



COMMONWEALTH OF KENTUCKY  
TRANSPORTATION CABINET

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SECRETARY

November 10, 2021

CALL NO. 104  
CONTRACT ID NO. 211348  
ADDENDUM # 3

Subject: Bullitt County, STP 5119(011)  
Letting November 19, 2021

(1) Added - Special Note - Pages 42(a)-42(g) of 172

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,

A handwritten signature in black ink that reads "Rachel Mills". The signature is written in a cursive, flowing style.

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

RM:mr  
Enclosures

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## **SPECIAL NOTE FOR SOUND BARRIER WALLS**

### **KY 480 (Cedar Grove Road) Item No. 391.20**

#### **I. DESCRIPTION**

All work shall be performed in accordance with the Department's latest Standards and Supplemental Specifications and applicable Special Provisions and Standard and Sepia Drawings, except as specified in these notes or elsewhere in this proposal. Section references are to the Standard Specifications. This work shall consist of design of the sound barrier wall, foundation, and connections, construction plans for the foundation, shop drawing preparation, and construction of precast concrete sound barrier walls, including construction of the drilled shaft foundations, in reasonably close conformity with the lines and grades shown on the contract plans and the Contractor's approved plans.

All references to AASHTO are to the AASHTO LRFD Bridge Design Specifications for Highway Bridges, Current Edition with Interims.

#### **II. DESIGN**

##### **A. General**

Furnish plans for sound barrier walls and foundations designed by a Registered Professional engineer licensed to practice in the Commonwealth of Kentucky. Design according to the AASHTO LRFD Bridge Design Specifications, and the Contract plans and documents.

The Contractor's design shall comply with all restrictions imposed by the site conditions and the proposal notes and plan sheets such as drainage, accommodation of existing and proposed utilities, limitations on dimensions or sound barrier wall location, fire hydrant access, and other conditions noted or found in the field. The top and bottom of the sound barrier wall elevation throughout shall be as shown on the contract plans.

##### **B. Site Conditions**

Be advised that Section 102.07 of the Specifications applies to this project. It shall be distinctly understood that any references in the contract plans and other contract documents to rock, rock disintegration zone, earth, or any other subsurface material whether in numbers, words, letters, or lines is solely for the Department's information. The Bidder draws his own conclusions as to the field conditions to be encountered.

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Tops of drilled shafts are to be a minimum of 6 inches below finished grade.

### **C. Utilities**

Take into consideration existing and proposed utilities in the vicinity of the sound barrier walls when developing sound barrier wall details. Show on the Contractor's plans and shop drawings additional work or materials necessary to construct the sound barrierwall without disturbing the utilities. Repair or replace features damaged during construction in like kind materials and design at no additional cost to the Department.

### **D. Contractor Submittals**

Submit design calculations and plans to the Engineer for review within thirty calendar days of the "Notice to Begin Work". Submit adequate documentation of proprietary designs and/or products to the Engineer for review.

Obtain sufficient subsurface information in order to design the drilled shaft foundations for axial and lateral loading conditions. Show field measured top of rock elevations, as appropriate, on the Contractor's plans.

Submit electronic files in PDF format of calculations and plans for the sound barrier wall to the Engineer for approval. Design calculations shall include the design for each component of the wall and the wall as a unit. Include the design for the horizontal connection between panels. Include the design of the connection to the existing barrier wall where shown on the plans. Include drilled shaft foundation design for axial and lateral loading. Show on the plans the drilled shaft foundations. One set of design calculations and plans, with any corrections noted will be returned to the Contractor. Each time corrections are made, three copies of the revised calculation sheets and/or five copies of the revised plan sheets shall be submitted.

The Department will review the design calculations and plans for general conformance with AASHTO, this Special Note, and the Contract Documents. The design calculations, plans, details and dimensions may not be completely checked by the Department. The Contractor shall be responsible for the accuracy of his design calculations and for compatibility with the contract plans. The Department's review will not relieve the Contractor of responsibility for the accuracy and completeness of the design calculations and plans.

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Upon final approval by the Department, furnish electronic files in PDF format of the Contractor's approved plans to the Engineer. The Department will provide copies of the approved plans to the Contractor.

