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

Steven L. Beshear
Governor

Michael W. Hancock, P.E.
Secretary

November 18, 2015

CALL NO. 100
CONTRACT ID NO. 151076
ADDENDUM # 1

Subject: Jefferson County, NHPP IM 0711 (115)
Letting November 20, 2015

(1) Revised - Plan Sheet - R2H
(2) Added - Special Notes - Pages 1-19 of 19
(3) Revised - Bid Items - Pages 158-162 of 162

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

Plan revisions are available at http://www.lynnimaging.com/kytransportation/.

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:ks
Enclosures

COUNTY OF	ITEM NO.	SHEET NO.
JEFFERSON	5-48.30	R2H

REVISED 11-17-15

GENERAL SUMMARY

ITEM	DESCRIPTION	UNIT	I-71 NB	I-265 SB	RAMP 5	RAMP A											PROJECT TOTAL
6511	PAVE STRIPING-TEMP PAINT-6 IN	LF	14360	20268	8437	3956											47021
6513	PAVE STRIPING-TEMP PAINT-12 IN	LF	330	543	686	319											1878
6531	PAVE STRIPING REMOVAL-6 IN	LF	14360	20268	8437	3956											47021
6533	PAVE STRIPING REMOVAL-12 IN	LF	330	543	686	319											1878
6600	REMOVE PAVEMENT MARKER TYPE V	EACH	50	70	77	21											218
8003	FOUNDATION PREPARATION	LS	1														1
8100	CONCRETE CLASS A	CUYD	11.46	17.19													28.65
8150	STEEL REINFORCEMENT (8)	LBS	392	3838													4230
10020NS	FUEL ADJUSTMENT	DOLL															65337
10030NS	ASPHALT ADJUSTMENT	DOLL															64426
20430ED	SAW CUT	LF		7785	398												8183
21289ED	LONGITUDINAL EDGE KEY	LF	4150		3392												7542
21590EN	SOUND BARRIER WALL	SQ FT	69031	41620	12748												123399
20738NS112	TEMP CRASH CUSHION (9)	EACH	2	2													4
24814EC	PIPELINE INSPECTION	LF	118	89													207

NOTES:

(8) INCLUDES 980 LBS FOR CRASH CUSHIONS AND 3250 LBS FOR 24" DRILL AND DOWEL. ALL LABOR AND MATERIAL FOR DRILL AND DOWEL IS INCIDENTAL TO STEEL REINFORCEMENT.

(9) CRASH CUSHION TYPE VI CLASS C TL3

GENERAL SUMMARY

COUNTY OF	ITEM NO.	SHEET NO.
JEFFERSON	5-48.30	R2H

GENERAL SUMMARY

ITEM	DESCRIPTION	UNIT	I-71 NB	I-265 SB	RAMP 5	RAMP A											PROJECT TOTAL
6511	PAVE STRIPING-TEMP PAINT-6 IN	LF	14360	20268	8437	3956											47021
6513	PAVE STRIPING-TEMP PAINT-12 IN	LF	330	543	686	319											1878
6531	PAVE STRIPING REMOVAL-6 IN	LF	14360	20268	8437	3956											47021
6533	PAVE STRIPING REMOVAL-12 IN	LF	330	543	686	319											1878
6600	REMOVE PAVEMENT MARKER TYPE V	EACH	50	70	77	21											218
8003	FOUNDATION PREPARATION	LS	1														1
8100	CONCRETE CLASS A	CUYD	11.46	17.19													28.65
8150	STEEL REINFORCEMENT (8)	LBS	392	3838													4230
10020NS	FUEL ADJUSTMENT	DOLL															65337
10030NS	ASPHALT ADJUSTMENT	DOLL															64426
20430ED	SAW CUT	LF		7785	398												8183
21289ED	LONGITUDINAL EDGE KEY	LF	4150		3392												7542
21590EN	SOUND BARRIER WALL	SQ FT	69031	41620	12748												123399
20738NS112	TEMP CRASH CUSHION (9)	EACH	2	2													4
24814EC	PIPELINE INSPECTION	LF	118	89													207

NOTES:

(8) INCLUDES 980 LBS FOR CRASH CUSHIONS AND 3250 LBS FOR 24" DRILL AND DOWEL. ALL LABOR AND MATERIAL FOR DRILL AND DOWEL IS INCIDENTAL TO STEEL REINFORCEMENT.

(9) CRASH CUSHION TYPE VI CLASS C TL3

GENERAL SUMMARY

SPECIAL NOTES FOR SOUND BARRIER WALLS

Project No. FD52 056 0071 007-010

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 the sound barrier wall and foundation design, 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, 7th Edition.

The **"Appendix"** to this Special Note contains the project specific requirements.

II. DESIGN

A. General

Furnish plans for sound barrier walls and drilled shaft foundations designed by a Registered Professional engineer licensed to practice in the Commonwealth of Kentucky. Design according to Section 15 of the AASHTO LRFD Bridge Design Specifications, and the Contract plans and documents. Design for an upstream surface condition of "Sparse Suburban".

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.

Design a free standing sound barrier wall finished on both sides. 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; spread footings or other type foundation designs will not be accepted unless otherwise specified in the geotechnical report.

Geotechnical work to determine the soil conditions and for the design of the drilled shaft/alternative spread footing foundation has been performed by the Department.

B. Site Conditions

Be advised that Section 102.06 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.

Tops of drilled shafts are to be a minimum of 6 inches below finished grade unless otherwise shown on the contract plans or "**Appendix"**.

C. Utilities

Take into consideration existing and proposed utilities and the Department's electrical service for interchange lighting 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 barrier wall 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.

Submit three complete sets of the design calculations and five complete sets of the 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 (dowels, etc.) between panels. Include drilled shaft/alternative spread footing foundation design for axial and lateral loading. Show on the plans the drilled shaft/alternative spread footing 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 the Guide Specifications, AASHTO, this Special Note, and the Contract Documents. The design calculations, plans, details and dimensions may not be completely checked. 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.

Upon final approval by the Department, furnish drawings of the Contractor's approved plans to the Engineer in a .pdf format in accordance with KYTC requirements. 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 ten sets of reviewed and approved shop drawings 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 two copies 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

See the "**Appendix"** for permitted wall type and architectural treatment.

Precast Concrete Wall

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

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. Concrete panels shall be reinforced and designed to compensate for backfill loadings.

