STATE OF NORTH CAROLINA
DEPARTMENT OF TRANSPORTATION

PAT MCCRORY
GOVERNOR

ANTHONY J. TATA
SECRETARY

November 8, 2013

Addendum No. 2
RE: Contract ID C203171
WBS # 32635.3.FR6
F. A. # BRNHF-0012(55)
Dare County (B-2500A)
Long Term Improvements (Phase II) To Pea Island On NC-12

November 19, 2013 Letting

To Whom It May Concern:

Reference is made to the proposal form furnished to you on this project.

The following revisions have been made to the proposal:

On Page No. 39 the project special provision entitled "Supplemental Grading" has been deleted. Also on Page No. 39 and on New Page No. 39A the project special provisions entitled "Supplemental Unclassified Excavation", "Supplemental Borrow Excavation" and "Ground Mounted Sign Support Modification" have been added. Please void Page No. 39 in your proposal and staple the revised Page No. 39 and New Page No. 39A thereto.

On Page Nos. 82 the eighth paragraph of the project special provision entitled "Bridge Deck Rideability –International Roughness Index" has been revised. On Page No. 83 the second sentence of the second paragraph of section "3.0 Reporting Requirements" has been revised. On Page No. 83A a sentence was added to section "7.0 Grooving Bridge Floors" within the project special provision entitled "Bridge Deck Rideability –International Roughness Index" Please void Page Nos. 82, 83 and 83A in your proposal and staple the revised Page Nos. 82, 83 and 83A thereto.

On Page No. 88 the first sentence of section 3.0 Preparation of Surface" and On Page No. 89 the second paragraph of section "8.0 Basis Of Payment" within the project special provision entitled "Concrete Wearing Surface" has been revised. Please void Page Nos. 88 and 89 in your proposal and staple the revised Page Nos. 88 and 89 thereto

On Page Nos. 121 and 122 the project special provision entitled "Stainless Steel Reinforcing" has been revised. Please void Page Nos. 121 and 122 in your proposal and staple the revised Page Nos. 121 and 122 and New Page No. 122A thereto.

MAILING ADDRESS:
NC DEPARTMENT OF TRANSPORTATION
CONTRACT STANDARDS AND DEVELOPMENT UNIT
1591 MAIL SERVICE CENTER
RALEIGH NC 27699-1591

TELEPHONE: 919-707-6900
FAX: 919-250-4119
WEBSITE: www.NCDOT.GOV

LOCATION:
CENTURY CENTER COMPLEX
ENTRANCE B-2
1020 BIRCH RIDGE DRIVE
RALEIGH NC 27610

C203171 B-2500A
Dare County

On Page No. 127 in the first paragraph Class I Rip Rap was changed to Scour Protection Stone. Please void Page No. 127 in your proposal and staple the revised Page No. 127 thereto.

On Page No. 136 the first paragraph under "Measurement and Payment" within the project special provision entitled "Reinforced Approach Fills" has been revised. Please void Page No. 136 in your proposal and staple the revised Page No. 136 thereto.

On the item sheets the following pay items have been deleted or added:

Item	Description	Old Quantity	New Quantity
9-0234000000-E-4SP	Supplemental Grading	1,000 CY	**DELETED**
43-4072000000-E-903	Supports, 3-LB Steel U-Channel	321 LF	**DELETED**
125-0234000000-E-SP	Supplemental Borrow Excavation	**NEW ITEM**	6,000 CY
126-0234000000-E-SP	Supplemental Unclassified Excavation	**NEW ITEM**	2,500 CY
127-4082000000-E-903	Supports, Wood	**NEW ITEM**	321 LF

The Contractor's bid must be based on these revised pay items. The contract will be prepared accordingly.

The Expedite File has been updated to reflect these revisions. Please download the Expedite Addendum File and follow the instructions for applying the addendum. Bid Express will not accept your bid unless the addendum has been applied.

