



STATE OF NORTH CAROLINA
DEPARTMENT OF TRANSPORTATION

PAT MCCRORY
GOVERNOR

ANTHONY J. TATA
SECRETARY

February 5, 2015

Addendum No. 1

Contract No.: DA00220

WBS No.: 1SP.20485.1, ETC.

Asphalt Surface Treatment (Double Seal) On Various Routes In Hyde And Tyrrell Counties

To Whom It May Concern:

Reference is made to the proposal and plans previously furnished for this project.

The following revision has been made to the proposal and plans:

Page No. 6, "Contract Time and Liquidated Damages" has been revised to change the completion date. Please void existing Page No. 6 and staple revised Page No. 6 thereto.

Page No. 9 - 17, "Asphalt Surface Treatment" has been revised. Please void existing Page No. 9 - 17 and staple revised Page No. 9 - 17 thereto.

Page No. 72, "Bid Form" has been revised to insert the correct Item Number for Line Item #4 "Temporary Traffic Control". Please void existing Page No. 72 and staple revised Page No. 72 thereto.

Plan Sheet No. 2, "Tyrrell County Title Sheet" has been revised to match the maps listed on the Summary of Quantities. Please void existing Plan Sheet No. 2 and staple revised Plan Sheet No. 2 thereto.

If you elect to prepare your bid electronically, place file DA00220.001 in the same folder with DA00220.EBS, so that Expedite Bid will properly apply the addendum.

Please acknowledge receipt of Addendum #1 in the space provided on the Addendum Acknowledgement Form.

Sincerely,
DocuSigned by:

W. B. Hobbs

99A5A272ED6A447...
W. B. Hobbs, PE

Division Project Manager

WBH
Attachment

cc: S. D. Baker, PE
C. S. Mebane, PE
C. W. Bridgers, Jr., PE

REVISED 2/5/2015**CONTRACT TIME AND LIQUIDATED DAMAGES:**

(7-1-95) (Rev. 12-18-07)

108

SP1 G10 A

The date of availability for this contract is **April 6, 2015**.

The completion date for this contract is **June 30, 2015**.

Except where otherwise provided by the contract, observation periods required by the contract will not be a part of the work to be completed by the completion date and/or intermediate contract times stated in the contract. The acceptable completion of the observation periods that extend beyond the final completion date shall be a part of the work covered by the performance and payment bonds.

The liquidated damages for this contract are **Five Hundred Dollars (\$ 500.00)** per calendar day.

MANDATORY PRE-BID CONFERENCE AND PROPOSAL REVIEW:

All prospective bidders shall attend a Mandatory Pre-Bid Conference to be held at the NCDOT Division Office Conference Room, located at 113 Airport Drive Suite 100, Edenton, North Carolina, 27932 at 10:00 AM on Wednesday, February 4, 2015. Please contact Barry Hobbs (252) 482-1850 for any further information.

NOTE: Contractors must be present during the entire Pre-Bid Conference in order to be eligible to bid on any of the projects.

The pre-bid conference will include a thorough discussion of the plans, contract pay items, special provisions, etc.

Only bidders who have attended and properly registered at the above scheduled pre-bid conferences will be considered qualified to bid on this project. A bid received from a bidder who has not attended and properly registered at the above scheduled pre-bid conferences will not be considered for award.

No questions concerning the project will be answered by any Department personnel at any time, except at the Mandatory Pre-Bid Conference.

This conference will be conducted by Department personnel for the purpose of providing additional information about the project and to give bidders an opportunity to ask any questions they may have.

The Engineer will explain areas of responsibility, standards of performance and expected results as well FHWA reporting requirements. This is also intended to be a time for the Contractor to raise questions.

Any changes made to the contract during the pre-bid conference will be documented and included in an addendum. The addendum must be returned with the bid package, signed and dated. Failure to do so will result in disqualification of bid. Pre-Bid Conference proceedings will be tape recorded.