Do not produce shop drawings before the Department's approval of the design calculations and Contractor's plans is completed. The Contractor's wall design engineer providing the design calculations and plans shall be responsible for shop drawing review. The Contractor's wall design engineer shall provide the Engineer electronic files in PDF format for the wall and provide the Department with a statement of assurance that the shop drawings are accurate and that they satisfy the project requirements. Each sheet of the shop drawings shall be dated, sealed, and signed by the wall design engineer providing the Contractor's design for the wall. Place the Drawing Number on the lower right-hand side of all shop drawings.

Do not order materials or begin fabrication or construction before the Department's review of the shop drawings is completed. The Contractor may request permission from the Engineer to begin foundation construction at his own risk. Written permission from the engineer is required.

After acceptance by the Department, submit requests for changes to the design calculations, Contractor's approved plans and shop drawings to the Engineer. Obtain written acceptance from the Engineer before incorporating any of the requested changes into the work.

Allow thirty working days for the Department's review of each submission of the design calculations, Contractor's plans, and shop drawings for the sound barrier wall. The thirty-day period begins when the design calculations, Contractor's plans, or shop drawings are received by the Engineer. Additional time required by the Department to review re-submissions shall not be cause for extending the specified completion date. Provide additional re-submissions as requested at no additional cost to the Department and with no extension of the specified completion date.

### **III. SOUND BARRIER WALLS**

#### **Precast Concrete Walls**

Where shown on the plans, design a free standing sound barrier wall finished on one side. The maximum precast panel length shall be 40 feet. Design all sound barrier walls for the same appearance and materials. Design drilled shafts for foundations; other type foundation designs will not be accepted.

Precast Concrete panels may be pilaster (post), and panel design or connected panels.

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Precast concrete panels, pilasters, and other precast elements shall comply with Section 605 of the Standard Specifications. Precast concrete shall be Class D with a minimum 28-day compressive strength of 5000 p.s.i. All materials and reinforcement shall conform to the Department's Standard Specifications.

Precast panels, pilasters, and other precast elements may be prestressed. Prestress fabrication shall be in accordance with Section 605 of the Standard Specifications. Prestressing tendons may be either bar or strand. Prestressing bars shall conform to ASTM A722, 'High Strength Steel Bars for Prestressed Concrete'. Prestressing strands shall be seven wire strands conforming to ASTM A416, 'Low-Relaxation, Seven-Wire Steel Strand for Prestressed Concrete'.

Use drilled shafts as foundation. The Contractor's design should be in accordance to the Special Note for Drilled Shafts (11C) of the Standard Specifications. The Contractor's plans shall indicate whether or not permanent casings will be required. Drilled Shaft Common, Drilled Shaft Solid Rock, Rock Sounding, and Rock Coring will be incidental to the Sound Barrier Wall and will not be measured for separate payment.

Use preformed joint filler complying with AASHTO M153 for Types I, II, or III or AASHTO M213.

Provide positive means of alignment between panels. Use tongue and groove joints with a minimum protrusion of 1".

Seal all joints between panels and between pilasters and panels with silicone sealer to prevent sound leaks. Obtain the Engineer's approval of the sealant before use. See notes for finish requirements below.

Step elevation changes at the top of the sound barrier wall except for end panels. Construct the top of sound barrier level between steps. Make steps only at the pilasters. Construct the top of the sound barrier wall at the elevation of the top of the sound barrier shown on the contract plans. The top of the pilaster elevation should match the elevation of the highest adjacent panel.

Construct reinforced concrete pilasters. Cast using metal forms. Construct pilasters that protrude a maximum of twelve inches from the front face of the precast panels. Connect pilasters to drilled shaft foundations above the finish grade. Use bolted galvanized steel for the connections; the Engineer will not allow or permit field welding.

Obtain the Engineer's approval of joint materials and details before use.

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### **Finish Requirements:**

Precast Panels – Provide an architectural formed finish representing an ashlarstone form lined surface on one side of the wall as approved by the Resident Engineer.

Pilasters - Pilasters shall be concrete and shall be cast using metal forms.

Color – All concrete surfaces of the precast panels and pilasters shall be stained as approved by the Resident Engineer, using outdoor grade coloring agents applied according to the manufacturer's instructions. Provide a uniform color throughout the entire length of the sound barrier wall.

