CALL NO. 310

CONTRACT ID. 121018

MENIFEE COUNTY

FED/STATE PROJECT NUMBER JL04 083 0460 010-014

DESCRIPTION FRENCHBURG-WEST LIBERTY ROAD (US 460)

WORK TYPE GRADE & DRAIN AND PAVEMENT ALTERNATES

PRIMARY COMPLETION DATE 245 WORKING DAYS

LETTING DATE: June 15, 2012

Sealed Bids will be received electronically through the Bid Express bidding service until 10:00 AM EASTERN DAYLIGHT TIME June 15, 2012. Bids will be publicly announced at 10:00 AM EASTERN DAYLIGHT TIME.

ROAD PLANS

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

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PART I

SCOPE OF WORK

CONTRACT ID - 121018 ADMINISTRATIVE DISTRICT - 10

PROJECT(S) IDENTIFICATION AND DESCRIPTION:

COUNTY - MENIFEE PCN - DE08304601218
JL04 083 0460 010-014
FRENCHBURG-WEST LIBERTY ROAD (US 460) RECONSTRUCT FROM KY 3338 SOUTH OF FRENCHBURG TO 0.8 MILES SOUTH OF KY 1242 AT MARIBA. GRADE & DRAIN AND PAVEMENT ALTERNATES. SYP NO. 10-00117.01.
GEOGRAPHIC COORDINATES LATITUDE 37^56'00" LONGITUDE 83^37'00"

COMPLETION DATE(S):
245 WORKING DAYS
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 Expedite Bidding Program available on the Internet web site of the Department of Highways, Division of Construction Procurement. (www.transportation.ky.gov/contract)

The Bidder must download the bid file located on the Bid Express website (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 is advised that the Underground Facility Damage Protection Act of 1994, became law January 1, 1995. It is the contractor's responsibility to determine the impact of the act regarding this project, and take all steps necessary to be in compliance with the provision of the act.

SPECIAL NOTE FOR PIPE INSPECTION

Contrary to Section 701.03.08 of the 2012 Standard Specifications for Road and Bridge Construction and Kentucky Method 64-114, certification by the Kentucky Transportation Center for prequalified Contractors to perform laser/video inspection is not required on this contract. It will continue to be a requirement for the Contractor performing any laser/video pipe inspection to be prequalified for this specialized item with the Kentucky Transportation Cabinet-Division of Construction Procurement.

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. 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). The answers provided shall be considered part of this Special Note and, in case of a discrepancy, will govern over all other bidding documents.

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. (See attachment)

10/18/2011

SPECIAL NOTE FOR RECIPROCAL PREFERENCE

Reciprocal preference to be given by public agencies to resident bidders

By reference, KRS 45A.490 to 45A.494 are incorporated herein and in compliance regarding the bidders residency. Bidders who want to claim resident bidder status should complete the Affidavit for Claiming Resident Bidder Status along with their bid in the Expedite Bidding Program. Submittal of the Affidavit should be done along with the bid in Bid Express.

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.

JPC RIDE QUALITY

JPC Pavement Smoothness requirements shall apply on this project in accordance with Section 501 of the current Standard Specifications.

FUEL AND ASPHALT PAY ADJUSTMENT

The Department has included the Contract items Asphalt Adjustment and Fuel Adjustment for possible future payments at an established Contract unit price of $1.00. The Department will calculate actual adjustment quantities after work is completed. If existing Contract amount is insufficient to pay all items on the contract with the adjustments, the Department will establish additional monies with a change order.

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.

MATERIAL TRANSFER VEHICLE (MTV)

Provide and use a MTV in accordance with Sections 403.02.10 and 403.03.05.

SPECIAL NOTE FOR
Perforated Pipe – 4 inch
For Aggregate Backfilled Trench

Apply section 704, Underdrains, of the current edition of the Standard Specifications except use coarse aggregate for the backfill and wrap the aggregate with geotextile fabric as shown in the edge drain details. Apply section 214.03.04 of the current edition of the Standard Specifications except use Type IV fabric. Place the fabric against the sides and bottom of the trench with suitable equipment without stretching it. The filter aggregate should be placed in the trench without damaging, displacing, or dislodging the fabric. For new construction the fabric should be placed under the drainage blanket, extend through the trench and wrap back on top of the drainage blanket after it is placed. For retrofit situations the fabric should be overlapped at the top of the back-filled trench.