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. 'Uncoated Steel Bars for Prestressed Concrete'. Prestressing strands shall be seven wire strands conforming to ASTM A416, 'Uncoated Seven-wire Stress-Relieved Strand for Prestressed Concrete'.

Use drilled shafts as foundation unless an alternative foundation is allowed in the geotechnical report. 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. The Contractor will not be required to conduct a subsurface exploration as outlined in Section 3.5 of the Special Note for Drilled Shafts if an adequate subsurface exploration is conducted as outlined in Section II.D of this note.

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

Use epoxy coated steel dowels to provide positive horizontal alignment of panels coated in accordance with Section 811.10.

Provide positive means of alignment between panels. Use tongue and grove joints or steel dowels. If steel dowels are used at horizontal joints between panels, install no less than one dowel at the mid-point for panels up to 20 feet long and no less than two dowels at the third point for panels over 20 feet long.

Seal all joints between panels and between pilasters and panels to prevent sound leaks. Obtain the Engineer's approval of the sealant before use.

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 or above the elevation of the top of the sound barrier shown on the contract plans.

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.

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. Clear and grub the minimum area required to construct the wall. Sound standing trees and shrubs within the construction limits shall be trimmed or removed only as directed or approved by the Engineer. The Engineer may direct minor alignment changes to avoid damage to existing trees or shrubs. Trim/Remove vegetation will be incidental to the clearing and grubbing bid item.

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.

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

barrier wall. 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.

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**.

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

APPENDIX

Standard Specifications: Kentucky Department of Highways Standard Specifications for Road and Bridge Construction, latest Edition.

AASHTO: AASHTO LRFD Bridge Design Specifications, Chapter 15 for "Design of Sound Barriers", 7th Edition.

The permitted Wall Type is precast concrete panels mounted on reinforced concrete pilasters, with drilled shaft foundation with an alternative spread footing foundation as specified by the geotechnical report.

Finish Requirements:

> Precast Panels – Provide an architectural formed finish representing an ashlar stone form-lined surface on both sides 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 using pigmentation matching Sherwin Williams HC Shield Plus Flat #7507 Stone Lion.

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**.

SPECIAL NOTE FOR DRILLED SHAFTS

Project No. FD52 056 0071 007-010

1.0 DESCRIPTION. Furnish all equipment, materials and labor necessary for constructing reinforced concrete drilled shafts in cylindrically excavated holes according to the details shown on the plans or as the Engineer directs. Construct the shaft to the lines and dimensions shown on the plans, or as the Engineer directs. Section references herein are to the Department's 2012 Standard Specifications for Road and Bridge Construction.

2.1 MATERIALS.

2.2 Concrete. Use Class A Modified concrete unless otherwise shown on the plans. The slump at the time of placement shall be 6.5 to 9.5 inches, the coarse aggregate shall be size 67, 68, 78, 8 or 9M, and the water/cementitious material ratio shall not exceed 0.45. Include water reducing and retarding admixtures. Type F high range water reducers used in combination with retarding admixtures or Type G high range water reducers fully meeting trial batch requirements are permitted and Class F fly ash is permitted in conformance with Section 601. Design the mix such that the concrete slump exceeds 4 inches at 4 hours after batching. If the estimated concrete transport, plus time to complete placement, exceeds 4 hours, design the concrete to have a slump that exceeds 4 inches or more for the greater time after batching and demonstrate that the slump requirement can be achieved after the extended time period using a trial batch.

Perform trial batches prior to beginning drilled shaft construction in order to demonstrate the adequacy of the proposed concrete mix. Demonstrate that the mix to be used will meet the requirements for temperature, slump, air content, water/cementitious material ratio, and compressive strength. Use the ingredients, proportions and equipment (including batching, mixing, and delivery) to be used on the project. Make at least 2 independent consecutive trial batches of 3 cubic yards each using the same mix proportions and meeting all specification requirements for mix design approval. Submit a report containing these results for slump, air content, water/cement ratio, temperature, and compressive strength and mix proportions for each trial batch to the Engineer for review and approval. Failure to demonstrate the adequacy of the concrete mix, methods, or equipment to the Engineer is cause for the Engineer to require appropriate alterations in concrete mix, equipment, and/or method by the Contractor to eliminate unsatisfactory results. Perform additional trial batches required to demonstrate the adequacy of the concrete mix, method, or equipment.

2.3 Steel Reinforcement. Provide Grade 60 deformed bars conforming to Section 811 of the Standard Specifications. Rail steel is permitted for straight bars only. Place according to Section 602 of the Standard Specifications, this Special Note, and the plans.

Use non-corrosive centering devices and feet to maintain the specified reinforcement clearances.

2.4 Casings. Provide casing meeting the requirements of ASTM A 252 Grade 2 or better unless otherwise specified. Ensure casing is smooth, clean, watertight, true and straight, and of ample strength to withstand handling, installation, and extraction stresses and the pressure of both concrete and the surrounding earth materials. Ensure the outside diameter of casing is not less than the specified diameter of shaft.

Use only continuous casings. Cut off the casing at the prescribed elevation and trim to within tolerances prior to acceptance. Extend casing into bedrock a sufficient distance to stabilize the shaft excavation against collapse, excessive deformation, and/or flow of water if required and/or shown on the plans.

Install from the work platform continuous casing meeting the design thickness requirements, but not less than 3/8 inch, to the elevations shown on the plans. When drilled shafts are located in open water areas, extend casings above the water elevation to the plan tip elevation to protect the shaft concrete from water action during concrete placement and curing. All casing is permanent unless temporary casing is specified in the contract drawings or documents. Permanent casing is incidental to the applicable drilled shaft unit bid price unless noted otherwise in the contract. Temporary casing may be required for drilled shafts not socketed into bedrock. If temporary surface casings are used, extend each casing up to the work platform. Remove all temporary surface casing prior to final acceptance unless otherwise permitted by the Central Office Construction Engineer.

Ensure casing splices have full penetration butt welds conforming to the current edition of AWS D1.1 with no exterior or interior splice plates and produce true and straight casing.

2.5 Slurry. When slurry is to be used for installation of the Drilled Shaft, submit a detailed plan for its use and disposal. The plan should include, but not be limited to the following:

1) Material properties
2) Mixing requirements and procedures
3) Testing requirements
4) Placement procedures
5) Disposal techniques

Obtain the Central Office Division of Construction’s approval for the slurry use and disposal plan before installing drilled shafts.

