

BID DOCUMENT AND SPECIFICATIONS

ASPHALT STREET RESURFACING

May 2016

BID NUMBER: 2016-11

CITY OF APOPKA

Mayor: JOE KILSHEIMER

City Commissioners:
BILLIE L. DEAN
DIANE VELAZQUEZ
DOUG BANKSON
KYLE BECKER

City Administrator: GLENN IRBY, MPA

Public Services Director: R. JAY DAVOLL, P.E.

**PUBLIC SERVICES DEPARTMENT
STREET MAINTENANCE DIVISION
CITY OF APOPKA
748 E. CLEVELAND STREET
APOPKA, FLORIDA 32703
(407) 703-1731**

CITY OF AOPKA

ASPHALT STREET RESURFACING

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SECTION 00010
BID NO. 2016-11
INVITATION TO BID

Sealed bids will be received by the City of Apopka until 10:00 a.m. E.S.T. on July 5, 2016 at the Apopka City Clerk's office, 120 E. Main Street, Apopka, Florida 32703 for the construction of the following project:

Asphalt Street Resurfacing

and publicly opened and read aloud at 10:15 a.m. in the City Council Chambers. The project consists of furnishing all transportation, materials, equipment, labor, services and supplies necessary to mill and resurface certain streets throughout the City. The milling is approximately 23,643 SY and the resurfacing is approximately 1,900 TN of type SP-9.5 asphalt.

A non-mandatory pre-bid meeting has been scheduled for June 23, 2016 at 10:00 a.m. in the Public Services Conference Room located at 748 E. Cleveland St., Apopka, Florida. Bidders are encouraged to obtain and review plans and specifications prior to the pre-bid meeting so that questions may be presented at that time.

Copies of the plan and specifications are available at the Public Services Complex, 748 E. Cleveland Street, Apopka, Florida 32703, telephone (407) 703-1731, for \$10.00 per set (non-refundable). Payments by check or money order are to be made payable to City of Apopka. If shipment is required, provide a commercial carrier (FedEx or UPS) account number. Plans and specifications are also available electronically at no charge via email link. Please contact our office at (407) 703-1731 to obtain the link address.

Each bid shall be made out and submitted in duplicate on a form furnished as part of the Bid Document and must be accompanied by cashier's check, certified check or a bidder's bond in the amount of five percent (5%) of the total bid price, make payable to the City of Apopka. Said check or bond shall be given as guarantee that the bidder will enter into a contract with the owner and furnish a performance bond and payment bond in the amount of 100% of the total bid price within fifteen (15) days from the date of notification of award. Bonds are required from companies licensed in the State of Florida.

In accordance with the Americans with Disabilities Act (ADA), persons with disabilities needing assistance to participate in any of these proceedings should contact the City Clerk's Office at 120 East Main Street, Apopka FL 32703, Telephone: 407-703-1704, no less than 48 hours prior to the proceeding.

The Owner reserves the right to reject any and all bids and to waive any and all irregularity in any bid.

SECTION 00020
INSTRUCTIONS TO BIDDERS

1. Defined Terms.

Terms used in these Instructions to Bidders which are defined in the General Terms and Conditions, Section 00160, have the meanings assigned to them in the General Terms and Conditions. The term "Successful Bidder" means the lowest, qualified, responsible Bidder to whom Owner (on the basis of Owner's evaluation as hereinafter provided) makes an award.

2. Copies of Bidding Documents.

2.1 Complete sets of the Bidding Documents in the number and for the deposit sum, if any, stated in the Advertisement of invitation may be obtained from Engineer (unless another issuing office is designated in the Advertisement of Invitation to Bid).

2.2 Complete sets of Bidding Documents shall be used in preparing Bids; neither Owner nor Engineer assume any responsibility for errors or misinterpretations resulting from the use of incomplete sets of Bidding Documents.

2.3 Owner and Engineer in making copies of Bidding Documents available on the above terms do so only for the purpose of obtaining Bids on the Work and do not confer a license or grant for any other use.

3. Qualifications of Bidders.

To demonstrate qualifications to perform the Work, each Bidder must be prepared to submit within seven (7) days of Owner's request written evidence of the types set forth here, such as financial data, previous experience and evidence of authority to conduct business in the jurisdiction where the Project is located. Each Bid must contain evidence of Bidder's qualification to do business in the state where the Project is located or covenant to obtain such qualification prior to award of the contract.

In order for the Owner to obtain the best quality of work in a reasonable period of time, the Owner reserves the right to reject bids from Contractors who are unable to meet the following requirements.

- a. Contractor must have had at least three (3) years' experience in the construction of similar projects of this size and larger.
- b. Contractor must have successfully constructed, as prime Contractor, at least three (3) projects similar in scope to this project in the last five (5) years.
- c. Contractor must have good recommendations from at least three (3) clients similar to the Owner.
- d. Contractor must be able to provide evidence of authority to conduct business in the

jurisdiction in which the project is located.

- e. The Contractor's superintendent and assistant must be qualified in similar projects in all categories.

4. Examination of Contract Documents and Site.

- 4.1 Before submitting a Bid, each Bidder must (a) examine the Contract Documents thoroughly, (b) visit the site to familiarize himself with local conditions that may in any manner affect cost, progress or performance of the Work, (c) familiarize himself with federal, state and local laws, ordinances, rules and regulations that may in any manner affect cost, progress or performance of the work; and (d) study and carefully correlate Bidder's observations with the Contract Documents.
- 4.2 The lands upon which the Work is to be performed, rights-of-way for access thereto and other lands designated for use by Contractor in performing the Work are identified in the Special Provisions, General Requirements or Drawings.
- 4.3 The submission of a Bid will constitute an incontrovertible representation by the Bidder that he has complied with every requirement of this Article 4 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.

5. Interpretations.

All questions about the meaning or intent of the Contract Documents shall be submitted to Engineer in writing. Replies will be issued by Addenda mailed or delivered to all parties recorded by Engineer as having received the Bidding Documents. Questions received less than five days prior to the date for opening of Bids will not be answered. Only questions answered by formal written Addenda will be binding. Oral and other interpretations or clarifications will be without legal effect.

6. Bid Security.

- 6.1 Bid Security shall be made payable to Owner, in the amount specified in the Bid Form and in the form of a certified or bank check or a Bid Bond (see Section 00050).
- 6.2 The Bid Security of the Successful Bidder will be retained until such Bidder has executed the Agreement and furnished the required Contract Security, whereupon it will be returned; if the successful Bidder fails to execute and deliver the Agreement and furnish the required Contract Security within 15 days of the Notice of Award, Owner may annul the Notice of Award and the Bid Security of the Bidder will be forfeited. The Bid Security of any Bidder whom Owner believes to have a reasonable chance of receiving the award may be retained by Owner until the earlier of the seventh day after the "effective date of the Agreement" (which term is defined as the date on which the Agreement is signed by

the representative for the City of Apopka) and the required Contract Security is furnished or the sixty-first day after the Bid opening. Bid Security of other Bidders will be returned within seven days of the Bid opening.

7. Contract Time.

The number of days within which, or the date by which, the Work is to be completed (the Contract Time) is set forth in the Bid Form and will be included in the Agreement.

8. Liquidated Damages.

Provisions for liquidated damages, if any, are set forth in the Agreement.

9. Substitute Material and Equipment.

The Contract, if awarded, will be on the basis of material and equipment described in the Drawings or specified in the Specifications without consideration of possible substitute or "or-equal" items. Whenever it is indicated in the Drawings or specified in the Specifications that a substitute or "or-equal" item of material or equipment may be furnished or used by Contractor if acceptable to Engineer until after the "effective date of the Agreement". The procedure for submittal of any such application by Contractor and consideration by Engineer is set forth in Article 7 of the General Terms and Conditions.

10. Subcontractors, etc.

10.1 The General Terms and Conditions require the identity of certain Subcontractors and other person and organizations to be submitted to Owner in advance of the Notice of Award. The apparent Successful Bidder, and any other Bidder so requested, will within seven days after the day of the Bid opening submit to Owner a list of all Subcontractors and other persons and organizations (including those who are to furnish the principal items of material and equipment) proposed for those portions of the Work as to which such identification is so required. Such list shall be accompanied by an experience statement with pertinent information as to similar projects and other evidence of qualification for each such Subcontractor, person and organization if requested by Owner. If Owner or Engineer after due investigation has reasonable objection to any proposed Subcontractor, other person or organization, either may before giving the Notice of Award request the apparent Successful Bidder to submit an acceptable substitute without an increase in Bid price. If the apparent Successful Bidder declines to make any such substitution will not constitute grounds for sacrificing his Bid Security. Any Subcontractor, other person or organization to listed and to whom Owner or Engineer does not make written objection prior to the giving of the Notice of Award will be deemed acceptable to Owner and Engineer.

10.2 No Contractor shall be required to employ any Subcontractor, other person or organization against whom he has reasonable objection.

11. Bid Form.

- 11.1 The Bid Form is attached hereto; additional copies may be obtained from Engineer.
- 11.2 Bid Forms must be completed in ink or typed. The Total Bid price on the form must be stated in words and numerals.
- 11.3 Bids by corporations must be executed in the corporate name by the president or a vice-president (or other corporate officer accompanied by evidence of authority to sign) and the corporate seal must be affixed and attested by the secretary. The corporate address and state of incorporation shall be shown below the signature.
- 11.4 Bids by partnerships must be executed in the partnership name and signed by a partner, whose title must appear under the signature and the official address of the partnership must be shown below the signature.
- 11.5 All names must be typed or printed below the signature.
- 11.6 The bid shall contain an acknowledgment of receipt of all Addenda (the numbers of which shall be filled in on the Bid Form).
- 11.7 The address to which communications regarding the Bid are to be directed must be shown.
- 11.8 All supporting information requested in the Bid Form must be furnished. Do not leave any questions or requests unanswered.

12. Submission of Bids.

- 12.1 Bids shall be submitted at the time and place indicated in the Invitation to Bid and shall be included in an opaque sealed envelope, marked with the Project title and name and address of the Bidder and accompanied by a completed Section 00150, Statement on Public Entity Crimes, a completed Section 00140, Sworn Statement Under the Florida Trench Safety Act, the Bid Security and other required documents which are included in the Contract Documents. If the Bid is sent through the mail or other delivery system the sealed envelope shall be enclosed in a separate envelope with the notation "BID ENCLOSED" on the face thereof.

13. Modification and Withdrawal of Bids.

- 13.1 Bids may be modified or withdrawn by an appropriate document duly executed (in the manner that a Bid must be executed) and delivered to the place where Bids are to be submitted at any time prior to the opening of Bids.
- 13.2 If, within twenty-four hours after Bids are opened, any Bidder files a duly signed written notice with Owner and promptly thereafter demonstrates to the reasonable satisfaction of Owner that there was a material and substantial mistake in the preparation of his Bid, that

Bidder may withdraw his Bid and the Bid Security will be returned. Thereafter, that Bidder will be disqualified from further bidding on the Work.

14. Opening of Bids.

Bids will be opened publicly. When Bids are opened publicly they will be read aloud, and an abstract of the amounts of the base Bids and major alternates (if any) will be made available after the opening of Bids.

15. Bids to Remain Open.

All Bids shall remain open for sixty days after the day of the Bid opening, but Owner may, at his sole discretion, release any Bid and return the Bid Security prior to that date.

16. Award of Contract.

16.1 Owner reserves the right to reject any and all Bids, to waive any and all informalities and to negotiate contract terms with the Successful Bidder, and the right to disregard all nonconforming, nonresponsive or conditional Bids. Discrepancies between words and figures will be resolved in favor of words. Discrepancies between the indicated sum of any column of figures and the correct sum thereof will be resolved in favor of the correct sum. Discrepancies between the indicated extension of unit prices and the correct extension thereof will be resolved in favor of the correct extension.

16.2 In evaluating Bids, Owner shall consider the qualifications of the bidders, whether or not the Bids comply with the prescribed requirements, and alternates and unit prices if requested in the bid forms. It is Owner's intent to accept alternates (if any are accepted) in the order in which they are listed in the Bid form but Owner may accept them in any order or combination.

16.3 Owner may consider the qualifications and experience of Subcontractors and other persons and organizations (including those who are to furnish the principal items of material or equipment) proposed for those portions of the Work as to which the identity of Subcontractors and other persons and organizations must be submitted as provided in the Supplementary Conditions. Operating costs, maintenance considerations, performance data and guarantees of materials and equipment may also be considered by Owner.

16.4 Owner may conduct such investigations as he deems necessary to assist in the evaluation of any Bid and to establish the responsibility, qualifications and financial ability of the Bidders, proposed Subcontractors and other persons and organizations to do the Work in accordance with the Contract Documents to Owner's satisfaction within the prescribed time.

16.5 Owner reserves the right to reject the Bid of any Bidder who does not pass any such evaluation to Owner's satisfaction.

16.6 If the contract is to be awarded it will be awarded to the lowest responsive, responsible Bidder on the basis of the Total Base Bid.

16.7 If the contract is to be awarded, Owner will give the Successful Bidder a Notice of Award within sixty days after the day of the Bid opening.

17. Performance and Other Bonds.

Section 4 of the Agreement Form sets forth Owner's requirements as to performance and other Bonds. When the Successful Bidder delivers the executed Agreement to Owner it shall be accompanied by the required Contract Security.

18. Signing of Agreement.

When Owner gives a Notice of Award to the Successful Bidder, it will be accompanied by at least three unsigned counterparts of the Agreement and all other Contract Documents. Within fifteen days thereafter Contractor shall sign and deliver at least three counterparts of the Agreement to Owner with all other contract Documents attached. Within ten days thereafter Owner will deliver all fully signed counterparts to Contractor. Engineer will identify those portions of the Contract Documents not fully signed by Owner and Contractor and such identification shall be binding on all parties.

19. Definitions.

19.1 OWNER refers to the City of Apopka.

19.2 DAYS refers to calendar days unless otherwise specified.

20. Construction Qualified Business License Requirements.

Prior to award of contract, the successful apparent low bidder must possess a Construction Qualified Business License issued by the State of Florida Department of Business and Professional Regulation.

END OF SECTION

This contract document has important legal consequences; consultation with an attorney is encouraged with respect to its completion or modification.

SECTION 00030
BID FORM
PROPOSAL TO THE CITY OF APOPKA

ASPHALT STREET RESURFACING

NAME OF BIDDER: _____

BUSINESS ADDRESS: _____

PHONE NO: _____

FAX NO: _____

TO THE CITY COUNCIL OF THE CITY OF APOPKA.

Pursuant to and in compliance with your notice inviting sealed proposals and the other documents related thereto, the undersigned bidder having familiarized himself with the terms of the Contract Documents, local conditions affecting the place where the work is to be done, hereby proposes and agrees to perform within the time stipulated in the Contract, including all of its component parts and everything required to be performed, and to provide and furnish any and all utility and transportation services necessary to perform the contract and complete in a workmanlike manner, all of the work required in connection with the construction of said work all in strict conformity with the plans and specifications and other Contract Documents, including Addenda Nos. _____, _____ and _____.

The work will be substantially completed within 30 days after the date when the Contract Time commences to run, and completed and ready for final payment within 5 days after the date of substantial completion.

The undersigned as bidder, declares that the only persons or parties interested in this proposal as principals are those named herein; that this proposal is made without collusion with any person, firm or corporation; and he proposes and agrees, if the proposal is accepted, that he will execute a contract with the Owner in the form set forth in the Contract Documents and that he will accept in full payment thereof the following prices to wit:

Table of Material Quantities					
2016 Asphalt Street Resurfacing					
Type SP- 9.5 1-inch					
ITEM NO.	DESCRIPTION	QTY	UNIT	UNIT PRICE	TOTAL
1a	Hawthorne Avenue 7 th Street to Michael Gladden Boulevard.	294	TN		
1b	Hawthorne Avenue Michael Gladden Boulevard to 10 th Street	70	TN		
2*	Votaw Road Park Avenue to Christiana Avenue	779	TN		
3*	Wekiva Oaks Drive Intersection Piedmont Wekiva Road – 200 Ft.	42	TN		
4a*	Spring Harbor Subdivision Ashley Boulevard	43	TN		
4b*	Spring Harbor Subdivision Justin Drive	158	TN		
4c*	Spring Harbor Subdivision Jett Loop	154	TN		
5a	Lake Avenue Grossenbacher Drive to Martin Street	97	TN		
5b	Lake Avenue Martin Street to Summit Drive	170	TN		
Thermo Plastic Striping					
6a	6" White Solid	9480	LF		
6b	24" White Solid	954	LF		
6c	6" Yellow Solid	9900	LF		
6d	18" Yellow Solid	280	LF		
6e	Symbol- Single White Arrow	11	EA		
6f	Single Lane Pavement Marking - School (33 S.F.)	3	EA		
6g	Reflective Pavement Markers	380	EA		
Total Price In Words:			Total Price in Numbers		
** Alternate Patch Work					
7a	Alternate Patch Work		TN		
7b	City Hall Parking Lot		TN		
7c	Police STA. Parking Lot		TN		

NOTE: * Streets requiring milling prior to paving. All milling shall be retained by the City of Apopka and delivered to the Public Services Complex at 748 E. Cleveland St.
 ** Misc. patch work provided funds are available. All 3 locations are less than 3,200 ft. of one another.

The evaluation of the Bid will be done in accordance with the Instructions to Bidders and on the total basis of the bid.

Each bid shall be made out and submitted in duplicate on a form furnished as part of the Bid Document and must be accompanied by cashier's check, certified check or a bidder's bond in the amount of five percent (5%) of the total bid price, made payable to the City of Apopka. Said check or bond shall be given as guarantee that the bidder will enter into a contract with the Owner and furnish a performance bond and payment bond in the amount of 100% of the total bid price within fifteen (15) days from the date of notification of award. Bonds are required from companies licensed in the State of Florida.

The Owner reserves the right to reject any and all bids and to waive any and all irregularity in any bid.

The names of all persons interested in the foregoing proposals as principals are as follows: (Notice - If bidder or other interested person is a corporation, state a legal name of corporation, and names of the president; if a partnership, state true name of firm, also names of all individual co-partners composing firms; if bidder or other interested person is an individual, state first and last names in full):

Licensed in accordance with an Act providing for the registration of contractors.

CONTRACTOR'S LICENSE NO: _____

NOTE: If bidder is a corporation, the legal name of the corporation shall be set forth below, together with the signature of the officer or officers authorized to sign contracts on behalf of the corporation and corporate seal; if bidder is a co-partnership, the true name of the firm shall be set forth below, together with the signature of the partner or partners authorized to sign contracts on behalf of the co-partnership; and if the bidder is an individual, his signature shall be placed below; if a special partnership, the names of the general partners.

SIGNATURE OF BIDDER: _____

BY: _____

ITS: _____

DATED: _____

SECTION 00040
BIDDER'S CERTIFICATION

I have carefully examined the Invitation to Bid, Instructions to Bidders, General and/or Special Conditions, Notes, Specifications, proposed agreement and any other documents accompanying or made a part of this Invitation.

I hereby propose to furnish the goods or services specified in the Invitation at the prices or rates quoted in my bid. I agree that my bid will remain firm for a period of up to _____ days in order to allow the City adequate time to evaluate the bids.

I agree to abide by all conditions of this bid and understand that a background investigation may be conducted by the Apopka Police Department prior to award.

I certify that all information contained in this bid is truthful to the best of my knowledge and belief. I further certify that I am duly authorized to submit this bid on behalf of the vendor/contractor as its act and deed and that the vendor/contractor is ready, willing and able to perform if awarded the bid.

I further certify, under oath, that this bid is made without prior understanding, agreement, connection, discussion, or collusion with any other person, firm or corporation submitting a bid for the same product or service; no officer, employee or agent of the City of Apopka or of any other bidder is interested in said bid; and that the undersigned executed this Bidder's Certification with full knowledge and understanding of the matters therein contained and was duly authorized to do so.

NAME OF BUSINESS

BY:

SIGNATURE

NAME & TITLE, TYPE OR PRINTED

MAILING ADDRESS

CITY, STATE, ZIP CODE

TELEPHONE NUMBER

Sworn to and subscribed

before me this _____ day of _____ 20__

Notary Public

State of _____

My Commission Expires: _____

SECTION 00050
BID BOND

KNOW ALL MEN BY THESE PRESENTS, that we, the undersigned,

_____ as Principle, and _____ as Surety,

are held and firmly bound unto the City of Apopka hereinafter called the Owner in the penal sum

of _____

_____ Dollars (\$ _____), lawful money of

the United States, for the payment of which sum well and truly be made, we bind ourselves, our

heirs, executors, administrators, and successors, jointly and severally, firmly by these presents.

The condition of this obligation is such that whereas the Principal has submitted the

accompanying bid dated _____, 20____ for the construction of

ASPHALT STREET RESURFACING

NOW THEREFORE, if the Principal shall not withdraw said bid within the period of time set forth in the contract documents, and shall within fifteen (15) calendar days after the prescribed forms are presented to him for signature enter into a written contract with the Owner in accordance with the bid as accepted, and if the Principal shall give the required bonds with good and sufficient sureties for the faithful performance and proper fulfillment of such contract and for the protection of laborers and material men, or in the event of the withdrawal of said bid within the periods specified, or the failure to enter into said contract, and give such bonds within the time specified, if the Principal shall within sixty (60) days after request by the Owner pay to the Owner the difference between the amount specified in said bid and the amount for which the Owner may procure the required work if the latter amount be in excess of the former, then the above obligation shall be void and of no effect, otherwise to remain in full force and virtue.

It is further agreed that if the Owner is required to initiate legal proceedings to recover on this bond, it may also recover its costs relating thereto including a reasonable amount for attorneys' fees.

IN WITNESS WHEREOF, the above-bounden parties have executed this instrument under their several seals this ____ day of _____, 20__, the name and corporate seal of each corporate party being hereto affixed and these presents duly signed by its undersigned representative pursuant to authority of its governing body.

WITNESSES (if individual)

PRINCIPAL

By _____

Title _____

ATTEST (if corporation)

Title _____

Corporate Seal

SURETY

By _____

Title _____

Any claims under this bond may be addressed to:

Name and Address of Surety

Telephone Number

Name and Address of Agent
or Representative in Florida if
Different From Above

Telephone Number

ATTEST

Title _____

Corporate Seal

SECTION 00060
AGREEMENT FORM

THE CITY OF APOPKA, FLORIDA, (“Owner”), hereby contracts with _____ (“Contractor”) of City Name, State Name, a State Name corporation, to perform all work (“Work”) Asphalt Street Resurfacing (“Project”) as said Work is set forth in the Plans and Specifications prepared by Owner and the other Contract Documents, all of such documents being hereafter specified. Notwithstanding the foregoing, wherever the term “Engineer” is used herein, especially with regard to the administration of this Contract, it shall be deemed to mean the Engineer, Owner, or another consultant of Owner, as may be designated by Owner in writing from time to time. Owner is sometimes referred to as the “City” in the Contract Documents.

Owner and Contractor, for the consideration herein set forth, agree as follows:

1. Contract Documents

1.1 The Contract Documents consist of this Agreement, all Change Orders, Work Directive Changes, Field Orders and Amendments hereafter executed by the parties in writing, in accordance with the terms herein. All of the foregoing Contract Documents are incorporated by reference and made a part of this Agreement (all of said documents including the Agreement sometimes being referred to herein as the “Contract Documents” and sometimes as the “Agreement”). A copy of the Contract Documents shall be maintained by Contractor at the Project site at all times during the performance of the Work.

1.2 Owner shall furnish to the Contractor up to five (5) sets of the Contract Documents as are reasonably necessary for execution of the Work. Additional copies of the Contract Documents shall be furnished, upon request, at the cost of reproduction.

2. Scope of Work

Contractor agrees to furnish and pay for all management, supervision, financing, labor, materials, tools, fuel, supplies, utilities, equipment and services of every kind and type necessary to diligently, timely, and fully perform and complete in a good and workmanlike manner the following work required as identified in the bid forms. Other incidental work as required by the Contract Documents.

3. Contract Amount

3.1 In consideration of the faithful performance by Contractor of the covenants in this Agreement, to the full satisfaction and acceptance of Owner, Owner agrees to pay or cause to be paid

to Contractor, in accordance with the terms of this Agreement, an amount equal to the sum of the unit prices established for each separately identified item of Work times the corresponding estimated quantity for those items, all set forth in Contractor's bid sheet attached hereto as Bid Form, Section 00030 (herein "Contract Amount"). Based upon the estimated quantities set forth in Bid Form, Section 00030, the total estimated amount of the Contract Amount is _____ . As hereby stated, estimated quantities are not guaranteed, and determination of actual quantities and classifications is to be made by Engineer as provided in sub paragraph 4.1.1. of the General Conditions. The established unit prices have been computed as provided in sub paragraph 4.1.2 of the General Conditions.

3.2 Contractor hereby acknowledges that the bid it submitted, as well as the Contract Documents, reference the trench safety standards that will be in effect during the period of construction of the Project and that the Contractor shall perform all trench excavation in compliance with all applicable trench safety standards.

4. Bonds

4.1 Contractor shall provide Performance and Payment Bonds, in the form prescribed in Section 00070, in the amount of 100% of the Contract Amount, the costs of which to be paid by Contractor. The Performance and Payments Bonds shall be underwritten by a surety authorized to do business in the State of Florida and otherwise acceptable to Owner; provided, however, the surety shall be rated as "A" or better as to general policy holders rating and Class "V" or higher rating as to financial size category and the amount required shall not exceed 5% of the reported policy holders surplus, all as reported in the most current Best Key Rating Guide, published by A.M. Best Company, Inc. of 75 Fulton Street, New York, New York 10038.

4.2 If the surety for any bond furnished by Contractor is declared bankrupt, becomes insolvent, its right to do business is terminated in the State of Florida, or it ceases to meet the requirements imposed by the Contract Documents, the Contractor shall, within five (5) calendar days thereafter, substitute another bond and surety, both of which shall be subject to the Owner's approval.

5. Contract Time and Liquidated Damages

5.1 Time is of the essence in the performance of the Work under this Agreement. The "Commencement Date" shall be established in the Notice to Proceed to be issued by the Owner or the Engineer within thirty (30) days from the date this Agreement has been executed by both parties. Contractor shall commence the Work within five (5) calendar days from the Commencement Date. No

Work shall be performed at the Project site prior to the Commencement Date. Any Work performed by Contractor prior to the Commencement Date shall be at the sole risk of Contractor. The Work shall be substantially completed within Thirty calendar days (30) from the Commencement Date (herein "Contract Time"). The Work shall be fully completed and ready for final acceptance by the Owner within Five (5) calendar days after the date Substantial Completion of the Work is achieved.

5.2 Owner and Contractor recognize that, since time is of the essence for this Agreement, Owner will suffer financial loss if the Work is not substantially completed within the time specified above, as said time may be adjusted as provided herein. Should Contractor fail to substantially complete the Work within the Contract Time, as said time period may be adjusted pursuant to the terms herein, Owner shall be entitled to assess, as liquidated damages, but not as a penalty, \$500 for each calendar day thereafter until substantial completion is achieved. The Project shall be deemed to be substantially completed on the date the Work has progressed to the point where, in the reasonable opinion of the Engineer and Owner, it is sufficiently complete, in accordance with the requirements of the Contract Documents, so that the Work can be utilized for the purposes for which it is intended. The date of substantial completion shall be noted in a Certificate of Substantial Completion, to be issued by Engineer pursuant to the terms hereof. Contractor hereby expressly waives and relinquishes any right which it may have to seek to characterize the above noted liquidated damages as a penalty, which the parties agree represents a fair and reasonable estimate of the owner's actual damages at the time of contracting if Contractor fails to substantially complete the Work in a timely manner.

5.3 When any period of time is referenced to by days herein, it shall be computed to exclude the first day and include the last day of such period. If the last day of any such period falls on a Saturday or Sunday or on a day made a legal holiday the law of the applicable jurisdiction, such day shall be omitted from the computation, and the last day shall become the next succeeding day which is not a Saturday, Sunday or legal holiday.

