



**CALL NO. 105**

**CONTRACT ID. 221042**

**BREATHITT COUNTY**

**FED/STATE PROJECT NUMBER STP 0151(093)**

**DESCRIPTION PANBOWL LAKE(KY-15)**

**WORK TYPE GEOTECHNICAL**

**PRIMARY COMPLETION DATE 4/30/2023**

**LETTING DATE: August 18,2022**

Sealed Bids will be received electronically through the Bid Express bidding service until 10:00 AM EASTERN DAYLIGHT TIME August 18,2022. Bids will be publicly announced at 10:00 AM EASTERN DAYLIGHT TIME.

**PLANS AVAILABLE FOR THIS PROJECT.**

**DBE CERTIFICATION REQUIRED - 0%**

**REQUIRED BID PROPOSAL GUARANTY:** Not less than 5% of the total bid.

**TABLE OF CONTENTS**

PART I	SCOPE OF WORK <ul style="list-style-type: none"><li>• PROJECT(S), COMPLETION DATE(S), &amp; LIQUIDATED DAMAGES</li><li>• CONTRACT NOTES</li><li>• FEDERAL CONTRACT NOTES</li><li>• ASPHALT MIXTURE</li><li>• INCIDENTAL SURFACING</li><li>• ASPHALT PAVEMENT RIDE QUALITY CAT A</li><li>• COMPACTION OPTION A</li><li>• SPECIAL NOTE(S) APPLICABLE TO PROJECT</li><li>• LIQUIDATED DAMAGES</li><li>• RIGHT OF WAY CERTIFICATION</li><li>• UTILITY IMPACT &amp; RAIL CERTIFICATION NOTES</li><li>• PRE-BID CONFERENCE</li></ul>
PART II	SPECIFICATIONS AND STANDARD DRAWINGS <ul style="list-style-type: none"><li>• SPECIFICATIONS REFERENCE</li><li>• SUPPLEMENTAL SPECIFICATION</li><li>• [SN-1I] PORTABLE CHANGEABLE SIGNS</li></ul>
PART III	EMPLOYMENT, WAGE AND RECORD REQUIREMENTS <ul style="list-style-type: none"><li>• FEDERAL-AID CONSTRUCTION CONTRACTS - FHWA 1273</li><li>• NONDISCRIMINATION OF EMPLOYEES</li><li>• EXECUTIVE BRANCH CODE OF ETHICS</li><li>• PROJECT WAGE RATES LOCALITY 2 / FEDERAL</li><li>• NOTICE OF REQUIREMENT FOR AFFIRMATIVE ACTION TO ENSURE EEO BREATHITT</li></ul>
PART IV	INSURANCE
PART V	BID ITEMS

**PART I**  
**SCOPE OF WORK**

**ADMINISTRATIVE DISTRICT - 10**

**CONTRACT ID - 221042**  
**STP 0151(093)**  
**COUNTY - BREATHITT**  
**PCN - DE01300152242**  
**STP 0151(093)**

PANBOWL LAKE(KY-15) (MP 17.6) DRAINAGE AND SAFETY IMPROVEMENTS ALONG KY-15 NEAR PANBOWL LAKE (MP 17.85), A DISTANCE OF 0.28 MILES.GEOTECHNICAL SYP NO. 10-00172.00.  
GEOGRAPHIC COORDINATES LATITUDE 37:33:27.00 LONGITUDE 83:23:09.00  
ADT

**COMPLETION DATE(S):**  
COMPLETED BY 04/30/2023      APPLIES TO ENTIRE CONTRACT

## **CONTRACT NOTES**

### **PROPOSAL ADDENDA**

All addenda to this proposal must be applied when calculating bid and certified in the bid packet submitted to the Kentucky Department of Highways. Failure to use the correct and most recent addenda may result in the bid being rejected.

### **BID SUBMITTAL**

Bidder must use the Department's electronic bidding software. The Bidder must download the bid file located on the Bid Express website ([www.bidx.com](http://www.bidx.com)) to prepare a bid packet for submission to the Department. The bidder must submit electronically using Bid Express.

### **JOINT VENTURE BIDDING**

Joint venture bidding is permissible. All companies in the joint venture must be prequalified in one of the work types in the Qualifications for Bidders for the project. The bidders must get a vendor ID for the joint venture from the Division of Construction Procurement and register the joint venture as a bidder on the project. Also, the joint venture must obtain a digital ID from Bid Express to submit a bid. A joint bid bond of 5% may be submitted for both companies or each company may submit a separate bond of 5%.

### **UNDERGROUND FACILITY DAMAGE PROTECTION**

The contractor shall make every effort to protect underground facilities from damage as prescribed in the Underground Facility Damage Protection Act of 1994, Kentucky Revised Statute KRS 367.4901 to 367.4917. It is the contractor's responsibility to determine and take steps necessary to be in compliance with federal and state damage prevention directives. When prescribed in said directives, the contractor shall submit Excavation Locate Requests to the Kentucky Contact Center (KY811) via web ticket entry. The submission of this request does not relieve the contractor from the responsibility of contacting non-member facility owners, whom shall be contacted through their individual Protection Notification Center. Non-compliance with these directives can result in the enforcement of penalties.

### **REGISTRATION WITH THE SECRETARY OF STATE BY A FOREIGN ENTITY**

Pursuant to KRS 176.085(1)(b), an agency, department, office, or political subdivision of the Commonwealth of Kentucky shall not award a state contract to a person that is a foreign entity required by [KRS 14A.9-010](#) to obtain a certificate of authority to transact business in the Commonwealth ("certificate") from the Secretary of State under [KRS 14A.9-030](#) unless the person produces the certificate within fourteen (14) days of the bid or proposal opening. If the foreign entity is not required to obtain a certificate as provided in [KRS 14A.9-010](#), the foreign entity should identify the applicable exception. Foreign entity is defined within [KRS 14A.1-070](#).

**For all foreign entities required to obtain a certificate of authority to transact business in the Commonwealth, if a copy of the certificate is not received by the contracting agency within the time frame identified above, the foreign entity's solicitation response shall be deemed non-responsive or the awarded contract shall be cancelled.**

Businesses can register with the Secretary of State at <https://secure.kentucky.gov/sos/ftbr/welcome.aspx>.

### **SPECIAL NOTE FOR PROJECT QUESTIONS DURING ADVERTISEMENT**

Questions about projects during the advertisement should be submitted in writing to the Division of Construction Procurement. This may be done by fax (502) 564-7299 or email to [kytc.projectquestions@ky.gov](mailto:kytc.projectquestions@ky.gov). The Department will attempt to answer all submitted questions. The Department reserves the right not to answer if the question is not pertinent or does not aid in clarifying the project intent.

The deadline for posting answers will be 3:00 pm Eastern Daylight Time, the day preceding the Letting. Questions may be submitted until this deadline with the understanding that the later a question is submitted, the less likely an answer will be able to be provided.

The questions and answers will be posted for each Letting under the heading "Questions & Answers" on the Construction Procurement website ([www.transportation.ky.gov/contract](http://www.transportation.ky.gov/contract)). The answers provided shall be considered part of this Special Note and, in case of a discrepancy, will govern over all other bidding documents.

### **HARDWOOD REMOVAL RESTRICTIONS**

The US Department of Agriculture has imposed a quarantine in Kentucky and several surrounding states, to prevent the spread of an invasive insect, the emerald ash borer. Hardwood cut in conjunction with the project may not be removed from the state. Chipping or burning on site is the preferred method of disposal.

### **INSTRUCTIONS FOR EXCESS MATERIAL SITES AND BORROW SITES**

Identification of excess material sites and borrow sites shall be the responsibility of the Contractor. The Contractor shall be responsible for compliance with all applicable state and federal laws and may wish to consult with the US Fish and Wildlife Service to seek protection under Section 10 of the Endangered Species Act for these activities.

### **ACCESS TO RECORDS**

The contractor, as defined in KRS 45A.030 (9) agrees that the contracting agency, the Finance and Administration Cabinet, the Auditor of Public Accounts, and the Legislative Research Commission, or their duly authorized representatives, shall have access to any books, documents, papers, records, or other evidence, which are directly pertinent to this contract for the purpose of financial audit or program review. Records and other prequalification information confidentially

disclosed as part of the bid process shall not be deemed as directly pertinent to the contract and shall be exempt from disclosure as provided in KRS 61.878(1)(c). The contractor also recognizes that any books, documents, papers, records, or other evidence, received during a financial audit or program review shall be subject to the Kentucky Open Records Act, KRS 61.870 to 61.884.

In the event of a dispute between the contractor and the contracting agency, Attorney General, or the Auditor of Public Accounts over documents that are eligible for production and review, the Finance and Administration Cabinet shall review the dispute and issue a determination, in accordance with Secretary's Order 11-004.

April 30, 2018

## **FEDERAL CONTRACT NOTES**

The Kentucky Department of Highways, in accordance with the Regulations of the United States Department of Transportation 23 CFR 635.112 (h), hereby notifies all bidders that failure by a bidder to comply with all applicable sections of the current Kentucky Standard Specifications, including, but not limited to the following, may result in a bid not being considered responsive and thus not eligible to be considered for award:

- |                                |  |
|--------------------------------|--|
| 102.02 Current Rating          | 102.08 Preparation and Delivery of Proposals |
| 102.13 Irregular Bid Proposals | 102.14 Disqualification of Bidders           |
| 102.09 Proposal Guaranty       |  |

### **CIVIL RIGHTS ACT OF 1964**

The Kentucky Transportation Cabinet, Department of Highways, in accordance with the provisions of Title VI of the Civil Rights Act of 1964 (78 Stat. 252, 42 U.S.C. §§ 2000d to 2000d-4) and the Regulations, hereby notifies all bidders that it will affirmatively ensure that any contract entered into pursuant to this advertisement, disadvantaged business enterprises will be afforded full and fair opportunity to submit bids in response to this invitation and will not be discriminated against on the grounds of race, color, national origin, sex, age (over 40), religion, sexual orientation, gender identity, veteran status, disability, income- level, or Limited English Proficiency (LEP) in consideration for an award.

### **NOTICE TO ALL BIDDERS**

To report bid rigging activities call: 1-800-424-9071.

The U.S. Department of Transportation (DOT) operates the above toll-free “hotline” Monday through Friday, 8:00 a.m. to 5:00 p.m. eastern time. Anyone with knowledge of possible bid rigging, bidder collusion, or other fraudulent activities should use the “hotline” to report such activities.

The “hotline” is part of the DOT’s continuing effort to identify and investigate highway construction contract fraud and abuse and is operated under the direction of the DOT Inspector General. All information will be treated confidentially and caller anonymity will be respected.

### **SECOND TIER SUBCONTRACTS**

Second tier subcontracts are acceptable per Section 108.01 of the Standard Specifications for Road and Bridge Construction. Sub-Contractors fulfilling a disadvantaged business enterprise goal on a project may enter into a 2<sup>nd</sup> tier subcontract with a Non-DBE Subcontractor. However, in this instance, none of the work subcontracted to the Non-DBE Contractor will count toward fulfilling the established Disadvantaged Goal for the project.

### **DISADVANTAGED BUSINESS ENTERPRISE PROGRAM**

It is the policy of the Kentucky Transportation Cabinet (“the Cabinet”) that Disadvantaged Business Enterprises (“DBE”) shall have the opportunity to participate in the performance of highway construction projects financed in whole or in part by Federal Funds in order to create a level playing field for all businesses who wish to contract with the Cabinet. To that end, the Cabinet will comply with the regulations found in 49 CFR Part 26, and the definitions and requirements contained therein shall be adopted as if set out verbatim herein.

The Cabinet, contractors, subcontractors, and sub-recipients shall not discriminate on the basis of race, color, national origin, or sex in the performance of work performed pursuant to Cabinet contracts. The contractor shall carry out applicable requirements of 49 CFR 26 in the award and administration of federally assisted highway construction projects. The contractor will include this provision in all its subcontracts and supply agreements pertaining to contracts with the Cabinet.

Failure by the contractor to carry out these requirements is a material breach of its contract with the Cabinet, which may result in the termination of the contract or such other remedy as the Cabinet deems necessary.

### **DBE GOAL**

The Disadvantaged Business Enterprise (DBE) goal established for this contract, as listed on the front page of the proposal, is the percentage of the total value of the contract.

The contractor shall exercise all necessary and reasonable steps to ensure that Disadvantaged Business Enterprises participate in a least the percent of the contract as set forth above as goals for this contract.

### **OBLIGATION OF CONTRACTORS**

Each contractor prequalified to perform work on Cabinet projects shall designate and make known to the Cabinet a liaison officer who is assigned the responsibility of effectively administering and promoting an active program for utilization of DBEs.

If a formal goal has not been designated for the contract, all contractors are encouraged to consider DBEs for subcontract work as well as for the supply of material and services needed to perform this work.

Contractors are encouraged to use the services of banks owned and controlled by minorities and women.

### **CERTIFICATION OF CONTRACT GOAL**

Contractors shall include the following certification in bids for projects for which a DBE goal has been established. BIDS SUBMITTED WHICH DO NOT INCLUDE CERTIFICATION OF DBE PARTICIPATION WILL NOT BE ACCEPTED. These bids will not be considered for award by the Cabinet and they will be returned to the bidder.

“The bidder certifies that it has secured participation by Disadvantaged Business Enterprises (“DBE”) in the amount of \_\_\_\_\_ percent of the total value of this contract and that the DBE participation is in compliance with the requirements of 49 CFR 26 and the policies of the Kentucky Transportation Cabinet pertaining to the DBE Program.”

**The certification statement is located in the electronic bid file. All contractors must certify their DBE participation on that page. DBEs utilized in achieving the DBE goal must be certified and prequalified for the work items at the time the bid is submitted.**

### **DBE PARTICIPATION PLAN**

Lowest responsive bidders must submit the *DBE Plan/ Subcontractor Request*, form TC 14-35 DBE, within **5** days of the letting. This is necessary before the Awards Committee will review and make a recommendation. **The project will not be considered for award prior to submission and approval of the apparent low bidder’s DBE Plan/Subcontractor Request.**

The DBE Participation Plan shall include the following:

1. Name and address of DBE Subcontractor(s) and/or supplier(s) intended to be used in the proposed project;
2. Description of the work each is to perform including the work item, unit, quantity, unit price and total amount of the work to be performed by the individual DBE. The Proposal Line Number, Category Number, and the Project Line Number can be found in the “material listing” on the Construction Procurement website under the specific letting;
3. The dollar value of each proposed DBE subcontract and the percentage of total project contract value this represents. DBE participation may be counted as follows;
  - a. If DBE suppliers and manufactures assume actual and contractual responsibility, the dollar value of materials to be furnished will be counted toward the goal as follows:
    - The entire expenditure paid to a DBE manufacturer;
    - 60 percent of expenditures to DBE suppliers that are not manufacturers provided the supplier is a regular dealer in the product involved. A regular dealer must be engaged in, as its principal business and in its own name, the sale of products to the public, maintain an inventory and own and operate distribution equipment; and
    - The amount of fees or commissions charged by the DBE firms for a bona fide service, such as professional, technical, consultant, or managerial services and assistance in the procurement of essential personnel, facilities, equipment, materials, supplies, delivery of materials and supplies or for furnishing bonds, or insurance, providing such fees or commissions are determined to be reasonable and customary.

- b) The dollar value of services provided by DBEs such as quality control testing, equipment repair and maintenance, engineering, staking, etc.;
- c) The dollar value of joint ventures. DBE credit for joint ventures will be limited to the dollar amount of the work actually performed by the DBE in the joint venture;
- 4. Written and signed documentation of the bidder's commitment to use a DBE contractor whose participation is being utilized to meet the DBE goal; and
- 5. Written and signed confirmation from the DBE that it is participating in the contract as provided in the prime contractor's commitment.

**UPON AWARD AND BEFORE A WORK ORDER WILL BE ISSUED**

Contractors must submit the signed subcontract between the contractor and the DBE contractor, along with the DBE's certificate of insurance. If the DBE is a supplier of materials for the project, a signed purchase order must be submitted to the Division of Construction Procurement.

Changes to DBE Participation Plans must be approved by the Cabinet. The Cabinet may consider extenuating circumstances including, but not limited to, changes in the nature or scope of the project, the inability or unwillingness of a DBE to perform the work in accordance with the bid, and/or other circumstances beyond the control of the prime contractor.

**CONSIDERATION OF GOOD FAITH EFFORTS REQUESTS**

If the DBE participation submitted in the bid by the apparent lowest responsive bidder does not meet or exceed the DBE contract goal, the apparent lowest responsive bidder must submit a Good Faith Effort Package to satisfy the Cabinet that sufficient good faith efforts were made to meet the contract goals prior to submission of the bid. Efforts to increase the goal after bid submission will not be considered in justifying the good faith effort, unless the contractor can show that the proposed DBE was solicited prior to the letting date. DBEs utilized in achieving the DBE goal must be certified and prequalified for the work items at the time the bid is submitted. One complete set (hard copy along with an electronic copy) of this information must be received in the Division of Contract Procurement no later than 12:00 noon of the tenth calendar day after receipt of notification that they are the apparent low bidder.

Where the information submitted includes repetitious solicitation letters it will be acceptable to submit a sample representative letter along with a distribution list of the firms solicited. Documentation of DBE quotations shall be a part of the good faith effort submittal as necessary to demonstrate compliance with the factors listed below which the Cabinet considers in judging good faith efforts. This documentation may include written subcontractors' quotations, telephone log notations of verbal quotations, or other types of quotation documentation.

The Good Faith Effort Package shall include, but may not be limited to information showing evidence of the following:

1. Whether the bidder attended any pre-bid meetings that were scheduled by the Cabinet to inform DBEs of subcontracting opportunities;
2. Whether the bidder provided solicitations through all reasonable and available means;
3. Whether the bidder provided written notice to all DBEs listed in the DBE directory at the time of the letting who are prequalified in the areas of work that the bidder will be subcontracting;
4. Whether the bidder followed up initial solicitations of interest by contacting DBEs to determine with certainty whether they were interested. If a reasonable amount of DBEs within the targeted districts do not provide an intent to quote or no DBEs are prequalified in the subcontracted areas, the bidder must notify the Disadvantaged Enterprise Business Liaison Officer (DEBLO) in the Office for Civil Rights and Small Business Development to give notification of the bidder's inability to get DBE quotes;
5. Whether the bidder selected portions of the work to be performed by DBEs in order to increase the likelihood of meeting the contract goals. This includes, where appropriate, breaking out contract work items into economically feasible units to facilitate DBE participation, even when the prime contractor might otherwise perform these work items with its own forces;
6. Whether the bidder provided interested DBEs with adequate and timely information about the plans, specifications, and requirements of the contract;
7. Whether the bidder negotiated in good faith with interested DBEs not rejecting them as unqualified without sound reasons based on a thorough investigation of their capabilities. Any rejection should be so noted in writing with a description as to why an agreement could not be reached;
8. Whether quotations were received from interested DBE firms but were rejected as unacceptable without sound reasons why the quotations were considered unacceptable. The fact that the DBE firm's quotation for the work is not the lowest quotation received will not in itself be considered as a sound reason for rejecting the quotation as unacceptable. The fact that the bidder has the ability and/or desire to perform the contract work with its own forces will not be considered a sound reason for rejecting a DBE quote. Nothing in this provision shall be construed to require the bidder to accept unreasonable quotes in order to satisfy DBE goals;
9. Whether the bidder specifically negotiated with subcontractors to assume part of the responsibility to meet the contract DBE goal when the work to be subcontracted includes potential DBE participation;
10. Whether the bidder made any efforts and/or offered assistance to interested DBEs in obtaining the necessary equipment, supplies, materials, insurance and/or bonding to satisfy the work requirements of the bid proposal; and
11. Any other evidence that the bidder submits which may show that the bidder has made reasonable good faith efforts to include DBE participation.

### **FAILURE TO MEET GOOD FAITH REQUIREMENT**

Where the apparent lowest responsive bidder fails to submit sufficient participation by DBE firms to meet the contract goal and upon a determination by the Good Faith Committee based upon the information submitted that the apparent lowest responsive bidder failed to make sufficient reasonable efforts to meet the contract goal, the bidder will be offered the opportunity to meet in person for administrative reconsideration. The bidder will be notified of the Committee's decision within 24 hours of its decision. The bidder will have 24 hours to request reconsideration of the Committee's decision. The reconsideration meeting will be held within two days of the receipt of a request by the bidder for reconsideration.

The request for reconsideration will be heard by the Office of the Secretary. The bidder will have the opportunity to present written documentation or argument concerning the issue of whether it met the goal or made an adequate good faith effort. The bidder will receive a written decision on the reconsideration explaining the basis for the finding that the bidder did or did not meet the goal or made adequate Good Faith efforts to do so.

The result of the reconsideration process is not administratively appealable to the Cabinet or to the United States Department of Transportation.

The Cabinet reserves the right to award the contract to the next lowest responsive bidder or to rebid the contract in the event that the contract is not awarded to the low bidder as the result of a failure to meet the good faith requirement.

### **SANCTIONS FOR FAILURE TO MEET DBE REQUIREMENTS OF THE PROJECT**

Failure by the prime contractor to fulfill the DBE requirements of a project under contract or to demonstrate good faith efforts to meet the goal constitutes a breach of contract. When this occurs, the Cabinet will hold the prime contractor accountable, as would be the case with all other contract provisions. Therefore, the contractor's failure to carry out the DBE contract requirements shall constitute a breach of contract and as such the Cabinet reserves the right to exercise all administrative remedies at its disposal including, but not limited to the following:

- Suspension of Prequalification;
- Disallow credit toward the DBE goal;
- Withholding progress payments;
- Withholding payment to the prime in an amount equal to the unmet portion of the contract goal; and/or
- Termination of the contract.

### **PROMPT PAYMENT**

The prime contractor will be required to pay the DBE and Non-DBE Subcontractors within seven (7) working days after he or she has received payment from the Kentucky Transportation Cabinet for work performed or materials furnished.

### **CONTRACTOR REPORTING**

All contractors must keep detailed records and provide reports to the Cabinet on their progress in meeting the DBE requirement on any highway contract. These records may include, but shall not be limited to payroll, lease agreements, cancelled payroll checks, executed subcontracting agreements, etc. Prime contractors will be required to complete and submit a **signed and notarized** Affidavit of Subcontractor Payment (TC 18-7) and copies of checks for any monies paid to each DBE subcontractor or supplier utilized to meet a DBE goal. These documents must be completed and signed within 7 days of being paid by the Cabinet.

Payment information that needs to be reported includes date the payment is sent to the DBE, check number, Contract ID, amount of payment and the check date. Before Final Payment is made on this contract, the Prime Contractor will certify that all payments were made to the DBE subcontractor and/or DBE suppliers.

\*\*\*\*\* IMPORTANT \*\*\*\*\*

**Please mail the original, signed and completed TC (18-7) Affidavit of Subcontractor Payment form and all copies of checks for payments listed above to the following address:**

Office for Civil Rights and Small Business Development  
6<sup>th</sup> Floor West 200 Mero Street  
Frankfort, KY 40622

The prime contractor should notify the KYTC Office for Civil Rights and Small Business Development seven (7) days prior to DBE contractors commencing work on the project. The contact in this office is Mr. Melvin Byne. Mr. Byne's current contact information is email address – [melvin.bynes2@ky.gov](mailto:melvin.bynes2@ky.gov) and the telephone number is (502) 564-3601.

### **DEFAULT OR DECERTIFICATION OF THE DBE**

If the DBE subcontractor or supplier is decertified or defaults in the performance of its work, and the overall goal cannot be credited for the uncompleted work, the prime contractor may utilize a substitute DBE or elect to fulfill the DBE goal with another DBE on a different work item. If after exerting good faith effort in accordance with the Cabinet's Good Faith Effort policies and procedures, the prime contractor is unable to replace the DBE, then the unmet portion of the goal may be waived at the discretion of the Cabinet.

### **PROHIBITION ON TELECOMMUNICATIONS EQUIPMENT OR SERVICES**

In accordance with the FY 2019 National Defense Authorization Act (NDAA), 2 CFR 200.216, and 2 CFR 200.471, Federal agencies are prohibited, after August 13, 2020, from obligating or expending financial assistance to obtain certain telecommunications and video surveillance services and equipment from specific producers. As a result of these regulations, contractors and subcontractors are prohibited, on projects with federal funding participation, from providing telecommunication or video surveillance equipment, services, or systems produced by:

- Huawei Technologies Company or ZTE Corporation (or any subsidiary or affiliate of such entities)
- Hytera Communications Corporation, Hangzhou Hikvision Digital Technology Company, or Dahua Technology Company (or any subsidiary or affiliate of such entities)

Revised: 5/3/2022

**LEGAL REQUIREMENTS AND RESPONSIBILITY TO THE PUBLIC – CARGO  
PREFERENCE ACT (CPA).**

**(REV 12-17-15) (1-16)**

SECTION 7 is expanded by the following new Article:

102.10 **Cargo Preference Act – Use of United States-flag vessels.**

Pursuant to Title 46CFR Part 381, the Contractor agrees

- To utilize privately owned United States-flag commercial vessels to ship at least 50 percent of the gross tonnage (computed separately for dry bulk carriers, dry cargo liners, and tankers) involved, whenever shipping any equipment, material, or commodities pursuant to this contract, to the extent such vessels are available at fair and reasonable rates for United States-flag commercial vessels.
- To furnish within 20 days following the date of loading for shipments originating within the United States or within 30 working days following the date of loading for shipments originating outside the United States, a legible copy of a rated, 'on-board' commercial ocean bill-of-lading in English for each shipment of cargo described in paragraph 1 of this section to both the Contracting Officer (through the prime contractor in the case of subcontractor bills-of-lading) and to the Division of National Cargo, Office of Market Development, Maritime Administration, Washington, DC 20590.
- To insert the substance of the provisions of this clause in all subcontracts issued pursuant to this contract.

### **ASPHALT MIXTURE**

Unless otherwise noted, the Department estimates the rate of application for all asphalt mixtures to be 110 lbs/sy per inch of depth.

### **INCIDENTAL SURFACING**

The Department has included in the quantities of asphalt mixtures established in the proposal estimated quantities required for resurfacing or surfacing mailbox turnouts, farm field entrances, residential and commercial entrances, curve widening, ramp gores and tapers, and road and street approaches, as applicable. Pave these areas to the limits as shown on Standard Drawing RPM-110-06 or as directed by the Engineer. In the event signal detectors are present in the intersecting streets or roads, pave the crossroads to the right of way limit or back of the signal detector, whichever is the farthest back of the mainline. Surface or resurface these areas as directed by the Engineer. The Department will not measure placing and compacting for separate payment but shall be incidental to the Contract unit price for the asphalt mixtures.

### **ASPHALT PAVEMENT RIDE QUALITY CATEGORY A**

The Department will apply Pavement Rideability Requirements on this project in accordance with Section 410, Category A.

### **OPTION A**

Be advised that the Department will accept compaction of asphalt mixtures furnished for driving lanes and ramps, at 1 inch (25mm) or greater, on this project according to OPTION A in accordance with Section 402 and Section 403 of the current Standard Specifications. The Department will require joint cores as described in Section 402.03.02 for surface mixtures only. The Department will accept compaction of all other asphalt mixtures according to OPTION B.

# Special Note for Steel Sheet Pile Cutoff Wall

## *KY Highway 15 – Panbowl Lake Dam (Item # 10-172.00)*

### 1.0 DESCRIPTION

- 1.1 This work is for the construction of a permanent “Sheet Pile Cutoff Wall” that will serve as a seepage cutoff wall at the West Embankment of the Panbowl Lake Dam System. Use an approved Specialty Contractor that has the expertise and capability to complete the work required by this Special Note. Only Contractors pre-qualified by the Kentucky Department of Highways (the “Department”) as a Specialty Contractor for “Grouting for Ground Improvements” (Work Item I39) OR “Jet Grouting” (Work Item J20) may bid on this project as the prime contractor and perform the work required by this Special Note. Subsurface data from the geotechnical exploration(s) are included in the Construction Plans and this Special Note with Appendices. Rock cores are available for viewing at the Geotechnical Branch in Frankfort, 502-564-2374. Contractors must call a minimum of two (2) days in advance to schedule a viewing of rock cores. Project related information, including the Geotechnical Report(s), are accessible on the Department’s Construction Procurement webpage.
- 1.2 The prospective bidders are responsible to familiarize themselves with the available geotechnical data, which provides further information regarding the anticipated soil and bedrock conditions, that will affect the installation of the steel sheet pile cutoff wall. Failure to inspect the project site and view the available rock cores and geotechnical data will result in the forfeiture of the right to file a claim based on site conditions and may result in disqualification from the project.

### 2.0 SCOPE OF WORK

- 2.1 The contract item “Sheet Piling” includes furnishing materials, labor, tools, equipment, and other incidental items required for the construction and testing of permanent sheet piling as described herein. See the Construction Plans for an overview of the steel sheet pile cutoff wall.
- 2.2 Steel sheet pile cutoff wall construction includes predrilling select reaches of the wall prior to pile installation (where required); installing interlock sealant; driving piles; splicing pile sections (if required); providing, placing, and grouting the annular space created by predrilling; and removing damaged or non-conforming piles.
- 2.3 Refer to Figure 9-16 in the USACE Engineering Manual (EM) 1110-2-1901 “Seepage Analysis and Control for Dams” for the components of a sheet pile cutoff wall. Refer to USACE EM 1110-2-2504 “Design of Sheet Pile Walls” and FHWA NHI-99-025 “Earth Retaining Structures” for additional characteristics of sheet piling.
- 2.4 Sheet pile cutoff wall construction requires disturbing an existing embankment dam.  
***Construction within and in the vicinity of embankment dams requires special***

***care and effort compared to general construction. Special care is required to prevent damage, slope instability, and the creation of seepage pathways within the embankment.*** The Contractor should take this into account during bidding and should consult all requirements of this Special Note and the Construction Plans for details.

- 2.5 Subject to the requirements in the Construction Plans and this Special Note, select the installation method and equipment to meet the performance requirements specified herein.
- 2.6 In construction of the sheet pile cutoff wall, consider the potential risks involved due to slope failure and generation of seepage pathways. Embankment integrity, slope stability, wall alignment, and preservation of wall condition are the Contractor's responsibilities from the beginning of work until final acceptance. Damage to property (public or private) or to the wall itself during construction is the responsibility of the Contractor. Construct the sheet pile cutoff wall system to ensure that the wall system will function as intended.
- 2.7 The main body of this Special Note is general for permanent sheet piling. Refer to the Appendix or Appendices for any project specific requirements.
- 2.8 Construction Plans are defined as plans prepared by the Department and/or authorized representative containing the sheet pile wall profile and layout, details, subsurface data, etc., to be used by the Steel Sheet Pile Cutoff Wall Contractor to construct the wall. These plans are included in the Bid Proposal.

### **3.0 REFERENCES**

The documents below apply to this work. Unless noted otherwise, use the current edition as of the letting date of this project.

- 1. Construction Plans and Plan Notes.
- 2. The "Kentucky Standard Specifications for Road and Bridge Construction", Current Edition with supplements. This document may be referred to as "Specifications" or "Standard Specifications" elsewhere in this Special Note.
- 3. The Department Manuals "Kentucky Methods", "List of Approved Materials", and "Field Sampling and Testing Practices".
- 4. American Society for Testing and Materials (ASTM) Standards, Current Edition.
- 5. American Association of State Highway and Transportation Officials (AASHTO) Standards, Current Edition.
- 6. FHWA Publication FHWA NHI-99-025, "Earth Retaining Structures" (NHI Course No. 13236 – Module 6), April 1999.
- 7. USACE EM 1110-2-1901, "Seepage Analysis and Control for Dams", April 1993.
- 8. USACE EM 1110-2-2504, "Design of Sheet Pile Walls", March 1994.
- 9. AASHTO Standard Specifications for Highway Bridges, Current Edition, with all interims.
- 10. AISC Steel Construction Manual for the design of structural hardware applies

if the design is not covered in the AASHTO Standard Specifications for Highway Bridges, Current Edition, with all interims.

## 4.0 EXPERIENCE REQUIREMENTS AND SUBMITTALS

Requirements for personnel experience and pre-construction submittals, **including submittal deadlines**, are in this section. Do not begin construction of the steel sheet pile cutoff wall, other than stockpiling of wall materials, until the Engineer receives and accepts all submittals required in this section. Additional submittals and records required during and after construction may be included in other sections of this Special Note. The use of electronic submittals (preferably in .pdf format) will expedite the approval process.

4.1 Personnel Experience Requirements: The Department considers a satisfactory record of experience in both permanent sheet piling serving as a hydraulic barrier and earthen embankment dam construction important to successfully complete this work. Use personnel meeting the requirements below on this project and submit one (1) electronic copy of all information necessary to verify that they meet the requirements. Submit this information no later than seven (7) calendar days after receiving Notice of Award. **Submit this information to Aric Skaggs at the following email address: aric.skaggs@ky.gov.** As a minimum, include the following for each project necessary to satisfy the requirements:

1. The names and current phone numbers of the Owner's representative(s) who can verify that the Contractor meets the requirements.
2. The dates of construction.
3. The type (temporary/permanent) of structure.
4. The sheet pile section.
5. The maximum pile penetration.
6. Subsurface and bearing conditions.