2.6 Tremies. Provide tremies of sufficient length, weight, and diameter to discharge concrete at the shaft base elevation. Ensure the tremie diameter is least 6 times the maximum size coarse aggregate to be used in the concrete mix and no less than 10 inches. Provide adequate wall thickness to prevent crimping or sharp bends that restrict

concrete placement. Support tremies used for depositing concrete in a dry drilled shaft excavation so that the free fall of the concrete does not cause the shaft excavation to cave or slough. Maintain a clean and smooth tremie surface to permit both flow of concrete and unimpeded withdrawal during concrete placement. Do not allow any aluminum parts to contact the concrete. Construct tremies used to deposit concrete for wet excavations so that they are watertight and will readily discharge concrete.

2.7 Concrete Pumps. Provide pump lines with a minimum diameter of 5 inches and watertight joints.

2.8 Drop Chutes. Do not use aluminum drop chutes.

3.1 CONSTRUCTION.

3.2 Preconstruction.

3.2.1 Prequalification. The Department will require prequalification by the Division of Construction Procurement before accepting a bid for the construction of Drilled Shafts.

3.2.2 Pre-Bid Inspection. Inspect both the project site and all subsurface information, including any soil or rock samples, prior to submitting a bid. Contact the Geotechnical Branch (502-564-2374) to schedule a viewing of the subsurface information. Failure to inspect the project site and view the subsurface information will result in the forfeiture of the right to file a claim based on site conditions and may result in disqualification from the project.

3.2.3 Drilled Shaft Installation Plan. Upon request, the Department will review a Drilled Shaft Installation Plan. Submit the plan no later than 45 calendar days prior to constructing drilled shafts. Items covered in this plan should include, but not be limited to the following:

1) Name and experience record of jobsite drilled shaft superintendent and foremen in charge of drilled shaft operations for each shift.
2) List and size of proposed equipment including cranes, drills, augers, bailing buckets, final cleaning equipment, de-sanding equipment, slurry pumps, core sampling equipment, tremies or concrete pumps, casings, etc.
3) Details of overall construction operation sequence and the sequence of shaft construction in the bents or groups.
4) Details of shaft excavation methods including methods to over-ream or roughen shaft walls, if necessary.
5) Details of slurry when the use of slurry is anticipated. Include methods to mix, circulate, and de-sand the proposed slurry. Provide details of

proposed testing, test methods, sampling methods, and test equipment.

6) Details of proposed methods to clean shaft and inside of casing after initial excavation.
7) Details of reinforcement handling, lifting, and placement including support and method to center in shaft. Also include rebar cage support during concrete placement and temporary casing removal.
8) Details of concrete placement including procedures for concrete tremie or pump. Include initial placement, raising during placement, and overfilling of the shaft to expel contaminated concrete.
9) Required submittals including shop drawings and concrete design mixes.
10) Other information shown in the plans or requested by the Engineer.
11) Special considerations for wet construction.
12) Details of environmental control procedures to protect the environment from discharge of excavation spoil, slurry (natural and mineral), and concrete over-pour.

The Division of Construction will review the submitted procedure and provide comments and recommendations. The Contractor is responsible for satisfactory construction and ultimate performance of the Drilled Shaft.

3.3 General Construction. Construct drilled shafts as indicated in the plans or described in this Special Note by either the dry or wet method. When the plans describe a particular method of construction, use this method unless the Engineer permits otherwise. When the plans do not describe a particular method, propose a method on the basis of its suitability to the site conditions. Approval of this proposed method is contingent upon the satisfactory results of the technique shaft.

The construction of the first drilled shaft or technique shaft will be used to determine if the methods and equipment used by the contractor are sufficient to produce a completed shaft meeting the requirements of the plans and specifications. Ability to control dimensions and alignment of excavations within tolerances; to seal the casing into impervious materials; to prevent caving or deterioration of subsurface materials by the use of slurry or other means; to properly clean the completed shaft excavation; to construct excavations in open water areas when required by the plans; to establish methods for belling or over-reaming when required by the plans; to determine the elevation of ground water; to satisfactorily handle, lift, place, and support the reinforcement cage; to satisfactorily place concrete meeting the specifications within the prescribed time frame; and to satisfactorily execute any other necessary construction operations will be evaluated during construction of the first shaft(s). Revise the methods and equipment as necessary at any time during the construction of the first shaft when unable to satisfactorily carry out any of the necessary operations described above or unable to control the dimensions and alignment of the shaft excavation within tolerances. Accurately locate technique so they may be used in the finished structure unless directed otherwise in the contract document or by the Engineer.

If at any time the Contractor fails to satisfactorily demonstrate, to the satisfaction of the Engineer, the adequacy of methods or equipment and alterations are required, additional technique shafts will be required at no additional cost to the Department and with no extension of contract time. Additional technique shafts shall be located as near as possible to the proposed production shafts but in a location as not to interfere with other construction activities. Once approval has been given to construct production shafts, no changes will be permitted in the methods or equipment used to construct the satisfactory shaft without written approval of the Engineer.

Do not make a claim against the Department for costs of construction delays, or any materials, labor, or equipment that may be necessary due to the Contractor's failure to furnish drilled shafts of a length sufficient to obtain the required bearing values, or for variations in length due to subsurface conditions that may be encountered. Soundings, boring logs, soil profiles, or other subsurface data included in the Contract documents are used by the Department for design and making preliminary estimates of quantities and should be used only at the risk of the Contractor for determining equipment, materials, or labor necessary for drilling shafts as required by the contract.

When necessary, set temporary removable surface casing. Use surface casing of sufficient length to prevent caving of the surface soils and to aid in maintaining shaft position and alignment. Pre-drilling with slurry and/or over-reaming to the outside diameter of the casing may be required to install the surface casing at some sites.

Provide equipment capable of constructing shafts to the deepest shaft depth shown in the plans plus 15 feet, 20 percent greater than the longest shaft (measured from the ground or water surface to the tip of the shaft), or 3 times the shaft diameter, whichever is greater. Blasting excavation methods are not permitted.

Use permanent casing unless otherwise noted in the Contract. Place casing as shown on the plans before beginning excavation. If full penetration cannot be attained, the Engineer may direct that excavation through the casing be accomplished and the casing advanced until reaching the plan tip elevation. In some cases, over-reaming to the outside diameter of the casing may be required before placing the casing. Cut off the casing at the prescribed elevation and leave the remainder of the casing in place. Do not use vibratory hammers for casing installation within 50 feet of shafts that have been completed less than 24 hours.