6. The Following Documents are Expressly Agreed to be incorporated by Reference and Made a Part of this Agreement.

DIVISION 0: BIDDING AND CONTRACT REQUIREMENTS

- 00010 Invitation to Bid
- 00020 Instruction to Bidders
- 00030 Bid Form
- 00040 Bidder's Certification
- 00050 Bid Bond

- 00060 Agreement Form
- 00070 Performance and Payment Bond
- 00080 Bid Protest Procedures
- 00090 Insurance Requirements & Information/ Hold Harmless Agreement
- 00100 Certificate of Insurance – Worker’s Compensation
- 00110 Certificate of Insurance – General Liability
- 00120 Drug Free Workplace
- 00150 Public Entity Crimes
- 00160 General Terms and Conditions
- 00180 Notice of Award Form
- 00190 Notice to Proceed Form
- 00200 Change Order Form
- 00210 Application for Payment Form
- 00220 Certificate of Substantial Completion Form
- 00230 Release and Affidavit
- 00240 Contractor Request for Information Form

DIVISION I - GENERAL REQUIREMENTS

- 01001 General Requirements
- 01025 Measurement and Payments

DIVISION II – CONSTRUCTION DETAILS

- 101 Mobilization
- 102 Maintenance of Traffic
- 300 Prime and Tack Coats
- 327 Milling of Existing Asphalt
- 334 Super Pave Asphalt Concrete
- 706 Raised Retro-Reflective Pavement Marker
- 711 Thermoplastic Traffic Stripes and Markings

APPENDICES:

- Appendix A Maps of Resurfacing Streets locations (Two 11x17 Pages)

7. Notices

7.1 All notices required or made pursuant to this Agreement by the Contractor to the Owner shall be in writing and delivered by hand or by United States Postal Service Department, first class mail, postage pre-paid, return receipt requested, addressed to the following:

City of Apopka
Public Services Department
748 E. Cleveland St.
Apopka FL 32703
Phone (407) 703-1731
Fax (407) 703-1748
Attn: R. Jay Davoll, P.E., Public Services Director

7.2 All notices required or made-pursuant to this Agreement by Owner to Contractor shall be made in writing and shall be delivered by hand or by United States Postal Service Department, first class mail, postage pre-paid, return receipt requested, addressed to the following:

7.3 Either party may change its above noted address by giving written notice to the other party in accordance with the requirements of this Section.

8. Modification

No modification or change to the Agreement shall be valid or binding upon the parties unless in writing and executed by the party or parties intended to be bound by it.

9. Successors and Assigns

Subject to other provisions hereof, the Agreement shall be binding upon and shall insure to the benefit of the successors and assigns of the parties to the Agreement.

10. Governing Law

The Agreement shall be interpreted under and its performance governed by the laws of the State of Florida.

11. No Waiver

The failure of the Owner to enforce at any time or for any period of time any one or more of the provisions of the Agreement shall not be construed to be and shall not be a waiver of any such provision or provisions or of its right thereafter to enforce each and every such provision.

12. Entire Agreement

Each of the parties hereto agrees and represents that the Agreement comprises the full and entire agreement between the parties affecting the Work contemplated, and no other agreement or understanding of any nature concerning the same has been entered into or will be recognized, and that all negotiations, acts, work performed, or payments made prior to the execution hereof shall be deemed merged in, integrated and superseded by the Agreement.

13. Severability

Should any provision of the Agreement be determined by a court to be unenforceable, such a determination shall not affect the validity or enforceability of any other section or part thereof.

IN WITNESS WHEREOF, the parties have executed this Agreement on the date(s) indicated below.

ATTEST:

Secretary

ATTEST:

City Clerk

CONTRACTOR:

By: _____
Print Name: _____
Its: _____
Date: _____

[Corporate Seal]

OWNER:

CITY OF APOPKA, FLORIDA

By: _____
Print Name: Joe Kilsheimer
Its: Mayor
Date: _____

SECTION 00070
PERFORMANCE AND PAYMENT BOND

BOND NO. _____

KNOW ALL MEN BY THESE PRESENTS: That _____
_____, as Principal, and _____
_____, as Surety, located at _____
_____, (Business Address) are held and firmly bound unto _____
_____ County, Florida, as Obligee in the sum of _____
_____ (\$ _____) for the payment whereof we bind ourselves, our
heirs, executors, personal representatives, successors and assigns, jointly and severally, firmly by these
presents.

WHEREAS, Principal has entered into a contract dated as of the ____ day of _____ 20 ____,
with Obligee for _____

in accordance with drawings and specifications, which contract is by reference made a part hereof, and
is hereinafter referred to as the Contract.

THE CONDITION OF THIS BOND is that if Principal:

1. Performs the Contract at the times and in the manner prescribed in the Contract; and
2. Promptly make payments to all claimants as defined in Section 255.05(1), Florida
Statutes, supplying the Principal with labor, materials or supplies, as used directly or indirectly by the
Principal in the prosecution of the work provided for in the Contract; and
3. Pays Obligee any and all losses, damages, costs and attorneys' fees, including appellate
proceedings, that Obligee sustains because of any default by Principal under the Contract, including all
delay damages (whether liquidated or unliquidated); 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.

The Surety, for value received, hereby stipulates and agrees that no changes, extensions of
time, alterations or additions to the terms of the Contract or other work to be performed hereunder, or
the specifications referred to therein, nor compliance or noncompliance with any formalities connected
with the Contract or any changes thereto, shall in anywise affect or alter its obligation under this bond,

and it does hereby waive notice of any such changes, extensions of time, alterations, additions, compliance or noncompliance.

This bond is intended to be a statutory bond pursuant to Section 255.05, Florida Statutes, and shall be construed accordingly.

IN WITNESS WHEREOF, the above bounded parties have executed this instrument under their several seals this ____ day of _____, 20__ the name and corporate seal of each corporate party being hereto affixed and these presents duly signed by its undersigned representative, pursuant to authority of its governing body.

Signed, sealed and delivered
in the presence of:

PRINCIPAL:

Witnesses as to Principal

By: _____

Name: _____

Its: _____

OR

Witnesses as to Attorney In Fact

By: _____

Name: _____

Its: _____

Attorney In Fact
(Attach Power)

STATE OF _____

COUNTY OF _____

I, the undersigned authority, hereby certify that on this ____ day of _____, 20__ , before me personally appeared _____ as _____ of _____, to me known to be the person(s) described in and who executed the foregoing instrument, and acknowledged execution thereof to be a free act and deed for the use and purposes therein mentioned.

WITNESS my hand and official seal on the date aforesaid.

_____(SEAL)

Notary Public, State of _____

at Large

My commission Expires: _____

ATTEST:

SURETY: _____

(Printed Name)

Witness

(Business Address)

Witness

(Authorized Signature)

(Printed Name)

OR

As Attorney In Fact (Attach Power)

(Business Address)

Witness

(Printed Name)

(Telephone Number)

SECTION 00080
POLICY NO. 109
BID PROTEST PROCEDURES

109.1 OVERVIEW

1. It is the policy of the City of Apopka (the City) to provide those participants in its competitive award process whose interests are adversely affected by bid document provisions and/or an award recommendation with respect to City capital projects involving the expenditure of over twenty-five thousand dollars (\$25,000.00) the opportunity to protest.
2. The requirements and procedures described herein govern a bid protest brought by an adversely affected participant in any competitive process utilized for selection of a person or other entity to design and/or construct any public improvement, to provide supplies, materials or services (including professional or management services), or to lease any City property.
3. A Party (as hereafter defined) who wishes to file a protest regarding the terms, conditions, or specifications contained in a solicitation, including any provisions governing the methods for ranking bids, proposals, or replies, awarding contracts, reserving rights of further negotiation, or modifying or amending any contract, shall file such a protest according to the procedures and requirements established in Section 109.2, below. Failure to file a notice of protest or failure to file a formal written protest in the manner provided in Section 109.2 shall constitute a waiver of the opportunity to protest the terms, conditions, and specifications contained in the solicitation.
4. A Party who wishes to file a protest regarding a proposed bid award or a proposed rejection of some or all responses to a solicitation, shall file such a protest according to the procedures and requirements established in Section 109.3, below. Failure to file a notice of protest or failure to file a formal written protest in the manner provided in Section III shall constitute a waiver of the opportunity to protest such proposed award.
5. For the purposes of these Bid Protest Procedures, the term "Party" shall mean a bidder, proposer, potential bidder, or potential proposer whose substantial interests are adversely affected by the City's decision or proposed decision regarding a contract solicitation, contract award, or rejection of one or more responses to a contract solicitation.
6. Monies required hereunder as bid protest security shall be in the form of either a protest bond issued by a Florida-licensed surety agency or a cashier's check issued by a bank located and authorized to transact business in the State of Florida.

109.2 PROTESTING BIDDING DOCUMENT SPECIFICATIONS

1. All contract solicitation documents issued by the City shall contain the following statement:

Failure to file a protest within the time prescribed by the City of Apopka's Bid Protest Procedures shall constitute a waiver of right to protest.

2. Within seventy-two (72) hours (excluding Saturdays, Sundays, and City holidays) after a Party's receipt of any contract solicitation documents, the Party wishing to protest the terms, conditions, or specification contained in such documents shall deliver to the City Clerk a written notice of intent to protest. Delivery is not deemed to have been completed until the notice of intent to protest is actually received by the office of the City Clerk.
3. The notice of intent to protest shall be accompanied by a cashier's check or a protest bond from a Florida-licensed agency payable to the City in the amount of \$5,000.00. Should the protesting Party be successful, the security submitted will be returned to the Party. Should the protesting Party be unsuccessful, the security submitted shall be retained by the City as liquidated damages and Party shall have no right to any refund of such security.
4. Within five (5) days from the delivery of its notice of protest, including Saturdays, Sundays, and City holidays, the Party shall deliver to the City Clerk a Formal Written Protest that states the facts and law upon which its protest is based. If the fifth day falls on a Saturday, Sunday, or City holiday, the deadline for delivery of the Formal Written Protest shall be extended until 5:00 p.m. on the next day that is not a Saturday, Sunday, or City holiday. Delivery is not deemed to have been completed until the Formal Written Protest is actually received by the office of the City Clerk.
5. Upon receipt of a timely filed Formal Written Protest, the City shall stop the solicitation process until the subject of the Formal Written Protest is resolved. However, the City may continue with the solicitation process if it determines, in writing, that halting the solicitation process
 - a) would cause or perpetuate an immediate and serious danger to public health, safety or welfare;
 - b) would result in a substantial loss of funding to the City; or
 - c) would otherwise be detrimental to the interests of the City.
6. The City shall refer the protest for proceedings before the City Administrator or his delegee. The Party shall have fourteen (14) days, including Saturdays, Sundays, or City holidays, to submit to the City Administrator or his delegee any documents and sworn testimony in support of its protest. The City Administrator shall issue a decision, in writing, within fourteen (14) days thereafter and shall provide a copy to the Party by certified mail.

109.3 PROTESTING AWARD DECISION OR REJECTION OF BIDS

1. All bids and proposals shall be evaluated by the City for compliance with the terms, conditions, and specifications of the solicitation documents.
2. All notices of decision or notice of intended decision regarding the award of a contract or the rejection of one or more bids or proposals shall be posted by the City in a public place designated by the City for that purpose.
3. The notice of decision or notice of intended decision shall contain the following statement:

Failure to file a protest within the time prescribed by the City of Apopka's Bid Protest Procedures shall constitute a waiver of right to protest.
4. Within seventy-two (72) hours (excluding Saturdays, Sundays, and City holidays) after the City's posting of notice of a decision or proposed decision to award a contract or reject one or more bids or proposals, a Party wishing to protest the decision or proposed decision shall deliver to the City Clerk a written notice of intent to protest. Delivery is not deemed to have been completed until the notice of intent to protest is actually received by the office of the City Clerk.
5. The notice of intent to protest shall be accompanied a cashier's check or a protest bond from a Florida-licensed agency payable to the City in the amount of \$5,000.00 or one percent (1%) of the contract price submitted by the Party, whichever is greater. Should the protesting Party be successful, the security submitted shall be returned to the Party. Should the protesting Party be unsuccessful, the security submitted shall be retained by the City as liquidated damages and Party shall have no right to any refund of such security.
6. Within five (5) days from the delivery of its notice of protest, including Saturdays, Sundays, and City holidays, the Party shall deliver to the City Clerk a Formal Written Protest that states the facts and law upon which its protest is based. If the fifth day falls on a Saturday, Sunday, or City holiday, the deadline for delivery of the Formal Written Protest shall be extended until 5:00 p.m. on the next day that is not a Saturday, Sunday, or City holiday. Delivery is not deemed to have been completed until the Formal Written Protest is actually received by the office of the City Clerk.
7. Upon receipt of a timely filed Formal Written Protest, the City shall stop the solicitation process until the subject of the Formal Written Protest is resolved. However, the City may continue with the solicitation process if it determines, in writing, that halting the solicitation process
 - a) would cause or perpetuate an immediate and serious danger to public health, safety or welfare;
 - b) would result in a substantial loss of funding to the City; or
 - c) would otherwise be detrimental to the interests of the City.

8. The City shall refer the protest for proceedings before the City Administrator or his delegee. The Party shall have fourteen (14) days, including Saturdays, Sundays, or City holidays, to submit to the City Administrator or his delegee any documents and sworn testimony in support of its protest. The City Administrator shall issue a decision, in writing, within fourteen (14) days thereafter and shall provide a copy to the Party by certified mail.

END OF SECTION

SECTION 00090

INSURANCE REQUIREMENTS

(1) The Contractor shall obtain and maintain such insurance as will protect it from: (1) claims under worker's compensation laws, disability benefit laws, or other similar employee benefit laws; (2) claims for damages because of bodily injury, occupational sickness or disease or death of his employees including claims insured by usual personal injury liability coverage; (3) claims for damages because of bodily injury, sickness or disease, or death of any person other than his employees including claims insured by usual personal injury liability coverage; and (4) from claims for injury to or destruction of tangible property including loss or use resulting therefrom, any or all of which claims may arise out of, or result from, the services, work and operations carried out pursuant to and under the requirements of the Contract Documents, whether such services, work and operations be by the Contractor, its employees, or by subcontractor(s), or anyone employed by or under the supervision of any of them, or for whose acts any of them may be legally liable.

(2) This insurance shall be obtained and written for not less than the limits of liability specified hereinafter, or as required by law, whichever is greater.

(3) The Contractor shall require, and shall be responsible for assuring throughout the time the Agreement is in effect, that any and all of its subcontractors obtain and maintain until the completion of that subcontractor's work, such of the insurance coverages described herein as are required by law to be provided on behalf of their employees and others.

(4) The Contractor shall obtain, have and maintain during the entire period of the Agreement insurance policies which contain the following information and provisions:

A. The name and type of policy and coverages provided;

B. The amount or limit applicable to each coverage provided;

C. The date of expiration of coverage;

D. The designation of the City of Apopka, Florida and Engineer as additional insureds and certificate holders. (This requirement shall not apply to the Worker's Compensation Insurance.);

E. The following clause must appear on the Certificate of Insurance:

"Cancellation - should any of the above described policies be canceled before the stated expiration date thereof, insurer will not cancel same until at least thirty (30) days prior written notice (by certified mail) has been given to the below named certificate holder. This prior notice provision is a part of each of the described policies."

(5) The Contractor shall provide endorsed certificates of insurance generated and executed by a licensed insurance broker, brokerage or similar licensed insurance professional evidencing such coverage, and naming City of Apopka as a named, additional insured, as well as furnishing the City of Apopka with a certified copy, or copies, of said insurance policies. (6) If the initial, or any subsequently issued Certificate of Insurance expires prior to the completion of the Work or termination of the Agreement, the Contractor shall furnish to the Owner, in triplicate, renewal or replacement Certificate(s) of Insurance not later than thirty (30) calendar days prior to the date of their expiration. Failure of the Contractor to provide the Owner with such renewal certificate(s) shall be considered justification for the Owner to terminate the Agreement.

(6) If the initial, or any subsequently issued Certificate of Insurance expires prior to the completion of the Work or termination of the Agreement, the Contractor shall furnish to the Owner, in triplicate, renewal or replacement Certificate(s) of Insurance not later than thirty (30) calendar days prior to the date of their expiration. Failure of the Contractor to provide the Owner with such renewal certificate(s) shall be considered justification for the Owner to terminate the Agreement.

(7) If Owner has any objection to the coverage afforded by other provisions of the insurance required to be purchased and maintained by Contractor in accordance with the requirements of the Contract Documents on the basis of its not complying with the Contract Documents, Owner shall notify Contractor in writing. Contractor shall provide to the Owner such additional information with respect to its insurance as may be requested.

(8) The Contractor shall obtain and maintain the following insurance coverages as provided hereinbefore, and in the type, amounts and in conformance with the following minimum requirements:

INSURANCE SCHEDULE

1. Workers Compensation and Employers Liability

Workers Compensation	Statutory
Employers Liability	\$1,000,000 Each Accident
	\$1,000,000 Per Person - Disease
	\$1,000,000 Aggregate - Disease

2. Commercial General Liability-Occurrence Form

Policy shall include bodily injury, property damage, broad form contractual liability and XCU coverage.

General Liability	\$1,000,000 Each Occurrence
	\$100,000 Damage to Rented Premises
	\$1,000,000 Personal Injury and Advertising
	\$2,000,000 General Aggregate
	\$1,000,000 Products/Completed Operations Aggregate
	\$10,000 Medical Payments

3. Automobile Liability

Bodily injury and property damage for any owned, hired, and non-owned vehicles used in the performance of this Contract.

Automobile Liability \$1,000,000 Combined Single Limit

4. Excess or Umbrella Liability Insurance

Excess of the primary coverage required, in paragraphs (1), (2), and (3) above:

\$2,000,000 Each Occurrence

\$2,000,000 General Aggregate

(9). The contractor shall purchase and maintain Builders Risk Insurance to cover the subject property for all risks of, subject to a waiver of coinsurance, and covering off-site storage, transit and installation risks. The policy is to be endorsed to cover the interests of all parties, including the City of Apopka and all contractors and subcontractors. The insurance is to be endorsed to cover the testing and to grant permission to occupy the facility under construction/renovation during such activity.

(10). All contractors, subcontractors, vendors, suppliers and related parties shall contact Risk Management to verify ; provide proper documentation regarding any and all related insurance policies for this project.

Special Provisions:

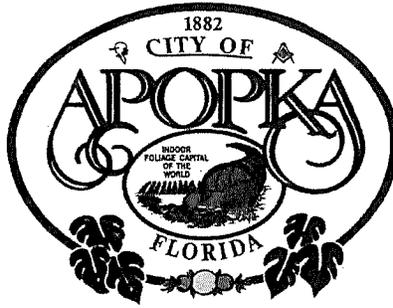
1. Additional Insured: City of Apopka, its employees, agents and any representatives shall be named as additional insured on the General Liability (including Products & Completed Operations) and Auto Liability Policies.

2. Waiver of Subrogation: Workers Compensation, General Liability, and Auto Liability policies shall contain a Waiver of Subrogation in favor against the City of Apopka

3. Insurance coverages as required herein, including but not limited to any excess and/or umbrella coverages, shall be considered as primary insurance over and above any other insurance.

4. All tools and equipment owned by the contractor/subcontractor are the responsibility of the owner of the equipment. The city is held harmless for loss of any kind. See form next sheet.

5. General Liability policy will include "Per Project Aggregate" endorsement.



Public Services Department • 748 E. Cleveland Street • Apopka, Florida 32703

Phone (407) 703-1731 • Fax (407) 703-1748

STANDARD HOLD HARMLESS AND INDEMNITY AGREEMENT

_____ agrees through the signing of this document by an authorized party or agent that it shall defend, indemnify and hold harmless the City of Apopka, and its agents, employees, and public officials from and against all suits, losses, claims, demands, judgments, liabilities and actions, including attorneys' fees and all costs of litigation and judgments of every name and description arising out of or incidental to the performance of this contract or work performed thereunder, whether or not due in whole or in part to or caused by the negligence of the City of Apopka, its agents, employees, and public officials excluding only the sole negligence of the City of Apopka, its agents, employees, and public officials.

This provision shall also pertain to any claims brought against the City of Apopka, its agents, employees, and public officials by an employee of the named Contractor, any Sub-contractor, or anyone directly or indirectly employed by any of them.

_____ obligation to indemnify the City of Apopka, its agents, employees and public officials under this provision shall be limited to \$1,000,000 per occurrence which the parties agree bears a reasonable commercial relationship to the contract.

_____ agrees to accept, as adequate remuneration, the consideration of \$100.00, the promises contained herein, and other good and valuable consideration, which is hereby acknowledged, for agreeing to enter into this Hold Harmless and Indemnity Agreement. Owner and Contractor agree the first \$100.00 of the Contract Amount paid by owner to Contractor shall be given as separate consideration being acknowledged by Contractor and by Contractor's execution of the Agreement.

Printed Name of Contractor: _____

Signature of Contractor: _____

STATE OF FLORIDA COUNTY OF ORANGE

The foregoing instrument was acknowledged before me this ____ day of _____,
20____, by _____, and who is personally known to me or who has produced
_____ as identification and who did (did not) take an oath.

Notary Public : _____

Commission No: _____

Commission Expires: _____

SECTION 00100

THIS SECTION RESERVED FOR
THE CONTRACTOR'S CERTIFICATE OF INSURANCE
WORKER'S COMPENSATION

SECTION 00110

THIS SECTION RESERVED FOR
THE CONTRACTOR'S CERTIFICATE OF INSURANCE
GENERAL LIABILITY

SECTION 00120
DRUG FREE WORKPLACE CERTIFICATION

The undersigned vendor in accordance with Florida Statue 287.087 hereby certifies that _____ does:

(Name of Business)

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

Proposer's Signature

Date

SECTION 00150
SWORN STATEMENT PURSUANT TO SECTION 287.133(3)(a),
FLORIDA STATUTES, ON PUBLIC ENTITY CRIMES

THIS FORM MUST BE SIGNED AND SWORN TO IN THE PRESENCE OF A NOTARY PUBLIC OR OTHER OFFICIAL AUTHORIZED TO ADMINISTER OATHS.

1. This sworn statement is submitted to _____

By _____
(print individual's name and title)

for _____
(print name of entity submitting statements)

whose business address is _____

and if applicable whose Federal Employer Identification Number (FEIN) is _____.

If the entity has no FEIN, include the Social Security Number of the individual signing

this sworn Statement: _____.

2. I understand that a "public entity crime" as defined in Paragraph 287.133(1)(g), Florida Statutes, means a violation of any state or federal law by a person with respect to and directly related to the transaction of business with any public entity or with an agency or political subdivision of any other state or with the United States, including, but not limited to, any bid, proposal, reply, or contract for goods or services, any lease for real property, or any contract for the construction or repair of a public building or public work, involving antitrust, fraud, theft, bribery, collusion, racketeering, conspiracy, or material misrepresentation.

3. I understand that "convicted" or "conviction" as defined in Paragraph 287.133(1)(b), Florida Statutes means a finding of guilt or a conviction of a public entity crime, with or without an adjudication of guilt, in any federal or state trial court of record relating to charges brought by indictment or information after July 1, 1989, as a result of a jury verdict, nonjury trial, or entry of a plea of guilty or nolo contendere.

4. I understand that an "affiliate" as defined in Paragraph 287.133(1)(a), Florida Statutes, means:

1. A predecessor or successor of a person convicted of a public entity crime; or
2. An entity under the control of any natural person who is active in the management of the entity and who has been convicted of a public entity crime. The term "affiliate" includes those officers, directors, executives, partners, shareholders, employees, members, and agents who are active in the management of an affiliate. The ownership by one person of shares constituting a controlling interest in another person, or a

pooling of equipment or income among persons when not for fair market value under an arm's length agreement, shall be a prima facie case that one person controls another person. A person who knowingly enters into a joint venture with a person who has been convicted of a public entity crime in Florida during the preceding 36 months shall be considered an affiliate.

5. I understand that a "person" as defined in Paragraph 287.133(1)(e), Florida Statutes, means any natural person or any entity organized under the laws of any state or of the United States with the legal power to enter into a binding contract and which bids or applies to bid on contracts for the provision of goods or services let by a public entity, or which otherwise transacts or applies to transact business with a public entity. The term "person" includes those officers, directors, executives, partners, shareholders, employees, members, and agents who are active in management of an entity.
6. Based on information and belief, the statement which I have marked below is true in relation to the entity submitting this sworn statement. (Please indicate which statement applies).

____ Neither the entity submitting this sworn statement, nor any of its officers, directors, executives, partners, shareholders, employees, members, or agents who are active in the management of the entity, or any affiliate of the entity has been charged with and convicted of a public entity crime within the past 36 months.

____ The entity submitting this sworn statement, or one or more of its officers, directors, executives, partners, shareholders, employees, members, or agents who are active in the management of the entity, or an affiliate of the entity has been charged with and convicted of a public entity crime within the past 36 months.

AND

____ The entity submitting this sworn statement, or one or more of its officers, directors, executives, partners, shareholders, employees, members, or agents who are active in the management of the entity, or agents who are active in the management of the entity, or an affiliate of the entity has been charged with and convicted of a public entity crime within the past 36 months. However, there has been a subsequent proceeding before a Hearing Officers of the State of Florida, Division of Administrative Hearings and the Final Order by the Hearing Officer determined that it was not in the public interest to place the entity submitting this sworn statement on the convicted vendor list. (Attached is a copy of the final order).

I UNDERSTAND THAT THE SUBMISSION OF THIS FORM TO THE CONTRACTING OFFICER FOR THE PUBLIC ENTITY IDENTIFIED IN PARAGRAPH 1 (ONE) ABOVE IS FOR THE PUBLIC ENTITY ONLY AND, THAT THIS FORM IS VALID THROUGH DECEMBER 31 OF THE CALENDAR YEAR IN WHICH IT IS FILED AND FOR THE PERIOD OF THE CONTRACT ENTERED INTO, WHICHEVER PERIOD IS LONGER. I ALSO UNDERSTAND THAT I AM REQUIRED TO INFORM THE PUBLIC ENTITY PRIOR TO ENTERING INTO A CONTRACT IN EXCESS OF THE THRESHOLD AMOUNT PROVIDED IN SECTION 287.017, FLORIDA STATUTES, FOR CATEGORY TWO OF ANY CHANGE IN THE INFORMATION CONTAINED IN THIS FORM.

(Signature)

STATE OF FLORIDA

COUNTY OF _____

Sworn and subscribed before me this _____ day of _____, 20__ by

_____ who is Personally known to me

_____ Or who produced identification - _____

(Type of Identification)

(Signature) Notary Public - State of Florida

(Printed, typed or stamped commissioned name of notary public)

My commission expires _____ (SEAL)

SECTION 00160
GENERAL TERMS AND CONDITIONS

1. Intent of Contract Documents.

1.1 It is the intent of the Contract Documents to describe a functionally complete project (or portion thereof) to be constructed in accordance with the Contract Documents. Any work, materials or equipment that may reasonably be inferred from the Contract Documents as being required to produce the intended result shall be supplied whether or not specifically called for. When words which have a well-known technical or trade meaning are used to describe work, materials or equipment, such words shall be interpreted in accordance with that meaning. Reference to standard specifications, manuals-or codes of any technical society, organization or association or to the laws or regulations of any governmental authority having jurisdiction over the Project, whether such reference be specific or by implication, shall mean the latest standard specification, manual, code, law or regulation in affect at the time the Work is performed, except as may be otherwise specifically stated herein.

1.2 If during the performance of the Work Contractor discovers a conflict, error or discrepancy in the Contract Documents, Contractor immediately shall report same to Engineer in writing and before proceeding with the Work affected thereby shall obtain a written interpretation or clarification from the Engineer or Architect. Contractor shall take field measurements and verify field conditions and shall carefully compare such field measurements and conditions and other information known to Contractor with the Contract Documents before commencing any portion of the Work.

1.3 Drawings are intended to show general arrangements, design and extent of Work and are not intended to serve as shop drawings. Specifications are separated into divisions for convenience of reference only and shall not be interpreted as establishing divisions for the Work, trades, subcontracts, or extent of any part: of the Work. In the event of a discrepancy between or among the drawings, specifications or other Contract Document provisions, Contractor shall be required to comply with the provision which is the more restrictive or stringent requirement upon the Contractor, as determined by the Engineer or Architect. Unless otherwise specifically mentioned, all anchors, bolts, screws, fittings, fillers, hardware, accessories, trim and other parts required in connection with any portion of the Work to make a

complete, serviceable, finished and first quality installation shall be furnished and installed as part of the Work, whether or not called for by the Contract Documents.

2. Investigation and Utilities.

2.1 Contractor shall have the sole responsibility of satisfying itself concerning the nature and location of the Work and the general and local conditions, and particularly, but without limitation, with respect to the following: those affecting transportation, access, disposal, handling and storage of materials; availability and quality of labor; water and electric power; availability and condition of roads; work area; living facilities; climatic conditions and seasons; physical conditions at the work-site and the Project area as a whole; topography and ground surface conditions; nature and quantity of the surface materials to be encountered; subsurface conditions; equipment and facilities needed preliminary to and during performance of the Work; and all other costs associated with such performance. The failure of Contractor to acquaint itself with any applicable conditions shall not relieve Contractor from any of its responsibilities to perform under the Contract Documents, nor shall it be considered the basis for any claim for additional time or compensation. Provided, however, the terms of this Paragraph 2.1 shall be subject to the provisions of Paragraph 10.8 herein.