Sincerely,

R. A. Garris, PE
Contract Officer

RAG/jag
Attachments
cc: Mr. Ron Hancock, PE
Mr. Jerry Jennings, PE
Ms. D. M. Barbour, PE
Mr. J. V. Barbour, PE
Mr. G. R. Perfetti, PE
Mr. R.E. Davenport, PE
Mr. Brad Hibbs, PE (Attn: Mr. Jake Riggsbee, PE)
Ms. Marsha Sample
Project File (2)
Mr. Ray Arnold, PE
Ms. Natalie Roskam, PE
Ms. Penny Higgins
Ms. Jaci Kincaid
Mr. Ronnie Higgins
Mr. Larry Strickland
Ms. Lori Strickland

PROJECT SPECIAL PROVISIONS

ROADWAY

CLEARING AND GRUBBING - METHOD II:

(9-17-02) (Rev. 1-17-12) 200 SP2 R02A

Perform clearing on this project to the limits established by Method "II" shown on Standard Drawing No. 200.02 of the *2012 Roadway Standard Drawings*.

TEMPORARY DETOURS:

(8-15-00) (Rev. 4-15-08) 1101 SP2 R30 B

Construct the temporary detours required on this project in accordance with the typical sections in the plans or as directed by the Engineer.

After the detours have served their purpose, remove the portions deemed unsuitable for use as a permanent part of the project as directed by the Engineer. Salvage and stockpile the aggregate base course removed from the detours at locations within the right of way, as directed by the Engineer, for removal by State Forces. Place pavement and earth material removed from the detour in embankments or dispose of in waste areas furnished by the Contractor.

Pipe culverts removed from the detours remain the property of the Contractor. Pipe culverts that are removed will be measured and will be paid at the contract unit price per linear foot for *Pipe Removal*. Payment for the construction of the detours will be made at the contract unit prices for the various items involved.

No direct payment will be made for removing the aggregate base course, earth material and pavement, as the cost of same shall be included in the lump sum price bid for *Grading*. Such prices and payments will be full compensation for the work of removing, salvaging, and stockpiling aggregate base course; removing pipe culverts; and for placing earth material and pavement in embankments or disposing of earth material and pavement in waste areas.

SUPPLEMENTAL UNCLASSIFIED EXCAVATION:

(11-19-13) 225 SPI

Description

Perform excavation not directly associated with the construction of the project; including, but not limited to, Survey Lines "—L—", "—Det—", "—Access—", "—X1—", "—X2—", "—X3—", "—X4—", "—X5—", in accordance with Articles 225-3, 225-5, 225-6, and 225-7 of the *Standard Specifications* and as directed by the Engineer.

Construction Methods

Supplemental unclassified excavation shall be performed when wind, over wash or other events deposit material within or adjacent to travelways that are open to the public, create a safety hazard, or as directed by the Engineer. All efforts shall be taken to retain the excavated material within the project limits. The excavated material shall be used for, but not limited to, the flattening of existing slopes, wedging pavement drop offs, leveling pads for construction staging and equipment, and creating protective berms and stockpiles.

In extraordinary circumstances or catastrophic events, the Department reserves the right to perform this supplemental borrow excavation with state forces or other contracting methods.

Measurement and Payment

Supplemental Unclassified Excavation will be measured in accordance with Article 225-7 of the *Standard Specifications*.

Payment will be made under:

Pay Item	**Pay Unit**
Supplemental Unclassified Excavation	Cubic Yard

SUPPLEMENTAL BORROW EXCAVATION:
(11-19-13) 230 SPI

Description

Perform borrow excavation not directly associated with the construction of the project; including, but not limited to, Survey Lines "—L—", "—Det—", "—Access—", "—X1—", "—X2—", "—X3—", "—X4—", "—X5—", in accordance with Section 230 of the *Standard Specifications* and as directed by the Engineer.

Construction Methods

Supplemental borrow excavation shall be performed when wind-blown sand, over wash or other events removes earthen material from within or adjacent to travelways that are open to the public, create a safety hazard, or as directed by the Engineer.

In extraordinary circumstances or catastrophic events, the Department reserves the right to perform this supplemental excavation with state forces or other contracting methods.

Measurement and Payment

Supplemental Borrow Excavation will be measured in accordance with Article 230-5 of the *Standard Specifications*.

Payment will be made under:

Pay Item	**Pay Unit**
Supplemental Borrow Excavation	Cubic Yard

GROUND MOUNTED SIGN SUPPORT MODIFICATION:
(11-19-13) 903 SPI

The current "Signing and Pavement Marking Plans" call for 3-Lb. Steel U-Channel Supports to be used for ground-mounted signs. The Contractor is hereby notified that where 3-Lb Steel U-Channel Supports are called for in the plans, he shall instead provide "Wood Supports". Wood supports shall be in accordance with Section 903 of the *Standard Specifications*. All other requirements of the "Signing and Pavement Marking Plans" shall remain in effect. *Supports, Wood* will be measured and paid in linear feet in accordance with Section 903 of the *Standard Specifications*.