3.3.1 Dry Construction Method. Use the dry construction method only at sites where the ground water table and soil conditions (generally stiff to hard clays or rock above the water table) make it feasible to construct the shaft in a relatively dry excavation and where the sides and bottom of the shaft are stable and may be visually inspected by the Engineer prior to placing the concrete. The dry construction method consists of drilling the shaft excavation, removing accumulated seepage water and loose material from the excavation, and placing the shaft concrete in a relatively dry excavation.

3.3.2 Wet Construction Method. Use the wet construction method at all sites where it is impractical to excavate by the dry method. The wet construction method consists of drilling the shaft excavation below the water table, keeping the shaft filled with water (including natural slurry formed during the drilling process) or slurry as defined in part 2.4 of this Special Note, desanding and cleaning the slurry as required, final cleaning of the excavation by means of a bailing bucket, air lift, submersible pump or other approved devices and placing the shaft concrete (with a tremie or concrete pump beginning at the shaft bottom) which displaces the water or slurry as concrete is placed.

Where drilled shafts are located in open water areas, construct the shafts by the wet method using casings extending from above water elevation to the plan casing tip elevation to protect the shaft concrete from water action during placement and curing. Install the casing in a manner that will produce a positive seal at the bottom of the casing.

3.4 Slurry. When the Contractor elects to use slurry, adjust construction operations so that the slurry is in contact with the bottom 5 feet of the shaft for less than 4 hours unless the Engineer approves otherwise. If the 4-hour limit is exceeded, over-ream the bottom 5 feet of shaft.

3.5 Cleaning. Over-reaming, cleaning, or wire brushing the sidewalls of the shaft excavation and permanent casings may be necessary to remove the depth of softening or to remove excessive slurry cake buildup as indicated by sidewall samples or other test methods employed by the Engineer. Over-ream around the perimeter of the excavation a minimum depth of 1/2 inch and maximum depth of 3 inches.

3.6 Subsurface Exploration. Take subsurface exploration borings when shown on the plans or as the Engineer directs to determine the character of the material that the shaft extends through and the material directly below the shaft excavation. Complete subsurface exploration borings prior to beginning excavation for any drilled shaft in a group. Unless directed otherwise, extend subsurface exploration borings a minimum depth of 3 shaft diameters but not less than 10 feet below the bottom of the anticipated tip of drilled shaft excavation as shown on the plans. For subsurface exploration borings where soil sampling is required use thin-wall tube samples and perform standard penetration tests according to the Department's current Geotechnical Manual. When shafts extend into bedrock, soil samples are not required unless otherwise specified. Perform rock core drilling according to the Department's Geotechnical Manual. When the Engineer directs, perform additional subsurface exploration borings prior to drilled shaft construction. Measure soil samples and/or rock cores and visually identify and describe them on the subsurface log according to the Department's current Geotechnical Manual. Subsurface exploration borings must be performed by contractors/consultants prequalified by the Department's Division of Professional Services for Geotechnical Drilling Services at the time that field work begins.

The Engineer or geotechnical branch representative may be on-site during the subsurface exploration process to evaluate the soil and/or rock core samples. The Engineer or geotechnical branch representative will determine the need to extend the borings to depths greater than the depths previously specified. Handle, label, identify, and store soil and/or rock samples according to the Department's current Geotechnical Manual and deliver them with the subsurface logs to the geotechnical branch's rock core lab in Frankfort within 24-hours of completing the borings, unless directed otherwise.

The Engineer will inspect the soil samples and/or cores and determine the final depth of required excavation (final drilled shaft tip elevation) based on evaluation of the material's suitability. The Engineer will establish the final tip elevations for shaft locations, other than those for which subsurface exploration borings have been performed, based on the results of the subsurface exploration. Within 15 calendar days after completion of the subsurface exploration borings, the Engineer will notify the contractor of the final tip elevations for shaft locations.

3.7 Excavations. The plans indicate the expected depths, the top of shaft elevations, and the estimated bottom of shaft elevations between which the drilled shaft are to be constructed. Drilled shafts may be extended deeper when the Engineer determines that the material encountered while drilling the shaft excavation is unsuitable and/or is not the same as anticipated in the design of the drilled shaft. Drilled shafts may be shortened when the Engineer determines the material encountered is better than that anticipated.

Begin drilled shaft excavation the excavation, excavation inspection, reinforcement placement, and concrete placement can be completed as one continuous operation. Do not construct new shafts within 24 hours adjacent to recently completed shafts if the center-to-center spacing is less than 3 shaft diameters.

Dispose of excavated material removed from the shaft according to the Standard Specifications or the contract documents.

Do not allow workmen to enter the shaft excavation for any reason unless both a suitable casing has been installed and adequate safety equipment and procedures have been provided to the workmen entering the excavation. Recommended Procedures for the Entry of Drilled Shaft Foundation Excavations, prepared by ADSC: The International Association of Foundation Drilling provides guideline recommendations for down-hole entry of drilled excavations.

3.8 Obstructions. Remove subsurface obstructions at drilled shaft locations. Such obstructions may include man-made materials such as old concrete foundations or natural materials such as boulders. Blasting is not permitted.

3.9 Inspections of Excavations. Provide equipment for checking the dimensions and alignment of each shaft excavation. Determine the dimensions and alignment of the shaft excavation under the observation and direction of the Engineer. Provide equipment necessary to verify shaft cleanliness for the method of inspection selected by the Engineer.

Measure final shaft depths with a weighted tape or other approved methods after final cleaning. Ensure the base of each shaft has less than ½ inch of sediment at the time of concrete placement. For dry excavations, do not allow the depth of water to exceed 3 inches for tremie or pump methods of concrete placement. Verify shaft cleanliness to the Engineer using direct visual inspection or other method the Engineers determines acceptable. Video camera or underwater inspection procedures may be used if specified in the plans. Inspect the side surfaces of rock sockets to ensure they are rough and of such condition to ensure bond between the shaft concrete and the rock. Calipers, bent rods, or other devices may be used to inspect the diameter and roughness of rock sockets. When the Engineer directs, mechanically roughen surfaces found to be smooth.

3.10 Reinforcing Steel Cage Fabrication and Placement. Assemble the reinforcing steel cage, consisting of longitudinal bars, ties, spirals, cage stiffener bars, spacers, centering devices, and other necessary appurtenances and place as a prefabricated unit immediately after the shaft excavation is inspected and accepted, and just prior to concrete placement.

