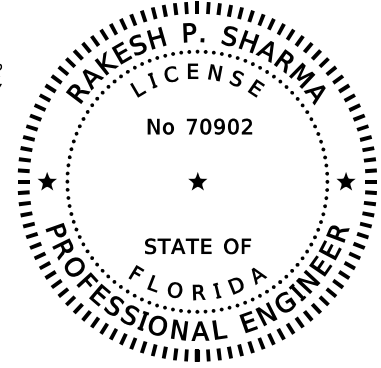


NOTES:
 1. PAY ITEM NUMBERS SHOWN IN THE PLANS ARE PROVIDED ONLY FOR THE PURPOSE OF DESCRIBING THE WORK TO BE PERFORMED. PAY ITEM DESCRIPTIONS ARE FOUND IN THE DEPARTMENT'S BASIS OF ESTIMATES MANUAL.

THIS DOCUMENT HAS BEEN DIGITALLY SIGNED AND SEALED BY:



PRINTED COPIES OF THIS DOCUMENT ARE NOT CONSIDERED SIGNED AND SEALED. THE SIGNATURE MUST BE VERIFIED ON THE ELECTRONIC DOCUMENTS.

HNTB CORPORATION
 610 CRESCENT EXECUTIVE CT, SUITE 400
 LAKE MARY, FL 32746
 CERTIFICATE OF AUTHORIZATION: 6500
 RAKESH P. SHARMA, P.E. NO. 70902

SR 436 (ALTAMONTE DRIVE)

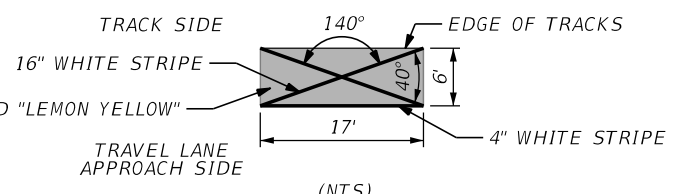
REVISIONS				ENGINEER OF RECORD: RAKESH P. SHARMA P.E. NO.: 70902 HNTB CORPORATION 610 CRESCENT EXECUTIVE COURT SUITE 400, LAKE MARY, FL 32746 (407) 805-0355 CERT. OF AUTH. NO. 6500	STATE OF FLORIDA DEPARTMENT OF TRANSPORTATION			SHEET NO. 13
DATE	DESCRIPTION	DATE	DESCRIPTION		ROAD NO.	COUNTY	FINANCIAL PROJECT ID	
					CFRC	ORANGE / SEMINOLE	427956-1-72-27	

SIGNING AND MARKING PLAN

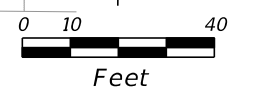
THE OFFICIAL RECORD OF THIS SHEET IS THE ELECTRONIC FILE DIGITALLY SIGNED AND SEALED UNDER RULE 61G15-23.004, F.A.C.

TYPICAL DYNAMIC ENVELOPE SURFACE TREATMENT AREA (SY)

523-1 "LEMON YELLOW" AREA
 711-16-101 4" WHITE THERMO
 711-11-124 16" WHITE THERMO



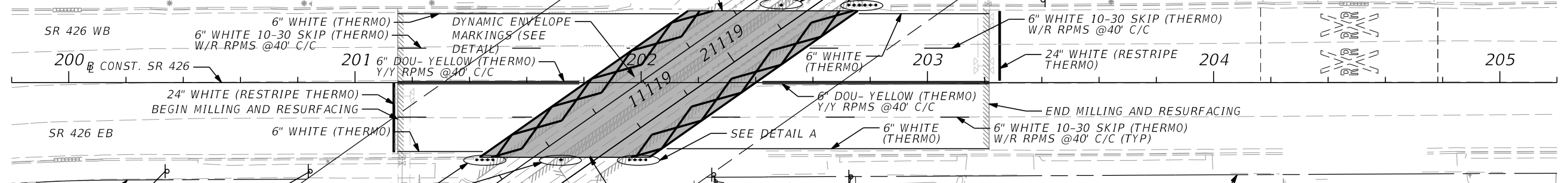
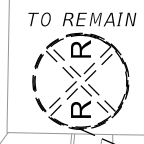
(R08-08)
 MODIFIED
 30" X 36"
 (1 AS) 700-1-11
 STA. 203+20



(R08-08)
 MODIFIED
 30" X 36"
 (1 AS) 700-1-11
 STA. 202+17



(W10-9)
 36" X 36"
 (BY OTHERS)



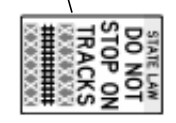
- NOTES:
- COORDINATE WITH THE MAINTAINING AGENCY TO FINALIZE THE DYNAMIC ENVELOPE PAVEMENT MARKING MATERIAL BEFORE BIDDING. THE MATERIAL SHALL BE PER THE TECHNICAL SPECIAL PROVISIONS AND SHALL INCLUDE 16" WHITE, 4" WHITE AND SOLID "LEMON YELLOW" BACKGROUND.
 - EXISTING PAVEMENT MARKINGS AND SIGNS SHALL REMAIN UNLESS OTHERWISE NOTED IN THE PLANS.
 - DYNAMIC ENVELOPE SHALL STRETCH FROM EDGE OF TRAVEL TO EDGE OF TRAVEL.
 - R08-08 (MODIFIED) SIGN DETAIL SHALL BE REQUESTED FROM SUNRAIL BY THE CONTRACTOR.
 - SPACING OF RPMS AND DELINEATORS ALONG THE LEFT AND RIGHT EDGES OF THE DYNAMIC ENVELOPE SHALL BE PER DETAIL A. ORIENTATION OF THE RPMS AND DELINEATORS SHALL BE COORDINATED WITH THE ENGINEER BEFORE INSTALLATION.
 - THE PAVEMENT MARKING MATERIAL WITHIN THE DYNAMIC ENVELOPE SHALL HAVE CUT LINES AT THE ASPHALT INTERFACE WITH THE CONCRETE CROSSING PANELS. MATERIAL IS TO BE APPLIED TO ASPHALT AND CONCRETE SURFACES ONLY. NO MATERIAL IS TO BE APPLIED TO, OR OVER, THE METAL CROSSING PANEL FRAMES, CROSSING PANEL LIFTING HOOKS, RAILROAD TRACK RAILS, ETC.
 - PAY ITEM NUMBERS SHOWN IN THE PLANS ARE PROVIDED ONLY FOR THE PURPOSE OF DESCRIBING THE WORK TO BE PERFORMED. PAY ITEM DESCRIPTIONS ARE FOUND IN THE DEPARTMENT'S BASIS OF ESTIMATES MANUAL.
 - PAY ITEM NOTES:
 711-16-101: INCLUDES 4" SOLID WHITE STRIPE
 711-11-124: INCLUDES 16" SOLID WHITE STRIPE



(R08-08)
 MODIFIED
 30" X 36"
 (1 AS) 700-1-11
 STA. 200+84



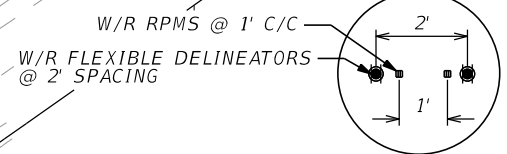
(W10-9)
 36" X 36"
 (BY OTHERS)



(R08-08)
 MODIFIED
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 (1 AS) 700-1-11
 STA. 202+25



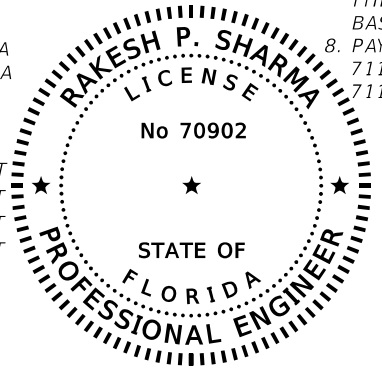
TO BE RELOCATED
 (1 AS) 700-1-50
 STA. 202+73



DELINEATOR WITH W/R RPMS
 DETAIL A (NTS)

201+42 RT	201+72 RT	202+02 RT	202+76 LT
201+44 RT	201+96 RT	202+49 LT	202+78 LT
201+46 RT	201+98 RT	202+72 LT	202+80 LT
201+48 RT	202+00 RT	202+74 LT	202+82 LT

STATION LOCATION FOR DELINEATORS ARE AS FOLLOWS:



HNTB CORPORATION
 610 CRESCENT EXECUTIVE CT, SUITE 400
 LAKE MARY, FL 32746
 CERTIFICATE OF AUTHORIZATION: 6500
 RAKESH P. SHARMA, P.E. NO. 70902

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SR 426 (FAIRBANKS AVENUE)

REVISIONS				ENGINEER OF RECORD: RAKESH P. SHARMA P.E. NO.: 70902 HNTB CORPORATION 610 CRESCENT EXECUTIVE COURT SUITE 400, LAKE MARY, FL 32746 (407) 805-0355 CERT. OF AUTH. NO. 6500	STATE OF FLORIDA DEPARTMENT OF TRANSPORTATION			SHEET NO. 14
DATE	DESCRIPTION	DATE	DESCRIPTION		ROAD NO.	COUNTY	FINANCIAL PROJECT ID	
					CFRC	ORANGE / SEMINOLE	427956-172-27	

THE OFFICIAL RECORD OF THIS SHEET IS THE ELECTRONIC FILE DIGITALLY SIGNED AND SEALED UNDER RULE 61G15-23.004, F.A.C.

January 19, 2018
PREPARED BY: Victor LoPiccolo
Matthew S. Ross, P.E.



SPECIFICATIONS PACKAGE
FINANCIAL PROJECT ID(S): 427956-1-72-27

SUNRAIL QUIET ZONES
CALENDAR DAYS: 135

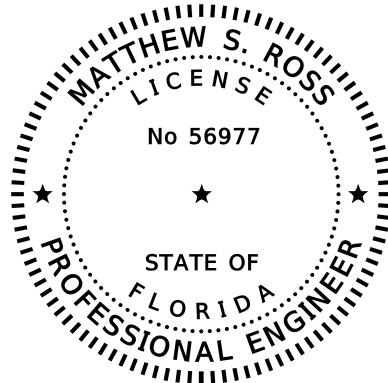
DISTRICT FIVE
ORANGE & SEMINOLE COUNTIES

The January 2018 Edition of the Florida Department of Transportation Standard Specifications is revised as follows:

I hereby certify that this specifications package has been properly prepared by me, or under my responsible charge, in accordance with procedures adopted by the Florida Department of Transportation.

The official record of this package has been electronically signed and sealed using a Digital Signature as required by 61G15-23.004 F.A.C. Printed copies of this document are not considered signed and sealed and the signature must be verified on any electronic copies.

Prepared by: Matthew S. Ross
Date: January 19, 2018
Fla. License No.: 56977
Firm Name: HNTB Corporation
Firm Address: 610 Crescent Executive Ct, Suite 400
City, State, Zip code: Lake Mary, FL 32746
Certificate of Authorization Number: 6500
Page(s): 1-51



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SPECIAL PROVISIONS

DEFINITIONS AND TERMS.

(REV 8-25-17) (1-18)

ARTICLE 1-3. The definition of ‘Contract Documents’ is deleted and replaced by the following:

Contract Documents.

The term “Contract Documents” includes: Advertisement for Proposal, Proposal, Certification as to Publication and Notice of Advertisement for Proposal, Appointment of Agent by Nonresident Contractors, Noncollusion Affidavit, Warranty Concerning Solicitation of the Contract by Others, Resolution of Award of Contract, Executed Form of Contract, Performance Bond and Payment Bond, Specifications, Plans (including revisions thereto issued during construction), Addenda, or other information mailed or otherwise transmitted to the prospective bidders prior to the receipt of bids, work orders and supplemental agreements, work documents, all of which are to be treated as one instrument whether or not set forth at length in the form of contract.

Note: As used in Sections 2 and 3 only, Contract Documents do not include work orders, and supplementary agreements. As used in Section 2 only, Contract Documents also do not include Resolution of Award of Contract, Executed Form of Contract, and Performance and Payment Bond.

ARTICLE 1-3. The definition of ‘Engineer’ is deleted and replaced by the following:

Engineer.