2.2 Contractor shall locate all existing roadways, railways, drainage facilities and utility services above, upon, or under the Project site, said roadways, railways, drainage facilities and utilities being referred to in this Section 2 as the "Utilities". Contractor shall timely contact the owners of all Utilities to determine the necessity and the Utilities owner's scheduling requirements for relocating or temporarily interrupting any Utilities during the construction of the Project. Contractor shall schedule and coordinate its Work around the Utilities owner's scheduling requirements for any such relocation or temporary service interruption. Contractor shall be responsible for properly shoring, supporting and protecting all Utilities at all times during the course of the Work. To the extent Contractor is unreasonably delayed in the performance of its Work due to the failure of any Utilities owner to timely perform with respect to any relocation or temporary service interruption of its Utility, so long as such delay is not due to the fault or neglect of Contractor, Contractor may seek an extension to the Contract Time in accordance with the procedures set forth in Paragraph 9.2 hereafter. In no event shall Contractor be entitled to any increase to the Contract Amount as a result of any such delay.

3. Schedule.

3.1 The Contractor, within ten (10) calendar days after the execution of this Agreement by both parties, shall prepare and submit to Owner and Engineer, for their review and acceptance, a progress schedule for the Project (herein "Progress Schedule"). The Progress Schedule shall relate to all Work required by the Contract Documents and shall provide for expeditious and practicable execution of the Work within the Contract Time. The Progress Schedule shall indicate the dates for starting and completing the various stages of the Work.

3.2 The Progress Schedule shall be updated monthly by the Contractor. All monthly updates to the Progress Schedule shall be subject to the Owner's and Engineer's review and acceptance. Contractor shall submit the updates to the Progress Schedule with its monthly Applications for Payment noted below. The Owner's and Engineer's review and acceptance of the submitted Progress Schedule updates shall be a condition precedent to the Owner's obligation to pay Contractor.

4. Progress Payments.

4.1 The first Application for Payment shall be submitted no earlier than thirty (30) days after the Commencement Date. Within ten (10) calendar days after the execution of this Agreement by both parties, Contractor shall submit to Owner and Engineer, for their review and approval, a schedule of values based upon the Contract Amount, listing the various items of the Work and the dollar value for each element. Said schedule of values to be developed from the Contractor's bid sheet attached as Section 00030. After its approval by Owner and Engineer, this schedule of values shall be used as the basis for Contractor's monthly Applications for Payment. This schedule shall be updated and submitted each month to Engineer along with a completed and notarized copy of the Application for Payment form attached to the Agreement as Section 00210.

4.1.1 As noted in Section 3.A of the Agreement to which these General Conditions are attached, initially the Contract Amount is based upon an amount equal to the sum of the established unit prices for each separately identified item of Work times the estimated quantity for each item as reflected in attached Section 00030. The estimated quantities of items of Work are not guaranteed and are solely for the purpose of comparison of bids and determining an initial Contract Amount. Determinations of the actual quantities and classifications of Work

performed by Contractor will be made by Engineer in accordance with the procedures in subparagraph 4.1.3 below.

4.1.2 The unit price for each item of Work will be deemed to include an amount considered by Contractor to be adequate to compensate Contractor for its overhead and profit for each separately identified item of Work.

4.1.3 Engineer will determine the actual quantities and classifications of Work performed by Contractor. Engineer will review with Contractor the Engineer's preliminary determinations on such matters before rendering a written decision thereon (by recommendation of an Application for Payment or otherwise). Engineer's written decision thereon will be final and binding upon Contractor, unless Contractor files a Claim contesting such determination within five (5) business days after Engineer has rendered its decision.

4.1.4 If the quantity of any item of Work performed by Contractor differs materially and significantly from the estimated quantity of such item indicated in Section 00030 (such difference must be at least twenty (20) per cent) and such difference will cause substantial inequity to either the Owner of Contractor, the applicable unit price shall be equitably adjusted by Change Order. If Contractor believes any such difference exists, it must file a Claim in accordance with the procedures set forth in Article 11 hereafter.

4.2 Within ten (10) calendar days after the execution of this Agreement by both parties, Contractor shall submit to Owner and the Engineer a complete list of all its proposed subcontractors and materialmen, showing the work and materials involved and the dollar amount of each proposed subcontract and purchase order. Said list of proposed subcontractors and materialmen is to be based upon the list provided with Contractor's bid for this Project.

4.3 Payment for materials and equipment not incorporated into the Project, but delivered and suitably stored at the site, shall be subject to the Owner's discretion. If Owner consents, such payments shall not exceed 50% of the value of such unincorporated items, and the Application for Payment shall be accompanied by a bill of sale, invoice or other documentation warranting that, conditioned solely upon Contractor's receipt of full payment for such items, the Owner has received the materials and equipment free and clear of all liens, charges, security interests and encumbrances, together with evidence that the materials and equipment are covered by appropriate property insurance and other arrangements to protect Owner's interest therein, all of which shall be subject to the Owner's satisfaction. Owner shall

not make any payments, and Contractor shall not include in any of its Applications for Payment, any amounts for equipment or materials stored off-site.

4.4 Contractor shall submit three (3) copies of its monthly Application for Payment to the Engineer on or before the 25th day of each month for Work performed during the previous month. Invoices received after the 25th day of each month shall be considered for payment as part of the next month's application. Within ten (10) calendar days after receipt of each Application for Payment, the Engineer shall either: (1) indicate its approval of the requested payment; (2) indicate its approval of only a portion of the requested payment, stating in writing its reasons therefore; or (3) return the Application for Payment to the Contractor indicating, in writing, the reason for refusing to approve payment. In the event of a total denial and return of the Application for Payment by the Engineer, the Contractor may make the necessary corrections and resubmit the Application for Payment. So long as the Contractor has submitted a complete and proper Application for Payment with all required supporting documentation, Owner shall, within thirty (30) calendar days after its receipt of the Application for Payment, pay the Contractor the amounts approved by the Engineer and Owner. Provided, however, in no event shall the Owner be obligated to pay an amount greater than that portion of the Application for Payment approved by the Engineer.

4.5 Owner shall retain ten percent (10%) of the gross amount of each monthly payment request or ten percent (10%) of the portion thereof approved by the Owner for payment, whichever is less. Such sum shall be accumulated and not released to Contractor until final payment is due. Any interim interest on such sums shall accrue to Owner.

4.6 Monthly payments to Contractor shall in no way imply approval or acceptance of the Work.

4.7 Each Application for Payment shall be accompanied by Release and Affidavits, in the form attached as Section 00230, from Contractor (and each of its subcontractors and suppliers on a form substantially similar to Section 00230 as approved by Owner) with respect to that portion of the Work upon which payment is being requested. The Owner shall not be required to make payment until and unless these affidavits are furnished by Contractor.

5. Payments Withheld.

5.1 The Engineer or Owner may decline to approve any Application for Payment, or portions thereof, because of subsequently discovered evidence or subsequent inspections. The

Engineer or Owner may nullify the whole or any part of any approval for payment previously issued and Owner may withhold any payments otherwise due Contractor under this Agreement or any other agreement between Owner and Contractor, to such extent as may be necessary in the Engineer's or Owner's opinion to protect it from loss because of: (a) defective Work not remedied; (b) third party claims filed or reasonable evidence indicating probable filing of such claims; (c) failure of Contractor to make payment properly to subcontractors or materialmen for labor, materials or equipment; (d) reasonable doubt that the Work can be completed for the unpaid balance of the Contract Amount; (e) reasonable indication that the Work will not be completed within the Contract Time; (f) unsatisfactory prosecution of the Work by the Contractor; or (g) any other material breach of the Contract Documents by Contractor. If these conditions are not remedied or removed, Owner may, after three (3) days written notice, rectify the same at Contractor's expense. Owner also may offset against any sums due Contractor the amount of any liquidated or unliquidated obligations of Contractor to Owner, whether relating to or arising out of this Agreement or any other agreement between Contractor and Owner.

6. Final Payment.

6.1 Owner shall make final payment to Contractor within thirty (30) calendar days after the Work is finally inspected and accepted by both Owner and the Engineer in accordance with Section 20.1 herein, provided that Contractor first, and as an explicit condition precedent to the accrual of Contractor's right to final payment, shall have furnished Owner with a properly executed and notarized copy of the Release and Affidavit attached as Section 00230, as well as, a duly executed copy of the Surety's consent to final payment and such other documentation that may be required by the Contract Documents, Engineer or Owner.

6.2 Contractor's acceptance of final payment shall constitute a full waiver of any and all claims by Contractor against Owner arising out of this Agreement or otherwise relating to the Project, except those previously made in writing and identified by Contractor as unsettled in its final Application for Payment. Neither the acceptance of the Work nor payment by Owner shall be deemed to be a waiver of Owner's right to enforce any obligations of Contractor hereunder or to the recovery of damages for defective Work not discovered by the Engineer or Owner at the time of final inspection.

7. Submittals and Substitutions.

7.1 Contractor shall carefully examine the Contract Documents for all requirements for approval of materials to be submitted such as shop drawings, data, test results, schedules and samples. Contractor shall submit all such materials at its own expense and in such form as required by the Contract Documents in sufficient time to prevent any delay in the delivery of such materials and the installation thereof.

7.2 Whenever materials or equipment are specified or described in the Contract Documents by using the name of a proprietary item or the name of a particular supplier, the naming of the item is intended to establish the type, function and quality required. Unless the name is followed by words indicating that no substitution is permitted, materials or equipment of other suppliers may be accepted by Owner if sufficient information is submitted by Contractor to allow the Owner to determine that the material or equipment proposed is equivalent or equal to that named. Requests for review of substitute items of material and equipment will not be accepted by Owner from anyone other than Contractor and all such requests must be submitted by Contractor to Engineer within thirty (30) calendar days after Notice of Award is received by Contractor.

7.3 If Contractor wishes to furnish or use a substitute item of material or equipment, Contractor shall make application to the Engineer for acceptance thereof, certifying that the proposed substitute shall perform adequately the functions and achieve the results called for by the general design, be similar and of equal substance to that specified and be suited to the same use as that specified. The application shall state that the evaluation and acceptance of the proposed substitute will not prejudice Contractor's achievement of substantial completion on time, whether or not acceptance of the substitute for use in the Work will require a change in any of the Contract Documents (or in the provisions of any other direct contract with Owner for the Project) to adapt the design to the proposed substitute and whether or not incorporation or use by the substitute in connection with the Work is subject to payment of any license fee or royalty. All variations of the proposed substitute from that specified will be identified in the application and available maintenance, repair and replacement service shall be indicated. The application also shall contain an itemized estimate of all costs that will result directly or indirectly from acceptance of such substitute, including costs for redesign and claims of other contractors affected by the resulting change, all of which shall be considered by the Engineer in

evaluating the proposed substitute. The Engineer may require Contractor to furnish at Contractor's expense additional data about the proposed substitute.

7.4 If a specific means, method, technique, sequence or procedure of construction is indicated in or required by the Contract Documents, Contractor may furnish or utilize a substitute means, method, sequence, technique or procedure of construction acceptable to the Engineer, if Contractor submits sufficient information to allow the Engineer to determine that the substitute proposed is equivalent to that indicated or required by the Contract Documents. The procedures for submission to and review by the Engineer shall be the same as those provided herein for substitute materials and equipment.

7.5 The Engineer shall be allowed a reasonable time within which to evaluate each proposed substitute. The Engineer and Owner shall be the sole judges of acceptability, and no substitute will be ordered, installed or utilized without the Engineer's and the Owner's prior written acceptance which shall be evidenced by either a Change Order or an approved Shop Drawing. The Owner may require Contractor to furnish at Contractor's expense a special performance guarantee or other surety with respect to any substitute. The Engineer will record time required by the Engineer and the Engineer's consultants in evaluating substitutions proposed by Contractor and making changes in the Contract Documents occasioned thereby. Whether or not the Owner accepts a proposed substitute, Contractor shall reimburse Owner for the charges of the Engineer and the Engineer's consultants for evaluating each proposed substitute.

8. Daily Reports, As-Builts and Meetings.

8.1 Unless waived in writing by Owner, Contractor shall complete and submit to Engineer on a weekly basis a daily log of the Work for the preceding week in a format approved by the Engineer and Owner. The daily log shall document all activities of Contractor at the Project site including, but not limited to, the following:

8.1.1 Weather conditions showing the high and low temperatures during work hours, the amount of precipitation received on the Project site, and any other weather conditions which adversely affect the Work;

8.1.2 Soil conditions which adversely affect the Work;

8.1.3 The hours of operation by Contractor's and subcontractor's personnel;

8.1.4 The number of Contractor's and subcontractor's personnel present and working at the Project site, by subcontract and trade;

8.1.5 All equipment present at the Project site, description of equipment use and designation of time equipment was used (specifically indicating any down time);

8.1.6 Description of Work being performed at the Project site;

8.1.7 Any unusual or special occurrences at the Project site;

8.1.8 Materials received at the Project site; and

8.1.9 A list of all visitors to the Project site.

The daily log shall not constitute nor take the place of any notice required to be given by Contractor to Owner or Engineer pursuant to the Contract Documents.

8.2 Contractor shall maintain in a safe place at the Project site one-record copy of the Contract Documents, including, but not limited to, all drawings, specifications, addenda, amendments, Change Orders, Work Directive Changes and Field Orders, as well as all written interpretations and clarifications issued by the Engineer, in good order and annotated to show all changes made during construction. The annotated drawings shall be continuously updated by the Contractor throughout the prosecution of the Work to accurately reflect all field changes that are made to adapt the Work to field conditions, changes resulting from Change Orders, Work Directive Changes and Field Orders.

8.3 Contractor shall keep all records and supporting documentation which concern or relate to the Work hereunder for a minimum of five (5) years from the date of termination of this Agreement or the date the Project is completed, whichever is later. Owner, or any duly authorized agents or representatives of Owner, shall have the right to audit, inspect and copy all such records and documentation as often as they deem necessary during the period of this Agreement and during the five (5) year period noted above; provided, however, such activity shall be conducted only during normal business hours.

9. Contract Time and Time Extensions.

9.1 Contractor shall diligently pursue the completion of the Work and coordinate the Work being done on the Project by its subcontractors and materialmen, as well as coordinating its Work with all work of others at the Project Site, so that its Work or the work of others shall not be delayed or impaired by any act or omission by Contractor. Contractor shall be solely

responsible for all construction means, methods, techniques, sequences, and procedures, as well as coordination of all portions of the Work under the Contract Documents.

9.2 Should Contractor be obstructed or delayed in the prosecution of or completion of the Work as a result of unforeseeable causes beyond the control of Contractor, and not due to its fault or neglect, including but not restricted to acts of God or of the public enemy, acts of government, fires, floods, epidemics, quarantine regulation, strikes or lockouts, Contractor shall notify the Owner in writing within forty-eight (48) hours after the commencement of such delay, stating the cause or causes thereof, or be deemed to have waived any right which Contractor may have had to make a claim for increased time or costs. Contractor shall be entitled to an extension to the Contract Time for any such delays, to the extent its performance of critical path Work has been delayed, so long as such delay is beyond its control and not due to its fault or neglect and Contractor has provided the written notice as required herein.

9.3 No interruption, interference, inefficiency, suspension or delay in the commencement or progress of the Work from any cause whatever, including those for which Owner may be responsible, in whole or in part, shall relieve Contractor of his duty to perform or give rise to any right to damages or additional compensation from Owner. Contractor expressly acknowledges and agrees that it shall receive no damages for delay. Contractor's sole remedy, if any, against Owner will be the right to seek an extension to the Contract Time; provided, however, the granting of any such time extension shall not be a condition precedent to the aforementioned "No Damage For Delay" provision. This paragraph shall expressly apply to claims for early completion, as well as to claims based on late completion. Notwithstanding the foregoing, if the Work is delayed due to the fault or neglect of Owner or anyone for whom Owner is liable ("Owner Delay"), and such Owner Delay exceeds a cumulative total of 90 calendar days, Contractor may make a claim in accordance with the procedures set forth in this Contract, for the actual and direct increased field costs it incurs as a result of such Owner Delay accruing after said 90 calendar days. Provided, however, Contractor expressly acknowledges and agrees that its actual and direct increased field costs shall not exceed \$500.00 per calendar day.

10. Changes in the Work.

10.1 Owner shall have the right at any time during the progress of the Work to increase or decrease the Work. Promptly after being notified of a change, Contractor shall

submit an itemized estimate of any cost or time increases or savings it foresees as a result of the change. Except in an emergency endangering life or property, or as expressly set forth herein, no addition or changes to the Work shall be made except upon written order of Owner, and Owner shall not be liable to the Contractor for any increased compensation without such written order. No officer, employee or agent of Owner is authorized to direct any extra or changed Work orally.

10.2 A Change Order, in the form attached as Section 00200 to this Agreement, shall be issued and executed promptly after an agreement is reached between Contractor and Owner concerning the requested changes. Contractor shall promptly perform changes authorized by duly executed Change Orders. The Contract Amount and Contract Time shall be adjusted in the Change Order in the manner as Owner and Contractor shall mutually agree.

10.3 If Owner and Contractor are unable to agree on a Change Order for the requested change, Contractor shall, nevertheless, promptly perform the change as directed by Owner in a written Work Directive Change. In that event, the Contract Amount and Contract Time shall be adjusted as directed by Owner. If Contractor disagrees with the Owner's adjustment determination, Contractor must make a claim pursuant to Section 11 of these General Conditions or else be deemed to have waived any claim on this matter it might otherwise have had.

10.4 In the event a requested change results in an increase to the Contract Amount, the amount of the increase shall be limited to the Contractor's reasonable direct labor and material costs and reasonable actual equipment costs as a result of the change (including allowance for labor burden costs) plus a maximum ten percent (10%) markup for all overhead and profit. In the event such change Work is performed by a subcontractor, a maximum ten percent (10%) markup for all overhead and profit for that subcontractors' direct labor and material costs and actual equipment costs shall be permitted, with a maximum five percent (5%) markup thereon by the Contractor for all of its overhead and profit, for a total maximum markup of fifteen percent (15%). All compensation due Contractor and any subcontractor for field and home office overhead is included in the markups noted above.

10.5 Owner shall have the right to conduct an audit of Contractor's books and records to verify the accuracy of the Contractor's claim with respect to Contractor's costs associated with any Change Order.

10.6 The Engineer shall have authority to order minor changes in the Work not involving an adjustment to the Contract Amount or an extension to the Contract Time and not inconsistent with the intent of the Contract Documents. Such changes may be effected by Field Order or by other written order. Such changes shall be binding on the Contractor.

10.7 If Contractor encounters on the Project site any materials reasonably believed by Contractor to be petroleum or petroleum related products or other hazardous or toxic substances which have not been rendered harmless, Contractor immediately shall (i) stop Work in the area affected and (ii) immediately report the condition to Owner and Engineer. If the Work is so stopped and hazardous material is found, the Work in the affected area shall not thereafter be resumed except by Change Order. Any such Change Order shall include, but not be limited to, an adjustment to the Contract Time and Contract Amount, as appropriate. If no hazardous material is found after the Work is stopped, no Change Order is required to resume the Work in the affected area. Further, if the hazardous material was generated or caused by Contractor or any of its employees, agents, subcontractors or materialmen, no Change Order will be required, nor any adjustment to either the Contract Time or Contract Amount shall be made, and Contractor shall indemnify, defend and hold Owner harmless from any costs or expenses incurred by Owner with respect to such hazardous material.

10.8 Subject to the provisions of Paragraph 6 of the Special Provisions attached to the Agreement as Section 00170, if conditions are encountered at the Project site which are (i) subsurface or otherwise concealed physical conditions which differ materially from those indicated in the Contract Documents, or (ii) unknown physical conditions of an unusual nature, which differ material from those ordinarily found to exist and generally recognized as inherent in construction activities for the character provided for in the Contract Documents, then Contractor shall provide Owner with prompt written notice thereof before conditions are disturbed and in no event later than 48 hours after the first observance of such conditions. Contractor's failure to provide such written notice shall be deemed a waiver of any claim Contractor otherwise may have made with respect to any such conditions. Owner and Engineer shall properly investigate such conditions and, if they differ materially and cause an increase or decrease in Contractor's cost of, or time required for, performance of any part of the Work, Owner will acknowledge and agree to an equitable adjustment to the Contract Amount or Contract Time, or both, for such Work. If Owner determines that the conditions at the site are

not materially different from those indicated in the Contract Documents or not of an unusual nature or should have been discovered by Contractor as part of its site investigations, and that no change in the terms of the Contract Documents is justified, Owner shall so notify Contractor in writing, stating its reasons. Claims by Contractor in opposition to such determination by Owner must be made within seven (7) calendar days after Contractor's receipt of Owner's written notice of such decision. If Contractor fails to provide Owner and Engineer written notice of such claim within said seven calendar (7) day period, Contractor shall be deemed to have waived any such claim. If Owner and Contractor cannot agree on the adjustment to the Contract Amount or Contract Time, the dispute resolution procedures set forth in the Contract Documents shall be complied with by the parties.

11. Claims and Disputes.

11.1 A Claim is a demand or assertion by one of the parties seeking an adjustment or interpretation of the terms of the Contract Documents, payment of money, extension of time or other relief with respect to the terms of the Contract Documents. The term "Claim" also includes other disputes and matters in question between Owner and Contractor arising out of or relating to the Contract Documents. The responsibility to substantiate a Claim shall rest with the party making the Claim.

11.2 Claims by the Contractor shall be made in writing to the Owner and Engineer within the time period set forth in the Contract Documents for such claim event, or if no such time period is stated, then within forty-eight (48) hours after the first day of the event giving rise to such Claim. Contractor's failure to comply with these notice requirements shall be deemed a waiver of the Claim by Contractor. Written supporting data shall be submitted to the Owner and Engineer within fifteen (15) calendar days after the occurrence of the event, unless the Owner grants additional time in writing, or else the Contractor shall be deemed to have waived the Claim. All Claims shall be priced in accordance with the provisions of Subsection 10.4.

11.3 The Contractor shall proceed diligently with its performance as directed by the Owner, regardless of any pending Claim action, suit, arbitration or administrative proceeding, unless otherwise agreed to by the Owner in writing, and Owner shall continue to make payments in accordance with the Contract Documents during the pendency of any Claim.

12. Other Work.

12.1 Owner may perform other work related to the Project at the site with Owner's own forces, have other work performed by utility owners or let other direct contracts. If the fact that such other work is to be performed is not noted in the Contract Documents, notice thereof will be given to Contractor prior to starting any such other work. If Contractor believes that such performance will involve additional expense to Contractor or require additional time, Contractor shall file a Claim in accordance with the procedures set forth in Article 11 above.

12.2 Contractor shall afford each utility owner and other contractors who are a party to a direct contract with Owner (or Owner, if Owner is performing the additional work with Owner's employees) proper and safe access to the site and a reasonable opportunity for the introduction and storage of materials and equipment and the execution of such work and shall properly connect and coordinate its Work with theirs. Contractor shall do all cutting, fitting and patching of the Work that may be required to make its several parts come together properly and integrate with such other work. Contractor shall 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 Engineer and the others whose work will be affected.

12.3 If any part of the Work depends for proper execution or results upon the work of any other contractor or utility owner (or Owner), Contractor shall inspect and promptly report to Engineer in writing any delays, defects or deficiencies in such work that render it unavailable or unsuitable for such proper execution and results. Contractor's failure to report will constitute an acceptance of the other work as fit and proper for integration with the Work except for latent defects in such other work not reasonably discovered by Contractor.

13. Indemnification and Insurance.

13.1 To the maximum extent permitted by Florida law, Contractor agrees to save harmless and indemnify Owner and its officers and employees from any and all liabilities, claims, damages penalties, demands, judgments, actions proceedings, losses or costs, including, but not limited to reasonable attorneys' fees and paralegals' fees, whether resulting from any claimed breach of this Agreement by Contractor or from personal injury, property damage, direct or consequential damages, or economic loss, to the extent caused by the negligence, recklessness, or intentional wrongful misconduct of Contractor or anyone employed or utilized by the Contractor in the performance of this Agreement. Owner and Contractor agree the first

\$100.00 of the Contract Amount paid by Owner to Contractor shall be given as separate consideration for this indemnification, the sufficiency of such separate consideration being acknowledged by Contractor by Contractor's execution of the Agreement.

13.1.1 Contractor agrees to defend the Owner and its employees, officers, directors and agents, and at the Owner's discretion, upon written demand to the Contractor, the Engineer and their respective employees, officers, directors and agents (collectively "Defended Parties"), from any and all liabilities, claims, damages, penalties, demands, losses, actions or proceedings, whether for personal injury, property damage, direct or consequential damages, or economic loss, arising directly or indirectly on account of or in connection with any negligent or wrongful act or omission of Contractor or anyone for whom Contractor is legally liable, or resulting from any breach of this Agreement by Contractor or anyone for whom Contractor is legally liable, or resulting from the use by Contractor, or by anyone for whom Contractor is legally liable, of any materials, tools, machinery or other property of any of Defended Party. The selection of counsel for defense of any such matter is subject to approval by Owner. Owner has the right to direct the defense of any matter under this Paragraph. Provided, however, nothing herein shall be construed as requiring Contractor to defend any particular Defended Party in claims arising solely from the negligence or misconduct of that Defended Party. And further provided that, following settlement or satisfaction of any claim against a Defended Party, nothing herein shall be construed to limit or abrogate the rights of Contractor to seek common law contribution for such settlement or satisfaction. Owner and Contractor agree the second \$100.00 of the Contract Amount paid by Owner to Contractor shall be given as separate consideration for this duty to defend, the sufficiency of such separate consideration being acknowledged by Contractor by Contractor's execution of the Agreement.

13.2 Contractor shall obtain and carry, at all times during its performance under the Contract Documents, insurance of the types and in the amounts set forth in Division 00090 to the Agreement. All insurance policies shall be from responsible companies duly authorized to do business in the State of Florida and/or responsible risk retention group insurance companies which are registered with the State of Florida. Within ten (10) calendar days after the execution of this Agreement by both parties, Contractor shall provide Owner with properly executed Certificates of Insurance to evidence Contractor's compliance with the insurance requirements of the Contract Documents. Said Certificates of Insurance shall be on forms

approved by Owner. The Certificates of Insurance shall be personally, manually signed by the authorized representatives of the insurance company/companies shown on the Certificates of Insurance, with proof that they are authorized representatives thereof. In addition, certified, true and exact copies of all insurance policies required hereunder shall be provided to Owner, on a timely basis, when requested by Owner.

13.3 The Certificates of Insurance and required insurance policies shall contain provisions that thirty (30) days prior written notice by registered or certified mail shall be given Owner of any cancellation, intent not to renew, or reduction in the policies or coverages, except in the application of the aggregate limits provisions. In the event of a reduction in the aggregate limit of any policy, Contractor shall immediately take steps to have the aggregate limit reinstated to the full extent permitted under such policy.

13.4 All insurance coverages of the Contractor shall be primary to any insurance or self-insurance program carried by the Owner applicable to this Project. The acceptance by Owner of any Certificate of Insurance does not constitute approval or agreement by the Owner that the insurance requirements have been satisfied or that the insurance policy shown on the Certificate of Insurance is in compliance with the requirements of the Contract Documents. No Work shall commence at the Project site unless and until the required Certificates of Insurance are received by the Owner.

13.5 Contractor shall require each of its subcontractors to procure and maintain, until the completion of the subcontractor's work, insurance of the types and to the limits specified in Section 00090, unless such insurance requirements for the subcontractor is expressly waived in writing by the Owner. All liability insurance policies, other than professional liability, worker's compensation and employer's liability policies, obtained by Contractor to meet the requirements of the Contract Documents shall name the Owner as an additional insured and shall contain severability of interest provisions. If any insurance provided pursuant to the Contract Documents expires prior to the completion of the Work, renewal Certificates of Insurance and, if requested by Owner, certified, true copies of the renewal policies, shall be furnished by Contractor within thirty (30) days prior to the date expiration.

13.6 Should at any time the Contractor not maintain the insurance coverages required herein, the Owner may terminate the Agreement for cause or at its sole discretion shall be authorized to purchase such coverages and charge the Contractor for such coverages purchased.