Tie the reinforcing steel with 100 percent double-wire ties and provide support so that it will remain within allowable tolerances for position. Locate splices as shown on the plans. Splice no more than 50 percent of the longitudinal reinforcing within 2-lap splice lengths of any location or within 3 feet of the splice location if approved mechanical connectors are used. All splices are to be in accordance with plan details. Use bands, temporary cross ties, etc. as required to provide a reinforcement cage of sufficient rigidity to prevent racking, permanent deformations, etc. during installation.

Use concrete centering devices or other approved non-corrosive centering devices at sufficient intervals along the length of the reinforcement cage to ensure concentric spacing for the entire cage length. As a minimum, provide a set of non-corrosive centering devices at intervals not exceeding 5 feet throughout the length of the shaft. When the size of the longitudinal reinforcement exceeds one inch in diameter the minimum spacing may be increased to 10 feet. As a minimum, provide a set of centering devices within 2 feet of the top and 2 feet of the bottom of the shaft. In addition provide one set of centering devices 2 feet above and 2 feet below each change in shaft diameter. Provide feet (bottom supports) at the bottom of the shaft on vertical bars. As a minimum, provide non-corrosive centering devices at 60 degree intervals around the circumference of the shaft to maintain the required reinforcement clearances. Ensure the centering devices maintain the specified annular clearance between the outside of the reinforcing cage and the side of the excavated hole or casing.

Concrete centering devices and feet will be constructed of concrete equal in quality and durability to the concrete specified for the shaft. Use epoxy coated centering devices fabricated from reinforcing steel. Use feet (bottom supports) of adequate size and number to assure the rebar cage is the proper distance above the bottom as determined by part (3.11.3) of this Special Note. The feet are not intended to support the weight of the cage. In the event that the shaft has been excavated below the anticipated tip elevation, extend the reinforcing cage at the tip (low) end by lap splices, mechanical connectors, or welded splices conforming to the Standard Specifications. In this instance, splices need not be

staggered and 100 percent of the reinforcing bars may be spliced at a given location. The bottom 12 inches of the shaft may not be reinforced when below plan tip elevation.

During concrete placement, support the reinforcing cage at or near the top of shaft such that the concrete feet are positioned approximately one inch above the bottom of shaft excavation. Not sooner than 24 hours after the completion of concrete placement, remove temporary supports. Provide the needed equipment, including extra cranes if necessary, to provide this cage support.

Prior to placing the reinforcement cage, demonstrate to the satisfaction of the Engineer that the fabrication and handling methods to be used will result in a reinforcing cage placed in the proper position, with the proper clearances, and without permanent bending, squashing, or racking of the reinforcement cage. During this demonstration bring the cage to an upright position, lower into a shaft excavation, and support as if for concrete placement.

Check the elevation of the top of the reinforcing cage before and after the concrete is placed. If the reinforcing cage is not maintained within the specified tolerances, correct to the satisfaction of the Engineer. Do not construct additional shafts until the contractor has modified his reinforcing cage support to obtain the required tolerances.

3.10 Concrete Placement. Place concrete according to the applicable portions of the Standard Specifications and with the requirements set forth herein. Do not apply the provisions of the Special Note 6U for Structural Mass Concrete.

Place concrete as soon as practical after reinforcing steel placement but no later than 4 hours after completion of the shaft excavation. Place concrete continuously from the bottom to above the top elevation of the shaft. For shafts that extend above ground or water surface, place concrete continuously after the shaft is full until good quality concrete is evident at the top of the shaft. Form any portion of the shaft above ground with a removable form or other approved method to the dimensions shown on the plans.

For shafts constructed in the wet with the top of the shaft below the water surface and below top of casing, place concrete to approximately one shaft diameter but no less than 2 feet above the top of shaft elevation. Remove contaminated concrete and deleterious material, as determined by the Engineer, accumulated above the top of shaft elevation immediately after completing concrete placement. Deleterious material and contaminated concrete may be airlifted under a head of water or slurry provided that the head is maintained at or near the exterior water surface elevation. Carefully remove any concrete remaining above plan top of shaft after curing and excess casing removal.

Place concrete either by free fall, through a tremie, or concrete pump. Use the free fall placement method in dry holes only. The maximum height of free fall placement is 20 feet. Do not allow concrete placed by free fall to contact either the reinforcing cage or hole sidewall. Drop chutes may be used to direct concrete to the base during free fall placement.

Place concrete in the shaft in one continuous operation. Maintain a minimum slump of 4 inches or more throughout the placement for 4 hours after batching. Adjust approved admixtures in the concrete mix for the conditions encountered on the job so that the concrete remains in a workable plastic state throughout the placement. Perform slump

loss tests to demonstrate that the concrete will maintain a 4-inch or greater slump for a period of time equal to the estimated transport plus the 2-hour placement time, but not less than 4 hours.

When the Engineer determines the concrete placement methods and/or equipment during construction of any technique and/or production shafts to be inadequate, make appropriate alterations to eliminate unsatisfactory results.

Drilled shafts not meeting the concrete placement requirements of this Special Note or contract plans are unacceptable. Correct all unacceptable completed shafts to the satisfaction of the Engineer.

3.10.1 Tremie Placement. Tremies may be used for concrete placement in either wet or dry holes. Extend the tremie to the shaft base elevation before starting underwater placement. Valves, bottom plates, or plugs may be used only if concrete discharge can begin approximately 2 inches above the excavation bottom. Remove plugs from the excavation unless otherwise approved by the Engineer. Maintain tremie discharge at or near the bottom of excavation as long as practical during concrete placement. Immerse tremie discharge end as deep as practical in the concrete but not less than 10 feet.

If at any time during the concrete pour the tremie line orifice is removed from the fluid concrete column and discharges concrete above the rising concrete surface, the entire drilled shaft is considered defective. In such case, remove the reinforcing cage and concrete, complete any necessary sidewall cleaning or over-reaming as directed by the Engineer, and repour the shaft.

3.10.2 Pumped Concrete. Concrete pumps and lines may be used for concrete placement in either wet or dry excavations. Do not begin concrete placement until the pump line discharge orifice is at the shaft base elevation.

For wet excavations, use a plug or similar device to separate the concrete from the fluid in the hole until pumping begins. Remove the plug unless otherwise approved by the engineer.

Ensure the discharge orifice remains at least 10 feet below the surface of the fluid concrete. When lifting the pump line during concrete placement, reduce the line pressure until the orifice has been repositioned at a higher level in the excavation.