Attendance at the Pre-Bid Conference will not meet the requirements of proper registration unless the individual attending has registered with the following information:

1. The individual writes his/her name on the official roster at the beginning of the pre-bid conference.

REVISED 2/5/2015**ASPHALT SURFACE TREATMENT (AST) SELECTION**

AST selections for this contract are listed as follows:

MAP Numbers	TYPE OF SEAL	AGGREGATE TYPE	LAYER
Various	Double Seal	5/16" LW	Top
		78M	Bottom

See Table 660-1 in the Asphalt Surface Treatment found elsewhere in this provision for target rates of Aggregate and Emulsion for each type of seal coat.

ASPHALT SURFACE TREATMENT:

(01-28-15)

660

SP06 R054

Revise the *2012 Standard Specifications* as follows:

Page 6-48, Section 660 ASPHALT SURFACE TREATMENT, replace section with the following:

SECTION 660**ASPHALT SURFACE TREATMENT****660-1 DESCRIPTION**

Perform the work covered by this section including, but not limited to, furnishing, hauling, spreading and rolling the emulsion and aggregate consisting of one or more applications of liquid asphalt material and one or more applications of aggregate cover coat material on a prepared surface; and maintaining and repairing the asphalt surface treatment (AST).

Schedule a pre-application meeting prior to installing the asphalt surface treatment including representatives from the Subcontractor, Project Engineer, Area Roadway Construction Engineer, and may include the State Pavement Construction Engineer and a representative from the Materials and Tests Unit.

660-2 MATERIALS

Refer to Division 10 of the *2012 Standard Specifications*.

Item	Section
Aggregates for Asphalt Surface Treatment	1012-2
Emulsified Asphalt, Grade CRS-2L	1020-3
Emulsified Asphalt, Grade CRS-2P	1020-3
Emulsified Asphalt, Grade CRS-1H	1020-3
Emulsified Asphalt, Grade CSS-1H	1020-3
Emulsified Asphalt, Grade CQS-1H	1020-3
Fine Aggregate	1014
Mineral Filler	1012-1(D)
Water	1024-4

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Before any asphalt surface treatment is placed, obtain from the asphalt supplier and furnish to the Engineer a Certification of Compatibility of the emulsion with the aggregate proposed for use.

660-3 WEATHER AND SEASONAL LIMITATIONS

Do not place any asphalt surface treatment between October 15 and April 1, except for asphalt surface treatment that is to be overlaid immediately with asphalt plant mix.

Apply AST only when the surface to be treated is dry and when the air or surface temperatures, measured at the location of the AST operation away from artificial heat, is 50°F and rising.

When placing asphalt surface treatment that is to be immediately overlaid with asphalt plant mix, the seasonal and temperature limitations of Article 610-4 of the *2012 Standard Specifications* shall apply.

Do not apply asphalt material when the weather is foggy or rainy.

660-4 SURFACE PREPARATION

Clean the surface to be treated of all dust, dirt, clay, grass, sod and any other deleterious matter before application of the asphalt surface treatment.

660-5 ACCEPTANCE OF ASPHALT MATERIALS

The acceptance of asphalt materials will be in accordance with Article 1020-1 of the *2012 Standard Specifications*.

660-6 APPLICATION EQUIPMENT

Use asphalt application equipment that meets Article 600-5 of the *2012 Standard Specifications*.

Apply aggregate by the use of a self-propelled, pneumatic-tire aggregate spreader capable of maintaining a specified rate with a uniform application for the width of asphalt material being covered. Tailgate spreaders will not be permitted. Areas that are inaccessible to the aggregate spreader shall be covered by hand spreading or other acceptable methods.

660-7 APPLICATION OF EMULSION

The grades of emulsion shall be CRS-2L or CRS-2P.

The target rates of application and the temperature that the emulsion is to be applied shall be as shown in Table 660-1 or as directed by the Engineer

Base the required rates of application on the volume of material at the application temperature.