The Director, Office of Maintenance, acting directly or through duly authorized representatives; such representatives acting within the scope of the duties and authority assigned to them.

Note: In order to avoid cumbersome and confusing repetition of expressions in these Specifications, it is provided that whenever anything is, or is to be done, if, as, or, when, or where “acceptable, accepted, approval, approved, authorized, condemned, considered necessary, contemplated, deemed necessary, designated, determined, directed, disapproved, established, given, indicated, insufficient, ordered, permitted, rejected, required, reserved, satisfactory, specified, sufficient, suitable, suspended, unacceptable, or unsatisfactory,” it shall be understood as if the expression were followed by the words “by the Engineer,” “to the Engineer,” or “of the Engineer.”

ARTICLE 1-3. The definition of “Plans” is deleted and replaced by the following:

Plans.

The approved plans, including reproductions thereof, showing the location, character, dimensions, and details of the work.

In this contract, references to “the plans” mean the Department’s Design Standards, and revisions thereto current at the time of contract letting, unless otherwise directed in the Contract Documents. When plans are included as part of this contract, references in this contract to “the plans” mean such plans and the Department’s Design Standards, and revisions thereto current at the time of contract letting, unless otherwise directed in the Contract Documents.

ARTICLE 1-3 is expanded by the following:

Contract Term.

The period of time during which the Contract is in effect.

Contract Term Extension.

An extension of the Contract Term at the Department’s sole discretion. An extension of the Contract Term does not extend Contract Time unless Contract Time is also extended in accordance with these Specifications.

Work Document.

Work Documents identify the location, description, amount of work to be accomplished, and time allotted to complete the work.

PROPOSAL REQUIREMENTS AND CONDITIONS – PREQUALIFICATION OF BIDDERS.

(REV 3-15-16) (1-18)

ARTICLE 2-1 is deleted and the following substituted:

2-1 Contractor Experience.

The Department does not require a Contractor to have a certificate of qualification if bidding Maintenance contracts. Maintenance contracts may require potential bidders to have and document certain experience in the type of work required for the contract. If this requirement is applicable to a contract, detailed experience requirements will be listed in the advertisement and a form will be included with the bid package to document such experience. The form must be fully and accurately completed by the potential bidder and received by the Department before or at the opening of the bids.

A person or affiliate who has been placed on the convicted vendor list following a conviction for a public entity crime may not submit the following:

1. A bid on a Contract to provide any goods or services to a public entity.
2. A bid on a Contract with a public entity for the construction or repair of a public building or public work.
3. Bids on leases of real property to a public entity.

A person or affiliate who has been placed on the convicted vendor list following a conviction for a public entity crime 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 Section 287.017 F.S., for Category Two. All restrictions apply for a period of 36 months from the date of placement on the convicted vendor list.

PROPOSAL REQUIREMENTS AND CONDITIONS - EXAMINATION OF PLANS, SPECIFICATIONS, SPECIAL PROVISIONS, AND SITE OF WORK. (REV 11-3-15) (FA 1-27-16) (1-18)

ARTICLE 2-4 is deleted and the following substituted:

2-4 Examination of Plans, Specifications, Special Provisions, and Site of Work.

Examine the Contract Documents and the site of the proposed work carefully before submitting a Proposal for the work contemplated. Investigate the conditions to be encountered, as to the character, quality, and quantities of work to be performed and materials to be furnished and as to the requirements of all Contract Documents.

Direct all questions to the Department by posting them to the Department's website at the following URL address:

<https://fdotwp1.dot.state.fl.us/BidQuestionsAndAnswers/Proposal.aspx/SearchProposal>.

Questions posted to this site before 5:00 P.M. (EST) on the seventh calendar day prior to the bid opening, or tenth calendar day prior to the December bid opening, will be responded to by the Department. For questions posted after these times, an answer cannot be assured. For all questions posted before the deadline, the Department will provide and post responses at the same website before 8:00 A.M. (EST) on the second calendar day prior to bid opening. Take responsibility to review and be familiar with all questions and responses posted to this website and to make any necessary adjustments in the proposal accordingly. If the Department's web site cannot be accessed, contact District 5 Construction Office by email D5-Bid_Questions@dot.state.fl.us.

When, in the sole judgment of the Department, responses to questions require Plan revisions, Specification revisions and/or addenda, the Contracts Office will issue them as necessary.

The Department does not guarantee the details pertaining to borings, as shown in the Plans, to be more than a general indication of the materials likely to be found adjacent to holes bored at the site of the work, approximately at the locations indicated. The Bidder shall examine boring data, where available, and make their own interpretation of the subsoil investigations and other preliminary data, and shall base their bid solely on their own opinion of the conditions likely to be encountered.

The Bidder's submission of a Proposal is prima facie evidence that the Bidder has made an examination as described in this Article.

**AWARD AND EXECUTION OF CONTRACT - CONSIDERATION OF BIDS
(LUMP SUM).
(REV 8-1-00) (1-18)**

ARTICLE 3-1. The first paragraph is deleted and the following substituted:

For the purpose of award, after opening and reading the Proposals, the Department will consider the total Contract Lump Sum Price as the bid. On this basis, the Department will compare the amounts of each bid and make the results of such comparison available to the public. Until the actual award of the Contract, however, the Department reserves the right to reject any or all Proposals and to waive technical errors that the Department determines, in its sole discretion, to be in the best interest of the State. In the event of any discrepancy in the two entries of the Contract Lump Sum Price, the Department will evaluate the bid based on the lump sum price shown in words.

**AWARD AND EXECUTION OF CONTRACT – AWARD OF CONTRACT.
(REV 4-27-16) (1-18)**

SUBARTICLE 3-2.2 is deleted.

**AWARD AND EXECUTION OF CONTRACT – PUBLIC RECORDS.
(REV 10-17-16) (FA 10-24-16) (1-18)**

ARTICLE 3-9 is expanded by the following:

**IF THE CONTRACTOR HAS QUESTIONS REGARDING THE
APPLICATION OF CHAPTER 119, FLORIDA STATUTES, TO THE
CONTRACTOR'S DUTY TO PROVIDE PUBLIC RECORDS
RELATING TO THIS CONTRACT, CONTACT THE CUSTODIAN
OF PUBLIC RECORDS AT:**

**District 5
386-943-5000
D5precustodian@dot.state.fl.us
Florida Department of Transportation
District 5 – Office of General Counsel
719 South Woodland Boulevard
Deland, FL 32720**

SCOPE OF THE WORK (LUMP SUM).
(REV 6-3-16) (FA 6-9-16) (1-18)

ARTICLE 4-1 is expanded by:

4-1 Intent and Scope.

The Improvements under this Contract consist of The work under this Contract consists of the installation of special striping and signage at SunRail crossings on SR 426 and SR 436.

This is a Lump Sum Contract with only one pay item listed in the Contract.

All references to payment under individual pay item numbers, regardless of where those references are contained in the Contract Documents or when in time any such pay item reference is incorporated in the Contract Documents, are superseded by the pay item references in this Special Provision.

Payment for all work in this Contract will be made under:

Item No. This is a Lump Sum Contract with only one pay item listed in the
Contract Lump Sum Contract - LS

Pay adjustments as shown in the Contract Documents, regardless of where those pay adjustments are referenced, shall not apply, except as provided for in 9-2 Scope of Payments.

SUBARTICLE 4-3.1 is deleted and the following substituted:

4-3.1 General: The Engineer reserves the right to make, at any time prior to or during the progress of the work, alterations or changes, whether a significant change or not, and such alterations in the details of construction, whether a substantial change or not, including but not limited to alterations in the grade or alignment of the road or structure or both, as may be found necessary or desirable by the Engineer. Such alterations or changes shall not constitute a breach of Contract, shall not invalidate the Contract, nor release the Surety from any liability arising out of this Contract or the Surety bond. The Contractor agrees to perform the work, as altered or changed, the same as if it had been a part of the original Contract.

The term “significant change” applies only when the Engineer determines that the character of the work as altered differs materially in kind or nature from that involved or included in the original proposed construction. The allowance due to the Contractor will be in accordance with 4-3.2, below.

In the instance of an alleged “significant change”, the determination by the Engineer shall be conclusive and shall not be subject to challenge by the Contractor in any forum, except upon the Contractor establishing by clear and convincing proof that the determination by the Engineer was without any reasonable and good-faith basis.

SUBARTICLE 4-3.4 is deleted and the following substituted:

4-3.4 Conditions Requiring a Supplemental Agreement or Unilateral

Payment: A Supplemental Agreement or Unilateral Payment will be used to clarify the Plans and Specifications of the Contract; to provide for Unforeseen Work, grade changes,

or alterations in Plans which could not reasonably have been contemplated or foreseen in the Original Plans and Specifications; to change the limits of construction to meet field conditions; to provide a safe and functional connection to an existing pavement; to settle documented Contract claims; to make the project functionally operational in accordance with the intent of the original Contract and subsequent amendments thereto.

SUBARTICLE 4-3.9.4 is deleted and the following substituted:

4-3.9.4 Processing Procedures: Submit Proposals to the Engineer or his duly authorized representative. The Department will process Proposals expeditiously; however, the Department is not liable for any delay in acting upon a Proposal submitted pursuant to this Subarticle. The Contractor may withdraw, in whole or in part, a Proposal not accepted by the Department within the period specified in the Proposal. The Department is not liable for any Proposal development cost in the case where the Department rejects or the Contractor withdraws a Proposal.

The Engineer is the sole judge of the acceptability of a Proposal and of the estimated net savings in construction costs from the adoption of all or any part of such Proposal.

Prior to approval, the Engineer may modify a Proposal, with the concurrence of the Contractor, to make it acceptable. If any modification increases or decreases the net savings resulting from the Proposal, the Department will determine the Contractor's fair share upon the basis of the Proposal as modified. The Department will compute the net savings by subtracting the revised total cost affected by the Proposal from the total cost as represented in the original Contract.

Prior to approval of the Proposal that initiates the supplemental agreement, submit acceptable Contract-quality plan sheets revised to show all details consistent with the Proposal design.

CONTROL OF THE WORK (LUMP SUM). (REV 3-15-02) (1-18)

SUBARTICLE 5-1.1 is expanded by the following:

All reference to separate payment for individual items of work will not apply. The cost for various items of work will be included and paid for under the Contract Lump Sum Price.

ARTICLE 5-2. The first paragraph is deleted and the following substituted:

These Specifications, the Plans, Special Provisions, and all supplementary documents are integral parts of the Contract; a requirement occurring in one is as binding as though occurring in all. In addition to the work and materials specifically called for in the Contract Documents and any additional incidental work, not specifically mentioned,

when so shown in the Plans, or if indicated, or obvious and apparent, as being necessary for the proper completion of the work will be included in the Contract Lump Sum Price.

SUBARTICLE 5-7.6 is deleted.

**CONTROL OF MATERIALS – ACCEPTANCE CRITERIA (LUMP SUM).
(REV 8-17-09) (FA 8-24-09) (1-18)**

ARTICLE 6-1 is expanded by the following new Subarticles:

6-1.3.3 Lump Sum Project General Requirements: Material is accepted by material sampling and testing requirements for the following work activities: earthwork and related operations, base courses, hot bituminous mixtures, portland cement concrete, and reinforcing steel as stated in 105-2. Fabricated metal acceptance will be in accordance with 105-1.2.3. All other material acceptance will be in accordance with 6-1.

6-1.3.4 Certification on Approved Product List (APL) Products: Submit to the Engineer a notarized manufacturer’s certification on each APL product that will be incorporated in the project. Submit the certification prior to utilization of the material on the project. Each certification will have the manufacturer letterhead, product name, batch number, FPID, Contract Number, category, county, title of certification person and test results in each product listed in the Department Specification. This letter will also provide the following statement: “This product meets the material specifications as provided in the Contract Documents.” Ensure that the date of the manufacturer’s certification is current to the shelf life of the product. This letter will be delivered to the jobsite prior to placement or utilization. Retain test results for a minimum of three years.