The Owner shall be under no obligation to purchase such insurance, nor shall it be responsible for the coverages purchased or the insurance company or companies used. The decision of the Owner to purchase such insurance coverages shall in no way be construed to be a waiver of any of its rights under the Contract Documents.

13.7 Contractor shall submit to Engineer a copy of all accident reports arising out of any injuries to its employees or those of any firm or individual to whom it may have subcontracted a portion of the Work, or any personal injuries or property damages arising or alleged to have arisen on account of any work by Contractor under the Contract Documents.

14. Compliance with Laws.

14.1 Contractor agrees to comply, at its own expense, with all federal, state and local laws, codes, statutes, ordinances rules, regulations and requirements applicable to the Project, including but not limited to those dealing with taxation, worker's compensation, equal employment and safety. If Contractor observes that the Contract Documents are at variance therewith, it shall promptly notify Owner and Engineer in writing prior to performing any such portion of the Work.

15. Cleanup and Protections.

15.1 Contractor agrees to keep the Project site clean at all times of debris, rubbish and waste materials arising out of the Work. At the completion of the Work, Contractor shall remove all debris, rubbish and waste materials from and about the Project site, as well as all tools, appliances, construction equipment and machinery and surface materials, and shall leave the Project site clean and ready for occupancy by Owner.

15.2 Any existing surface or subsurface improvements (subject to the provisions of Paragraph 10.8 above), including, but not limited to, pavements, curbs, sidewalks, pipes, utilities, footings, structures, trees and shrubbery, not indicated in the Contract Documents to be removed or altered, shall be protected by Contractor from damage during the prosecution of the Work. Any such improvements so damaged shall be restored by Contractor to the condition equal to that existing at the time of Contractor's commencement of the Work.

16. Assignment.

16.1 Contractor shall not assign this Agreement or any part thereof, without the prior written consent of Owner, which consent shall be at Owner's sole discretion. Contractor shall not be released from this Agreement as the result of any such assignment.

17. Permits, Licenses and Taxes.

17.1 Except for St. John River Water Management Permit for surface water drainage and FDEP permits for water and sewer utility improvements, all permits and licenses necessary for the prosecution of the Work (including all dewatering and NPDES permits) shall be procured and paid for by Contractor. If Contractor performs any Work without obtaining, or contrary to, such permits or licenses, Contractor shall bear all costs arising therefrom. Except for all City of Apopka permit and inspection fees, which have been waived by Owner, Contractor shall pay all other governmental charges and inspection fees necessary for the prosecution of the Work.

17.2 Contractor shall pay all sales, consumer, use and other similar taxes associated with the Work or portions thereof, which are applicable during the performance of the Work.

18. Termination for Default.

18.1 Contractor shall be considered in material default of the Agreement and such default shall be considered cause for Owner to terminate Contractor's right to continue to perform under the Agreement, in whole or in part, as further set forth in this Section, if Contractor: (1) fails to begin the Work under the Contract Documents within the time specified herein; or (2) fails to properly and timely perform the Work as directed by the Owner or the Engineer or as provided for in the approved Progress Schedule; or (3) performs the Work unsuitably or neglects or refuses to remove materials or to correct or replace such Work as may be rejected as unacceptable or unsuitable; or (4) discontinues the prosecution of the Work; or (5) fails to resume Work which has been suspended within a reasonable time after being notified to do so; or (6) becomes insolvent or is declared bankrupt, or commits any act of bankruptcy; or (7) allows any final judgment to stand against it unsatisfied for more than ten (10) days; or (8) makes an assignment for the benefit of creditors; or (9) fails to obey any applicable codes, laws, ordinances, rules or regulations with respect to the Work; or (10) materially breaches any other provision of the Contract Documents.

18.2 Owner shall notify Contractor in writing of Contractor's default(s). If Owner determines that Contractor has not remedied and cured the default(s) within seven (7) calendar days following receipt by Contractor of said written notice (unless the cure cannot reasonably be accomplished within said seven (7) calendar days, in which event Contractor must commence the cure within said seven (7) calendar days and thereafter diligently and continuously prosecute such cure to completion, but in no event shall such time period to cure exceed thirty (30) calendar days following receipt by Contractor of Owner's default notice), then Owner, at its option, without releasing or waiving its rights and remedies against the Contractor's sureties and without prejudice to any other right or remedy it may be entitled to hereunder or by law, may terminate Contractor's right to proceed under the Agreement, in whole or in part, and take possession of all or any portion of the Work and any materials, tools, equipment, and appliances of Contractor, take assignments of any of Contractor's subcontracts and purchase orders, and complete all or any portion of the Work by whatever means, method or agency which Owner, in its sole discretion, may choose.

18.3 If Owner deems any of the foregoing remedies necessary, Contractor agrees that it shall not be entitled to receive any further payments hereunder until after the Project is completed. All monies expended and all of the costs, losses, damages and extra expenses, including all management, administrative and other overhead and other direct and indirect expenses (including Engineer's and attorneys' fees) or damages incurred by Owner incident to such completion, shall be deducted from the Contract Amount, and if such expenditures exceed the unpaid balance of the Contract Amount, Contractor agrees to pay promptly to Owner on demand the full amount of such excess, including costs of collection, attorney's fees (including appeals) and interest thereon at the maximum legal rate of interest until paid. If the unpaid balance of the Contract Amount exceeds all such costs, expenditures and damages incurred by the Owner to complete the Work, such excess shall be paid to the Contractor. The amount to be paid to the Contractor or Owner, as the case may be, shall be certified by the Engineer, upon application, and this obligation for payment shall survive termination of the Agreement.

18.4 The liability of Contractor hereunder shall extend to and include the full amount of any and all sums paid, expenses and losses incurred, damages sustained, and obligations assumed by Owner in good faith under the belief that such payments or assumptions were necessary or required, in completing the Work and providing labor, materials, equipment,

supplies, and other items therefore or reletting the Work, and in settlement, discharge or compromise of any claims, demands, suits, and judgments pertaining to or arising out of the Work hereunder. Owner may rely upon the Engineer's recommendations and determinations with respect to any default by Contractor hereunder, including whether any such default has been appropriately cured by Contractor.

18.5 If, after notice of termination of Contractor's right to proceed pursuant to this Section, it is determined for any reason that Contractor was not in default, or that its default was excusable, or that Owner was not entitled to the remedies against Contractor provided herein, then Contractor's remedies against Owner shall be the same as and limited to those afforded Contractor under Section 19 below.

19. Termination for Convenience and Right of Suspension.

19.1 Owner shall have the right to terminate this Agreement, in whole or in part, without cause upon seven (7) calendar days written notice to Contractor. In the event of such termination for convenience, Contractor's recovery against Owner shall be limited to that portion of the Contract Amount earned through the date of termination, together with any retainage withheld and reasonable termination expenses incurred, but Contractor shall not be entitled to any other or further recovery against Owner, including, but not limited to, damages or any anticipated profit on portions of the Work not performed.

19.2 Owner shall have the right to suspend all or any portions of the Work upon giving Contractor two (2) calendar days' prior written notice of such suspension. If all or any portion of the Work is so suspended, Contractor may seek an extension of time to its schedule in accordance with the terms and conditions of Paragraphs 9.2 and 9.3 herein. Provided, however, if the ordered suspension exceeds three (3) months, the Contractor shall have the right to terminate the Agreement with respect to that portion of the Work which is subject to the ordered suspension.

20. Completion.

20.1 When the entire Work (or any portion thereof designated in writing by Owner) is ready for its intended use, Contractor shall notify Owner and Engineer in writing that the entire Work (or such designated portion) is substantially complete and request that Engineer issue a Certificate of Substantial Completion (or Certificate of Partial Substantial Completion).

Within a reasonable time thereafter, Owner, Contractor and Engineer shall make an inspection of the Work (or designated portion thereof) to determine the status of completion. If Owner and Engineer do not consider the Work (or designated portion) substantially complete, Engineer shall notify Contractor in writing giving the reasons therefor. If Owner and Engineer consider the Work (or designated portion) substantially complete, Engineer shall prepare and deliver to Contractor a Certificate of Substantial Completion (or Certificate of Partial Substantial Completion) which shall fix the date of Substantial Completion for the entire Work (or designated portion thereof) and include a tentative punch-list of items to be completed or corrected by Contractor before final payment. Owner shall have the right to exclude Contractor from the Work and Project site (or designated portion thereof) after the date of Substantial Completion, but Owner shall allow Contractor reasonable access to complete or correct items on the tentative punch list.

20.2 Upon receipt of written notice that the Work is ready for final inspection and acceptance and upon receipt of a final Application for Payment, the Engineer shall promptly make such inspection and, if it finds the Work acceptable and fully performed under the Contract Documents, Engineer shall promptly issue a final Certificate for Payment, stating that, on the basis of its observations and inspections, the Work has been completed in accordance with the terms and conditions of the Contract Documents and that the entire balance found to be due the Contractor is due and payable. Neither the final payment nor the retainage shall become due and payable until Contractor submits: (1) the Release and Affidavit in the form attached as Section 00230, (2) consent of surety to final payment, and (3) if required by Owner or Engineer, other data establishing payment or satisfaction of all obligations, such as receipts, releases and waivers, arising out of the Contract Documents, to the extent and in such form as may be designated by Owner or Engineer. Owner reserves the right to inspect the Work and make an independent determination as to the Work's acceptability, even though the Engineer may have issued its certificate. Unless and until the Owner is completely satisfied, neither the final payment nor the retainage shall become due and payable.

21. Warranty.

21.1 Contractor shall obtain and assign to Owner all express warranties given to Contractor or any subcontractors by any materialmen supplying materials, equipment or fixtures to be incorporated into the Project. Contractor warrants to Owner that any materials

and equipment furnished under the Contract Documents shall be new unless otherwise specified, and that all Work shall be of good quality, free from all defects and in conformance with the Contract Documents. Contractor further warrants to Owner that all materials and equipment furnished under the Contract Documents shall be applied, installed, connected, erected, used, cleaned and conditioned in accordance with the instructions of the applicable manufacturers, fabricators, suppliers or processors except as otherwise provided for in the Contract Documents. If, within one (1) year after final completion, any Work is found to be defective or not in conformance with the Contract Documents, Contractor shall correct it promptly after receipt of written notice from Owner. Contractor shall also be responsible for and pay for replacement or repair of adjacent materials or Work which may be damaged as a result of such replacement or repair. These warranties are in addition to those implied warranties to which Owner is entitled as a matter of law or any other express warranties contained within the Contract Documents.

22. Tests and Inspections.

22.1 Owner, Engineer, their respective representatives, agents and employees, and governmental agencies with jurisdiction over the Project shall have access at all times to the Work, whether the Work is being performed on or off of the Project site, for their observation, inspection and testing. Contractor shall provide proper, safe conditions for such access. Contractor shall provide Engineer with timely notice of readiness of the Work for all required inspections, tests or approvals.

22.2 If the Contract Documents or any codes, laws, ordinances, rules or regulations of any public authority having jurisdiction over the Project requires any portion of the Work to be specifically inspected, tested or approved, Contractor shall assume full responsibility therefore, pay all costs in connection therewith and furnish Engineer the required certificates of inspection, testing or approval. All inspections, tests or approvals shall be performed in a manner and by organizations acceptable to the Engineer and Owner.

22.3 If any Work that is to be inspected, tested or approved is covered without written concurrence from the Engineer, such Work must, if requested by Engineer, be uncovered for observation. Such uncovering shall be at Contractor's expense unless Contractor has given Engineer timely notice of Contractor's intention to cover the same and Engineer has not acted with reasonable promptness to respond to such notice. If any Work is covered

contrary to written directions from Engineer, such Work must, if requested by Engineer, be uncovered for Engineer's observation and be replaced at Contractor's sole expense.

22.4 The Owner shall charge to Contractor and may deduct from any payments due Contractor all engineering and inspection expenses incurred by Owner in connection with any overtime work. Such overtime work consisting of any Work performed during the construction period beyond the regular eight (8) hour day and for any work performed on Saturday, Sunday or holidays.

22.5 Neither observations by the Engineer or Owner, nor inspections, tests or approvals by others shall relieve Contractor from Contractor's obligations to perform the Work in accordance with the Contract Documents.

23. Defective Work.

23.1 Work not conforming to the requirements of the Contract Documents shall be deemed defective Work. If required by Owner or Engineer, Contractor shall as directed, either correct all defective Work, whether or not fabricated, installed or completed, or, if the defective Work has been rejected by Owner or Engineer, remove it from the site and replace it with non-defective Work. Contractor shall bear all direct, indirect and consequential costs of such correction or removal (including, but not limited to fees and charges of engineers, architects, attorneys and other professionals) made necessary thereby, and shall hold Owner harmless for same.

23.2 If the Owner or Engineer consider it necessary or advisable that covered Work be observed by Engineer or inspected or tested by others, Contractor, at Owner's or Engineer's request, shall uncover, expose or otherwise make available for observation, inspection or tests as Owner or Engineer may require, that portion of the Work in question, furnishing all necessary labor, material and equipment. If it is found that such Work is defective, Contractor shall bear all direct, indirect and consequential costs of such uncovering, exposure, observation, inspection and testing and of satisfactory reconstruction (including, but not limited to, fees and charges of engineers, architects, attorneys and other professionals), and Owner shall be entitled to an appropriate decrease in the Contract Amount. If, however, such Work is not found to be defective, Contractor shall be allowed an increase in the Contract Amount and/or an extension to the Contract Time, directly attributable to such uncovering, exposure, observation, inspection, testing and reconstruction.

23.3 If any portion of the Work is defective, or Contractor fails to supply sufficient skilled workers with suitable materials or equipment, or fails to finish or perform the Work in such a way that the completed Work will conform to the Contract Documents, Owner or Engineer may order Contractor to stop the Work, or any portion thereof, until the cause for such order has been eliminated; however, this right of Owner and Engineer to stop the Work shall not give rise to any duty on the part of Owner or Engineer to exercise this right for the benefit of Contractor or any other party.

23.4 Should the Owner determine, at its sole opinion, it is in the Owner's best interest to accept defective Work, the Owner may do so. Contractor shall bear all direct, indirect and consequential costs attributable to the Owner's evaluation of and determination to accept defective Work. If such determination is rendered prior to final payment, a Change Order or Work Change Directive shall be issued evidencing such acceptance of such defective Work, incorporating the necessary revisions in the Contract Documents and reflecting an appropriate decrease in the Contract Amount. If the Owner accepts such defective Work after final payment, Contractor shall promptly pay Owner an appropriate amount determined by Owner to adequately compensate Owner for its acceptance of the defective Work.

23.5 If Contractor fails, within a reasonable time after the written notice from Owner or Engineer, to correct defective Work or to remove and replace rejected defective Work as required by Engineer or Owner, or if Contractor fails to perform the Work in accordance with the Contract Documents, or if Contractor fails to comply with any of the provisions of the Contract Documents, Owner may, after seven (7) days written notice to Contractor, correct and remedy any such deficiency. To the extent necessary to complete corrective and remedial action, Owner may exclude Contractor from any or all of the Project site, take possession of all or any part of the Work, and suspend Contractor's services related thereto, take possession of Contractor's tools, appliances, construction equipment and machinery at the Project site and incorporate in the Work all materials and equipment stored at the Project site or for which Owner has paid Contractor but which are stored elsewhere. Contractor shall allow Owner, Engineer and their respective representatives, agents, and employees such access to the Project site as may be necessary to enable Owner to exercise the rights and remedies under this paragraph. All direct, indirect and consequential costs of Owner in exercising such rights and remedies shall be charged against Contractor, and a Change Order or Work Change Directive

shall be issued, incorporating the necessary revisions to the Contract Documents, including an appropriate decrease to the Contract Amount. Such direct, indirect and consequential costs shall include, but not be limited to, fees and charges of engineers, architects, attorneys and other professionals, all court and arbitration costs and all costs of repair and replacement of work of others destroyed or damaged by correction, removal or replacement of Contractor's defective Work. Contractor shall not be allowed an extension of the Contract Time because of any delay in performance of the Work attributable to the exercise by Owner of Owner's rights and remedies hereunder.

24. Supervision and Superintendents.

24.1 Contractor shall supervise and direct the Work competently and efficiently, devoting such attention thereto and applying such skills and expertise as may be necessary to perform the Work in accordance with the Contract Documents. Contractor shall be responsible to see that the finished Work complies accurately with the Contract Documents. Contractor shall keep on the Work at all times during its progress a competent resident superintendent, who shall not be replaced without prior written notice to Owner and Engineer except under extraordinary circumstances. The superintendent shall be Contractor's representative at the Project site and shall have authority to act on behalf of Contractor. All communications given to the superintendent shall be as binding as if given to the Contractor. Owner shall have the right to direct Contractor to remove and replace its Project superintendent, with or without cause.

25. Protection of Work.

25.1 Contractor shall fully protect the Work from loss or damage and shall bear the cost of any such loss or damage until final payment has been made. If Contractor or any one for whom Contractor is legally liable for is responsible for any loss or damage to the Work, or other work or materials of Owner or Owner's separate contractors, Contractor shall be charged with the same, and any monies necessary to replace such loss or damage shall be deducted from any amounts due Contractor.

25.2 Contractor shall not load nor permit any part of any structure to be loaded in any manner that will endanger the structure, nor shall Contractor subject any part of the Work or adjacent property to stresses or pressures that will endanger it.

26. Emergencies.

26.1 In the event of an emergency affecting the safety or protection of persons or the Work or property at the Project site or adjacent thereto, Contractor, without special instruction or authorization from Owner or Engineer is obligated to act to prevent threatened damage, injury or loss. Contractor shall give Engineer written notice within forty-eight (48) hours after the occurrence of the emergency, if Contractor believes that any significant changes in the Work or variations from the Contract Documents have been caused thereby. If the Engineer determines that a change in the Contract Documents is required because of the action taken in response to an emergency, a Change Order shall be issued to document the consequences of the changes or variations. If Contractor fails to provide the forty-eight (48) hour written notice noted above, the Contractor shall be deemed to have waived any right it otherwise may have had to seek an adjustment to the Contract Amount or an extension to the Contract Time.

27. Use of Premises.

27.1 Contractor shall confine all construction equipment, the storage of materials and equipment and the operations of workers to the Project site and land and areas identified in and permitted by the Contract Documents and other lands and areas permitted by law, rights of way, permits and easements, and shall not unreasonably encumber the Project site with construction equipment or other material or equipment. Contractor shall assume full responsibility for any damage to any such land or area, or to the owner or occupant thereof, or any land or areas contiguous thereto, resulting from the performance of the Work.

28. Safety.

28.1 Contractor shall be responsible for initiating, maintaining and supervising all safety precautions and programs in connection with the Work. Contractor shall take all necessary precautions for the safety of, and shall provide the necessary protection to prevent damage, injury or loss to:

28.1.1 All employees on the Work and other persons and/or organizations who may be affected thereby;

28.1.2 All the Work and materials and equipment to be incorporated therein, whether in storage on or off the Project site; and

28.1.3 Other property on the Project site or adjacent thereto, including trees, shrubs, laws, walks, pavements, roadways, structures, utilities and any underground structures or improvements not designated for removal, relocation or replacement in the Contract Documents.

28.2 Contractor shall comply with all applicable codes, laws, ordinances, rules and regulations of any public body having jurisdiction for the safety of persons or property or to protect them from damage, injury or loss (including, but not limited to, the Trench Safety Act, Chapter 553, Florida Statutes). Contractor shall erect and maintain all necessary safeguards for such safety and protection. Contractor shall notify owners of adjacent property and of underground structures and improvements and utility owners when prosecution of the Work may affect them, and shall cooperate with them in the protection, removal, relocation or replacement of their property. Contractor's duties and responsibilities for the safety and protection of the Work shall continue until such time as the Work is completed and final acceptance of same by Owner has occurred.

28.3 Contractor shall designate a responsible representative at the Project site whose duty shall be the prevention of accidents. This person shall be Contractor's superintendent unless otherwise designated in writing by Contractor to Owner.

29. Project Meetings.

29.1 Prior to the commencement of Work, the Contractor shall attend a preconstruction conference with the Engineer and others as appropriate to discuss the Progress Schedule, procedures for handling shop drawings and other submittals, and for processing Applications for Payment, and to establish a working understanding among the parties as to the Work. During the prosecution of the Work, the Contractor shall attend any and all meetings convened by the Engineer or Owner with respect to the Project, when directed to do so by Owner or Engineer. Contractor shall have its subcontractors and suppliers attend all such meetings (including the preconstruction conference) as may be directed by the Owner or Engineer.

30. Securing Agreement.

30.1 Contractor warrants that Contractor has not employed or retained any company or person, other than a bona fide employee working solely for Contractor, to solicit or secure this Agreement and that Contractor has not paid or agreed to pay any person, company,

corporation, individual or firm, other than a bona fide employee working solely for Contractor, any fee, commission, percentage, gift or any other consideration contingent upon or resulting from the award or making of this Agreement.

31. Public Entity Crimes.

31.1 By its execution of this Contract, Contractor acknowledges that it has been informed by Owner of the terms of Section 287.133(2)(a) of the Florida Statutes which read as follows:

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

32. Equal Employment Opportunity/Non-Discrimination

32.1 In performing all services to be provided hereunder, Contractor shall not discriminate against any employee or applicant for employment because of race, color, religion, sex or national origin. Contractor shall take affirmative action to ensure that applicants for employment are employed, and that employees are treated during employment, without regard to their race, color, religion, sex or national origin. Such actions shall include, but not be limited to the following: (i) employment, upgrading, demotion or transfer; (ii) recruitment or recruitment advertising; (iii) layoff or termination; (iv) rates of pay or other forms of compensation; and (v) selection for training, including apprenticeship. Contractor shall post in conspicuous places, available to all employees and applicants for employment notices setting forth the terms of this Equal Employment Opportunity Non-Discrimination Clause and stating that all qualified candidates will receive consideration for employment without regard to race, color, religion, sex or national origin.

33. Drug-Free Workplace

33.1 By its execution of this Contract, Contractor acknowledges that it has been informed by Owner of the terms of Section 287.087 of the Florida Statutes which reads as

follows: “Whenever two or more bids, proposals, or replies that are equal with respect to price, quality, and service are received by the state or by any political subdivision for the procurement of commodities or contractual services, a bid, proposal, or reply received from a business that certifies that it has implemented a drug-free workplace program shall be given preference in the award process. 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 prohibition.

(2) Inform employees about the dangers of drug abuse in the workplace, the business's policy of maintaining a drug-free workplace, any available drug counseling, rehabilitation, and employee assistance programs, and the penalties that may be imposed upon employees for drug abuse violations.

(3) Give each employee engaged in providing the commodities or contractual services that are under bid a copy of the statement specified in subsection (1).

(4) In the statement specified in subsection (1), notify the employees that, as a condition of working on the commodities or contractual services that are under 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 contendere to, any violation of chapter 893 or of any controlled substance law of the United States or any state, for a violation occurring in the workplace no later than 5 days after such conviction.

(5) Impose a sanction on, or require the satisfactory participation in a drug abuse assistance or rehabilitation program if such is available in the employee's community by, any employee who is so convicted.

(6) Make a good faith effort to continue to maintain a drug-free workplace through implementation of this section.”

END OF GENERAL TERMS AND CONDITIONS

SECTION 00180
NOTICE OF AWARD

CONTRACTOR:

DATE: _____

Project: ASPHALT STREET RESURFACING

Date of Bid Opening: _____

You are hereby notified that you are the apparent successful Bidder on the Project noted above. Upon compliance with the conditions precedent to be fulfilled by you within the time specified, the Agreement will be executed and delivered to you.

No. Copies	Item
3	Agreement between Owner and Contractor
3	Performance and Payment Bond
1	Notice of Award

Please take the following actions:

1. Execute Agreements and Seal.
2. Have your insurance company provide 3 copies each of Certificate of Insurance as described in Section 00100 and 00110.
3. Provide Performance and Payment bonds.
4. Return all 3 copies of Agreement, insurance certificates and bonds to:

City of Apopka
748 E. Cleveland St.
Apopka, FL 32703
Attn: R. Jay Davoll, P.E., Public Services Director

We will return a fully executed copy of the Contract Documents to you along with a Notice to Proceed.

OWNER:

BY:

CITY OF APOPKA
748 E. CLEVELAND ST.
APOPKA, FL 32703

R. Jay Davoll, P.E., Public Services Director

SECTION 00190
NOTICE TO PROCEED

CONTRACTOR:

DATE: _____

RE: Notice to Proceed On Project: ASPHALT STREET RESURFACING

You are hereby notified that you may proceed with the work on the subject Project as of _____ as you requested. A pre-con meeting has been scheduled for _____. The plans and specifications will be distributed to you at that time.

OWNER:

CITY OF APOPKA
748 E. CLEVELAND ST.
APOPKA, FL 32703

BY:

R. Jay Davoll, P.E., Public Services Director

SECTION 00200
CHANGE ORDER

No. _____

Date: _____

Project: ASPHALT STREET RESURFACING

Bid No.: _____

Owner: City of Apopka

Contract Date: _____

Contractor:

Phone No.: _____

Nature of the Change:

Total Cost of Change Order: \$ _____

The changes result in the following adjustment of Contract Price:

Original Contract Price \$ _____

Change Order Amount Prior to this Change Order \$ _____

Contract Price Prior to this Change Order \$ _____

Net (Increase) (Decrease) Resulting from this Change Order \$ _____

Current Contract Price Including this Change Order \$ _____

Contract Time Prior to this Change Order _____
(date/days)

Net (Increase) (Decrease) Resulting from this Change Order _____
(date/days)

Current Contract Time Including this Change Order _____
(date/days)

The Above Changes Are Approved:

Public Services Director

By: R. Jay Davoll, P.E.

Date: _____

The Above Changes Accepted:

Contractor

By: _____

Date: _____

SECTION 00210
APPLICATION FOR PAYMENT

Application No.: _____ Progress: _____ Final: _____ Project No.: _____

Project: _____

Contractor: _____ Contract Date: _____

Contract for: _____

Application Date: _____ Period Ending: _____

ANALYSIS OF WORK PERFORMED

1. Value of original contract price _____
2. Cumulative change orders _____
3. Current contract price _____
4. Value of work completed to date _____
5. Plus material stored 50% _____
6. Total value of work completed to date _____
7. Less _____ % retainage _____
8. Less liquidated damages _____
9. Less amount of previous payments _____
10. Balance due this estimate _____

CONTRACTORS CERTIFICATION

The undersigned Contractor hereby swears under penalty of perjury that (1) all previous progress payments received from the Owner on account of Work performed under the contract referred to above have been applied by the undersigned to discharge in full all obligations of the undersigned incurred in connection with Work covered by prior Application for Payment numbered 1 through ___ inclusive; and (2) all materials and equipment incorporated in said project or otherwise listed in or covered by this Application for Payment are free and clear of all liens, claims, security interest and encumbrances; and (3) all applicable provisions of the Florida Prevailing Wage Law (Florida Statutes, 448-110) regarding apprentices and payment of wages have been complied with and to the best of my knowledge and belief by all subcontractors. (Contractor shall attach like affidavits by all subcontractors.)

(DATE)

(CONTRACTOR)

By: _____

(PRINT/TYPE)

COUNTY OF _____

STATE OF _____

Before me on this __ day of _____ 20__, personally appeared _____, known to me, who being duly sworn, deposes and says that (s)he executed the above Application for Payment and statement of behalf of said Contractor; and that all of the statements contained therein are true, correct and complete.

Notary Public
My Commission Expires:

PROJECT MANAGER/ENGINEER APPROVAL

In accordance with above contract, the undersigned approves payment to the Contractor of the Amount Due as shown above.

City of Apopka Public Services
748 E. Cleveland St.
Apopka, FL 32703

By: _____

R. Jay Davoll, P.E.

Public Services Director
(Title)

Date: _____

SECTION 00220
CERTIFICATE OF SUBSTANTIAL COMPLETION

Project No: _____

Project: _____

Contractor: _____ Contract Date: _____

Contract For: _____

Project or Specified Part Shall Include: _____

DEFINITION OF SUBSTANTIAL COMPLETION

The date of Substantial Completion of a Project or Specified part of a Project is the date when the construction is sufficiently completed, in accordance with the Contract Documents, so that the Project or specified part of the Project can be utilized for the purpose for which it was intended.

To: _____
(Owner)

And To: _____

Date of Substantial Completion: _____

The Work performed under this contract has been inspected by authorized representatives of the Owner, Contractor and Engineer, and the Project (or specified part of the Project, as indicated above) is hereby declared to be substantially completed on the above date.