Provide a competent operator, trained in the operation of the inertial profiler. Operation of the inertial profiling system shall conform to AASHTO R 57.

Provide the user selected inertial profiler settings to the Engineer for the project records. Certification of the inertial profiling system shall conform to AASHTO R 56.

Remove all objects and foreign material on the bridge deck surface prior to longitudinal bridge deck profile testing.

Traffic control and all associated activities included in the bridge deck smoothness testing of the bridge deck surface will be the responsibility of the Contractor.

Operate the profiler at any speed as per the manufacturer's recommendations, however, the speed shall be constant to within ± 3 mph of the intended speed and any required acceleration shall be gradual. For example, if the intended speed were 30 mph, the acceptable range of speed for testing would be 27 to 33 mph.

Operate the inertial profiler in the direction of the final traffic pattern. Collect IRI data from both wheel paths during the same run. It is permissible to collect data one wheel path at a time if each wheel path is tested and evaluated separately. Define a "wheel path" as 3 feet from the edge of the travel lane. MRI values are the average of the IRI values from both wheel paths. When using an inertial profiler that collects a single trace per pass, take care to ensure that the measurements from each trace in a travel lane start and stop at the same longitudinal locations. Unless otherwise specified, multiple runs are not necessary for data collection.

Operate the automatic triggering method at all times unless impractical. A tape stripe or traffic cone wrapped with reflective material may be used to alert the profiler's automatic triggering sensor to begin data collection. The profiler shall reach the intended operating speed before entering the test section. The runup and runout distances shall be sufficient to obtain the intended operating speed and to slow down after testing is completed.

The evaluation of the profiles will be performed on a section basis. A section is defined as the length from expansion joint to expansion joint for each travel lane of the finished bridge deck surface.

Perform all smoothness testing in the presence of the Engineer. Perform smoothness tests on the finished surface of the completed project or at the completion of a major stage of construction as approved by the Engineer. Coordinate with and receive authorization from the Engineer before starting smoothness testing. Perform smoothness tests within 7 days after receiving authorization. Any testing performed without the Engineer's presence, unless otherwise authorized, may be ordered retested at the Contractor's expense.

Areas excluded from testing by the profiler shall be tested by the Contractor and the Engineer using a 10-ft stationary straightedge furnished by the Contractor. Any location on the bridge deck selected by the Department shall be tested as well as all transverse joints. Apply the straightedge parallel to the centerline of the surface. Do not exceed 1/8" variation of the surface being tested from the edge of the straightedge between any 2 contact points. Correct areas found to exceed this tolerance with corrective measures approved by the Engineer. Provide the work and materials required in the correction of defective work at no cost to the Department.

When corrections to the bridge deck surface are required, the method of correction shall be diamond grinding. See "Diamond Grinding" herein. Where corrections are made after the initial smoothness testing, the bridge deck will be retested by the Contractor to verify that corrections have produced the acceptable ride surface.

3. Reporting Requirements

After testing, transfer the profile data from the profiler portable computer's hard drive to a write once storage media (DVD-R or CD-R) or electronic media (flash drive) approved by the Engineer. Label the disk or electronic media with the Project number, Route, file number, date, and termini of the profile data. Submit the electronic data on the approved media to the Engineer immediately after testing and this media will not be returned to the Contractor.

Submit documentation and electronic data of the evaluation for each section to the Engineer within 10 days after completion of the smoothness testing. Submit the electronic files compatible with ProVAL and the evaluation in tabular form with each section occupying a row. Include each row with the beginning and ending station for the section, the length of the section, the original IRI values from each wheel path, and the MRI value for the section. Each continuous run for a section will occupy a separate table and each table will have a header that includes the following: the project contract number, county, the roadway number or designation, a lane designation, the dates of the smoothness runs, and the beginning and ending station of the continuous run. Summarize each table at the bottom.

IRI and MRI numbers recorded in inches per mile will be established from expansion joint to expansion joint for each travel lane of the finished bridge deck surface designated by the Contract.

4. Acceptance Criteria

The bridge deck smoothness acceptance criteria shall be an MRI, the average IRI from both wheel paths, of 130 in/mile or less.