The Department will review the experience requirements and respond to the Contractor within fourteen (14) calendar days. Review and acceptance by the Engineer is for evidence of the required experience and does not in any way relieve the Contractor of full responsibility for the successful and satisfactory completion of the work.

### 4.1.1 Project Engineer Experience Requirements:

Use an engineer meeting the requirements below to have overall technical responsibility for sheet piling construction on this project. It is not necessary for the Project Engineer to be on-site daily. Consultants or manufacturers' representatives may not be used to satisfy these requirements. The requirements for the Project Engineer are:

- a. Licensed Professional Engineer in the U.S.
- b. A minimum of five (5) years design and/or construction experience on permanent steel sheet piling serving as a hydraulic barrier and/or other seepage cutoff walls, with experience on a minimum of five (5) projects of similar size and complexity, constructed in the past five (5) years.
- c. An employee of the Steel Sheet Pile Cutoff Wall Contractor.

#### 4.1.2 On-Site Supervisor Experience Requirements:

Use an on-site supervisor (project manager, superintendent, etc.) meeting the requirements below to be responsible for the daily sheet piling construction activities on this project. Consultants or manufacturers' representatives may not be used to satisfy the requirements of this section. The requirements for the On-Site Supervisor are:

- a. A minimum of three (3) years construction experience on permanent steel sheet piling serving as a hydraulic barrier and/or other seepage cutoff walls, with experience on a minimum of three (3) projects of similar size and complexity, constructed in the past three (3) years.
- b. An employee of the Steel Sheet Pile Cutoff Wall Contractor.

The On-Site Supervisor and the Project Engineer may be the same person if that person meets all the stated requirements. The Department will consider allowing a team of more than one supervisor to satisfy these requirements and perform the associated functions, subject to certain conditions at the discretion of the Engineer. The Department may consider related experience with other similar types of specialty construction.

- 4.1.3 The Engineer may suspend work on the wall if the Contractor substitutes unqualified and/or unapproved personnel or if the personnel are not performing the required duties. If work is suspended due to substitution of unqualified and/or unapproved personnel, the Contractor is fully liable for all costs resulting from the suspension of work. No adjustment in contract time resulting from this suspension of work will be allowed.

- 4.2 Construction and Materials Submittals: Submit six (6) hard copies or one (1) electronic copy of the following **no later than thirty (30) calendar days after receiving Notice to Begin Work.**

1. The proposed start date and proposed wall construction sequence and schedule including:
  - a. Plan describing how surface water will be diverted, controlled and disposed of.
  - b. Proposed methods for delivery, storage, and handling of sheet piling.
  - c. Proposed sheeting installation plan, including the driving sequence, estimated predrilling limits, and sheet piling tip elevation of each pile section.
  - d. Proposed plan to mitigate premature refusal of sheet piles.
  - e. Proposed methods and equipment for predrilling, including the type of equipment, manufacturer, and model number as well as the estimated elevations and limits of the predrilling program if different from the approximate limits shown in Construction Plans.
  - f. Proposed method and equipment for backfilling annular space created from the predrilling program, including batching and placing grout.
  - g. Proposed method for installing the interlock sealant between pile sections.
  - h. Proposed methods and equipment for installing and extracting the

- sheet piling, including the type of driving equipment, the manufacturer of the equipment, protection caps, leads, model number and driving energy. The proposed methods should include measures to install sheet piling straight and plumb at the locations shown on the Construction Plans.
- i. Proposed procedure of insufficient pile length including methods for pulling and redriving damaged or non-conforming sheet piling.
    - j. Information on provisions for working in the proximity of both overhead and underground facilities or utilities.
  2. Vibration instrumentation and monitoring program plan.
  3. Preconstruction Condition Survey Report.
  4. Certification of land surveyor to be utilized for specified portions of the sheet piling work.
  5. Provide welding and steel plant certificates stating full compliance with the contract requirements.
  6. Product technical data including:
    - a. Acknowledgement that products submitted meet the requirements of standards referenced.
    - b. Manufacturer's installation instructions.
  7. Submit certified material test reports showing that sheet piling and appurtenant metal materials meet the specified requirements for each shipment and identified with specific lots prior to installing materials. Material test reports must meet the requirements of ASTM A6/A6M.
    - a. Sheet piling and appurtenant materials must be tested and certified by the manufacturer to meet the specified chemical, mechanical and section property requirements prior to delivery to the site.
    - b. Testing of sheet piling for mechanical properties must be performed after the completion of all rolling and forming operations.
  8. Submit shop drawings for the sheet piling showing fabricated section that include completed piling dimensions and details, as well as the driving sequence and location of installing piling.
  9. Grout submittal including:
    - a. type of mixer;
    - b. water/cement ratio;
    - c. type of additives;
    - d. type of cement;
    - e. quantity of bentonite;
    - f. mix design;
    - g. design strength (maximum of 80 pounds per square inch (psi)); and
    - h. mix verification testing.
  10. Pile driving records as required by this Special Note, including a summary of location coordinates of in-place sheet piling.
  11. Any other documentation required to verify that proposed construction procedures and materials fully comply with all requirements in the contract documents.

The Department will complete the review within fourteen (14) calendar days after receiving each submittal; the Department will not extend the specified completion date for this review period. Unacceptable methods or documentation, as judged by

the Engineer, will be cause for withholding acceptance. The Contractor is fully liable for all costs resulting from acceptance being withheld; the Department will not extend the specified completion date as the result of not accepting the construction and materials submittals. Review and acceptance by the Engineer is for evidence of work to be performed and does not in any way relieve the Contractor of full responsibility for the successful and satisfactory completion of the work.

4.3 Steel Sheet Pile Cutoff Wall Pre-Construction Meeting: A Pre-Construction Meeting to discuss the steel sheet pile cutoff wall construction will be required. This meeting will be held after all sheet pile wall submittals in Section 4.1 and 4.2 have been received, reviewed, and accepted by the Department, and at least ten (10) working days prior to the beginning of sheet pile wall construction. The purpose of the meeting is to discuss construction procedures, personnel, and equipment to be used. The following will be expected to attend:

- Representing the Contractor and Subcontractors - Contractor Representative, Project Engineer and On-Site Supervisor, and Vibration Instrumentation Specialist. Also, representatives of the Surveyor, if different than the Prime Contractor.
- Representing the Quality Control Team - QCP Manager and Lead Inspector as defined in Appendix C of this Special Note.
- Representing the Department – Section Engineer, Central Office Construction Engineer, Geotechnical Branch Representative and others as deemed appropriate by the Section Engineer.

If the Contractor's key personnel change or if the Contractor proposes a significant revision to sheet piling construction procedures, additional Pre-Construction meetings may be required at the discretion of the Engineer.

## 5.0 MATERIALS

Provide materials conforming to the requirements below when the materials are required by this Special Note, the Construction (Contract) Plans, or elsewhere in the Contract Documents.

### 5.1 Sheet Piling:

1. Subject to compliance with this Special Note, the following manufacturers are acceptable:
  - a. Sheet Piling:
    - i. Skyline Steel Corporation.
    - ii. Gerdau Ameristeel.
    - iii. Or approved equal.
  - b. Sheet Piling points:
    - i. Associated Pile and Fitting Corporation.
    - ii. Or approved equal.
2. PZ-35 or approved equal.
3. Hot-rolled steel section.
4. ASTM A328/A328M.
5. Piling sections shall be continuously interlocking.
6. Piling shall be reasonably free sliding to grade when threaded.

7. Provide standard handling hole approximately 4 IN from one end.

5.2 Corners, Tees, and Wyes:

1. As appropriate with ASTM A328/A328M piling.
2. Fabricated from matching pieces of sheet piling, ASTM A36/A36M plates or angles, and ASTM F3125, Grade A325 high-strength bolts.
3. Bolts shall be furnished with washers.

5.3 Welding Electrodes:

1. AWS D1.1 and AWS D1.3, E70 electrode.

5.4 Interlock Sealant:

1. Subject to compliance with this Special Note, the interlock sealant shall meet the following:
  - a. Hydrophilic waterstop (swells in contact with water).
  - b. Tested and certified to prevent water from passing thru interlock joints under 5 bars (approximately 70 PSI) of pressure.
  - c. Remains flexible at 41 DEGF.
  - d. Remains bonded to sheet pile.
  - e. Compatible with steel piling and to be placed in the female (socket) interlock along the full length of the sheet pile.
  - f. Installed by the Manufacturer.

5.5 Grout:

1. A mixture of cement, water, bentonite, and air having a consistency which will flow under a very low head.
2. Type I cement conforming to Section 801 of the Standard Construction Specifications.
3. Use fine powdered (less than No. 200 sieve), high yielding sodium bentonite.
4. Use grout that has a maximum seven (7) day compressive strength of 80 pounds per square inch (psi) when tested using applicable portions of ASTM C 109.
5. Batched to following proportions:
  - a. One (1) 94-lb bag of Type I Cement; to
  - b. 25 lbs. powdered sodium bentonite; to
  - c. 30 gallons of water.

5.6 Reinforced Concrete Load Distributor: A concrete load distributor is required along the entire length of the steel sheet pile cutoff wall, as shown in the Construction Plans. The load distributor will also serve as part of the roadbed. The concrete load distributor shall use materials meeting the following:

5.6.1 Cast-in-Place Concrete: Conform to Section 601.02 and 601.03 of the Standard Specifications for Class B concrete.

5.6.2 Reinforcing Steel: Epoxy coated No. 4 steel reinforcing bars at 12-inch by 12-inch centers conforming to Section 602 and 811 of the Standard Specifications.

**5.7 Material Delivery, Handling, and Storage:**

Comply with the Standard Specifications. Develop and submit plans for the delivery, storage, and handling of sheet piling at least 30 days prior to delivery of piles to the job site.

**5.7.1 Delivery and Storage:**

Materials delivered to the site must be new and undamaged and must be accompanied by certified test reports, as required by this Special Note. Provide the manufacturer's logo and mill identification mark on the sheet piling. Store sheet piling in the manner recommended by the manufacturer to prevent permanent deflection, distortion or damage to the interlocks; as a minimum, support on level blocks or racks spaced not more than 10 feet apart and not more than 2 feet from the ends. Storage of sheet piling should also facilitate required inspection activities.

Sheet piling must be transported and stored so that the interlock sealant does not come into contact with standing water. Standing water increases the risk of expansion of the product after polymerization and loss of adhesion to the steel.

**5.7.2 Handling:**

Lift piles to ensure that the maximum permissible curvature is not exceeded. Holes may be burned above the cutoff length for lifting piles into the leads as specified in this Special Note. If there is evidence of pile damage during driving due to the holes, the Engineer may restrict the burning of holes. Do not damage piles when dragging piles across the ground.

Inspect piles for excessive curvature and for damage before transporting them from the storage area to the driving area and immediately prior to placement in the driving leads. Curvature in the pile must be measured with the pile laying on a flat surface and is the distance between the pile at the mid-length of the pile and the flat surface. During the inspection for curvature, the piling may be laid in either a concave up or down position in accordance with the manufacturer's storage recommendations for sheet piling with interlock sealant. Straightness of the sections of piles must conform to AWS D1.5M/D1.5, Section 3.5.1.1. Piles having excessive curvature will be rejected.

**5.7.3 Damaged Piles:**

Inspect each pile for straightness and structural damage before transporting them to the project site and immediately prior to placement in the driving leads. Piles which are damaged during delivery, storage, or handling to the extent they are rendered unsuitable for the work, in the opinion of the Engineer, will be rejected and removed from the project site, or may be repaired, if approved.

**6.0 MATERIALS TESTING AND ACCEPTANCE**

- 6.1 Materials Sampling and Testing will be in accordance with Section 106 of the Standard Specifications, the Department's current "Kentucky Methods", the current "Manual of Field Sampling and Testing Practices", and other referenced documents.

- 6.2 Concrete and grout testing will be performed at the minimum frequencies indicated in the Manual of Field Sampling and Testing Practices or as necessary to determine the quality. The tests will be performed according to the procedures outlined by the applicable Kentucky Method. Compressive strength specimens will be cast and tested for compressive strength according to KM 64-305 and ASTM C 39, respectively. In cases of failures, the Department will evaluate cylinder results according to KM 64-314 to determine whether in-place investigation may be necessary.
- 6.3 Use only materials accepted by the Department before use. The Engineer may suspend work on the wall if the Contractor does not have acceptance of materials to be used and there is no other work on the wall that may be done. If work is suspended due to lack of material acceptance, the Contractor is fully liable for additional cost from the suspension of work. No additional contract time resulting from the suspension of work will be allowed.
- 6.4 Sheet piling and appurtenant materials must be tested and certified by the manufacturer to meet the specified chemical, mechanical and section property requirements prior to delivery to the site. Testing of sheet piling for mechanical properties must be performed after the completion of all rolling and forming operations. Testing of sheet piling must meet the requirements of ASTM A6/A6M.

## **7.0 CONSTRUCTION**

Construct the permanent sheet piling according to the Construction Plans, the Standard Specifications, and the requirements below in a manner that creates a hydraulic barrier through the embankment. In all cases, provide materials and personnel conforming to the Materials Section and Personnel Experience Requirements of this Special Note. Quality Control Plan personnel requirements are included in Appendix C of this Special Note.

### **7.1 Preconstruction Condition Survey:**

1. Perform preconstruction condition survey of structures, embankment slopes, and utilities within 500 feet of the pile driving activity.
2. Perform outreach to the owner of the structures, either the Department or Private Owners, 28 days before performing the preconstruction condition survey.
3. Obtain written permission from the owner of the structure (for private owners) prior to accessing the structure.
4. The preconstruction condition survey must include video and photographic documentation of the exterior and interior of above ground structures and of the interior of underground structures.
5. Video documentation must be in high definition, and show existing conditions and highlight, where possible, existing cracks, deteriorated concrete, exposed and corroded reinforcement, cracked or broken brick or mortar, and other signs of distress.
6. For utilities, perform the survey when the greatest extent of the interior is exposed. Provide supplementary artificial lighting as needed.
7. The video must include annotation with location and structure nomenclature

which describes any areas of distress over the video and time code superimposed on the video.

8. Photographs must be accompanied by sketches or descriptions that indicate the location and direction of each photograph.
9. For each structure surveyed, provide a Pre-Construction Condition Survey Report following completion of the survey. The report must contain all documentation associated with the survey including DVD copies. In the report, include notes, sketches, photographs, and videos. Provide general information, such as location details and structure type, as well as particular information on materials, condition, existing damage, aperture and persistence of cracks, and disrepair observed during visual survey. Provide a graphical depiction of locations of damage or other features of concern.
10. Submit the Preconstruction Condition Survey Reports no later than 28 days before the commencement of pile driving activity.
11. The Contractor accept responsibility for damages to existing adjacent or adjoining structures created by sheet pile driving work and repair any damages to these structures without cost to the owner/Department.

#### 7.2 Vibration Control:

1. Perform vibration monitoring during the pile driving operations.
2. Perform vibration monitoring using seismographs and geophones within 500 feet from the pile driving activity at locations identified by the independent vibration consultant.
3. Engage the services of a qualified, independent vibration consultant to conduct the vibration monitoring.
  - a. The vibration consultant must have minimum of five years of experience in vibration monitoring.
  - b. A minimum of 28 days before the installation of vibration monitors, submit to the Department the name of the vibration consultant and a list of at least three previously completed projects of similar scope and purpose.
4. Prior to the pile driving activities, obtain baseline readings of ambient vibrations.
5. The vibration during the pile driving activities must be limited to a peak particle velocity of not more than 2 inches per seconds.
6. During pile driving activities, monitor the vibrations to ensure the limits are not exceeded.
7. If the limits are exceeded, cease the pile driving activity causing the vibration until the Vibration consultant and Engineer are on site to observe the structures nearest to the vibration monitor which has exceeded the limits.
8. The Contractor is responsible for all damages resulting from the pile driving operations and must take whatever measures necessary to maintain peak particle velocity within the specified limit.
9. After completion of the project, remove the vibration monitors off the site and restore the monitoring locations back to their original condition.

#### 7.3 Preparation:

1. Do not begin sheet pile installation until the earthwork in the area where sheet piles are to be driven has been completed to the extent that grade

elevation is as indicated on the details shown in Construction Plans.

7.4 Installation Records:

1. Maintain a pile driving record for each sheet pile driven.
2. Indicate on the installation record: installation dates and times, type and size of hammer, rate of operation, total driving time, dimensions of driving helmet and cap used, blows required per foot for each foot of penetration, final driving resistance in blows for final 6 inches, pile locations, tip elevations, ground elevations, cut-off elevations, and any reheading or cutting of piles.
3. Record any unusual pile driving problems during driving.
4. Submit complete records to Engineer.

7.5 Interlock Sealant:

1. Use the manufacturer's installation personnel to install interlock sealant before or after the sheet piling is delivered to the site.
2. Apply the sealant under shelter if installed after the sheet piling is delivered to the site.
3. Install sealant in the female (socket) interlock along the full length of the sheet piling.
4. Place sealant in the trailing interlock end of a single sheet pile section. The trailing interlock end is defined as the interlock opposite of the driving direction.
5. Keep the sheet piling horizontal and the interlocks dry and free of grease during installation.
6. Cleaning the interlocks with compressed air, a steel wire brush or high-pressure water jet if necessary.
7. Block or clog the ends at the top and bottom using a mastic to prevent the sealant from flowing out of the ends of the sheet piling when the interlocks are filled.
8. Chamfer the leading interlock (side in direction of driving) on the top and the sealed trailing interlock cut on the toe.
9. A commercial soapy product may be used to lubricate the interlock sealant before driving. Spread the lubricant in the sealed interlock using a paintbrush or by any other means. Only lubricants recommended by the interlock manufacture and approved by the Engineer shall be used.

7.6 Pile Length Markings:

1. Mark each pile prior to driving with horizontal lines at one-foot intervals. Mark the interval number on pile every 5 feet from pile tip.

7.7 Placement:

1. Any excavation required within the area where sheet pilings are to be installed must be completed prior to placing sheet pilings. Pilings properly placed and driven must be interlocked throughout their length with adjacent pilings to form a continuous diaphragm throughout the length or run of piling wall.
2. Install sheet piles straight and plumb and to the dimensions shown on the Construction Plans. Ensure that the wall is compatible with the horizontal and vertical alignment indicated in the Construction Plans.

3. Pilings must be carefully located as indicated on the Construction Plans. Pilings must be placed plumb with out-of-plumbness not exceeding 1/4 inch per foot of length and true to line. Place the pile so the face will not be more than 6 inches from vertical alignment at any point. Top of pile at elevation of cut-off must be within 1/2 inch horizontally and 2 inches vertically of the location indicated in the Construction Plans. Manipulation of piles to force them into position will not be permitted.
4. Check all piles for heave. Re-drive all heaved piles to the required tip elevation.
5. Adequately support and hold sheet piles in correct vertical position during driving by means of adequate driving equipment.
6. Provide temporary wales, templates, or guide structures to ensure that the pilings are placed and driven to the correct alignment. Use a system of structural framing sufficiently rigid to resist lateral and driving forces and to adequately support the sheet piling until design tip elevation is achieved. Use two templates, at least, when placing each piling not less than 20 feet apart. Templates must not move when supporting sheet piling. Fit templates with wood blocking to bear against the web of each alternate sheet pile and hold the sheet pile at the design location alignment. Provide outer template straps or other restraints as necessary to prevent the sheets from warping or wandering from the alignment. Mark template for the location of the leading edge of each alternate sheet pile. If in view, also mark the second level to assure that the piles are vertical and in position. If two guide marks cannot be seen, other means must be used to keep the sheet pile vertical along its leading edge.

#### 7.8 Driving:

1. Use method to drive piling that will not cause damage to nearby buildings, structures, or embankments.
2. Hammers must be steam, air, or diesel drop, single-acting, double-acting, differential-acting, or vibratory type. The driving energy of the hammers must be as recommended by the manufacturer for the piling weights and subsurface materials to be encountered.
3. Drive piling to the top of bedrock and each pile section must be seated individually on the rock surface. Estimated piling tip elevations are shown in the Construction Plans. Contact the Engineer should any pile section refuse at elevations above the estimated tip elevations shown in the Construction Plans. Do not continue the installation of subsequent sheet piles until directed by the Engineer.
4. Sheet piles shall be installed as one continuous member unless splices are permitted by Engineer.
5. Drive pilings with the proper size hammer and by approved methods so as not to subject the pilings to damage and to ensure proper interlocking throughout their lengths.
6. Complete driving of each sheet pile section in less than two hours after the piles contacts water (i.e., ground water).
7. Maintain driving hammers in proper alignment during driving operations by use of leads or guides attached to the hammer.
8. Caution must be taken in the sustained use of vibratory hammers when a

- hard driving condition is encountered to avoid interlock-melt or damages. Discontinue the use of vibratory hammers and impact hammers employed when the penetration rate due to vibratory loading is one foot or less per minute. Care must be taken that the temperature in the interlocks never exceeds 130°C (risk of damaging the seal) when using a vibratory hammer.
9. Employ a protecting cap in driving when using impact hammers to prevent damage to the tops of pilings.
  10. Use cast steel shoe to prevent damage to the tip of the sheet piling.
  11. Remove and replace pilings damaged during driving or driven out of interlock at the Contractor's expense.
  12. Drive pilings without the aid of a water jet.
  13. Before commencing the driving of the final 5 feet, firmly seat the pile in place by the application of a number of reduced energy hammer blows.
  14. Take adequate precautions to ensure that pilings are driven plumb.
  15. If an open socket is leading, the interlock shall be prepared in a manner that minimizes packing material into it and ease driving for the next sheet.
  16. If at any time the forward or leading edge of the piling wall is found to be out-of-plumb in the plane of the wall the piling being driven must be driven to the required depth and tapered pilings must be provided and driven to interlock with the out-of-plumb leading edge or other approved corrective measures must be taken to insure the plumbness of succeeding pilings.
  17. Obstructions restricting driving piling to the specified penetration must be removed or reduced by predrilling.
  18. Pilings must extend up to the elevation indicated for the top of pilings.
  19. A tolerance of 1 inch above the indicated top elevation will be permitted.
  20. Predrilling of piles will be necessary along some reaches of the wall alignment. Discontinue predrilling at the top of competent bedrock. Seat the pile tip on the bedrock surface by driving the pile in accordance with this Special Note. The seating must not damage the pile and the pile interlocks.
  21. Should any obstruction including but not limited to boulders, rocks, rubble, existing foundations or timbers be encountered which prevent driving of piling to bedrock, threaten piling damage or cause piling to drift from required location horizontally, cease driving and perform predrilling as directed by Engineer.

7.9 Cutting-Off and Splicing:

1. Obtain cut off elevations from the Construction Plans.
2. Provide additional length of piling sufficient to allow cutting off the top of the piling that may be damaged during driving and construction operations.
3. Pilings driven to refusal or to the point where additional penetration cannot be attained and are extending above the required top elevation in excess of the specified tolerance must be cut off to the required elevation. Pilings driven below the required top elevation and pilings damaged by driving and cut off to permit further driving must be extended as required to reach the top elevation by splicing when directed at no additional cost.
4. If directed, pilings must be spliced as required to drive them to depths greater than shown and extend them up to the required top elevation.
5. Pilings adjoining spliced pilings must be full length unless otherwise approved. Splices are not allowed in adjoining pilings.
6. Ends of pilings to be spliced must be squared before splicing to eliminate

- dips or camber.
7. Where splices are permitted, make splices by full penetration groove welding the entire cross-sectional area of the piles at the splice location.
  8. Pilings must be spliced together with concentric alignment of the interlocks so that there are no discontinuities, dips or camber at the abutting interlocks.
  9. Spliced pilings must be free sliding and able to obtain the maximum swing with contiguous pilings. Welding of splices must conform to the requirements of these Notes. Shop and field welding, qualification of welding procedures, welders, and welding operators must be in accordance with AWS D1.1/D1.1M.
  10. Perform welding using operators who have passed the above referenced welding qualification tests during previous 12-month period prior to commencement of required welding.
  11. The tops of pilings excessively battered during driving must be trimmed when directed. Piling cut-offs are the property of the Contractor and must be removed from the site.
  12. Cut holes in pilings for bolts, rods, drains or utilities in a neat and workmanlike manner, as shown in the Construction Plans or as directed. Use a straight edge in cuts made by burning to avoid abrupt nicks. Bolt holes in piling must be drilled or may be burned and reamed by approved methods which will not damage the surrounding metal. Holes other than bolt holes must be reasonably smooth and the proper size for rods and other items to be inserted.

**7.10 Pulling and Redriving:**

1. Damaged piling includes but is not necessarily limited to sheet piles bent, buckled, cracked, with fabrication tolerances beyond those indicated in ASTM A328/A328M, or with any other defect, as determined by the Engineer, that would weaken the sheet pile.
2. Should any sheet pile, as determined by the Engineer, be damaged or otherwise not conform to these Notes, withdraw sheet pile and drive another sheet pile in its place.
3. Provide pulling holes in pilings, as required.
4. Extractors must be of suitable type and size.
5. Care shall be exercised during pulling of pilings to avoid damaging piling interlocks and adjacent construction.
6. If adjacent permanent construction has been damaged during pulling, the Contractor will be required to repair this construction at no extra cost.
7. Pull pilings one sheet at a time.
8. Pilings fused together must be separated prior to pulling, unless the Contractor demonstrates, to the satisfaction of the Engineer, that the pilings cannot be separated.
9. The Contractor will not be paid for the removal of pilings damaged beyond structural use due to proper care not being exercised during pulling.
10. Any piling so pulled and found to be damaged, to the extent that its usefulness in the structure is impaired, must be removed and replaced at the Contractor's expense.
11. Pilings pulled and found to be in satisfactory condition as determined by the Engineer may be re-driven when directed by the Engineer.

12. If it is impossible to withdraw damaged or rejected sheet pile, install additional sheet piles at locations indicated by Engineer.

7.11 Sorting, Cleaning, Inventorying and Storing:

1. Pulled pilings must be sorted, cleaned, inventoried and stored by type into groups as:
  - a. Piling usable without reconditioning.
  - b. Piling requiring reconditioning.
  - c. Piling damaged beyond structural use.

7.12 Damaged Piles:

1. Any pile damaged by reason of internal defects or by improper driving must be corrected by one of the following methods approved by the Engineer for the pile in question. These methods also apply to piles driven out of its proper location or out of plumb.
  - a. The pile is withdrawn, if practicable, and replaced by a new and, if necessary, longer pile.
  - b. One or more replacement piles are driven adjacent to the defective pile.

7.13 Inspection of Driven Piling:

1. Perform continuous inspection during pile driving.
2. Inspect all piles for compliance with tolerance requirements.
3. Inspect the interlocked joints of driven pilings extending above ground.
4. Pilings found to be out of interlock must be removed and replaced at the Contractor's expense.

7.14 Survey Data:

1. After the driving of each pile group is complete, submit an as-driven survey showing actual location and top elevation of each pile.
2. Submit an as-driven survey showing actual location and top elevation of each pile within 7 calendar days of completing the pile installation. Do not proceed with placing roadway surface until the Engineer has reviewed the survey. Present a survey in such form that it gives deviation from plan location in two perpendicular directions and elevations of each pile to nearest half inch. Survey must be prepared and certified by a land surveyor licensed in the state of Kentucky.

7.15 Reinforced Concrete Load Distributor:

1. Construct the concrete load distributor in accordance with Section 601.03 of the Standard Specifications.
2. The load distributor must be constructed using cast-in-place concrete to a minimum thickness of 6-inches.
3. Reinforce the concrete slab with epoxy-coated No. 4 bars placed on 12-inch centers in both directions.
4. Place reinforcing bars in the middle of the concrete slab, ensuring that placement and vibration of concrete does not result in the migration of the reinforcement within the slab.
5. Provide a minimum of 2.5 inches of clear cover from the base and top surface

of the concrete slab. Provide 3 inches of clear cover from each vertical face on the sides of the concrete slab.

6. Embed the top of the sheet piling a minimum of 2-inches into base of the concrete load distributor.

#### 7.16 Site Drainage Control:

1. Provide positive control and discharge of all surface water that will affect construction.
2. Maintain all pipes or conduits used to control surface water during construction.
3. Repair damage caused by surface water at no additional cost. Upon substantial completion of the wall, remove surface water control pipes or conduits from the site. Alternatively, with the approval of the Engineer, pipes or conduits that are left in place, may be fully grouted and abandoned or left in a way that protects the structure and all adjacent facilities from migration of fines through the pipe or conduit and potential ground loss.

### 8.0 **ACCEPTANCE REQUIREMENTS**

#### 8.1 Acceptance Criteria:

A sheet pile section is considered acceptable when the following criteria are met:

1. The section is installed to the top of bedrock near the elevations shown in the Construction Drawings.
2. The section satisfies the placement and driving criteria of Section 7.0 of this Special Note.
3. The section is not deemed damage by the Engineer as described in this Special Note.

#### 8.2 Sheet Piling Rejection:

If sheet pile section does not satisfy the acceptance criterion outlined above, the Engineer will implement the procedures below.

1. The Engineer will evaluate the installation records and will reject installation methods and/or sheet pile sections that do not satisfy the requirements of this Special Note. Propose alternative methods and install replacement sheet piling as described by this Special Note. Install replacement sheet piling at no additional cost to the Department and with no extension of contract time.
2. Contractor modifications may include but are not limited to; predrilling prior to installing the sheet piles; increasing the pre-drillhole diameter to further remove potential obstructions; modifying the installation methods; or modifying the installation equipment. Any modifications to the installation method and/or equipment must be approved by the Engineer prior to implementing. The sheet piling sections may not be shortened beyond the lengths shown in the Construction Plans.

## 9.0 RECORDS

Provide the Engineer with one (1) hard and one (1) electronic copy of the following final records:

1. As-built drawings showing:
  - a. The actual location and orientation of the sheet piling, including deviation from specified tolerances and Contract location.
  - b. The actual sheet piling tip and cutoff elevation for each individual section.
  - c. The location of pile splices, where required.
  - d. The diameter and the horizontal and vertical extents of predrilling.
  - e. The locations of any instrumentation installed and any required instrumentation records.
  - f. Finished ground line elevations along the wall alignment.
2. Post-Construction survey report.
3. Other records as required by Section 106 of the Standard Specifications.
4. Structural Steel records required by Section 607 of the Standard Specifications.
5. Construction Records including:
  - a. Contractor's name.
  - b. Pile hammer operator's name.
  - c. Date and time of start and finish of driving.
  - d. Driving difficulties.
  - e. Damaged, pulled, and re-driven sheet piling sections.
  - f. Groundwater conditions, if encountered during predrilling.
  - g. Grouting records performed for predrilling including: date, time and method grout was placed; cement type; and volume of grout placed.

## **10.0 MEASUREMENT AND PAYMENT**

- 10.1 The Department will pay for the accepted quantities of "Sheet Piling" at the contract unit bid price per "Square Foot" of sheet pile and will measure quantities as shown in the Construction Plans. This will constitute full compensation for all costs including materials, labor, tools, equipment, and other incidental items required for constructing the permanent steel sheet pile cutoff wall as described herein and shown in the Construction Plans. This may include but is not limited to the following items: installing piling, installing interlock sealant, splicing, cutoff, removing damaged piling, all required submittals and records, and other incidental items necessary to provide a complete permanent steel sheet pile cutoff wall. Earth moving, drainage, and any other earthwork necessary to complete these walls and not included in other bid items, is included as an incidental part of this work.
- 10.2 Additional areas of wall, required due to unforeseen foundation conditions or other reasons and approved in writing by the Engineer, will be paid at the contract unit prices. In the event a decrease in the area of a wall is required, subject to acceptance by the Department, payment will be reduced due to the decrease in the wall area or length.
- 10.3 The Department will pay for the reinforced concrete load distributor at the contract unit bid prices for "Concrete-Class B" and "Steel Reinforcement-Epoxy Coated" at the quantities shown in the Construction Plans. This will constitute full compensation for all costs including materials, labor, tools, equipment, and other incidental items required for constructing the reinforced concrete load distributor as described herein and shown in the Construction Plans.
- 10.4 All measurement will be based on plan dimensions or dimensions as ordered in writing.
- 10.5 Refer to an Appendix to this Special Note for Project Specific Measurement and Payment information.

## **Special Note for Steel Sheet Pile Cutoff Wall Appendix A – Project Specific Requirements**

### ***KY Highway 15 – Panbowl Lake Dam (Item # 10-172.00)***

#### **A1.0 STEEL SHEET PILE CUTOFF WALL CONTRACTOR REQUIREMENTS**

The requirements for the Steel Sheet Pile Cutoff Wall specialty contractor are below. Submit applicable documentation, including references, that the sheet pile cutoff wall specialty contractor is pre-qualified by the Department for "Grouting for Ground Improvements" (Work Item I39) OR "Jet Grouting" (Work Item J20).