6-1.3.5 Certification on all Other Materials Not Specified: Submit to the Engineer a notarized manufacturer’s certification on each product that will be incorporated in the project. Submit the certification prior to utilization on the project. Each certification will have the manufacturer letterhead, identification and type of material, FPID, Contract Number, county, test results of the material and notarized signature from the manufacturer. This letter will also provide the following statement: “This product meets the material specifications as provided in the Contract Documents.” Ensure that the date of the manufacturer’s certification is current to the shelf life of the product. Retain test results for a minimum of three years.

**LEGAL REQUIREMENTS AND RESPONSIBILITY TO THE PUBLIC –
PRESERVATION OF EXISTING PROPERTY - OPERATIONS WITHIN THE
RAILROAD RIGHT-OF-WAY.**

(REV 3-11-16) (FA 8-2-16) (1-18)

SUBARTICLE 7-11.4 is deleted and the following substituted:

7-11.4 Operations Within Railroad Right-of-Way:

7-11.4.1 Notification to the Railroad Company:

7-11.4.1.1 CSX Transportation (CSXT), Norfolk Southern (NS), and Department-Owned Rail Corridors: Submit written notification to the Engineer at least 72 hours before beginning any operation within the limits of the railroad right-of-way; any operation requiring movement of employees, trucks, or other equipment across the tracks of the railroad company at other than an established public crossing; and any other work that may affect railroad operations or property.

7-11.4.1.2 Florida East Coast Railway (FEC): Submit written notification to the Chief FEC Engineer or authorized Railway Representative at least 72 hours before beginning any operation within the limits of the railroad right-of-way; any operation requiring movement of employees, trucks, or other equipment across the tracks of the railroad company at other than an established public crossing; and any other work that may affect railroad operations or property.

Contact the FEC Signal Office at 904-279-3182 at least 30 days prior to any traffic signal work within 500 feet of a signalized, at-grade, rail-highway crossing.

7-11.4.2 Contractor's Responsibilities: Comply with requirements deemed necessary by the railroad company's authorized representative to safeguard the railroad's property and operations. Do not perform temporary lane closures, lane shifts or detour routes within the railroad company right-of-way without railroad approval.

The Contractor is responsible for all damages, delays, or injuries and all suits, actions, or claims brought on account of damages or injuries resulting from the Contractor's operations within or adjacent to railroad company right-of-way.

7-11.4.2.1 CSXT: Comply with the Construction Submission Criteria of the CSXT Public Project Information document and Construction Requirements sections of the CSXT Pipeline and Wireline Design and Construction Specifications prior to beginning work. These documents are available at the following URL: <http://www.fdot.gov/programmanagement/Implemented/URLinSpecs/CSXT.shtm>.

Perform no work within the limits of the railroad right-of-way on CSXT holidays. CSXT holidays are New Year's Day, President's Day, Good Friday, Memorial Day, Independence Day, Labor Day, Thanksgiving Day and the following Friday, Christmas Eve, Christmas Day, and New Year's Eve. Holidays falling on Saturday are observed on Friday and those falling on Sunday are observed on Monday.

7-11.4.2.2 NS: Comply with the NS Special Provisions for Protection of Railway Interests (Appendix E) and the Construction Requirements (Appendix 4.3) of the NS Public Projects Manual document prior to beginning and during all work. These documents are available at the following URL:

http://www.nscorp.com/content/dam/nscorp/ship/shipping-tools/Public_Projects_Manual.pdf.

7-11.4.2.3 FEC: Complete the On-Track Contractor Roadway Worker Training Course for FEC Railway. Contact FEC Railway at 1-800-342-1131 for training information.

Costs incurred by the railroad for Contractor caused delays that adversely impact railway operations will be forwarded to the Contractor for payment. If the Contractor fails to pay said costs, the Department will deduct the amount from payments to be made to the Contractor.

7-11.4.3 Watchman or Flagging Services:

7-11.4.3.1 CSXT, NS, and FEC:

7-11.4.3.1.1 General: The railroad company will furnish protective services (i.e., watchman or flagging services) to ensure the safety of railroad operations during certain periods of the project. The Department will reimburse the railroad company for the cost thereof. Schedule work that affects railroad operations so as to minimize the need for protective services by the railroad company.

7-11.4.3.1.2 CSXT: Submit schedules and schedule changes to the Engineer so the Department can coordinate the scheduling of flagging resources. Projects with less than 20 consecutive days of flagging services require a CSXT short-term flagger and 45 days written advance notice. Submit the 45 days written advance notice to the Engineer. Projects with 20 or more consecutive days of flagging services require a CSXT long term flagger. The Department will submit the 6 months written advance notice to CSXT.

7-11.4.3.1.3 NS: Submit schedules and schedule changes to the Engineer so the Department can coordinate the scheduling of flagging resources. Projects with less than 20 consecutive days of flagging services require a NS short-term flagger and 45 days written advance notice. Submit the 45 days written advance notice to the Engineer. Projects with 20 or more consecutive days of flagging services require a NS long term flagger. The Department will submit the 6 months written advance notice to NS.

7-11.4.3.1.4 FEC: Contact FEC Railway at 1-800-342-1131, ext. 2377, to request signal locates and railroad watchmen or flagging services at least 72 hours prior to railroad right-of-way encroachments. When requesting railroad watchman or flagging services, identify the work as a Florida Department of Transportation project.

7-11.4.3.2 Department-Owned Rail Corridors: The Department will furnish protective services (i.e., watchman or flagging services) to ensure the safety of railroad operations during certain periods of the project.

For projects involving the South Florida Rail Corridor (SFRC), contact the South Florida Regional Transportation Authority (SFRTA) at 954-788-1788 at least 30 days prior to rail corridor right-of-way encroachments to coordinate the scheduling of flagging resources.

For projects involving the Central Florida Rail Corridor (CFRC), submit written advance notice to the Engineer at least 30 days prior to rail corridor right-of-way encroachments so the Department can coordinate the scheduling of flagging resources.

**LEGAL REQUIREMENTS AND RESPONSIBILITY TO THE PUBLIC –
PRESERVATION OF EXISTING PROPERTY – UTILITIES - UTILITY
ADJUSTMENTS (NO UTILITY WORK SCHEDULE).**

(REV 2-10-94) (1-18)

SUBARTICLE 7-11.5.3 is expanded by the following:

For this project, no utility work involving facilities owned by other agencies is anticipated.

**LEGAL REQUIREMENTS AND RESPONSIBILITY TO THE PUBLIC –
CONTRACTOR’S RESPONSIBILITY FOR WORK.**

(REV 5-27-15) (1-18)

Article 7-14 is deleted and the following substituted:

7-14 Contractor’s Responsibility for Work.

Until the Department’s acceptance of the work, take charge and custody of the work, and take every necessary precaution against injury or damage to the work by the action of the elements or from any other cause whatsoever, arising either from the execution or from the nonexecution of the work. Rebuild, repair, restore, and make good, without additional expense to the Department, all injury or damage to any portion of the work occasioned by any of the above causes before its completion and acceptance, except that in case of extensive or catastrophic damage, the Department may, at its discretion, reimburse the Contractor for the repair of such damage due to unforeseeable causes beyond the control of and without the fault or negligence of the Contractor, including but not restricted to Acts of God, of the public enemy, or of governmental authorities.

**LEGAL REQUIREMENTS AND RESPONSIBILITY TO THE PUBLIC - EQUAL
EMPLOYMENT OPPORTUNITY REQUIREMENTS.**

(REV 4-25-02) (FA 7-17-02) (1-18)

SECTION 7 is expanded by the following:

7-27 Equal Employment Opportunity Requirements.

7-27.1 Equal Employment Opportunity Policy: Accept as the operating policy, the following statement which is designed to further the provision of equal employment opportunity to all persons without regard to their age, race, color, religion, national origin, sex, or disability and to promote the full realization of equal employment opportunity through a positive continuing program:

“It is the policy of this Company to assure that applicants are employed, and that employees are treated during employment, without regard to their age, race, religion, color, national origin, sex, or disability. Such action must include: employment, upgrading, demotion, or transfer; recruitment or recruitment advertising; layoff or termination; rates of pay or other forms of compensation; and selection for training, including apprenticeship, preapprenticeship, and/or on-the-job training.”

7-27.2 Equal Employment Opportunity Officer: Designate and make known to the Department’s contracting officers an equal employment opportunity officer (hereinafter referred to as the EEO Officer) who must be capable of effectively administering and promoting an active Contractor program employment opportunity and who must be assigned adequate authority and responsibility to do so.

7-27.3 Dissemination of Policy: All members of the Contractor’s staff who are authorized to hire, supervise, promote, and discharge employees, or who recommend such action, or who are substantially involved in such action, will be made fully cognizant of, and will implement, the Contractor’s equal employment opportunity policy and contractual responsibilities.

7-27.4 Recruitment: When advertising for employees, include in all advertisements for employees the notation “An Equal Opportunity Employer”.

7-27.5 Personnel Actions: Establish and administer wages, working conditions, employee benefits, and personnel actions of every type, including hiring, upgrading, promotion, transfer, demotion, layoff, and termination without regard to age, race, color, religion, national origin, sex, or disability.

Follow the following procedures:

(1) Conduct periodic inspections of project sites to insure that working conditions and employee facilities do not indicate discriminatory treatment of project site personnel.

(2) Periodically evaluate the spread of wages paid with each classification to determine any evidence of discriminatory wage practices.

(3) Periodically review selected personnel actions in depth to determine whether there is evidence of discrimination. Where evidence is found, promptly take corrective action. If the review indicates that the discrimination may extend beyond the actions reviewed, such corrective action must include all affected persons.

(4) Investigate all complaints of alleged discrimination made in connection with obligations under this Contract, attempt to resolve such complaints, and take appropriate corrective action. If the investigation indicates that the discrimination may affect persons other than the complainant, such corrective action must include such other persons. Upon completion of each investigation inform every complainant of all of the avenues of appeal.

7-27.6 Subcontracting: Use the best efforts to ensure subcontractor compliance with their equal employment opportunity policy.

7-27.7 Records and Reports: Keep such records as are necessary to determine compliance with the equal employment opportunity obligations. The records kept will be designed to indicate the following:

(1) The number of minority and nonminority group members employed in each work classification on the project.

(2) The progress and efforts being made in cooperation with unions to increase minority group employment opportunities (applicable only to Contractors who rely in whole or in part on unions as a source of their work force).

(3) The progress and efforts being made in locating, hiring, training, qualifying, and upgrading minority group employees as deemed appropriate to comply with their Equal Employment Opportunity Policy.

(4) The progress and efforts being made in securing the services of minority group subcontractors or subcontractors with meaningful minority group representation among their employees as deemed appropriate to comply with their Equal Employment Opportunity Policy.

All such records must be retained for a period of three years following completion of the contract work and be available at reasonable times and places for inspection by authorized representatives to the Department and the Federal Highway Administration.

Upon request, submit to the Department a report of the number of minority and nonminority group employees currently engaged in each work classification required by the Contract work.

LEGAL REQUIREMENTS AND RESPONSIBILITY TO THE PUBLIC – E-VERIFY.

(REV 6-13-11) (FA 6-16-11) (1-18)

SECTION 7 is expanded by the following new Article:

7-29 E-Verify.

The Contractor shall utilize the U.S. Department of Homeland Security's E-Verify system to verify the employment eligibility of all new employees hired by the Contractor during the term of the Contract and shall expressly require any subcontractors performing work or providing services pursuant to the Contract to likewise utilize the U.S. Department of Homeland Security's E-Verify system to verify the employment eligibility of all new employees hired by the subcontractor during the Contract term.

PROSECUTION AND PROGRESS – SUBLETTING OR ASSIGNING OF CONTRACTS.

(REV 10-8-15) (1-18)

ARTICLE 8-1 is deleted and the following substituted:

8-1 Subletting or Assigning of Contracts.

Do not sell, transfer, assign or otherwise dispose of the Contract or Contracts or any portion thereof, or of any right, title, or interest therein, without written consent of the Department. If the Contractor chooses to sublet any portion of the Contract, the Contractor must provide a written request to sublet work on the Certification of Sublet

Work form developed by the Department for this purpose. With the Engineer's acceptance of the request, the Contractor may sublet a portion of the work. The Certification of Sublet Work request will be deemed acceptable to the Department, for purposes of the Department's consent, unless the Engineer notifies the Contractor within 5 business days of receipt of the Certification of Sublet Work that the Department is not consenting to the request.