If at any time during the concrete pour the pump line orifice is removed from the fluid concrete column and discharges concrete above the rising concrete level, the Department will consider the shaft defective. In such case, remove the reinforcing cage and concrete, complete any necessary sidewall cleaning or over-reaming as the Engineer directs, and repour the shaft.

3.10.3 Drop Chutes. Drop chutes may be used to direct placement of free fall concrete in excavations where the maximum depth of water does not exceed one inch. Do not use the free fall method of placement in wet excavations. Concrete may be placed through either a hopper at the top of the tube or side openings as

the drop chute is retrieved during concrete placement. Reduce the height of free fall and/or reduce the rate of concrete flow into the excavation if the concrete placement causes the shaft excavation to cave or slough, or if the concrete strikes the reinforcing cage or sidewall. When the Engineer determines free fall placement cannot be accomplished satisfactorily, use either tremie or pumping to accomplish the pour.

3.11 Construction Tolerances. The following construction tolerances apply to drilled shafts unless otherwise stated in the contract document:

1) Construct drilled shaft within 3 inches of plan position in the horizontal plane at the top of the shaft.
2) Do not vary the vertical alignment of a shaft excavation from the plan alignment by more than 1/4 inch per foot of depth or 6 inches total.
3) Maintain the top of the reinforcing steel cage no more than 6 inches above and no more than 3 inches below plan position.
4) All casing diameters shown on the plans refer to O.D. (outside diameter) dimensions. The casing dimensions are subject to American Pipe Institute tolerances applicable to regular steel pipe. A casing larger in diameter than shown in the plans may be used, at no additional cost, with prior approval by the Department.
5) Maintain the top of shaft concrete within ± 3 inches from the plan top of shaft elevation, measured after excess shaft concrete has been removed.
6) Design excavation equipment and methods so that the completed shaft excavation will have a planar bottom. Maintain the cutting edges of excavation equipment normal to the vertical axis of the equipment within a tolerance of ± 3/8 inch per foot of diameter. The tip elevation of the shaft has a tolerance of ± 6 inches from final shaft tip elevation unless otherwise specified in the plans.

Drilled shaft excavations and completed shafts not constructed within the required tolerances are unacceptable. Correct all unacceptable shaft excavations and completed shafts to the satisfaction of the Engineer. When a shaft excavation is completed with unacceptable tolerances, present corrective measures designed by a registered Professional Engineer for approval.

4.0 PAYMENT

The Department will not make separate payment for drilled shafts. All work to design and construct the drilled shafts will be incidental to Foundation Preparation.

151076

PROPOSAL BID ITEMS

Report Date 11/18/15

Section: 0001 - PAVING

LINE	BID CODE	ALT	DESCRIPTION	QUANTITY	UNIT	UNIT PRIC	FP	AMOUNT
0010	00001		DGA BASE	23,192.00	TON		$	
0020	00018		DRAINAGE BLANKET-TYPE II-ASPH	3,734.00	TON		$	
0030	00022		JPC PAVEMENT DRAINAGE BLANKET	5,132.00	TON		$	
0040	00100		ASPHALT SEAL AGGREGATE	218.00	TON		$	
0050	00103		ASPHALT SEAL COAT	26.10	TON		$	
0060	00190		LEVELING & WEDGING PG64-22	1,193.00	TON		$	
0070	00214		CL3 ASPH BASE 1.00D PG64-22	7,264.00	TON		$	
0080	00217		CL4 ASPH BASE 1.00D PG64-22	3,439.00	TON		$	
0090	00219		CL4 ASPH BASE 1.00D PG76-22	1,690.00	TON		$	
0100	00342		CL4 ASPH SURF 0.38A PG76-22	2,893.00	TON		$	
0110	00358		ASPHALT CURING SEAL	14.00	TON		$	
0120	02086		JPC PAVEMENT-13 IN	12,870.00	SQYD		$	
0130	02676		MOBILIZATION FOR MILL & TEXT	1.00	LS		$	
0140	02677		ASPHALT PAVE MILLING & TEXTURING	1,613.00	TON		$	
0150	02696		SHOULDER RUMBLE STRIPS-SAWED	20,807.00	LF		$	
0160	02702		SAND FOR BLOTTER	42.00	TON		$	

Section: 0002 - ROADWAY

LINE	BID CODE	ALT	DESCRIPTION	QUANTITY	UNIT	UNIT PRIC	FP	AMOUNT
0200	00021		DRAINAGE BLANKET-EMBANKMENT	3,094.00	CUYD		$	
0210	00078		CRUSHED AGGREGATE SIZE NO 2	4,104.00	TON		$	
0220	01000		PERFORATED PIPE-4 IN	18,253.00	LF		$	
0230	01010		NON-PERFORATED PIPE-4 IN	879.00	LF		$	
0240	01015		INSPECT & CERTIFY EDGE DRAIN SYSTEM	1.00	LS		$	
0250	01020		PERF PIPE HEADWALL TY 1-4 IN	22.00	EACH		$	
0260	01024		PERF PIPE HEADWALL TY 2-4 IN	6.00	EACH		$	
0270	01028		PERF PIPE HEADWALL TY 3-4 IN	12.00	EACH		$	
0280	01032		PERF PIPE HEADWALL TY 4-4 IN	15.00	EACH		$	
0290	01897		ASPHALT WEDGE CURB	40.00	LF		$	
0300	01982		DELINEATOR FOR GUARDRAIL MONO DIRECTIONAL WHITE	115.00	EACH		$	
0310	01983		DELINEATOR FOR GUARDRAIL MONO DIRECTIONAL YELLOW	7.00	EACH		$	
0320	02003		RELOCATE TEMP CONC BARRIER	6,300.00	LF		$	
0330	02058		REMOVE PCC PAVEMENT	5,975.00	SQYD		$	
0340	02159		TEMP DITCH	7,209.00	LF		$	
0350	02160		CLEAN TEMP DITCH	3,605.00	LF		$	
0360	02200		ROADWAY EXCAVATION	79,481.00	CUYD		$	
0370	02223		GRANULAR EMBANKMENT	300.00	CUYD		$	
0380	02242		WATER	2,703.00	MGAL		$	
0390	02351		GUARDRAIL-STEEL W BEAM-S FACE	10,687.50	LF		$	
0400	02363		GUARDRAIL CONNECTOR TO BRIDGE END TY A	1.00	EACH		$	
0410	02367		GUARDRAIL END TREATMENT TYPE 1	5.00	EACH		$	
0420	02369		GUARDRAIL END TREATMENT TYPE 2A	4.00	EACH		$	
0430	02381		REMOVE GUARDRAIL	4,765.00	LF		$	