#### **A2.0 VALUE ENGINEERING**

The Department will not consider any Value Engineering Proposals that would result in changes in wall location, sheet pile section, and/or elevations.

#### **A3.0 SUBSURFACE CONDITIONS**

The boring logs from drilling performed in 2021 and 2022 are presented on the Soil Profile Sheets in the Construction Plans. Subsurface Conditions may vary between boring locations. Boulders and cobbles are known to be present within the dam embankment fill and will be encountered during sheet pile cutoff wall installation.

#### **A4.0 ADDITIONAL CORE BORINGS**

Perform additional core borings as directed by the Engineer where it is deemed that insufficient geotechnical data is available along the steel sheet pile cutoff wall. The Department was unable to perform core borings from the beginning of the wall at STA 124+53 to STA 125+38 due to the presence of energized overhead utility lines. The estimated bedrock surface shown in the Construction Plans is based on interpolation and/or extrapolation from available data which includes auger and SPT sampler refusal elevations. Coring was only performed in a select number of the borings along the sheet pile cutoff wall to confirm bedrock conditions. Additional core borings must be executed in accordance with the following criteria:

- Advance through the embankment fill using rotary drilling techniques;
- Do not advance through the embankment fill with the aid of water, air, or other downhole pressurized drilling techniques;
- Backfill the borings using the tremie method with a mixture of cement, bentonite, water, and sand that produces a maximum compressive strength ( $f'_c$ ) of 80 pounds per square inch (psi);
- Do not leave the boring sidewalls unsupported at any time during drilling and/or backfilling operations. A boring is considered unsupported if any interval is not

braced by either the backfill mix or drill tooling; and

- Conduct a 5-foot rock core run to confirm the presence of bedrock. Perform coring within temporary steel casing seated into the bedrock to develop a hydraulic seal.

## **A5.0 LOCATIONS OF EXISTING STRUCTURE UNITS**

Approximate locations and elevations of the existing structures and pavement are provided in the Construction Plans. These locations are based on plans in the Department's archives. However, the Department does not guarantee the accuracy of these locations. Field verify the locations of existing structure units prior to installing sheet piling.

The existing highway plans are Drawing No. HES 15-1(14). Plans for information only are accessible on the Department's Construction Procurement webpage, along with other project related information including the Geotechnical and Hydrologic and Hydraulic (H&H) Report(s).

## **A6.0 STAGING AREA**

The location selection for the construction staging area is the responsibility of the Contractor. This area shall be used for parking, equipment and material storage. If an on-site staging area is desired by the Contractor, written request to the Department shall be submitted describing the specific location of the proposed staging area. If on-site, the Contractor is responsible for any necessary signage, fencing, safety, sediment/erosion control, improvements, restorations, etc. in these areas.

## **A7.0 SHEET PILING PROTECTOR/SHOE**

All sheet piling shall be installed with protective steel piling shoes as indicated on the Construction Plans. The piling shoes shall meet the material and installation requirements of this Special Note.

## **A8.0 PREDRILLING WITHIN EMBANKMENT DAMS**

Predrilling is required to install the sheet piling to the top of bedrock elevations shown on the Construction Plans. Estimated predrilling limits are shown in Construction Plans and shall be verified by the Contractor prior to construction. Exercise extreme care while predrilling and backfilling within the embankment prior to the installation of the sheet piling. Predrilling shall be performed using rotary drilling techniques using soil and/or rock augers and core barrels. Under no circumstances shall predrilling be performed with the aid of water, air, or other downhole pressurized methods. Grout backfilling of the annular space created by predrilling shall be performed by the tremie method or other approved non-*pressurized* method. Predrilling holes shall not be left unsupported overnight and should be cased or grouted at the end of each workday. The cost of repairing any damage to the embankment or embankment slopes will be at the expense of the Contractor and with no extension of contract time.

The estimated predrilling limits and bedrock elevations provided in the Construction Plans are based on the subsurface investigation performed in 2021 and 2022 as part of the Phase I and Phase II investigations, respectively. Variations in both the bedrock surface and distribution of boulders may occur between boring locations. The Contractor is responsible for reviewing the subsurface investigation results provided in this Special Note and in the Construction Plans to verify the estimated predrilling limits and determine other reaches of the wall that may require predrilling. The depths and predrilling limits shown on the Plan are considered an estimate and will depend on the exact subsurface conditions along the sheet pile wall alignment.

## **A9.0 GROUNDWATER CONTROL**

Groundwater measurements were collected during the Phase I subsurface investigation at the time of drilling and seven days after drilling in observations wells. It is unknown if the observations wells installed during the Phase I investigation are still functioning. Measured groundwater elevations within the borings at the time of drilling ranged from approximately 702 to 709 ft. Groundwater measurements taken approximately seven days after the completion of drilling within the observation wells ranged from approximately 704 to 710 ft. The groundwater elevation is expected to be greatly influenced by the water elevation in Panbowl Lake and the North Fork of the Kentucky River. The Contractor shall be prepared for encountering groundwater during predrilling and providing any necessary measures to control the groundwater.

## **A10.0 SITE INSPECTIONS**

During construction, observe the conditions of the lakeside embankment slope daily for signs of ground movement or distress in the vicinity of the wall. Notify the Engineer immediately if signs of movements such as new cracks, sloughing, or increased size of old cracks are observed. If the Engineer determines that the movements exceed those anticipated for typical sheet piling construction and requires corrective action, immediately take corrective actions necessary to stop the movement or perform repairs at no additional cost to the Department.

## **A11.0 FIELD ADJUSTMENTS AND CONSTRUCTION TOLERANCES**

Field adjustments of individual sheet locations may be necessary due to the existing structure units or other considerations. The Engineer shall be notified prior to making adjustments to the locations that exceed the specified tolerances. Sheet piling sections that deviate from the Construction Plans shall be approved by the Engineer prior to installation.

## **A12.0 PILE TEST PROGRAM**

A pile test program shall be conducted along the wall alignment where predrilling is not shown in the Construction Plans or identified by the Contractor. At a minimum, the test program shall consist of two adjacent production pile sections. The pile sections shall be driven separately to demonstrate proper interlocking along the length of the adjacent sections. The pile test program will confirm that the required pile tip elevations shown in

Construction Plans can be achieved by the Contractor’s approved driving methods and equipment without damaging the sheet pile sections. The Contractor shall submit an alternative driving method and/or equipment to the Engineer for review if the test program reveals the Contractor cannot properly install the sheet piles to the required tip elevation without the risk of damage.

**A13.0 CONSTRUCTION SEQUENCE**

The Contractor shall begin construction of the sheet pile cutoff wall at STA 129+75, designated in the Construction Plans as the end of the wall. Constructing the wall beginning at STA 129+75 provides additional time for the relocation of the overhead utility lines (to be performed by others) at the east end of the wall, designated as the beginning of the wall. This also provides additional time to perform supplemental core borings in this area.

**A14.0 SUMMARY OF SPT SAMPLE AND CORE BORINGS**

Eighteen Standard Penetration Test (SPT) sample borings and three SPT sample borings with rock coring were performed in May of 2022 along KY 15 at the West Embankment. An additional three SPT sample borings and two SPT sample boings with rock coring were performed in June of 2021 at the West Embankment as part of the Phase I investigation. SPT “N” values, auger refusal depths, and depths to bedrock confirmed by rock coring are provided in the table below. The Contractor shall use the information provided in the table below to verify the estimated predrilling limits shown on the Construction Plans, as well as identify other areas of the wall alignment that requires predrilling.

Hole No.	North (Y)	East (X)	Elev. (Z)	SPT Sample <sup>(3)</sup>		Auger Refusal Depth (ft.)	Bedrock Depth (ft.)	Bedrock Core		
				Sample Depth (ft.)	SPT “N” Value			Sample Depth (ft.)	RQD (%)	REC (%)
B-101	3735232.2	5606132.5	740.15	50.5-50.8	50/0.3'	50.8	--	--	--	--
B-102	3735227.3	5606162.4	740.31	52.0-52.3	50/0.3'	52.3	--	--	--	--
B-103	3735224.2	5606182.1	740.44	52.5-52.7	50/0.2'	52.5	--	--	--	--
B-104	3735221.3	5606202.0	740.62	54.0-54.2	50/0.2'	54.2	--	--	--	--
B-105	3735218.6	5606221.8	740.88	54.0-54.1	50/0.1'	54.0	54.5	54.5-56.5	60	100
								56.5-58.5	75	95
								58.5-61.5	53	90
B-106	3735212.8	5606281.6	741.27	31.0-31.1	50/0.1'	31.0*	--	--	--	--
B-107	3735211.6	5606301.6	741.37	34.8-34.9	50/0.1'	34.8*	--	--	--	--
B-108	3735210.6	5606321.6	741.50	39.0-40.2	23-17-50/0.2'	39.0*	-- <sup>(1)</sup>	40.5-41.5	0	30
								41.5-44.0	0	48
								44.0-46.5	0	44
B-109	3735208.9	5606361.6	741.76	21.8-21.9	50/0.1'	21.9*	--	--	--	--

Hole No.	North (Y)	East (X)	Elev. (Z)	SPT Sample <sup>(3)</sup>		Auger Refusal Depth (ft.)	Bedrock Depth (ft.)	Bedrock Core		
				Sample Depth (ft.)	SPT "N" Value			Sample Depth (ft.)	RQD (%)	REC (%)
B-110	3735208.2	5606381.6	741.91	54.5-54.6	50/0.1'	51.6	--	--	--	--
B-111	3735207.6	5606401.6	742.06	12.5-12.6	50/0.1'	12.6*	--	--	--	--
B-112	3735206.9	5606421.6	742.21	53.0-53.1	50/0.1'	53.1	--	--	--	--
B-113	3735206.2	5606441.6	742.36	--	--	53.0	53.0	54.0-57.0	47	97
								57.0-60.0	63	93
B-114	3735205.9	5606461.6	742.48	23.8-23.9	50/0.1'	23.8*	--	--	--	--
B-115	3735205.5	5606481.6	742.58	28.7-28.8	50/0.1'	28.7*	--	--	--	--
B-116	3735205.2	5606501.6	742.70	37.2-37.4	50/0.2'	37.4*	--	--	--	--
B-117	3735205.2	5606521.6	742.84	50.5-50.6	50/0.1'	50.5	--	--	--	--
B-118	3735205.2	5606561.7	743.07	33.0-33.1	50/0.1'	33.0*	--	--	--	--
B-119 <sup>(2)</sup>	3735205.8	5606621.6	743.48	--	--	--	--	--	--	--
B-120 <sup>(2)</sup>	3735205.4	5606641.7	743.70	--	--	--	--	--	--	--
B-121	3735216.4	5606691.7	743.24	5.5-5.5	50/0.0'	5.5	5.5	5.5-8.0	16	96
								8.0-11.0	30	30
								11.0-15.5	76	98
B-1	3735242.0	5606110.1	739.75	49.5-50.5	18-50/0.5'	50.5	50.5	50.5-55.5	10	74
B-2	3735152.1	5606246.3	735.79	40.5-41.6	18-3-50/0.1'	41.6*	--	--	--	--
B-3	3735207.1	5606347.7	741.64	54.5-54.6	50/0.1'	54.6*	--	--	--	--
B-4	3735260.5	5606414.4	720.59	24.5-25.7	19-20-50/0.2	25.7*	--	--	--	--
B-5	3735202.9	5606544.3	743.10	46.0-46.3	50/0.3'	46.3	46.3	46.3-51.3	40	92
Minimum						5.5	5.5		0	30
Average						39.9	35.1		36.2	75.9
Maximum						54.6	54.5		76	100

Notes:  
(1) Bedrock not encountered. Refusal encountered on material interpreted as a boulder. Recovered rock core visually classified as boulder fill.  
(2) B-119 and B-120 not performed due to overhead utilities.  
(3) SPT samples shown for 2021 borings are those that experienced refusal at either boring termination or the top of bedrock.  
\* Areas requiring predrilling. The Contractor shall review all drilling records provided in this Special Note to identify other areas that require predrilling.

## **A15.0 TOP OF BEDROCK ELEVATIONS**

The Phase I and Phase II subsurface exploration for this project consisted of rock core borings (with varying quantities of soil sampling) and SPT sample borings performed to auger refusal. Sample locations and intervals are shown on the Driller's Subsurface Log in Appendix B. The embankment is known to be constructed of rock fill consisting of shot rock, boulders, cobbles, and varying amounts of rock fragments, as confirmed at select locations of the subsurface investigation. Therefore, the "auger refusal" depths associated with the SPT sample borings do not necessarily correspond to competent bedrock but could indicate the presence of very stiff soil, weathered bedrock, boulders, or rock remnants. The bedrock depths presented in A14.0 are based on the Geologist or Engineer's evaluation of rock core specimens obtained from the rock core borings.

As the result of energized overhead utility lines, the Department was not able to perform exploratory borings near the east end of the proposed sheet pile cutoff wall. The plot of "Assumed Rockline" shown in the Construction Plans is based on interpolation and/or extrapolation from available bedrock data including some refusal elevations from SPT borings. The plotted "Assumed Rockline" elevations shall be considered an estimate and the nature of the top of bedrock beyond and between boring locations will likely vary. As required by this Special Note, the sheet piles shall be driven to the top of bedrock and each pile section must be seated individually on the rock surface. The actual rockline may occur at elevations higher or lower than the assumed rockline shown in the Construction Plans. Preparations shall be made to account for variability in the rockline.

Despite efforts to define a reasonable top of bedrock elevation, it will be necessary to establish procedures to evaluate the encountered top of bedrock elevations during construction. Submit a plan and proposed criteria to confirm that bedrock has been encountered, rather than a boulder, when pre-drilling or installing sheet piles for the cutoff wall. The plan should include measures to prevent premature refusal of sheet pile sections and ensure each pile section is seated individually on the bedrock surface. In developing these criteria, consider at least:

- known subsurface conditions;
- equipment being used;
- operator experience; and
- prior experience in similar subsurface conditions with boulders present.

The use of a single operator and an operator with experience installing sheet piles in similar subsurface conditions is important to the successful completion of this work.

## **A16.0 MEASUREMENT AND PAYMENT**

- A16.1 The Department will measure and pay for the accepted quantity of "Sheet Piling" as described in the Contract Plans, Section 10 of this Special Note, and below, at the Contract Unit Bid Price per Square Foot of sheet pile. The Department considers payment as full compensation for all costs and delays associated with sheet piling including but not limited to all materials, handling, storing, labor, equipment, tools, interlock sealant, and incidentals necessary to complete the work as necessary by this Special Note.
- A16.2 Measurement of "Steel Piling" will be in projected square feet, to the nearest foot, from the pile tip to cut-off elevation and to the horizontal limits shown on the Construction Plans. Sheet piling extending above the cut-off elevation and beyond the horizontal limits shown on the Constructions Plans will be considered as waste. Payment will not be made for damaged or rejected sheet piling or sheet piling classified as waste by the Engineer. For sheet piling directed to be cut off before reaching the estimated tip elevation shown in the Construction Plans, the portion cut off will be measured for payment as the difference between the total length of piling shown on the plans for that location and the length of piling installed below the point of cut-off.
- A16.3 The Department will measure and pay for the accepted quantity of "Pre-Drilling for Piles" as described in the Contract Plans and below at the Contract Unit Bid Price per Linear Foot of pre-drilling. The Department considers payment as full compensation for all costs and delays associated with pre-drilling including but not limited to all materials, labor, equipment, tools, and incidentals necessary to complete the work as necessary by this Special Note.
- A16.4 The Department will measure and pay for the accepted quantity of "Vibration Monitoring" as described in Section 7.2 of this Special Note at the Contract Lump Sum Bid Price. The measurement and payment of "Vibration Monitoring" will include the *preconstruction condition survey* as described in Section 7.1 of this Special Note. The Department considers payment as full compensation for all costs and delays associated with monitoring vibrations and the preconstruction condition survey including but not limited to all materials, labor, equipment, tools, and incidentals necessary to complete the work as necessary by this Special Note.
- A16.5 The Department will measure and pay for the accepted quantity "Grout" as described in this Special Note at the Contract Unit Bid Price per Cubic yard of grout. The Department considers payment as full compensation for all costs and delays associated with the grouting required to backfill the annular space resulting from pre-drilling. This includes but is not limited to all materials, labor, equipment, tools, and incidentals necessary to complete the work as necessary by this Special Note.
- A16.6 The Department will measure and pay for the accepted quantity of "Rock Soundings" and "Rock Coring" as described in the Contract Plans and below at the Contract Unit Bid Price per Linear Foot of sounding and/or coring. The Department considers payment as full compensation for all costs and delays associated with

rock soundings and coring including but not limited to all materials, labor, equipment, tools, and incidentals necessary to complete the work as necessary by this Special Note.

- A16.7 The “Sheet Piling”, “Grouting”, “Pre-Drilling for Piles”, “Rock Soundings”, and “Rock Corings” quantities shown in the Construction Plans are based on interpretations of existing subsurface data and horizontal projections of known bedrock surface and boulder/obstruction fields. Variations in the elevation of the bedrock surface and boulder/obstruction fields may occur between boring and coring locations. The “Sheet Piling”, “Grouting”, “Pre-Drilling for Piles”, “Rock Soundings”, and “Rock Corings” quantities shown in the Construction Plans shall therefore be considered an estimate and may fluctuate based on the exact subsurface conditions along sheet pile cutoff wall.
- A16.8 Adjustment of base bid unit quantities for “Sheet Piling”, “Grouting”, “Pre-Drilling for Piles”, “Rock Soundings”, and “Rock Corings” shall be made in accordance with contract unit prices. Adjustment will be made on the total square footage of sheet piling installed, not individual sheets. In the event a decrease in quantity of sheet pile, grout, rock soundings/corings, and/or pre-drilling is required, subject to acceptance by the Department, payment will be reduced in accordance with the contract unit prices. Additional areas of sheet piling, grout, rock soundings/corings, and/or pre-drilling required where the bedrock surface and boulder/obstruction fields differs from those shown in the Construction Plans or other unforeseen conditions, will be paid at the contract unit prices.

<u>Code</u>	<u>Pay Item</u>	<u>Pay Unit</u>
24787EN	Sheet Piling	Square Foot
08039	Pre-Drilling for Piles	Linear Foot
24550EC	Vibration Monitoring	Lump Sum
23911EC	Grout	Cubic Yard
20745ED	Rock Soundings	Linear Foot
20746ED	Rock Corings	Linear Foot

Special Note for Steel Sheet Pile Cutoff Wall

Appendix B – Data from Previous Subsurface Explorations

KY Highway 15 – Panbowl Lake Dam (Item # 10-172.00)



This drawing was produced in 2021 and contains the locations of the undisturbed borings and core borings performed in 2021 as part of the Phase I investigation.

Project ID: <u>M-004-2021</u> Item Number: <u>10-00376.00</u>		<u>Breathitt - KY-15 MP 16.8-17.9</u>		Project Type: <u>Miscellaneous</u> Project Manager: <u>  </u>					
Hole Number <u>B-1</u> Surface Elevation <u>739.8'</u> Total Depth <u>55.5'</u> Location <u>563+72.00 12.0' Rt.</u>		Immediate Water Depth <u>NA</u> Static Water Depth <u>NA</u> Driller <u>Horn, Grant</u>		Start Date <u>06/23/2021</u> End Date <u>06/23/2021</u> Latitude(83) <u>37.557498</u> Longitude(83) <u>-83.387048</u>		Hole Type <u>core and sample</u> Rig Number <u>03-D50</u>			
Lithology		Description	Overburden	Sample No.	Depth (ft)	Rec. (ft)	SPT Blows	Sample Type	Remarks
Elevation	Depth		Rock Core	Std/Ky RQD	Run (ft)	Rec (ft)	Rec (%)	SDI (JS)	
738.5	1.3	Asphalt.							
737.4	2.4	Aggregate Base.							
5 730.3	9.5	Brown, moist, clayey silt with rock fragments.	ST-1	2.5-4.5	1.8			ST	5
			ST-2	4.5-6.5	1.1			ST	
			ST-3	6.5-8.5	1.4			ST	
			ST-4	8.5-9.5	1.0			ST	10
10 722.8	17.0	Brown, moist, clayey silt with shale.	SS-1	9.5-11.0		7-5-6	SPT	10	
			SS-2	11.0-12.5		4-8-9	SPT		
			SS-3	12.5-14.0		2-2-9	SPT		
			SS-4	14.0-15.5		7-7-6	SPT	15	
			SS-5	15.5-17.0		3-5-10	SPT		
20 25 30 35 703.0	36.8	Brown, wet, clayey silt with some sand.	ST-5	17.0-19.0	0.5			ST	20
			SS-6	19.0-20.5		2-2-3	SPT	20	
			ST-6	20.5-22.5	1.5			ST	
			ST-7	22.5-24.5	0.6			ST	25
			SS-7	24.5-26.0		2-2-2	SPT	25	
			SS-8	26.0-27.5		1-1-1	SPT		
			ST-8	27.5-29.5	0.0			ST	30
			SS-9	29.5-31.0		0-0-0	SPT	30	
			SS-10	31.0-32.5		0-0-0	SPT	35	
			ST-9	32.5-34.5	0.0			ST	35
			SS-11	34.5-36.0		0-0-3	SPT	35	
			SS-12	36.0-37.5		0-2-1	SPT		
40 45 694.0	45.8	Brown, saturated, silty sand.	SS-13	37.5-39.0		0-0-2	SPT	40	
			SS-14	39.0-40.5		0-0-1	SPT	40	
			SS-15	40.5-42.0		0-0-1	SPT		
			SS-16	42.0-43.5		0-0-1	SPT		
			SS-17	43.5-45.0		1-1-1	SPT	45	
			SS-18	45.0-46.5		0-0-0	SPT	45	
690.8	49.0	Gray, saturated, silty sand.	SS-19	46.5-48.0		0-1-3	SPT		
			SS-20	48.0-49.5		18-27-8	SPT	50	
50		(Weathered shale).							50

Drilling Firm: Horn & Associates Inc  
For: Division of Structural Design  
Geotechnical Branch

DRILLER'S SUBSURFACE LOG

Printed: 11/11/21  
Page 2 of 2

Project ID: <u>M-004-2021</u> Item Number: <u>10-00376.00</u>		<u>Breathitt - KY-15 MP 16.8-17.9</u>		Project Type: <u>Miscellaneous</u> Project Manager: <u>  </u>					
Hole Number <u>B-1</u> Surface Elevation <u>739.8'</u> Total Depth <u>55.5'</u> Location <u>563+72.00 12.0' Rt.</u>		Immediate Water Depth <u>NA</u> Static Water Depth <u>NA</u> Driller <u>Horn, Grant</u>		Start Date <u>06/23/2021</u> End Date <u>06/23/2021</u> Latitude(83) <u>37.557498</u> Longitude(83) <u>-83.387048</u>		Hole Type <u>core and sample</u> Rig Number <u>03-D50</u>			
Lithology		Description	Overburden	Sample No.	Depth (ft)	Rec. (ft)	SPT Blows	Sample Type	Remarks
Elevation	Depth		Rock Core	Std/Ky RQD	Run (ft)	Rec (ft)	Rec (%)	SDI (JS)	
689.3	50.5		(Begin Core)	SS-21	49.5-50.5		18-50/0.50'	SPT	
55 684.3	55.5	Gray shale, silty.		10 / 0	5.0	3.7	74		55
60		(Bottom of Hole 55.5')							60
65									65
70									70
75									75
80									80
85									85
90									90
95									95
100									100

Drilling Firm: Horn & Associates Inc  
For: Division of Structural Design  
Geotechnical Branch

DRILLER'S SUBSURFACE LOG

Printed: 11/11/21  
Page 1 of 1

Project ID: <u>M-004-2021</u> Item Number: <u>10-00376.00</u>		<u>Breathitt - KY-15 MP 16.8-17.9</u>		Project Type: <u>Miscellaneous</u> Project Manager: <u>  </u>					
Hole Number <u>B-2</u> Surface Elevation <u>735.8'</u> Total Depth <u>41.6'</u> Location <u>562+33.00 72.0' Lt.</u>		Immediate Water Depth <u>30.3 (06/24/21)</u> Static Water Depth <u>29.8 (06/29/21)</u> Driller <u>Horn, Grant</u>		Start Date <u>06/24/2021</u> End Date <u>06/24/2021</u> Latitude(83) <u>37.557242</u> Longitude(83) <u>-83.386587</u>		Hole Type <u>sample</u> Rig Number <u>03-D50</u>			
Lithology		Overburden		Sample No.	Depth (ft)	Rec. (ft)	SPT Blows	Sample Type	Remarks
Elevation	Depth	Description		Std/Ky RQD	Run (ft)	Rec (ft)	Rec (%)	SDI (JS)	
735.5	0.3	Topsoil.		SS-1	0.0-1.5		4-6-5	SPT	
733.1	2.7	Brown, moist, clayey silt with rock fragments.		SS-2	1.5-3.0		2-4-7	SPT	
				SS-3	3.0-4.5		3-5-7	SPT	
				SS-4	4.5-6.0		6-7-18	SPT	
				SS-5	6.0-7.5		12-21-18	SPT	
				SS-6	7.5-9.0		18-7-5	SPT	
				SS-7	9.0-10.5		3-28-29	SPT	
				SS-8	10.5-12.0		7-18-42	SPT	
				SS-9	12.0-13.5		18-4-7	SPT	
				SS-10	13.5-15.0		8-8-17	SPT	
				SS-11	15.0-16.5		7-3-3	SPT	
				SS-12	16.5-18.0		4-3-2	SPT	
				SS-13	18.0-18.1		50/0.10'	SPT	
				SS-14	19.5-21.0		5-4-2	SPT	
				SS-15	21.0-22.5		2-3-3	SPT	
				SS-16	22.5-24.0		3-5-6	SPT	
				SS-17	24.0-25.5		3-9-3	SPT	
				SS-18	25.5-27.0		4-3-3	SPT	
				SS-19	27.0-28.5		8-7-2	SPT	
				SS-20	28.5-30.0		1-2-3	SPT	
				SS-21	30.0-31.5		4-4-2	SPT	
				SS-22	31.5-33.0		1-2-2	SPT	
				SS-23	33.0-34.5		2-2-4	SPT	
				SS-24	34.5-36.0		2-3-4	SPT	
				SS-25	36.0-37.5		34-10-7	SPT	
				SS-26	37.5-39.0		13-1-4	SPT	
				SS-27	39.0-39.9		5-50/0.40'	SPT	
				SS-28	40.5-41.6		18-3-50/0.10'	SPT	
		(Bottom of Hole 41.6') (Refusal @ 41.6')							

Drilling Firm: Horn & Associates Inc  
For: Division of Structural Design  
Geotechnical Branch

DRILLER'S SUBSURFACE LOG

Printed: 11/11/21  
Page 1 of 2

Project ID: <u>M-004-2021</u> Item Number: <u>10-00376.00</u>		<u>Breathitt - KY-15 MP 16.8-17.9</u>			Project Type: <u>Miscellaneous</u> Project Manager: <u>  </u>				
Hole Number <u>B-3</u> Surface Elevation <u>741.6'</u> Total Depth <u>54.6'</u> Location <u>561+34.00 13.0' Lt.</u>		Immediate Water Depth <u>NA</u> Static Water Depth <u>NA</u> Driller <u>Horn, Grant</u>		Start Date <u>06/23/2021</u> End Date <u>06/23/2021</u> Latitude(83) <u>37.557386</u> Longitude(83) <u>-83.386232</u>		Hole Type <u>sample</u> Rig Number <u>03-D50</u>			
Lithology		Description	Overburden	Sample No.	Depth (ft)	Rec. (ft)	SPT Blows	Sample Type	Remarks
Elevation	Depth		Rock Core	Std/Ky RQD	Run (ft)	Rec (ft)	Rec (%)	SDI (JS)	
740.4	1.2	Asphalt.							
739.6	2.0	Aggregate Base.							
735.4	6.2	Gray, moist, clayey silt with shale.	ST-1	2.0-4.0	2.0			ST	
			ST-2	4.0-4.5	0.5		ST		
			SS-1	4.5-6.0		6-9-8	SPT		
731.1	10.5	Dark brown, wet, clayey silt with rock fragments.	SS-2	6.0-7.5			3-8-8	SPT	
			SS-3	7.5-9.0			2-4-2	SPT	
			SS-4	9.0-10.5			15-8-8	SPT	
			SS-5	10.5-12.0			9-5-4	SPT	
716.1	25.5	Gray, wet, clayey silt with shale (Saturated below 19.5 ft).	SS-6	12.0-13.5			3-5-5	SPT	
			SS-7	13.5-15.0			3-2-8	SPT	
			SS-8	15.0-16.5			11-17-25	SPT	
			SS-9	16.5-18.0			7-27-8	SPT	
			SS-10	18.0-19.5			6-5-4	SPT	
			SS-11	19.5-21.0			4-6-17	SPT	
			SS-12	21.0-22.5			15-20-13	SPT	
			SS-13	22.5-24.0			8-11-32	SPT	
			SS-14	24.0-25.5			7-13-2	SPT	
			SS-15	25.5-27.0			1-0-1	SPT	
697.6	44.0	Dark gray, saturated, clayey silt with shale.	SS-16	27.0-28.5			3-2-3	SPT	
			ST-3	28.5-30.5	1.7			ST	
			ST-4	30.5-32.5	1.0			ST	
			SS-17	32.5-34.0			2-4-3	SPT	
			SS-18	34.0-35.5			0-1-3	SPT	
			ST-5	35.5-37.0	1.4			ST	
			SS-19	37.0-38.5			7-9-9	SPT	
			SS-20	38.5-40.0			2-3-3	SPT	
			SS-21	40.0-41.5			2-4-3	SPT	
			SS-22	41.5-43.0			5-5-6	SPT	
45		Gray, saturated, clayey silt with rock fragments.	ST-6	43.0-44.0	1.0			ST	
			SS-23	44.0-45.5			19-8-7	SPT	
			SS-24	45.5-47.0			2-36-8	SPT	
			SS-25	47.0-48.5			4-6-5	SPT	
50			SS-26	48.5-50.0			1-2-4	SPT	

Drilling Firm: Horn & Associates Inc  
For: Division of Structural Design  
Geotechnical Branch

DRILLER'S SUBSURFACE LOG

Printed: 11/11/21  
Page 2 of 2

Project ID: <u>M-004-2021</u> Item Number: <u>10-00376.00</u>		<u>Breathitt - KY-15 MP 16.8-17.9</u>		Project Type: <u>Miscellaneous</u> Project Manager: <u>  </u>					
Hole Number <u>B-3</u> Surface Elevation <u>741.6'</u> Total Depth <u>54.6'</u> Location <u>561+34.00 13.0' Lt.</u>		Immediate Water Depth <u>NA</u> Static Water Depth <u>NA</u> Driller <u>Horn, Grant</u>		Start Date <u>06/23/2021</u> End Date <u>06/23/2021</u> Latitude(83) <u>37.557386</u> Longitude(83) <u>-83.386232</u>		Hole Type <u>sample</u> Rig Number <u>03-D50</u>			
Lithology		Description	Overburden	Sample No.	Depth (ft)	Rec. (ft)	SPT Blows	Sample Type	Remarks
Elevation	Depth		Rock Core	Std/Ky RQD	Run (ft)	Rec (ft)	Rec (%)	SDI (JS)	
688.9	52.7	Gray, saturated, clayey silt with rock fragments.		SS-27	50.0-51.5		1-2-2	SPT	
				SS-28	51.5-53.0		1-4-14	SPT	
687.3	54.3	Gray, saturated, clayey silt with sand.		SS-29	53.0-54.5		6-5-36	SPT	
687.0	54.6	(Weathered sandstone).		SS-30	54.5-54.6		50/0.10'	SPT	
		(Bottom of Hole 54.6') (Refusal @ 54.6)							
60									60
65									65
70									70
75									75
80									80
85									85
90									90
95									95
100									100

Drilling Firm: Horn & Associates Inc  
For: Division of Structural Design  
Geotechnical Branch