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**TABLE 660-1
MATERIAL APPLICATION RATES AND TEMPERATURES**

Type of Coat	Layer	Aggregate Type	Aggregate Target Rate^A (Lbs/Sy)	Emulsion Target Rate^{B,C,D} (Gal/Sy)
Single Seal	Top	78M	18	0.35
		5/16" LW	10	0.32
		#9	10	0.32
		CA-9 LW	10	0.35
Double Seal	Top	78M	12	0.25
		5/16" LW	9	0.25
		#9	9	0.25
		CA-9 LW	9	0.25
		#14	7	0.20
	Bottom	78M	18	0.30
		5/16" LW	10	0.30
Triple Seal	Top	78M	12	0.22
		5/16" LW	9	0.25
		#9	9	0.25
		CA-9 LW	9	0.25
		#14	7	0.20
	Middle	78M	15	0.24
		5/16" LW	9	0.25
	Bottom	78M	18	0.30
		#67	30	0.32
		5/16" LW	10	0.30
Mat and Single Seal	Top	78M	14	0.22
		5/16" LW	9	0.25
	Mat	#67	38	0.32
		#57	40	0.35
Mat and Double Seal	Top	78M	12	0.25
		5/16" LW	9	0.25
	Middle	78M	16	0.25
	Mat	#67	38	0.40
Mat Coat		78M	18	0.35
		#67	38	0.40

A. Aggregate Target Rates have +/- 1.0 lbs/sy tolerance limit.

B. Grade of Asphalt (emulsion) shall be CRS-2L or CRS-2P.

C. Emulsion Target Rates have +/- 0.03 gal/sy tolerance limit.

D. Application temperatures shall be 160-170°F.

660-8 APPLICATION OF AGGREGATES

The type and size of the aggregate shall be as shown in Table 660-1 for the mat coat or the type of seal coat to be constructed. The rate of application for mat and seal aggregates shall be within the

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limits shown in Table 660-1. When directed, weigh a sufficient number of truckloads of aggregate before spreading to verify that the rate of application is within the required limits and use ASTM D5624 to determine rate of application.

660-9 CONSTRUCTION METHODS

For any type of AST work, demonstrate that all equipment has been calibrated in the presence of the Engineer with a minimum 100-foot test section. If the test section is not feasible, submit a calibration plan to the Engineer with detailed information on equipment and a designated area for calibration.

(A) Asphalt Seal Coat

Use the type of seal coat as required by the contract. Seal coat aggregates shall be drained of free moisture and dust free before use. Place the seal coat in full-lane widths.

Adjust the aggregate rates to provide a sufficient quantity of cover material to be spread over the surface of the seal coat preventing traffic damage, where it is necessary to permit traffic on sections of a completed seal coat.

Perform rolling of each layer immediately after the aggregate has been uniformly spread. Rolling will consist of at least 3 complete coverages with one pneumatic-tire roller followed by at least one complete coverage with a 5 to 8 ton steel-wheel roller. All roller coverages shall be completed within 5 minutes of the asphalt emulsion being placed. Do not allow crushing of the aggregate or picking up of the material by the rollers.

The use of a combination steel-wheel and pneumatic-tire roller will be permitted instead of the 5 to 8 ton steel-wheel roller.

After the aggregate is thoroughly seated, broom all excess aggregate off of the surface of the seal coat after 3 days but no more than 7 calendar days. Traffic may be permitted on the seal coat immediately after the rolling is complete.

The construction of the various types of seal coats will be in accordance with the following additional requirements:

(1) Single Seal

Apply emulsion to the existing surface followed immediately by an application of aggregate using Table 660-1 and requirements in the contract. Uniformly spread the full required amount of aggregate in one application and correct all non-uniform areas before rolling.

Immediately after the aggregate has been uniformly spread, perform rolling as previously described.

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(2) Double Seal

Apply emulsion to the existing surface followed immediately by an application of aggregate using Table 660-1 and requirements in the contract ensuring each is uniformly placed over the existing surface and rolled as previously described.

Immediately after the first application of seal aggregate has been made uniform and rolled, apply the second application of the required amount of emulsion and seal coat aggregate as defined in Article 1012-3 of the *2012 Standard Specifications* and roll as previously described.