5. Localized Roughness

Areas of localized roughness shall be identified through the "Smoothness Assurance Module" provided in the ProVAL software. Use the "Smoothness Assurance Module" to optimize repair strategies by analyzing the measurements from profiles collected using inertial profilers. The ride quality threshold for localized roughness shall be 300 in/mile at the continuous short interval

of 25 ft. Submit a continuous roughness report to identify sections outside the threshold and identify all localized roughness areas.
The Department will review the localized roughness data and determine the areas that require any corrective action. Re-profile the corrected area to ensure that the corrective action was successful. If the corrective action is not successful, the Department will assess a penalty or require additional corrective action.

Corrective work for localized roughness shall be either diamond grinding or another method approved by the Engineer. Any corrective action performed shall not reduce the integrity or durability of the bridge deck that is to remain in place. Notify the Engineer 5 days prior to commencement of the corrective action.

Localized roughness correction work shall be for the entire traffic lane width. Bridge deck cross slope shall be maintained through corrective areas.

6. Diamond Grinding

If the deck does not meet the smoothness acceptance testing requirements, diamond grinding is required to make corrections. Diamond grind the full width of all lanes in the direction of travel.

Submit grinding equipment specifications to the Engineer for approval before any grinding is performed. Use a grinding machine with diamond tipped saw blades gang mounted on a power driven self-propelled machine capable of removing a minimum of 3 ft of width with each pass. Multiple passes may be needed to achieve the required depth of removal. In addition, hand grinding may be required to remove vertical steps between passes.

The ground surface shall consist of between 50 and 60 grooves per foot of width. The grooves shall be between 0.09" and 0.15" in width and 0.0625" in depth. The area between the grooves shall be between 0.06" and 0.13" in width. The final concrete texture shall be uniform.

Construct and operate the grinding machine such that it will not cause strain or damage to the deck surface, excessive ravels, aggregate fractures, spalls, or disturbance of transverse joints. Longitudinally grind the deck parallel to the roadway centerline.

Continuously remove all slurry or other debris resulting from the grinding operations by vacuum pick-up or other approved methods. Prevent the slurry from flowing into floor drains, onto the ground or into the body of water under the bridge. Dispose of all residues in accordance with Section 802 of the *2012 Standard Specifications*.

In completing all corrective work on the deck surface to satisfy the rideability criteria stated herein, limit grinding such that the final reinforcement cover is not less than the plan cover minus 1/2". In cases where this cannot be achieved, other corrective work may be required as directed by the Engineer.

If corrective action is required on an area equal to or greater than of 50% of the joint to joint section, then corrective action will be required on the entire section at no cost to the Department.

7. Grooving Bridge Floors

After the concrete surface profile has been accepted by the Engineer, the concrete blockouts poured, and the joints installed, groove the bridge deck in accordance with Subarticle 420-14(B) of the *2012 Standard Specifications*. On joint to joint sections which have been completely diamond ground, grooving will not be required.

CONCRETE WEARING SURFACE (9-30-11)

1.0 GENERAL

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

2.0 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.

3.0 PREPARATION OF SURFACE

Prepare all surfaces to be overlayed using the equipment specified herein and prior to placing the stainless 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.

4.0 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.

5.0 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.

6.0 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.

7.0 METHOD OF MEASUREMENT

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.

8.0 BASIS OF PAYMENT

The quantity for which payment is made will be that quantity shown in square feet on the plans. Where the plans have been revised, the quantity to be paid for will be the quantity shown on the revised plans.

The unit bid per square foot will be full compensation for all work covered by this Special Provision and applicable parts of the Standard Specifications, but not limited to furnishing and placing concrete, stainless reinforcing steel, joint filler and sealer, deck drains, bridge scuppers, and any other material; erecting and removing all forms, curing concrete, protecting concrete in wind, rain, low humidity, high temperatures or other unfavorable weather.

Payment will be made under:

Item	Unit
Concrete Wearing Surface	Square Foot

STAINLESS STEEL REINFORCING (SPECIAL)

1.0 GENERAL

Prior to shipping, ensure that all chains and steel bands will not come into direct contact with the stainless steel reinforcement bars. Place wood or other soft materials (i.e., thick cardboard) under the tie-downs. Alternatively, use nylon or polypropylene straps to secure the stainless steel reinforcement bars.

When bundles of reinforcement steel and stainless steel reinforcement bars must be shipped one on top of the other, load the stainless steel reinforcement bars on top. Use wooden spacers to separate the two materials.