DRILLER'S SUBSURFACE LOG

Printed: 11/11/21  
Page 1 of 1

Project ID: <u>M-004-2021</u> Item Number: <u>10-00376.00</u>		<u>Breathitt - KY-15 MP 16.8-17.9</u>		Project Type: <u>Miscellaneous</u> Project Manager: <u>  </u>					
Hole Number <u>B-4</u> Surface Elevation <u>720.6'</u> Total Depth <u>25.7'</u> Location <u>560+69.00 42.0' Rt.</u>		Immediate Water Depth <u>11.5 (06/24/21)</u> Static Water Depth <u>11.0 (06/29/21)</u> Driller <u>Horn, Grant</u>		Start Date <u>06/24/2021</u> End Date <u>06/24/2021</u> Latitude(83) <u>37.557528</u> Longitude(83) <u>-83.385997</u>		Hole Type <u>sample</u> Rig Number <u>03-D50</u>			
Lithology		Description	Overburden	Sample No.	Depth (ft)	Rec. (ft)	SPT Blows	Sample Type	Remarks
Elevation	Depth		Rock Core	Std/Ky RQD	Run (ft)	Rec (ft)	Rec (%)	SDI (JS)	
720.3	0.3	Topsoil.		SS-1	0.0-1.5		6-17-26	SPT	
		Brown, wet, clayey silt with shale (Saturated below 13.5 ft).		SS-2	1.5-3.0		18-5-5	SPT	
				SS-3	3.0-4.5		3-4-3	SPT	
				SS-4	4.5-6.0		6-7-12	SPT	
				SS-5	6.0-7.5		6-7-4	SPT	
				SS-6	7.5-9.0		4-4-3	SPT	
				SS-7	9.0-10.5		4-2-1	SPT	
				SS-8	10.5-12.0		2-6-5	SPT	
				SS-9	12.0-13.5		3-4-9	SPT	
				SS-10	13.5-15.0		17-6-6	SPT	
				SS-11	15.0-16.5		3-3-5	SPT	
				ST-1	16.5-18.5	1.2		ST	
		Brown, saturated, silty sand.		SS-12	18.5-20.0		3-4-9	SPT	
				SS-13	20.0-21.5		5-4-4	SPT	
		Brown, saturated, clayey silt with sand.		SS-14	21.5-23.0		1-0-0	SPT	
				SS-15	23.0-24.5		7-36-11	SPT	
		(Weathered shale).		SS-16	24.5-25.7		19-20-50/0.20	SPT	
		(Bottom of Hole 25.7') (Refusal @ 25.7')							

Drilling Firm: Horn & Associates Inc  
For: Division of Structural Design  
Geotechnical Branch

DRILLER'S SUBSURFACE LOG

Printed: 11/11/21  
Page 1 of 2

Project ID: <u>M-004-2021</u> Item Number: <u>10-00376.00</u>		<u>Breathitt - KY-15 MP 16.8-17.9</u>		Project Type: <u>Miscellaneous</u> Project Manager: <u>  </u>					
Hole Number <u>B-5</u> Surface Elevation <u>743.1'</u> Total Depth <u>51.3'</u> Location <u>559+37.00 10.0' Lt.</u>		Immediate Water Depth <u>NA</u> Static Water Depth <u>NA</u> Driller <u>Horn, Grant</u>		Start Date <u>06/17/2021</u> End Date <u>06/17/2021</u> Latitude(83) <u>37.557361</u> Longitude(83) <u>-83.385554</u>		Hole Type <u>core and sample</u> Rig Number <u>03-D50</u>			
Lithology		Description	Overburden	Sample No.	Depth (ft)	Rec. (ft)	SPT Blows	Sample Type	Remarks
Elevation	Depth		Rock Core	Std/Ky RQD	Run (ft)	Rec (ft)	Rec (%)	SDI (JS)	
741.9	1.2	Asphalt.							
741.1	2.0	Aggregate Base.							
5	738.1	Brown, moist, clayey silt with rock fragments.	ST-1	2.0-4.0	1.7			ST	
	ST-2		4.0-5.0	1.0			ST		
	736.6	Gray, moist, clayey silt with shale.	SS-1	5.0-6.5			17-23-35	SPT	
10		Brown, moist, clayey silt with rock fragments.	SS-2	6.5-8.0			4-4-6	SPT	
			ST-3	8.0-9.0	1.0			ST	
			SS-3	9.0-10.5			6-7-10	SPT	
			SS-4	10.5-12.0			8-8-7	SPT	
	729.6		SS-5	12.0-13.5			4-5-8	SPT	
15		Gray, moist, clayey silt with shale.	SS-6	13.5-15.0			6-12-17	SPT	
			SS-7	15.0-16.5			6-1-18	SPT	
			SS-8	16.5-18.0			8-3-5	SPT	
			SS-9	18.0-18.9			16-50/0.40'	SPT	
			SS-10	19.5-19.7			50/0.20'	SPT	
			SS-11	21.0-22.5			4-6-8	SPT	
			SS-12	22.5-23.9			5-5-50/0.40'	SPT	
			SS-13	24.0-24.2			50/0.20'	SPT	
			SS-14	25.5-25.8			50/0.30'	SPT	
			SS-15	27.0-28.5			4-3-3	SPT	
30		Gray, moist, clayey silt with shale.	SS-16	28.5-30.0			6-7-5	SPT	
			SS-17	30.0-31.5			7-5-4	SPT	
			SS-18	31.5-33.0			3-5-7	SPT	
			SS-19	33.0-34.5			4-2-4	SPT	
	704.4		SS-20	34.5-36.0			5-7-5	SPT	
40		Dark gray, wet, clayey silt with some sand.	SS-21	36.0-37.5			2-4-7	SPT	
			SS-22	37.5-39.0			4-4-5	SPT	
			ST-4	39.0-41.0	0.0			ST	
	702.1		SS-23	41.0-42.5			0-1-5	SPT	
45		Gray, saturated, clayey silt with sand.	ST-5	42.5-44.5	0.0			ST	
			SS-24	44.5-46.0			0-0-0	SPT	
			(Begin Core)	SS-25	46.0-46.3			50/0.30'	SPT
	697.0	46.1	(Weathered shale).	40 / 16	5.0	4.6	92		
	696.8	46.3	Gray shale, sandy.						
50									50

Drilling Firm: Horn & Associates Inc  
For: Division of Structural Design  
Geotechnical Branch

DRILLER'S SUBSURFACE LOG

Printed: 11/11/21  
Page 2 of 2

Project ID: <u>M-004-2021</u> Item Number: <u>10-00376.00</u>		<u>Breathitt - KY-15 MP 16.8-17.9</u>		Project Type: <u>Miscellaneous</u> Project Manager: <u>  </u>					
Hole Number <u>B-5</u> Surface Elevation <u>743.1'</u> Total Depth <u>51.3'</u> Location <u>559+37.00 10.0' Lt.</u>		Immediate Water Depth <u>NA</u> Static Water Depth <u>NA</u> Driller <u>Horn, Grant</u>		Start Date <u>06/17/2021</u> End Date <u>06/17/2021</u> Latitude(83) <u>37.557361</u> Longitude(83) <u>-83.385554</u>		Hole Type <u>core and sample</u> Rig Number <u>03-D50</u>			
Lithology		Description	Overburden	Sample No.	Depth (ft)	Rec. (ft)	SPT Blows	Sample Type	Remarks
Elevation	Depth		Rock Core	Std/Ky RQD	Run (ft)	Rec (ft)	Rec (%)	SDI (JS)	
691.8	51.3	Gray shale, sandy.			5.0	4.6	92		51.3
55		(Bottom of Hole 51.3')							55
60									60
65									65
70									70
75									75
80									80
85									85
90									90
95									95
100									100

Drilling Firm: Horn & Associates Inc  
For: Division of Structural Design  
Geotechnical Branch

DRILLER'S SUBSURFACE LOG

Printed: 5/25/22  
Page 1 of 1

Project ID: <u>M-003-2022</u> Item Number: <u>10-00172.00</u>		<u>Breathitt - KY-15 MP 13.8-14.6</u>		Project Type: <u>Miscellaneous Dam</u> Project Manager: <u>  </u>					
Hole Number <u>B-101</u> Surface Elevation <u>740.2'</u> Total Depth <u>50.8'</u> Location <u>563+49.64 3.5' Rt.</u>		Immediate Water Depth <u>NA</u> Static Water Depth <u>NA</u> Driller <u>Grant Horn</u>		Start Date <u>05/04/2022</u> End Date <u>05/04/2022</u> Latitude(83) <u>  </u> Longitude(83) <u>  </u>		Hole Type <u>sample</u> Rig Number <u>90-D120</u>			
Lithology		Description	Overburden	Sample No.	Depth (ft)	Rec. (ft)	SPT Blows	Sample Type	Remarks
Elevation	Depth		Rock Core	Std/Ky RQD	Run (ft)	Rec (ft)	Rec (%)	SDI (JS)	
739.0	1.2	Asphalt.							
737.7	2.5	Aggregate Base.							
5									5
10									10
15									15
20									20
25		Overburden.							25
30									30
35									35
40									40
45									45
691.2	49.0								
689.4	50.8	Weathered Shale.							50
			SS-1	50.5-50.8			50/0.30'	SPT	
55		(Bottom of Hole 50.8') (Refusal @ 50.8)							55
60									60

Drilling Firm: Horn & Associates Inc  
For: Division of Structural Design  
Geotechnical Branch

DRILLER'S SUBSURFACE LOG

Printed: 5/25/22  
Page 1 of 1

Project ID: <u>M-003-2022</u> Item Number: <u>10-00172.00</u>		<u>Breathitt - KY-15 MP 13.8-14.6</u>		Project Type: <u>Miscellaneous Dam</u> Project Manager: <u>  </u>					
Hole Number <u>B-102</u> Surface Elevation <u>740.2'</u> Total Depth <u>52.3'</u> Location <u>563+19.64 0.2' Lt.</u>		Immediate Water Depth <u>NA</u> Static Water Depth <u>NA</u> Driller <u>Grant Horn</u>		Start Date <u>05/03/2022</u> End Date <u>05/03/2022</u> Latitude(83) <u>  </u> Longitude(83) <u>  </u>		Hole Type <u>sample</u> Rig Number <u>90-D120</u>			
Lithology		Description	Overburden	Sample No.	Depth (ft)	Rec. (ft)	SPT Blows	Sample Type	Remarks
Elevation	Depth		Rock Core	Std/Ky RQD	Run (ft)	Rec (ft)	Rec (%)	SDI (JS)	
739.0	1.2	Asphalt.							
737.7	2.5	Aggregate Base.							
5		Overburden.							Difficult drilling @ 6-7.5
10									
15									
20									
25									
30									
35									
40									
45									
50									
689.7	50.5								
687.9	52.3	Weathered shale.							
55			SS-1	52.0-52.3		50/0.30'	SPT		
60		(Bottom of Hole 52.3') (Refusal @ 52.3)							

Drilling Firm: Horn & Associates Inc  
For: Division of Structural Design  
Geotechnical Branch

DRILLER'S SUBSURFACE LOG

Printed: 5/25/22  
Page 1 of 1

Project ID: <u>M-003-2022</u> Item Number: <u>10-00172.00</u>		<u>Breathitt - KY-15 MP 13.8-14.6</u>		Project Type: <u>Miscellaneous Dam</u> Project Manager: <u>  </u>					
Hole Number <u>B-103</u> Surface Elevation <u>740.6'</u> Total Depth <u>52.7'</u> Location <u>562+99.78 4.7' Lt.</u>		Immediate Water Depth <u>NA</u> Static Water Depth <u>NA</u> Driller <u>Grant Horn</u>		Start Date <u>05/03/2022</u> End Date <u>05/03/2022</u> Latitude(83) <u>  </u> Longitude(83) <u>  </u>		Hole Type <u>sample</u> Rig Number <u>90-D120</u>			
Lithology		Description	Overburden	Sample No.	Depth (ft)	Rec. (ft)	SPT Blows	Sample Type	Remarks
Elevation	Depth		Rock Core	Std/Ky RQD	Run (ft)	Rec (ft)	Rec (%)	SDI (JS)	
739.3	1.3	Asphalt.							
738.1	2.5	Aggregate Base.							
5									5
10									10
15									15
20									20
25									25
30		Overburden.							30
35									35
40									40
45									45
50	689.6	51.0							50
	687.9	52.7	Weathered Shale.						
55				SS-1	52.5-52.7		50/0.20'	SPT	55
60		(Bottom of Hole 52.7') (Refusal @ 52.7)							60

Drilling Firm: Horn & Associates Inc  
For: Division of Structural Design  
Geotechnical Branch

DRILLER'S SUBSURFACE LOG

Printed: 5/25/22  
Page 1 of 2

Project ID: <u>M-003-2022</u> Item Number: <u>10-00172.00</u>		<u>Breathitt - KY-15 MP 13.8-14.6</u>		Project Type: <u>Miscellaneous Dam</u> Project Manager: <u>  </u>					
Hole Number <u>B-104</u> Surface Elevation <u>740.6'</u> Total Depth <u>54.2'</u> Location <u>562+79.88 4.7' Lt.</u>		Immediate Water Depth <u>NA</u> Static Water Depth <u>NA</u> Driller <u>Grant Horn</u>		Start Date <u>05/02/2022</u> End Date <u>05/02/2022</u> Latitude(83) <u>  </u> Longitude(83) <u>  </u>		Hole Type <u>sample</u> Rig Number <u>90-D120</u>			
Lithology		Description	Overburden	Sample No.	Depth (ft)	Rec. (ft)	SPT Blows	Sample Type	Remarks
Elevation	Depth		Rock Core	Std/Ky RQD	Run (ft)	Rec (ft)	Rec (%)	SDI (JS)	
739.3	1.3	Asphalt.							
738.6	2.0	Aggregate Base.							
5									5
10									10
15									15
20									20
25									25
30		Overburden.							30
35									35
40									40
45									45
50									50
689.1	51.5								
686.4	54.2	Weathered Shale.							
55				SS-1	54.0-54.2		50/0.20'	SPT	55
60		(Bottom of Hole 54.2')							60

Drilling Firm: Horn & Associates Inc  
For: Division of Structural Design  
Geotechnical Branch

DRILLER'S SUBSURFACE LOG

Printed: 5/25/22  
Page 2 of 2

Project ID: <u>M-003-2022</u> Item Number: <u>10-00172.00</u>		<u>Breathitt - KY-15 MP 13.8-14.6</u>		Project Type: <u>Miscellaneous Dam</u> Project Manager: <u>  </u>					
Hole Number <u>B-104</u> Surface Elevation <u>740.6'</u> Total Depth <u>54.2'</u> Location <u>562+79.88 4.7' Lt.</u>		Immediate Water Depth <u>NA</u> Static Water Depth <u>NA</u> Driller <u>Grant Horn</u>		Start Date <u>05/02/2022</u> End Date <u>05/02/2022</u> Latitude(83) <u>  </u> Longitude(83) <u>  </u>		Hole Type <u>sample</u> Rig Number <u>90-D120</u>			
Lithology		Description	Overburden	Sample No.	Depth (ft)	Rec. (ft)	SPT Blows	Sample Type	Remarks
Elevation	Depth		Rock Core	Std/Ky RQD	Run (ft)	Rec (ft)	Rec (%)	SDI (JS)	
65		(Refusal @ 54.2)							65
70									70
75									75
80									80
85									85
90									90
95									95
100									100
105									105
110									110
115									115
120									120

Drilling Firm: Horn & Associates Inc  
For: Division of Structural Design  
Geotechnical Branch

DRILLER'S SUBSURFACE LOG

Printed: 5/25/22  
Page 1 of 2

Project ID: <u>M-003-2022</u> Item Number: <u>10-00172.00</u>		<u>Breathitt - KY-15 MP 13.8-14.6</u>		Project Type: <u>Miscellaneous Dam</u> Project Manager: <u>  </u>					
Hole Number <u>B-105</u> Surface Elevation <u>740.9'</u> Total Depth <u>61.5'</u> Location <u>562+59.96 6.7' Lt.</u>		Immediate Water Depth <u>NA</u> Static Water Depth <u>NA</u> Driller <u>Grant Horn</u>		Start Date <u>05/04/2022</u> End Date <u>05/04/2022</u> Latitude(83) <u>  </u> Longitude(83) <u>  </u>		Hole Type <u>core and sample</u> Rig Number <u>90-D120</u>			
Lithology		Description	Overburden	Sample No.	Depth (ft)	Rec. (ft)	SPT Blows	Sample Type	Remarks
Elevation	Depth		Rock Core	Std/Ky RQD	Run (ft)	Rec (ft)	Rec (%)	SDI (JS)	
739.7	1.2	Asphalt.							
738.9	2.0	Aggregate Base.							
5									5
10									10
15									15
20									20
25									25
30		Overburden.							30
35									35
40									40
45									45
50									50
687.9	53.0								
686.4	54.5	Weathered shale. (Begin Core)		SS-1	54.0-54.1		50/0.10'	SPT	Casing
				60 / -	2.0	2.0	100		advancer @
		Gray shale, silty.		75 / -	2.0	1.9	95		54.1-54.5
				53 / -	3.0	2.7	90		No water
									return @ 54.5
60									60

Drilling Firm: Horn & Associates Inc  
For: Division of Structural Design  
Geotechnical Branch

DRILLER'S SUBSURFACE LOG

Printed: 5/25/22  
Page 2 of 2

Project ID: <u>M-003-2022</u> Item Number: <u>10-00172.00</u>		<u>Breathitt - KY-15 MP 13.8-14.6</u>		Project Type: <u>Miscellaneous Dam</u> Project Manager: <u>  </u>					
Hole Number <u>B-105</u> Surface Elevation <u>740.9'</u> Total Depth <u>61.5'</u> Location <u>562+59.96 6.7' Lt.</u>		Immediate Water Depth <u>NA</u> Static Water Depth <u>NA</u> Driller <u>Grant Horn</u>		Start Date <u>05/04/2022</u> End Date <u>05/04/2022</u> Latitude(83) <u>  </u> Longitude(83) <u>  </u>		Hole Type <u>core and sample</u> Rig Number <u>90-D120</u>			
Lithology		Description	Overburden	Sample No.	Depth (ft)	Rec. (ft)	SPT Blows	Sample Type	Remarks
Elevation	Depth		Rock Core	Std/Ky RQD	Run (ft)	Rec (ft)	Rec (%)	SDI (JS)	
679.4	61.5	Gray shale, silty.		53 / -	3.0	2.7	90		61.5
65		(Bottom of Hole 61.5')							65
70									70
75									75
80									80
85									85
90									90
95									95
100									100
105									105
110									110
115									115
120									120

Drilling Firm: Horn & Associates Inc  
For: Division of Structural Design  
Geotechnical Branch

DRILLER'S SUBSURFACE LOG

Printed: 5/25/22  
Page 1 of 1

Project ID: <u>M-003-2022</u> Item Number: <u>10-00172.00</u>		<u>Breathitt - KY-15 MP 13.8-14.6</u>		Project Type: <u>Miscellaneous Dam</u> Project Manager: <u>  </u>					
Hole Number <u>B-106</u> Surface Elevation <u>741.2'</u> Total Depth <u>31.1'</u> Location <u>561+99.95 10.2' Lt.</u>		Immediate Water Depth <u>NA</u> Static Water Depth <u>NA</u> Driller <u>Grant Horn</u>		Start Date <u>05/05/2022</u> End Date <u>05/05/2022</u> Latitude(83) <u>  </u> Longitude(83) <u>  </u>		Hole Type <u>sample</u> Rig Number <u>90-D120</u>			
Lithology		Description	Overburden	Sample No.	Depth (ft)	Rec. (ft)	SPT Blows	Sample Type	Remarks
Elevation	Depth		Rock Core	Std/Ky RQD	Run (ft)	Rec (ft)	Rec (%)	SDI (JS)	
740.0	1.2	Asphalt.							
738.7	2.5	Aggregate Base.							
5									5
10									10
15									15
20		Overburden.							20
25									25
30	710.1	31.1							30
				SS-1	31.0-31.1		50/0.10'	SPT	Difficult drilling, possible boulder @ 29.5-31.1
35		(Bottom of Hole 31.1') (Refusal @ 31.1)							35
40									40
45									45
50									50
55									55
60									60

Drilling Firm: Horn & Associates Inc  
For: Division of Structural Design  
Geotechnical Branch

DRILLER'S SUBSURFACE LOG

Printed: 5/25/22  
Page 1 of 1

Project ID: <u>M-003-2022</u> Item Number: <u>10-00172.00</u>		<u>Breathitt - KY-15 MP 13.8-14.6</u>		Project Type: <u>Miscellaneous Dam</u> Project Manager: <u>  </u>					
Hole Number <u>B-107</u> Surface Elevation <u>741.3'</u> Total Depth <u>34.9'</u> Location <u>561+79.90 10.7' Lt.</u>		Immediate Water Depth <u>NA</u> Static Water Depth <u>NA</u> Driller <u>Grant Horn</u>		Start Date <u>05/05/2022</u> End Date <u>05/05/2022</u> Latitude(83) <u>  </u> Longitude(83) <u>  </u>		Hole Type <u>sample</u> Rig Number <u>90-D120</u>			
Lithology		Description	Overburden	Sample No.	Depth (ft)	Rec. (ft)	SPT Blows	Sample Type	Remarks
Elevation	Depth		Rock Core	Std/Ky RQD	Run (ft)	Rec (ft)	Rec (%)	SDI (JS)	
740.1	1.2	Asphalt.							
739.0	2.3	Aggregate Base.							
5									5
10									10
15									15
20		Overburden.							20
25									25
30									30
35	706.4	34.9							35
				SS-1	34.8-34.9				Difficult drilling, possible boulder @ 34.2-34.9
40		(Bottom of Hole 34.9') (Refusal @ 34.9)							40
45									45
50									50
55									55
60									60

Drilling Firm: Horn & Associates Inc  
For: Division of Structural Design  
Geotechnical Branch

DRILLER'S SUBSURFACE LOG

Printed: 5/25/22  
Page 1 of 1

Project ID: <u>M-003-2022</u> Item Number: <u>10-00172.00</u>		<u>Breathitt - KY-15 MP 13.8-14.6</u>		Project Type: <u>Miscellaneous Dam</u> Project Manager: <u>  </u>					
Hole Number <u>B-108</u> Surface Elevation <u>741.4'</u> Total Depth <u>46.5'</u> Location <u>561+59.91 11.0' Lt.</u>		Immediate Water Depth <u>NA</u> Static Water Depth <u>NA</u> Driller <u>Grant Horn</u>		Start Date <u>05/09/2022</u> End Date <u>05/09/2022</u> Latitude(83) <u>  </u> Longitude(83) <u>  </u>		Hole Type <u>core and sample</u> Rig Number <u>90-D120</u>			
Lithology		Description	Overburden	Sample No.	Depth (ft)	Rec. (ft)	SPT Blows	Sample Type	Remarks
Elevation	Depth		Rock Core	Std/Ky RQD	Run (ft)	Rec (ft)	Rec (%)	SDI (JS)	
740.2	1.2	Asphalt.							
739.4	2.0	Aggregate Base.							
5									5
10									10
15									15
20		Overburden.							20
25									25
30									30
35									35
702.4	39.0								
40	700.9	Shot rock fill. (Begin Core)	SS-1	39.0-40.2		23-17-50/0.20*	SPT	Casing advancer @ 39-40.5	40
			0 / -	1.0	0.3	30		41.5	
45		Shot rock fill.	0 / -	2.5	1.2	48		44.0	
694.9	46.5		0 / -	2.5	1.1	44		46.5	
50		(Bottom of Hole 46.5')							50
55									55
60									60

Drilling Firm: Horn & Associates Inc  
For: Division of Structural Design  
Geotechnical Branch

DRILLER'S SUBSURFACE LOG

Printed: 5/25/22  
Page 1 of 1

Project ID: <u>M-003-2022</u> Item Number: <u>10-00172.00</u>		<u>Breathitt - KY-15 MP 13.8-14.6</u>		Project Type: <u>Miscellaneous Dam</u> Project Manager: <u>  </u>					
Hole Number <u>B-109</u> Surface Elevation <u>741.8'</u> Total Depth <u>21.9'</u> Location <u>561+19.87 11.2' Lt.</u>		Immediate Water Depth <u>NA</u> Static Water Depth <u>NA</u> Driller <u>Grant Horn</u>		Start Date <u>05/10/2022</u> End Date <u>05/10/2022</u> Latitude(83) <u>  </u> Longitude(83) <u>  </u>		Hole Type <u>sample</u> Rig Number <u>90-D120</u>			
Lithology		Description	Overburden	Sample No.	Depth (ft)	Rec. (ft)	SPT Blows	Sample Type	Remarks
Elevation	Depth		Rock Core	Std/Ky RQD	Run (ft)	Rec (ft)	Rec (%)	SDI (JS)	
740.6	1.2	Asphalt.							
739.3	2.5	Aggregate Base.							
5		Overburden.							5
10									10
15									15
20									20
719.9	21.9								
25		(Bottom of Hole 21.9') (Refusal @ 21.9)	SS-1	21.8-21.9		50/0.10'	SPT		Difficult drilling @ 21.2-21.9
30									30
35									35
40									40
45									45
50									50
55									55
60									60

Drilling Firm: Horn & Associates Inc  
For: Division of Structural Design  
Geotechnical Branch

DRILLER'S SUBSURFACE LOG

Printed: 5/25/22  
Page 1 of 2

Project ID: <u>M-003-2022</u> Item Number: <u>10-00172.00</u>		<u>Breathitt - KY-15 MP 13.8-14.6</u>		Project Type: <u>Miscellaneous Dam</u> Project Manager: <u>  </u>					
Hole Number <u>B-110</u> Surface Elevation <u>741.9'</u> Total Depth <u>54.6'</u> Location <u>560+99.87 11.1' Lt.</u>		Immediate Water Depth <u>NA</u> Static Water Depth <u>NA</u> Driller <u>Grant Horn</u>		Start Date <u>05/10/2022</u> End Date <u>05/10/2022</u> Latitude(83) <u>  </u> Longitude(83) <u>  </u>		Hole Type <u>sample</u> Rig Number <u>90-D120</u>			
Lithology		Description	Overburden	Sample No.	Depth (ft)	Rec. (ft)	SPT Blows	Sample Type	Remarks
Elevation	Depth		Rock Core	Std/Ky RQD	Run (ft)	Rec (ft)	Rec (%)	SDI (JS)	
740.7	1.2	Asphalt.							
739.4	2.5	Aggregate Base.							
5									5
10									10
15									15
20									20
25									25
30		Overburden.							30
35									35
40									40
45									45
50									50
689.9	52.0								
687.3	54.6	Weathered shale.							
				SS-1	54.5-54.6		50/0.10'	SPT	
60		(Bottom of Hole 54.6')							60

Drilling Firm: Horn & Associates Inc  
For: Division of Structural Design  
Geotechnical Branch

DRILLER'S SUBSURFACE LOG

Printed: 5/25/22  
Page 2 of 2

Project ID: <u>M-003-2022</u> Item Number: <u>10-00172.00</u>		<u>Breathitt - KY-15 MP 13.8-14.6</u>		Project Type: <u>Miscellaneous Dam</u> Project Manager: <u>  </u>					
Hole Number <u>B-110</u> Surface Elevation <u>741.9'</u> Total Depth <u>54.6'</u> Location <u>560+99.87 11.1' Lt.</u>		Immediate Water Depth <u>NA</u> Static Water Depth <u>NA</u> Driller <u>Grant Horn</u>		Start Date <u>05/10/2022</u> End Date <u>05/10/2022</u> Latitude(83) <u>  </u> Longitude(83) <u>  </u>		Hole Type <u>sample</u> Rig Number <u>90-D120</u>			
Lithology		Description	Overburden	Sample No.	Depth (ft)	Rec. (ft)	SPT Blows	Sample Type	Remarks
Elevation	Depth		Rock Core	Std/Ky RQD	Run (ft)	Rec (ft)	Rec (%)	SDI (JS)	
65		(Refusal @ 51.6)							65
70									70
75									75
80									80
85									85
90									90
95									95
100									100
105									105
110									110
115									115
120									120

Drilling Firm: Horn & Associates Inc  
For: Division of Structural Design  
Geotechnical Branch

DRILLER'S SUBSURFACE LOG

Printed: 5/25/22  
Page 1 of 1

Project ID: <u>M-003-2022</u> Item Number: <u>10-00172.00</u>		<u>Breathitt - KY-15 MP 13.8-14.6</u>		Project Type: <u>Miscellaneous Dam</u> Project Manager: <u>  </u>					
Hole Number <u>B-111</u> Surface Elevation <u>742.0'</u> Total Depth <u>12.6'</u> Location <u>560+79.87 11.0' Lt.</u>		Immediate Water Depth <u>NA</u> Static Water Depth <u>NA</u> Driller <u>Grant Horn</u>		Start Date <u>05/11/2022</u> End Date <u>05/11/2022</u> Latitude(83) <u>  </u> Longitude(83) <u>  </u>		Hole Type <u>sample</u> Rig Number <u>90-D120</u>			
Lithology		Description	Overburden	Sample No.	Depth (ft)	Rec. (ft)	SPT Blows	Sample Type	Remarks
Elevation	Depth		Rock Core	Std/Ky RQD	Run (ft)	Rec (ft)	Rec (%)	SDI (JS)	
740.9	1.1	Asphalt.							
739.5	2.5	Aggregate Base.							
5		Overburden.							5
10									10
729.4	12.6								
15		(Bottom of Hole 12.6') (Refusal @ 12.6)	SS-1	12.5-12.6			50/0.10'	SPT	Difficult drilling, possible boulder @ 11.8-12.6
20									20
25									25
30									30
35									35
40									40
45									45
50									50
55									55
60									60

Drilling Firm: Horn & Associates Inc  
For: Division of Structural Design  
Geotechnical Branch

DRILLER'S SUBSURFACE LOG

Printed: 5/25/22  
Page 1 of 1

Project ID: <u>M-003-2022</u> Item Number: <u>10-00172.00</u>		<u>Breathitt - KY-15 MP 13.8-14.6</u>		Project Type: <u>Miscellaneous Dam</u> Project Manager: <u>  </u>					
Hole Number <u>B-112</u> Surface Elevation <u>742.2'</u> Total Depth <u>53.1'</u> Location <u>560+59.70 10.9' Lt.</u>		Immediate Water Depth <u>NA</u> Static Water Depth <u>NA</u> Driller <u>Grant Horn</u>		Start Date <u>05/11/2022</u> End Date <u>05/11/2022</u> Latitude(83) <u>  </u> Longitude(83) <u>  </u>		Hole Type <u>sample</u> Rig Number <u>90-D120</u>			
Lithology		Description	Overburden	Sample No.	Depth (ft)	Rec. (ft)	SPT Blows	Sample Type	Remarks
Elevation	Depth		Rock Core	Std/Ky RQD	Run (ft)	Rec (ft)	Rec (%)	SDI (JS)	
740.9	1.3	Asphalt.							
739.7	2.5	Aggregate Base.							
5									5
10									10
15									15
20									20
25									25
30		Overburden.							30
35									35
40									40
45									45
50									50
691.2	51.0								
689.1	53.1	Weathered shale.							
55				SS-1	53.0-53.1		50/0.10'	SPT	55
60		(Bottom of Hole 53.1') (Refusal @ 53.1)							60

Drilling Firm: Horn & Associates Inc  
For: Division of Structural Design  
Geotechnical Branch

DRILLER'S SUBSURFACE LOG

Printed: 5/25/22  
Page 1 of 2

Project ID: <u>M-003-2022</u> Item Number: <u>10-00172.00</u>		<u>Breathitt - KY-15 MP 13.8-14.6</u>		Project Type: <u>Miscellaneous Dam</u> Project Manager: <u>  </u>					
Hole Number <u>B-113</u> Surface Elevation <u>742.4'</u> Total Depth <u>60.0'</u> Location <u>560+39.87 10.8' Lt.</u>		Immediate Water Depth <u>NA</u> Static Water Depth <u>NA</u> Driller <u>Grant Horn</u>		Start Date <u>05/12/2022</u> End Date <u>05/12/2022</u> Latitude(83) <u>  </u> Longitude(83) <u>  </u>		Hole Type <u>core</u> Rig Number <u>90-D120</u>			
Lithology		Description	Overburden	Sample No.	Depth (ft)	Rec. (ft)	SPT Blows	Sample Type	Remarks
Elevation	Depth		Rock Core	Std/Ky RQD	Run (ft)	Rec (ft)	Rec (%)	SDI (JS)	
741.3	1.1	Asphalt.							
739.9	2.5	Aggregate Base.							
5									5
10									10
15									15
20									20
25									25
30		Overburden.							30
35									35
40									40
45									45
50									50
690.4	52.0								
689.4	53.0	Weathered Shale.	(Begin Core)						
55				47 / -	3.0	2.9	97		Casing Advancer @ 53-54
		Gray shale, silty.							57.0
60	682.4			63 / -	3.0	2.8	93		60.0
60									60

Drilling Firm: Horn & Associates Inc  
For: Division of Structural Design  
Geotechnical Branch