November 20, 2006

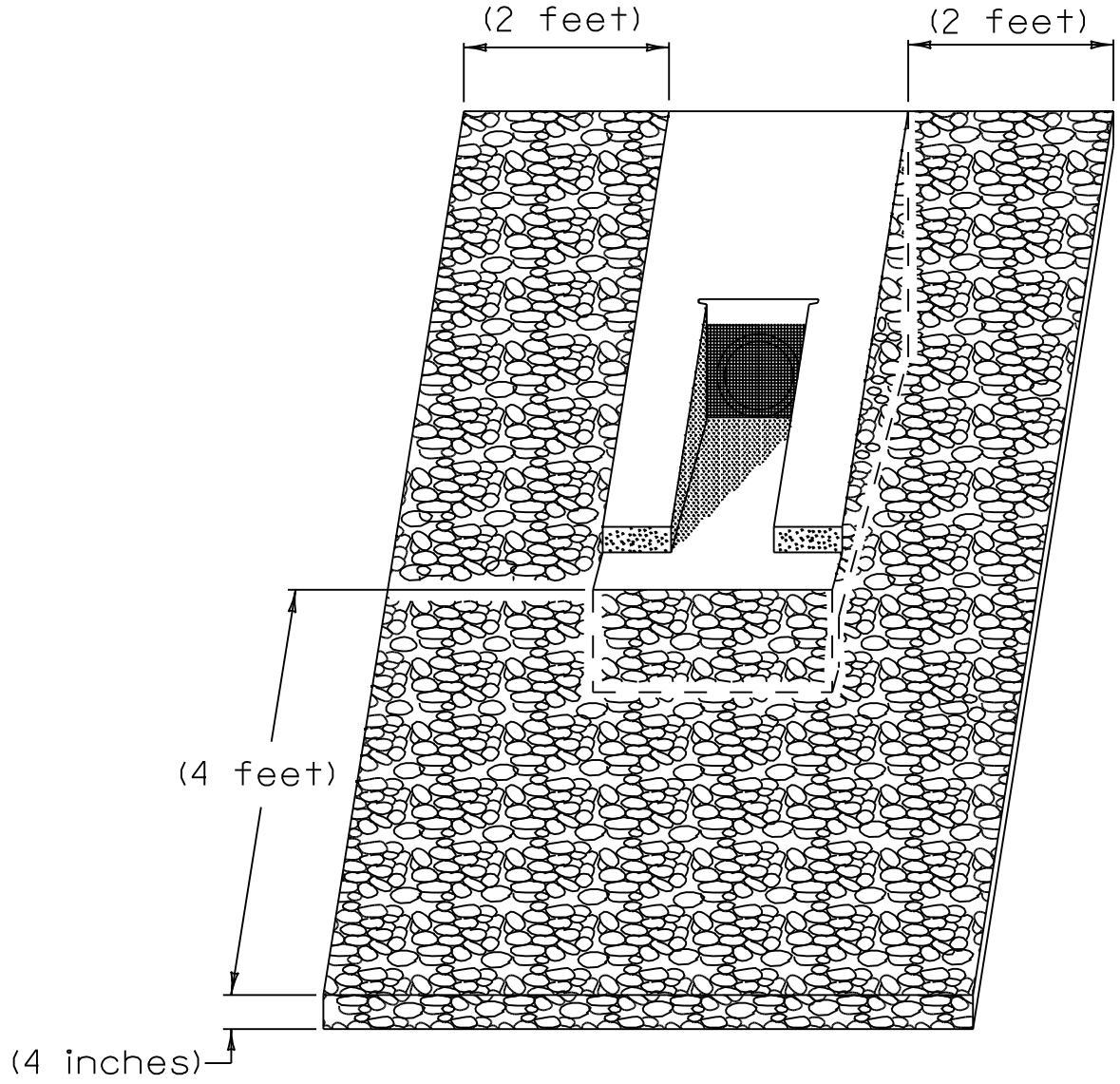
SPECIAL NOTE FOR PAVEMENT SUBSURFACE DRAINAGE OUTLET

Use approximately one ton of Crushed Aggregate Size No. 2 at all Perforated Pipe Headwall Outlets as illustrated in the detail below. Place Crushed Aggregate Size No. 2 to a minimum depth of 4'' as detailed below.

Use Dense Graded Aggregate (DGA) removed during placement of the Crushed Aggreagate Size No. 2 to dress existing shoulders where DGA is exposed. Waste other materials removed during placement of the Crushed Aggregate Size No. 2 as directed by the Engineer. The Department will make no direct payment for disposal of wasted material.