(3) Triple Seal

Follow the procedure outlined in Subarticle 660-9(A)(2) and apply emulsion and aggregate as a third layer and roll as previously described.

(4) Sand Seal

Place the fully required amount of asphalt material in one application and immediately cover with the seal coat aggregate. Uniformly spread the fully required amount of aggregate in one application and correct all non-uniform areas before rolling.

Immediately after the aggregate has been uniformly spread, perform rolling.

Broom excess aggregate material from the surface of the seal coat.

When the sand seal is to be constructed for temporary sealing purposes only and will not be used by traffic, use other grades of asphalt material meeting the requirements of Articles 1020-5 and 1020-6 of the *2012 Standard Specifications*.

(B) Asphalt Mat and Seal

Construct the seal coat in accordance with Subarticle 660-9(A) using the size aggregate required by the contract.

Construct the mat coat in accordance with Subarticle 660-9(C) using the type seal required by the contract.

Asphalt Mat Coat for Soil Subgrade

The surface on which the mat coat is to be applied shall be approved by the Engineer before the mat coat emulsion is applied.

Place a string line guide for application equipment. Place the mat coat in full-lane widths.

Existing surface shall be damp prior to placement of the mat coat.

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Immediately follow the application of emulsion with the spreading of the aggregate. No more than 5 minutes can elapse from the time the emulsion is applied and the rolling is completed when using CRS-2L or CRS-2P.

Mat coat aggregate shall be drained of free moisture and dust free before use. Spread the aggregate uniformly at the required rate and correct all non-uniform areas before rolling.

Roll immediately after the aggregate is uniformly spread. Rolling consists of at least 3 complete coverages with two 5 to 10 ton steel-wheel rollers. Continue rolling until the aggregate is thoroughly keyed into the emulsion. Do not allow crushing of the aggregate or picking up of the material by the rollers. A combination steel-wheel and pneumatic-tire roller will not be permitted. Use 2 individual steel-wheel rollers. The 3 coverages shall be completed within 5 minutes of the spraying of the emulsion.

At the discretion of the Engineer, at the beginning of each emulsion application, spread a paper over the end of the previously completed mat coat and begin the asphalt application on the paper. After application, remove and dispose of the paper.

After the aggregate is thoroughly seated, traffic may be permitted on the mat coat after the rolling is complete. No brooming shall be performed on the mat coat.

Correct defects or damage to the mat coat before the application of seal coat or plant mix overlay. The seal coat or plant mix may be applied the same day the mat coat is placed provided the mat coat has been satisfactorily applied and rolled.

Asphalt Mat Coat for Pavement Surfaces

For mat coats with an asphalt overlay, construct the mat coat in accordance with Subarticle 660-9(C). The emulsion for the mat coat may be the same as the tack coat of the asphalt overlay with the application rate as specified in Table 605-1 Application Rates for Tack Coat.

For mat coats constructed on existing pavement surfaces, construct the mat coat in accordance with Subarticle 660-9(C) using the sized aggregate required by the contract and the application rates specified in Table 660-1.

(C) Fog Seal

Apply an emulsified asphalt and water mixture as an aggregate loss preventative or surface seal.

Use a base material from a CRS-1H, CSS-1H or CQS-1H emulsion in accordance with the requirements of Article 1020-3 of the *2012 Standard Specifications*. Emulsion will be diluted with water at a 1:1 ratio unless otherwise directed by the Engineer.

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For emulsions containing modifiers other than those allowed in Article 1020-3, submit to the Engineer for approval. These emulsions with modifiers shall meet the requirements of Article 1020-3 and manufacturer specifications.

Provide a distributor for heating and uniformly applying the emulsion in accordance with the requirements of Article 600-5 of the *2012 Standard Specifications*. Provide a hand spray hose and nozzle to cover areas inaccessible to the spray bars.