DRILLER'S SUBSURFACE LOG

Printed: 5/25/22  
Page 2 of 2

Project ID: <u>M-003-2022</u> Item Number: <u>10-00172.00</u>		<u>Breathitt - KY-15 MP 13.8-14.6</u>		Project Type: <u>Miscellaneous Dam</u> Project Manager: <u>  </u>					
Hole Number <u>B-113</u> Surface Elevation <u>742.4'</u> Total Depth <u>60.0'</u> Location <u>560+39.87 10.8' Lt.</u>		Immediate Water Depth <u>NA</u> Static Water Depth <u>NA</u> Driller <u>Grant Horn</u>		Start Date <u>05/12/2022</u> End Date <u>05/12/2022</u> Latitude(83) <u>  </u> Longitude(83) <u>  </u>		Hole Type <u>core</u> Rig Number <u>90-D120</u>			
Lithology		Description	Overburden	Sample No.	Depth (ft)	Rec. (ft)	SPT Blows	Sample Type	Remarks
Elevation	Depth		Rock Core	Std/Ky RQD	Run (ft)	Rec (ft)	Rec (%)	SDI (JS)	
65		(Bottom of Hole 60.0')							65
70									70
75									75
80									80
85									85
90									90
95									95
100									100
105									105
110									110
115									115
120									120

Drilling Firm: Horn & Associates Inc  
For: Division of Structural Design  
Geotechnical Branch

DRILLER'S SUBSURFACE LOG

Printed: 5/25/22  
Page 1 of 1

Project ID: <u>M-003-2022</u> Item Number: <u>10-00172.00</u>		<u>Breathitt - KY-15 MP 13.8-14.6</u>		Project Type: <u>Miscellaneous Dam</u> Project Manager: <u>  </u>					
Hole Number <u>B-114</u> Surface Elevation <u>742.4'</u> Total Depth <u>23.9'</u> Location <u>560+19.85 10.4' Lt.</u>		Immediate Water Depth <u>NA</u> Static Water Depth <u>NA</u> Driller <u>Grant Yearry</u>		Start Date <u>05/10/2022</u> End Date <u>05/10/2022</u> Latitude(83) <u>  </u> Longitude(83) <u>  </u>		Hole Type <u>sample</u> Rig Number <u>03-D50</u>			
Lithology		Description	Overburden	Sample No.	Depth (ft)	Rec. (ft)	SPT Blows	Sample Type	Remarks
Elevation	Depth		Rock Core	Std/Ky RQD	Run (ft)	Rec (ft)	Rec (%)	SDI (JS)	
741.5	0.9	Asphalt.							
740.6	1.8	Aggregate Base.							
5									5
10									10
15		Overburden.							15
20									20
718.5	23.9								
25				SS-1	23.8-23.9		50/0.10'	SPT	25
30		(Bottom of Hole 23.9') (Refusal @ 23.9)							30
35									35
40									40
45									45
50									50
55									55
60									60

Drilling Firm: Horn & Associates Inc  
For: Division of Structural Design  
Geotechnical Branch

DRILLER'S SUBSURFACE LOG

Printed: 5/25/22  
Page 1 of 1

Project ID: <u>M-003-2022</u> Item Number: <u>10-00172.00</u>		<u>Breathitt - KY-15 MP 13.8-14.6</u>		Project Type: <u>Miscellaneous Dam</u> Project Manager: <u>  </u>					
Hole Number <u>B-115</u> Surface Elevation <u>742.5'</u> Total Depth <u>28.8'</u> Location <u>559+99.85 10.0' Lt.</u>		Immediate Water Depth <u>NA</u> Static Water Depth <u>NA</u> Driller <u>Grant Yearry</u>		Start Date <u>05/10/2022</u> End Date <u>05/10/2022</u> Latitude(83) <u>  </u> Longitude(83) <u>  </u>		Hole Type <u>sample</u> Rig Number <u>03-D50</u>			
Lithology		Description	Overburden	Sample No.	Depth (ft)	Rec. (ft)	SPT Blows	Sample Type	Remarks
Elevation	Depth		Rock Core	Std/Ky RQD	Run (ft)	Rec (ft)	Rec (%)	SDI (JS)	
741.5	1.0	Asphalt.							
740.2	2.3	Aggregate Base.							
5		Overburden.							Difficult drilling @ 10.5-11.8
10									
15									
20									
25									
713.7	28.8			SS-1	28.7-28.8		50/0.10'	SPT	Difficult drilling, possible boulder @ 27.5-28.7
30									
35									
40									
45									
50		(Bottom of Hole 28.8') (Refusal @ 28.8)							
55									
60									

Drilling Firm: Horn & Associates Inc  
For: Division of Structural Design  
Geotechnical Branch

DRILLER'S SUBSURFACE LOG

Printed: 5/25/22  
Page 1 of 1

Project ID: <u>M-003-2022</u> Item Number: <u>10-00172.00</u>		<u>Breathitt - KY-15 MP 13.8-14.6</u>		Project Type: <u>Miscellaneous Dam</u> Project Manager: <u>  </u>					
Hole Number <u>B-116</u> Surface Elevation <u>742.6'</u> Total Depth <u>37.4'</u> Location <u>559+79.82 9.5' Lt.</u>		Immediate Water Depth <u>NA</u> Static Water Depth <u>NA</u> Driller <u>Grant Yeary</u>		Start Date <u>05/11/2022</u> End Date <u>05/11/2022</u> Latitude(83) <u>  </u> Longitude(83) <u>  </u>		Hole Type <u>sample</u> Rig Number <u>03-D50</u>			
Lithology		Description	Overburden	Sample No.	Depth (ft)	Rec. (ft)	SPT Blows	Sample Type	Remarks
Elevation	Depth		Rock Core	Std/Ky RQD	Run (ft)	Rec (ft)	Rec (%)	SDI (JS)	
741.5	1.1	Asphalt.							
740.5	2.1	Aggregate Base.							
5									5
10									10
15									15
20		Overburden.							20
25									25
30									30
35									35
705.4	37.2								
705.2	37.4	Weathered shale.	SS-1	37.2-37.4		50/0.20'	SPT		
40		(Bottom of Hole 37.4') (Refusal @ 37.4)							40
45									45
50									50
55									55
60									60

Drilling Firm: Horn & Associates Inc  
For: Division of Structural Design  
Geotechnical Branch

DRILLER'S SUBSURFACE LOG

Printed: 5/25/22  
Page 1 of 1

Project ID: <u>M-003-2022</u> Item Number: <u>10-00172.00</u>		<u>Breathitt - KY-15 MP 13.8-14.6</u>		Project Type: <u>Miscellaneous Dam</u> Project Manager: <u>  </u>					
Hole Number <u>B-117</u> Surface Elevation <u>742.7'</u> Total Depth <u>50.6'</u> Location <u>559+59.84 8.9' Lt.</u>		Immediate Water Depth <u>NA</u> Static Water Depth <u>NA</u> Driller <u>Grant Yeary</u>		Start Date <u>05/11/2022</u> End Date <u>05/11/2022</u> Latitude(83) <u>  </u> Longitude(83) <u>  </u>		Hole Type <u>sample</u> Rig Number <u>03-D50</u>			
Lithology		Description	Overburden	Sample No.	Depth (ft)	Rec. (ft)	SPT Blows	Sample Type	Remarks
Elevation	Depth		Rock Core	Std/Ky RQD	Run (ft)	Rec (ft)	Rec (%)	SDI (JS)	
741.8	0.9	Asphalt.							
740.9	1.8	Aggregate Base.							
5									5
10									10
15									15
20									20
25		Overburden.							25
30									30
35									35
40									40
45									45
50	692.2	50.5							50
				SS-1	50.5-50.6		50/0.10'	SPT	
55		(Bottom of Hole 50.6') (Refusal @ 50.6)							55
60									60

Drilling Firm: Horn & Associates Inc  
For: Division of Structural Design  
Geotechnical Branch

DRILLER'S SUBSURFACE LOG

Printed: 5/25/22  
Page 1 of 1

Project ID: <u>M-003-2022</u> Item Number: <u>10-00172.00</u>		<u>Breathitt - KY-15 MP 13.8-14.6</u>		Project Type: <u>Miscellaneous Dam</u> Project Manager: <u>  </u>					
Hole Number <u>B-118</u> Surface Elevation <u>743.1'</u> Total Depth <u>33.1'</u> Location <u>559+19.89 7.3' Lt.</u>		Immediate Water Depth <u>NA</u> Static Water Depth <u>NA</u> Driller <u>Grant Horn</u>		Start Date <u>05/12/2022</u> End Date <u>05/12/2022</u> Latitude(83) <u>  </u> Longitude(83) <u>  </u>		Hole Type <u>sample</u> Rig Number <u>90-D120</u>			
Lithology		Description	Overburden	Sample No.	Depth (ft)	Rec. (ft)	SPT Blows	Sample Type	Remarks
Elevation	Depth		Rock Core	Std/Ky RQD	Run (ft)	Rec (ft)	Rec (%)	SDI (JS)	
741.9	1.2	Asphalt.							
740.6	2.5	Aggregate Base.							
5									5
10									10
15									15
20		Overburden.							20
25									25
30									30
711.1	32.0								
710.0	33.1	Boulders.							
35				SS-1	33.0-33.1		50/0.10'	SPT	Difficult drilling, possible boulder @ 32-33.1
40		(Bottom of Hole 33.1') (Refusal @ 33.1)							40
45									45
50									50
55									55
60									60

Project ID: <u>M-003-2022</u> Item Number: <u>10-00172.00</u>		<u>Breathitt - KY-15 MP 13.8-14.6</u>		Project Type: <u>Miscellaneous Dam</u> Project Manager: <u>  </u>					
Hole Number <u>B-121</u> Surface Elevation <u>743.3'</u> Total Depth <u>15.5'</u> Location <u>557+90.00 6.3' Rt.</u>		Immediate Water Depth <u>NA</u> Static Water Depth <u>NA</u> Driller <u>Grant Yearry</u>		Start Date <u>05/12/2022</u> End Date <u>05/12/2022</u> Latitude(83) <u>  </u> Longitude(83) <u>  </u>		Hole Type <u>core and sample</u> Rig Number <u>03-D50</u>			
Lithology		Overburden		Sample No.	Depth (ft)	Rec. (ft)	SPT Blows	Sample Type	Remarks
Elevation	Depth	Description		Rock Core	Std/Ky RQD	Run (ft)	Rec (ft)	Rec (%)	
742.1	1.2	Asphalt.							
741.0	2.3	Aggregate Base.							
737.8	5.5	Overburden. (Begin Core)							
10	15.5	Gray sandstone with interbedded shale.		SS-1 16 / -	5.5-5.5 2.5	2.4	50/0.01' 96	SPT	8.0
				30 / -	3.0	0.9	30		11.0
				76 / -	4.5	4.4	98		15.5
20		(Bottom of Hole 15.5')							20
25									25
30									30
35									35
40									40
45									45
50									50
55									55
60									60

## **Special Note for Steel Sheet Pile Cutoff Wall**

### **Appendix C – Quality Control Inspection**

#### ***KY Highway 15 – Panbowl Lake Dam (Item # 10-172.00)***

This Special Note is in addition to the requirements set forth in Section 113 of the Standard Specifications for Road and Bridge Construction, current edition.

### **1.0 DESCRIPTION**

This work consists of developing, furnishing, executing, and maintaining a Quality Control Plan (QCP) for the inspection of the steel sheet pile cutoff wall. QC personnel will answer directly to the Department's Section Engineer. The work includes but is not limited to inspecting, testing, and ensuring conformance to the contract. The QCP subcontractor is responsible for executing the QCP, which includes checking and tracking material shipments, construction inspection, and on-site materials testing pertaining to predrilling and installation of steel sheet pile cutoff wall and instrumentation. This includes ensuring conformance with all sections and Appendices of the Special Note for Steel Sheet Pile Cutoff Wall.

The Department will be responsible for quality assurance, any off-site material testing, and inspection of all other items in the contract.

### **2.0 QUALITY CONTROL PLAN (QCP) PERSONNEL**

In addition to conforming to Subsection 113.03 of the Standard Specifications for Road and Bridge Construction, conform to the following requirements.

The QCP personnel's sole duty on the project will be implementing the QCP. Provide a QCP organization to be on-site at all times during the progress of work on the specified bid items, with complete authority to take any action necessary to ensure compliance with the Contract. These individuals must not be responsible for the production of the project and may not be directly employed by the general contractor, specialty subcontractor, or any other subcontractor responsible for any construction activities on the project.

The size and composition of the QCP organization may vary as the job progresses but at all times must be compatible with the level of effort and capability required by the Contract requirements.

#### **2.1 QCP Personnel:**

As part of the QCP organization, provide a QCP Manager and specialized inspection personnel to assist and be responsible to the QCP Manager and to be physically present at the construction site during all activities covered by the QCP. Provide a QCP organization with a minimum of four (4) persons, as follows:

- 1 QCP Manager and 1 Alternate QCP Manager.
- 1 Lead Inspector and 1 Alternate Lead Inspector.

The QCP subcontractor may determine the need for an Assistant Inspector(s)

based on the project size, complexity, and schedule. If the need is identified by the QCP subcontractor, submit a minimum of two (2) persons for the role of Assistant Inspector in addition to the four (4) persons listed above for QCP Manager and Lead Inspector.

Provide personnel with the experience and credentials below. For lead and assistant inspectors, education may be substituted for experience as follows:

- A Bachelors Degree in Engineering, Engineering Technology, Surveying, Construction Management, Geology, or other related technical field (at the discretion of the Department), will count for two (2) years of experience.
- An Associates Degree in Engineering Technology, Surveying, Construction Management or other related technical field (at the discretion of the Department), will count for one (1) year of experience.

#### **2.1.1 QCP Manager and Alternate QCP Manager(s):**

- Licensed Professional Engineer with a minimum of five (5) years of engineering experience in one or more of the following areas: construction, materials, geotechnical, or structure design. A Master's Degree in Engineering will count for one (1) year of experience.
- Experience on a minimum of three (3) projects involving the installation of temporary and/or permanent steel sheet pile walls; and experience on a minimum of two (2) projects involving the installation of sheet piling of similar size and complexity.
- Field construction engineering and/or inspection experience on a minimum of three (3) geotechnical-related projects and two (2) earthen or rockfill dam projects.

#### **2.1.2 Lead Inspector and Alternate Lead Inspector(s):**

- A minimum of five (5) years of construction and/or materials inspection experience showing evidence of supervisory experience on geotechnical-related projects with at least one (1) earthen or rockfill dam project.
- Construction and/or inspection experience on a minimum of two (2) projects involving the installation of temporary and/or permanent steel sheet pile walls; and experience on a minimum of one (1) project involving the installation of sheet piling of similar size and complexity.

#### **2.1.3 Assistant Inspectors:**

- A minimum of two (2) years of construction and/or materials inspection experience on geotechnical-related projects.
- Construction and/or inspection experience on a minimum of two (2) projects involving the installation of temporary and/or permanent steel sheet pile walls.

**2.2 QCP Personnel Duties:** Duties for the QCP personnel include but are not limited to the duties described below.

#### **2.2.1 QCP Manager and Alternate QCP Manager(s):**

The QCP Manager must be available during construction activities as indicated on

the QCP Plan. The QCP Manager may be removed from the project for noncompliance of quality products. Identify an Alternate QCP Manager in the QCP Plan to manage the QCP effort during the QCP Manager's absence. In no instance may the QCP Manager be absent and the Alternate QCP Manager serve for more than a 2-week period without written permission from the Engineer.

The QCP Manager must visit the project site at least one time during the first two (2) weeks of activities covered by the QCP. The QCP Manager and/or Alternate QCP Manager must review all QCP reports and documentation and submit letters to the Section Engineer documenting that they have done such.

### **2.2.2 Lead Inspector:**

The Lead Inspector or Alternate Lead Inspector must be present during all activities covered by the QCP. The Lead Inspector or Alternate Lead Inspector may request prior verbal approval for short absences from the Section Engineer or authorized representative. Approval will be subject to the experience and competency of the Assistant Inspector(s) on the project.

The Lead Inspector or Alternate Lead Inspector must review and sign all QCP reports and documentation prior to submittal to the Department.

## **3.0 QCP ORGANIZATION AND PROCEDURES**

The QCP must include the following:

- 3.1** A description of the quality control organization, including an organizational chart showing lines of authority and acknowledgment that the QCP staff shall implement at least a 3-phase control system for all aspects of work as specified herein. Phase I Preparatory Phase prior to beginning work; Phase II Construction Phase during execution of work; and Phase III Acceptance of Work.
- 3.2** The name, qualifications in resume format, duties responsibilities, authorities and certifications of the QCP Manager, Alternate QCP Manager, Lead Inspector and Alternate Lead Inspector and all other personnel.
- 3.3** A copy of the letter to the QCP Manager, signed by an authorized official of the Contractor which describes the responsibilities and delegates sufficient authority to adequately perform the functions of the QCP Manager, including authority to stop work which is not in compliance with the Contract. The QCP Manager must issue a letter of direction to all other various quality control representatives outlining duties, authorities and responsibilities. Include copies of these letters in the QCP.
- 3.4** Procedures for managing submittals and approvals, including but not limited to, source of materials, shop drawings and subletting requests.
- 3.5** Procedures for tracking construction deficiencies from identification through acceptable corrective action shall be on the QCP. These procedures will establish verifications that identified deficiencies have been corrected. A Non-Conformance Report (NCR) with each item numbered consecutively will be prepared and signed

by the QCP Manager at least weekly with recommended action, action taken and date corrected and filed separately.

- 3.6** The scope of the project, including a list of definable work activities. A definable work activity is separate and distinct from other tasks, requires specific crews or Subcontractors, has different specifications, and has separate control requirements. It could be identified by different crews or Subcontractors, or it could be work performed by the same trade in a different environment. Each activity must have construction tolerances and workmanship standards identified for use by construction crews and sampling/testing frequencies identified for the QCP personnel. This list will be agreed upon during the coordination meeting.

## **4.0 CONTROL**

QCP is the means by which the Contractor ensures, by way of the QCP subcontractor, the quality and construction, to include subcontractors and suppliers, and complies with the requirements of the Contract. At least 3 phases of control must be conducted by the QCP Manager for each definable work activity as follows:

- 4.1 Preparatory Phase:** Perform this phase prior to beginning work in an activity and include:

- 4.1.1** Review all the Contractor's Construction and Materials Submittals (including those required by the Special Note for Steel Sheet Pile Cutoff Walls, steel mill test reports, shop drawings, etc.) and provide written comments signed by the QCP Manager and Lead Inspector, to the Department within 14 calendar days; include specific recommendations for acceptance, acceptance with revisions, or non-acceptance of each submittal.
- 4.1.2** Prior to the start of each work activity, the Contractor and QCP Manager are encouraged to conduct a meeting with each crew to discuss in detail with each crew member the quality standards and workmanship identified in the Preparatory Phase. The importance and role of each crew member in achieving quality should be stressed.
- 4.1.3** A review of each paragraph of applicable specifications and Special Note.
- 4.1.4** A review of Contract and Construction Drawings.
- 4.1.5** A check to assure that all materials and equipment and subletting requests have been submitted, tested and approved.
- 4.1.6** A review of control inspection and testing requirement has been completed.
- 4.1.7** Examination of the work area to assure that all required preliminary work has been completed and complies with the Contract.
- 4.1.8** A physical examination to assure all required materials and equipment are on hand, and conform to approved shop drawings, or submitted data and are properly stored.
- 4.1.9** Notify the Department at least 24 hours prior to beginning grout work.
- 4.1.10** Preparation and approval of QCP staffing plan which corresponds to the working schedule.
- 4.1.11** Discussion of procedures for controlling quality of work, including repetitive deficiencies, with all contractor managers. Assure availability of appropriate documentation.

- 4.2 Construction Phase:** This phase includes the control measures from start to completion of a work activity.
- 4.2.1** Once the work zone has been established, check it to ensure conformance with the Contract requirements.
- 4.2.2** Monitor the producers' QC testing to ensure specifications and the requirements of the Special Note are being met.
- 4.2.3** Inspect, test and document in accordance with the Contract requirements to ensure quality standards are being identified, corrective actions taken and documented using the NCR. The Lead Inspector will be responsible for completing a Daily Work Report (DWR) to document each day's activities on the sheet piling wall work. Submit the DWR to the Section Engineer or representative no later than the close of the next workday. Verify quality standards as work progresses and make adjustments to the QCP.
- 4.3 Acceptance Phase:** This phase includes the control measures at the completion of any work activity.
- 4.3.1 Pre-final Inspection:** At the completion of any work activity or any increment thereof, the QCP Manager, Contractor, and Section Engineer (or representative) must conduct an inspection of the work and develop a "punch list" of items which do not conform to the approved drawings and specifications. Include such a list of deficiencies in the QCP documentation as required herein and include the estimated date by which the deficiencies will be corrected. The Contractor must ensure all items on this list have been corrected when the Final Inspection is scheduled.
- 4.3.2 Final Acceptance Inspection:** Final acceptance and any corrective work will be in accordance with the requirements of Section 105.12 of the Standard Specifications.

## **5.0 QCP SUBMITTAL**

- 5.1 Original Submittal for Approval:** Submit the QCP to the Engineer no later than thirty (30) calendar days after receiving Notice to Begin Work and at least thirty (30) calendar days before beginning a specific work activity. The Department will return the QCP to the Contractor within fourteen (14) calendar days after submittal with requests for changes to be performed by the QCP subcontractor, if applicable. The QCP subcontractor will then have seven (7) calendar days to correct and make changes and resubmit the QCP to the Engineer. Work cannot begin on an activity until after the QCP for that activity has been approved by the Engineer.
- 5.2 Subsequent Approvals:** Once the Contractor begins work under the approved QCP, continuously prosecute the work in accordance with the QCP. Changes must be approved by the Engineer prior to implementation.

## **6.0 DOCUMENTATION**

The Contractor and QCP personnel are advised that any deliberate action to the detriment of the QCP will be grounds for defaulting the Contract. This includes but is not limited to any deliberate omissions, deliberate cover-ups, or attempts by the Contractor to withhold information from the Department. Allow direct communication between QCP personnel

and the Department. The Contractor and any Subcontractor involved in such detrimental action will not be considered for future bids until requalified.

Maintain current records providing factual evidence that required quality control activities and tests have been performed, including the work of subcontractors and suppliers. Submit all records with the last pay estimate, including but not limited to sketch books, and as-built plans. The Department will make the final payment only after all documentation has been submitted.

**7.0 PAYMENT**

The Department will pay for Quality Control at the contract Lump Sum amount. The Department considers payment as full compensation for all labor and costs associated with performing Quality Control. In addition to conforming to Subsection 113.09 of the Standard Specifications for Road and Bridge Construction, there are the following requirements. The Department will include payment for 20 percent Lump Sum for the QCP in the first estimate. The Department will pay the remaining 80 percent based on the percentage of work completed.

Additional payment for the QCP will be made when time or extra work is added according to Subsection 104.03 for the bid items included in the QCP. Additional work added to other parts of the contract will not permit additional payment for the QCP.

<u>Code</u>	<u>Pay Item</u>	<u>Pay Unit</u>
2572	Quality Control	Lump Sum

**Special Note for Fixed Completion Date and  
Liquidated Damages  
KY 15  
Breathitt County  
Item No. 10-172.00**

This project has an overall Fixed Completion Date of April 30, 2023.

If all work is not completed by April 30 and KY 15 is not reopened to all 3 lanes of travel by April 30, Liquidated Damages will be charged as the sum of \$4,750 plus those damages as set forth in Section 108.09 until KY 15 is reopened to all 3 lanes of travel.

If KY 15 is reopened to all 3 lanes of travel by April 30, but the project is not complete by April 30, then Liquidated Damages will be charged as set forth in Section 108.09.

KENTUCKY TRANSPORTATION CABINET  
Department of Highways  
DIVISION OF RIGHT OF WAY & UTILITIESTC 62-226  
Rev. 01/2016  
Page 1 of 1

## RIGHT OF WAY CERTIFICATION

<input checked="" type="checkbox"/> Original	<input type="checkbox"/> Re-Certification	RIGHT OF WAY CERTIFICATION	
ITEM #	COUNTY	PROJECT # (STATE)	PROJECT # (FEDERAL)
10-172.00	Breathitt	FD52 097 0015 016-018	STP 0151(093)
PROJECT DESCRIPTION			
Emergency Repairs to Panbowl Dam			
<input checked="" type="checkbox"/> <b>No Additional Right of Way Required</b>			
Construction will be within the limits of the existing right of way. The right of way was acquired in accordance to FHWA regulations under the Uniform Relocation Assistance and Real Property Acquisitions Policy Act of 1970, as amended. No additional right of way or relocation assistance were required for this project.			
<input type="checkbox"/> <b>Condition # 1 (Additional Right of Way Required and Cleared)</b>			
All necessary right of way, including control of access rights when applicable, have been acquired including legal and physical possession. Trial or appeal of cases may be pending in court but legal possession has been obtained. There may be some improvements remaining on the right-of-way, but all occupants have vacated the lands and improvements, and KYTC has physical possession and the rights to remove, salvage, or demolish all improvements and enter on all land. Just Compensation has been paid or deposited with the court. All relocations have been relocated to decent, safe, and sanitary housing or that KYTC has made available to displaced persons adequate replacement housing in accordance with the provisions of the current FHWA directive.			
<input type="checkbox"/> <b>Condition # 2 (Additional Right of Way Required with Exception)</b>			
The right of way has not been fully acquired, the right to occupy and to use all rights-of-way required for the proper execution of the project has been acquired. Some parcels may be pending in court and on other parcels full legal possession has not been obtained, but right of entry has been obtained, the occupants of all lands and improvements have vacated, and KYTC has physical possession and right to remove, salvage, or demolish all improvements. Just Compensation has been paid or deposited with the court for most parcels. Just Compensation for all pending parcels will be paid or deposited with the court prior to AWARD of construction contract			
<input type="checkbox"/> <b>Condition # 3 (Additional Right of Way Required with Exception)</b>			
The acquisition or right of occupancy and use of a few remaining parcels are not complete and/or some parcels still have occupants. All remaining occupants have had replacement housing made available to them in accordance with 49 CFR 24.204. KYTC is hereby requesting authorization to advertise this project for bids and to proceed with bid letting even though the necessary right of way will not be fully acquired, and/or some occupants will not be relocated, and/or the just compensation will not be paid or deposited with the court for some parcels until after bid letting. KYTC will fully meet all the requirements outlined in 23 CFR 635.309(c)(3) and 49 CFR 24.102(j) and will expedite completion of all acquisitions, relocations, and full payments after bid letting and prior to AWARD of the construction contract or force account construction.			
Total Number of Parcels on Project		EXCEPTION (S) Parcel #	ANTICIPATED DATE OF POSSESSION WITH EXPLANATION
Number of Parcels That Have Been Acquired			
Signed Deed			
Condemnation			
Signed ROE			
Notes/ Comments (Text is limited. Use additional sheet if necessary.)			
LPA RW Project Manager		Right of Way Supervisor	
Printed Name		Printed Name	Edgar Raleigh II
Signature		Signature	
Date		Date	6/14/2022
Right of Way Director		FHWA	
Printed Name		Printed Name	
Signature		Signature	
Date		Date	

UTILITIES AND RAIL CERTIFICATION NOTE

Breathitt County  
STP 0151(093)  
FD52 097 0015 016-018  
Mile point: 16.000 TO 18.000  
Panbowl Lake drainage and safety improvements along KY 15.  
ITEM NUMBER: 10-172.00 Parent Project 10-376

PROJECT NOTES ON UTILITIES

These Impact note are specifically intended the Sheet Wall Construction section not the project in its entirety. Any work pertaining to these utility facilities is defined in the bid package and is to be carried out as instructed by the Kentucky Transportation Cabinet. The contractor will be responsible for any coordination or adjustments that are discussed or quantified in the proposal.

NOTE: DO NOT DISTURB THE FOLLOWING FACILITIES LOCATED WITHIN THE PROJECT DISTURB LIMITS

Kentucky Frontier Gas, LLC - Natural Gas

**\*The Contractor is fully responsible for protection of all utilities listed above\***

THE FOLLOWING FACILITY OWNERS ARE RELOCATING/ADJUSTING THEIR FACILITIES WITHIN THE PROJECT LIMITS AND WILL BE COMPLETE PRIOR TO CONSTRUCTION

- American Electric Power - Electric
- Thacker-Grigsby Telephone Company, Inc. - Telephone
- AT&T - KY - Telephone
- City of Jackson - Water

UTILITIES AND RAIL CERTIFICATION NOTE

Breathitt County  
STP 0151(093)  
FD52 097 0015 016-018  
Mile point: 16.000 TO 18.000  
Panbowl Lake drainage and safety improvements along KY 15.  
ITEM NUMBER: 10-172.00 Parent Project 10-376

THE FOLLOWING FACILITY OWNERS HAVE FACILITIES TO BE RELOCATED/ADJUSTED BY THE OWNER OR THEIR SUBCONTRACTOR AND IS TO BE COORDINATED WITH THE ROAD CONTRACT

Not Applicable

THE FOLLOWING FACILITY OWNERS HAVE FACILITIES TO BE RELOCATED/ADJUSTED BY THE ROAD CONTRACTOR AS INCLUDED IN THIS CONTRACT

RAIL COMPANIES HAVE FACILITIES IN CONJUNCTION WITH THIS PROJECT AS NOTED

☒ No Rail Involvement    ☐ Rail Involved    ☐ Rail Adjacent

UTILITIES AND RAIL CERTIFICATION NOTE

Breathitt County  
STP 0151(093)  
FD52 097 0015 016-018  
Mile point: 16.000 TO 18.000  
Panbowl Lake drainage and safety improvements along KY 15.  
ITEM NUMBER: 10-172.00 Parent Project 10-376

AREA FACILITY OWNER CONTACT LIST

Facility Owner	Address	Contact Name	Phone	Email
American Electric Power - Electric	12333 Kevin Avenue Ashland KY 41102	Ellis McKnight	6064361329	ermcknight@aep.com
AT&T - KY - Telephone	102 Walters Rd Pikeville KY 41501	Jack Salyer	6064249328	js2299@att.com
City of Jackson - Sewer	333 Broadway Jackson KY 41339	Laura Thomas	6066667069	angiecombs@setel.com
City of Jackson - Water	333 Broadway Jackson KY 41339	Laura Thomas	6066667069	angiecombs@setel.com
Kentucky Frontier Gas, LLC - Natural Gas	2963 Route 321 N. Prestonsburg KY 41653	Mike Harris	6068862431	hpowers@kyfrontiergas.com
Thacker-Grigsby Telephone Company, Inc. - Telephone	PO Box 789 Hindman KY 41822	Freddie Williams	6067859500	f.williams@tgtel.com

**10-172.00**  
**SPECIAL NOTE FOR PRE-BID CONFERENCE**

The Department will conduct a Pre-Bid Conference and Site Visit of the subject project on **Tuesday, August 9, 2022 from 1:00 PM to 3:00 PM** at:

Kentucky Transportation Cabinet District 10 Office  
473 Highway 15 South  
Jackson, Kentucky 41339

The meeting will be recorded.

Any company that is interested in bidding on the subject project or being part of a joint venture must be represented at the conference and site visit by at least **one person of sufficient authority to bind the company**. No individual can represent more than one company. At the conference a roster will be taken of the representatives present. **Only companies represented at the conference and site visit will be eligible to have their bids opened at the date of letting.**

The purpose of the conference and site visit is to familiarize all prospective bidders with the contract requirements of the contract.

Department of Highways officials present at the conference will answer questions concerning the projects.

**PART II**

**SPECIFICATIONS AND STANDARD DRAWINGS**

### **SPECIFICATIONS REFERENCE**

Any reference in the plans or proposal to previous editions of the *Standard Specifications for Road and Bridge Construction* and *Standard Drawings* are superseded by *Standard Specifications for Road and Bridge Construction, Edition of 2019* and *Standard Drawings, Edition of 2020*.

## **SUPPLEMENTAL SPECIFICATIONS**

The contractor shall use the Supplemental Specifications that are effective at the time of letting.  
The Supplemental Specifications can be found at the following link:

<http://transportation.ky.gov/Construction/Pages/Kentucky-Standard-Specifications.aspx>

## **SPECIAL NOTE FOR PORTABLE CHANGEABLE MESSAGE SIGNS**

This Special Note will apply when indicated on the plans or in the proposal.

**1.0 DESCRIPTION.** Furnish, install, operate, and maintain variable message signs at the locations shown on the plans or designated by the Engineer. Remove and retain possession of variable message signs when they are no longer needed on the project.

## **2.0 MATERIALS.**

**2.1 General.** Use LED Variable Message Signs Class I, II, or III, as appropriate, from the Department's List of Approved Materials.

Unclassified signs may be submitted for approval by the Engineer. The Engineer may require a daytime and nighttime demonstration. The Engineer will make a final decision within 30 days after all required information is received.