Do not use carbon steel tools, chains, slings, etc. when fabricating or handling stainless steel reinforcement bars. Only use nylon or polypropylene slings. Protect stainless steel from contamination during construction operations including any cutting, grinding, or welding above or in the vicinity of stainless steel.

Store steel reinforcement on blocking at least 12" above the ground; protect the steel at all times from damage; and when placing in the work, ensure it is free from dirt, dust, loose mill scale, loose rust, paint, oil or other foreign materials.

The Department requires submittal of a written plan detailing the conformance of operations of all stainless steel reinforcing producers, fabricators and transporters to these provisions. This plan shall be submitted 60 days prior to any stainless steel production. The Department reserves the right to inspect all production and fabrication facilities prior to and during production to ensure this plan is followed and contamination of stainless steel is avoided. Failure to comply with this plan may result in rejection of stainless steel reinforcing.

2.0 DEFORMED STEEL BAR REINFORCEMENT FOR STRUCTURES

Supply deformed steel bar reinforcement conforming to ASTM A955-12 EL, Grade 75. Any alloy with a UNS Designation listed in Table 2 of ASTM 955, meeting the requirements of this specification, shall be used. The UNS Designated Alloy selected by the contractor shall be used throughout the bridge; mixing of alloys will not be permitted.

Bend and cut during fabrication with tolerances in accordance with the Manual of Standard Practice published by the Concrete Reinforcing Steel Institute. Bend the bars cold to the details shown in the plans.

All steel and iron products furnished as domestic products shall be melted cast, formed, shaped, drawn, extruded, forged, fabricated, produced, or otherwise processed and manufactured in the United States. Raw materials including pig iron and processed pelletized and reduced iron ore used in manufacturing domestic steel products may be imported; however, all manufacturing processes to produce the products, including coatings, shall occur in the United States.

Before each steel or iron product is incorporated into this project or included for partial payment on a monthly estimate, the Contractor shall furnish the Resident Engineer a notarized certification certifying that the product conforms to the above. The Engineer will forward a copy of each certification to the Materials and Tests Unit.

Control of Material: In accordance with 106-1(B), Mill Test Reports shall be provided for the Project and shall:

1. Be from the supplying mill verifying that the stainless reinforcement provided has been sampled and tested and the test results meet the Contract requirements;
2. Include a copy of the chemical analysis of the steel provided, with the UNS designation, the heat lot identification and the source of the metal if obtained as ingots from another mill;
3. Include a copy of tensile strength, yield strength and elongation tests on each of the sizes of stainless steel reinforcement provided;
4. Permit positive determination that the reinforcement provided is that which the test results cover; and
5. Include a statement certifying that the materials meet NCDOT Standard Specification 106-1(B) regarding material being melted and manufactured in the United States.

Bars which exhibit active corrosion shall be evaluated. Bars which have damage exceeding two percent of the surface area in any 1 foot length shall be replaced.

Do not weld stainless steel bar reinforcement.

3.0 REINFORCING STEEL BAR SUPPORTS

Place all stainless steel reinforcement on bar chairs that are stainless steel.

Fabricate stainless steel metal chairs and continuous metal stainless steel supports from stainless steel conforming to the same requirements and UNS designations as stainless steel bar reinforcement being supported. Stainless steel chairs used above steel beams shall have plastic-coated feet. Make all wire bar supports of smooth cold drawn industrial quality basic wire having a minimum tensile strength of 65,000 psi. When the legs of the bar supports are in contact with the forms, ensure that the entire leg of the bar support is stainless steel wire or a minimum thickness of 1/4" stainless steel at points of contact with the forms. Use stainless steel wire meeting ASTM A493 except having a minimum chromium content of 16% and a minimum tensile strength of 95,000 psi. Ensure that wire sizes, height tolerance, and leg spacing for wire bar supports are in accordance with the Manual of Standard Practice published by the Concrete Reinforcing Steel Institute.

Tie wire used to tie stainless steel reinforcement shall be stainless steel 16 gauge wire fabricated from stainless steel conforming to the same requirements and UNS designations as stainless steel bar reinforcement as listed in Section 2, dead soft annealed, annealed at size.

4.0 MEASUREMENT AND PAYMENT

Measurement and payment will be as described in section 425-6 of the Standard Specification and will be full compensation for all work and materials as detailed in section 425-1 of the in-place and accepted reinforcement.

