



STATE OF NORTH CAROLINA
DEPARTMENT OF TRANSPORTATION

PATRICK L. MCCRORY
GOVERNOR

ANTHONY J. TATA
SECRETARY

January 8, 2013

Addendum No. 1

Contract No.: DA00144

TIP No.: N/A

WBS No.: 17BP.1.R.15 & 17BP.1.R.16

Replacement of Bridges #12 & #25 on NC 137 over Cole Creek in Gates County

To Whom It May Concern:

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

The following revisions have been made to the proposal:

Page No. 75-A, "Concrete Wearing Surface," has been added. Please insert Page No. 75-A the proposal.

Pages No. 75-B & 75-C, "Elastomeric Concrete," have been added. Please insert Pages No. 75-B & 75-C the proposal.

Page No. 91, "Bid Form," has been revised to adjust the quantities for HP 12 X 53 Steel Piles and HP 12 X 53 Galvanized Steel Piles. Please void the existing Page No. 91 in the proposal and staple revised Page No. 91 thereto.

Sincerely,

A handwritten signature in dark ink, appearing to read "W. B. Hobbs", followed by a horizontal line.

W. B. Hobbs, PE
Division Project Manager

WBH/ces

Attachment

cc: S. D. Baker, PE
G. A. Byrum, PE
R. W. Midgett, PE
J. S. Abel, Jr.
D. H. Stallings

REVISED 1/8/13

CONCRETE WEARING SURFACE

GENERAL

This Special Provision governs materials, forming, and all other related work in the construction of a reinforced concrete wearing surface including the grooving of the bridge deck in accordance with Section 420 of the Standard Specifications, the details shown on the plans, and as outlined in these Special Provisions.

MATERIALS

Unless otherwise noted on the plans, use class AA concrete and a coarse aggregate gradation of 78M. The Class AA concrete shall contain fly ash or ground granulated blast furnace slag at the substitution rate specified in Article 1024-1 and in accordance with Articles 1024-5 and 1024-6 of the Standard Specifications. Place the wearing surface according to the grades, thicknesses and cross sections shown on the plans.

PREPARATION OF SURFACE

Prepare all surfaces to be overlaid using the equipment specified herein and prior to placing the epoxy coated reinforcing steel. Additionally, clean the surface within 48 hours prior to placing the overlay unless otherwise approved.

Thoroughly soak the cleaned surface for at least 12 hours prior to placing the concrete wearing surface. While soaking the surface, cover it with a layer of white opaque polyethylene film that is at least 4 mils thick. Immediately prior to placing the concrete wearing surface, remove standing water from the surface.

EQUIPMENT

Prior to beginning any work, obtain approval for all equipment to be used for deck preparation, placing, finishing, and curing the concrete wearing surface.

For surface preparation, use sandblasting or pressure washing equipment capable of removing all foreign matter. If using high pressure water blast, a minimum nozzle pressure of 3000 psi is required.

PLACING AND FINISHING

Follow the placing, finishing, and curing requirements of Article 420-14 (A) and (B). Construction Joints other than those shown on the plans are not permitted.

LIMITATIONS OF OPERATIONS

The requirements of Article 420-20 will apply to placing vehicles and construction equipment on the finished concrete wearing surface. Use insulation that meets the requirements of Article 420-7(C), and if required, place it on the concrete wearing surface as soon as the initial set permits.

The quantity of concrete wearing surface to be paid for is the actual number of square feet of concrete wearing surface as provided on the plans.

MEASUREMENT AND PAYMENT

No direct payment will be made for this work, as the cost for this work will be considered incidental to the bid item, "Construction of Superstructure".

REVISED 1/8/13

ELASTOMERIC CONCRETE

(12-18-12)

1.0 DESCRIPTION

Elastomeric concrete is a mixture of a two-part polymer consisting of polyurethane and/or epoxy and kiln-dried aggregate. Provide an elastomeric concrete and binder system that is preapproved. Use the concrete in the blocked out areas on both sides of the bridge deck joints as indicated on the plans.

2.0 MATERIALS

Provide materials that comply with the following minimum requirements at 14 days (or at the end of the specified curing time).

ELASTOMERIC CONCRETE PROPERTIES	TEST METHOD	MINIMUM REQUIREMENT
Compressive Strength, psi	ASTM D695	2000
5% Deflection Resilience	ASTM D695	95
Splitting Tensile Strength, psi	ASTM D3967	625
Bond Strength to Concrete, psi	ASTM D882 (D882M)	450
Durometer Hardness	ASTM D2240	50

BINDER PROPERTIES (without aggregate)	TEST METHOD	MINIMUM REQUIREMENT
Tensile Strength, psi	ASTM D638	1000
Ultimate Elongation	ASTM D638	150%
Tear Resistance, lb/in	ASTM D624	200

In addition to the requirements above, the elastomeric concrete must be resistant to water, chemical, UV and ozone exposure and withstand temperature extremes. Elastomeric concrete systems requiring preheated aggregates are not allowed.

3.0 PREQUALIFICATION

Manufacturers of elastomeric concrete materials shall submit samples (including aggregate, primer and binder materials) and a Type 3 certification in accordance with Article 106-3 of the Standard Specifications for prequalification to:

North Carolina Department of Transportation
Materials and Tests Unit
1801 Blue Ridge Road
Raleigh, NC 27607

REVISED 1/8/13

Prequalification will be determined for the system. Individual components will not be evaluated, nor will individual components of previously evaluated systems be deemed prequalified for use.

The submitted binder (a minimum volume of 1 gallon) and corresponding aggregate samples will be evaluated for compliance with the Materials requirements specified above. Systems satisfying all of the Materials requirements will be prequalified for a one year period. Before the end of this period new product samples shall be resubmitted for prequalification evaluation.