A tentative list of items to be completed or corrected is appended hereto. This list may not be exhaustive, and the failure to include an item on it does not alter the responsibility of the Contractor to complete all the Work in accordance with Contract Documents. These items shall be completed by the Contractor within _____ days of Substantial Completion.

Contractor accepts this Certificate of Substantial Completion on _____, 20__

Contractor

By: _____

Owner accepts this Certificate of Substantial Completion on _____, 20__

Owner

By: _____

SECTION 00230
RELEASE AND AFFIDAVIT

COUNTY OF ORANGE, STATE OF FLORIDA, before me, the undersigned authority, personally appeared _____ who after being duly sworn, deposes and says:

1. In accordance with the Contract Documents and conditioned upon receipt of payment in the amount of \$ _____, _____ (“Contractor”) hereby releases and waives for itself and its subcontractors, material men, successors and assigns, except for unpaid retainage, all claims demands, damages, costs and expenses, whether in contract or in tort, against the City of Apopka, Florida (“Owner”) relating in any way to the performance of the Agreement between Contractor and Owner, dated _____, 20____, for the period from _____ to _____, except for such still pending claims as Contractor previously may have filed in accordance with the terms of the Contract Documents and which are expressly identified as follows:

2. Contractor certifies for itself and its subcontractors, material men, successors and assigns, that all charges for labor, materials, supplies, lands, licenses and other expenses for which Owner might be sued or for which a lien or a demand against any payment bond might be filed, have been fully satisfied and paid through the previous month’s Application for Payment No. _____, except for unpaid retainage and the following expressly identified items:

3. Contractor agrees to indemnify, defend and save harmless Owner from all demands or suits, actions, claims of liens or other charges filed or asserted against the Owner arising out of the performance by Contractor of the Work covered by this Release and Affidavit.

4. This Release and Affidavit is given in connection with Contractor’s [monthly/final] Application for Payment No. _____.

CONTRACTOR:

By: _____

Its: President

Date: _____

Witnesses

[Corporate Seal]

STATE OF FLORIDA

COUNTY OF _____

The foregoing instrument was acknowledged before me this ___ day of _____, 20___, by

_____, as _____ President of

_____ on behalf of the corporation.

Notary Public, State of Florida

My Commission Expires: _____

(SEAL)

SECTION 00240
CONTRACTOR REQUEST FOR INFORMATION

Question:

Reference Section: _____

Drawing No.: _____

By: _____

Date: _____

Reply:

By: _____

Date: _____

CC: _____

RFI No.: _____

SECTION 01001
GENERAL REQUIREMENTS

1.01 WORK UNDER THIS CONTRACT

In conformance with the requirements of General Terms and Conditions, all notices or other papers required to be delivered by the Contractor to the Owner shall be delivered to the office of the Owner's, City of Apopka, Public Services, 748 E. Cleveland Street, Apopka, FL 32703.

A. WORK TO BE DONE

1. The Contractor shall furnish all labor, materials, equipment, tools services and incidentals to complete all work required by these specifications and as shown on the Drawings, at a rate of progress which will ensure completion of the Work within the Contract Time stipulated.
2. All materials, equipment, skills, tools and labor which is reasonably and properly inferable and necessary for the proper completion of the Work in a substantial manner and in compliance with the requirements stated or implied by these Specifications or Drawings shall be furnished and installed by the Contractor without additional compensation, whether specifically indicated in the Contract Documents or not.
3. The Contractor shall perform the work complete, in place, and ready for continuous service, and shall include repairs, testing, permits, clean-up, replacements, and restoration required as a result of damages caused during this construction.
4. The Contractor shall comply with all City, County, State, Federal, and other codes that are applicable to the proposed construction work.
5. All newly constructed work shall be carefully protected from injury in any way. No wheeling or walking or placing of heavy loads on it shall be allowed and the Contractor at his own expense shall reconstruct all portions damaged.
6. Scope of Work: See the Bid Schedule for details.

B. DRAWINGS AND PROJECT MANUAL

1. The Work shall be performed in accordance with the Drawings and Specifications prepared by the City of Apopka, 748 E. Cleveland Street, Apopka, FL 32703. In addition, The Contractor shall comply with all agencies whom retain jurisdiction within the limits of the project site.
2. The Contractor shall verify all dimensions, quantities and details shown on the Drawings, Supplementary Drawings, Schedules, Specifications or other data received from the Engineer, and shall notify same, in writing, of all errors, omissions, conflicts and discrepancies found therein. Failure to discover or correct errors, conflicts or discrepancies shall not relieve the Contractor of full

responsibility for unsatisfactory Work, faulty construction or improper operation resulting therefrom, nor from rectifying such conditions at his own expense.

3. All schedules are given for the convenience of the Engineer and the Contractor and are not guaranteed to be complete. The Contractor shall assume all responsibility for the making of estimates of the size, kind, and quantity of materials and equipment included in the Work to be done under this Contract.
4. Intent:
 - a. All Work called for in the Specifications applicable to this Contract, but not shown on the Drawings in their present form, or vice versa, shall be of like effect as if shown or mentioned in both. Work not specified in either the Drawings or in the Specifications, but involved in carrying out their intent, or in the complete and proper execution of the Work, is required and shall be performed by the Contractor as though it were specifically delineated or described.
 - b. Items of material, equipment, machinery, and the like may be specified on the Drawings and not in the Specifications. The Contractor in accordance with the specification on the Drawings shall provide such items.
 - c. The apparent silence of the Specifications as to any detail, or the apparent omission from them of a detailed description concerning any Work to be done and materials to be furnished, shall be regarded as meaning that only the best general practice is to prevail and that only material and workmanship of the best quality is to be used, and interpretation of these Specifications shall be made upon that basis.
5. When obtaining data and information from the Drawings, conflicts, errors, and discrepancies shall be resolved from the documents given the following order of precedence:
 - a. Agreement
 - b. Change Orders
 - c. Addenda
 - d. Special Provisions
 - e. Instructions to Bidders
 - f. General Terms and Conditions
 - g. Specifications (Div. 1 through 16)
 - h. Drawings
 - 1) Dimensions
 - 2) Full-size Drawing
 - 3) Large-scale Drawing
 - 4) Small-scale Drawing
 - i. Invitation for Bids
 - j. Bid
 - k. Bonds
 - l. Insurance Certificates
 - m. Insurance Endorsements
 - n. Affidavits

When measurements are affected by conditions already established or where items are to be fitted into constructed conditions, it shall be the CONTRACTOR'S responsibility to verify all such dimensions at the site and the

actual job dimensions shall take precedence over scale and figure dimensions on the Drawings.

C. WORK UNDER OTHER CONTRACTS

1. During progress of Work under this Contract, it may be necessary for other contractors and persons employed by the Owner to work in or about the project. The Owner reserves the right to put such other contractors to work and to afford such access to the Site of the Work to be performed hereunder at such times as the Owner deems proper.
2. The Engineer's control of the coordination and sequence of the Work to be performed under various contracts shall permit him to direct the operations of two contractors at junctions in their Work so as to minimize disturbance to the respective operations and minimize conflicts as to responsibility for placement and maintenance of plugs, caps, or bulk-heads at such locations.
3. If this Contract requires a portion of the Work to be tied into work done under other Contract(s), it will be necessary for this Contractor to plan his work and cooperate with other contractors insofar as possible to prevent any interference and delay.

D. HOURS OF WORK & CONTRACTOR'S PAYMENT TO OWNER FOR OVERTIME WORK

Except in the event of special construction, no work shall be done between the hours of 6:00 p.m. and 7:00 AM, or on Saturdays, Sundays and City of Apopka holidays. If the proposed and efficient prosecution of the Work requires operations during the aforementioned hours or on Saturdays or Sundays, the Owner's permission shall be required to obtain two (2) days before starting such items of the Work.

The normal working hours for the Owner's Resident Project Representative (RPR) are defined as any 8 hour period between the hours of 8:00 AM. and 5:00 PM on the weekdays of Monday through Friday. Any work beyond the aforementioned normal working hours of the RPR shall be requested in writing 48 hours in advance. All overtime and weekend work compensation to the RPR for working beyond the normal working hours are considered overtime compensation and shall be paid for by the Contractor. This overtime pay rate is subject to adjustment by the Owner. The Contractor agrees that the Owner shall deduct such charges for work outside normal work hours and for overtime pay from payments due to the Contractor.

Normal working hours for the work within the Orange County right of ways shall comply with the provisions of the Orange County Right of Way Permit.

E. WEATHER

During inclement weather, all work that might be damaged or rendered inferior by such weather conditions shall be suspended. The orders and decisions of the Project

Representative as to suspensions shall be final and binding. During suspension of the Work from any cause, the Work shall be suitably covered and protected so as to preserve it from injury by the weather or otherwise; and, if the Project Representative will so direct, the rubbish and surplus materials shall be removed.

F. PROTECTION AND RESTORATION

1. The Contractor shall be responsible for the preservation of all public and private property, and shall use every means of protection necessary to prevent damage thereto. If any direct or indirect damage is done to public or private property by or on account of any act, omission, neglect, or misconduct in the execution of the Work on the part of the Contractor, such property shall be restored by the Contractor, at his expense, to a condition similar or equal to that existing before the damage was done, or he shall make good the damage in other manner acceptable to the Engineer.
2. Protection of Trees and Shrubs:
 - a. Protect with boxes or other barricades.
 - b. Do not place excavated material so as to injure trees or shrubs.
3. Tree and Limb Removal
 - a. Tree limbs that interfere with equipment operation and are designated for pruning shall be neatly trimmed and the tree cut coated with a tree paint.
5. Lawn Areas - All lawn areas disturbed by construction shall be replaced with like kind to a condition similar or equal to that existing before construction.
6. Fences - Any fence, or part thereof, that is damaged or removed during the course of the work shall be replaced or repaired by the Contractor, and shall be left in as good a condition as before the starting of the work.
7. Where fencing, walls, shrubbery, grass strips or area must be removed or destroyed incident to the construction operation, the Contractor shall, after completion of the work, replace or restore to the original condition all such destroyed or damaged landscaping and improvements.
8. The cost of all labor, materials, equipment, and work for restoration shall be deemed included in the appropriate Contract Item or items, or if no specific item is provided therefor, as part of the overhead cost of the Work, and no additional payment will be made therefor.

G. ADJACENT LANDS AND IMPROVEMENTS

1. Contractor shall be entirely responsible and liable for all damage or injury as a result of his operations to all other adjacent public and private property, landscaping, trees, fences, structures of any kind and appurtenances thereto met with during the progress of the Work.

2. The Contractor shall not enter or occupy private land outside of the project site or right-of-way, except by written permission of the appropriate owners. Contractor shall provide Owner a copy of such written permission.

1.02 LABOR

- A. The Contractor shall keep the Contract under his own control and it shall be his responsibility to see that the Work is properly supervised and carried on faithfully and efficiently. The Contractor shall supervise the Work personally or shall have a competent, English speaking superintendent or representative, who shall be on the site of the project at all working hours, and who shall have full authority by the Contractor to direct the performance of the Work and make arrangements for all necessary materials, equipment, and labor without delay.
- B. Jurisdictional Disputes - It shall be the responsibility of the Contractor to pay all costs that may be required to perform any of the Work shown on the Drawings or specified herein to avoid any work stoppages due to jurisdictional disputes. The basis for subletting work in question, if any, shall conform with precedent agreements and decisions on record with the Building and Construction Trades Department, AFL-CIO, dated June, 1973, including any amendments thereto.
- C. Apprenticeship - The Contractor shall comply with all of the requirements of Chapter 446, Florida Statutes, for all contracts in excess of \$25,000 excluding roadway, highway or bridge contracts and the Contractor agrees to insert in any subcontract under this Contract the requirements of this Article.

1.03 MATERIALS AND EQUIPMENT

A. MANUFACTURER

1. All transactions with the manufacturers or subcontractors shall be through the Contractor, unless the Contractor shall request and at the Engineer's option, that the manufacturer or subcontractor communicate directly with the Engineer. Any such transactions shall not in any way release the Contractor from his full responsibility under this Contract.
2. All workmanship and materials shall be of the highest quality. The equipment shall be the product of manufacturers who are experienced and skilled in the field with an established record of research and development. No equipment will be considered unless the manufacturer has designed and manufactured equipment of comparable type and size and have demonstrated sufficient experience in such design and manufacture.
3. All materials and equipment furnished by the Contractor shall be subject to the inspection, review and acceptance of the Engineer. No material shall be delivered to the work without prior approval of the Engineer/Owner.

RELATED CONSTRUCTION REQUIREMENTS

A. TRAFFIC MAINTENANCE

1. Maintain public highway traffic within the limits of the project for the duration of the construction period, including any temporary suspensions of Work. Work shall also include construction and maintenance of any necessary detour facilities; furnishing, installing and maintaining of traffic control and safety devices during construction, control of dust, or any other special requirements for safe and expeditious movement of vehicular and pedestrian traffic.
2. Traffic Control shall be provided at the Contractor's expense by the Contractor's personnel or off-duty-uniformed police officer, depending on and as required by the applicable traffic control requirements jurisdictional to the construction or road.
3. At the request of any jurisdictional agency, the Contractor shall prepare and submit a Traffic Control Plan to the Engineer for review and acceptance prior to commencing any Work on the site. The Traffic Control Plan shall detail procedures and protective measures proposed by the Contractor to provide for protection and control of traffic affected by the Work consistent with the following applicable standards:
 - a. Standard Specifications for Road and Bridge Construction, Latest Edition including all subsequent supplements issued by the Florida Department of Transportation, (FDOT Spec.).
 - b. Manual of Traffic Control and Safe Practices for Street and Highway Construction, Maintenance and Utility Operations, FDOT.
 - c. Right-of-Way Utilization Regulations, Orange County, Florida, latest edition.

All references to the respective agency in the above referenced standards shall be construed to also include the Owner for this Work.
4. Before closing any thoroughfare, the Contractor shall give written notice to and, if necessary, obtain a permit or permits from the duly constituted public authority having jurisdiction over the thoroughfare. Notice shall be given no less than 72 hours in advance of the time when it may be necessary in the process of construction to close such thoroughfare, or as may be otherwise provided in the accepted Traffic Control Plan.
5. The Contractor shall sequence and plan construction operations and shall generally conduct his Work in such a manner as not to unduly or unnecessarily restrict or impede existing normal traffic through the streets of the local community.
6. Insofar as it is practicable, excavated material and spoil banks shall not be located in such a manner as to obstruct traffic. The traveled way of all streets, roads and alleys shall be kept clear and unobstructed insofar as is possible and

shall not be used for the storage of construction materials, equipment, supplies, or excavated earth, except when and where necessary.

7. If required by duly constituted public authority, the Contractor shall, at his own expense, construct bridges or other temporary crossing structures over trenches so as not to unduly restrict traffic. Such structures shall be of adequate strength and proper construction and shall be maintained by the Contractor in such a manner as not to constitute an undue traffic hazard. Private driveways shall not be closed except when and where necessary, and then only upon due advance notice to the Engineer/Owner and for the shortest practicable period of time consistent with efficient and expeditious construction. The Contractor shall be liable for any damages to persons or property resulting from his work.
8. The Contractor shall make provisions at all "open cut" a street crossing to allow a minimum of one lane to be open for vehicular traffic at all times. Lane closing shall be as permitted by the local governing authority and shall be repaired to a smooth, safe driving surface immediately following the installation of pipe or conduit. Flagmen shall be required, in addition to barricades, signs and other protective devices at all lane closings.
9. The Contractor shall make provisions at cross streets for the free passage of vehicles and pedestrians, either by bridging or otherwise, and shall not obstruct the sidewalks, gutters, or streets, nor prevent in any manner the flow of water in the latter, but shall use all proper and necessary means to permit the free passage of surface water along the gutters.
10. The Contractor shall immediately cart away all offensive matter, exercising such precaution as may be directed by the Engineer/Owner. All material excavated shall be so disposed of as to inconvenience the public and adjacent tenants as little as possible and to prevent injury to trees, sidewalks, fences and adjacent property of all kinds.

B. BARRIER AND LIGHTS

The Contractor shall exercise extreme care in the conduct of the Work to protect health and safety of the workmen and the public. The Contractor shall provide all protective measures and devices necessary, in conformance with applicable local, state and federal regulations regarding their need and use. Protective measures shall include but are not limited to barricades, warning lights/flashers and safety ropes.

C. DUST, NOISE AND EROSION CONTROL

1. The Contractor shall prevent dust nuisance from his operations or from traffic by the use of water.
2. Noise suppression:
 - a. The Contractor shall eliminate noise to as great an extent as practical at all times. Air compressing plants shall be equipped with silencers and the

exhaust of all gasoline motors or other power equipment shall be provided with mufflers. In the vicinity of hospitals and schools, special care shall be used to avoid noise or other nuisances. The Contractor shall strictly observe all local regulations and ordinances covering noise control.

- b. Sound levels measured by the Engineer's/Owner's personnel shall not exceed 55 dBA 8 a.m. to 7 p.m. This sound level shall be measured at the exterior of the nearest exterior wall of the nearest residence or building. Levels at the equipment shall not exceed 85 dBA at any time. Sound levels in excess of these values are sufficient cause to have the Work halted until equipment can be quieted to these levels. Work stoppage by the Engineer/Owner for excessive noise shall not relieve the Contractor of other contractual responsibilities stipulated in the Contract Documents including, but not limited to Contract Price and time.

D. CLEANING

1. During Construction:

- a. During construction of the Work, the Contractor shall, at all times, keep the site of the Work and adjacent premises as free from material, debris and rubbish as is practicable and shall remove the same from any portion of the site if, in the opinion of the Engineer/Owner, such material, debris, or rubbish constitutes a nuisance or is objectionable.
- b.

1.04 CONSTRUCTION NOT PERMITTED

- A. USE OF EXPLOSIVES - No blasting shall be done except upon approval by the Owner and the governmental agency or political subdivision having jurisdiction. When the use of explosives is directed by the Owner as necessary for the execution of the Work, the Contractor shall use the utmost care so as not to endanger life or property, and assume responsibility for any such damage resulting from his blasting operations, and whenever directed, the number and size of the charges shall be reduced. All explosives shall be stored in a secure manner and all such storage places shall be marked clearly, "DANGEROUS EXPLOSIVES" and shall be in care of competent watchmen. The Contractor at his expense shall obtain all permits required for the use of explosives. All requirements of the governmental agency-issuing permit shall be observed.
- B. EXCAVATED SUITABLE MATERIAL HAULED-OFF-SITE - At the direction of the Engineer/Owner, all excess suitable topsoil and other suitable excavated material shall remain at the site and if necessary stockpiled at the Engineer/Owner's direction.

1.05 CONSTRUCTION / PAYMENT PROGRESS SCHEDULE AND PARTIAL RELEASE

- A. Within fifteen (15) days after Award of the Contract or before the Pre-Construction Meeting, prepare and submit to the Engineer/Owner estimated construction progress schedules for the Work with sub-schedules of related activities which are essential to its progress.

- B. Construction Progress Schedules shall be prepared in the form of a horizontal bar chart with separate horizontal bars for each trade or operation within each structure or item in chronological order. Provide horizontal time scale in weeks from the start of construction and identify the first work day of each month. Scale and spacing shall allow for notations and future revisions. Identify listings by major specification section numbers as applicable and structure. Maximum sheet size shall be 24 x 36-inches.
- C. Content of Schedules; show or indicate the following:
1. Complete sequence of construction by activity;
 2. Dates for the beginning and completion of each major element of construction in no more than a two-week incremental scale.
 3. Projected percentage of completion for each item as of the first day of each month.
 4. Dates for Contractor's submittals.
 5. Dates for required Owner-furnished materials or equipment.
 6. Dates accepted submittals will be required from the Engineer/Owner.
 7. Additionally, provide a typewritten list of all long lead items (equipment, materials, etc.)
- D. Progress Schedule Submissions and Revisions:
1. Submit two (2) opaque copies of the revised monthly progress schedule with that month's Application for Payment to the Engineer/Owner.
 2. Indicate progress of each activity to date of submission and changes occurring since previous submission of schedule. Provide a narrative report as needed to define problem areas, anticipated delays, and the impact on the schedule; corrective action recommended and its effect; and, the effect of changes on schedules of other prime contractors, if any.
- E. Progress Schedule Updates:
1. Contractor shall submit a progressed version of the Progress Schedule with each Application for Payment, showing actual progress up to the date of the application. If the update calculations result in early dates for completion of the Work, or a part thereof, beyond that Contract Time or Milestone, Contractor shall revise the schedule to show how the Work can be completed within the remaining time, or requests an extension of Contract Time if Contractor believes he is entitled to additional time. A narrative report shall be submitted with any revised or extended Progress Schedule explaining revisions made and actions taken or planned to recover the schedule or obtain a Change Order for an extension of Contract Time.

F. Partial Release:

1. The Contractor shall be required to have applications for Progress Payments accompanied by legally effective partial releases or waivers of right to claim against the payment bond (progress payment) executed by all Subcontractors which performed services and suppliers of material or equipment for the Contractor for services or supplies which were included in the previous Application for Progress Payment, and, Consent of Surety to Partial Payment. The Contractor shall include the following certification on each Application for Progress Payments and the Application for Final Payment:

“The undersigned Contractor certifies that the work covered by this application for payment has been done, or completed in accordance with the Contract documents, that all amounts have been paid by him for work, supplies, material or equipment for which previous Certificates for Payment were issued and that the current payment shown herein is now due”.

1.06 FAILURE OF TESTS:

1. Any defects in the materials and equipment or their failure to meet the tests, guarantees or requirements of the Contract Documents shall be promptly corrected by the Contractor by replacements, improvements, or otherwise at no cost to the Owner. The decision of the Engineer as to whether or not the Contractor has fulfilled his obligations under the Contract shall be final and conclusive.
2. If the Contractor fails to make these corrections or if the improved materials and equipment, when tested, shall again fail to meet the guarantees or specified requirements, the Owner, notwithstanding partial payment for work, and materials and equipment, may reject the nonconforming materials and equipment and may order the Contractor to remove them from the site at his own expense.
3. If the Owner rejects any materials and equipment, then the Contractor shall replace the rejected materials and equipment within a reasonable time. If he fails to do so, the Owner may, after the expiration of a period of thirty (30) calendar days after giving him notice in writing, proceed to replace such rejected materials and equipment. The cost thereof shall be deducted from any compensation due or which may become due the Contractor under his Contract.

1.07 CONTRACT CLOSEOUT

A. SUBSTANTIAL COMPLETION:

1. When the Contractor considers the Work as substantially complete, he shall submit to the Engineer/Owner a written notice stating so and requesting the Engineer/Owner to make an inspection to determine the status of completion. This request shall be accompanied by a list of items known to be incomplete or yet to be corrected.

2. Should the Engineer/Owner determine that the work is not substantially complete, the Engineer/Owner will promptly notify the Contractor in writing, given the reasons therefor in the form of a punch list. The Contractor shall remedy the deficiencies in the Work, and send a second written notice of substantial completion to the Engineer/Owner for re-inspection.
3. When the Engineer/Owner finds that the work is substantially complete, he will prepare a tentative Certificate of Substantial Completion with a tentative list of items to be completed or corrected prior to final payment.

B. FINAL INSPECTION:

1. When the Contractor considers the Work complete, he shall submit written certification that:
 - a. Contract Documents have been reviewed.
 - b. Work has been inspected for compliance with Contract Documents.
 - c. Work has been completed in accordance with Contract Documents.
 - d. Equipment and systems have been tested in the presence of the Owner's Representative and are operational.
 - e. Work is completed and ready for final inspection.
2. The Engineer/Owner will make a final inspection to verify the status of completion after receipt of such certification.
3. Should the Engineer/Owner consider that the Work is incomplete or defective, he will promptly notify the Contractor in writing, listing the incomplete and defective work, to the best of his knowledge at that time. If the Engineer has inadvertently omitted any items from the list it shall not relieve the Contractor from his obligations shown on the Drawings and specified in the Project Manual. Contractor shall take immediate steps to remedy the stated deficiencies, and send a second written certification to the Engineer/Owner that the Work is complete.
4. When the Engineer/Owner finds that the Work is acceptable under the Contract Documents, he shall request the Contractor to make closeout submittals.
5. Should the Engineer/Owner perform reinspection due to failure of the work to comply with the claims of status of completion made by the Contractor, the Owner will deduct the amount of any compensation or costs paid for additional inspections or tests from the final payment to the Contractor.

C. CONTRACTOR'S CLOSE-OUT SUBMITTALS TO ENGINEER:

1. Evidence of compliance with requirement of governing authorities
2. Project Record Documents
3. Operating and Maintenance Data
4. Warranties and Bonds (required for the Correctional Period and Maintenance Period)

5. Evidence of Payment and Release of Liens
6. Final Application for Payment, including "Final Release of Liens", "Consent of Surety to Final Payment", "Final Statement of Accounting" and final Change Order, if required. The final Statement of Accounts shall reflect the following adjustments to the Contract Price:
 - a. Previous Change Orders
 - b. Allowances
 - c. Unit prices
 - d. Deductions for uncorrected work
 - e. Penalties and bonuses
 - f. Deductions for liquidated damages
 - g. Deductions for reinspection payments
 - h. Other adjustments
7. The Engineer/Owner will prepare a final Change Order, reflecting accepted adjustments to the Contract Price which were not previously made by Change Orders. The Contractor shall meet all close-out requirements as specified in the General Terms and Conditions (Part F) of these specifications.

END OF SECTION

SECTION 01025
MEASUREMENT AND PAYMENT

PART 1 - GENERAL

1.01 GENERAL PROVISIONS

- A. Unit Price Contracts: The quantities of work to be done and materials to be furnished under a unit price contract, as given in the Bid Form, are to be considered as approximate only and are to be used solely for the comparison of Bids received and determining an initial Contract Price. The Owner/Engineer does not expressly or by implication represent that the actual quantities involved will correspond exactly therewith; nor shall the Contractor plead misunderstanding or deception because of such estimate or quantities or of the character, location or other conditions pertaining to the Work. Payment to the Contractor will be made only for the actual quantities of work performed or material furnished in accordance with the Drawings and other Contract Documents, and it is understood that the quantities may be increased or diminished as provided in the General Conditions without in any way invalidating any of the unit prices bid.
- B. Lump Sum Contracts: The quantities of work to be done and materials to be furnished, including all labor, equipment and incidentals required to complete the Work, are specified in the Contract Specifications and shown in the Contract Drawings. Payment to the Contractor of the lump sum price bid for the Work will be made and shall fully compensate the Contractor for the construction of the Work, completed and ready for continuous operation and use, in the manner contemplated by the Contract Documents.
- C. Unit Price and Lump Sum Contracts:
1. All schedules are given for the convenience of the Engineer, the Owner and the Contractor and are not guaranteed to be complete. The Contractor shall assume all responsibility for the making of estimates of the size, kind, and quantity of materials and equipment included in work to be done under this Contract.
 2. Where fittings are noted on the Drawings, such notation is for the Contractor's convenience and does not relieve him from laying and jointing different or additional items where required and approved.
 3. All contracts shall be subject to 10% minimum retainage as defined in the General Conditions and the Agreement.

1.02 ALLOWANCES - NOT APPLICABLE

END OF SECTION

SECTION 101 MOBILIZATION

101-1 Description.

Perform preparatory work and operations in mobilizing for beginning work on the project, including, but not limited to, those operations necessary for the movement of personnel, equipment, supplies, and incidentals to the project site and for the establishment of temporary offices, buildings, safety equipment and first aid supplies, and sanitary and other facilities. Include the costs of bonds and any required insurance and any other preconstruction expense necessary for the start of the work, excluding the cost of construction materials.

101-2 Basis of Payment.

Payment of mobilization shall be included in the unit price of pavement costs.

SECTION 102
MAINTENANCE OF TRAFFIC

102-1 Description.

Maintain traffic within the limits of the project for the duration of the construction period, including any temporary suspensions of the work. Construct and maintain detours. Provide facilities for access to residences, businesses, etc., along the project. Furnish, install and maintain traffic control and safety devices during construction. Furnish and install work zone pavement markings for maintenance of traffic (MOT) in construction areas. Provide any other special requirements for safe and expeditious movement of traffic specified in the Plans. MOT includes all facilities, devices and operations as required for safety and convenience of the public within the work zone.

Do not maintain traffic over those portions of the project where no work is to be accomplished or where construction operations will not affect existing roads. Do not obstruct or create a hazard to any traffic during the performance of the work, and repair any damage to existing pavement open to traffic.