Item	Unit
Stainless Steel Reinforcing	Pounds
Spiral Stainless Steel Reinforcing	Pounds

REMOVAL OF EXISTING STRUCTURE (SPECIAL)

1.0 GENERAL

The contractor shall remove the existing structure on NC-12 over the new Pea Island Inlet in accordance with section 402 of the Standard Specifications and this special provision. The existing structure for removal contains:

5-Span Mabey Truss Bridge, 684' overall length
12 Concrete Pile Footing
34 H-Piles
48-24" Ø Pipe Piles

Scour Protection Stone, 300-400lb
Steel Sheet Piling

Traffic shall be maintained in accordance with the traffic control plans.

All components of the Mabey Truss superstructure including but not limited to truss panels, floor beams, stringers, floor panels, bearings and any incidental components and hardware will remain the property of the department. Superstructure components shall be inventoried, crated and delivered to the Bridge Maintenance Yard at 14183 NC Hwy 94N, Creswell, NC 27928. Delivery shall be coordinated with the Engineer.

All other bridge components shall become the property of the contractor.

The contractor shall submit a removal plan to the engineer for approval. This plan shall indicate the sequence of operations, resources, time frames, staging areas and stockpile locations.

The Mabey Truss Bridge shall be disassembled in such a manner so as not to damage the superstructure components. The concrete bent caps over the inlet shall be removed using non-shattering methods; other concrete bent caps may be removed using shattering methods. Steel piles will be removed to a minimum of 3' below the ground line or mud line. The contractor shall take care not to allow and debris or materials to fall into the inlet.

Steel sheet piles that are installed and subsequently removed to accommodate construction of the proposed bridge will not be counted as part of the linear footage of Steel Sheet Piling Removal. This will be the case even for piles that are installed in place of existing steel sheet piles.

The contractor's attention is brought to the fact that sandbags were used to stabilize/support the roadway embankment for the existing NC-12 roadway. Sandbag removal is a Roadway quantity and pay item. See Roadway plans for details.

2.0 MEASUREMENT AND PAYMENT

Removal of Existing Structure Payment shall be paid for at the contract lump sum price bid.

Place facings and forms as near to vertical as possible with no negative batter. Construct reinforced approach fills with a vertical and horizontal tolerance of 3" when measured with a 10 ft straight edge and an overall vertical plumbness (batter) and horizontal alignment of less than 6".

Place reinforcement at locations and elevations shown on the plans or accepted submittals and in slight tension free of kinks, folds, wrinkles or creases. Repair or replace any damaged reinforcement. Contact the Engineer when existing or future structures such as foundations, pavements, pipes, inlets or utilities will interfere with reinforcement. To avoid structures, deflect, skew and modify reinforcement.

Do not splice reinforcement in the reinforcement direction (RD), i.e., parallel to the reinforced approach fill face. Seams are allowed in the cross-reinforcement direction (CRD). Bond or sew adjacent reinforcing fabric together or overlap fabric a minimum of 18" with seams oriented perpendicular to the reinforced approach fill face.

Place backfill in 8 to 10 inch thick lifts and compact in accordance with Subarticle 235-4(C) of the *Standard Specifications*. Use only hand operated compaction equipment within 3 ft of the reinforced approach fill face. Do not damage reinforcement when placing and compacting backfill. End dumping directly on the reinforcement is not permitted. Do not operate heavy equipment on reinforcement until it is covered with at least 10" of backfill. Do not use sheepsfoot, grid rollers or other types of compaction equipment with feet.

Cover reinforcing fabric with at least 3" of backfill.

Measurement and Payment

Reinforced Approach Fills will be measured and paid for at the contract unit price per square foot of vertical formed approach fill face at locations shown on the plans or required by the Engineer. The top of reinforced approach fills will be measured as the top of the trimmed wire facing formwork prior to construction of approach slabs or moment slabs. The bottom of the reinforced approach fill will be Elevation 1.0 as shown on the plans. Such price and payment will be full compensation for furnishing all labor, tools, equipment, excavating, backfilling, hauling and removing excavated materials, geotextile fabrics, galvanized wire facings, and miscellaneous materials and all incidentals necessary to install the reinforced approach fills and complete the work as described in this provision.

Common borrow used within and in front of reinforced approach fills will be considered incidental to *Grading* per Article 226 of the *Standard Specifications*.

Payment will be made under:

Pay Item	Pay Unit
Reinforced Approach Fills	Square Foot