Include in the total Contract amount the cost of materials and manufactured component products, and their transportation to the project site. For the purpose of meeting this requirement, the Department will not consider off-site commercial production of materials and manufactured component products that the Contractor purchases, or their transportation to the project, as subcontracted work.

Execute all agreements to sublet work in writing and include all pertinent provisions, specifications and requirements of the Contract. Upon request, furnish the Department with a copy of the subcontract. The subletting of work does not relieve the Contractor or the surety of their respective responsibilities and liabilities under the Contract and Contract Bond.

The Department recognizes a subcontractor only in the capacity of an employee or agent of the Contractor, and the Engineer may require the Contractor to remove the subcontractor as in the case of an employee.

PROSECUTION AND PROGRESS.

(REV. 5-18-17) (1-18)

ARTICLE 8-2 is deleted and replaced by the following:

8-2 Work Performed by Equipment Rental Agreement.

Rental agreements will not be considered subcontracts.

SUBARTICLE 8-3.2 is deleted.

SUBARTICLE 8-3.3, the last sentence has been deleted and the following substituted:

The Department will issue the Notice to Proceed within 20 days, excluding Saturdays, Sundays and Holidays, after the Department's execution of the Contract.

SUBARTICLE 8-3.5 is deleted and the following substituted:

8-3.5 Preconstruction Conference: Immediately after executing the Contract but before the Contractor begins work, the Engineer will call a pre-work conference at a location the Engineer designates to go over the work required by the Contract. Attend this

meeting, along with the Department and any utility companies that will be involved with the work.

PROSECUTION AND PROGRESS - PROSECUTION OF WORK – PROVISIONS FOR CONVENIENCE OF PUBLIC.

(REV 8-16-17) (1-18)

SUBARTICLE 8-3.4 is deleted and the following substituted:

8-3.4 Provisions for Convenience of Public: Schedule construction operations so as to minimize any inconvenience to adjacent businesses or residences. Where necessary, the Engineer may require the Contractor to first construct the work in any areas along the project where inconveniences caused by construction operations would present a more serious handicap. In such critical locations, where there is no assurance of continuous effective prosecution of the work once the construction operations are begun, the Engineer may require the Contractor to delay removal of the existing (usable) facilities.

Maintain ADA compliant pedestrian access to transit facilities and ensure transit facilities remain operational throughout the project. At least one week before the start of work that impacts a transit facility, notify the transit agency indicated in the Plans.

PROSECUTION AND PROGRESS –DISPUTES REVIEW BOARD.

(REV 8-3-10) (1-18)

ARTICLE 8-3 is expanded by the following new Subarticle:

8-3.7 Maintenance Disputes Review Board: For this Maintenance Contract, a Maintenance Disputes Review Board will be available to assist in the resolution of disputes and claims arising out of the work on the Contract.

8-3.7.1 Purpose: The Board will provide special expertise to assist in and facilitate the timely and equitable resolution of disputes, claims, and controversies between the Department and the Contractor in an effort to avoid contract delay and future claims.

It is not intended that the Department or the Contractor default on their normal responsibility to cooperatively and fairly settle their differences by indiscriminately assigning them to the Board. It is intended that the Board encourage the Department and Contractor to resolve potential disputes without resorting to this alternative resolution procedure.

The Board will be used when normal Department-Contractor dispute resolution is unsuccessful. Either the Department or the Contractor may refer a dispute to the Board. Referral to the Board should be initiated as soon as it appears that the normal dispute resolution effort is not succeeding. It is a condition of this Contract

that the parties shall use the Maintenance Dispute Review Board. The Department and the Contractor agree that the submission of any unresolved dispute or claim to the Board is a condition precedent to the Department or the Contractor having the right to proceed to arbitration or litigation of such unresolved dispute or claim. The Department's Claim Review Committee will not entertain any issues on this project.

The recommendations of the Board will not be binding on either the Department or the Contractor.

The Board will fairly and impartially and without regard to how or by whom they may have been appointed, consider disputes referred to it and will provide written recommendations to the Department and Contractor to assist in the resolution of these disputes.

8-3.7.2 Continuance of Work During Dispute: During the course of the Maintenance Disputes Review Board process, the Contractor will continue with the work as directed by the Engineer in a diligent manner and without delay or otherwise conform to the Engineer's decision or order, and will be governed by all applicable provisions of the Contract. Throughout any protested work, the Contractor will keep complete records of extra costs and time incurred. The Contractor will permit the Engineer and Board access to these and any other records needed for evaluating the dispute.

8-3.7.3 Membership: The Maintenance Disputes Review Board will consist of the same members as established for the "Regional Disputes Review Board", pre-selected by the Department and the President of the Florida Transportation Builders' Association (FTBA), and posted on the Department's Website.

If during the life of the contract, a Board member has a discussion regarding employment or enter into any agreement for employment after completion of the contract with the Department, the Contractor or any subcontractor or supplier on the project, he/she shall immediately disclose this to the Contractor and the Department and shall be disqualified from serving on the Board.

Once established, the Board will remain active and in full force and effect. If, after the Department has made final acceptance of the project, there are unresolved disputes and claims remaining, the Maintenance Disputes Review Board shall remain active and in full force and effect until the project is otherwise administratively closed by the Department following final payment so that the Board may continue in operation until all unresolved disputes and claims are resolved.

8-3.7.4 Procedure and Schedules for Disputes Resolution: Disputes will be considered as quickly as possible, taking into consideration the particular circumstances and the time required to prepare detailed documentation. Steps may be omitted as agreed by the Department and the Contractor and the time periods stated below may be shortened in order to hasten resolution.

a. If the Contractor objects to any decision, action or order of the Engineer, the Contractor may file a written protest with the Engineer, stating clearly and in detail the basis for the objection, within 15 days after the event.

b. The Engineer will consider the written protest and make his decision on the basis of the pertinent contract provisions, together with the facts and circumstances involved in the dispute. The Engineer's decision will be furnished in writing to the Contractor within 15 days after receipt of the Contractor's written protest.

c. This decision will be final and conclusive on the subject, unless a written appeal to the Engineer is filed by the Contractor within 15 days of receiving the decision. Should the Contractor preserve its protest of the Engineer's decision, the matter can be referred to the Board by either the Department or the Contractor.

d. Upon receipt by the Board of a written duly preserved protest of a dispute, either from the Department or the Contractor, it will first be decided when to conduct the hearing.

e. Either party furnishing any written evidence or documentation to the Board will furnish copies of such information to the other party a minimum of 15 days prior to the date the Board sets to convene the hearing for the dispute. If the Board requests any additional documentation or evidence prior to, during, or after the hearing, the Department and/or Contractor will provide the requested information to the Board and to the other party.

f. The Contractor and the Department will each be afforded an opportunity to be heard by the Board and to offer evidence. Neither the Department nor the Contractor may present information at the hearing that was not previously distributed to both the Board and the other party.

g. The Board's recommendations for resolution of the dispute will be given in writing to both the Department and the Contractor, within 15 days of completion of the hearings. In cases of extreme complexity, both parties may agree to allow additional time for the Board to formulate its recommendations. The Board will focus its attention in the written report to matters of entitlement and allow the parties to determine the monetary damages. If both parties' request and sufficient documentation is available, the Board may make a recommendation of monetary damages.

h. Within 15 days of receiving the Board's recommendations, both the Department and the Contractor will respond to the other and to the Board in writing, signifying either acceptance or rejection of the Board's recommendations. The failure of either party to respond within the 15 day period will be deemed an acceptance of the Board's recommendations by that party. If the Department and the Contractor are able to resolve the dispute with or without the aid of the Board's recommendations, the Department will promptly process any required Contract changes.

i. Should the dispute remain unresolved, either party may seek reconsideration of the decision by the Board only when there is new evidence to present. No provisions in this Specification will abrogate the Contractor's responsibility for preserving a claim filed in accordance with 5-12.

Although both the Department and the Contractor should place great weight on the Board's recommendation, it is not binding. If the Board's recommendations do not resolve the dispute, all records and written recommendations of the Board will be admissible as evidence in any subsequent dispute resolution procedures.

8-3.7.5 Contractor Responsibility: The Contractor shall furnish to each Board member a set of all pertinent documents which are or may become necessary for the Board, except documents furnished by the Department, to perform their function. Pertinent documents are any drawings or sketches, calculations, procedures, schedules, estimates, or other documents which are used in the performance of the work or in

justifying or substantiating the Contractor's position. A copy of such pertinent documents must also be furnished to the Department.

Except for its participation in the Board's activities as provided in the maintenance Contract and in this Agreement, the Contractor will not solicit advice or consultation from the Board or any of its members on matters dealing in any way with the project, the conduct of the work or resolution of problems.

8-3.7.6 Department Responsibilities: Except for its participation in the Board's activities as provided in the maintenance Contract and in this Agreement, the Department will not solicit advice or consultation from the Board or any of its members on matters dealing in any way with the project, the conduct of the work or resolution of problems.

The Department shall furnish the following services and items:

a. Contract Related Documents: The Department shall furnish each Board member a copy of all Contract Documents, supplemental agreements, written instructions issued by the Department to the Contractor, or other documents pertinent to the performance of the Contract and necessary for the Board to perform their function. A copy of such pertinent documents must also be furnished to the Contractor.

b. Coordination and Services: The Department, in cooperation with the Contractor, will coordinate the operations of the Board. The Department, through the Engineer, will arrange or provide conference facilities at or near the Contract site and provide secretarial and copying services.

8-3.7.7 Payment: A per hearing cost of \$8,000.00 has been established by the Department to provide compensation for all members of the Maintenance Disputes Review Board. For each hearing, the Contractor shall compensate the Maintenance Disputes Review Board chairman the sum of \$3,000.00, and the remaining two members will receive \$2,500.00 each. Such payment will be full compensation to the Board member for salary and all travel expenses (air fare, rental or personal automobile, motel room, meals, etc.) related to membership on the Board. The Department will reimburse the Contractor for Board expenses incurred if the findings of the Board are in favor of the Contractor. If the findings are in favor of the Department the Department will not reimburse the Contractor for Board expenses incurred. If the Board rules on multiple issues during a single hearing, Department reimbursement to the Contractor is based on ratio of findings (e.g., if Board hears four issues, regardless of importance or value, and rules favorably for the Contractor on three of them, the Department reimburses Contractor for 75% of Board costs).

The Department will pay all other non-salary and non-travel expenses related to operation of the Board. The Department will prepare and mail minutes and progress reports, will provide administrative services, such as conference facilities and secretarial services, and will bear the cost of these services. If the Board desires special services, such as legal consultation, accounting, data research, and the like, both parties must agree, and the costs will be shared by them as mutually agreed. Payment for non-salary and non-travel expenses and the Department's share of special services shall be made by the Engineer in accordance with Department policy outside of this Contract.

PROSECUTION AND PROGRESS (LUMP SUM).
(REV 8-1-00) (1-18)

SUBARTICLE 8-4.1. The fifth paragraph is deleted.

SUBARTICLE 8-7.3.1 is deleted and the following substituted:

8-7.3.1 Increased Work: The Department may grant an extension of Contract Time when it increases the Contract amount due to adding new work or providing for unforeseen work. The Department will base the consideration for granting an extension of Contract Time on the extent that the time normally required to complete the additional designated work delays the Contract completion schedule.

PROSECUTION AND PROGRESS - EQUIPMENT.
(REV 3-2-17) (1-18)

ARTICLE 8-4 is expanded by the addition of the following new Subarticle:

8-4.10 Equipment: Equip vehicles and mobile equipment used on the project with a minimum of one class 2 amber or white flashing light that meets the Society of Automotive Engineers recommended practice SAE J845 and SAE J1318. The Engineer may require a white flashing light meeting the above requirements when conditions reduce the effectiveness of amber light (i.e., at night under high intensity discharge lights such as sodium vapor).

Ensure all equipment safety devices recommended by the manufacturer are installed and properly maintained.