151076

PROPOSAL BID ITEMS

Report Date 11/18/15

LINE	BID CODE	ALT	DESCRIPTION	QUANTITY	UNIT	UNIT PRIC	FP	AMOUNT
0440	02391		GUARDRAIL END TREATMENT TYPE 4A	2.00	EACH		$	
0450	02396		REMOVE GUARDRAIL END TREATMENT	7.00	EACH		$	
0460	02471		FILL AND CAP SINKHOLE	1.00	EACH		$	
0470	02483		CHANNEL LINING CLASS II	2,702.00	TON		$	
0480	02484		CHANNEL LINING CLASS III	2,235.00	TON		$	
0490	02545		CLEARING AND GRUBBING 15.4 ACRES	1.00	LS		$	
0500	02562		TEMPORARY SIGNS	639.00	SQFT		$	
0510	02599		FABRIC-GEOTEXTILE TYPE IV	61,124.00	SQYD		$	
0520	02600		FABRIC GEOTEXTILE TY IV FOR PIPE	657.00	SQYD	$2.00	$	$1,314.00
0530	02610		RETAINING WALL-GABION	667.00	CUYD		$	
0540	02650		MAINTAIN & CONTROL TRAFFIC	1.00	LS		$	
0550	02671		PORTABLE CHANGEABLE MESSAGE SIGN	6.00	EACH		$	
0560	02701		TEMP SILT FENCE	7,209.00	LF		$	
0570	02703		SILT TRAP TYPE A	33.00	EACH		$	
0580	02704		SILT TRAP TYPE B	33.00	EACH		$	
0590	02705		SILT TRAP TYPE C	33.00	EACH		$	
0600	02706		CLEAN SILT TRAP TYPE A	33.00	EACH		$	
0610	02707		CLEAN SILT TRAP TYPE B	33.00	EACH		$	
0620	02708		CLEAN SILT TRAP TYPE C	33.00	EACH		$	
0630	02726		STAKING	1.00	LS		$	
0640	02731		REMOVE STRUCTURE	1.00	LS		$	
0650	02775		ARROW PANEL	2.00	EACH		$	
0660	02929		CRASH CUSHION TYPE IX	5.00	EACH		$	
0670	03171		CONCRETE BARRIER WALL TYPE 9T	13,360.00	LF		$	
0680	05950		EROSION CONTROL BLANKET	11,923.00	SQYD		$	
0690	05952		TEMP MULCH	101,963.00	SQYD		$	
0700	05953		TEMP SEEDING AND PROTECTION	76,472.00	SQYD		$	
0710	05963		INITIAL FERTILIZER	5.10	TON		$	
0720	05964		20-10-10 FERTILIZER	8.50	TON		$	
0730	05985		SEEDING AND PROTECTION	152,944.00	SQYD		$	
0740	06401		FLEXIBLE DELINEATOR POST-M/W	29.00	EACH		$	
0750	06404		FLEXIBLE DELINEATOR POST-M/Y	20.00	EACH		$	
0760	06511		PAVE STRIPING-TEMP PAINT-6 IN	47,021.00	LF		$	
0770	06513		PAVE STRIPING-TEMP PAINT-12 IN	1,878.00	LF		$	
0780	06515		PAVE STRIPING-PERM PAINT-6 IN	32,452.00	LF		$	
0790	06517		PAVE STRIPING-PERM PAINT-12 IN	3,285.00	LF		$	
0800	06531		PAVE STRIPING REMOVAL-6 IN	47,021.00	LF		$	
0810	06533		PAVE STRIPING REMOVAL-12 IN	1,878.00	LF		$	
0820	06574		PAVE MARKING-THERMO CURV ARROW	12.00	EACH		$	
0830	06592		PAVEMENT MARKER TYPE V-B W/R	572.00	EACH		$	
0840	06593		PAVEMENT MARKER TYPE V-B Y/R	76.00	EACH		$	
0850	06600		REMOVE PAVEMENT MARKER TYPE V	218.00	EACH		$	
0851	08003		FOUNDATION PREPARATION (ADDED: 11-18-15)	1.00	LS		$	
0860	08100		CONCRETE-CLASS A	28.65	CUYD		$	
0870	08150		STEEL REINFORCEMENT	4,230.00	LB		$	
0880	10020NS		FUEL ADJUSTMENT	65,337.00	DOLL	$1.00	$	$65,337.00
0890	10030NS		ASPHALT ADJUSTMENT	64,426.00	DOLL	$1.00	$	$64,426.00
0900	20205EC		PAVE MARK STOP BAR-24 IN PAINT	48.00	LF		$	
0910	20430ED		SAW CUT	8,183.00	LF		$	

151076

PROPOSAL BID ITEMS

Report Date 11/18/15

LINE	BID CODE	ALT	DESCRIPTION	QUANTITY	UNIT	UNIT PRIC	FP	AMOUNT
0920	20738NS112		TEMP CRASH CUSHION	4.00	EACH		$	
0930	21289ED		LONGITUDINAL EDGE KEY	7,542.00	LF		$	
0940	21590EN		SOUND BARRIER WALL	123,399.00	SQFT		$	
0950	24814EC		PIPELINE INSPECTION	207.00	LF		$	

Section: 0003 - DRAINAGE

LINE	BID CODE	ALT	DESCRIPTION	QUANTITY	UNIT	UNIT PRIC	FP	AMOUNT
0960	00462		CULVERT PIPE-18 IN	77.00	LF		$	
0970	00464		CULVERT PIPE-24 IN	14.00	LF		$	
0980	00469		CULVERT PIPE-42 IN	26.00	LF		$	
0990	00521		STORM SEWER PIPE-15 IN	297.00	LF		$	
1000	01202		PIPE CULVERT HEADWALL-15 IN	13.00	EACH		$	
1010	01204		PIPE CULVERT HEADWALL-18 IN	2.00	EACH		$	
1020	01214		PIPE CULVERT HEADWALL-42 IN	1.00	EACH		$	
1030	01310		REMOVE PIPE	35.00	LF		$	
1040	01451		S & F BOX INLET-OUTLET-24 IN	1.00	EACH		$	
1050	01490		DROP BOX INLET TYPE 1	1.00	EACH		$	
1060	01506		DROP BOX INLET TYPE 5B MOD	1.00	EACH		$	
1070	01512		DROP BOX INLET TYPE 5D MOD	14.00	EACH		$	
1080	01630		REMOVE MEDIAN BOX INLET	1.00	EACH		$	
1090	02484		CHANNEL LINING CLASS III	247.00	TON		$	
1100	02625		REMOVE HEADWALL	4.00	EACH		$	
1110	21583NN		MODIFY EXISTING DRAINAGE BOX	1.00	EACH		$	