Joints – Horizontal joints are to be filled with silicone sealer and stained to match the color of the wall as approved by the Resident Engineer.

Provide two samples of the precast concrete panels, a minimum of four feet by eight feet, cast using same form liners as proposed for production for the Department's approval. Retain one sample at the casting yard for a standard of comparison for the production panels. Deliver the second sample to the project site. Casting and delivering the samples to the job site will not be measured for separate payment, but shall be incidental to Sound Barrier Wall.

### **IV. MATERIALS APPROVAL**

All materials shall be sampled and tested in accordance with the Department's Sampling Manual and the materials shall be available for sampling a sufficient time in advance of the use of the materials to allow for the necessary time for testing. Unless otherwise specified in these Notes, obtain acceptance of materials from the Engineer before use.

### **V. CONSTRUCTION**

Perform site preparation necessary to construct the sound barrier wall in accordance with the Standard Specifications, contract plans, Contractor's approved plans and notes in the proposal.

Construct sound barrier walls in accordance with the contract plans, the Contractor's approved plans, and the approved shop drawings. Construct vertical and horizontal joints so that the sound barrier wall is structurally sound and with no sound leaks. Construct the face of the completed sound barrier wall without deviation from the vertical of more than ½ inch in ten feet and with horizontal alignment conforming to the neat line shown on the contract plans.

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Alternate drilled shaft foundation designs are permitted if solid rock is encountered above the solid rock line shown on the Contractor's approved plans; however, contact the Engineer before revising the drilled shaft foundations. Revised calculations and Contractor's plans will be required. Obtain the Engineer's acceptance of revised drilled shaft foundation designs before constructing. Construct the tops of drilled shaft foundations a minimum of six inches below finish grade on both sides of the sound barrierwall. There will be no deduction in area to be measured for payment when drilled shaft foundations protrude into the sound barrier bottom pay limit.

Revising the drilled shaft foundation designs shall not be cause for an extension in contract time or change the contract price.

Transport, store, handle, and erect precast units in accordance with Section 605 of the Standard Specifications.

Protect all masonry materials from the weather from the time of manufacture until they are in the finished sound barrier walls.

Construction of the ditches shown on the plans will not be measured for payment but shall be incidental to Site Preparation.

After constructing the wall, clean all sound barrier wall surfaces. Clean from the top of the wall to twelve inches below finished grade on both sides. Use a cleaner selected by the Contractor and approved by the Engineer.

## **VI. MEASUREMENT**

### **SOUND BARRIER WALL**

**Sound Barrier Walls** will be measured in square feet of surface area in a vertical plane between the vertical and horizontal limits, top of wall elevations, and lateral limits shown on the Contractor's approved plans or approved changes; however, tops of footings may be above the minimum depth of burial with no reduction in area to be measured.

Any area of the sound barrier wall outside the approved vertical and horizontal plan limits as shown on the approved plans or changes approved or directed by the Engineer will not be measured for payment. Approved adjustments in the area will be measured in square feet and the final quantity will be increased or decreased as applicable.

The Department will not measure caps, copings, joint sealants, void fill material, weep holes, connectors, trim, surface finish, concrete stain, cleaning, sample panels, and incidental items that are a normal part of the sound barrier wall construction, but shall be incidental to Sound Barrier Wall.

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**FOUNDATION PREPARATION**

Contrary to Section 603.04.03, **Foundation Preparation** will be measured as lump sum. Structure Excavation Common, Structure Excavation Solid Rock, Structure Excavation Unclassified, Foundation Undercut, Drilled Shaft Common, Drilled Shaft Solid Rock, Rock Sounding, and Rock Coring for removal of unsuitable foundation materials will not be measured for separate payment but shall be incidental to **Foundation Preparation or Site Preparation**.

**VII. PAYMENT**

Payment at the contract unit price per square foot shall be full complete compensation for all labor, materials, equipment, and incidentals to design and construction of the sound barrier walls.

CODE	PAY ITEM	PAY UNIT
21590EN	Sound Barrier Wall	Square Feet
08003	Foundation Preparation	Lump Sum