Park vehicles and equipment not in use or left on the right-of-way overnight as close as possible to the right-of-way line and always outside of the applicable clear zone. Conduct service and supply operations as close to the right-of-way line as possible. Do not park equipment in the median, regardless of the width of the median, unless movement from the work area is determined by the Engineer to be prohibitive.

SUBARTICLE 8-5 is expanded by the following:

All persons employed by the Contractor or Subcontractors working within the Department's right-of-way must have Tier 1 Illicit Discharge Detection and Elimination (IDDE) training. The computer based training is provided by video on the following web page: <http://wbt.dot.state.fl.us/ois/EnvironmentalManagementOffice/index.html>.

Provide a list of persons trained prior to submittal of the first invoice. Provide an updated list of new Contractor/Subcontractor employees annually thereafter.

PROSECUTION AND PROGRESS – CONTRACT TIME AND TERM EXTENSIONS.

(REV 8-25-17) (1-18)

SUBARTICLE 8-7.3.2 is deleted and the following substituted:

8-7.3.2 Contract Time Extensions: The Department may grant an extension of Contract Time when a controlling item of work is delayed by factors not reasonably anticipated or foreseeable at the time of bid. The Department may allow such extension of time only for delays occurring during the Contract Time period or authorized extensions of the Contract Time period. When failure by the Department to fulfill an obligation under the Contract results in delays to the controlling items of work, the Department will consider such delays as a basis for granting a time extension to the Contract.

Whenever the Engineer suspends the Contractor's operations, as provided in 8-6, for reasons other than the fault of the Contractor, the Engineer will grant a time extension for any delay to a controlling item of work due to such suspension. The Department will not grant time extensions to the Contract for delays due to the fault or negligence of the Contractor.

The Contractor must continually monitor the effects of weather. When a controlling item of work is delayed by the effects of rains or other inclement weather, the Contractor may submit a request for an extension of contract time to the Engineer due to the weather related delay. Requests must be submitted no later than 10 calendar days after the work was originally scheduled to be completed. Upon timely receipt of the request of Contract Time extension from the Contractor for weather related delays, the Engineer will investigate the conditions, and if found justifiable, the Engineer will grant the time extension within five calendar days of receipt of the request.

The Department will grant time extensions, on a day for day basis, for delays caused by the effects of rains or other inclement weather conditions, related adverse soil conditions or suspension of operations as defined in 8-6.4 that prevent the Contractor from productively performing controlling items of work resulting in:

(1) The Contractor being unable to work at least 50% of the normal work day on pre-determined controlling work items; or

(2) The Contractor must make major repairs to work damaged by weather, provided that the damage is not attributable to the Contractor's failure to perform or neglect; and provided that the Contractor was unable to work at least 50% of the normal workday on pre-determined controlling work items.

No additional compensation will be made for delays caused by the effects of inclement weather.

The Department will consider the delays in delivery of materials or component equipment that affect progress on a controlling item of work as a basis for granting a time extension if such delays are beyond the control of the Contractor or supplier. Such delays may include an area-wide shortage, an industry-wide strike, or a natural disaster that affects all feasible sources of supply. In such cases, the Contractor shall furnish substantiating letters from a representative number of manufacturers of such

materials or equipment clearly confirming that the delays in delivery were the result of an area-wide shortage, an industry-wide strike, etc. No additional compensation will be made for delays caused by delivery of materials or component equipment.

The Department will not consider requests for time extension due to delay in the delivery of custom manufactured equipment such as traffic signal equipment, highway lighting equipment, etc., unless the Contractor furnishes documentation that he placed the order for such equipment in a timely manner, the delay was caused by factors beyond the manufacturer's control, and the lack of such equipment caused a delay in progress on a controlling item of work. No additional compensation will be paid for delays caused by delivery of custom manufactured equipment.

The Department will consider the effect of utility relocation and adjustment work on job progress as the basis for granting a time extension only if all the following criteria are met:

(1) Delays are the result of either utility work that was not detailed in the plans, or utility work that was detailed in the plans but was not accomplished in reasonably close accordance with the schedule included in the Contract Documents.

(2) Utility work actually affected progress toward completion of controlling work items.

(3) The Contractor took all reasonable measures to minimize the effect of utility work on job progress, including cooperative scheduling of the Contractor's operations with the scheduled utility work at the preconstruction conference and providing adequate advance notification to utility companies as to the dates to coordinate their operations with the Contractor's operations to avoid delays.

As a condition precedent to an extension of Contract Time the Contractor must submit to the Engineer:

A preliminary request for an extension of Contract Time must be made in writing to the Engineer within ten calendar days after the commencement of a delay to a controlling item of work. If the Contractor fails to submit this required preliminary request for an extension of Contract Time, the Contractor fully, completely, absolutely and irrevocably waives any entitlement to an extension of Contract Time for that delay. In the case of a continuing delay only a single preliminary request for an extension of Contract Time will be required. Each such preliminary request for an extension of Contract Time shall include as a minimum the commencement date of the delay, the cause of the delay, and the controlling item of work affected by the delay.

Furthermore, the Contractor must submit to the Engineer a request for a Contract Time extension in writing within 30 days after the elimination of the delay to the controlling item of work identified in the preliminary request for an extension of Contract Time. Each request for a Contract Time extension shall include as a minimum all documentation that the Contractor wishes the Department to consider related to the delay, and the exact number of days requested to be added to Contract Time. If the Contractor contends that the delay is compensable, then the Contractor shall also be required to submit with the request for a Contract Time extension a detailed cost analysis of the requested additional compensation. If the Contractor fails to submit this required request for a Contract Time extension, with or without a detailed cost analysis, depriving the Engineer of the timely opportunity to verify the delay and the costs of the delay, the

Contractor waives any entitlement to an extension of Contract Time or additional compensation for the delay.

Upon timely receipt of the preliminary request of Contract Time from the Contractor, the Engineer will investigate the conditions, and if it is determined that a controlling item of work is being delayed for reasons beyond the control of the Contractor the Engineer will take appropriate action to mitigate the delay and the costs of the delay. Upon timely receipt of the request for a Contract Time extension the Engineer will further investigate the conditions, and if it is determined that there was an increase in the time or the cost of performance of the controlling item of work beyond the control of the Contractor, then an adjustment of Contract Time will be made, and a monetary adjustment will be made, excluding loss of anticipated profits, and the Contract will be modified in writing accordingly.

ARTICLE 8-7 is expanded by the following new Subarticle:

8-7.3.3 Contract Term Extension: The Department will monitor the Contractor's performance of the work. If the percentage of work progress indicates that the Contractor will not complete the work as contemplated by the original Contract and any Supplemental Agreements prior to the expiration of the Contract Term, the Department may extend the Contract Term. A Contract Term Extension is subject to the same terms and conditions set forth in the original Contract and any Supplemental Agreements. The cumulative period of all Contract Term Extensions shall not exceed 180 calendar days unless the failure to meet the criteria set forth in the Contract for completion of the Contract is due to events beyond the control of the Contractor. The Contractor will receive written notification of the Contract Term Extension.

ARTICLE 8-8 is deleted and the following substituted:

8-8 Contractor Non-Responsibility.

Section 337.16(2) of the Florida Statutes and Rule 14-22, Florida Administrative Code (FAC), establish certain requirements for Contractors bidding on or any Maintenance Contracts, and authorize ineligibility to bid due to Contractor non-responsibility.

The Department will review and rate the performance of each Contractor using the Contractor Field Performance Report. The Contractor will receive written notification of the Field Performance Report and will be given an opportunity to resolve disputes concerning the rating.

SUBARTICLE 8-9.1 is deleted and the following substituted:

8-9.1 Determination of Default: The following acts or omissions constitute acts of default and, except as to subparagraphs (i and k), the Department will give notice, in writing, to the Contractor and his surety for any delay, neglect or default, if the Contractor:

(a) fails to begin the work under the Contract within the time specified in the Notice to Proceed;

(b) fails to perform the work with sufficient workmen and equipment or with sufficient materials to ensure prompt completion of the Contract;

(c) performs the work unsuitably, or neglects or refuses to remove materials or to perform anew such work that the Engineer rejects as unacceptable and unsuitable;

(d) discontinues the prosecution of the work, or fails to resume discontinued work within a reasonable time after the Engineer notifies the Contractor to do so;

(e) becomes insolvent or is declared bankrupt, or files for reorganization under the bankruptcy code, or commits any act of bankruptcy or insolvency, either voluntarily or involuntarily;

(f) allows any final judgment to stand against him unsatisfied for a period of ten calendar days;

(g) makes an assignment for the benefit of creditors;

(h) fails to comply with Contract requirements regarding minimum wage payments or EEO requirements;

(i) fails to comply with the Engineer's written suspension of work order within the time allowed for compliance and which time is stated in that suspension of work order; or

(j) for any other cause whatsoever, fails to carry on the work in an acceptable manner, or if the surety executing the bond, for any reasonable cause, becomes unsatisfactory in the opinion of the Department.

(k) fails to comply with 3-9.

(l) fails to provide all required insurance and to keep said insurance in force during the duration of the Contract.

For a notice based upon reasons stated in subparagraphs (a) through (h) and (j): if the Contractor, within a period of time specified by the Department after receiving the notice described above, fails to correct the conditions of which complaint is made, the Department will, upon written certificate from the Engineer of the fact of such delay, neglect, or default and the Contractor's failure to correct such conditions, have full power and authority, without violating the Contract, to take the prosecution of the work out of the hands of the Contractor and to declare the Contractor in default.

If the Contractor, after having received a prior notice described above for any reason stated in subparagraph (b), (c), (d), (e), (f) or (h), commits a second or subsequent act of default for any reason covered by the same subparagraph (b), (c), (d), (e), (f) or (h) as stated in the prior notice, and regardless whether the specific reason is the same, then, regardless of whether the Contractor has cured the deficiency stated in that prior notice, the Department will, upon written certificate from the Engineer of the fact of such delay, neglect or default and the Contractor's failure to correct such conditions, have full power and authority, without any prior written notice to the Contractor and without violating the Contract, to take the prosecution of the work out of the hands of the Contractor and to declare the Contractor in default.

Regarding subparagraph (i), if the Contractor fails to comply with the Engineer's written suspension of work order within the time allowed for compliance and

which time is stated in that suspension of work order, the Department will, upon written certificate from the Engineer of the fact of such delay and the Contractor's failure to correct that condition, have full power and authority, without violating the Contract, to immediately take the prosecution of the work out of the hands of the Contractor and to declare the Contractor in default.

Regarding subparagraph (k), if the Contractor fails to comply with 3-9, the Department will have full power and authority, without violating the Contract, to immediately take the prosecution of the work out of the hands of the Contractor and to declare the Contractor in default.

The Department has no liability for anticipated profits for unfinished work on a Contract that the Department has determined to be in default.

Notwithstanding the above, the Department shall have the right to declare the Contractor (or its "affiliate") in default and immediately terminate this Contract, without any prior notice to the Contractor, in the event the Contractor (or its "affiliate") is at any time "convicted" of a "contract crime," as these terms are defined in Section 337.165(1), Florida Statutes. The Department's right to default the Contractor (or its "affiliate") for "conviction" of a "contract crime" shall extend to and is expressly applicable to any and all Department Contracts that were either advertised for bid; for which requests for proposals or letters of interest were requested; for which an intent to award was posted or otherwise issued; or for which a Contract was entered into, after the date that the underlying or related criminal indictment, criminal information or other criminal charge was filed against the Contractor (or its "affiliate") that resulted in the "conviction." In the event the Department terminates this Contract for this reason, the Contractor shall hereby forfeit any claims for additional compensation, extra time, or anticipated profits. The Contractor shall only be paid for any completed work up to the date of termination. Further, the Contractor shall be liable for any and all additional costs and expenses the Department incurs in completing the Contract work after such termination.

SUBARTICLE 8-9.3 is deleted and the following substituted:

8-9.3 Completion of Work by Department: Upon declaration of default, the Department will have full authority to appropriate or use any or all suitable and acceptable materials and equipment on the site and may enter into an agreement with others to complete the work under the Contract, or may use other methods to complete the work in an acceptable manner. The Department will charge all costs that the Department incurs because of the Contractor's default, including the costs of completing the work under the Contract, against the Contractor. If the Department incurs such costs in an amount that exceeds the sum that would have been payable under the Contract, then the Contractor and the surety shall be liable and shall pay the Department the amount of the excess.