**2.2 Sign and Controls.** All signs must:

- 1) Provide 3-line messages with each line being 8 characters long and at least 18 inches tall. Each character comprises 35 pixels.
- 2) Provide at least 40 preprogrammed messages available for use at any time. Provide for quick and easy change of the displayed message; editing of the message; and additions of new messages.
- 3) Provide a controller consisting of:
  - a) Keyboard or keypad.
  - b) Readout that mimics the actual sign display. (When LCD or LCD type readout is used, include backlighting and heating or otherwise arrange for viewing in cold temperatures.)
  - c) Non-volatile memory or suitable memory with battery backup for storing pre-programmed messages.
  - d) Logic circuitry to control the sequence of messages and flash rate.
- 4) Provide a serial interface that is capable of supporting complete remote control ability through land line and cellular telephone operation. Include communication software capable of immediately updating the message, providing complete sign status, and allowing message library queries and updates.
- 5) Allow a single person easily to raise the sign to a satisfactory height above the pavement during use, and lower the sign during travel.
- 6) Be Highway Orange on all exterior surfaces of the trailer, supports, and controller cabinet.
- 7) Provide operation in ambient temperatures from -30 to + 120 degrees Fahrenheit during snow, rain and other inclement weather.
- 8) Provide the driver board as part of a module. All modules are interchangeable, and have plug and socket arrangements for disconnection and reconnection. Printed circuit boards associated with driver boards have a conformable coating to protect against moisture.
- 9) Provide a sign case sealed against rain, snow, dust, insects, etc. The lens is UV stabilized clear plastic (polycarbonate, acrylic, or other approved material) angled to prevent glare.
- 10) Provide a flat black UV protected coating on the sign hardware, character PCB, and appropriate lens areas.
- 11) Provide a photocell control to provide automatic dimming.

11

- 12) Allow an on-off flashing sequence at an adjustable rate.
- 13) Provide a sight to aim the message.
- 14) Provide a LED display color of approximately 590 nm amber.
- 15) Provide a controller that is password protected.
- 16) Provide a security device that prevents unauthorized individuals from accessing the controller.
- 17) Provide the following 3-line messages preprogrammed and available for use when the sign unit begins operation:

/KEEP/RIGHT/⇒⇒⇒/	/MIN/SPEED/**MPH/
/KEEP/LEFT/⇐⇐⇐/	/ICY/BRIDGE/AHEAD/ /ONE
/LOOSE/GRAVEL/AHEAD/	LANE/BRIDGE/AHEAD/
/RD WORK/NEXT/**MILES/	/ROUGH/ROAD/AHEAD/
/TWO WAY/TRAFFIC/AHEAD/	/MERGING/TRAFFIC/AHEAD/
/PAINT/CREW/AHEAD/	/NEXT/**/MILES/
/REDUCE/SPEED/**MPH/	/HEAVY/TRAFFIC/AHEAD/
/BRIDGE/WORK/**0 FT/	/SPEED/LIMIT/**MPH/
/MAX/SPEED/**MPH/	/BUMP/AHEAD/
/SURVEY/PARTY/AHEAD/	/TWO/WAY/TRAFFIC/

\*Insert numerals as directed by the Engineer.

Add other messages during the project when required by the Engineer.

### 2.3 Power.

- 1) Design solar panels to yield 10 percent or greater additional charge than sign consumption. Provide direct wiring for operation of the sign or arrow board from an external power source to provide energy backup for 21 days without sunlight and an on-board system charger with the ability to recharge completely discharged batteries in 24 hours.

**3.0 CONSTRUCTION.** Furnish and operate the variable message signs as designated on the plans or by the Engineer. Ensure the bottom of the message panel is a minimum of 7 feet above the roadway in urban areas and 5 feet above in rural areas when operating. Use Class I, II, or III signs on roads with a speed limit less than 55 mph. Use Class I or II signs on roads with speed limits 55 mph or greater.

Maintain the sign in proper working order, including repair of any damage done by others, until completion of the project. When the sign becomes inoperative, immediately repair or replace the sign. Repetitive problems with the same unit will be cause for rejection and replacement.

Use only project related messages and messages directed by the Engineer, unnecessary messages lessen the impact of the sign. Ensure the message is displayed in either one or 2 phases with each phase having no more than 3 lines of text. When no message is needed, but it is necessary to know if the sign is operable, flash only a pixel.

When the sign is not needed, move it outside the clear zone or where the Engineer directs. Variable Message Signs are the property of the Contractor and shall be removed from the project when no longer needed. The Department will not assume ownership of these signs.

**4.0 MEASUREMENT.** The final quantity of Variable Message Sign will be

11  
the actual number of individual signs acceptably furnished and operated during the project. The Department will not measure signs replaced due to damage or rejection.

**5.0 PAYMENT.** The Department will pay for the Variable Message Signs at the unit price each. The Department will not pay for signs replaced due to damage or rejection. Payment is full compensation for furnishing all materials, labor, equipment, and service necessary to, operate, move, repair, and maintain or replace the variable message signs. The Department will make payment for the completed and accepted quantities under the following:

<u>Code</u>	<u>Pay Item</u>	<u>Pay Unit</u>
02671	Portable Changeable Message Sign	Each

Effective June 15, 2012

## **PART III**

### **EMPLOYMENT, WAGE AND RECORD REQUIREMENTS**

FHWA-1273 -- Revised July 5, 2022

REQUIRED CONTRACT PROVISIONS  
FEDERAL-AID CONSTRUCTION CONTRACTS

- I. General
- II. Nondiscrimination
- III. Non-segregated Facilities
- IV. Davis-Bacon and Related Act Provisions
- V. Contract Work Hours and Safety Standards Act Provisions
- VI. Subletting or Assigning the Contract
- VII. Safety: Accident Prevention
- VIII. False Statements Concerning Highway Projects
- IX. Implementation of Clean Air Act and Federal Water Pollution Control Act
- X. Certification Regarding Debarment, Suspension, Ineligibility and Voluntary Exclusion
- XI. Certification Regarding Use of Contract Funds for Lobbying
- XII. Use of United States-Flag Vessels:

ATTACHMENTS

A. Employment and Materials Preference for Appalachian Development Highway System or Appalachian Local Access Road Contracts (included in Appalachian contracts only)

I. GENERAL

1. Form FHWA-1273 must be physically incorporated in each construction contract funded under title 23, United States Code, as required in 23 CFR 633.102(b) (excluding emergency contracts solely intended for debris removal). The contractor (or subcontractor) must insert this form in each subcontract and further require its inclusion in all lower tier subcontracts (excluding purchase orders, rental agreements and other agreements for supplies or services). 23 CFR 633.102(e).

The applicable requirements of Form FHWA-1273 are incorporated by reference for work done under any purchase order, rental agreement or agreement for other services. The prime contractor shall be responsible for compliance by any subcontractor, lower-tier subcontractor or service provider. 23 CFR 633.102(e).

Form FHWA-1273 must be included in all Federal-aid design-build contracts, in all subcontracts and in lower tier subcontracts (excluding subcontracts for design services, purchase orders, rental agreements and other agreements for supplies or services) in accordance with 23 CFR 633.102. The design-builder shall be responsible for compliance by any subcontractor, lower-tier subcontractor or service provider.

Contracting agencies may reference Form FHWA-1273 in solicitation-for-bids or request-for-proposals documents, however, the Form FHWA-1273 must be physically incorporated (not referenced) in all contracts, subcontracts and lower-tier subcontracts (excluding purchase orders, rental agreements and other agreements for supplies or services related to a construction contract). 23 CFR 633.102(b).

2. Subject to the applicability criteria noted in the following sections, these contract provisions shall apply to all work

performed on the contract by the contractor's own organization and with the assistance of workers under the contractor's immediate superintendence and to all work performed on the contract by piecework, station work, or by subcontract. 23 CFR 633.102(d).

3. A breach of any of the stipulations contained in these Required Contract Provisions may be sufficient grounds for withholding of progress payments, withholding of final payment, termination of the contract, suspension / debarment or any other action determined to be appropriate by the contracting agency and FHWA.

4. Selection of Labor: During the performance of this contract, the contractor shall not use convict labor for any purpose within the limits of a construction project on a Federal-aid highway unless it is labor performed by convicts who are on parole, supervised release, or probation. 23 U.S.C. 114(b). The term Federal-aid highway does not include roadways functionally classified as local roads or rural minor collectors. 23 U.S.C. 101(a).

II. NONDISCRIMINATION (23 CFR 230.107(a); 23 CFR Part 230, Subpart A, Appendix A; EO 11246)

The provisions of this section related to 23 CFR Part 230, Subpart A, Appendix A are applicable to all Federal-aid construction contracts and to all related construction subcontracts of \$10,000 or more. The provisions of 23 CFR Part 230 are not applicable to material supply, engineering, or architectural service contracts.

In addition, the contractor and all subcontractors must comply with the following policies: Executive Order 11246, 41 CFR Part 60, 29 CFR Parts 1625-1627, 23 U.S.C. 140, Section 504 of the Rehabilitation Act of 1973, as amended (29 U.S.C. 794), Title VI of the Civil Rights Act of 1964, as amended (42 U.S.C. 2000d et seq.), and related regulations including 49 CFR Parts 21, 26, and 27; and 23 CFR Parts 200, 230, and 633.

The contractor and all subcontractors must comply with: the requirements of the Equal Opportunity Clause in 41 CFR 60-1.4(b) and, for all construction contracts exceeding \$10,000, the Standard Federal Equal Employment Opportunity Construction Contract Specifications in 41 CFR 60-4.3.

Note: The U.S. Department of Labor has exclusive authority to determine compliance with Executive Order 11246 and the policies of the Secretary of Labor including 41 CFR Part 60, and 29 CFR Parts 1625-1627. The contracting agency and the FHWA have the authority and the responsibility to ensure compliance with 23 U.S.C. 140, Section 504 of the Rehabilitation Act of 1973, as amended (29 U.S.C. 794), and Title VI of the Civil Rights Act of 1964, as amended (42 U.S.C. 2000d et seq.), and related regulations including 49 CFR Parts 21, 26, and 27; and 23 CFR Parts 200, 230, and 633.

The following provision is adopted from 23 CFR Part 230, Subpart A, Appendix A, with appropriate revisions to conform to the U.S. Department of Labor (US DOL) and FHWA requirements.

**1. Equal Employment Opportunity:** Equal Employment Opportunity (EEO) requirements not to discriminate and to take affirmative action to assure equal opportunity as set forth under laws, executive orders, rules, regulations (see 28 CFR Part 35, 29 CFR Part 1630, 29 CFR Parts 1625-1627, 41 CFR Part 60 and 49 CFR Part 27) and orders of the Secretary of Labor as modified by the provisions prescribed herein, and imposed pursuant to 23 U.S.C. 140, shall constitute the EEO and specific affirmative action standards for the contractor's project activities under this contract. The provisions of the Americans with Disabilities Act of 1990 (42 U.S.C. 12101 et seq.) set forth under 28 CFR Part 35 and 29 CFR Part 1630 are incorporated by reference in this contract. In the execution of this contract, the contractor agrees to comply with the following minimum specific requirement activities of EEO:

a. The contractor will work with the contracting agency and the Federal Government to ensure that it has made every good faith effort to provide equal opportunity with respect to all of its terms and conditions of employment and in their review of activities under the contract. 23 CFR 230.409 (g)(4) & (5).

b. The contractor will accept as its operating policy the following statement:

"It is the policy of this Company to assure that applicants are employed, and that employees are treated during employment, without regard to their race, religion, sex, sexual orientation, gender identity, color, national origin, age or disability. Such action shall include: employment, upgrading, demotion, or transfer; recruitment or recruitment advertising; layoff or termination; rates of pay or other forms of compensation; and selection for training, including apprenticeship, pre-apprenticeship, and/or on-the-job training."

**2. EEO Officer:** The contractor will designate and make known to the contracting officers an EEO Officer who will have the responsibility for and must be capable of effectively administering and promoting an active EEO program and who must be assigned adequate authority and responsibility to do so.

**3. Dissemination of Policy:** All members of the contractor's staff who are authorized to hire, supervise, promote, and discharge employees, or who recommend such action or are substantially involved in such action, will be made fully cognizant of and will implement the contractor's EEO policy and contractual responsibilities to provide EEO in each grade and classification of employment. To ensure that the above agreement will be met, the following actions will be taken as a minimum:

a. Periodic meetings of supervisory and personnel office employees will be conducted before the start of work and then not less often than once every six months, at which time the contractor's EEO policy and its implementation will be reviewed and explained. The meetings will be conducted by the EEO Officer or other knowledgeable company official.

b. All new supervisory or personnel office employees will be given a thorough indoctrination by the EEO Officer, covering all major aspects of the contractor's EEO obligations within thirty days following their reporting for duty with the contractor.

c. All personnel who are engaged in direct recruitment for the project will be instructed by the EEO Officer in the contractor's procedures for locating and hiring minorities and women.

d. Notices and posters setting forth the contractor's EEO policy will be placed in areas readily accessible to employees, applicants for employment and potential employees.

e. The contractor's EEO policy and the procedures to implement such policy will be brought to the attention of employees by means of meetings, employee handbooks, or other appropriate means.

**4. Recruitment:** When advertising for employees, the contractor will include in all advertisements for employees the notation: "An Equal Opportunity Employer." All such advertisements will be placed in publications having a large circulation among minorities and women in the area from which the project work force would normally be derived.

a. The contractor will, unless precluded by a valid bargaining agreement, conduct systematic and direct recruitment through public and private employee referral sources likely to yield qualified minorities and women. To meet this requirement, the contractor will identify sources of potential minority group employees and establish with such identified sources procedures whereby minority and women applicants may be referred to the contractor for employment consideration.

b. In the event the contractor has a valid bargaining agreement providing for exclusive hiring hall referrals, the contractor is expected to observe the provisions of that agreement to the extent that the system meets the contractor's compliance with EEO contract provisions. Where implementation of such an agreement has the effect of discriminating against minorities or women, or obligates the contractor to do the same, such implementation violates Federal nondiscrimination provisions.

c. The contractor will encourage its present employees to refer minorities and women as applicants for employment. Information and procedures with regard to referring such applicants will be discussed with employees.

**5. Personnel Actions:** Wages, working conditions, and employee benefits shall be established and administered, and personnel actions of every type, including hiring, upgrading, promotion, transfer, demotion, layoff, and termination, shall be taken without regard to race, color, religion, sex, sexual orientation, gender identity, national origin, age or disability. The following procedures shall be followed:

a. The contractor will conduct periodic inspections of project sites to ensure that working conditions and employee facilities do not indicate discriminatory treatment of project site personnel.

b. The contractor will periodically evaluate the spread of wages paid within each classification to determine any evidence of discriminatory wage practices.

c. The contractor will periodically review selected personnel actions in depth to determine whether there is evidence of discrimination. Where evidence is found, the contractor will promptly take corrective action. If the review indicates that the discrimination may extend beyond the actions reviewed, such corrective action shall include all affected persons.

d. The contractor will promptly investigate all complaints of alleged discrimination made to the contractor in connection with its obligations under this contract, will attempt to resolve such complaints, and will take appropriate corrective action

within a reasonable time. If the investigation indicates that the discrimination may affect persons other than the complainant, such corrective action shall include such other persons. Upon completion of each investigation, the contractor will inform every complainant of all of their avenues of appeal.

**6. Training and Promotion:**

- a. The contractor will assist in locating, qualifying, and increasing the skills of minorities and women who are applicants for employment or current employees. Such efforts should be aimed at developing full journey level status employees in the type of trade or job classification involved.
- b. Consistent with the contractor's work force requirements and as permissible under Federal and State regulations, the contractor shall make full use of training programs (i.e., apprenticeship and on-the-job training programs for the geographical area of contract performance). In the event a special provision for training is provided under this contract, this subparagraph will be superseded as indicated in the special provision. The contracting agency may reserve training positions for persons who receive welfare assistance in accordance with 23 U.S.C. 140(a).
- c. The contractor will advise employees and applicants for employment of available training programs and entrance requirements for each.
- d. The contractor will periodically review the training and promotion potential of employees who are minorities and women and will encourage eligible employees to apply for such training and promotion.

**7. Unions:** If the contractor relies in whole or in part upon unions as a source of employees, the contractor will use good faith efforts to obtain the cooperation of such unions to increase opportunities for minorities and women. 23 CFR 230.409. Actions by the contractor, either directly or through a contractor's association acting as agent, will include the procedures set forth below:

- a. The contractor will use good faith efforts to develop, in cooperation with the unions, joint training programs aimed toward qualifying more minorities and women for membership in the unions and increasing the skills of minorities and women so that they may qualify for higher paying employment.
- b. The contractor will use good faith efforts to incorporate an EEO clause into each union agreement to the end that such union will be contractually bound to refer applicants without regard to their race, color, religion, sex, sexual orientation, gender identity, national origin, age, or disability.
- c. The contractor is to obtain information as to the referral practices and policies of the labor union except that to the extent such information is within the exclusive possession of the labor union and such labor union refuses to furnish such information to the contractor, the contractor shall so certify to the contracting agency and shall set forth what efforts have been made to obtain such information.
- d. In the event the union is unable to provide the contractor with a reasonable flow of referrals within the time limit set forth in the collective bargaining agreement, the contractor will, through independent recruitment efforts, fill the employment vacancies without regard to race, color, religion, sex, sexual orientation, gender identity, national origin, age, or disability; making full efforts to obtain qualified and/or qualifiable minorities and women. The failure of a union to provide

sufficient referrals (even though it is obligated to provide exclusive referrals under the terms of a collective bargaining agreement) does not relieve the contractor from the requirements of this paragraph. In the event the union referral practice prevents the contractor from meeting the obligations pursuant to Executive Order 11246, as amended, and these special provisions, such contractor shall immediately notify the contracting agency.

**8. Reasonable Accommodation for Applicants / Employees with Disabilities:** The contractor must be familiar with the requirements for and comply with the Americans with Disabilities Act and all rules and regulations established thereunder. Employers must provide reasonable accommodation in all employment activities unless to do so would cause an undue hardship.

**9. Selection of Subcontractors, Procurement of Materials and Leasing of Equipment:** The contractor shall not discriminate on the grounds of race, color, religion, sex, sexual orientation, gender identity, national origin, age, or disability in the selection and retention of subcontractors, including procurement of materials and leases of equipment. The contractor shall take all necessary and reasonable steps to ensure nondiscrimination in the administration of this contract.

- a. The contractor shall notify all potential subcontractors, suppliers, and lessors of their EEO obligations under this contract.
- b. The contractor will use good faith efforts to ensure subcontractor compliance with their EEO obligations.

**10. Assurances Required:**

- a. The requirements of 49 CFR Part 26 and the State DOT's FHWA-approved Disadvantaged Business Enterprise (DBE) program are incorporated by reference.
- b. The contractor, subrecipient or subcontractor shall not discriminate on the basis of race, color, national origin, or sex in the performance of this contract. The contractor shall carry out applicable requirements of 49 CFR part 26 in the award and administration of DOT-assisted contracts. Failure by the contractor to carry out these requirements is a material breach of this contract, which may result in the termination of this contract or such other remedy as the recipient deems appropriate, which may include, but is not limited to:
  - (1) Withholding monthly progress payments;
  - (2) Assessing sanctions;
  - (3) Liquidated damages; and/or
  - (4) Disqualifying the contractor from future bidding as non-responsible.
- c. The Title VI and nondiscrimination provisions of U.S. DOT Order 1050.2A at Appendixes A and E are incorporated by reference. 49 CFR Part 21.

**11. Records and Reports:** The contractor shall keep such records as necessary to document compliance with the EEO requirements. Such records shall be retained for a period of three years following the date of the final payment to the contractor for all contract work and shall be available at reasonable times and places for inspection by authorized representatives of the contracting agency and the FHWA.

- a. The records kept by the contractor shall document the following:

- (1) The number and work hours of minority and non-minority group members and women employed in each work classification on the project;
- (2) The progress and efforts being made in cooperation with unions, when applicable, to increase employment opportunities for minorities and women; and
- (3) The progress and efforts being made in locating, hiring, training, qualifying, and upgrading minorities and women.

b. The contractors and subcontractors will submit an annual report to the contracting agency each July for the duration of the project indicating the number of minority, women, and non-minority group employees currently engaged in each work classification required by the contract work. This information is to be reported on [Form FHWA-1391](#). The staffing data should represent the project work force on board in all or any part of the last payroll period preceding the end of July. If on-the-job training is being required by special provision, the contractor will be required to collect and report training data. The employment data should reflect the work force on board during all or any part of the last payroll period preceding the end of July.

III. NONSEGREGATED FACILITIES

This provision is applicable to all Federal-aid construction contracts and to all related construction subcontracts of more than \$10,000. 41 CFR 60-1.5.

As prescribed by 41 CFR 60-1.8, the contractor must ensure that facilities provided for employees are provided in such a manner that segregation on the basis of race, color, religion, sex, sexual orientation, gender identity, or national origin cannot result. The contractor may neither require such segregated use by written or oral policies nor tolerate such use by employee custom. The contractor's obligation extends further to ensure that its employees are not assigned to perform their services at any location under the contractor's control where the facilities are segregated. The term "facilities" includes waiting rooms, work areas, restaurants and other eating areas, time clocks, restrooms, washrooms, locker rooms and other storage or dressing areas, parking lots, drinking fountains, recreation or entertainment areas, transportation, and housing provided for employees. The contractor shall provide separate or single-user restrooms and necessary dressing or sleeping areas to assure privacy between sexes.

IV. DAVIS-BACON AND RELATED ACT PROVISIONS

This section is applicable to all Federal-aid construction projects exceeding \$2,000 and to all related subcontracts and lower-tier subcontracts (regardless of subcontract size), in accordance with 29 CFR 5.5. The requirements apply to all projects located within the right-of-way of a roadway that is functionally classified as Federal-aid highway. 23 U.S.C. 113. This excludes roadways functionally classified as local roads or rural minor collectors, which are exempt. 23 U.S.C. 101. Where applicable law requires that projects be treated as a project on a Federal-aid highway, the provisions of this subpart will apply regardless of the location of the project. Examples include: Surface Transportation Block Grant Program projects funded under 23 U.S.C. 133 [excluding recreational trails projects], the Nationally Significant Freight and Highway

Projects funded under 23 U.S.C. 117, and National Highway Freight Program projects funded under 23 U.S.C. 167.

The following provisions are from the U.S. Department of Labor regulations in 29 CFR 5.5 "Contract provisions and related matters" with minor revisions to conform to the FHWA-1273 format and FHWA program requirements.

1. Minimum wages (29 CFR 5.5)

a. All laborers and mechanics employed or working upon the site of the work, will be paid unconditionally and not less often than once a week, and without subsequent deduction or rebate on any account (except such payroll deductions as are permitted by regulations issued by the Secretary of Labor under the Copeland Act (29 CFR part 3)), the full amount of wages and bona fide fringe benefits (or cash equivalents thereof) due at time of payment computed at rates not less than those contained in the wage determination of the Secretary of Labor which is attached hereto and made a part hereof, regardless of any contractual relationship which may be alleged to exist between the contractor and such laborers and mechanics.

Contributions made or costs reasonably anticipated for bona fide fringe benefits under section 1(b)(2) of the Davis-Bacon Act on behalf of laborers or mechanics are considered wages paid to such laborers or mechanics, subject to the provisions of paragraph 1.d. of this section; also, regular contributions made or costs incurred for more than a weekly period (but not less often than quarterly) under plans, funds, or programs which cover the particular weekly period, are deemed to be constructively made or incurred during such weekly period. Such laborers and mechanics shall be paid the appropriate wage rate and fringe benefits on the wage determination for the classification of work actually performed, without regard to skill, except as provided in 29 CFR 5.5(a)(4). Laborers or mechanics performing work in more than one classification may be compensated at the rate specified for each classification for the time actually worked therein: Provided, That the employer's payroll records accurately set forth the time spent in each classification in which work is performed. The wage determination (including any additional classification and wage rates conformed under paragraph 1.b. of this section) and the Davis-Bacon poster (WH-1321) shall be posted at all times by the contractor and its subcontractors at the site of the work in a prominent and accessible place where it can be easily seen by the workers.

- b.(1) The contracting officer shall require that any class of laborers or mechanics, including helpers, which is not listed in the wage determination and which is to be employed under the contract shall be classified in conformance with the wage determination. The contracting officer shall approve an additional classification and wage rate and fringe benefits therefore only when the following criteria have been met:
  - (i) The work to be performed by the classification requested is not performed by a classification in the wage determination; and
  - (ii) The classification is utilized in the area by the construction industry; and

(iii) The proposed wage rate, including any bona fide fringe benefits, bears a reasonable relationship to the wage rates contained in the wage determination.

(2) If the contractor and the laborers and mechanics to be employed in the classification (if known), or their representatives, and the contracting officer agree on the classification and wage rate (including the amount designated for fringe benefits where appropriate), a report of the action taken shall be sent by the contracting officer to the Administrator of the Wage and Hour Division, U.S. Department of Labor, Washington, DC 20210. The Administrator, or an authorized representative, will approve, modify, or disapprove every additional classification action within 30 days of receipt and so advise the contracting officer or will notify the contracting officer within the 30-day period that additional time is necessary.

(3) In the event the contractor, the laborers or mechanics to be employed in the classification or their representatives, and the contracting officer do not agree on the proposed classification and wage rate (including the amount designated for fringe benefits, where appropriate), the contracting officer shall refer the questions, including the views of all interested parties and the recommendation of the contracting officer, to the Administrator for determination. The Administrator, or an authorized representative, will issue a determination within 30 days of receipt and so advise the contracting officer or will notify the contracting officer within the 30-day period that additional time is necessary.

(4) The wage rate (including fringe benefits where appropriate) determined pursuant to paragraphs 1.b.(2) or 1.b.(3) of this section, shall be paid to all workers performing work in the classification under this contract from the first day on which work is performed in the classification.

c. Whenever the minimum wage rate prescribed in the contract for a class of laborers or mechanics includes a fringe benefit which is not expressed as an hourly rate, the contractor shall either pay the benefit as stated in the wage determination or shall pay another bona fide fringe benefit or an hourly cash equivalent thereof.

d. If the contractor does not make payments to a trustee or other third person, the contractor may consider as part of the wages of any laborer or mechanic the amount of any costs reasonably anticipated in providing bona fide fringe benefits under a plan or program. Provided, That the Secretary of Labor has found, upon the written request of the contractor, that the applicable standards of the Davis-Bacon Act have been met. The Secretary of Labor may require the contractor to set aside in a separate account assets for the meeting of obligations under the plan or program.

## 2. Withholding (29 CFR 5.5)

The contracting agency shall upon its own action or upon written request of an authorized representative of the Department of Labor, withhold or cause to be withheld from the contractor under this contract, or any other Federal contract with the same prime contractor, or any other federally-assisted contract subject to Davis-Bacon prevailing wage requirements, which is held by the same prime contractor, so much of the accrued payments or advances as may be considered necessary to pay laborers and mechanics,

including apprentices, trainees, and helpers, employed by the contractor or any subcontractor the full amount of wages required by the contract. In the event of failure to pay any laborer or mechanic, including any apprentice, trainee, or helper, employed or working on the site of the work, all or part of the wages required by the contract, the contracting agency may, after written notice to the contractor, take such action as may be necessary to cause the suspension of any further payment, advance, or guarantee of funds until such violations have ceased.

## 3. Payrolls and basic records (29 CFR 5.5)

a. Payrolls and basic records relating thereto shall be maintained by the contractor during the course of the work and preserved for a period of three years thereafter for all laborers and mechanics working at the site of the work. Such records shall contain the name, address, and social security number of each such worker, his or her correct classification, hourly rates of wages paid (including rates of contributions or costs anticipated for bona fide fringe benefits or cash equivalents thereof of the types described in section 1(b)(2)(B) of the Davis-Bacon Act), daily and weekly number of hours worked, deductions made and actual wages paid. Whenever the Secretary of Labor has found under 29 CFR 5.5(a)(1)(iv) that the wages of any laborer or mechanic include the amount of any costs reasonably anticipated in providing benefits under a plan or program described in section 1(b)(2)(B) of the Davis-Bacon Act, the contractor shall maintain records which show that the commitment to provide such benefits is enforceable, that the plan or program is financially responsible, and that the plan or program has been communicated in writing to the laborers or mechanics affected, and records which show the costs anticipated or the actual cost incurred in providing such benefits. Contractors employing apprentices or trainees under approved programs shall maintain written evidence of the registration of apprenticeship programs and certification of trainee programs, the registration of the apprentices and trainees, and the ratios and wage rates prescribed in the applicable programs.

b.(1) The contractor shall submit weekly for each week in which any contract work is performed a copy of all payrolls to the contracting agency. The payrolls submitted shall set out accurately and completely all of the information required to be maintained under 29 CFR 5.5(a)(3)(i), except that full social security numbers and home addresses shall not be included on weekly transmittals. Instead the payrolls shall only need to include an individually identifying number for each employee (e.g., the last four digits of the employee's social security number). The required weekly payroll information may be submitted in any form desired. Optional Form WH-347 is available for this purpose from the Wage and Hour Division Web site. The prime contractor is responsible for the submission of copies of payrolls by all subcontractors. Contractors and subcontractors shall maintain the full social security number and current address of each covered worker, and shall provide them upon request to the contracting agency for transmission to the State DOT, the FHWA or the Wage and Hour Division of the Department of Labor for purposes of an investigation or audit of compliance with prevailing wage requirements. It is not a violation of this section for a prime contractor to require a subcontractor to provide addresses and social security numbers to the prime contractor for its own records, without weekly submission to the contracting agency.

(2) Each payroll submitted shall be accompanied by a "Statement of Compliance," signed by the contractor or

subcontractor or his or her agent who pays or supervises the payment of the persons employed under the contract and shall certify the following:

- (i) That the payroll for the payroll period contains the information required to be provided under 29 CFR 5.5(a)(3)(ii), the appropriate information is being maintained under 29 CFR 5.5(a)(3)(i), and that such information is correct and complete;
  - (ii) That each laborer or mechanic (including each helper, apprentice, and trainee) employed on the contract during the payroll period has been paid the full weekly wages earned, without rebate, either directly or indirectly, and that no deductions have been made either directly or indirectly from the full wages earned, other than permissible deductions as set forth in 29 CFR part 3;
  - (iii) That each laborer or mechanic has been paid not less than the applicable wage rates and fringe benefits or cash equivalents for the classification of work performed, as specified in the applicable wage determination incorporated into the contract.
- (3) The weekly submission of a properly executed certification set forth on the reverse side of Optional Form WH-347 shall satisfy the requirement for submission of the "Statement of Compliance" required by paragraph 3.b.(2) of this section.
- (4) The falsification of any of the above certifications may subject the contractor or subcontractor to civil or criminal prosecution under 18 U.S.C. 1001 and 31 U.S.C. 231.

c. The contractor or subcontractor shall make the records required under paragraph 3.a. of this section available for inspection, copying, or transcription by authorized representatives of the contracting agency, the State DOT, the FHWA, or the Department of Labor, and shall permit such representatives to interview employees during working hours on the job. If the contractor or subcontractor fails to submit the required records or to make them available, the FHWA may, after written notice to the contractor, the contracting agency or the State DOT, take such action as may be necessary to cause the suspension of any further payment, advance, or guarantee of funds. Furthermore, failure to submit the required records upon request or to make such records available may be grounds for debarment action pursuant to 29 CFR 5.12.

4. Apprentices and trainees (29 CFR 5.5)

a. Apprentices (programs of the USDOL).

Apprentices will be permitted to work at less than the predetermined rate for the work they performed when they are employed pursuant to and individually registered in a bona fide apprenticeship program registered with the U.S. Department of Labor, Employment and Training Administration, Office of Apprenticeship Training, Employer and Labor Services, or with a State Apprenticeship Agency recognized by the Office, or if a person is employed in his or her first 90 days of probationary employment as an apprentice in such an apprenticeship program, who is not individually registered in the program, but who has been certified by the Office of Apprenticeship Training, Employer and Labor Services or a State

Apprenticeship Agency (where appropriate) to be eligible for probationary employment as an apprentice.

The allowable ratio of apprentices to journeymen on the job site in any craft classification shall not be greater than the ratio permitted to the contractor as to the entire work force under the registered program. Any worker listed on a payroll at an apprentice wage rate, who is not registered or otherwise employed as stated above, shall be paid not less than the applicable wage rate on the wage determination for the classification of work actually performed. In addition, any apprentice performing work on the job site in excess of the ratio permitted under the registered program shall be paid not less than the applicable wage rate on the wage determination for the work actually performed. Where a contractor is performing construction on a project in a locality other than that in which its program is registered, the ratios and wage rates (expressed in percentages of the journeyman's hourly rate) specified in the contractor's or subcontractor's registered program shall be observed.

Every apprentice must be paid at not less than the rate specified in the registered program for the apprentice's level of progress, expressed as a percentage of the journeymen hourly rate specified in the applicable wage determination. Apprentices shall be paid fringe benefits in accordance with the provisions of the apprenticeship program. If the apprenticeship program does not specify fringe benefits, apprentices must be paid the full amount of fringe benefits listed on the wage determination for the applicable classification. If the Administrator determines that a different practice prevails for the applicable apprentice classification, fringes shall be paid in accordance with that determination.

