will begin a surfacing operation. Should the Contractor fail to give such notice, and a County Representative not be present at the site during the paving operation, **NO** payment will be made for the material placed until and unless the Contractor can produce proof, to the Project Manager's satisfaction, of the amount of material claimed to have been placed. Any such claim shall be made, in writing, within fourteen (14) calendar days of the placement of the material. Any such claim made after fourteen (14) calendar days will not be allowed and no payment will be made for the disputed material under the claim.

**SCHEDULING OF WORK** – The Contractor shall supply a work schedule to be approved by the Project Manager. The County shall review and approve the schedule submitted and reserves the right to demand reasonable changes or adjustments or to reject the entire proposed schedule. Surfacing projects that do not start within 7 calendar days of the agreed upon scheduled date shall be assessed liquidated damages of \$700.00, and thereafter \$100.00, per calendar day in addition to any liquidated damages incurred for not completing the surfacing project on time.

The Contractor shall make every effort to stay on schedule and shall complete all routine work during the scheduled calendar week and within approved scheduled time. Failure to complete the surfacing project within the approved scheduled days shall result in liquidated damages being applied to the surfacing project invoice of \$100.00 per calendar day. Time extensions may be granted for extenuating circumstances, at the sole discretion of the County. A rain day, upon request, shall be granted for each day rain exceeds 1" and an additional day for each additional 1" of rain. Rainfall will be determined by the nearest South Florida Water Management District gauges at [www.sfwmd.gov/weather-radar/rainfall-historical/daily](http://www.sfwmd.gov/weather-radar/rainfall-historical/daily).

The Project Manager will determine if work not done on schedule constitutes a deficiency.

## **CONSTRUCTION SITE SIGNAGE**

The Contractor shall comply with the requirements of the Manual on Traffic Control Devices, U.S. Department of Transportation, and Federal Highway Administration. These requirements include, but not limited to, advanced and construction zone signage, flagging operations and methods, lane closures, etc. In addition the Contractor shall maintain an "UNEVEN PAVEMENT", at each approach to the resurfacing area. This sign(s) shall remain in place at all times until to final wearing surface is complete and the temporary traffic stripe is placed. It shall be the responsibility of the Contractor to insure all necessary and required signs are in place prior to starting the operations, maintained during the operations, and removed at the completion of the operations.

## **TRAFFIC FLOW**

The Contractor shall maintain a clear, well defined method of traffic control at all times while performing the work, and shall be consistent with current requirements as established in FDOT standard indexes 600-651. The Contractor will not be allowed to block pedestrian walkways, park benches, or impede the flow vehicular traffic in any manner.

All Chip Seal and Asphalt operations and general safety of the work area shall be the responsibility of the Contractor. Securing the work area each day shall include ensuring a maximum pavement drop-off of 1 inch at the end of pavement laid and the absence of dangerous or loose material posing a hazard to pedestrian or vehicular traffic.

## **CONTRACTOR RESPONSIBILITIES**

The Contractor certifies, by submission of his bid, that the Contractor will perform the services agreed upon in a timely and professional manner in accordance with currently accepted professional standards.

All construction shall be in compliance with the Florida Department of Transportation Standard Specifications for Road and Bridge Construction, Latest Edition, and any supplements thereto and NCHRP Synthesis 342 Chip Seal Best Practices.

## **MANHOLES AND VALVE BOXES**

Manholes, and valve boxes shall be covered with an approved material during the operation and shall be removed immediately after the street has been chip sealed and fog sealed. The Contractor is responsible for locating all exposed manholes and valve boxes prior to chip sealing.

## **WEATHER LIMITATIONS**

The Chip Seal shall not be applied when the pavement is moist, threat of rain showers, or other environmental factors which could affect the performance of the Chip Seal construction.

## **UNSATISFACTORY WORK**

The Contractor shall correct unsatisfactory work within twenty-four (24) hours of notification by the County.

## **PROTECTION OF PROPERTY**

At all times, the Contractor shall guard from damage or loss to property of the County, and shall replace or repair any loss or damage unless such damage is caused by the County or other contractors. The County may withhold payment, or make such deductions as it might deem necessary, to insure reimbursement for loss or damage to property through negligence of the Contractor or the Contractor's agents.

## **DAMAGE TO COUNTY PROPERTY**

Care is to be taken at all times to prevent damage to facilities or structures on site, both public and private, including but not limited to, signage, lighting, benches, private and public fencing, sidewalks, curbing, culverts, inlet and outlet structures. Any existing damage is to be reported immediately to the County. Damage attributed to the Contractor or their agents due to wrongful or negligent acts will be repaired and deducted from payment due to the Contractor.

## **REGULATIONS**

The Contractor shall conform to all Federal, State and County regulations during the performance of the agreement. Any fines levied due to inadequacies or failure to comply with any and all requirements shall be the sole responsibility of the Contractor. Any person found not in conformance with any laws, statutes, rules or regulations will not be allowed on the job site. Continued violations by a Contractor shall constitute cause for immediate termination of the agreement.

## **CONTRACTOR EXPERIENCE**

The Contractor shall have a minimum of three years' experience in the placement of Bituminous Asphaltic materials.

## **PROJECT MANAGER**

The Contractor shall keep during the term of this Contract a competent Project Manager and any necessary assistants, all of which shall be satisfactory to the Owner's Project Manager. The Contractor, as soon as practicable after the award of the Contract, but prior to the issuance of the Notice-to-Proceed, shall furnish in writing to the Owner's Project Manager the name and qualifications of the Project Manager who will be in charge of the project, along with the Project Manager's contact information. The Owner's Project Manager may reply within fourteen (14) days to the Contractor in writing stating whether he/she has objection to the proposed Project Manager or requires additional time for review. The failure of the Owner's Project Manager to make objection to the Contractor's Project Manager within the fourteen days (14) of receipt shall constitute an acceptance of such Project Manager.

The parties shall direct all matters arising in connection with the performance of this Contract, other than invoices and notices, to the attention of the Project Managers for attempted resolution or action. Except as otherwise provided for in the Contract, the Project Managers shall be responsible for overall resolution or action. The Project Managers shall be responsible for overall coordination and oversight relating to the performance of this Contract. The Project Manager, however, has no authority to approve or execute Change Order Work.

The Contractor shall not use a Project Manager to whom the Owner has made reasonable and timely objection. The Contractor shall not change their Project Manager without the Owner's consent.

The Owner's Project Manager shall be able to reach the Contractor's Project Manager at their cell phone/direct connect number at all hours (24/7). The Contractor shall give sufficient superintendence to the work using his best skill and attention.

At any time, the Owner's Project Manager, with or without cause, may request that the Contractor replace any individual with an individual acceptable to the Owner.