The pavement surface must be clean and dry before applying the fog seal. Apply the mixture when the air temperature is 60°F and above. Do not apply asphalt material when the weather is foggy or rainy. The application temperature will be between 160°F and 170°F or per manufacturer's recommendations. Care is to be taken not to overlap the existing thermoplastic edgeline while spraying. The typical target application rate for diluted emulsions shall be 0.12 gal/sy +/- 0.03 gal/sy. The Engineer may request a test strip prior to construction to determine the application rate.

660-10 TEMPORARY TRAFFIC CONTROL (TTC)

All AST operations shall be conducted in daylight hours.

Provide temporary traffic control for the asphalt surface treatment operations in accordance with the contract and in accordance with the provision RWZ-1 TEMPORARY TRAFFIC CONTROL (TTC) found elsewhere in the proposal except the following sections do not apply:

TRAFFIC OPERATIONS, Drop-Off Requirements and Time Limitations.

TRAFFIC OPERATIONS, Project Requirements.

Install advance/general warning work zone signs according to the Detail Drawing titled Signing for Asphalt Surface Treatment provided in these plans.

660-11 WARRANTY

The Asphalt Surface Treatment (AST) shall be warranted by the project payment and performance bonds for a period of 12 months.

(A) Warranty Period

The Department will conduct an inspection of the work and provide written acceptance in accordance with Article 105-17 of the 2012 Standard Specifications. Written acceptance of the work will constitute the start date for the 12 month AST warranty period.

(B) Situations Affecting the Warranty

During the warranty period, the Contractor will not be held responsible for distresses that are caused by factors not related to materials and workmanship. These include, but are not limited to, chemical and fuel spills, vehicle fires, base failures, and snow plows. Other factors considered to be beyond the control of the Contractor, which may contribute to pavement distress, will be considered by the Engineer on a case by case basis upon receipt of a written

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request from the Contractor. Maintaining traffic on the pavement surface prior to the Engineer's acceptance will not be a condition for voiding the warranty.

(C) Emergency Repairs

If, in the opinion of the Department, a pavement condition covered by the warranty requires immediate attention for the safety of the traveling public, the Contractor will be notified immediately. If the Contractor cannot perform the work in a timely manner, the Department may directly perform or have the corrective work performed by another entity at the Contractor's expense. Any emergency work performed will not alter the requirements, responsibilities, or obligations of the warranty.

(D) Warranty Performance Criteria

Surface Defects	Severity	Extent (Per Lot)
Surface Patterns	Alternate lean and heavy lines streaking over the entire pavement surface.	Greater than 20% of a lot affected; distress spotted evenly over the lot or over localized areas within the lot.
Bleeding/Flushing	Distinctive appearance (with excess asphalt binder already free).	Greater than 20% of the wheel tracks within a lot affected.
Loss of Cover Aggregate	Large patches of cover aggregate lost from the pavement surface.	Greater than 20% of a lot affected; distress spotted evenly over the lot or over localized areas within the lot.

Lot - A 1,000-foot section of pavement or portion thereof, a lane width wide, on which AST is constructed on a single map.

The beginning point of the first lot will be the beginning point of each day's operation or the beginning of a map, whichever is applicable.

The Department will review the AST and advise the Contractor of any required corrective work in writing prior to expiration of the warranty period.

The Department will approve all materials and methods used in warranty work.

The Department will determine if warranty work performed by the Contractor meets the contract and provide written acceptance of the warranty work when complete.

The Chief Engineer will review any disputes for corrective work covered under the warranty.

660-10 MAINTENANCE AND PROTECTION

Maintain and protect the asphalt surface treatment until it is accepted by the Department. Make all necessary repairs in such a manner as to preserve the uniformity of the surface.

REVISED 2/5/2015**660-11 MEASUREMENT AND PAYMENT**

Asphalt Surface Treatment: Single Seal, Double Seal, Triple Seal, Mat and Single Seal, Mat and Double Seal, Fog Seal, Sand Seal, and Mat Coat, No. ____ Stone. All AST will be measured and paid at the contract unit price per square yard. Payment at the above prices will be made for replacing any satisfactorily completed asphalt surface treatment when such replacement has been made necessary by defects in subgrade or base constructed by others.