In the event the Office of Apprenticeship Training, Employer and Labor Services, or a State Apprenticeship Agency recognized by the Office, withdraws approval of an apprenticeship program, the contractor will no longer be permitted to utilize apprentices at less than the applicable predetermined rate for the work performed until an acceptable program is approved.

b. Trainees (programs of the USDOL).

Except as provided in 29 CFR 5.16, trainees will not be permitted to work at less than the predetermined rate for the work performed unless they are employed pursuant to and individually registered in a program which has received prior approval, evidenced by formal certification by the U.S. Department of Labor, Employment and Training Administration.

The ratio of trainees to journeymen on the job site shall not be greater than permitted under the plan approved by the Employment and Training Administration.

Every trainee must be paid at not less than the rate specified in the approved program for the trainee's level of progress, expressed as a percentage of the journeyman hourly rate specified in the applicable wage determination. Trainees shall be paid fringe benefits in accordance with the provisions of the trainee program. If the trainee program does not mention fringe benefits, trainees shall be paid the full amount of fringe benefits listed on the wage determination unless the Administrator of the Wage and Hour Division determines that there is an apprenticeship program associated with the

corresponding journeyman wage rate on the wage determination which provides for less than full fringe benefits for apprentices. Any employee listed on the payroll at a trainee rate who is not registered and participating in a training plan approved by the Employment and Training Administration shall be paid not less than the applicable wage rate on the wage determination for the classification of work actually performed. In addition, any trainee performing work on the job site in excess of the ratio permitted under the registered program shall be paid not less than the applicable wage rate on the wage determination for the work actually performed.

In the event the Employment and Training Administration withdraws approval of a training program, the contractor will no longer be permitted to utilize trainees at less than the applicable predetermined rate for the work performed until an acceptable program is approved.

c. Equal employment opportunity. The utilization of apprentices, trainees and journeymen under this part shall be in conformity with the equal employment opportunity requirements of Executive Order 11246, as amended, and 29 CFR part 30.

d. Apprentices and Trainees (programs of the U.S. DOT).

Apprentices and trainees working under apprenticeship and skill training programs which have been certified by the Secretary of Transportation as promoting EEO in connection with Federal-aid highway construction programs are not subject to the requirements of paragraph 4 of this Section IV. 23 CFR 230.111(e)(2). The straight time hourly wage rates for apprentices and trainees under such programs will be established by the particular programs. The ratio of apprentices and trainees to journeymen shall not be greater than permitted by the terms of the particular program.

**5. Compliance with Copeland Act requirements.** The contractor shall comply with the requirements of 29 CFR part 3, which are incorporated by reference in this contract as provided in 29 CFR 5.5.

**6. Subcontracts.** The contractor or subcontractor shall insert Form FHWA-1273 in any subcontracts and also require the subcontractors to include Form FHWA-1273 in any lower tier subcontracts. The prime contractor shall be responsible for the compliance by any subcontractor or lower tier subcontractor with all the contract clauses in 29 CFR 5.5.

**7. Contract termination: debarment.** A breach of the contract clauses in 29 CFR 5.5 may be grounds for termination of the contract, and for debarment as a contractor and a subcontractor as provided in 29 CFR 5.12.

**8. Compliance with Davis-Bacon and Related Act requirements.** All rulings and interpretations of the Davis-Bacon and Related Acts contained in 29 CFR parts 1, 3, and 5 are herein incorporated by reference in this contract as provided in 29 CFR 5.5.

**9. Disputes concerning labor standards.** As provided in 29 CFR 5.5, disputes arising out of the labor standards provisions of this contract shall not be subject to the general disputes clause of this contract. Such disputes shall be resolved in accordance with the procedures of the Department of Labor

set forth in 29 CFR parts 5, 6, and 7. Disputes within the meaning of this clause include disputes between the contractor (or any of its subcontractors) and the contracting agency, the U.S. Department of Labor, or the employees or their representatives.

**10. Certification of eligibility (29 CFR 5.5)**

a. By entering into this contract, the contractor certifies that neither it (nor he or she) nor any person or firm who has an interest in the contractor's firm is a person or firm ineligible to be awarded Government contracts by virtue of section 3(a) of the Davis-Bacon Act or 29 CFR 5.12(a)(1).

b. No part of this contract shall be subcontracted to any person or firm ineligible for award of a Government contract by virtue of section 3(a) of the Davis-Bacon Act or 29 CFR 5.12(a)(1).

c. The penalty for making false statements is prescribed in the U.S. Criminal Code, 18 U.S.C. 1001.

**V. CONTRACT WORK HOURS AND SAFETY STANDARDS ACT**

Pursuant to 29 CFR 5.5(b), the following clauses apply to any Federal-aid construction contract in an amount in excess of \$100,000 and subject to the overtime provisions of the Contract Work Hours and Safety Standards Act. These clauses shall be inserted in addition to the clauses required by 29 CFR 5.5(a) or 29 CFR 4.6. As used in this paragraph, the terms laborers and mechanics include watchmen and guards.

**1. Overtime requirements.** No contractor or subcontractor contracting for any part of the contract work which may require or involve the employment of laborers or mechanics shall require or permit any such laborer or mechanic in any workweek in which he or she is employed on such work to work in excess of forty hours in such workweek unless such laborer or mechanic receives compensation at a rate not less than one and one-half times the basic rate of pay for all hours worked in excess of forty hours in such workweek. 29 CFR 5.5.

**2. Violation; liability for unpaid wages; liquidated damages.** In the event of any violation of the clause set forth in paragraph 1 of this section, the contractor and any subcontractor responsible therefor shall be liable for the unpaid wages. In addition, such contractor and subcontractor shall be liable to the United States (in the case of work done under contract for the District of Columbia or a territory, to such District or to such territory), for liquidated damages. Such liquidated damages shall be computed with respect to each individual laborer or mechanic, including watchmen and guards, employed in violation of the clause set forth in paragraph 1 of this section, in the sum currently provided in 29 CFR 5.5(b)(2)\* for each calendar day on which such individual was required or permitted to work in excess of the standard workweek of forty hours without payment of the overtime wages required by the clause set forth in paragraph 1 of this section. 29 CFR 5.5.

\* \$27 as of January 23, 2019 (See 84 FR 213-01, 218) as may be adjusted annually by the Department of Labor; pursuant to the Federal Civil Penalties Inflation Adjustment Act of 1990).

**3. Withholding for unpaid wages and liquidated damages.** The FHWA or the contracting agency shall upon its own action or upon written request of an authorized representative of the Department of Labor withhold or cause to be withheld, from any moneys payable on account of work performed by the contractor or subcontractor under any such contract or any other Federal contract with the same prime contractor, or any other federally-assisted contract subject to the Contract Work Hours and Safety Standards Act, which is held by the same prime contractor, such sums as may be determined to be necessary to satisfy any liabilities of such contractor or subcontractor for unpaid wages and liquidated damages as provided in the clause set forth in paragraph 2 of this section. 29 CFR 5.5.

**4. Subcontracts.** The contractor or subcontractor shall insert in any subcontracts the clauses set forth in paragraphs 1 through 4 of this section and also a clause requiring the subcontractors to include these clauses in any lower tier subcontracts. The prime contractor shall be responsible for compliance by any subcontractor or lower tier subcontractor with the clauses set forth in paragraphs 1 through 4 of this section. 29 CFR 5.5.

**VI. SUBLETTING OR ASSIGNING THE CONTRACT**

This provision is applicable to all Federal-aid construction contracts on the National Highway System pursuant to 23 CFR 635.116.

1. The contractor shall perform with its own organization contract work amounting to not less than 30 percent (or a greater percentage if specified elsewhere in the contract) of the total original contract price, excluding any specialty items designated by the contracting agency. Specialty items may be performed by subcontract and the amount of any such specialty items performed may be deducted from the total original contract price before computing the amount of work required to be performed by the contractor's own organization (23 CFR 635.116).

a. The term "perform work with its own organization" in paragraph 1 of Section VI refers to workers employed or leased by the prime contractor, and equipment owned or rented by the prime contractor, with or without operators. Such term does not include employees or equipment of a subcontractor or lower tier subcontractor, agents of the prime contractor, or any other assignees. The term may include payments for the costs of hiring leased employees from an employee leasing firm meeting all relevant Federal and State regulatory requirements. Leased employees may only be included in this term if the prime contractor meets all of the following conditions: (based on longstanding interpretation)

- (1) the prime contractor maintains control over the supervision of the day-to-day activities of the leased employees;
- (2) the prime contractor remains responsible for the quality of the work of the leased employees;
- (3) the prime contractor retains all power to accept or exclude individual employees from work on the project; and
- (4) the prime contractor remains ultimately responsible for the payment of predetermined minimum wages, the submission of payrolls, statements of compliance and all other Federal regulatory requirements.

b. "Specialty Items" shall be construed to be limited to work that requires highly specialized knowledge, abilities, or

equipment not ordinarily available in the type of contracting organizations qualified and expected to bid or propose on the contract as a whole and in general are to be limited to minor components of the overall contract. 23 CFR 635.102.

2. Pursuant to 23 CFR 635.116(a), the contract amount upon which the requirements set forth in paragraph (1) of Section VI is computed includes the cost of material and manufactured products which are to be purchased or produced by the contractor under the contract provisions.

3. Pursuant to 23 CFR 635.116(c), the contractor shall furnish (a) a competent superintendent or supervisor who is employed by the firm, has full authority to direct performance of the work in accordance with the contract requirements, and is in charge of all construction operations (regardless of who performs the work) and (b) such other of its own organizational resources (supervision, management, and engineering services) as the contracting officer determines is necessary to assure the performance of the contract.

4. No portion of the contract shall be sublet, assigned or otherwise disposed of except with the written consent of the contracting officer, or authorized representative, and such consent when given shall not be construed to relieve the contractor of any responsibility for the fulfillment of the contract. Written consent will be given only after the contracting agency has assured that each subcontract is evidenced in writing and that it contains all pertinent provisions and requirements of the prime contract. (based on long-standing interpretation of 23 CFR 635.116).

5. The 30-percent self-performance requirement of paragraph (1) is not applicable to design-build contracts; however, contracting agencies may establish their own self-performance requirements. 23 CFR 635.116(d).

**VII. SAFETY: ACCIDENT PREVENTION**

This provision is applicable to all Federal-aid construction contracts and to all related subcontracts.

1. In the performance of this contract the contractor shall comply with all applicable Federal, State, and local laws governing safety, health, and sanitation (23 CFR Part 635). The contractor shall provide all safeguards, safety devices and protective equipment and take any other needed actions as it determines, or as the contracting officer may determine, to be reasonably necessary to protect the life and health of employees on the job and the safety of the public and to protect property in connection with the performance of the work covered by the contract. 23 CFR 635.108.

2. It is a condition of this contract, and shall be made a condition of each subcontract, which the contractor enters into pursuant to this contract, that the contractor and any subcontractor shall not permit any employee, in performance of the contract, to work in surroundings or under conditions which are unsanitary, hazardous or dangerous to his/her health or safety, as determined under construction safety and health standards (29 CFR Part 1926) promulgated by the Secretary of Labor, in accordance with Section 107 of the Contract Work Hours and Safety Standards Act (40 U.S.C. 3704). 29 CFR 1926.10.

3. Pursuant to 29 CFR 1926.3, it is a condition of this contract that the Secretary of Labor or authorized representative thereof, shall have right of entry to any site of contract performance to inspect or investigate the matter of compliance

with the construction safety and health standards and to carry out the duties of the Secretary under Section 107 of the Contract Work Hours and Safety Standards Act (40 U.S.C. 3704).

**VIII. FALSE STATEMENTS CONCERNING HIGHWAY PROJECTS**

This provision is applicable to all Federal-aid construction contracts and to all related subcontracts.

In order to assure high quality and durable construction in conformity with approved plans and specifications and a high degree of reliability on statements and representations made by engineers, contractors, suppliers, and workers on Federal-aid highway projects, it is essential that all persons concerned with the project perform their functions as carefully, thoroughly, and honestly as possible. Willful falsification, distortion, or misrepresentation with respect to any facts related to the project is a violation of Federal law. To prevent any misunderstanding regarding the seriousness of these and similar acts, Form FHWA-1022 shall be posted on each Federal-aid highway project (23 CFR Part 635) in one or more places where it is readily available to all persons concerned with the project:

18 U.S.C. 1020 reads as follows:

"Whoever, being an officer, agent, or employee of the United States, or of any State or Territory, or whoever, whether a person, association, firm, or corporation, knowingly makes any false statement, false representation, or false report as to the character, quality, quantity, or cost of the material used or to be used, or the quantity or quality of the work performed or to be performed, or the cost thereof in connection with the submission of plans, maps, specifications, contracts, or costs of construction on any highway or related project submitted for approval to the Secretary of Transportation; or

Whoever knowingly makes any false statement, false representation, false report or false claim with respect to the character, quality, quantity, or cost of any work performed or to be performed, or materials furnished or to be furnished, in connection with the construction of any highway or related project approved by the Secretary of Transportation; or

Whoever knowingly makes any false statement or false representation as to material fact in any statement, certificate, or report submitted pursuant to provisions of the Federal-aid Roads Act approved July 11, 1916, (39 Stat. 355), as amended and supplemented;

Shall be fined under this title or imprisoned not more than 5 years or both."

**IX. IMPLEMENTATION OF CLEAN AIR ACT AND FEDERAL WATER POLLUTION CONTROL ACT (42 U.S.C. 7606; 2 CFR 200.88; EO 11738)**

This provision is applicable to all Federal-aid construction contracts in excess of \$150,000 and to all related subcontracts. 48 CFR 2.101; 2 CFR 200.326.

By submission of this bid/proposal or the execution of this contract or subcontract, as appropriate, the bidder, proposer, Federal-aid construction contractor, subcontractor, supplier, or vendor agrees to comply with all applicable standards, orders

or regulations issued pursuant to the Clean Air Act (42 U.S.C. 7401-7671q) and the Federal Water Pollution Control Act, as amended (33 U.S.C. 1251-1387). Violations must be reported to the Federal Highway Administration and the Regional Office of the Environmental Protection Agency. 2 CFR Part 200, Appendix II.

The contractor agrees to include or cause to be included the requirements of this Section in every subcontract, and further agrees to take such action as the contracting agency may direct as a means of enforcing such requirements. 2 CFR 200.326.

**X. CERTIFICATION REGARDING DEBARMENT, SUSPENSION, INELIGIBILITY AND VOLUNTARY EXCLUSION**

This provision is applicable to all Federal-aid construction contracts, design-build contracts, subcontracts, lower-tier subcontracts, purchase orders, lease agreements, consultant contracts or any other covered transaction requiring FHWA approval or that is estimated to cost \$25,000 or more – as defined in 2 CFR Parts 180 and 1200. 2 CFR 180.220 and 1200.220.

**1. Instructions for Certification – First Tier Participants:**

a. By signing and submitting this proposal, the prospective first tier participant is providing the certification set out below.

b. The inability of a person to provide the certification set out below will not necessarily result in denial of participation in this covered transaction. The prospective first tier participant shall submit an explanation of why it cannot provide the certification set out below. The certification or explanation will be considered in connection with the department or agency's determination whether to enter into this transaction. However, failure of the prospective first tier participant to furnish a certification or an explanation shall disqualify such a person from participation in this transaction. 2 CFR 180.320.

c. The certification in this clause is a material representation of fact upon which reliance was placed when the contracting agency determined to enter into this transaction. If it is later determined that the prospective participant knowingly rendered an erroneous certification, in addition to other remedies available to the Federal Government, the contracting agency may terminate this transaction for cause of default. 2 CFR 180.325.

d. The prospective first tier participant shall provide immediate written notice to the contracting agency to whom this proposal is submitted if any time the prospective first tier participant learns that its certification was erroneous when submitted or has become erroneous by reason of changed circumstances. 2 CFR 180.345 and 180.350.

e. The terms "covered transaction," "debarred," "suspended," "ineligible," "participant," "person," "principal," and "voluntarily excluded," as used in this clause, are defined in 2 CFR Parts 180, Subpart I, 180.900-180.1020, and 1200. "First Tier Covered Transactions" refers to any covered transaction between a recipient or subrecipient of Federal funds and a participant (such as the prime or general contract). "Lower Tier Covered Transactions" refers to any covered transaction under a First Tier Covered Transaction (such as subcontracts). "First Tier Participant" refers to the participant

who has entered into a covered transaction with a recipient or subrecipient of Federal funds (such as the prime or general contractor). "Lower Tier Participant" refers any participant who has entered into a covered transaction with a First Tier Participant or other Lower Tier Participants (such as subcontractors and suppliers).

f. The prospective first tier participant agrees by submitting this proposal that, should the proposed covered transaction be entered into, it shall not knowingly enter into any lower tier covered transaction with a person who is debarred, suspended, declared ineligible, or voluntarily excluded from participation in this covered transaction, unless authorized by the department or agency entering into this transaction. 2 CFR 180.330.

g. The prospective first tier participant further agrees by submitting this proposal that it will include the clause titled "Certification Regarding Debarment, Suspension, Ineligibility and Voluntary Exclusion-Lower Tier Covered Transactions," provided by the department or contracting agency, entering into this covered transaction, without modification, in all lower tier covered transactions and in all solicitations for lower tier covered transactions exceeding the \$25,000 threshold. 2 CFR 180.220 and 180.300.

h. A participant in a covered transaction may rely upon a certification of a prospective participant in a lower tier covered transaction that is not debarred, suspended, ineligible, or voluntarily excluded from the covered transaction, unless it knows that the certification is erroneous. 2 CFR 180.300; 180.320, and 180.325. A participant is responsible for ensuring that its principals are not suspended, debarred, or otherwise ineligible to participate in covered transactions. 2 CFR 180.335. To verify the eligibility of its principals, as well as the eligibility of any lower tier prospective participants, each participant may, but is not required to, check the System for Award Management website (<https://www.sam.gov/>). 2 CFR 180.300, 180.320, and 180.325.

i. Nothing contained in the foregoing shall be construed to require the establishment of a system of records in order to render in good faith the certification required by this clause. The knowledge and information of the prospective participant is not required to exceed that which is normally possessed by a prudent person in the ordinary course of business dealings.

j. Except for transactions authorized under paragraph (f) of these instructions, if a participant in a covered transaction knowingly enters into a lower tier covered transaction with a person who is suspended, debarred, ineligible, or voluntarily excluded from participation in this transaction, in addition to other remedies available to the Federal Government, the department or agency may terminate this transaction for cause or default. 2 CFR 180.325.

\*\*\*\*\*

**2. Certification Regarding Debarment, Suspension, Ineligibility and Voluntary Exclusion – First Tier Participants:**

a. The prospective first tier participant certifies to the best of its knowledge and belief, that it and its principals:

(1) Are not presently debarred, suspended, proposed for debarment, declared ineligible, or voluntarily excluded from participating in covered transactions by any Federal department or agency, 2 CFR 180.335;.

(2) Have not within a three-year period preceding this proposal been convicted of or had a civil judgment rendered against them for commission of fraud or a criminal offense in connection with obtaining, attempting to obtain, or performing a public (Federal, State, or local) transaction or contract under a public transaction; violation of Federal or State antitrust statutes or commission of embezzlement, theft, forgery, bribery, falsification or destruction of records, making false statements, or receiving stolen property, 2 CFR 180.800;

(3) Are not presently indicted for or otherwise criminally or civilly charged by a governmental entity (Federal, State or local) with commission of any of the offenses enumerated in paragraph (a)(2) of this certification, 2 CFR 180.700 and 180.800; and

(4) Have not within a three-year period preceding this application/proposal had one or more public transactions (Federal, State or local) terminated for cause or default. 2 CFR 180.335(d).

(5) Are not a corporation that has been convicted of a felony violation under any Federal law within the two-year period preceding this proposal (USDOT Order 4200.6 implementing appropriations act requirements); and

(6) Are not a corporation with any unpaid Federal tax liability that has been assessed, for which all judicial and administrative remedies have been exhausted, or have lapsed, and that is not being paid in a timely manner pursuant to an agreement with the authority responsible for collecting the tax liability (USDOT Order 4200.6 implementing appropriations act requirements).

b. Where the prospective participant is unable to certify to any of the statements in this certification, such prospective participant should attach an explanation to this proposal. 2 CFR 180.335 and 180.340.

**3. Instructions for Certification - Lower Tier Participants:**

(Applicable to all subcontracts, purchase orders, and other lower tier transactions requiring prior FHWA approval or estimated to cost \$25,000 or more - 2 CFR Parts 180 and 1200). 2 CFR 180.220 and 1200.220.

a. By signing and submitting this proposal, the prospective lower tier participant is providing the certification set out below.

b. The certification in this clause is a material representation of fact upon which reliance was placed when this transaction was entered into. If it is later determined that the prospective lower tier participant knowingly rendered an erroneous certification, in addition to other remedies available to the Federal Government, the department, or agency with which this transaction originated may pursue available remedies, including suspension and/or debarment.

c. The prospective lower tier participant shall provide immediate written notice to the person to which this proposal is submitted if at any time the prospective lower tier participant learns that its certification was erroneous by reason of changed circumstances. 2 CFR 180.365.

d. The terms "covered transaction," "debarred," "suspended," "ineligible," "participant," "person," "principal," and "voluntarily excluded," as used in this clause, are defined in 2 CFR Parts 180, Subpart I, 180.900 – 180.1020, and 1200. You may contact the person to which this proposal is

submitted for assistance in obtaining a copy of those regulations. "First Tier Covered Transactions" refers to any covered transaction between a recipient or subrecipient of Federal funds and a participant (such as the prime or general contract). "Lower Tier Covered Transactions" refers to any covered transaction under a First Tier Covered Transaction (such as subcontracts). "First Tier Participant" refers to the participant who has entered into a covered transaction with a recipient or subrecipient of Federal funds (such as the prime or general contractor). "Lower Tier Participant" refers any participant who has entered into a covered transaction with a First Tier Participant or other Lower Tier Participants (such as subcontractors and suppliers).

e. The prospective lower tier participant agrees by submitting this proposal that, should the proposed covered transaction be entered into, it shall not knowingly enter into any lower tier covered transaction with a person who is debarred, suspended, declared ineligible, or voluntarily excluded from participation in this covered transaction, unless authorized by the department or agency with which this transaction originated. 2 CFR 1200.220 and 1200.332.

f. The prospective lower tier participant further agrees by submitting this proposal that it will include this clause titled "Certification Regarding Debarment, Suspension, Ineligibility and Voluntary Exclusion-Lower Tier Covered Transaction," without modification, in all lower tier covered transactions and in all solicitations for lower tier covered transactions exceeding the \$25,000 threshold. 2 CFR 180.220 and 1200.220.

g. A participant in a covered transaction may rely upon a certification of a prospective participant in a lower tier covered transaction that is not debarred, suspended, ineligible, or voluntarily excluded from the covered transaction, unless it knows that the certification is erroneous. A participant is responsible for ensuring that its principals are not suspended, debarred, or otherwise ineligible to participate in covered transactions. To verify the eligibility of its principals, as well as the eligibility of any lower tier prospective participants, each participant may, but is not required to, check the System for Award Management website (<https://www.sam.gov/>), which is compiled by the General Services Administration. 2 CFR 180.300, 180.320, 180.330, and 180.335.

h. Nothing contained in the foregoing shall be construed to require establishment of a system of records in order to render in good faith the certification required by this clause. The knowledge and information of participant is not required to exceed that which is normally possessed by a prudent person in the ordinary course of business dealings.

i. Except for transactions authorized under paragraph e of these instructions, if a participant in a covered transaction knowingly enters into a lower tier covered transaction with a person who is suspended, debarred, ineligible, or voluntarily excluded from participation in this transaction, in addition to other remedies available to the Federal Government, the department or agency with which this transaction originated may pursue available remedies, including suspension and/or debarment. 2 CFR 180.325.

\*\*\*\*\*

**Certification Regarding Debarment, Suspension, Ineligibility and Voluntary Exclusion--Lower Tier Participants:**

1. The prospective lower tier participant certifies, by submission of this proposal, that neither it nor its principals:

(a) is presently debarred, suspended, proposed for debarment, declared ineligible, or voluntarily excluded from participating in covered transactions by any Federal department or agency, 2 CFR 180.355;

(b) is a corporation that has been convicted of a felony violation under any Federal law within the two-year period preceding this proposal (USDOT Order 4200.6 implementing appropriations act requirements); and

(c) is a corporation with any unpaid Federal tax liability that has been assessed, for which all judicial and administrative remedies have been exhausted, or have lapsed, and that is not being paid in a timely manner pursuant to an agreement with the authority responsible for collecting the tax liability. (USDOT Order 4200.6 implementing appropriations act requirements)

2. Where the prospective lower tier participant is unable to certify to any of the statements in this certification, such prospective participant should attach an explanation to this proposal.

\*\*\*\*\*

**XI. CERTIFICATION REGARDING USE OF CONTRACT FUNDS FOR LOBBYING**

This provision is applicable to all Federal-aid construction contracts and to all related subcontracts which exceed \$100,000. 49 CFR Part 20, App. A.

1. The prospective participant certifies, by signing and submitting this bid or proposal, to the best of his or her knowledge and belief, that:

a. No Federal appropriated funds have been paid or will be paid, by or on behalf of the undersigned, to any person for influencing or attempting to influence an officer or employee of any Federal agency, a Member of Congress, an officer or employee of Congress, or an employee of a Member of Congress in connection with the awarding of any Federal contract, the making of any Federal grant, the making of any Federal loan, the entering into of any cooperative agreement, and the extension, continuation, renewal, amendment, or modification of any Federal contract, grant, loan, or cooperative agreement.

b. If any funds other than Federal appropriated funds have been paid or will be paid to any person for influencing or attempting to influence an officer or employee of any Federal agency, a Member of Congress, an officer or employee of Congress, or an employee of a Member of Congress in connection with this Federal contract, grant, loan, or cooperative agreement, the undersigned shall complete and submit Standard Form-LLL, "Disclosure Form to Report Lobbying," in accordance with its instructions.

2. This certification is a material representation of fact upon which reliance was placed when this transaction was made or entered into. Submission of this certification is a prerequisite for making or entering into this transaction imposed by 31 U.S.C. 1352. Any person who fails to file the required certification shall be subject to a civil penalty of not less than \$10,000 and not more than \$100,000 for each such failure.

3. The prospective participant also agrees by submitting its bid or proposal that the participant shall require that the language of this certification be included in all lower tier

subcontracts, which exceed \$100,000 and that all such recipients shall certify and disclose accordingly.

## **XII. USE OF UNITED STATES-FLAG VESSELS:**

This provision is applicable to all Federal-aid construction contracts, design-build contracts, subcontracts, lower-tier subcontracts, purchase orders, lease agreements, or any other covered transaction. 46 CFR Part 381.

This requirement applies to material or equipment that is acquired for a specific Federal-aid highway project. 46 CFR 381.7. It is not applicable to goods or materials that come into inventories independent of an FHWA funded-contract.

When oceanic shipments (or shipments across the Great Lakes) are necessary for materials or equipment acquired for a specific Federal-aid construction project, the bidder, proposer, contractor, subcontractor, or vendor agrees:

1. To utilize privately owned United States-flag commercial vessels to ship at least 50 percent of the gross tonnage (computed separately for dry bulk carriers, dry cargo liners, and tankers) involved, whenever shipping any equipment, material, or commodities pursuant to this contract, to the extent such vessels are available at fair and reasonable rates for United States-flag commercial vessels. 46 CFR 381.7.

2. To furnish within 20 days following the date of loading for shipments originating within the United States or within 30 working days following the date of loading for shipments originating outside the United States, a legible copy of a rated, 'on-board' commercial ocean bill-of-lading in English for each shipment of cargo described in paragraph (b)(1) of this section to both the Contracting Officer (through the prime contractor in the case of subcontractor bills-of-lading) and to the Office of Cargo and Commercial Sealift (MAR-620), Maritime Administration, Washington, DC 20590. (MARAD requires copies of the ocean carrier's (master) bills of lading, certified onboard, dated, with rates and charges. These bills of lading may contain business sensitive information and therefore may be submitted directly to MARAD by the Ocean Transportation Intermediary on behalf of the contractor). 46 CFR 381.7.

**ATTACHMENT A - EMPLOYMENT AND MATERIALS  
PREFERENCE FOR APPALACHIAN DEVELOPMENT  
HIGHWAY SYSTEM OR APPALACHIAN LOCAL ACCESS  
ROAD CONTRACTS (23 CFR 633, Subpart B, Appendix B)**

This provision is applicable to all Federal-aid projects funded under the Appalachian Regional Development Act of 1965.

1. During the performance of this contract, the contractor undertaking to do work which is, or reasonably may be, done as on-site work, shall give preference to qualified persons who regularly reside in the labor area as designated by the DOL wherein the contract work is situated, or the subregion, or the Appalachian counties of the State wherein the contract work is situated, except:

a. To the extent that qualified persons regularly residing in the area are not available.

b. For the reasonable needs of the contractor to employ supervisory or specially experienced personnel necessary to assure an efficient execution of the contract work.

c. For the obligation of the contractor to offer employment to present or former employees as the result of a lawful collective bargaining contract, provided that the number of nonresident persons employed under this subparagraph (1c) shall not exceed 20 percent of the total number of employees employed by the contractor on the contract work, except as provided in subparagraph (4) below.

2. The contractor shall place a job order with the State Employment Service indicating (a) the classifications of the laborers, mechanics and other employees required to perform the contract work, (b) the number of employees required in each classification, (c) the date on which the participant estimates such employees will be required, and (d) any other pertinent information required by the State Employment Service to complete the job order form. The job order may be placed with the State Employment Service in writing or by telephone. If during the course of the contract work, the information submitted by the contractor in the original job order is substantially modified, the participant shall promptly notify the State Employment Service.

3. The contractor shall give full consideration to all qualified job applicants referred to him by the State Employment Service. The contractor is not required to grant employment to any job applicants who, in his opinion, are not qualified to perform the classification of work required.

4. If, within one week following the placing of a job order by the contractor with the State Employment Service, the State Employment Service is unable to refer any qualified job applicants to the contractor, or less than the number requested, the State Employment Service will forward a certificate to the contractor indicating the unavailability of applicants. Such certificate shall be made a part of the contractor's permanent project records. Upon receipt of this certificate, the contractor may employ persons who do not normally reside in the labor area to fill positions covered by the certificate, notwithstanding the provisions of subparagraph (1c) above.

5. The provisions of 23 CFR 633.207(e) allow the contracting agency to provide a contractual preference for the use of mineral resource materials native to the Appalachian region.

6. The contractor shall include the provisions of Sections 1 through 4 of this Attachment A in every subcontract for work which is, or reasonably may be, done as on-site work.

**KENTUCKY TRANSPORTATION CABINET  
DEPARTMENT OF HIGHWAYS**

**EMPLOYMENT REQUIREMENTS  
RELATING TO  
NONDISCRIMINATION OF EMPLOYEES  
(APPLICABLE TO FEDERAL-AID SYSTEM CONTRACTS)**

**AN ACT OF THE KENTUCKY GENERAL ASSEMBLY  
TO PREVENT DISCRIMINATION IN EMPLOYMENT**

**KRS CHAPTER 344  
EFFECTIVE JUNE 16, 1972**

The contract on this project, in accordance with KRS Chapter 344, provides that during the performance of this contract, the contractor agrees as follows:

1. The contractor shall not fail or refuse to hire, or shall not discharge any individual, or otherwise discriminate against an individual with respect to his compensation, terms, conditions, or privileges of employment, because of such individual's race, color, religion, national origin, sex, disability or age (forty and above); or limit, segregate, or classify his employees in any way which would deprive or tend to deprive an individual of employment opportunities or otherwise adversely affect his status as an employee, because of such individual's race, color, religion, national origin, sex, disability or age forty (40) and over. The contractor agrees to post in conspicuous places, available to employees and applicants for employment, notices to be provided setting forth the provisions of this nondiscrimination clause.

2. The contractor shall not print or publish or cause to be printed or published a notice or advertisement relating to employment by such an employer or membership in or any classification or referral for employment by the employment agency, indicating any preference, limitation, specification, or discrimination, based on race, color, religion, national origin, sex, or age forty (40) and over, or because the person is a qualified individual with a disability, except that such a notice or advertisement may indicate a preference, limitation, or specification based on religion, national origin, sex, or age forty (40) and over, or because the person is a qualified individual with a disability, when religion, national origin, sex, or age forty (40) and over, or because the person is a qualified individual with a disability, is a bona fide occupational qualification for employment.

3. If the contractor is in control of apprenticeship or other training or retraining, including on-the-job training programs, he shall not discriminate against an individual because of his race, color, religion, national origin, sex, disability or age forty (40) and over, in admission to, or employment in any program established to provide apprenticeship or other training.

4. The contractor will send to each labor union or representative of workers with which he has a collective bargaining agreement or other contract or understanding, a notice to be provided advising the said labor union or workers' representative of the contractor's commitments under this section, and shall post copies of the notice in conspicuous places available to employees and applicants for employment. The contractor will take such action with respect to any subcontract or purchase order as the administering agency may direct as a means of enforcing such provisions, including sanctions for non-compliance.