Section: 0004 - BRIDGE- CULVERT 15476

LINE	BID CODE	ALT	DESCRIPTION	QUANTITY	UNIT	UNIT PRIC	FP	AMOUNT
1120	02403		REMOVE CONCRETE MASONRY	6.00	CUYD		$	
1130	08003		FOUNDATION PREPARATION	1.00	LS		$	
1140	08100		CONCRETE-CLASS A	25.20	CUYD		$	
1150	08150		STEEL REINFORCEMENT	2,169.00	LB		$	

Section: 0005 - BRIDGE- CULVERT 15477

LINE	BID CODE	ALT	DESCRIPTION	QUANTITY	UNIT	UNIT PRIC	FP	AMOUNT
1160	02403		REMOVE CONCRETE MASONRY	16.50	CUYD		$	
1170	08002		STRUCTURE EXCAV-SOLID ROCK	46.00	CUYD		$	
1180	08003		FOUNDATION PREPARATION	1.00	LS		$	
1190	08100		CONCRETE-CLASS A	75.30	CUYD		$	
1200	08150		STEEL REINFORCEMENT	4,952.00	LB		$	
1210	23930EC		LIGHTWEIGHT CELLULAR CONCRETE FILL	1,813.00	CUYD		$	
1220	23931EC		EPS FOAM BLOCK	77,613.00	CUFT		$	

Section: 0006 - UTILITY-TRIMARC

151076

PROPOSAL BID ITEMS

Report Date 11/18/15

LINE	BID CODE	ALT	DESCRIPTION	QUANTITY	UNIT	UNIT PRIC	FP	AMOUNT
1230	03381		PVC PIPE-2 IN	200.00	LF		$	
1240	04795		CONDUIT-2 IN	56.00	LF		$	
1250	04820		TRENCHING AND BACKFILLING	100.00	LF		$	
1260	04835		WIRE-NO. 4	1,256.00	LF		$	
1270	20391NS835		ELECTRICAL JUNCTION BOX TYPE A	1.00	EACH		$	

Section: 0007 - UTILITY-TRIMARC ALT 1

LINE	BID CODE	ALT	DESCRIPTION	QUANTITY	UNIT	UNIT PRIC	FP	AMOUNT
1280	03381		PVC PIPE-2 IN	200.00	LF		$	
1290	04795		CONDUIT-2 IN	192.00	LF		$	
1300	04820		TRENCHING AND BACKFILLING	200.00	LF		$	
1310	04835		WIRE-NO. 4	1,256.00	LF		$	
1320	20391NS835		ELECTRICAL JUNCTION BOX TYPE A	2.00	EACH		$	
1330	21543EN		BORE AND JACK CONDUIT	192.00	LF		$	

Section: 0008 - UTILITY-TRIMARC ALT 2

LINE	BID CODE	ALT	DESCRIPTION	QUANTITY	UNIT	UNIT PRIC	FP	AMOUNT
1340	03381		PVC PIPE-2 IN	650.00	LF		$	
1350	04795		CONDUIT-2 IN	336.00	LF		$	
1360	04820		TRENCHING AND BACKFILLING	700.00	LF		$	
1370	04835		WIRE-NO. 4	1,950.00	LF		$	
1380	20391NS835		ELECTRICAL JUNCTION BOX TYPE A	2.00	EACH		$	
1390	21543EN		BORE AND JACK CONDUIT	336.00	LF		$	

Section: 0009 - SIGNING

LINE	BID CODE	ALT	DESCRIPTION	QUANTITY	UNIT	UNIT PRIC	FP	AMOUNT
1400	06405		SBM ALUMINUM PANEL SIGNS	5,227.00	SQFT		$	
1410	06407		SBM ALUM SHEET SIGNS .125 IN	209.50	SQFT		$	
1420	06410		STEEL POST TYPE 1	280.00	LF		$	
1430	06412		STEEL POST MILE MARKERS	1.00	EACH		$	
1440	06420		OSS ALUMINUM 55 FT TRUSS	1.00	EACH		$	
1450	06424		OSS ALUMINUM 65 FT TRUSS	2.00	EACH		$	
1460	06436		OSS ALUMINUM 75 FT TRUSS	2.00	EACH		$	
1470	06438		OSS ALUMINUM 80 FT TRUSS	1.00	EACH		$	
1480	06441		GMSS GALV STEEL TYPE C	1,927.20	LB		$	
1490	06449		REM OVERHEAD SIGN SUPPORT STR	7.00	EACH		$	
1500	06451		REMOVE SIGN SUPPORT BEAM	2.00	EACH		$	
1510	06490		CLASS A CONCRETE FOR SIGNS	9.49	CUYD		$	
1520	06491		STEEL REINFORCEMENT FOR SIGNS	330.00	LB		$	
1530	20418ED		REMOVE & RELOCATE SIGNS	3.00	EACH		$	
1540	20419ND		ROADWAY CROSS SECTION	2.00	EACH		$	
1550	21373ND		REMOVE SIGN	11.00	EACH		$	
1560	21596ND		GMSS TYPE D	14.00	EACH		$	

151076

PROPOSAL BID ITEMS

Report Date 11/18/15

LINE	BID CODE	ALT	DESCRIPTION	QUANTITY	UNIT	UNIT PRIC	FP	AMOUNT
1570	24372EC		SIGN TRUSS FOOTING	12.00	EACH		$	
1580	24631EC		BARCODE SIGN INVENTORY	3.00	EACH		$	
1590	30012		MILE MARKER	1.00	EACH		$	

Section: 0010 - TRAINEES

LINE	BID CODE	ALT	DESCRIPTION	QUANTITY	UNIT	UNIT PRIC	FP	AMOUNT
0170	02742		TRAINEE PAYMENT REIMBURSEMENT 1 GROUP 2, 3 OR 4 OPERATOR	1,400.00	HOUR		$	

Section: 0011 - DEMOBILIZATION &/OR MOBILIZATION

LINE	BID CODE	ALT	DESCRIPTION	QUANTITY	UNIT	UNIT PRIC	FP	AMOUNT
0180	02568		MOBILIZATION	1.00	LS		$	
0190	02569		DEMOBILIZATION	1.00	LS		$	