If, after the period of time specified by the Department and prior to any action by the Department to otherwise complete the work under the Contract, the Contractor establishes his intent to prosecute the work in accordance with the Department's requirements, then the Department may allow the Contractor to resume the work, in which case the Department will deduct from any monies due or that may

become due under the Contract, any costs to the Department incurred by the delay, or from any reason attributable to the delay.

**PROSECUTION AND PROGRESS - DAMAGE RECOVERY.
(REV 8-7-17) (1-18)**

ARTICLE 8-12 is deleted and the following substituted:

8-12 Damage Recovery.

8-12.1 Damages Suffered by Third Parties: In addition to the damages provided for in 8-10.2 and pursuant to Section 337.18 of the Florida Statutes, when the Contractor fails to complete the work within the Contract Time the Department may recover from the Contractor amounts that the Department pays for damages suffered by third parties unless the failure to timely complete the work was caused by the Department's act or omission.

8-12-2 Damage Recovery/User Costs: A damage recovery/user cost will be assessed against the Contractor if all lanes are not open to traffic during the times as shown in the Traffic Control Plans. Costs will be assessed beginning at the appropriate time as shown in the Traffic Control Plans and continue until all lanes are open as recorded by the Engineer. This assessment will be in the following amounts:

SR 436 Section 77080

First 30 minutes and under: \$1,432.00

Each additional 30 minute period or portion thereof: \$1,217.00

Such costs will not exceed \$17,179.00 over a 24 hour period.

SR 426 Section 75040

First 30 minutes and under: \$1,590.00

Each additional 30 minute period or portion thereof: \$1,875.00

Such costs will not exceed \$22,500.00 over a 24 hour period.

At the discretion of the Engineer, damage recovery/user cost will not be assessed for failure to open traffic lanes if such cause is beyond the control of the Contractor, i.e., catastrophic events, accidents not related or caused by the Contractor's operations.

The Department will have the right to apply as payment on such damages any money which is due to the Contractor by the Department.

MEASUREMENT AND PAYMENT.

(REV 2-22-2017) (1-18)

ARTICLE 9-1, is expanded by the following new Subarticle:

9-1.7 Maintenance Activity Measurement: Breakdown the invoice by Operations Cost Center for all work units completed for each Maintenance Management System (MMS) activity number. Research maintenance activity numbers, activity descriptions, and units of measure in the Department's Routine Maintenance Cost Handbook.

MEASUREMENT AND PAYMENT – SCOPE OF PAYMENTS.

(REV 8-12-16) (1-18)

SUBARTICLE 9-2.1 is expanded as follows:

Request payment for work completed and accepted by the Department by submitting an invoice using the pay items and unit prices contained in the Contract. Include the Contract Number, the Financial Project Number, the Invoice Number, the Invoice Date and the period that the invoice represents. If required by the Engineer, furnish photos of the completed work at each location with the invoice. Submit the invoice no more often than once every 28 days to the Engineer in charge of the project. Upon receipt and approval, payment will be made less an amount retained or withheld in the Contract.

For Lump Sum contracts, within 21 calendar days after contract award or at the pre-work meeting, whichever is earlier, prepare and submit to the Engineer a schedule of values. With the Engineer's approval, the schedule of values will be the basis for determining monthly payments.

SUBARTICLES 9-2.1.1 and 9-2.1.2 are deleted.

SUBARTICLE 9-3.2 is deleted.

SUBARTICLE 9-3.3.1 is deleted and the following substituted:

9-3.3.1 Error in Lump Sum Quantity: Where the Department designates the pay quantity for an item to be a lump sum and the plans show an estimated quantity, the Department will adjust the lump sum compensation only in the event that either the Contractor submits satisfactory evidence or the Department determines and

furnishes satisfactory evidence that the lump sum quantity shown is in substantial error. The term “substantial error” is defined as the smaller of (a) or (b) below:

(a) a difference between the original plan quantity and final quantity of more than 5%,

(b) a change in quantity which causes a change in the amount payable of more than \$5,000.

SUBARTICLE 9-5.1 is deleted and the following substituted:

9-5.1 General: If the Contract Time extends over a period in excess of 45 calendar days, the Contractor may claim partial payment for work completed and accepted by the Department by submitting an invoice. The actual reimbursement to the contractor will be based on:

1. the items shown in the schedule of values completed for the Lump Sum contract, or

2. the pay items and the unit prices contained in the Contract Document completed, and accepted by the Engineer in charge .

Contract amount is defined as the original contract amount adjusted by approved supplemental agreements.

Retainage will be determined for each project on multiple project Contracts. The Department will not accept Securities, Certificates of Deposit or letters of credit as a replacement for retainage. Amounts withheld will not be released until payment of the final estimate.

An amount may be retained from a Contractor’s payment until final acceptance of materials or work at the end of a burn-in or establishment period. The amount retained will be determined in accordance with the following schedule:

Percentage Contract Amount Completed	Amount Retained
0 to 75	None
75 to 100	10 % of value of work completed exceeding 75% of Contract Amount.

The Engineer will make payments based upon invoices submitted by the Contractor in accordance with 9-2.1.

SUBARTICLE 9-5.5 is deleted.

ARTICLE 9-8 is deleted and the following substituted:

9-8 Acceptance and Final Payment.

Submit a completed Contractor's Affidavit and Surety Consent (Form 21-A) (Department Form Number 700-050-21) to the Department within 90 days of submittal of the final invoice. Failure to submit this form may result in a determination of Contractor Non-Responsibility under the provisions of 14-22.0141, F.A.C., and the Contractor will be prohibited from bidding, subcontracting, or acting as a material supplier on any Department contracts.

ARTICLE 9-9 is expanded by the following:

Section 215.422(5), Florida Statutes, requires the Department to include a statement of vendor (Contractor) rights. Contractors are hereby advised of the following:

Contractors providing goods and services to an agency should be aware of the following time frames: Upon receipt, an agency has five working days to inspect and approve the goods and services, unless the bid specifications, purchase order or Contract specifies otherwise. An agency has 20 days to deliver a request for payment (voucher) to the Department of Financial Services. The 20 days are measured from the latter of the date the invoice is received or the goods or services are received, inspected and approved, by the Department of Transportation.

If a payment is not made within 40 days, a separate interest penalty at the rate established pursuant to Section 55.03(1), Florida Statutes will be due and payable in addition to the invoice amount, to the Contractor. The interest penalty provision applies after a 35-day time period to health care providers, as defined by rule. Interest penalties of less than one dollar will not be enforced unless the Contractor requests payment. Invoices which have to be returned to a Contractor because of Contractor preparation errors will result in a delay in the payment. The invoice payment requirements do not start until a properly completed invoice is provided to the Department.

A Vendor Ombudsman has been established within the Department of Financial Services. The duties of this individual include acting as an advocate for Contractors who may be experiencing problems in obtaining timely payment(s) from a state agency. The Vendor Ombudsman may be contacted by calling the Bureau of Accounting at (850) 413-5516.

**CONSTRUCTION EQUIPMENT - GENERAL REQUIREMENTS.
(REV 1-28-15) (1-18)**

SUBARTICLE 100-1 is expanded by the following:

Clearly and legibly identify the owner of all equipment on the Department's right-of-way.

MAINTENANCE OF TRAFFIC – SPECIFIC REQUIREMENTS - LANE CLOSURE INFORMATION SYSTEM.

(REV 8-16-17) (1-18)

SUBARTICLE 102-3.3 is deleted and the following substituted:

102-3.3 Lane Closure Information System: Approval for all lane closures, mobile operations, and traffic pacing operations is required. Submit routine requests fourteen calendar days in advance of planned lane closures, mobile operations, and traffic pacing operations at the following URL address: <https://lcis.dot.state.fl.us/>. Confirm at least once every two weeks that information entered within LCIS reflects current planned operations and update as necessary. For unforeseen events that require cancelling or rescheduling lane closures, mobile operations, and traffic pacing operations, revise the lane closure request as soon as possible.

Provide at least 14 days advance notification to the transit agency, indicated in the Plans, of lane closures or intersection closures that impact transit facilities.

MAINTENANCE OF TRAFFIC.

(REV 8-30-17) (1-18)

SUBARTICLE 102-5.4 is deleted and the following substituted:

102-5.4 Crossings and Intersections: Provide and maintain adequate accommodations for intersecting and crossing traffic. Do not block or unduly restrict any median opening, road or street crossing the project unless approved by the Engineer. Maintain all existing actuated or traffic responsive mode signal operations for main and side street movements for the duration of the work. Restore any loss of detection within 12 hours. Use only detection technology listed on the Department's Approved Products List (APL) and approved by the Engineer to restore detection capabilities. Before beginning any construction, submit to the Engineer the names and phone numbers of persons that can be contacted when signal operation malfunctions.

ARTICLE 102-7 is expanded by the following:

Provide off-duty law enforcement officer when required or as directed by the Engineer.

SUBARTICLE 102-11.1 is deleted and the following substituted:

102-11.1 General: Devices installed/used on the project on any calendar day or portion thereof, within the Contract Time, including time extensions which may be granted, will be paid for at lump sum price per day or per location

ARTICLE 102-12 is deleted.

ARTICLE 102-13.23 is deleted and the following substituted:

102-13.23 Maintenance of Traffic Lump Sum: Price and payment will be full compensation for all work and costs specified under Section 102.

When the proposal does not include a separate item for Maintenance of Traffic, all work and incidental costs specified as being covered under this Section will be included for payment under the several scheduled items of the overall Contract and no separate payment will be made therefore.

102-13.24 Payment Items: Payment will be made under the items shown in the Bid Price Proposal.

OBJECT MARKERS AND DELINEATORS.

(REV 9-28-15) (1-18)

ARTICLE 705-5 is deleted and the following substituted:

705-5 Basis of Payment.

Prices and payments will be full compensation for work specified in this Section, including the cost of labor, materials, disposal, and incidental items required to complete the work. Disposal of debris will be in accordance with any applicable Federal, State, and Local Rules and Regulations and any cost incurred for disposal will be the Contractors' responsibility.

Payment will be made under the items specified in the Bid Price Proposal.

RAISED RETRO-REFLECTIVE PAVEMENT MARKERS AND BITUMINOUS ADHESIVE.

(REV 9-28-15) (1-18)

ARTICLE 706-1 is deleted and the following substituted:

706-1 Description.

Remove and properly dispose of existing raised Retro-Reflective Pavement Markers (RPMs) and replace with new RPMs and adhesive as specified in the work document, producing a positive guidance system to supplement other reflective pavement markings.

ARTICLE 706-4 is expanded by the following:

All markers for each work document will be in place before starting the initial 45 day replacement period under traffic.

ARTICLES 706-6 and 706-7 are deleted and the following substituted:

706-6 Method of Measurement.

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

706-7 Basis of Payment.

Payment will be made under the items specified in the Bid Price Proposal.

**THERMOPLASTIC PAVEMENT MARKINGS – HOT SPRAY.
(REV 9-29-15) (1-18)**

SUBARTICLE 711-2 is deleted and the following substituted:

711-2 Materials.

Use only materials listed on the Department’s Approved Product List (APL) meeting the following requirements.

- Standard and Refurbishment Thermoplastic971-1 and 971-5
- Refurbishment of Existing Stripes971-1, 971-5 and 971-10
- Preformed Thermoplastic971-1 and 971-6
- Glass Spheres.....971-1 and 971-2

Use sand materials meeting the requirements of 971-5.4.

The Engineer will take random samples of all material in accordance with the Department’s Sampling, Testing and Reporting Guide schedule.

ARTICLE 711-4 is deleted and the following substituted:

711-4 Application.

711-4.1 General: Remove existing pavement markings such that scars or traces of removed markings will not conflict with new pavement 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 pavement markings, remove any material that would adversely affect the bond of the pavement markings by a method approved by the Engineer.

Before applying pavement markings 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 pavement markings to dry surfaces only, 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 pavement markings to the same tolerances in dimensions and in alignment as specified in 710-5. When applying pavement 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 by extrusion or other means approved by the Engineer.