Revised: January 25, 2017

### Standard Title VI/Non-Discrimination Assurances

During the performance of this contract, the contractor, for itself, its assignees, and successors in interest (hereinafter referred to as the "contractor") agrees as follows:

1. **Compliance with Regulations:** The contractor (hereinafter includes consultants) will comply with the Acts and the Regulations relative to Non-discrimination in Federally-assisted programs of the U.S. Department of Transportation, **Federal Highway Administration**, as they may be amended from time to time, which are herein incorporated by reference and made a part of this contract.
2. **Non-discrimination:** The contractor, with regard to the work performed by it during the contract, will not discriminate on the grounds of race, color, or national origin in the selection and retention of subcontractors, including procurements of materials and leases of equipment. The contractor will not participate directly or indirectly in the discrimination prohibited by the Acts and the Regulations, including employment practices when the contract covers any activity, project, or program set forth in Appendix B of 49 CFR Part 21.
3. **Solicitations for Subcontracts, Including Procurements of Materials and Equipment:** In all solicitations, either by competitive bidding, or negotiation made by the contractor for work to be performed under a subcontract, including procurements of materials, or leases of equipment, each potential subcontractor or supplier will be notified by the contractor of the contractor's obligations under this contract and the Acts and the Regulations relative to Non-discrimination on the grounds of race, color, or national origin.
4. **Information and Reports:** The contractor will provide all information and reports required by the Acts, the Regulations, and directives issued pursuant thereto and will permit access to its books, records, accounts, other sources of information, and its facilities as may be determined by the Recipient or the **Federal Highway Administration** to be pertinent to ascertain compliance with such Acts, Regulations, and instructions. Where any information required of a contractor is in the exclusive possession of another who fails or refuses to furnish the information, the contractor will so certify to the Recipient or the **Federal Highway Administration**, as appropriate, and will set forth what efforts it has made to obtain the information.
5. **Sanctions for Noncompliance:** In the event of a contractor's noncompliance with the Non-discrimination provisions of this contract, the Recipient will impose such contract sanctions as it or the **Federal Highway Administration** may determine to be appropriate, including, but not limited to:
  - a. withholding payments to the contractor under the contract until the contractor complies; and/or
  - b. cancelling, terminating, or suspending a contract, in whole or in part.
6. **Incorporation of Provisions:** The contractor will include the provisions of paragraphs one through six in every subcontract, including procurements of materials and leases of equipment, unless exempt by the Acts, the Regulations and directives issued pursuant thereto. The contractor will take action with respect to any subcontract or procurement as the Recipient or the **Federal Highway Administration** may direct as a means of enforcing such provisions including sanctions for noncompliance. Provided, that if the contractor becomes involved in, or is threatened with litigation by a subcontractor, or supplier because of such direction, the contractor may request the Recipient to enter into any litigation to protect the interests of the Recipient. In addition, the contractor may request the United States to enter into the litigation to protect the interests of the United States.

### **Standard Title VI/Non-Discrimination Statutes and Authorities**

During the performance of this contract, the contractor, for itself, its assignees, and successors in interest (hereinafter referred to as the “contractor”) agrees to comply with the following non-discrimination statutes and authorities; including but not limited to:

- Title VI of the Civil Rights Act of 1964 (42 U.S.C. § 2000d *et seq.*, 78 stat. 252), (prohibits discrimination on the basis of race, color, national origin); and 49 CFR Part 21;
- The Uniform Relocation Assistance and Real Property Acquisition Policies Act of 1970, (42 U.S.C. § 4601), (prohibits unfair treatment of persons displaced or whose property has been acquired because of Federal or Federal-aid programs and projects);
- Federal-Aid Highway Act of 1973, (23 U.S.C. § 324 *et seq.*), (prohibits discrimination on the basis of sex);
- Section 504 of the Rehabilitation Act of 1973, (29 U.S.C. § 794 *et seq.*), as amended, (prohibits discrimination on the basis of disability); and 49 CFR Part 27;
- The Age Discrimination Act of 1975, as amended, (42 U.S.C. § 6101 *et seq.*), (prohibits discrimination on the basis of age);
- Airport and Airway Improvement Act of 1982, (49 USC § 471, Section 47123), as amended, (prohibits discrimination based on race, creed, color, national origin, or sex);
- The Civil Rights Restoration Act of 1987, (PL 100-209), (Broadened the scope, coverage and applicability of Title VI of the Civil Rights Act of 1964, The Age Discrimination Act of 1975 and Section 504 of the Rehabilitation Act of 1973, by expanding the definition of the terms “programs or activities” to include all of the programs or activities of the Federal-aid recipients, sub-recipients and contractors, whether such programs or activities are Federally funded or not);
- Titles II and III of the Americans with Disabilities Act, which prohibit discrimination on the basis of disability in the operation of public entities, public and private transportation systems, places of public accommodation, and certain testing entities (42 U.S.C. §§ 12131 -- 12189) as implemented by Department of Transportation regulations at 49 C.F.R. parts 37 and 38;
- The Federal Aviation Administration’s Non-discrimination statute (49 U.S.C. § 47123) (prohibits discrimination on the basis of race, color, national origin, and sex);
- Executive Order 12898, Federal Actions to Address Environmental Justice in Minority Populations and Low-Income Populations, which ensures non-discrimination against minority populations by discouraging programs, policies, and activities with disproportionately high and adverse human health or environmental effects on minority and low-income populations;
- Executive Order 13166, Improving Access to Services for Persons with Limited English Proficiency, and resulting agency guidance, national origin discrimination includes discrimination because of limited English proficiency (LEP). To ensure compliance with Title VI, you must take reasonable steps to ensure that LEP persons have meaningful access to your programs (70 Fed. Reg. at 74087 to 74100);
- Title IX of the Education Amendments of 1972, as amended, which prohibits you from discriminating because of sex in education programs or activities (20 U.S.C. 1681 *et seq.*).

## EXECUTIVE BRANCH CODE OF ETHICS

In the 1992 regular legislative session, the General Assembly passed and Governor Brereton Jones signed Senate Bill 63 (codified as KRS 11A), the Executive Branch Code of Ethics, which states, in part:

KRS 11A.040 (7) provides:

No present or former public servant shall, within six (6) months following termination of his office or employment, accept employment, compensation, or other economic benefit from any person or business that contracts or does business with, or is regulated by, the state in matters in which he was directly involved during the last thirty-six (36) months of his tenure. This provision shall not prohibit an individual from returning to the same business, firm, occupation, or profession in which he was involved prior to taking office or beginning his term of employment, or for which he received, prior to his state employment, a professional degree or license, provided that, for a period of six (6) months, he personally refrains from working on any matter in which he was directly involved during the last thirty-six (36) months of his tenure in state government. This subsection shall not prohibit the performance of ministerial functions, including but not limited to filing tax returns, filing applications for permits or licenses, or filing incorporation papers, nor shall it prohibit the former officer or public servant from receiving public funds disbursed through entitlement programs.

KRS 11A.040 (9) states:

A former public servant shall not represent a person or business before a state agency in a matter in which the former public servant was directly involved during the last thirty-six (36) months of his tenure, for a period of one (1) year after the latter of:

- a) The date of leaving office or termination of employment; or
- b) The date the term of office expires to which the public servant was elected.

This law is intended to promote public confidence in the integrity of state government and to declare as public policy the idea that state employees should view their work as a public trust and not as a way to obtain private benefits.

If you have worked for the executive branch of state government within the past six months, you may be subject to the law's prohibitions. The law's applicability may be different if you hold elected office or are contemplating representation of another before a state agency.

Also, if you are affiliated with a firm which does business with the state and which employs former state executive-branch employees, you should be aware that the law may apply to them.

In case of doubt, the law permits you to request an advisory opinion from the Executive Branch Ethics Commission, 1025 Capital Center Drive, Suite 104, Frankfort, Kentucky 40601; telephone (502) 564-7954.

Revised: May 23, 2022

"General Decision Number: KY20220107 02/25/2022

Superseded General Decision Number: KY20210107

State: Kentucky

Construction Type: Highway

Counties: Adair, Barren, Bell, Breathitt, Casey, Clay, Clinton, Cumberland, Estill, Floyd, Garrard, Green, Harlan, Hart, Jackson, Johnson, Knott, Knox, Laurel, Lawrence, Lee, Leslie, Letcher, Lincoln, Magoffin, Martin, McCreary, Menifee, Metcalfe, Monroe, Morgan, Owsley, Perry, Pike, Powell, Pulaski, Rockcastle, Russell, Taylor, Wayne, Whitley and Wolfe Counties in Kentucky.

HIGHWAY CONSTRUCTION PROJECTS

Note: Contracts subject to the Davis-Bacon Act are generally required to pay at least the applicable minimum wage rate required under Executive Order 14026 or Executive Order 13658. Please note that these Executive Orders apply to covered contracts entered into by the federal government that are subject to the Davis-Bacon Act itself, but do not apply to contracts subject only to the Davis-Bacon Related Acts, including those set forth at 29 CFR 5.1(a)(2)-(60).

If the contract is entered into on or after January 30, 2022, or the contract is renewed or extended (e.g., an option is exercised) on or after January 30, 2022:	<div><div>. Executive Order 14026 generally applies to the contract.</div><div>. The contractor must pay all covered workers at least \$15.00 per hour (or the applicable wage rate listed on this wage determination, if it is higher) for all hours spent performing on the contract in 2022.</div></div>
If the contract was awarded on or between January 1, 2015 and January 29, 2022, and the contract is not renewed or extended on or after January 30, 2022:	<div><div>. Executive Order 13658 generally applies to the contract.</div><div>. The contractor must pay all covered workers at least \$11.25 per hour (or the applicable wage rate listed on this wage determination, if it is higher) for all hours spent performing on that contract in 2022.</div></div>

The applicable Executive Order minimum wage rate will be adjusted annually. If this contract is covered by one of the Executive Orders and a classification considered necessary for performance of work on the contract does not appear on this wage determination, the contractor must still submit a conformance request.

Additional information on contractor requirements and worker protections under the Executive Orders is available at

<https://www.dol.gov/agencies/whd/government-contracts>.

Modification Number	Publication Date
0	01/07/2022
1	02/25/2022

SUKY2015-047 10/20/2015

	Rates	Fringes
BOILERMAKER.....	\$ 24.65	12.94
BRICKLAYER		
Bricklayer.....	\$ 22.90	8.50
Stone Mason.....	\$ 21.50	8.50
CARPENTER		
Carpenter.....	\$ 24.90	14.50
Piledriver.....	\$ 24.55	14.50
CEMENT MASON.....	\$ 21.25	8.50
ELECTRICIAN		
Electrician.....	\$ 29.36	10.55
Equipment Operator.....	\$ 26.90	10.31
Groundsman.....	\$ 17.79	8.51
Lineman.....	\$ 30.09	10.94

When workmen are required to work from bosum chairs, trusses, stacks, tanks, scaffolds, catwalks, radio and T.V. towers, structural steel (open, unprotected, unfloored raw steel), and bridges or similar hazardous locations where workmen are subject to fall, except where using JLG's and bucket trucks up to 75 feet: Add 25% to workman's base rate for 50 to 75 feet, and add 50% to workman's base rate for over 75 feet.

IRONWORKER.....	\$ 27.56	20.57
LABORER		
Group 1.....	\$ 21.80	12.36
Group 2.....	\$ 22.05	12.36
Group 3.....	\$ 22.10	12.36
Group 4.....	\$ 22.70	12.36

GROUP 1: Aging and Curing of Concrete (Any Mode or Method), Asbestos Abatement Worker, Asphalt Plant Laborers, Asphalt Laborers, Batch Truck Dumpers, Carpenter Tenders, Cement Mason Tenders, Cleaning of Machines, Concrete Laborers, Demolition Laborers, Dredging Laborers, Drill Tender, Environmental Laborer - Nuclear, Radiation, Toxic and Hazardous Waste - Level D, Flagmen, Grade Checkers, All Hand Digging and Hand Back Filling, Highway Marker Placers, Landscaping Laborers, Mesh Handlers and Placers, Puddler, Railroad Laborers, Rip-rap and Grouters, Right of Way Laborers, Sign, Guard Rail and Fence Installers (All Types), Signalmen, Sound Barrier Installer, Storm and Sanitary Sewer Laborers, Swampers, Truck Spotters and Dumpers, Wrecking of Concrete Forms, General Cleanup

GROUP 2: Batter Board Men (Sanitary and Storm Sewer), Brickmason Tenders, Mortar Mixer Operator, Scaffold Builders, Burner and Welder, Bushammers, Chain Saw Operator, Concrete Saw Operators, Deckhand Scow Man, Dry Cement Handlers, Environmental Laborers - Nuclear, Radiation, Toxic and Hazardous Waste - Level C, Forklift Operators for Masonry, Form Setters, Green Concrete Cutting, Hand Operated Grouter and Grinder Machine Operator, Jack Hammers, Lead Paint

Abatement, Pavement Breakers, Paving Joint Machine, Pipe Layers - Laser Operators (Non-metallic), Plastic Pipe Fusion, Power Driven Georgia Buggy and Wheel Barrow, Power Post Hole Diggers, Precast Manhole Setters, Walk-behind Tampers, Walk-behind Trenchers, Sand Blasters, Concrete Chippers, Surface Grinders, Vibrator Operators, Wagon Drillers  
GROUP 3: Air Track Driller (All Types), Asphalt Luteman and Rakers, Gunnite Nozzleman, Gunnite Operators and Mixers, Grout Pump Operator, Powderman and Blaster, Side Rail Setters, Rail Paved Ditches, Screw Operators, Tunnel Laborers (Free Air), Water Blasters  
GROUP 4: Caisson Workers (Free Air), Cement Finishers, Environmental Laborer - Nuclear, Radiation, Toxic and Hazardous Waste - Level A and B, miners and Drillers (Free Air), Tunnel Blasters, and Tunnel Mockers (Free Air), Directional and Horizontal Boring, Air Track Drillers (All Types), Powder Man and Blasters, Troxler and Concrete Tester if Laborer is Utilized

PAINTER		
All Excluding Bridges.....	\$ 19.92	9.57
Bridges.....	\$ 23.92	10.07

PLUMBER.....	\$ 22.52	7.80
--------------	----------	------

POWER EQUIPMENT OPERATOR:		
Group 1.....	\$ 29.95	14.40
Group 2.....	\$ 29.95	14.40
Group 3.....	\$ 27.26	14.40
Group 4.....	\$ 26.96	14.40

GROUP 1: Auto Patrol, Batcher Plant, Bituminous Paver, Cable-Way, Clamshell, Concrete Mixer (21 cu ft or over), Concrete Pump, Crane, Crusher Plant, Derrick, Derrick Boat, Ditching and Trenching Machine, Dragline, Dredge Engineer, Elevator (regardless of ownership when used for hoisting any building material), Elevating Grader and all types of Loaders, Hoe-type Machine, Hoisting Engine, Locomotive, LeTourneau or Carry-all Scoop, Bulldozer, Mechanic, Orangepeel Bucket, Piledriver, Power Blade, Roller (Bituminous), Roller (Earth), Roller (Rock), Scarifier, Shovel, Tractor Shovel, Truck Crane, Well Point, Winch Truck, Push Dozer, Grout Pump, High Lift, Fork Lift (regardless of lift height), all types of Boom Cats, Multiple Operator, Core Drill, Tow or Push Boat, A-Frame Winch Truck, Concrete Paver, Grade-All, Hoist, Hyster, Material Pump, Pumpcrete, Ross Carrier, Sheepfoot, Sideboom, Throttle-Valve Man, Rotary Drill, Power Generator, Mucking Machine, Rock Spreader attached to Equipment, Scoopmobile, KeCal Loader, Tower Cranes,(French, German and other types), Hydrocrane, Tugger, Backfiller Gurries, Self-propelled Compactor, Self-Contained Hydraulic Percussion Drill  
GROUP 2: All Air Compressors (200 cu ft/min or greater), Bituminous Mixer, Concrete Mixer (21 cu. ft. or over), Welding Machine, Form Grader, Tractor (50 hp and over), Bull Float, Finish Machine, Outboard Motor Boat, Brakeman, Mechanic Tender, Whirly Oiler, Tract-air, Road Widening Trencher, Articulating Trucks  
GROUP 3: Greaser on Grease Facilities servicing Heavy Equipment  
GROUP 4: Bituminous Distributor, Cement Gun, Conveyor, Mud Jack, Paving Joint Machine, Pump, Tamping Machine, Tractor (under 50 hp), Vibrator, Oiler, Air Compressor (under 200 cu ft per minute), Concrete Saw, Burlap and Curing Machine, Hydro Seeder, Power Form Handling Equipment, Deckhand Oiler, Hydraulic Post Driver

SHEET METAL WORKER.....	\$ 20.40	7.80
-------------------------	----------	------

TRUCK DRIVER		
Driver (3 Tons and Over), Driver (Truck Mounted Rotary Drill).....\$ 23.74	14.50	
Driver (3 Tons and Under), Tire Changer and Truck Mechanic Tender.....\$ 23.53	14.50	
Driver (Semi-Trailer or Pole Trailer), Driver (Dump Truck, Tandem Axle), Driver of Distributor.....\$ 23.40	14.50	
Driver on Mixer Trucks (All Types).....\$ 23.45	14.50	
Driver on Pavement Breakers.\$ 23.55	14.50	
Driver, Euclid and Other Heavy Earth Moving Equipment and Low Boy.....\$ 24.31	14.50	
Driver, Winch Truck and A- Frame when used in Transporting Materials.....\$ 23.30	14.50	
Greaser on Greasing Facilities.....\$ 24.40	14.50	
Truck Mechanic.....\$ 23.50	14.50	
Truck Tender and Warehouseman.....\$ 23.20	14.50	
-----		

WELDERS - Receive rate prescribed for craft performing operation to which welding is incidental.

=====

Note: Executive Order (EO) 13706, Establishing Paid Sick Leave for Federal Contractors applies to all contracts subject to the Davis-Bacon Act for which the contract is awarded (and any solicitation was issued) on or after January 1, 2017. If this contract is covered by the EO, the contractor must provide employees with 1 hour of paid sick leave for every 30 hours they work, up to 56 hours of paid sick leave each year. Employees must be permitted to use paid sick leave for their own illness, injury or other health-related needs, including preventive care; to assist a family member (or person who is like family to the employee) who is ill, injured, or has other health-related needs, including preventive care; or for reasons resulting from, or to assist a family member (or person who is like family to the employee) who is a victim of, domestic violence, sexual assault, or stalking. Additional information on contractor requirements and worker protections under the EO is available at <https://www.dol.gov/agencies/whd/government-contracts>.

Unlisted classifications needed for work not included within the scope of the classifications listed may be added after award only as provided in the labor standards contract clauses (29CFR 5.5 (a) (1) (ii)).

-----

The body of each wage determination lists the classification and wage rates that have been found to be prevailing for the cited type(s) of construction in the area covered by the wage determination. The classifications are listed in alphabetical

order of ""identifiers"" that indicate whether the particular rate is a union rate (current union negotiated rate for local), a survey rate (weighted average rate) or a union average rate (weighted union average rate).

#### Union Rate Identifiers

A four letter classification abbreviation identifier enclosed in dotted lines beginning with characters other than ""SU"" or ""UAVG"" denotes that the union classification and rate were prevailing for that classification in the survey. Example: PLUM0198-005 07/01/2014. PLUM is an abbreviation identifier of the union which prevailed in the survey for this classification, which in this example would be Plumbers. 0198 indicates the local union number or district council number where applicable, i.e., Plumbers Local 0198. The next number, 005 in the example, is an internal number used in processing the wage determination. 07/01/2014 is the effective date of the most current negotiated rate, which in this example is July 1, 2014.

Union prevailing wage rates are updated to reflect all rate changes in the collective bargaining agreement (CBA) governing this classification and rate.

#### Survey Rate Identifiers

Classifications listed under the ""SU"" identifier indicate that no one rate prevailed for this classification in the survey and the published rate is derived by computing a weighted average rate based on all the rates reported in the survey for that classification. As this weighted average rate includes all rates reported in the survey, it may include both union and non-union rates. Example: SULA2012-007 5/13/2014. SU indicates the rates are survey rates based on a weighted average calculation of rates and are not majority rates. LA indicates the State of Louisiana. 2012 is the year of survey on which these classifications and rates are based. The next number, 007 in the example, is an internal number used in producing the wage determination. 5/13/2014 indicates the survey completion date for the classifications and rates under that identifier.

Survey wage rates are not updated and remain in effect until a new survey is conducted.

#### Union Average Rate Identifiers

Classification(s) listed under the UAVG identifier indicate that no single majority rate prevailed for those classifications; however, 100% of the data reported for the classifications was union data. EXAMPLE: UAVG-OH-0010 08/29/2014. UAVG indicates that the rate is a weighted union average rate. OH indicates the state. The next number, 0010 in the example, is an internal number used in producing the wage determination. 08/29/2014 indicates the survey completion date for the classifications and rates under that identifier.

A UAVG rate will be updated once a year, usually in January of each year, to reflect a weighted average of the current negotiated/CBA rate of the union locals from which the rate is based.

# WAGE DETERMINATION APPEALS PROCESS

1.) Has there been an initial decision in the matter? This can be:

- \* an existing published wage determination
- \* a survey underlying a wage determination
- \* a Wage and Hour Division letter setting forth a position on a wage determination matter
- \* a conformance (additional classification and rate) ruling

On survey related matters, initial contact, including requests for summaries of surveys, should be with the Wage and Hour National Office because National Office has responsibility for the Davis-Bacon survey program. If the response from this initial contact is not satisfactory, then the process described in 2.) and 3.) should be followed.

With regard to any other matter not yet ripe for the formal process described here, initial contact should be with the Branch of Construction Wage Determinations. Write to:

Branch of Construction Wage Determinations  
Wage and Hour Division  
U.S. Department of Labor  
200 Constitution Avenue, N.W.  
Washington, DC 20210

2.) If the answer to the question in 1.) is yes, then an interested party (those affected by the action) can request review and reconsideration from the Wage and Hour Administrator (See 29 CFR Part 1.8 and 29 CFR Part 7). Write to:

Wage and Hour Administrator  
U.S. Department of Labor  
200 Constitution Avenue, N.W.  
Washington, DC 20210

The request should be accompanied by a full statement of the interested party's position and by any information (wage payment data, project description, area practice material, etc.) that the requestor considers relevant to the issue.

3.) If the decision of the Administrator is not favorable, an interested party may appeal directly to the Administrative Review Board (formerly the Wage Appeals Board). Write to:

Administrative Review Board  
U.S. Department of Labor  
200 Constitution Avenue, N.W.  
Washington, DC 20210

4.) All decisions by the Administrative Review Board are final.

=====

END OF GENERAL DECISIO"

Fringe benefit amounts are applicable for all hours worked except when otherwise noted.

No laborer, workman or mechanic shall be paid at a rate less than that of a Journeyman except those classified as bona fide apprentices.

Apprentices or trainees shall be permitted to work as such subject to Administrative Regulations adopted by the Commissioner of Workplace Standards. Copies of these regulations will be furnished upon request from any interested person.

Before using apprentices on the job the contractor shall present to the Contracting Officer written evidence of registration of such employees in a program of a State apprenticeship and training agency approved and recognized by the U. S. Bureau of Apprenticeship and Training. In the absence of such a State agency, the contractor shall submit evidence of approval and registration by the U. S. Bureau of Apprenticeship and Training.

The contractor shall submit to the Contracting Officer, written evidence of the established apprenticeship-journeyman ratios and wage rates in the project area, which will be the basis for establishing such ratios and rates for the project under the applicable contract provisions.

**TO: EMPLOYERS/EMPLOYEES**

**PREVAILING WAGE SCHEDULE:**

**The wages indicated on this wage schedule are the least permitted to be paid for the occupations indicated. When an employee works in more than one classification, the employer must record the number of hours worked in each classification at the prescribed hourly base rate.**

**OVERTIME:**

**Overtime is to be paid to an employee at a rate not less than one and one-half times the basic rate of pay for all hours worked in excess of forty (40) hours in such workweek. Wage violations or questions should be directed to the designated Engineer or the undersigned.**

Director  
Division of Construction Procurement  
Frankfort, Kentucky 40622  
502-564-3500

**NOTICE OF REQUIREMENT FOR AFFIRMATIVE ACTION  
TO ENSURE EQUAL EMPLOYMENT OPPORTUNITY  
(Executive Order 11246)**

1. The Offeror's or Bidder's attention is called to the "Equal Opportunity Clause" and the "Standard Federal Equal Employment Specifications" set forth herein.
2. The goals and timetables for minority and female participation, expressed in percentage terms for the Contractor's aggregate work force in each trade on all construction work in the covered area, are as follows:

<b>GOALS FOR MINORITY PARTICIPATION IN EACH TRADE</b>	<b>GOALS FOR FEMALE PARTICIPATION IN EACH TRADE</b>
7.0%	6.9%

These goals are applicable to all the Contractor's construction work (whether or not it is Federal or federally-assisted) performed in the covered area. If the contractor performs construction work in a geographical area located outside of the covered area, it shall apply the goals established for such geographical area where the work is actually performed. With regard to this second area, the contractor also is subject to the goals for both its federally involved and non-federally involved construction.

The Contractor's compliance with the Executive Order and the regulations in CFR Part 60-4 shall be based on its implementation of the Equal Opportunity Clause, specific affirmative action obligations required by the specifications set forth in 41 CFR 60-4, 3(a), and its efforts to meet the goals. The hours of minority and female employment and training must be substantially uniform throughout the length of the contract, and in each trade, and the contractor shall make a good faith effort to employ minorities and women evenly on each of its projects. The transfer of minority or female employees or trainees from Contractor to Contractor or from project to project for the sole purpose of meeting the Contractor's goals shall be a violation of the contract, the Executive Order and the regulations in 41 CFR Part 60-4. Compliance with the goals will be measured against the total work hours performed.

3. The Contractor shall provide written notification to the Director of the Office of Federal Contract Compliance Programs within ten (10) working days of award of any construction subcontract in excess of \$10,000.00 at any tier for construction work under the contract resulting from this solicitation. The notification shall list the name, address and telephone number of the subcontractor; employer identification number of the subcontractor; estimated dollar amount of the subcontract; estimated starting and completion dates of the subcontract; and the geographical area in which the subcontract is to be performed. The notification shall be mailed to:

**Evelyn Teague, Regional Director  
Office of Federal Contract Compliance Programs  
61 Forsyth Street, SW, Suite 7B75  
Atlanta, Georgia 30303-8609**

4. As used in this Notice, and in the contract resulting from this solicitation, the "**covered area**" is Breathitt County.

## **PART IV**

## **INSURANCE**

Refer to  
*Kentucky Standard Specifications for Road and Bridge Construction,*  
current edition

**PART V**

**BID ITEMS**

Section: 0001 - PAVING

LINE	BID CODE	ALT	DESCRIPTION	QUANTITY	UNIT	UNIT PRIC	FP	AMOUNT
0010	00003		CRUSHED STONE BASE	533.00	TON		\$	
0020	00100		ASPHALT SEAL AGGREGATE	5.00	TON		\$	
0030	00103		ASPHALT SEAL COAT	.60	TON		\$	
0040	00214		CL3 ASPH BASE 1.00D PG64-22	380.00	TON		\$	
0050	00356		ASPHALT MATERIAL FOR TACK	4.10	TON		\$	
0060	00388		CL3 ASPH SURF 0.38B PG64-22	710.00	TON		\$	
0070	02676		MOBILIZATION FOR MILL & TEXT	1.00	LS		\$	
0080	02677		ASPHALT PAVE MILLING & TEXTURING	642.00	TON		\$	

Section: 0002 - ROADWAY

LINE	BID CODE	ALT	DESCRIPTION	QUANTITY	UNIT	UNIT PRIC	FP	AMOUNT
0090	00071		CRUSHED AGGREGATE SIZE NO 57	279.00	TON		\$	
0100	00078		CRUSHED AGGREGATE SIZE NO 2	1,342.00	TON		\$	
0110	01982		DELINEATOR FOR GUARDRAIL MONO DIRECTIONAL WHITE	10.00	EACH		\$	
0120	01984		DELINEATOR FOR BARRIER - WHITE	26.00	EACH		\$	
0130	02014		BARRICADE-TYPE III	4.00	EACH		\$	
0140	02159		TEMP DITCH	100.00	LF		\$	
0150	02160		CLEAN TEMP DITCH	100.00	LF		\$	
0160	02200		ROADWAY EXCAVATION	1,613.00	CUYD		\$	
0170	02360		GUARDRAIL TERMINAL SECTION NO 1	1.00	EACH		\$	
0180	02367		GUARDRAIL END TREATMENT TYPE 1	1.00	EACH		\$	
0190	02381		REMOVE GUARDRAIL	527.00	LF		\$	
0200	02555		CONCRETE-CLASS B	180.00	CUYD		\$	
0210	02562		TEMPORARY SIGNS	300.00	SQFT		\$	
0220	02572		QUALITY CONTROL	1.00	LS		\$	
0230	02602		FABRIC-GEOTEXTILE CLASS 1	2,956.00	SQYD		\$	
0240	02650		MAINTAIN & CONTROL TRAFFIC	1.00	LS		\$	
0250	02671		PORTABLE CHANGEABLE MESSAGE SIGN	4.00	EACH		\$	
0260	02701		TEMP SILT FENCE	650.00	LF		\$	
0270	02704		SILT TRAP TYPE B	2.00	EACH		\$	
0280	02705		SILT TRAP TYPE C	4.00	EACH		\$	
0290	02707		CLEAN SILT TRAP TYPE B	2.00	EACH		\$	
0300	02708		CLEAN SILT TRAP TYPE C	4.00	EACH		\$	
0310	02726		STAKING	1.00	LS		\$	
0320	03171		CONCRETE BARRIER WALL TYPE 9T	486.00	LF		\$	
0330	04953		TEMP RELOCATION OF SIGNAL HEAD	8.00	EACH		\$	
0340	05950		EROSION CONTROL BLANKET	500.00	SQYD		\$	
0350	05952		TEMP MULCH	500.00	SQYD		\$	
0360	05953		TEMP SEEDING AND PROTECTION	30.00	SQYD		\$	
0370	05963		INITIAL FERTILIZER	.10	TON		\$	
0380	05964		MAINTENANCE FERTILIZER	.10	TON		\$	
0390	05992		AGRICULTURAL LIMESTONE	.40	TON		\$	
0400	06511		PAVE STRIPING-TEMP PAINT-6 IN	5,584.00	LF		\$	
0410	06568		PAVE MARKING-THERMO STOP BAR-24IN	66.00	LF		\$	

Report Date 7/20/22

LINE	BID CODE	ALT	DESCRIPTION	QUANTITY	UNIT	UNIT PRIC	FP	AMOUNT
0420	06573		PAVE MARKING-THERMO STR ARROW	1.00	EACH		\$	
0430	06574		PAVE MARKING-THERMO CURV ARROW	11.00	EACH		\$	
0440	06593		PAVEMENT MARKER TYPE V-B Y/R	23.00	EACH		\$	
0450	06610		INLAID PAVEMENT MARKER-MW	9.00	EACH		\$	
0460	08039		PRE-DRILLING FOR PILES	8,583.00	LF		\$	
0470	08151		STEEL REINFORCEMENT-EPOXY COATED	6,800.00	LB		\$	
0480	08901		CRASH CUSHION TY VI CLASS BT TL2	2.00	EACH		\$	
0490	20191ED		OBJECT MARKER TY 3	2.00	EACH		\$	
0500	20430ED		SAW CUT	596.00	LF		\$	
0510	20745ED		ROCK SOUNDINGS	120.00	LF		\$	
0520	20746ED		ROCK CORINGS	15.00	LF		\$	
0530	21802EN		G/R STEEL W BEAM-S FACE (7 FT POST)	500.00	LF		\$	
0540	22664EN		WATER BLASTING EXISTING STRIPE	2,500.00	LF		\$	
0550	23261EC		PAVE MARK-THERMO-X-WALK-24 IN	101.00	LF		\$	
0560	23911EC		GROUT	999.00	CUYD		\$	
0570	24189ER		DURABLE WATERBORNE MARKING-6 IN W	3,495.00	LF		\$	
0580	24190ER		DURABLE WATERBORNE MARKING-6 IN Y	2,857.00	LF		\$	
0590	24550EC		VIBRATION MONITORING	1.00	LS		\$	
0600	24787EN		SHEET PILING	24,127.00	SQFT		\$	
0610	24880EC		REMOVE PAVEMENT MARKER	22.00	EACH		\$	

Section: 0003 - MOBILIZATION & DEMOBILIZATION

LINE	BID CODE	ALT	DESCRIPTION	QUANTITY	UNIT	UNIT PRIC	FP	AMOUNT
0620	02568		MOBILIZATION	1.00	LS		\$	
0630	02569		DEMOBILIZATION	1.00	LS		\$	