Include the cost of any traffic control that is necessary to meet the requirements of FDOT maintenance of traffic latest edition in the unit cost of pavement.

BITUMINOUS TREATMENTS, SURFACE COURSES AND CONCRETE
PAVEMENT

SECTION 300
PRIME AND TACK COATS

300-1 Description.

Apply bituminous prime coats on previously prepared bases, and apply bituminous tack coats on previously prepared bases and on existing pavement surfaces.

300-2 Materials.

300-2.1 Prime Coat: For prime coat, use Cut-back Asphalt Grade RC-70 or RC-250 meeting the requirements of 916-2; Emulsified Asphalt Grades SS-1 or CSS-1, SS-1H, or CSS-1H diluted in equal proportion with water; Emulsified Asphalt Grade AE-60, AE-90, AE-150, or AE-200 diluted at the ratio of six parts emulsified asphalt to four parts water; Special MS-Emulsion diluted at the ratio of six parts emulsified asphalt to four parts water; Asphalt Emulsion Prime (AEP), Emulsion Prime (RS Type), EPR-1 Prime, or NTSS-1hm meeting the requirements of 916-3, or other types and grades of bituminous material which may be specified in the Contract Documents.

Where the above materials for use as a prime coat are to be diluted, certify that the dilution was done in accordance with this Section for each load of material used.

The Contractor may select any of the specified bituminous materials unless the Contract Documents indicate the use of a specific material. The Engineer may allow types and grades of bituminous material other than those specified above if the Contractor can show that the alternate material will properly perform the function of prime coat material.

300-2.2 Cover Material for Prime Coat: Uniformly cover the primed base by a light application of cover material. However, if using EPR-1 prime material, the Engineer may waive the cover material requirement if the primed base is not exposed to general traffic and construction traffic does not mar the prime coat so as to expose the base. The Contractor may use either sand or screenings for the cover material. For the sand, meet the requirements as specified in 902-2 or 902-6, and for the screenings, meet the requirements as specified in 902-5. If exposing the primed base course to general traffic, apply a cover material that has been coated with 2 to 4% asphalt cement. Apply the asphalt coated material at approximately 10 lb/yd². Roll the entire surface of asphalt coated prime material with a traffic roller as required to produce a reasonably dense mat.

300-2.3 Tack Coat: Unless the Contract Documents call for a specific type or grade of tack coat, use PG 52-28 meeting the requirements of 916-1, heated to a temperature of 250 to 300°F or undiluted Emulsified Asphalt Grades RS-1h, RS-2, CRS-1h, or NTSS-1hm meeting the requirements of 916-3. Heat RS-1h, RS-2, CRS-1h, and NTSS-1hm to a temperature of 150 to 180°F. The Contractor may use RS-1h modified to include up to 3% naphtha to improve handling of the material during the winter months of December, January and February or at any other time, as approved by the Engineer.

For night paving, use PG 52-28 tack coat. The Engineer may approve RS-1h, RS-2, CRS-1h, or NTSS-1hm for night paving if the Contractor demonstrates, at the time of use, that the emulsion will break and not affect the progress of the paving operation.

300-3 Equipment.

300-3.1 Pressure Distributor: Provide a pressure distributor that is equipped with pneumatic tires having a sufficient width of rubber in contact with the road surface to avoid breaking the bond or forming a rut in the surface. Ensure that the distance between the centers of openings of the outside nozzles of the spray bar is equal to the width of the application required, within an allowable variation of 2 inches. Ensure that the outside nozzle at each end of the spray bar has an area of opening not less than 25% or more than 75% in excess of the other nozzles. Ensure that all other nozzles have uniform openings. When the application covers less than the full width, the Contractor may allow the normal opening of the end nozzle at the junction line to remain the same as those of the interior nozzles.

300-3.2 Sampling Device: Equip all pressure distributors and transport tanks with an approved spigot-type sampling device.

300-3.3 Temperature Sensing Device: Equip all pressure distributors and transport tanks with an approved dial type thermometer.

Use a thermometer with a temperature range from 50 to 500°F with maximum 25°F increments with a minimum dial diameter of 2 inches.

Locate the thermometer near the midpoint in length and within the middle third of the height of the tank, or as specified by the manufacturer (if in a safe and easily accessible location). Enclose the thermometer in a well with a protective window or by other means as necessary to keep the instrument clean and in the proper working condition.

300-4 Contractor's Quality Control.

Provide the necessary quality control of the prime and tack coats and application in accordance with the Contract requirements. Provide in the Quality Control Plan, procedures for monitoring and controlling of rate of application. If the rate of application varies by more than 5% from the rate set by the Engineer or varies beyond the range established in 300-7 or 300-8, immediately make all corrections necessary to bring the spread rate into the acceptable range. The Engineer may take additional measurements at any time. The Engineer will randomly check the Contractor's measurement to verify the spread rate.

300-5 Cleaning Base and Protection of Adjacent Work.

Before applying any bituminous material, remove all loose material, dust, dirt, caked clay and other foreign material which might prevent proper bond with the existing surface for the full width of the application. Take particular care in cleaning the outer edges of the strip to be treated, to ensure that the prime or tack coat will adhere.

When applying the prime or tack coat adjacent to curb and gutter, valley gutter, or any other concrete surfaces, cover such concrete surfaces, except where they are to be covered with a bituminous wearing course, with heavy paper or otherwise protect them as approved by the Engineer, while applying the prime or tack coat. Remove any bituminous material deposited on such concrete surfaces.

300-6 Weather Limitations.

Do not apply prime and tack coats when the air temperature in the shade and away from artificial heat is less than 40°F at the location where the application is to be made or when weather conditions or the surface conditions are otherwise unfavorable.

300-7 Application of Prime Coat.

300-7.1 General: Clean the surface to be primed and ensure that the moisture content of the base does not exceed the optimum moisture. Ensure that the temperature of the prime material is between 100 and 150°F. The Engineer will designate the actual temperature to ensure uniform distribution. Apply the material with a pressure distributor. Determine the application amount based on the character of the surface. Use an amount sufficient to coat the surface thoroughly and uniformly with no excess.

300-7.2 Rate of Application:

300-7.2.1 Limerock, Limerock Stabilized, and Local Rock Bases: For these bases, use a rate of application that is not less than 0.10 gal/yd², unless a lower rate is directed by the Engineer. Determine the application rate at the beginning of each day's production, and as needed to control the operation, a minimum of twice per day.

300-7.2.2 Sand-Clay, Shell and Shell Stabilized Bases: For these bases, use a rate of application that is not less than 0.15 gal/yd², unless a lower rate is directed by the Engineer. Determine the application rate at the beginning of each day's production, and as needed to control the operation, a minimum of twice per day.

300-7.3 Sprinkling: If so required by the Engineer, lightly sprinkle the base with water and roll it with a traffic roller in advance of the application of the prime coat.

300-7.4 Partial Width of Application: If traffic conditions warrant, the Engineer may require that the application be made on only 1/2 the width of the base at one time, in which case use positive means to secure the correct amount of bituminous material at the joint.

300-8 Application of Tack Coat.

300-8.1 General: Where the Engineer requires a tack coat prior to laying a bituminous surface, apply the tack coat as specified herein below.

300-8.2 Where Required: Place a tack coat on all asphalt layers prior to constructing the next course. In general, the Engineer will not require a tack coat on primed bases except in areas that have become excessively dirty and cannot be cleaned, or in areas where the prime has cured to the extent that it has lost all bonding effect.

300-8.3 Method of Application: Apply the tack coat with a pressure distributor except that on small jobs, if approved by the Engineer, apply it by other mechanical devices or by hand methods. Heat the bituminous material to a suitable temperature as designated by the Engineer, and apply it in a thin, uniform layer.

300-8.4 Rate of Application: Use a rate of application as defined in Table 300-1. Control the rate of application to be within plus or minus 0.01 gallon per square yard of the target application rate. The target application rate may be adjusted by the Engineer to meet specific field conditions. Determine and record the rate of application a minimum of twice per day, once at the beginning of each day's production and again as needed to control the operation. When using RA-550, multiply the target rate of application by 0.6.

Asphalt Mixture Type	Underlying Pavement Surface	Target Tack Rate (gal/yd ²)
Base Course, Structural Course, Dense Graded Friction Course	Newly Constructed Asphalt Layers	0.03 minimum

	Milled Surface or Oxidized and	0.06
	Cracked Pavement	
	Concrete Pavement	0.08
Open graded Friction Course	Newly Constructed Asphalt Layers	0.05
	Milled Surface	0.07

300-8.5 Curing and Time of Application: The Engineer will designate the curing period for the tack coat. Apply the tack coat sufficiently in advance of the laying of the bituminous mix to permit drying, but do not apply the tack coat so far in advance that it might lose its adhesiveness as a result of being covered with dust or other foreign material.

300-8.6 Protection: Keep the tack coat surface free from traffic until the subsequent layer of bituminous hot mix has been laid.

300-9 Method of Measurement.

300-9.1 General: The quantity specified will be the volume, in gallons of bituminous material actually applied and accepted. This spread rate will be determined from measurements made by the Contractor and verified by the Engineer based on tank calibrations, as specified in 300-9.2. Where it is specified that prime coat or tack coat material is to be diluted with water, the amount specified for the spread rate will be the volume after dilution.

300-9.2 Calibration of Tanks: Ensure that all distributors used for applying tack or prime coats are calibrated prior to use by a reliable and recognized firm engaged in calibrating tanks. Provide a certification of calibration and the calibration chart to the Engineer prior to use. In lieu of a volumetrically calibrated distributor, use a distributor that is equipped with a calibrated meter and is approved by the Engineer.

300-9.3 Temperature Correction: Measure the volume and increase or decrease the volume actually measured to a corrected volume at a temperature of 60°F.

Make the correction for temperature by applying the applicable conversion factor (K), as shown below.

For petroleum oils having a specific gravity (60°F/60°F) above 0.966,
K = 0.00035 per degree.

For petroleum oils having a specific gravity (60°F/60°F) of between 0.850 and 0.966, K = 0.00040 per degree.

For emulsified asphalt, K = 0.00025 per degree.

When volume-correction tables based on the above conversion factors are not available, use the following formula in computing the corrections for volumetric change:

$$\frac{V_1}{K(T - 60) + 1}$$

Where:

V= Volume of the bituminous material at 60°F (pay volume).

V1= Volume of bituminous material as measured.

K= Correction factor (Coefficient of Expansion).

T= Temperature (in °F), of the bituminous material when measured.

300-10 Basis of Payment.

There is no direct payment for the work specified in this Section, it is incidental to, and is to be included in the unit cost of the pavement.

SECTION 327 MILLING OF EXISTING ASPHALT PAVEMENT

327-1 Description.

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 prior to resurfacing, or to completely remove existing pavement.

When milling to improve rideability, the Plans will specify an average depth of cut. Take ownership of milled material.

327-2 Equipment.

Provide a milling machine capable of maintaining a depth of cut and cross slope that will achieve the results specified in the Contract Documents. Use a machine with a minimum overall length (out to out measurement excluding the conveyor) of 18 feet and a minimum cutting width of 6 feet.

Equip the milling machine with a built-in automatic grade control system that can control the transverse slope and the longitudinal profile to produce the specified results.

To start the project, the Engineer will approve any commercially manufactured milling machine that meets the above requirements. If it becomes evident after starting milling that the milling machine cannot consistently produce the specified results, the Engineer will reject the milling machine for further use.

The Contractor may use a smaller milling machine when milling to lower the grade adjacent to existing curb or other areas where it is impractical to use the above described equipment.

Equip the milling machine with means to effectively limit the amount of dust escaping during the removal operation.

For complete pavement removal, the Engineer may approve the use of alternate removal and crushing equipment in lieu of the equipment specified above.

327-3 Construction.

327-3.1 General: Remove the existing raised reflective pavement markers prior to milling. Include the cost of removing existing pavement markers in the price for milling.

When milling to improve rideability or cross slope, remove the existing pavement to the average depth specified in the Plans, in a manner that will restore the pavement surface to a uniform cross-section and longitudinal profile. The Engineer may require the use of a stringline to ensure maintaining the proper alignment.

Establish the longitudinal profile of the milled surface in accordance with the milling plans. Ensure that the final cross slope of the milled surface parallels the surface cross slope shown in the Plans or as directed by the Engineer. Establish the cross slope of the milled surface by a second sensing device near the outside edge of the cut or by an automatic cross slope control mechanism. The Plans may waive the requirement of automatic grade or cross slope controls where the situation warrants such action.

Operate the milling machine to minimize the amount of dust being emitted. The Engineer may require prewetting of the pavement.

Provide positive drainage of the milled surface and the adjacent pavement. Perform this operation on the same day as milling. Repave all milled surfaces no later than the day after the surface was milled unless otherwise stated in the Plans.

If traffic is to be maintained on the milled surface prior to the placement of the new asphalt concrete, provide suitable transitions between areas of varying thickness to create a smooth longitudinal riding surface. Produce a pattern of striations that will provide an acceptable riding surface. The Engineer will control the traveling speed of the milling machine to produce a texture that will provide an acceptable riding surface.

Prior to opening an area which has been milled to traffic, sweep the pavement with a power broom or other approved equipment to remove, to the greatest extent practicable, fine material which will create dust under traffic. Sweep in a manner that will minimize the potential for creation of a traffic hazard and to minimize air pollution.

Sweep the milled surface with a power broom prior to placing asphalt concrete.

In urban and other sensitive areas, use a street sweeper or other equipment capable of removing excess milled materials and controlling dust. Obtain the Engineer's approval of such equipment, contingent upon its demonstrated ability to do the work.

Perform the sweeping operation immediately after the milling operations or as directed by the Engineer.

327-3.2 Quality Control Requirements: Furnish an electronic level with a length of 4 feet and an accuracy of plus or minus 0.1 degree approved by the Engineer for the control of cross slope. Make this electronic level available at the jobsite at all times during milling operations. Calibrate and compare electronic levels in accordance with 330-9.3.1 at a minimum frequency of once per day before any milling operation.

Multiple cuts may be made to achieve the required pavement configuration or depth of cut. Measure the cross slope of the milled surface by placing the level at the center location of a lane and perpendicular to the roadway centerline. Record all the measurements to the nearest 0.1% on an approved form and submit to the Engineer for documentation.

1. Tangent Sections: Measure the cross slope per lane at a minimum frequency of one measurement every 100 feet. Calculate the absolute deviation of cross slope at each measurement and then average the absolute deviation of ten consecutive cross slope measurements. The absolute deviation is the positive value of a deviation. When the average absolute deviation cross slope is consistently within the acceptance tolerance as shown in Table 327-1 and upon approval by the Engineer, the frequency of the cross slope measurements can be reduced to one measurement every 200 feet during milling operations.

2. Superelevated Sections: Measure the cross slope every 100 feet per lane within the length of full superelevation. Calculate the absolute deviation of each measurement and then average the absolute deviation of ten consecutive cross slope measurements. For every transition section, measure the cross slope at control points identified in the Plans or, if not shown in the Plans, at a control point at a location of 0.0% cross slope. For curves where the length of the fully superelevated section is less than 250 feet, measure the cross slope at the beginning point, midpoint and ending point of the fully superelevated section, calculate the absolute deviation and average. When the number of measurements is less than ten and the length of full superelevation is greater than 250 feet, average the absolute deviation of all measurements.

If the average absolute deviation of the cross slope measurements falls outside the acceptance tolerance shown in Table 327-1, stop the milling operations and make adjustments

until the problem is resolved to the satisfaction of the Engineer. If an individual cross slope deviation falls outside the acceptance tolerance as shown in Table 327-1, make corrections only in the deficient area to the satisfaction of the Engineer at no cost to the Department. For pavement with multiple cuts, the deficient areas not caused by the final cut may be left in place upon approval of the Engineer. All milling corrections shall be completed before placement of the asphalt course unless stated otherwise in the Plans or as determined by the Engineer.

The limits of deficient areas requiring correction may be verified and adjusted with more accurate measurement methods, including survey instruments, upon approval by the Engineer at no cost to the Department. Should the Contractor wish to have any corrections waived, submit a request to the Engineer for approval. The Engineer may waive the corrections at no reduction in payment if an engineering determination indicates that the deficiencies are sufficiently separated so as not to significantly affect the final cross slope or project grade.

For intersections, tapers, crossovers, transitions at the beginning and end of the project, bridge approaches and similar areas, adjust the cross slope to match the actual site conditions, or as directed by the Engineer.

TABLE 327-1 Cross Slope Milling Acceptance Tolerance		
Roadway Feature	Individual Absolute Deviation	Average Absolute Deviation
Tangent section (including turn lanes)	0.4%	0.2%
Superelevated curve	0.4%	0.2%
Shoulder	0.5%	0.5%

In the event that the distance between tow edges of deficient areas is less than 100 feet, the correction work shall include the area between the deficient sections.

327-3.3 Verification: The Engineer will verify the Contractor’s cross slope measurements by randomly taking a minimum of ten cross slope measurements per lane per mile in tangent sections, control points in transition sections, and a minimum of three cross slope measurements on fully superelevated sections. The Engineer will measure the cross slope of the milled surface by placing the level at the center location of a lane and perpendicular to the roadway centerline. If the average absolute deviation or an individual cross slope deviation falls outside the acceptance tolerance as shown in Table 327-1, immediately make a comparison check at the QC test locations to verify the QC measurements in the questionable section. If the comparisons are beyond the acceptable comparison tolerance in accordance with 327-3.2, stop the milling operation until the problem is resolved to the satisfaction of the Engineer. Correct any cross slope not meeting the individual deviation acceptance tolerance at no cost to the Department. The Engineer reserves the right to check the cross slope of the milled surface at any time by taking cross slope measurements at any location.

327-4 Milled Surface.

Provide a milled surface with a reasonably uniform texture, within 1/4 inch of a true profile grade, and with no deviation in excess of 1/4 inch from a straightedge applied to the pavement perpendicular to the centerline. Ensure that the variation of the longitudinal joint between multiple cut areas does not exceed 1/4 inch. The Engineer may accept areas varying

from a true surface in excess of the above stated tolerance without correction if the Engineer determines that they were caused by a pre-existing condition which could not have reasonably been corrected by the milling operations. Correct any unsuitable texture or profile, as determined by the Engineer, at no additional expense to the Department.

The Engineer may require remilling of any area where a surface lamination causes a non-uniform texture to occur.

327-5 Method of Measurement.

The quantity to be paid for will be the plan quantity area, in square yards, over which milling is completed and accepted.

327-6 Basis of Payment.

Price and payment will be full compensation for all work specified in this Section, including hauling off and stockpiling or otherwise disposing of the milled material. *The contractor shall deliver the asphalt milling generated to Public Services Complex located at 748 E. Cleveland Street, Apopka, FL 32703.*

Payment will be made under:

Item No. 327- 70- Milling Existing Asphalt Pavement - per square yard.

**SECTION 334
SUPERPAVE ASPHALT CONCRETE**

334-1 Description.

334-1.1 General: Construct a Superpave Asphalt Concrete pavement with the type of mixture specified in the Contract, 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.

Meet the requirements of Section 320 for plant and equipment. Meet the general construction requirements of Section 330, except as modified herein, including the provision for Quality Control (QC) Plans and Quality Control (QC) Systems as specified in Section 105.

334-1.2 Traffic Levels: The requirements for Type SP Asphalt Concrete mixtures are based on the design traffic level of the project, expressed in 18,000 pound Equivalent Single Axle Loads (ESAL's). The five traffic levels are as shown in Table 334-1.

Table 334-1 Superpave Traffic Levels	
Traffic Level	Traffic Level (1x10 ⁶ ESAL's)
A	<0.3
B	0.3 to <3
C	3 to <10
D	10 to <30
E	≥30

The traffic levels for the project are as specified in the Contract. A Type SP mix one traffic level higher than the traffic level specified in the Contract may be substituted, at no cost to the Department (i.e. Traffic Level B may be substituted for Traffic Level A, etc.).

334-1.3 Gradation Classification: The Superpave mixes are classified as either coarse or fine, depending on the overall gradation of the mixture. Coarse and fine mixes are defined in 334-3.2.2.

The equivalent AASHTO nominal maximum aggregate size Superpave mixes are as follows:

- Type SP-9.5..... 9.5 mm
- Type SP-12.5..... 12.5 mm
- Type SP-19.0..... 19.0 mm

334-1.4 Thickness: The total thickness of the Type SP asphalt layers will be the plan thickness as shown in the Contract Documents. Before paving, propose a thickness for each individual layer meeting the requirements of this specification, which when combined with other layers (as applicable) will equal the plan thickness. For construction purposes, the plan thickness and individual layer thickness will be converted to spread rate based on the maximum specific gravity of the asphalt mix being used, as well as the minimum density level, as shown in the following equation:

$$\text{Spread rate (lbs/yd}^2\text{)} = t \times G_{mm} \times 43.3$$

Where: t = Thickness (in.) (plan thickness or individual layer thickness)

G_{mm} = Maximum specific gravity from the verified mix design

The weight of the mixture shall be determined as provided in 320-3.2. For target purposes only, spread rate calculations should be rounded to the nearest whole number.

Note: Plan quantities are based on a G_{mm} of 2.540, corresponding to a spread rate of 110 lbs/yd²-in. Pay quantities will be based on the actual maximum specific gravity of the mix being used.

334-1.4.1 Layer Thicknesses - Fine Mixes: The allowable layer thicknesses for fine Type SP Asphalt Concrete mixtures are as follows:

Type SP-9.5.....	1 to 1-1/2 inches
Type SP-12.5.....	1 1/2 to 2-1/2 inches
Type SP-19.0.....	2 to 3 inches

In addition to the minimum and maximum thickness requirements, the following restrictions are placed on fine mixes when used as a structural course:

Type SP-9.5 - Limited to the top two structural layers, two layers maximum.

Type SP-9.5 – May not be used on Traffic Level D and E applications.

Type SP-19.0 - May not be used in the final (top) structural layer.

334-1.4.2 Layer Thicknesses - Coarse Mixes: The allowable layer thicknesses for coarse Type SP Asphalt Concrete mixtures are as follows:

Type SP-9.5.....	1-1/2 to 2 inches
Type SP-12.5.....	2 to 3 inches
Type SP-19.0.....	3 to 3-1/2 inches

In addition to the minimum and maximum thickness requirements, the following restrictions are placed on coarse mixes when used as a structural course:

Type SP-19.0 - May not be used in the final (top) structural layer.

334-1.4.3 Additional Requirements: The following requirements also apply to coarse and fine Type SP Asphalt Concrete mixtures:

1. A minimum 1-1/2 inch initial lift is required over an Asphalt Rubber Membrane Interlayer (ARMI).
2. When construction includes the paving of adjacent shoulders (less than or equal to 5 feet wide), the layer thickness for the upper pavement layer and shoulder must be the same and paved in a single pass, unless called for differently in the Contract Documents.
3. All overbuild layers must be fine Type SP Asphalt Concrete designed at the traffic level as stated in the Contract Documents. Use the minimum and maximum layer thicknesses as specified above unless called for differently in the Contract Documents. On variable thickness overbuild layers, the minimum and maximum allowable thicknesses will be as specified below, unless called for differently in the Contract Documents.

Type SP-9.5.....	3/8 to 2 inches
Type SP-12.5.....	1/2 to 3 inches
Type SP-19.0.....	1-1/2 to 3-1/2 inches

334-2 Materials.

334-2.1 General Requirements: Meet the material requirements specified in Division III. Specific references are as follows:

Superpave PG Asphalt Binder	916-1
Coarse Aggregate	Section 901

334-2.2 Superpave Asphalt Binder: Unless specified otherwise in the Contract, use a PG 67-22 asphalt binder. In addition, meet the requirements of 334-2.3.

334-2.3 Reclaimed Asphalt Pavement (RAP) Material:

334-2.3.1 General requirements: RAP may be used as a component of the asphalt mixture subject to the following requirements:

1. When using a PG 76-22 Asphalt Binder, limit the amount of RAP material used in the mix to a maximum of 20% by weight of total aggregate. As an exception, amounts greater than 20% RAP by weight of total aggregate can be used if no more than 20% by weight of the total asphalt binder comes from the RAP material.
2. Assume full responsibility for the design, production and construction of asphalt mixes which incorporate RAP as a component material.
3. Use RAP from a Department approved stockpile or RAP that has a Department furnished Pavement Composition Data Sheet.
4. Provide stockpiled RAP material that is reasonably consistent in characteristics and contains no aggregate particles which are soft or conglomerates of fines.
5. Provide RAP material having a minimum average asphalt binder content of 4.0% by weight of RAP. As an exception, when using fractionated RAP, the minimum average asphalt binder content for the coarse portion of the RAP shall be 2.5% by weight of the coarse portion of the RAP. The coarse portion of the RAP shall be the portion of the RAP retained on the No. 4 sieve. The Engineer may sample the stockpiles to verify that this requirement is met.

334-2.3.2 Material Characterization for Mix Design: Assume responsibility for establishing the asphalt binder content, gradation, and bulk specific gravity (G_{sb}) of the RAP material based on a representative sampling of the material by roadway cores or stockpile samples. For roadway core samples, assume responsibility for the degradation that will occur during the milling operation.

334-2.3.3 RAP Stockpile Approval: Prior to the incorporation of RAP into the asphalt mixture, stockpile the RAP material and obtain approval for the stockpile by one of the following methods:

1. Continuous stockpile: When RAP is obtained from one or multiple sources and is either processed, blended, or fractionated, and stockpiled in a continuous manner, assure an adequate number of test results are obtained for stockpile approval. Test the RAP material for gradation and asphalt content at a minimum frequency of one sample per 1000 tons with a minimum of six test results. Test the RAP material for G_{mm} (for G_{sb} determination) at a minimum frequency of one sample per 5,000 tons with a minimum of two test results. Based on visual inspection and a review of the test data, the Engineer will determine the suitability of the stockpiled material. In addition, address in the QC Plan the details and specifics of the processing, sampling, testing and actions to be taken.
2. Non-continuous single stockpile: When an individual stockpile is being constructed, obtain representative samples at random locations and test the RAP material for gradation and asphalt content at a minimum frequency of one sample per 1000 tons with a minimum of six test results. Test the RAP material for G_{mm} (for G_{sb} determination) at a minimum frequency of one sample per 5,000 tons with a minimum of two test results. Based on visual inspection and a review of the test data, the Engineer will determine the suitability of the stockpiled material. Once the RAP stockpile has been approved, do not add additional material

without prior approval of the Engineer.

Determine the asphalt binder content and gradation of the RAP material in accordance with FM 5-563 and FM 1-T 030, respectively. Establish the G_{sb} of the RAP material by using one of the following methods:

a. Calculate the G_{sb} value based upon the effective specific gravity (G_{se}) of the RAP material, determined on the basis of the asphalt binder content and maximum specific gravity (G_{mm}) of the RAP material. The Engineer will approve the estimated asphalt binder absorption value used in the calculation.

b. Measure the G_{sb} of the RAP aggregate, in accordance with FM 1-T 084 and FM 1-T 085. Obtain the aggregate by using a solvent extraction method.

334-2.3.4 Pavement Composition: When the Contract includes milling of the existing asphalt pavement, the Pavement Coring Report may be available on the Department’s website.

334-2.3.5 Asphalt Binder for Mixes with RAP: Select the appropriate asphalt binder grade based on Table 334-2. Obtain a sample of the mixture for the Engineer within the first 1,000 tons of production and at a continuing frequency of one sample per 4,000 tons of mix. The Engineer reserves the right to change the asphalt binder type and grade at design based on the characteristics of the RAP asphalt binder, and reserves the right to make changes during production.

Table 334-2 Asphalt Binder Grade for Mixes Containing RAP	
Percent RAP	Asphalt Binder Grade
0 – 15	PG 67-22
16 – 30	PG 58-22
>30	PG 52-28

334-2.4 Recycled Crushed Glass: Recycled crushed glass may be used as a component of the asphalt mixture subject to the following requirements:

1. Consider the recycled crushed glass a local material and meet all requirements specified in 902-6.
2. Limit the amount of recycled crushed glass to a maximum of 15% by weight of total aggregate.
3. Use an asphalt binder that contains a minimum of 0.5% anti-stripping agent by weight of binder. The antistrip additive shall be one of the products listed on the Qualified Products List (QPL). The antistrip additive shall be introduced into the asphalt binder by the supplier during loading.
4. Do not use recycled crushed glass in friction course mixtures or in structural course mixtures which are to be used as the final wearing surface.

334-3 General Composition of Mixture.