Conduct field tests in accordance with FM 5-541. Take test readings representative of the pavement marking performance. Remove and replace pavement markings not meeting the requirements of this Section at no additional cost to the Department.

Wait at least 14 days after constructing the final asphalt surface course to place thermoplastic pavement markings. Provide temporary pavement markings during the interim period prior to opening the road to traffic.

711-4.1.1 Preformed Thermoplastic: Apply markings to dry surfaces only 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 Standard Thermoplastic Markings: Apply or recap standard thermoplastic pavement markings for longitudinal lines to attain a minimum thickness of 0.10 inch or 100 mils and a maximum thickness 0.15 inch or 150 mils maximum thickness, when measured above the pavement surface.

All chevrons, diagonal and transverse lines, messages, symbols, and arrows, wherever located, will have a thickness of 0.09 inch or 90 mils to 0.12 inch or 120 mils 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.

The Engineer will verify the thickness of the pavement markings in accordance with FM 5-541 within 30 days of receipt of the Contractor's certification.

711-4.2.2 Refurbishment Thermoplastic Markings: Apply a minimum of 0.06 inch or 60 mils of thermoplastic material. Ensure that the combination of the existing marking and the overlay after application of glass spheres does not exceed the maximum thickness of 0.150 inch or 150 mils for all lines.

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.

The Engineer will verify the thickness of the pavement markings in accordance with FM 5-541 within 30 days of receipt of the Contractor's certification.

711-4.2.3 Preformed Thermoplastic: Apply 0.125 inch or 125 mils of preformed thermoplastic material.

Measure, record and certify on Department approved form and submit to the Engineer, the thickness of the pavement markings in accordance with FM 5-541.

711-4.3 Retroreflectivity: Apply white and yellow pavement 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 chevrons, diagonal lines, stop lines, messages, symbols, 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 crosswalks and bicycle markings shall attain an initial retroreflectivity of not less than 275 mcd/lx·m².

When using hot spray thermoplastic material, apply white and yellow pavement markings that will attain an initial retroreflectivity of not less than 300 mcd/lx·m² and not less than 250 mcd/lx·m², respectively for all longitudinal lines. All pedestrian crosswalks 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 standard thermoplastic markings, apply the first drop of Type 4 or larger glass spheres immediately followed by the second drop of Type 1 glass spheres. For refurbishment thermoplastic markings, 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 Chevrons, Diagonal and Transverse Lines, Messages, Symbols, and Arrows: For standard or refurbishment thermoplastic markings, apply a single drop of Type 1 glass spheres. Apply retroreflective 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 standard thermoplastic crosswalk lines 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.

TRAFFIC MARKING MATERIALS – THERMOPLASTIC MATERIAL – HOT SPRAY.

(REV 3-18-16) (1-18)

SECTION 971 is expanded by the following new Article:

971-11 Thermoplastic Material-Hot Spray.

971-10.1 General: This work shall consist of furnishing and applying thermoplastic material when the project requires refurbishing existing thermoplastic stripes. The manufacturer shall utilize alkyd based materials only and shall have the option of formulating the material according to his own specifications. However, the

requirements delineated in this Specification and Section 711 shall apply regardless of the type of formulation used.

971-11.2 Composition:

Component	White	Yellow
Binder	25.0% minimum	25.0% minimum
TiO ₂ (ASTM D-476 Type II Ructile)	10.0% minimum	-
Glass Spheres	35.0% minimum	35.0% minimum
Yellow Pigment	-	% minimum per manufacturer
Calcium Carbonate and Inert Filler (No. 200 sieve)	30.0% maximum	40.0% maximum
Percentages are by Weight		

971-11.3 Binders: The manufacturer shall have the option of formulating the material according to his own specifications. However, the physical and chemical properties contained in this Specification shall apply regardless of the type of formulation used. The pigment, beads and filler shall be well dispersed in the resin. The material shall be free from all skins, dirt and foreign objects.

971-11.4 Physical Requirements: Sample specimens shall be prepared in accordance with ASTM D-4960.

Procedure shall meet the following requirements:

Property	Test Method	Minimum	Maximum
Water Absorption	ASTM D-570	-	0.5%
Softening Point	ASTM D-36	190°F	-
Low Temperature Stress Resistance	AASHTO T-250	Pass	-
Specific Gravity	Water displacement	1.87	2.3
Indentation Resistance	ASTM D-2240* Shore Durometer, A2	5	30
Impact Resistance	ASTM D-256, Method A	1.0 N·m	-
Flash Point	ASTM D-92	475°F	-

*The durometer and panel shall be at 110°F with a 4.4 lb load applied. Instrument measurement shall be taken after 15 seconds.

971-11.4.1 Set To Bear Traffic Time: The thermoplastic shall set to bear traffic in not more than two minutes.

971-11.4.2 Retroreflectivity: The white and yellow pavement markings shall attain an initial retroreflectance of not less than 300 mcd/lx·m² and not less than 250 mcd/lx·m², respectively. The retroreflectance of the white and yellow pavement markings at the end of the one year service life shall not be less than 150 mcd/lx·m².

971-11.4.3 Durability: Durability is the measured percent of thermoplastic material completely removed from the pavement. The thermoplastic material line loss must not exceed 5.0% at the end of the one year service life.

971-11.5 Glass Spheres: Glass spheres shall be Type 1 or high index and meet the requirements of 971-2.

971-11.6 Sharp Silica Sand: Sharp silica sand used for bike lane symbols and pedestrian crosswalk lines shall meet the following gradation requirements:

Sieve Size	% Passing
20	100
50	0 to 10

971-11.7 Application Properties: The thermoplastic material shall readily apply and adhere to the existing traffic stripe at temperatures as recommended by the manufacturer from equipment approved by the Engineer to produce a line which shall be continuous and uniform in shape having clear and sharp dimensions at a minimum thickness as identified in the plans. No signs of moisture shall be visible on the pavement surface as determined in accordance with the binder manufacturer's recommendations.

The material, when formed into traffic stripes, must be readily renewable by placing an overlay of new material directly over an old line of the same material. Such new material shall bond itself to the old line in a manner such that no splitting or separation occurs.

Overlay stripe thicknesses shall be measured as specified in Section 711 for refurbishing of thermoplastic stripes.

971-11.8 Packing and Marking: The thermoplastic material shall be packed in suitable biodegradable or thermo-degradable containers which will not adhere to the product during shipment and storage. The container of thermoplastic material shall weigh approximately 50 lb. The label shall warn the user that the material shall be heated in the range as recommended by the manufacturer.

SUPPLEMENTAL SPECIFICATIONS

710 PAINTED PAVEMENT MARKINGS.
(REV 5-26-17) (FA 8-7-17) (1-18)

SUBARTICLE 710-4.1.1 is deleted and the following substituted:

710-4.1.1 Painted Pavement Markings (Final Surface): On concrete surfaces or newly constructed asphalt without rumble striping, the painted pavement markings (final surface) will include one application of standard paint and one application of Class B retroreflective pavement markers applied to the final surface.

On newly constructed asphalt with rumble striping, apply two applications of standard paint and one application of Class B retroreflective pavement markers. Additionally, for center line rumble striping installations, install Class D retroreflective pavement markers with the first application of standard paint. Remove Class D markers prior to grinding, and install Class B retroreflective pavement markers in an unground area after grinding. The second application of standard paint must be applied within 24 hours of each day's grinding operation.

Do not apply final surface paint for bicycle arrows or bicycle messages, 24 inch longitudinal bars in special emphasis crosswalks, or route shields where preformed thermoplastic will be applied.

Install all retroreflective pavement markers in accordance with Design Standards, Index Nos. 17352 and 17345, prior to opening the road to traffic.

Temporary retroreflective pavement markers must meet the requirements of Section 102.

Permanent retroreflective pavement markers must meet the requirements of Section 706.

APPENDICES

TECHNICAL SPECIAL PROVISIONS.

The following Technical Special Provisions are individually signed and sealed but are included as part of this Specifications Package.

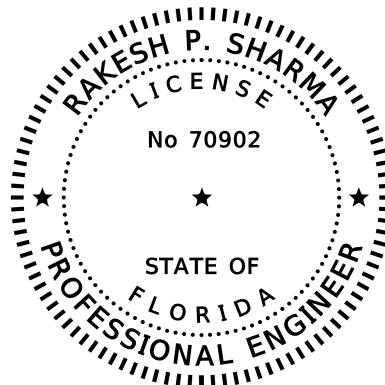
TSP 528 DYNAMIC ENVELOPE PATTERNED PAVEMENT AT RAILROAD CROSSINGS

**TECHNICAL SPECIAL PROVISION
FOR
DYNAMIC ENVELOPE PATTERNED PAVEMENT AT RAILROAD
CROSSINGS
SECTION 528**

**FINANCIAL PROJECT ID: 427956-1-72-27
ORANGE AND SEMINOLE COUNTIES**

The official record of this Technical Special Provision is the electronic file signed and sealed under Rule 61G15-23.004 F.A.C.

Prepared by: Rakesh P. Sharma, P.E.
P.E. No. 70902
Date: January 19, 2018
Pages 1 to 8



DYNAMIC ENVELOPE PATTERNED PAVEMENT AT RAILROAD CROSSINGS.

(REV. 10-5-17)

The following new Section is added after Section 527:

528-1 Description.

Furnish and apply Patterned Pavement at railroad grade crossings for the “Dynamic Envelope” in accordance with this Technical Special Provision (TSP). Install products in accordance with manufacturer’s specifications with the color and pattern as specified in the Plans.

For this specification, Patterned Pavements are defined as a post applied surface marking overlay to either the pavement surface.

Arrange a demonstration with the manufacturer’s representative at the construction site to train Department staff, Construction Engineering & Inspection (CEI) inspector(s), and Contractor personnel prior to surface treatment. Arrange for the manufacturer’s representative to be available during application of the surface treatment.

528-2 Materials.

528-2.1 Polymer Binder: Binders must be of an amine epoxy base, comprised of a two-component epoxy resin certified by the manufacturer to be suitable for color pigmentation. A maximum in service time of four (4) hours, at an ambient pavement surface temperature of 70° F, is required to meet the specified depth of color.

Use a two-part polymer resin binder treatment capable of retaining a bauxite, synthetic or glass aggregate topping under vehicular traffic conditions and consists of a thermosetting modified polymer compound and meets the requirements in Table 528-1.

Obtain a mixing ratio of 2:1 or a mix proven by the manufacturer for stronger bonding may be allowed upon providing documentation acceptable by the Department. Do not use two-part epoxy materials which are not exothermic in curing and do not meet the viscosity requirement. Provide independent laboratory report documents demonstrating that the epoxy binder meets the requirements of this Section.

528-2.2 Aggregate: The aggregate must be a calcined bauxite, synthetic or glass 100% integral opaque yellow colored aggregate consisting of a 1-3 mm gradation. The aggregate must be clean, dry, and free from foreign matter. The aggregate must be delivered to the construction site in packaging that is clearly labeled. Protect the aggregate from any contaminants on the jobsite and from exposure to rain or other moisture. The aggregate must meet the requirements in Table 528-2.

Use only aggregate products approved for use in vehicular traffic areas. Products must meet manufacturer’s specifications for all patterns, textures, templates, sealers, coatings and coloring materials.

Material coatings used to achieve the pattern and color must produce an adherent, weather resistant, skid resistant, wear resistant surface under service conditions. Color must be integral and consistent throughout the installation. Use materials that are characterized as non-hazardous as defined by Resource Conservation and Recovery Act (RCRA), Subpart C, Table 1 of 40 CFR 261.24 “Toxicity Characteristic”.

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Materials must not exude fumes which are hazardous, toxic or detrimental to persons or property.

