COMMONWEALTH OF KENTUCKY
TRANSPORTATION CABINET
Frankfort, Kentucky 40622
www.transportation.ky.gov/

Matthew G. Bevin
Governor

Greg Thomas
Secretary

October 25, 2018

CALL NO. 303
CONTRACT ID NO. 185007
ADDENDUM # 2

Subject: JEFFERSON COUNTY, FD04 056 3396 C00033N
Letting October 26, 2018

(1)Revised – Special Note for Masonry Repairs – Pages 36-38 of 92

Proposal revisions are available at http://transportation.ky.gov/Construction-Procurement/.

If you have any questions, please contact us at 502-564-3500.

Sincerely,

Rachel Mills

Rachel Mills, P.E.
Director
Division of Construction Procurement

RM:mr
Enclosures

V. SPECIAL NOTE FOR MASONRY REPAIRS

1.0 DESCRIPTION. Perform all work in accordance with the Kentucky Transportation Cabinet, Department of Highway's current Standard Specifications for Road and Bridge Construction and applicable Supplemental Specifications, the Standard Drawings, this Note, and the attached detail drawings. Section references are to the Standard Specifications.

Coordinate this note with the Special Note for Dutchman Repairs, the Special Note for Masonry Crack Repairs, the Special Note for Masonry Patching Repairs, the Special Note for Repointing, the Special Note for Stone Replacement, and the Special Note for Bridge Cleaning.

2.1 QUALITY ASSURANCE SAMPLING, TESTING, AND ACCEPTANCE.

2.2 Contractor Qualifications. The Contractor, supervisor, and craftspeople must be qualified to perform historic masonry repairs. The Apparent Low Bidder must submit their qualifications to perform the work to Royce Meredith (Royce.Meredith@ky.gov) prior to Award of the Contract. The Kentucky Transportation Cabinet has the right to reject bids at their discretion from nonqualified contractors. KYTC may consult with an Advisory Committee before making a decision. The documentation of the Contractor's qualifications shall include, but is not limited to, the following:

a. A description and location of three projects performed in the last four years involving the rehabilitation of mortar-masonry structures.
b. Three references familiar with the quality of work performed by the Contractor.

2.3 Mortar Analysis. Analyze existing original historic mortar before repointing or performing any repairs that require repointing in order to provide a match with the new repointing mortar. Full laboratory analysis of the existing mortar shall conform to ASTM C1324, and include methods for precise determination of the binder constituents.

Take and analyze samples of unweathered original historic mortar and different type of mortar in the structure in order to match the new mortar to be used for repointing. Remove three or four samples of each type of mortar to be matched with a hand chisel from several locations on the bridge. Set aside the largest sample for comparison with the repointing mortar. Place the remaining samples in labeled, sealed sample bags for transport to the laboratory.

Field analysis of the existing mortar shall be as specified as below:

a. Analyze the mortar composition and detect cracks, degradation and de-bonding from the surrounding masonry. Also determine previous surface coating treatments that may be contributing to the current conditions.
b. Compare the bedding mortar with the pointing mortar and determine the cross-sectional characteristics of the wall.
c. Determine the level of moisture movement in the insitu mortar, and if the mortar or masonry units are handling the brunt of the water movement through the wall.
d. Assess the physical characteristics of the mortar and determine indirect compressive strength. Gather data on insitu mortar joint shear strength.

2.4 Restoration Mock-up. Submit the restoration methods, and materials selected for a specific structure for approval before work starts. No patching, grout or mortar

material shall be used in the work until the mock-ups and the represented material and workmanship have been approved. Materials shall be submitted and approved prior to the creation of mock-ups. The placement, size, and location of mock-ups will be in a less visible area of the bridge as directed by the Engineer. The Contractor must gain approval from the Engineer on their proposed methods, materials, and mock-up before beginning work. The Engineer will consult with the Advisory Committee (as defined in the General Notes) before making a decision.

Mock-ups must demonstrate the methods and quality of workmanship to be performed in each treatment.

a. Prepare mock-ups on existing masonry under the same weather conditions expected during the remainder of the work.
b. Throughout restoration, retain approved mock-up panels in undisturbed condition, suitably marked, as a standard for judging completed work.
c. Review manufacturer's product data sheets to determine suitability of each product for each surface.
d. Apply products using manufacturer-approved application methods, determining actual requirements for application.
e. Obtain approval as to the preservation treatment approach, design, and workmanship to include, but not limited to the verification of all material applications and finishes as specified to the requirements of color, texture, profiles, and finishes before proceeding with work.
f. Mock-ups: May be performed on inconspicuous sections of actual construction
    1. Location and number of mock-ups as directed by the Engineer.
    2. Size: two feet by two feet for patching or dutchman and six feet for repointing or crack repair, or as appropriate for the repair specified.
    3. Repair unacceptable work.

3.1 EQUIPMENT.

3.2 Compressed Air Supplies. Compressed air equipment shall deliver clean, oil and moisture free compressed air at the surface to be cleaned. Test the compressed air supply during each shift for the presence of oil and moisture.

4.1 FIELD CONDITIONS.

4.2 General Ambient Conditions. Masonry, mortar, and epoxy adhesives shall not be placed when weather conditions detrimentally affect the quality of the finished product. No masonry or mortar shall be placed when the air temperature is below 40 degrees F in the shade. When air temperature is likely to exceed 90 degrees F masonry and mortar shall have a temperature not exceeding 90 degrees F when deposited. Materials to be used in the work shall be neither produced nor placed during periods of rain or other precipitation. Stop material placements, and protect all in-place material from exposure, during periods of rain or other precipitation. Masonry surfaces shall be cleaned only when air temperatures are above 40 degrees F and will remain so until masonry has dried out, but for not less than seven days after completion of the work.

4.3 Masonry Installation Conditions. Do not perform any masonry repointing unless air temperatures are between 40 degrees F and 95 degrees F and will remain so for at least 48 hours after completion of work. Phase repointing during hot weather by completing process on the shady side of the bridge or schedule installation of materials during cooler evening hours to prevent premature evaporation of the water from the mortar. Do not use frozen materials or materials mixed or coated with ice or frost. Do not lower the freezing point of mortar by the use of admixtures or anti-freeze agents. Do not add chlorides to the mortar. Prevent repointing mortar from staining the face of the masonry or other exposed surfaces. Immediately remove all repointing mortar that comes in contact with such surfaces. Cover partially completed work when work is not in progress. Protect sills, ledges and projections from mortar droppings. If the Contractor fails to protect against bridge damage as a result of work of this Section, such damage shall be the Contractor's responsibility. The Contractor shall restore damaged areas to the complete satisfaction of the Owner at no expense to the Owner. Do not apply products under conditions outside manufacturer's requirements, which include:

c. Surfaces that are frozen; allow complete thawing prior to installation.
d. Surface and air temperatures below 40 degrees F.
e. Surface and air temperatures above 95 degrees F.
f. When surface or air temperature is not expected to remain above 40 degrees F for at least 48 hours after application.
g. Wind conditions that may blow materials onto surfaces not intended to be treated.