Emulsion for Asphalt Surface Treatment will be measured and paid at the contract unit price per gallon, which price will be full compensation for all materials including modifiers and additives, tack coat, labor, tools, equipment, and all other incidentals necessary to complete the work.

Price adjustments herein shall apply concurrently; however, price adjustment will not apply in the event the material is rejected.

Furnishing and applying prime will be paid as provided in Article 600-9 of the *2012 Standard Specifications for Prime Coat*.

Adjustment for *Emulsion for AST* will be paid per the following formula:

$$A = B + ((D - C)/235)*0.65$$

Where:

A = Adjusted Contract Unit Price of *Emulsion for AST* per gallon

B = Contract Unit Price of *Emulsion for AST* per gallon

C = Base Price Index of PG 64-22 per ton

D = Monthly Average Terminal F.O.B. Selling Price for PG 64-22 per ton

See Price Adjustment - Asphalt Binder Special Provision found elsewhere in this proposal for the base price index of PG 64-22 per ton.

Payment will be made under:

Pay Item	Pay Unit
Asphalt Surface Treatment, Single Seal	Square Yard
Asphalt Surface Treatment, Double Seal	Square Yard
Asphalt Surface Treatment, Triple Seal	Square Yard
Asphalt Surface Treatment, Mat and Single Seal	Square Yard
Asphalt Surface Treatment, Mat and Double Seal	Square Yard
Asphalt Surface Treatment, Fog Seal	Square Yard
Asphalt Surface Treatment, Sand Seal	Square Yard
Asphalt Surface Treatment, Mat Coat, No. ____ Stone	Square Yard
Emulsion for Asphalt Surface Treatment	Gallon

Line #	Item Number	Sec #	Description	Quantity	Unit Cost	Amount
ROADWAY ITEMS						
0001	0000100000-N	800	MOBILIZATION	Lump Sum	L.S.	
0002	1803500000-E	SP	ASPHALT SURFACE TREATMENT, DOUBLE SEAL	251,093 SY		
0003	1838000000-E	SP	EMULSION FOR ASPHALT SURFACE TREATMENT	138,101 GAL		
0004	4457000000-N	SP	TEMPORARY TRAFFIC CONTROL	Lump Sum	L.S.	
0957/Feb05/Q389196.0/D8098600000/E4						
Total Amount Of Bid For Entire Project :						

09/08/09

CONTRACT NO.: DA00220 WBS ELEMENT: ISP.20485.1, ETC.