Table 528-1

Polymer Resin Binder Requirements		
Property	Requirement	Test Method
Viscosity	7 – 30 poises	ASTM D-2556
Gel Time	10 minutes min.	ASTM C-881 (60-gram mass)
Ultimate Tensile Strength	2000 – 5000 psi	ASTM D-638 (Type 1 Specimen)
Elongation at break point	30 – 70%	ASTM D-638 (Type 1 Specimen)
Durometer Hardness (shore D)	60 - 80	ASTM D-2240
Compressive Strength	1000 psi min 3 hours, 5000 psi min at 7 days	ASTM C-579
Water Absorption	1.0% max	ASTM D-570
Adhesive Strength at 24 hrs	250 psi min or 100% substrate failure	ASTM C-1583
Bleed Test	Minimal to no trace	Swab test visual 7 days @ room temperature

Table 528-2

Property	Requirement	Test Methods
Aggregate Abrasion Value	20% max	AASHTO T-96
Aggregate Grading	No. 4 Sieve Size	100% min Passing
	No. 6 Sieve Size	95% min Passing
	No. 16 Sieve Size	5% max Passing
Moisture Content	0.2% max	AASHTO T-255
Aluminum Oxide	86% min	ASTM C-25

Provide independent test data verifying the material meets the requirements of this Section including verification that the product, installed in accordance with the manufacturer’s specifications and procedures, has been tested in accordance with either:

- a. ASTM E-274, Skid Resistance of Paved Surfaces using a standard ribbed full-scale tire at a speed of 40 mph (FN40R), and has a minimum FN40R value of 35, or
- b. ASTM E-1911, Measuring Paved Surface Frictional Properties Using the Dynamic Friction Tester (DFT), at a speed of 40 mph (DFT40), and has a minimum DFT40 value of 40.

528-2.3 Thermoplastic Pavement Markings: Apply the thermoplastic edge lines and cross lines per plans.

528-3 Performance Requirements for Products in Vehicular Travel Areas.

Department approval will be contingent on a field service test demonstrating that the Patterned Pavement product meets the following performance measures at the end of three years from opening to traffic:

1. The average thickness must be a minimum of 50% of the original thickness.
2. Wearing of the material coating must not expose more than 15% of the underlying surface area as measured within the traveled way.
3. Friction performance of patterned/textured pavement materials must meet or exceed one of the following test method values:
 - a. FN40R value of 35 in accordance with ASTM E-274; or,
 - b. DFT40 value of 40 in accordance with ASTM E-1911

Provide a field service test installation of each product within a marked crosswalk on a roadway with an ADT of 6,000 to 12,000 vehicles per day per lane, on a site approved by the Department. The test installation must be a minimum six feet wide and extend from pavement edge to pavement edge across all traffic lanes and shoulder pavement at the crosswalk location. The test installation must be tested by the manufacturer in accordance with FM 5-592.

528-4 Construction.

528-4.1 General: Do not apply the two-part polymer resin binder on a wet surface, when the ambient or surface temperature is below or above the manufacturer's specifications, or when the anticipated weather conditions would prevent the proper application of the surface treatment as determined by the manufacturer's representative.

528-4.2 Product Submittals: Prior to installation, submit pattern and color samples to the Engineer for confirmation that the product meets the pattern and color specified in the Plans. Do not begin installation until acceptance by the Engineer.

528-4.3 Pavement Cuts: Complete all utility and other items requiring a cut and installation under the finished surface, prior to product installation. Traffic loop detector installations are not allowed within the Dynamic Envelop.

528-4.4 Surface Protection: Protect treated surfaces from traffic and environmental effects until the product is completely installed, including drying and curing according to the manufacturer's instructions.

528-4.5 Preparation: Surfaces must be clean, dry, and free of all dust, oil, debris and any other material that might interfere with the bond between the polymer resin binder material and existing surfaces.

Allow for a minimum of thirty (30) calendar days before applying the Patterned Pavement on a new asphalt roadway surface. Asphalt surfaces must be vigorously treated to remove dust laitance and other loose material. The treatment must consist of the application of compressed air or dry surface abrasive blasting as determined by a site inspection. Newly laid asphalt surface must be trafficked for a minimum period of two (2) weeks prior to surface binder application. Any visible oil must be removed by washing and scrubbing the surface with a mild detergent solution and flushing with clean water. The surface must then be allowed to dry prior to surface application of the binder.

Clean concrete pavement surfaces by shot blasting to remove all curing compounds, loosely bonded mortar, dust laitance, surface carbonation, and deleterious material. The final surface must have, at minimum, the texture of Concrete Surface Profile (CSP) 5 as specified by the International Concrete Repair Institute (ICRI). The texture should not go above CSP 7. After shot blasting, vacuum sweep or air wash, with a minimum of 180 cfm of clean and dry compressed air. Maintain the air lance perpendicular to the surface and the tip of the air lance within 12 inches of the surface.

New concrete should be water cured for at least 28 days, well compacted and finished, preferably by power floating or troweling to give a dense smooth finish.

Old concrete must be structurally sound, all loose and deteriorated areas must be replaced, spalled areas repaired and any existing coatings must be removed. The concrete substrate must not have any visible moisture and the surface must be clean, free from dust, oil, grease or other contaminants that may impair the adhesion of the system. Immediately prior to application all surface laitance must be removed by captive shot blasting, scarifying, diamond grinding, hydro blasting or other approved methods. Unless otherwise directed by the engineer all existing road markings, reflective pavement markers (RPMs) and areas in general which are not to receive the treatment.

Protect all utilities drainage structures, curbs and any other structure within or adjacent to the treatment location against the application of the surface treatment materials. Cover and protect all existing pavements and pavement markings that are adjacent to the application surfaces. Remove pavement markings that conflict with the surface application by grinding, or by other methods approved by the Engineer. Sweep the surface clean prior to the polymer binder application.

Pre-treat asphalt joints and cracks greater than 1/4 inch in width and depth with the mixed polymer specified herein. Proceed with the high friction polymer binder and the aggregate topping installation once the polymer in the pre-treated areas has gelled. On concrete, slab repair or replacement is required for any single slab with moderate or severe distress (specifically transverse cracking, longitudinal cracking, spalling, or corner cracking) or a shattered slab in more than three pieces. Install overlay products in areas subject to vehicular traffic to a thickness not exceeding 180 mils. The thermoplastic pavement marking must be laid first on the pavement surface; meet the two-part treatment material overlay thickness for dynamic envelope.

528-4.6 Application:

Hand-mix the polymer resin binder in accordance with the manufacturer's specifications. Uniformly spread the binder using serrated edge squeegees onto a dry surface at a minimum rate of (20- 23 sq. ft. per gallon) which will vary according to the surface texture and porosity. On a smooth closed textured surface, the amount of binder must not be less than the manufacturer's requirements as required to hold the aggregate permanently in position.

The temperature of binder components heated to facilitate mixing or spray application must be measured using a temperature gauge accurate to $\pm 2^\circ$ and must not exceed the maximum temperature recommended by the resin manufacturer. Heated binders must be allowed to cool prior to the application of aggregate. Following binder application, aggregate must be broadcast to cover the binder

uniformly and to excess at a rate of not less than 1.25 lbs. per sq. ft. Rolling of aggregate must not be permitted under any circumstances.

Immediately following application any masking material must be removed together with any binder or aggregate adhering to same. During the cure period, no traffic of any kind must be permitted on the surface treatment.

Upon initial curing, all excess aggregate must be removed by a power sweeper, brooms or equivalent means.

528-4.7 Installation Acceptance: Upon completion of the installation, the Engineer will check the area at random locations for geometric accuracy. If any of the chosen areas are found to be deficient, correct the entire patterned area at no additional cost to the Department.

Certify that the Patterned Pavement was installed in accordance with the manufacturer's requirements.

528-5 Vendor Qualification.

Use a Patterned Pavement vendor that has experience on similar projects on which a minimum of 100 square yards of Patterned Pavement that has been placed within the past three years from the date of the submittal of bid. Provide the owners contact information and project locations. Include documentation that indicates the in-place friction characteristics of these projects met a minimum FN40R of 35 when tested in accordance with ASTM E-274.

528-6 Quality Control Plan.

Submit a Patterned Pavement Quality Control Plan (QCP) and provide a copy to the State Materials Office (SMO) for approval at least 30 days prior to placement of Patterned Pavement. The QCP must include at a minimum:

1. Schedule for the trial and the production of Patterned Pavement work.
2. Description of equipment for placing Patterned Pavement.
3. Method of application for measuring, mixing, placing, and finishing Patterned Pavement.
4. Method for protecting areas not to receive Patterned Pavement.
5. Description of acceptable environmental conditions for placing Patterned Pavement.
6. Cure time and time to bear traffic estimates for Patterned Pavement.
7. Storage and handling of Patterned Pavement components.
8. Disposal and recycling of excess Patterned Pavement and containers.
9. Contingency plan for possible failure during the Patterned Pavement application.
10. Name of the certified independent testing laboratory.
11. Key personnel and contact information.
12. All project certifications and test results.
13. QC Manager (who has full authority to institute any action necessary for the successful operation of the plan).

528-7 Warranty and Warranty Bond.

The complete Dynamic Envelope described under this Technical Special Provision Section shall be warranted by the Contractor and Manufacturer against defects in material and workmanship for a period of 1 year from the date of Final Acceptance. The warranty shall include and provide for the complete removal and replacement of the Dynamic Envelope should the Dynamic Envelope fail to perform as described in Table 528-3 of this Technical Special Provision or appear to deteriorate in any other manner not clearly specified in Manufacturer's published data. The warranty shall be provided by the Contractor to the Department and shall include Labor and Materials for the removal and replacement for a period of 1 year from the date of the Final Acceptance.

Regular and scheduled maintenance may be performed by the Department's maintenance contractor. Maintenance work by the maintenance contractor shall not void the above described warranty of the Dynamic Envelope.

Prior to Final Acceptance, provide a warranty bond covering the warranty described above which will remain in effect for a period of 1 year following Final Acceptance. This bond is separate from and in addition to any bonds required for the Project but shall conform to the same requirements contained within the FDOT Specifications except for the time period which shall be the time period described herein. This Technical Special Provision does not alleviate any requirements nor conflict with any conditions in the FDOT Specifications.

If any manufacturer has a separate and additional warranty for materials, Contractor hereby assigns to the Department any and all manufacturers' or other sellers' warranties that come with any products, material or supplies which are incorporated into or are consumed in the project in any way. To the extent that any such warranties do not extend to subsequent purchasers or owners or such warranties contain a limitation on assignment, Contractor agrees that Contractor purchased the products, materials and supplies on behalf of the Department with the intent that the Department be the intended recipient of any warranties. All documents associated with or describing any such warranties shall be delivered to the Department along with the other project final acceptance documents and shall be deemed to be a part of the required final acceptance documentation. Contractor shall not take any action or fail to act in any way which voids any such warranties. All subcontracts shall contain a similar provision which requires subcontractors to assign any such warranties to the Department.

Table 528-3

Warranty Criteria			
Type of Survey	Type of Survey	Threshold Values for Patterned Pavement Application Area	Remedial Work
Surface Cracking ⁽¹⁾	Any Survey	≥ 10% of any given 100 square yard of Patterned Pavement application area	Remove and replace the distressed areas Patterned Pavement to the full distressed depth and to a minimum surface area of 150% of each distressed area, subject to performance at final ⁽²⁾
Raveling and/or Delamination ⁽³⁾	Any Survey	≥ 10% of any given 100 square yard of Patterned Pavement application area	Grind and replace the full distressed depth area(s) with Patterned Pavement to the full distressed depth and to a minimum surface area of 150% of each distressed area, subject to performance at final survey ⁽⁴⁾
Soft Spots/Bleeding ⁽⁵⁾	Any Survey	≥ 10% of any given 100 square yard of Patterned Pavement application area	Grind and replace the full distressed depth area(s) with Patterned Pavement to the full distressed depth and to a minimum surface area of 150% of each distressed area, subject to performance at final survey ⁽⁴⁾
<p>(1) Severity of Cracking Class IB or greater. (2) Remedial Work for surface cracking: All corrective work must be performed to the satisfaction of the Engineer. (3) Raveling and/or Delamination: Loss of cover aggregate or lack of Patterned Pavement mix on the surface. (4) At the time of final survey, repaired areas must be performing to the satisfaction of the Engineer. (5) Soft Spots is caused by uncured or polymer binder and bleeding is due to excess binder. The soft spots can be detected and verified by using a small scraper knife to shovel off the material.</p>			

528-8 Method of Measurement.

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

528-9 Basis of Payment.

Payment will be made under the items specified in the Bid Price Proposal.

**THIS COMPLETES
THIS
SPECIFICATIONS
PACKAGE**