334-3.1 General: Compose the asphalt mixture using a combination of aggregate (coarse, fine or mixtures thereof), mineral filler, if required, and asphalt binder material. Size, grade and combine the aggregate fractions to meet the grading and physical properties of the mix design. Aggregates from various sources may be combined.

334-3.2 Mix Design:

334-3.2.1 General: Design the asphalt mixture in accordance with AASHTO R35-09, except as noted herein. Prior to the production of any asphalt mixture, submit the proposed mix design with supporting test data indicating compliance with all mix design criteria to the Engineer. For Traffic Level B through E mix designs, include representative samples of all component materials, including asphalt binder. Allow the State Materials Engineer a maximum of four weeks to either conditionally verify or reject the mix as designed.

Do not use more than three mix designs per nominal maximum aggregate size per traffic level per binder grade per year, where the year starts at the Notice to Proceed. Exceeding this limitation will result in a maximum Composite Pay Factor of 1.00 as defined in 334-8.2 for all designs used beyond this limit.

Warm mix technologies (additives, foaming techniques, etc.) listed on the Department's website may be used in the production of the mix. The URL for obtaining this information, if available, is:

<http://www.dot.state.fl.us/Specificationsoffice/implemented/URLinSpecs/files/WarmMixAsphalt.pdf>.

The Engineer will consider any marked variations from original test data for a mix design or any evidence of inadequate field performance of a mix design as sufficient evidence that the properties of the mix design have changed, and the Engineer will no longer allow the use of the mix design.

334-3.2.2 Mixture Gradation Requirements: Combine the coarse and fine aggregate in proportions that will produce an asphalt mixture meeting all of the requirements defined in this specification and conform to the gradation requirements at design as defined in AASHTO M323-07, Table 3. Aggregates from various sources may be combined.

334-3.2.2.1 Mixture Gradation Classification: Plot the combined mixture gradation on an FHWA 0.45 Power Gradation Chart. Include the Control Points from AASHTO M323-07, Table-3, as well as the Primary Control Sieve (PCS) Control Point from AASHTO M323-07, Table 4. Coarse mixes are defined as having a combined aggregate gradation that passes below the primary control sieve control point and below the maximum density line for all sieve sizes smaller than the primary control sieve. Fine mixes are defined as having a gradation that passes above the primary control sieve control point and above the maximum density line for all sieve sizes smaller than the primary control sieve and larger than the No. 100 sieve. Use a fine mix for Traffic Levels A through C; use either a coarse mix or fine mix for Traffic Levels D and E.

334-3.2.3 Aggregate Consensus Properties: For Traffic Level C through E mixtures, meet the following consensus properties at design for the aggregate blend. Aggregate consensus properties do not apply to Traffic Level A and B mixtures.

334-3.2.3.1 Coarse Aggregate Angularity: When tested in accordance with ASTM D 5821, meet the percentage of fractured faces requirements specified in AASHTO M 323-07, Table 5.

334-3.2.3.2 Fine Aggregate Angularity: When tested in accordance with AASHTO T 304-11, Method A, meet the uncompacted void content of fine aggregate specified in AASHTO M 323-07, Table 5.

334-3.2.3.3 Flat and Elongated Particles: When tested in accordance with ASTM D 4791, (with the exception that the material passing the 3/8 inch sieve and retained on the No. 4 sieve shall be included), meet the requirements specified in AASHTO M 323-07,

Table 5. Measure the aggregate using the ratio of 5:1, comparing the length (longest dimension) to the thickness (shortest dimension) of the aggregate particles.

334-3.2.3.4 Sand Equivalent: When tested in accordance with AASHTO T 176-08, meet the sand equivalent requirements specified in AASHTO M 323-07, Table 5.

334-3.2.4 Gyratory Compaction: Compact the design mixture in accordance with AASHTO T 312-11, with the following exception: use the number of gyrations at N_{design} as defined in Table 334-3. Measure the inside diameter of gyratory molds in accordance with AASHTO T 312-11.

Table 334-3 Gyratory Compaction Requirements	
Traffic Level	N_{design} Number of Gyration
A	50
B	65
C	75
D	100
E	100

334-3.2.5 Design Criteria: Meet the requirements for nominal maximum aggregate size as defined in AASHTO M 323-07, as well as for relative density, VMA, VFA, and dust-to-binder ratio as specified in AASHTO M 323-07, Table 6. Use a dust-to-binder ratio of 0.8 to 1.6 for coarse mixes. $N_{initial}$ and $N_{maximum}$ requirements are not applicable.

334-3.2.6 Moisture Susceptibility:

1. For Traffic Level A and B mixtures, use a liquid anti-strip additive, at a rate of 0.5% by weight of the asphalt binder. The anti-strip additive must be listed on the QPL. Other rates of anti-strip additive may be used upon approval of the Engineer.

2. For Traffic Level C through E mixtures, test 4 inch specimens in accordance with FM 1-T 283. Provide a mixture having a retained tensile strength ratio of at least 0.80 and a minimum tensile strength (unconditioned) of 100 psi. If necessary, add a liquid anti-stripping agent and/or hydrated lime (meeting the requirements of Section 337) in order to meet these criteria. The anti-strip additive must be listed on the QPL.

334-3.2.7 Additional Information: In addition to the requirements listed above, provide the following information with each proposed mix design submitted for verification:

1. The design traffic level and the design number of gyrations (N_{design}).
2. The source and description of the materials to be used.
3. The Department source number and the Department product code of the aggregate components furnished from a Department approved source.
4. The gradation and proportions of the raw materials as intended to be combined in the paving mixture. The gradation of the component materials shall be representative of the material at the time of use. Compensate for any change in aggregate gradation caused by handling and processing as necessary.
5. A single percentage of the combined mineral aggregate passing each specified sieve. Degradation of the aggregate due to processing (particularly material passing the No. 200 sieve) should be accounted for and identified.

6. The bulk specific gravity (G_{sb}) value for each individual aggregate and RAP component, as identified in the Department's aggregate control program.
7. A single percentage of asphalt binder by weight of total mix intended to be incorporated in the completed mixture, shown to the nearest 0.1%.
8. A target temperature for the mixture at the plant (mixing temperature) and a target temperature for the mixture at the roadway (compaction temperature) in accordance with 320-6.3. Do not exceed a target temperature of 330°F for PG 76-22 asphalt binders, 320°F for ARB-12 asphalt binders, and 315°F for ARB-5 and unmodified asphalt binders.
9. Provide the physical properties achieved at four different asphalt binder contents. One of which must be at the optimum asphalt content, and must conform to all specified physical requirements.
10. The name of the CTQP Qualified Mix Designer.
11. The ignition oven calibration factor.
12. The warm mix technology, if used.

334-3.3 Mix Design Revisions: During production, the Contractor may request a target value revision to a mix design, subject to meeting the following requirements: (1) the target change falls within the limits defined in Table 334-4, (2) appropriate data exists demonstrating that the mix complies with production air voids specification criteria, and (3) the mixture gradation meets the basic gradation requirements defined in 334-3.2.2.

Table 334-4 Limits for Potential Adjustments to Mix Design Target Values	
Characteristic	Limit from Original Mix Design
No. 8 sieve and Coarser	± 5.0%
No. 16 sieve	± 4.0%
No. 30 sieve	± 4.0%
No. 50 sieve	± 3.0%
No. 100 sieve	± 3.0%
No. 200 sieve	± 1.0%
Asphalt Binder Content (1)	± 0.3%
Each Component of Aggregate Blend (2)	± 5.0%
<small>(1) Reductions to the asphalt binder content will not be permitted if the VMA during production is lower than 1.0% below the Design criteria. (2) Revisions to FC-5 mixtures to be determined by the Engineer.</small>	

Submit all requests for revisions to mix designs, along with supporting documentation, to the Engineer. In order to expedite the revision process, the request for revision or discussions on the possibility of a revision may be made verbally, but must be followed up by a written request. The verified mix design will remain in effect until the Engineer authorizes a change. In no case will the effective date of the revision be established earlier than the date of the first communication between the Contractor and the Engineer regarding the revision.

A new design mix will be required if aggregate sources change, or for any substitution of an aggregate product with a different aggregate code, unless approved by the Engineer.

334-4 Contractor Process Control.

Assume full responsibility for controlling all operations and processes such that the requirements of these Specifications are met at all times. Perform any tests necessary at the plant and roadway for process control purposes. Enter all Process Control test data into the Department's Laboratory Information Management System (LIMS) database. The Engineer will not use these test results in the acceptance payment decision.

Address in the QC Plan how Process Control failures will be handled. When a Process Control failure occurs, investigate, at a minimum, the production process, testing equipment and/or sampling methods to determine the cause of the failure, and make any necessary changes to assure compliance with these Specifications. Obtain a follow up sample immediately after corrective actions are taken to assess the adequacy of the corrections. In the event the follow-up Process Control sample also fails to meet Specification requirements, cease production of the asphalt mixture until the problem is adequately resolved to the satisfaction of the QC Manager.

334-5 Acceptance of the Mixture.

334-5.1 General: The mixture will be accepted at the plant with respect to gradation (P-8 and P-200), asphalt content (P_b), and volumetrics (volumetrics is defined as air voids at N_{design}). The mixture will be accepted on the roadway with respect to density of roadway cores. Acceptance will be on a LOT by LOT basis (for each mix design) based on tests of random samples obtained within each subplot taken at a frequency of one set of samples per subplot. A roadway LOT and a plant production LOT shall be the same. Acceptance of the mixture will be based on Contractor QC test results that have been verified by the Department.

334-5.1.1 Sampling and Testing Requirements: Obtain the samples in accordance with FM 1-T 168. Obtain samples at the plant of a sufficient quantity to be split into three smaller samples; one for QC, one for Verification and one for Resolution testing; each sample at approximately 35 pounds. The split samples for Verification testing and Resolution testing shall be reduced in size and stored in three boxes each. The approximate size of each box must be 12 inches x 8 inches x 4 inches. Provide, label and safely store sample boxes in a manner agreed upon by the Engineer for future testing.

The asphalt content of the mixture will be determined in accordance with FM 5-563. The gradation of the recovered aggregate will be determined in accordance with FM 1-T 030. Volumetric testing will be in accordance with AASHTO T 312-11 and FM 1-T 209. Measure the inside diameter of gyratory molds in accordance with FM 5-585. Prior to testing volumetric samples, condition the test-sized sample for one hour, plus or minus five minutes, at the target roadway compaction temperature in a shallow, flat pan, such that the mixture temperature at the end of the one hour conditioning period is within plus or minus 20°F of the roadway compaction temperature. Test for roadway density in accordance with FM 1-T 166.

334-5.1.2 Acceptance Testing Exceptions: When the total combined quantity of hot mix asphalt for the project, as indicated in the Plans for Type SP and Type FC mixtures only, is less than 2000 tons, the Engineer will accept the mix on the basis of visual inspection. The Engineer may require the Contractor to run process control tests for informational purposes, as defined in 334-4, or may run independent verification tests to determine the acceptability of the material.

Density testing for acceptance will not be performed on widening strips or shoulders with a width of 5 feet or less, open-graded friction courses, variable thickness overbuild courses, leveling courses, any asphalt layer placed on subgrade (regardless of type),

miscellaneous asphalt pavement, shared use paths, crossovers, or any course with a specified thickness less than 1 inch or a specified spread rate that converts to less than 1 inch as described in 334-1.4. Density testing for acceptance will not be performed on asphalt courses placed on bridge decks or approach slabs; compact these courses in static mode only per the requirements of 330-7.7. In addition, density testing for acceptance will not be performed on the following areas when they are less than 1,000 feet (continuous) in length: turning lanes, acceleration lanes, deceleration lanes, shoulders, parallel parking lanes or ramps. Do not perform density testing for acceptance in situations where the areas requiring density testing is less than 50 tons within a subplot.

Density testing for acceptance will not be performed in intersections. The limits of the intersection will be from stop bar to stop bar for both the mainline and side streets. A random core location that occurs within the intersection shall be moved forward or backward from the intersection at the direction of the Engineer.

Where density testing for acceptance is not required, compact these courses (with the exception of open-graded friction courses) in accordance with the rolling procedure (equipment and pattern) as approved by the Engineer or with Standard Rolling Procedure as specified in 330-7.2. In the event that the rolling procedure deviates from the procedure approved by the Engineer, or the Standard Rolling Procedure, placement of the mix shall be stopped.

The density pay factor (as defined in 334-8.2) for areas not requiring density testing for acceptance will be paid at the same density pay factor as for the areas requiring density testing within the same LOT. If the entire LOT does not require density testing for acceptance, the LOT will be paid at a density pay factor of 1.00.

334-5.2 Full LOTs: Each LOT will be defined (as selected by the Contractor prior to the start of the LOT) as either (1) 2,000 tons, with each LOT subdivided into four equal sublots of 500 tons each, or (2) 4,000 tons, with each LOT subdivided into four equal sublots of 1,000 tons each. As an exception to this, the initial LOT of all new mix designs shall be defined as 2,000 tons, subdivided into four equal sublots of 500 tons each. Before the beginning of a LOT, the Engineer will develop a random sampling plan for each subplot and direct the Contractor on sample points, based on tonnage, for each subplot during construction.

334-5.3 Partial LOTs: A partial LOT is defined as a LOT size that is less than a full LOT. A partial LOT may occur due to the following:

1. The completion of a given mix type or mix design on a project.
2. Closure of the LOT due to time. LOTs will be closed 30 calendar days after the start of the LOT. Time periods other than 30 calendar days may be used if agreed to by both the Engineer and the Contractor.
3. A LOT is terminated per 334-5.4.4.

All partial LOTs will be evaluated based on the number of tests available, and will not be redefined. If a LOT is closed before the first plant random sample is obtained, then the LOT will be visually accepted by the Engineer and the LOT pay factor will be 1.00.

334-5.4 QC Sampling and Testing: Obtain all samples randomly as directed by the Engineer.

Should the Engineer determine that the QC requirements are not being met or that unsatisfactory results are being obtained, or should any instances of falsification of test data occur, approval of the Contractor's QC Plan will be suspended and production will be stopped.

334-5.4.1 Lost or Missing Verification/Resolution Samples: In the event that

any of the Verification and/or Resolution samples that are in the custody of the Contractor are lost, damaged, destroyed, or are otherwise unavailable for testing, the minimum possible pay factor for each quality characteristic as described in 334-8.2 will be applied to the entire LOT in question, unless called for otherwise by the Engineer. Specifically, if the LOT in question has more than two sublots, the pay factor for each quality characteristic will be 0.55. If the LOT has two or less sublots, the pay factor for each quality characteristic will be 0.80. In either event, the material in question will also be evaluated in accordance with 334-5.9.5.

If any of the Verification and/or Resolution samples that are in the custody of the Department are lost, damaged, destroyed or are otherwise unavailable for testing, the corresponding QC test result will be considered verified, and payment will be based upon the Contractor's data.

334-5.4.2 Plant Sampling and Testing Requirements: Obtain one random sample of mix per subplot in accordance with 334-5.1.1 as directed by the Engineer. Test the QC split sample for gradation, asphalt binder content and volumetrics in accordance with 334-5.1.1. Complete all QC testing within one working day from the time the samples were obtained.

334-5.4.3 Roadway Sampling and Testing Requirements: Obtain five 6 inch diameter roadway cores within 24 hours of placement at random locations as directed by the Engineer within each subplot. Test these QC samples for density (Gmb) in accordance with 334-5.1.1. Obtain a minimum of three cores per subplot at random locations as identified by the Engineer in situations where the subplot/LOT was closed or terminated before the random numbers were reached or where it is impractical to cut five cores per subplot. Do not obtain cores any closer than 12 inches from an unsupported edge. The Engineer may adjust randomly generated core locations for safety purposes or as the Engineer deems necessary. Maintain traffic during the coring operation; core the roadway, patch the core holes (within three days of coring); and trim the cores to the proper thickness prior to density testing.

Density for the subplot shall be based on the average value for the cores cut from the subplot with the target density being the maximum specific gravity (Gmm) of the subplot. Once the average density of a subplot has been determined, do not retest the samples unless approved by the Engineer. Ensure proper handling and storage of all cores until the LOT in question has been accepted.

334-5.4.4 Individual Test Tolerances for QC Testing: Terminate the LOT if any of the following QC failures occur:

- 1) An individual test result of a subplot for air voids does not meet the requirements of Table 334-5,
- 2) The average subplot density does not meet the requirements of Table 334-5,
- 3) Two consecutive test results within the same LOT for gradation or asphalt binder content do not meet the requirements of Table 334-5,
- 4) Two core densities for coarse mixes within a subplot are less than 91.00% of Gmm.

When a LOT is terminated due to a QC failure, stop production of the mixture until the problem is resolved to the satisfaction of the QC Manager and/or Asphalt Plant Level II technician responsible for the decision to resume production after a QC failure, as identified in 105-8.6.4. In the event that it can be demonstrated that the problem can immediately be or already has been resolved, it will not be necessary to stop production. When a LOT is terminated, make all necessary changes to correct the problem. Do not resume production until

appropriate corrections have been made. Inform the Engineer of the problem and corrections made to correct the problem. After resuming production, sample and test the material to verify that the changes have corrected the problem. Summarize this information and provide it to the Engineer prior to the end of the work shift when production resumes.

In the event that a QC failure is not addressed as defined above, the Engineer's approval will be required prior to resuming production after any future QC failures.

Address any material represented by a failing test result in accordance with 334-5.9.5. Any LOT terminated under this subarticle will be limited to a maximum Pay Factor of 1.00 (as defined in 334-8.2) for each quality characteristic.

In the event that a G_{mm} test result differs by more than 0.040 from the mix design G_{mm}, investigate the causes of the discrepancy and report the findings and proposed actions to the Engineer.

Characteristic	Tolerance (1)
Asphalt Binder Content (%)	Target ± 0.55
Passing No. 200 Sieve (%)	Target ± 1.50
Air Voids (%) Coarse Graded	2.00 – 6.00
Air Voids (%) Fine Graded	2.30 – 6.00
Density (% G _{mm}) (2)	
Coarse Graded (minimum)	93.00
Fine Graded (minimum)	90.00
(1) Tolerances for sample size of n = 1 from the verified mix design	
(2) Based on an average of 5 randomly located cores	

334-5.5 Verification Testing: In order to determine the validity of the Contractor's QC test results prior to their use in the Acceptance decision, the Engineer will run verification tests.

334-5.5.1 Plant Testing: At the completion of each LOT, the Engineer will test a minimum of one Verification split sample randomly selected from the LOT. Results of the testing and analysis for the LOT will be made available to the Contractor within one working day from the time the LOT is completed. Verification samples shall be reheated at the target roadway compaction temperature for 1-1/2 hours, plus or minus 5 minutes, reduced to the appropriate testing size, and conditioned and tested as described in 334-5.1.1. In lieu of the 1-1/2 hours reheating procedure, the mixture may be reheated to within plus or minus 20°F of the roadway compaction temperature using a microwave oven. Stir the mixture as necessary during the reheating process to maintain temperature uniformity. Subsequently, condition and test the mixture as described in 334-5.1.1.

The Verification test results will be compared with the QC test results based on the between-laboratory precision values shown in Table 334-6.

Property	Maximum Difference
G _{mm}	0.016
G _{mb} (gyratory compacted samples)	0.022

Table 334-6 Between-Laboratory Precision Values	
Property	Maximum Difference
G _{mb} (roadway cores – fine graded mixture)	0.015
G _{mb} (roadway cores – coarse graded mixture)	0.018
P _b	0.44%
P-200	FM 1-T 030 (Figure 2)
P-8	FM 1-T 030 (Figure 2)

If all of the specified mix characteristics compare favorably, then the LOT will be accepted, with payment based on the Contractor's QC test data for the LOT.

If any of the results do not compare favorably, then the Resolution samples from the LOT will be sent to the Resolution laboratory for testing, as described in 334-5.6.

334-5.5.2 Roadway Testing: At the completion of each LOT, the Engineer will determine the density (G_{mb}) of each core (previously tested by Quality Control) as described in 334-5.1.1 from the same subplot as the plant samples. For situations where roadway density is not required for the random subplot chosen, then another subplot shall be randomly chosen for roadway density cores only. Results of the testing and analysis for the LOT will be made available to the Contractor within one working day from the time the LOT is completed.

The individual Verification test results will be compared with individual QC test results by the Engineer based on the between-laboratory precision values given in Table 334-6.

If each of the core test results compare favorably, then the LOT will be accepted with respect to density, with payment based on the Contractor's QC test data for the LOT.

If any of the results do not compare favorably, then the core samples from the LOT will be sent to the Resolution laboratory for testing as specified in 334-5.6.

334-5.6 Resolution System:

334-5.6.1 Plant Samples: In the event of an unfavorable comparison between the Contractor's QC test results and the Engineer's Verification test results on any of the properties identified in Table 334-6, the Resolution laboratory will test all of the split samples from the LOT for only the property (or properties) in question. Resolution samples shall be reheated at the target roadway compaction temperature for 1-1/2 hours, plus or minus 5 minutes, reduced to the appropriate testing size, and conditioned and tested as described in 334-5.1.1. In lieu of the 1-1/2 hours reheating procedure, the mixture may be reheated to within plus or minus 20°F of the roadway compaction temperature using a microwave oven. Stir the mixture as necessary during the reheating process to maintain temperature uniformity. Subsequently, condition and test the mixture as described in 334-5.1.1.

334-5.6.2 Roadway Samples: In the event of an unfavorable comparison between the Contractor's QC test data and the Engineer's Verification test data on the density results, the Resolution laboratory will test all of the cores from the LOT. Testing will be as described in 334-5.1.1. Any damaged roadway cores will not be included in the evaluation; replace damaged cores with additional cores at the direction of the Engineer.

334-5.6.3 Resolution Determination: The Resolution test results (for the property or properties in question) will be compared with the QC test results based on the

between-laboratory precision values shown in Table 334-6.

If the Resolution laboratory results compare favorably with all of the QC results, then acceptance and payment for the LOT will be based on the QC results, and the Department will bear the costs associated with Resolution testing. No additional compensation, either monetary or time, will be made for the impacts of any such testing.

If the Resolution laboratory results do not compare favorably with all of the QC results, then acceptance and payment for the LOT will be based on the Resolution test data for the LOT, and the costs of the Resolution testing will be deducted from monthly estimates. No additional time will be granted for the impacts of any such testing. In addition, in the event that the application of the Resolution test data results in a failure to meet the requirements of Table 334-5, address any material represented by the failing test result in accordance with 334-5.9.5.

In the event of an unfavorable comparison between the Resolution test results and QC test results, make the necessary adjustments to assure that future comparisons are favorable.

334-5.7 Independent Verification Testing:

334-5.7.1 Plant: The Contractor shall provide sample boxes and take samples as directed by the Engineer for Independent Verification testing. Obtain enough material for three complete sets of tests (two samples for Independent Verification testing by the Engineer and one sample for testing by the Contractor). If agreed upon by both the Engineer and the Contractor, only one sample for Independent Verification testing by the Engineer may be obtained. Independent Verification samples will be reheated at the target roadway compaction temperature for 1-1/2 hours, plus or minus 5 minutes, reduced to the appropriate testing size, and conditioned and tested as described in 334-5.1.1. The Contractor's split sample, if tested immediately after sampling, shall be reduced to the appropriate testing size, and conditioned and tested as described in 334-5.1.1. If the Contractor's sample is not tested immediately after sampling, then the sample shall be reheated at the target roadway compaction temperature for 1-1/2 hours, plus or minus 5 minutes, reduced to the appropriate testing size, and conditioned and tested as described in 334-5.1.1. For the Independent Verification and Contractor's samples, in lieu of the 1-1/2 hours reheating procedure, the mixture may be reheated to within plus or minus 20°F of the roadway compaction temperature using a microwave oven. Stir the mixture as necessary during the reheating process to maintain temperature uniformity. Subsequently, condition and test the mixture as described in 334-5.1.1. The Contractor's test results shall be provided to the Engineer within one working day from the time the sample was obtained.

If any of the Independent Verification test results do not meet the requirements of Table 334-5, then a comparison of the Independent Verification test results and the Contractor's test results, if available, will be made. If a comparison of the Independent Verification test results and the Contractor's test results meets the precision values of Table 334-6 for the material properties in question, or if the Contractor's test results are not available, then the Independent Verification test results are considered verified and the Contractor shall cease production of the asphalt mixture until the problem is adequately resolved (to the satisfaction of the Engineer), unless it can be demonstrated to the satisfaction of the Engineer that the problem can immediately be (or already has been) resolved. Address any material represented by the failing test results in accordance with 334-5.9.5.

If a comparison of the Independent Verification test results and the Contractor's test results does not meet the precision values of Table 334-6 for the material

properties in question, then the second Independent Verification sample shall be tested by the Engineer for the material properties in question. If a comparison between the first and second Independent Verification test results does not meet the precision values of Table 334-6 for the material properties in question, then the first Independent Verification test results are considered unverified for the material properties in question and no action shall be taken.

If a comparison between the first and second Independent Verification test results meets the precision values of Table 334-6 for the material properties in question, then the first Independent Verification sample is considered verified and the Contractor shall cease production of the asphalt mixture until the problem is adequately resolved (to the satisfaction of the Engineer), unless it can be demonstrated to the satisfaction of the Engineer that the problem can immediately be (or already has been) resolved. Address any material represented by the failing test results in accordance with 334-5.9.5.

The Engineer has the option to use the Independent Verification sample for comparison testing as specified in 334-6.

334-5.7.2 Roadway: Obtain five 6 inch diameter roadway cores within 24 hours of placement, as directed by the Engineer, for Independent Verification testing. In situations where it is impractical to cut five cores per subplot, obtain a minimum of three cores per subplot at random locations, as identified by the Engineer. These independent cores will be obtained from the same LOTs and sublots as the Independent Verification Plant samples, or as directed by the Engineer. The density of these cores will be obtained as described in 334-5.1.1. If the average of the results for the subplot does not meet the requirements of Table 334-5 for density, cease production of the asphalt mixture until the problem is adequately resolved (to the satisfaction of the Engineer), unless it can be demonstrated to the satisfaction of the Engineer that the problem can immediately be (or already has been) resolved. Address any material represented by the failing test results in accordance with 334-5.9.5.

334-5.8 Surface Tolerance: The asphalt mixture will be accepted on the roadway with respect to surface tolerance in accordance with the applicable requirements of 330-9.

334-5.9 Minimum Acceptable Quality Levels:

334-5.9.1 Pay Factors Below 0.90: In the event that an individual pay factor for any quality characteristic of a LOT falls below 0.90, take steps to correct the situation and report the actions to the Engineer. In the event that the pay factor for the same quality characteristic for two consecutive LOTs is below 0.90, cease production of the asphalt mixture until the problem is adequately resolved (to the satisfaction of the Engineer), unless it can be demonstrated to the satisfaction of the Engineer that the problem can immediately be (or already has been) resolved. Actions taken must be approved by the Engineer before production resumes.

334-5.9.2 Composite Pay Factors Less Than 0.90 and Greater Than or Equal to 0.80: If the composite pay factor for the LOT is less than 0.90 and greater than or equal to 0.80, cease production of the asphalt mixture until the problem is adequately resolved (to the satisfaction of the Engineer), unless it can be demonstrated to the satisfaction of the Engineer that the problem can immediately be (or already has been) resolved. Actions taken must be approved by the Engineer before production resumes.

334-5.9.3 Composite Pay Factors Less Than 0.80 and Greater Than or Equal to 0.75: If the composite pay factor for the LOT is less than 0.80 and greater than or equal to 0.75, address the defective material in accordance with 334-5.9.5.

334-5.9.4 Composite Pay Factors Less Than 0.75: If the composite pay factor for the LOT is less than 0.75, remove and replace the defective LOT at no cost to the

Department, or as approved by the Engineer.

334-5.9.5 Defective Material: Assume responsibility for removing and replacing all defective material placed on the project, at no cost to the Department.

As an exception to the above and upon approval of the Engineer, obtain an engineering analysis by an independent laboratory (as approved by the Engineer) to determine the disposition of the material. The engineering analysis must be signed and sealed by a Professional Engineer licensed in the State of Florida.

The Engineer may determine that an engineering analysis is not necessary or may perform an engineering analysis to determine the disposition of the material.

Any material that remains in place will be accepted with a composite pay factor as determined by 334-8, or as determined by the Engineer.

If the defective material is due to a gradation, asphalt binder content or density failure, upon approval of the Engineer the Contractor may perform delineation tests on roadway cores in lieu of an engineering analysis to determine the limits of the defective material that may require removal and replacement. Prior to any delineation testing, all sampling locations shall be approved by the Engineer. All delineation sampling and testing shall be monitored and verified by the Engineer. For materials that are defective due to air voids, an engineering analysis is required.