If, at any time, any formulation or component modifications are made to a prequalified system that system will no longer be approved for use.

4.0 INSTALLATION

The elastomeric concrete shall not be placed until the reinforced concrete deck slab has cured for seven full days and reached a minimum strength of 3000 psi.

Provide a manufacturer's representative at the bridge site during the installation of the elastomeric concrete to ensure that all steps being performed comply with all manufacturer installation requirements including, but not limited to weather conditions (ambient temperature, relative humidity, precipitation, wind, etc), concrete deck surface preparation, binder and aggregate mixing, primer application, elastomeric concrete placement, curing conditions and minimum curing time before joint exposure to traffic. Do not place elastomeric concrete if the ambient air or surface temperature is below 45°F.

Prepare the concrete surface within 48 hours prior to placing the elastomeric concrete. Before placing the elastomeric concrete, all concrete surfaces shall be thoroughly cleaned and dry. Sandblast the concrete surface in the blockout and clear the surface of all loose debris. Do not place the elastomeric concrete until the surface preparation is completed and approved.

Prepare and apply a primer, as per manufacturer's recommendations, to all concrete faces to be in contact with elastomeric concrete, and to areas specified by the manufacturer.

Prepare, batch, and place the elastomeric concrete in accordance with the manufacturer's instructions. Place the elastomeric concrete in the areas specified on the plans while the primer is still tacky and within 2 hours after applying the primer. Trowel the elastomeric concrete to a smooth finish.

The joint opening in the elastomeric concrete shall match the formed opening in the concrete deck prior to sawing the joint.

5.0 FIELD SAMPLING

Provide additional production material to allow freshly mixed elastomeric concrete to be sampled for acceptance. A minimum of six 2 inch cube molds and three 3x6 inch cylinders will be taken by the Department for each day's production. Compression, splitting tensile, and durometer hardness testing will be performed by the Department to determine acceptance. Materials failing to meet the requirements listed above are subject to removal and replacement at no cost to the Department.

6.0 BASIS OF PAYMENT

No separate payment will be made for elastomeric concrete. The lump sum contract price bid for "Foam Joint Seals" or "Synthetic Rubber Expansion Joint Seal" will be full compensation for furnishing and placing the Elastomeric Concrete.

BID FORM CONT.

Line No.	Item No.	Sect. No.	DESCRIPTION	QUANTITY	UNIT	UNIT PRICE	AMOUNT BID
35	6048000000-E	SP	Floating Turbidity Curtain	110	SY		
36	6071012000-E	SP	Coir Fiber Wattle	890	LF		
37	6084000000-E	1660	Seeding & Mulching	1	ACR		
38	6087000000-E	1660	Mowing	1	ACR		
39	6090000000-E	1661	Seed for Repair Seeding	100	LB		
40	6093000000-E	1661	Fertilizer for Repair Seeding	0.5	TON		
41	6096000000-E	1662	Seed for Supplemental Seeding	100	LB		
42	6108000000-E	1665	Fertilizer Topdressing	0.75	TON		
43	6114500000-N	1667	Specialized Hand Mowing	20	MHR		
44	6117000000-N	SP	Response For Erosion Control	26	EA		
45	8042000000-N	402	Removal Of Existing Structures at (13+27.00)	Lump Sum	LS	Lump Sum	
46	8042000000-N	402	Removal Of Existing Structures at (13+63.50)	Lump Sum	LS	Lump Sum	
47	8112730000-N	450	PDA Testing	2	EA		
48	8121000000-N	412	Unclassified Structure Excavation at (13+27.00)	Lump Sum	LS	Lump Sum	
49	8121000000-N	412	Unclassified Structure Excavation at (13+63.50)	Lump Sum	LS	Lump Sum	
50	8210000000-N	422	Bridge Approach Slabs, (13+27.00)	Lump Sum	LS	Lump Sum	
51	8210000000-N	422	Bridge Approach Slabs, (13+63.50)	Lump Sum	LS	Lump Sum	
52	8364000000-E	450	HP 12 X 53 Steel Piles	1,365	LF		
53	8365000000-E	450	HP 12 X 53 Galvanized Steel Piles	560	LF		
54	8384000000-E	450	HP 14 X 73 Steel Piles	1,640	LF		
55	8384200000-E	450	HP 14 X 73 Galvanized Steel Piles	600	LF		
56	8391000000-N	450	Steel Pile Points	52	EA		
57	8393000000-N	450	Pile Redrives	24	EA		
58	8608000000-E	876	Rip Rap Class II (2'-0" Thick)	468	TON		
59	8622000000-E	876	Geotextile for Drainage (Slope Protection)	520	SY		
60	8765000000-N	SP	Construction Of Substructure at (13+27.00)	Lump Sum	LS	Lump Sum	
61	8765000000-N	SP	Construction Of Substructure at (13+63.50)	Lump Sum	LS	Lump Sum	
62	8766000000-N	SP	Construction Of Superstructure at (13+27.00)	Lump Sum	LS	Lump Sum	
63	8766000000-N	SP	Construction Of Superstructure at (13+63.50)	Lump Sum	LS	Lump Sum	

*****Unit Prices must be limited to TWO decimal places*****

FOR BID TO BE CONSIDERED RESPONSIVE, ANY ADDENDA ISSUED MUST BE ACKNOWLEDGED. PLEASE ACKNOWLEDGE RECEIPT OF ADDENDA BY WRITING IN ADDENDUM NUMBER AND DATING BELOW.

Addendum No. _____ Initial & Date: _____

Addendum No. _____ Initial & Date: _____

Addendum No. _____ Initial & Date: _____

Addendum No. _____ Initial & Date: _____