STATE OF NORTH CAROLINA
DIVISION OF HIGHWAYS

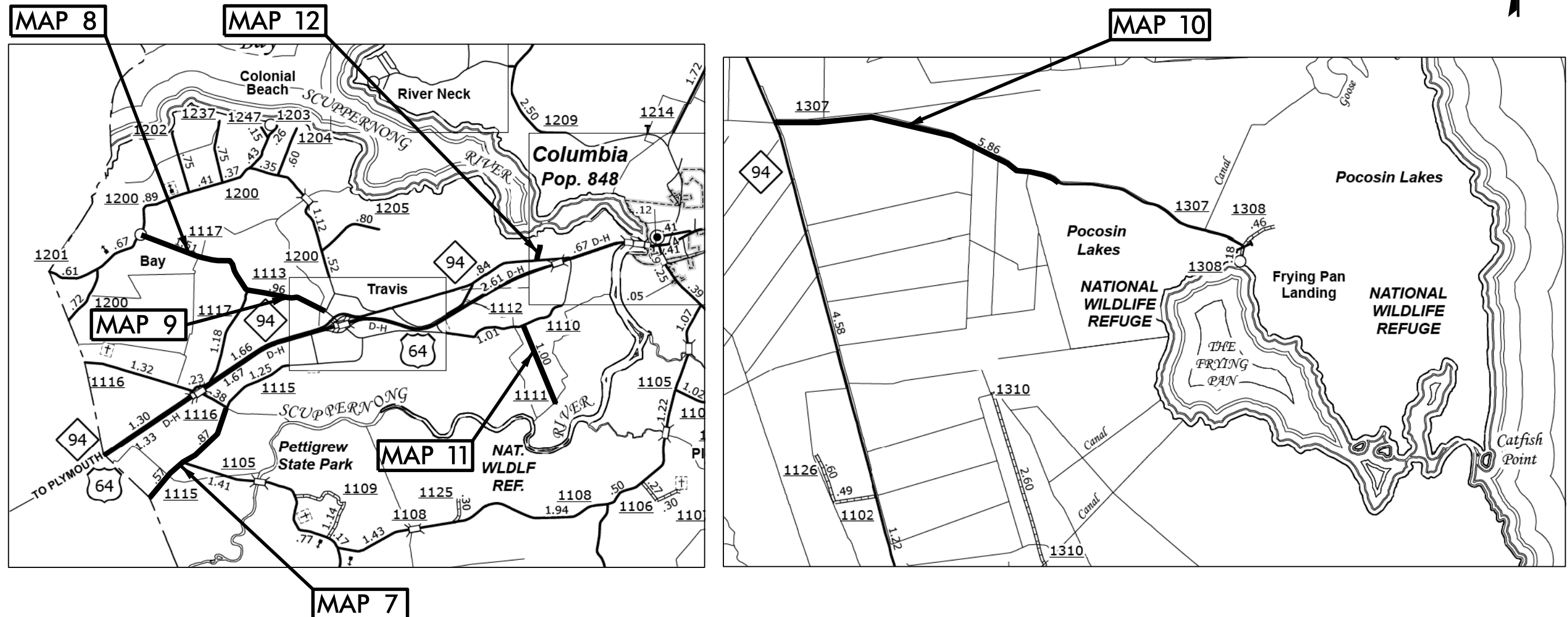
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TYRRELL COUNTY

LOCATION: MAP 7 SR 1115 FROM SR 1116 TO WASH. CO. LINE
MAP 8 SR 1117 FROM SR 1113 TO SR 1200
MAP 9 SR 1113 FROM SR 1206 TO SR 1117
MAP 10 SR 1307 FROM NC 94 TO EXIST. SEAL
MAP 11 SR 1111 FROM SR 1110 TO END
MAP 12 SR 1228 FROM NC 94 TO END

TYPE OF WORK: ASPHALT SURFACE TREATMENT DOUBLE SEAL

STATE	STATE PROJECT REFERENCE NO.	SHEET NO.	TOTAL SHEETS
N.C.	1CR.20081.68, ETC.	2	7
STATE PROJ. NO.	F.A. PROJ. NO.	DESCRIPTION	
ISP.20895.6		MAP 7	
ISP.20895.1		MAP 8	
ISP.20895.2		MAP 9	
ISP.20895.3		MAP 10	
ISP.20895.4		MAP 11	
ISP.20895.5		MAP 12	



NTS

PROJECT LENGTH

LENGTH OF ROADWAY PROJECT MAP 7 = 1.30 MI.
LENGTH OF ROADWAY PROJECT MAP 8 = 1.60 MI.
LENGTH OF ROADWAY PROJECT MAP 9 = 0.90 MI.
LENGTH OF ROADWAY PROJECT MAP 10 = 3.10 MI.
LENGTH OF ROADWAY PROJECT MAP 11 = 1.00 MI.
LENGTH OF ROADWAY PROJECT MAP 12 = 0.20 MI.

Prepared in the Office of:
DIVISION OF HIGHWAYS

113 Airport Dr., Edenton NC, 27932

2012 STANDARD SPECIFICATIONS

LETTING DATE:
FEBRUARY 18, 2015

W.B. HOBBS, P.E.
DIVISION PROJECT MANAGER

C.E. SLACHTA
DIVISION PROPOSALS ENGINEER

**DIVISION OF HIGHWAYS
STATE OF NORTH CAROLINA**