When evaluating defective material by engineering analysis or delineation testing, at a minimum, evaluate all material located between passing QC, Process Control or Independent Verification test results. Exceptions to this requirement shall be approved by the Engineer.

334-6 Comparison Testing.

At the start of the project (unless waived by the Engineer) and at other times as determined necessary by the Engineer, provide split samples for comparison testing with the Engineer. The purpose of these tests is to verify that the testing equipment is functioning properly and that the testing procedures are being performed correctly. In the event that the Engineer determines that there is a problem with the Contractor's testing equipment and/or testing procedures, immediately correct the problem to the Engineer's satisfaction. In the event that the problem is not immediately corrected, cease production of the asphalt mixture until the problem is adequately resolved to the satisfaction of the Engineer.

If so agreed to by both the Contractor and the Engineer, the split sample used for comparison testing may also be used for the QC sample. The split sample used for comparison testing must also meet the requirements for Independent Verification Testing described in 334-5.7.

334-7 Method of Measurement.

For the work specified under this Section (including the pertinent provisions of Sections 320 and 330), the quantity to be paid for will be the weight of the mixture, in tons. The pay quantity will be based on the project average spread rate, excluding overbuild, limited to a maximum of 105% of the spread rate determined in accordance with 334-1.4 or as set by the Engineer. The project average spread rate is calculated by totaling the arithmetic mean of the average daily spread rate values for each layer.

The bid price for the asphalt mix will include the cost of the liquid asphalt or the asphalt recycling agent and the tack coat application as directed in 300-8. There will be no separate

payment or unit price adjustment for the asphalt binder material in the asphalt mix. For the calculation of unit price adjustments of bituminous material, the average asphalt content will be based on the percentage specified in 9-2.1.2. The weight will be determined as provided in 320-3.2 (including the provisions for the automatic recordation system).

Prepare a Certification of Quantities, using the Department’s current approved form, for the certified Superpave asphalt concrete pay item. Submit this certification to the Engineer no later than Twelve O’clock noon Monday after the estimate cut-off or as directed by the Engineer, based on the quantity of asphalt produced and accepted on the roadway per Contract. The certification must include the Contract Number, FPID Number, Certification Number, Certification Date, period represented by Certification and the tons produced for each asphalt pay item.

334-8 Basis of Payment.

334-8.1 General: Price and payment will be full compensation for all the work specified under this Section (including the applicable requirements of Sections 320 and 330).

For materials accepted in accordance with 334-5, based upon the quality of the material, a pay adjustment will be applied to the bid price of the material as determined on a LOT by LOT basis. The pay adjustment will be assessed by calculating a Pay Factor for the following individual quality characteristics: pavement density, air voids, asphalt binder content, and the percentage passing the No. 200 and No. 8 sieves. The pay adjustment will be computed by multiplying a Composite Pay Factor for the LOT by the bid price per ton. Perform all calculations using the latest version of the Department’s Asphalt Plant Worksheet.

334-8.2 Pay Factors:

334-8.2.1 Partial LOTs: For Partial LOTs where no random sample is obtained due to insufficient tonnage, a Composite Pay Factor of 1.00 shall be applied.

334-8.2.2 Two or Less Sublot Test Results: In the event that two or less sublot test results are available for a LOT, Pay Factors will be determined based on the Small Quantity Pay Table. The Small Quantity Pay Table and Pay Factor calculations are determined in accordance with the instructions contained within the Department’s Asphalt Plant Worksheet.

334-8.2.3 Three or More Sublot Test Results: When three or more sublot test results are available for a LOT, the variability-unknown, standard deviation method will be used to determine the estimated percentage of the LOT that is within the specification limits shown in Table 334-7. The Percent Within Limits (PWL) is determined in accordance with the instructions contained within the Department’s Asphalt Plant Worksheet.

Table 334-7 Specification Limits	
Quality Characteristic	Specification Limits
Passing No. 8 sieve (%)	Target ± 3.1
Passing No. 200 sieve (%)	Target ± 1.0
Asphalt Content (%)	Target ± 0.40
Air Voids – Coarse Mixes (%)	4.00 ± 1.40
Air Voids – Fine Mixes (%)	4.00 ± 1.20
Density – Coarse Mixes (% of G _{mm}):	94.50 ± 1.30
Density – Fine Mixes (% of G _{mm}):	93.00 + 2.00, - 1.20 (1)
Note (1): If the Engineer (or Contract Documents) limits compaction to the static mode only, or for all one-inch thick lifts, Compaction shall be in the static mode. No vibratory mode in the vertical direction will be allowed. Other vibratory modes will	

Be allowed, if approved by the Engineer. In either case, the specification limits will be as follows: 92.00 + 3.00, -1.20% of Gmm
No additional compensation, cost or time, shall be made/.

334-8.2.3.1 Pay Factors (PF): Pay Factors will be calculated by using the following equation:

$$\text{Pay Factor} = (55 + 0.5 \times \text{PWL}) / 100$$

The PWL is determined in accordance with the instructions contained within the Department's Asphalt Plant Worksheet.

334-8.3 Composite Pay Factor (CPF): A Composite Pay Factor for the LOT will be calculated based on the individual Pay Factors (PF) with the following weighting applied: 35% Density (D), 25% Air Voids (Va), 25% asphalt binder content (Pb), 10% Passing No. 200 (P-200) and 5% Passing No. 8 (P-8). Calculate the CPF by using the following formula:

$$\text{CPF} = [(0.350 \times \text{PF D}) + (0.250 \times \text{PF Va}) + (0.250 \times \text{PF Pb}) + (0.100 \times \text{PF P-200}) + (0.050 \times \text{PF P-8})]$$

Where the Pay Factor (PF) for each quality characteristic is determined in either 334-8.2.2 or 334-8.2.3, depending on the number of subplot tests. Note that the number after each multiplication will be rounded to the nearest 0.01.

The pay adjustment shall be computed by multiplying the Composite Pay Factor for the LOT by the bid price per ton.

334-8.4 Payment: Payment will be made under:

Item No. 334- 1- Superpave Asphaltic Concrete - per ton.

SECTION 706
RAISED RETRO-REFLECTIVE PAVEMENT
MARKERS AND BITUMINOUS ADHESIVE

706-1 Description.

Place raised retro-reflective pavement markers (RPMs) and adhesive, which upon installation produces a positive guidance system to supplement other reflective pavement markings.

706-2 Materials.

Use only Class B markers unless otherwise shown in the Plans.

Meet the requirements of Section 970 of the FDOT Standard Specifications for Road and Bridge Construction 2016.

706-2.1 Product Acceptance on the Project. Use only reflective pavement markers and bituminous adhesive that are listed on the FDOT's Qualified Products List (QPL).

Provide to the Engineer a manufacturer's certification conforming to the requirements of Section 6 of the FDOT Standard Specifications for Road and Bridge Construction 2016, which confirms that each product meets the requirements of this Section.

706-3 Equipment.

Use equipment having either thermostatically controlled double boiler type units utilizing heat transfer oil or thermostatically controlled electric heating pots to install hot applied bituminous adhesive. Do not use direct flame melting units with flexible adhesives; however, this type of unit may be used with standard adhesive in accordance with manufacturer's recommendations. Use a melter/applicator unit suited for both melting and pumping the adhesive through heated applicator hoses.

Heat the adhesive to between 375°F and 425°F and apply directly to the bonding surface from the melter/applicator by either pumping or pouring. Maintain the application temperature between 375°F and 425°F. The adhesive may be reheated. However, do not exceed the manufacturer's recommendations for pot life at application temperatures.

706-4 Application.

Apply RPMs to the bonding surface using bituminous adhesives only. The Engineer will conduct field testing in accordance with FM 5-566. Correct RPMs not applied in accordance with these requirements at no cost to the Department.

Prior to application of adhesive, clean the portion of the bonding surface of any material which would adversely affect the adhesive.

Apply the adhesive to the bonding surface (not the marker) so that 100% of the bonding area of the marker will be covered, in accordance with adhesive manufacturer's recommendations. Apply sufficient adhesive to ensure, that when the marker is pressed downward into the adhesive, adhesive will be forced out around the entire perimeter of the marker.

Immediately remove excess adhesive from the bonding surface and exposed surfaces of the RPMs. Soft rags moistened with mineral spirits meeting Federal Specifications TT-T-291 or kerosene may be used to remove adhesive from exposed faces of the RPMs. Do not use any other solvent. If any adhesive, pavement marking materials or other foreign matter adheres to the reflective face of the marker, replace the marker at no cost to the City.

Install RPMs with the reflective face of the RPM perpendicular to a line parallel to the roadway centerline.

Ensure that all final RPMs are in place prior to opening the road to traffic.

If more than 2% of the RPMs fail in adhesion or alignment within the first 45 days under traffic, replace all failed markers at no expense to the City. If more than 5% of the markers fail in adhesion and or alignment during the initial 45 day period, the Engineer will extend the replacement period an additional 45 days from the date that all replacement markers have been installed. If, at the end of the additional 45 day period, more than 2% of all markers (initial installation and 45 day replacements combined) fail in adhesion or alignment, replace all failed markers at no expense to the City.

706-5 Contractor's Responsibility for Notification.

Notify the Engineer prior to the placement of RPMs. At the time of notification, indicate the manufacturer and the LOT numbers of RPMs and bituminous adhesive that are intended for use. Verify that the approved LOT numbers appear on the material packages. Furnish a test report to the Engineer certifying that the materials meet all requirements specified.

706-6 Method of Measurement.

The quantities to be paid for will be the number of RPMs, furnished and installed, completed and accepted.

706-7 Basis of Payment.

706-7.1 General: Price and payment will be full compensation for all work specified in this Section.

Payment will be made under:

Item No. 706-3 Retro-Reflective Pavement Markers, each.

SECTION 711 THERMOPLASTIC TRAFFIC STRIPES AND MARKINGS

711-1 Description.

Apply new thermoplastic traffic stripes and markings, or refurbish existing thermoplastic traffic stripes and markings, in accordance with the Contract Documents.

711-2 Materials.

711-2.1 Thermoplastic: Use only thermoplastic materials listed on the QPL. The Engineer will take random samples of all material in accordance with the Department's Sampling, Testing and Reporting Guide schedule.

711-2.1.1 Initial or Recapped Stripes and Markings: Use materials meeting the requirements of 971-1 and 971-5.

711-2.1.2 Refurbishing Existing Stripes and Markings: Use materials meeting the requirements of 971-1 and 971-5.

711-2.1.3 Preformed Stripes and Markings: Use Materials meeting the requirements of 971-1 and 971-6.

711-2.2 Glass Spheres: Use only glass spheres listed on the QPL, meeting the requirements of 971-1 and 971-2. The Engineer will take random samples of all glass spheres in accordance with ASTM D1214 and the Department's Sampling, Testing and Reporting Guide schedule.

711-2.3 Sand: Use materials meeting the requirements of 971-5.4.

711-3 Equipment.

Use equipment capable of providing continuous uniform heating of striping materials to temperatures exceeding 390°F, mixing and agitation of the material reservoir to provide a homogeneous mixture without segregation. Use equipment that will maintain the striping material in a plastic state, in all mixing and conveying parts, including the line dispensing device until applied. Use equipment which can produce varying width traffic stripes and which meets the following requirements:

(a) capable of traveling at a uniform, predetermined rate of speed, both uphill and downhill, in order to produce a uniform application of striping material and capable of following straight lines and making normal curves in a true arc.

(b) is capable of applying glass spheres to the surface of the completed stripe by a double drop application for initial traffic striping and marking and a single drop application for recapping and refurbishing. The bead dispenser for the first bead drop shall be attached to the striping machine in such a manner that the beads are dispensed closely behind with the thermoplastic material. The second bead dispenser bead shall be attached to the striping machine in such a manner that the beads are dispensed immediately after the first bead drop application. Glass spheres dispensers shall be equipped with an automatic cut-off control that is synchronized with the cut-off of the thermoplastic material and applies the glass spheres in a manner such that the spheres appear uniform on the entire traffic stripes and markings surface with, 50 to 60% embedment.

(c) equipped with a special kettle for uniformly heating and melting the striping material. The kettle must be equipped with an automatic temperature control device and material thermometer for positive temperature control and to prevent overheating or scorching of the thermoplastic material.

(d) meet the requirements of the National Fire Protection Association, state, and local authorities.

711-4 Application.

711-4.1 General: Remove existing pavement markings such that scars or traces of removed markings will not conflict with new stripes and markings by a method approved by the Engineer. Cost for removing conflicting pavement markings during maintenance of traffic operations to be included in Maintenance of Traffic, Lump Sum.

Before applying traffic stripes and markings, remove any material by a method approved by the Engineer that would adversely affect the bond of the traffic stripes.

Before applying traffic stripes to any portland cement concrete surface, apply a primer, sealer or surface preparation adhesive of the type recommended by the manufacturer. Offset longitudinal lines at least 2 inches from any longitudinal joints of portland cement concrete pavement. Apply traffic stripes or markings only to dry surfaces, and when the ambient air and surface temperature is at least 50°F and rising for asphalt surfaces and 60°F and rising for concrete surfaces. Apply striping to the same tolerances in dimensions and in alignment specified in 710-5. When applying traffic stripes and markings over existing markings, ensure that no more than 2 inches on either end and not more than 1 inch on either side of the existing line is visible. Apply thermoplastic material to the pavement either by spray, extrusion or other means approved by the Engineer. Conduct field tests in accordance with FM 5-541. Take test readings representative of the striping performance. Remove and replace traffic stripes and markings not meeting the requirements of this Section at no additional cost to the Department. Apply all final pavement markings prior to opening the road to traffic.

711-4.1.1 Preformed Thermoplastic: Apply markings only to dry surfaces and when ambient air temperature is at least 32°F. Prior to installation, follow the manufacturer's recommendations for pre-heating.

711-4.2 Thickness:

711-4.2.1 Initial or Recapped Stripes and Markings: Apply or recap traffic stripes or markings such that all lane lines, center lines, transverse markings and traffic stripes and markings within traffic wearing areas, will have a thickness of 0.10 to 0.15 inch when measured above the pavement surface. Also, all gore, island, and diagonal stripe markings, bike lane symbols and messages, wherever located, will have a thickness of 0.09 to 0.12 inch when measured above the pavement surface. Measure, record and certify on Department approved form and submit to the Engineer, the thickness of white and yellow pavement markings in accordance with FM 5-541.

711-4.2.2 Refurbishing Existing Traffic Stripes and Markings: Apply a minimum of 0.06 inch of thermoplastic material. Ensure that the combination of the existing stripe and the overlay after application of glass spheres does not exceed the maximum thickness of 0.150 inch for all lines.

711-4.3 Retroreflectivity: Apply white and yellow traffic stripes and markings that will attain an initial retroreflectivity of not less than 450 mcd/lx·m² and not less than 350 mcd/lx·m², respectively for all longitudinal lines. All transverse lines, messages and arrows will attain an initial retroreflectivity of not less than 300 mcd/lx·m² and 250 mcd/lx·m² for white and yellow respectively. All pedestrian crosswalks, bike lane symbols or messages in a proposed bike lane

shall attain an initial retroreflectivity of not less than 275 mcd/lx·m². Measure, record and certify on Department approved form and submit to the Engineer, the retroreflectivity of white and yellow pavement markings in accordance with FM 5-541.

711-4.4 Glass Spheres:

711-4.4.1 Longitudinal Lines: For initial traffic striping and marking, apply the first drop of Type 4 or larger glass spheres immediately followed by the second drop of Type 1 glass spheres. For refurbishing, apply a single drop of Type 3 glass spheres. Apply reflective glass spheres to all markings at the rates determined by the manufacturer's recommendations.

711-4.4.2 Transverse Stripes and Markings: Apply a single drop of Type 1 glass spheres. Apply reflective glass spheres to all markings at the rates determined by the manufacturer's recommendations. Apply a mixture consisting of 50% glass spheres and 50% sharp silica sand to all thermoplastic pedestrian crosswalk lines and bike lane symbols at the rates determined by the manufacturer's recommendations.

711-4.4.3 Preformed Markings: These markings are factory supplied with glass spheres and skid resistant material. No additional glass spheres or skid resistant material should be applied during installation.

711-5 Contractor's Responsibility for Notification.

Notify the Engineer prior to the placement of the thermoplastic materials. Furnish the Engineer with the manufacturer's name and batch numbers of the thermoplastic materials and glass spheres to be used. Ensure that the approved batch numbers appear on the thermoplastic materials and glass spheres packages.

711-6 Protection of Newly Applied Traffic Stripes and Markings.

Do not allow traffic onto or permit vehicles to cross newly applied pavement markings until they are sufficiently dry. Remove and replace any portion of the pavement markings damaged by passing traffic or from any other cause, at no additional cost to the Department

711-7 Observation Period.

Longitudinal pavement markings are subject to a 180 day observation period under normal traffic. The observation period shall begin with the satisfactory completion and acceptance of the work. The longitudinal pavement markings shall show no signs of failure due to blistering, excessive cracking, chipping, discoloration, poor adhesion to the pavement, loss of reflectivity or vehicular damage. The retroreflectivity shall meet the initial requirements of 711-4.3. The Department reserves the right to check the color and retroreflectivity any time prior to the end of the observation period. Replace, at no additional expense to the Department, any longitudinal pavement markings that do not perform satisfactorily under traffic during the 180 day observation period.

711-8 Corrections for Deficiencies.

Recapping applies to conditions where additional striping material is applied to new or refurbished traffic stripes or markings to correct a deficiency. Recap a 1.0 mile section centered around the deficiency with additional striping material or by complete removal and reapplication at no additional cost to the Department. If recapping will result in a thickness exceeding the maximum allowed, the traffic stripes or markings will be removed and reapplied.

711-9 Submittals.

711-9.1 Submittal Instructions: Prepare a certification of quantities, using the Department's current approved form, for each project in the Contract. Submit the certification of quantities and daily worksheets to the Engineer. The Department will not pay for any disputed items until the Engineer approves the certification of quantities.

711-9.2 Contractor's Certification of Quantities: Request payment by submitting a certification of quantities no later than Twelve O clock noon Monday after the estimate cut-off date or as directed by the Engineer, based on the amount of work done or completed. Ensure the certification of quantities consists of the following:

(a) Contract Number, FPID Number, Certification Number, Certification Date and the period that the certification represents.

(b) The basis for arriving at the amount of the progress certification, less payments previously made and less any amount previously retained or withheld. The basis will include a detailed breakdown provided on the certification of items of payment.

711-10 Method of Measurement.

The quantities to be paid for under this Section will be as follows:

(a) The length, in net miles, of 6 inch solid traffic stripe, authorized and acceptably applied.

(b) The total traversed distance in gross miles of 10-30 or 3-9 skip line. The actual applied line is 25% of the traverse distance, for a 1:3 ratio. This equates to 1,320 feet of marking per mile of single line.

(c) The net length, in feet, of all other types of lines and stripes, authorized and acceptably applied.

(d) The area, in square feet, of removal of existing pavement markings, acceptably removed.

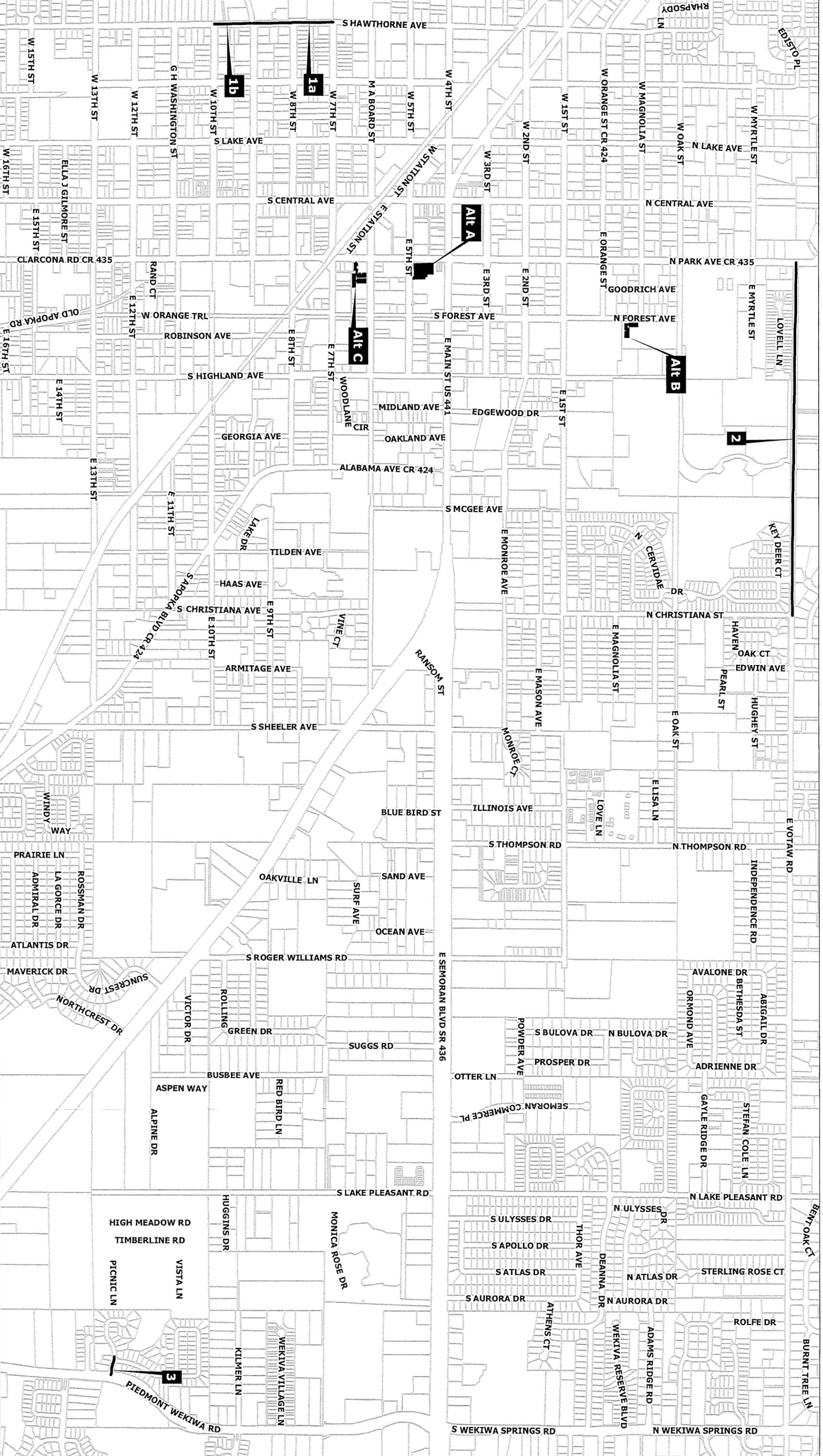
(e) The number of pavement messages, symbols and directional arrows, authorized and acceptably applied.

711-11 Basis of Payment.

Prices and payments will be full compensation for all work specified in this Section, including, all cleaning and preparing of surfaces, furnishing of all materials, application, curing and protection of all items, protection of traffic, furnishing of all tools, machines and equipment, and all incidentals necessary to complete the work. Final payment will be withheld until all deficiencies are corrected.

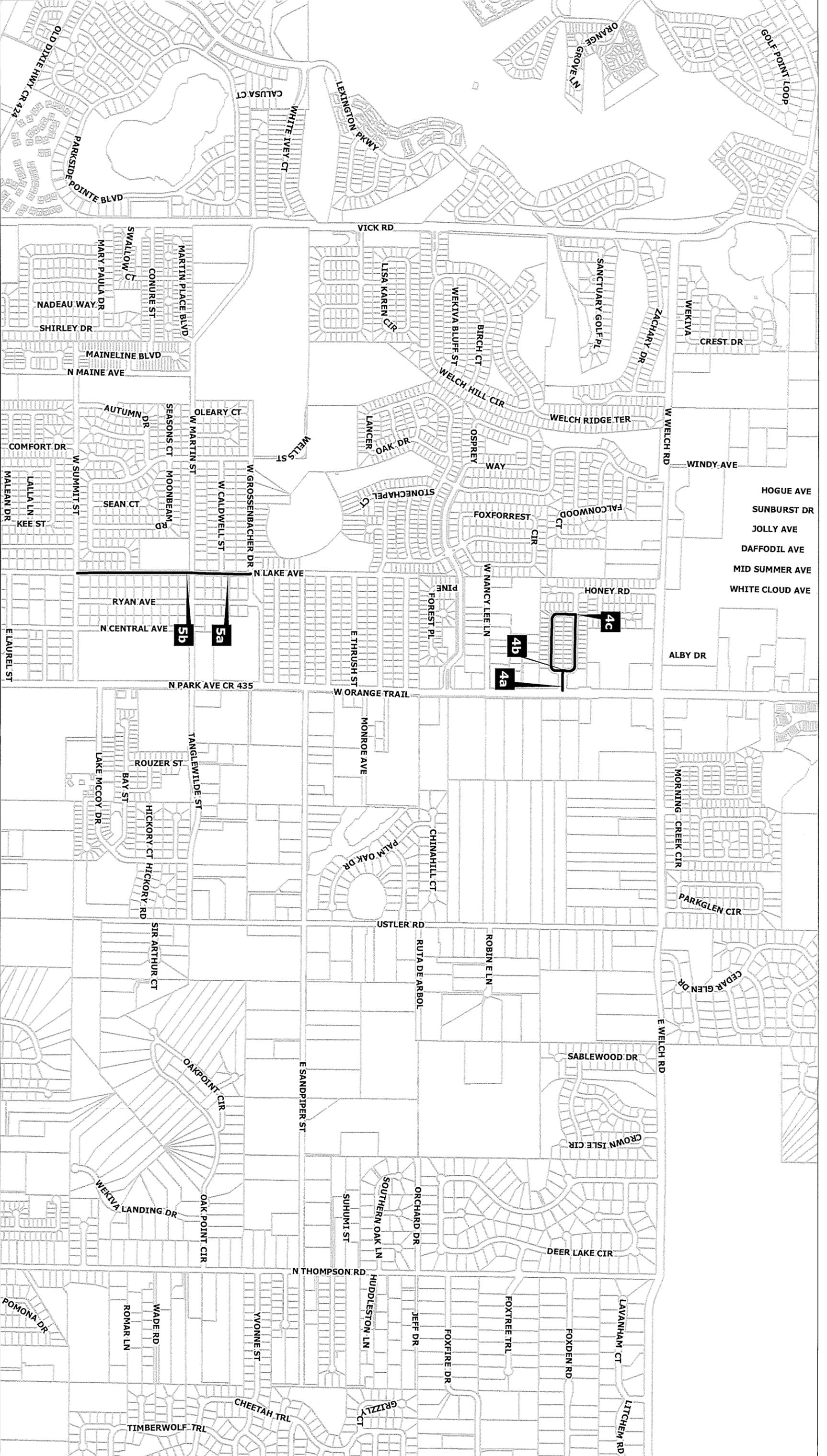
Payment will be made under:

706-3	REFLECTIVE PAVEMENT MARKERS, EA
711-11-121	THERMOPLASTIC, STANDARD, WHITE, SOLID, 6", LF
711-11-123	THERMOPLASTIC, STANDARD, WHITE, SOLID, 12", LF
711-11-125	THERMOPLASTIC, STANDARD, WHITE, SOLID, 24", LF
711-11-170	THERMOPLASTIC, STANDARD, WHITE, ARROW, EA
711-11-221	THERMOPLASTIC, STANDARD, YELLOW, SOLID, 6", LF
711-11-224	THERMOPLASTIC, STANDARD, YELLOW, SOLID 18", LF
711-14-16	THERMOPLASTIC, PERFORMED, WHITE, MESSAGE (SCHOOL-33 S.F.), EA



- 1a = Hawthorne Ave - 7th St to Michael Gladden Blvd (9th St)
- 1b = Hawthorne Ave - Michael Gladden Blvd (9th St) to 10th St
- 2 = Votaw Rd - Park Ave to Christiana St
- 3 = Wekiwa Oaks Dr - Piedmont Wekiwa Rd to 200' west
- Alt A = City Hall Parking Lot
- Alt B = Fran Carton Parking Lot
- Alt C = Police Station Parking Lot





4a = Ashley Blvd - Spring Harbor Subdivision
 4b = Justin Dr - Spring Harbor Subdivision
 4c = Jett Lp - Spring Harbor Subdivision

5a = Lake Ave - Grossenbacher Dr to Martin St
 5b = Lake Ave - Martin St to Summit Dr