The Department will consider payment for Crushed Aggregate Size No. 2 as full compensation for all materials, labor, and other incidentals necessary to place Crushed Aggregate Size No. 2 for vegetation control and/or erosion control at pavement edge drain outlets.

See current Standard Drawing RDP-010 for dimensions and other details.



SPECIAL NOTE FOR

Longitudinal Drain and Blankets

"ALL LONGITUDINAL PIPE DRAINAGE SYSTEMS FOR THE PAVEMENT DRAINAGE BLANKETS SHALL BE OUTLETTED TO A HEADWALL, MEDIAN BOX INLET, DITCH BOX, OR CURB BOX INLET. OUTLET SHALL BE IN A FILL SECTION WHENEVER POSSIBLE. OUTLET SPACING SHALL NOT EXCEED 500 FEET EXCEPT GRADES 1% OR LESS, THEN THE SPACING OF OUTLETS SHALL NOT EXCEED 250 FEET. ALL SAGS SHALL HAVE AN OUTLET."

SPECIAL NOTE FOR ROLLER COMPACTED CONCRETE (RCC) 6-INCHES OR LESS DEPTH

This Special Note will apply where indicated on the plans or in the proposal. Section references herein are to the Department's 2012 Standard Specifications for Road and Bridge Construction.

1.0 DESCRIPTION. Roller Compacted Concrete (RCC) consists of aggregate, Portland cement, possibly mineral admixtures, and water. RCC is proportioned, mixed, placed, compacted, and cured in accordance with these specifications. Ensure that the RCC conforms to the lines, grades, thickness, and typical cross section shown in the plans or otherwise established by the Engineer. When used as base course, it will be covered with one or more lifts of asphalt as shown on the Plans. Otherwise, the RCC will provide the final riding surface.

2.0 MATERIALS AND EQUIPMENT.

2.1 Portland Cement. Use Type I or II Portland cement conforming to Section 801.

2.2 Mineral Admixtures. Conform to Section 844. The Department will allow up to 40 percent, by weight, of the total cementious content to be mineral admixtures with individual limits on each type as follows:

Mineral Admixture	Maximum by Weight of Cementious Content
Class F Fly Ash	20%
Class C Fly Ash	30%
Ground Granulated Blast Furnace Slag	30%
Microsilica	10%

2.3 Aggregate. Conform to Sections 804 and 805. Use well-graded aggregate without gradation gaps and conforming to the following:

Sieve Size	Percent Passing by Weight
1 inch	100
3/4 inch	90-100
1/2 inch	70-100
3/8 inch	60-85
No. 4	40-60
No. 16	20-40
No. 100	6-18
No. 200	2-8

2.4 Water. Conform to Section 803.

2.5 Curing Compound. Conform to Section 823.

2.6 Concrete Plant. Conform to Section 601. Ensure the mixing plant is within a 30-minute haul time from the point of RCC placement. Use only plants capable of producing an RCC pavement mixture in the proportions defined by the final approved mix design and within the specified tolerances. The capacity of the plant must be sufficient to produce a uniform mixture at a rate compatible with the placement equipment. If the plant is unable to produce material at a rate adequate to prevent unnecessary cold joints and frequent paver stoppages, the Engineer may halt production until such time that a plant of appropriate capacity is used.

2.7 Paver. Conform to 403.02.07 and ensure that the paver is of suitable weight and stability to spread and finish the RCC material, without segregation, to the required thickness, smoothness, surface texture, cross-section, and grade.

2.8 Compactors. Use self-propelled steel drum vibratory rollers having a minimum static weight of 10 tons for primary compaction. For final compaction, use either a steel drum roller, operated in a static mode, or a rubber-tired roller of equal or greater weight. Only use walk-behind vibratory rollers or plate tampers for compacting areas inaccessible to large rollers.

2.9 Haul Trucks. Use dump trucks equipped with retractable protective covers for protection from rain or excessive evaporation. Use a sufficient number of trucks to ensure an adequate and continuous supply of RCC material to the paver. If the number of trucks is inadequate to prevent frequent starts and stops of the paver, cease production until additional trucks are obtained.

2.10 Water Trucks. Keep at least one water truck, or other similar equipment, on-site and available for use throughout the paving and curing process. Equip such equipment with a spreader pipe containing fog spray nozzles capable of evenly applying a fine spray of water to the surface of the RCC without damaging the final surface.

3.0 CONSTRUCTION.

3.1 RCC Mix Design. At least 45 days prior to the beginning of placing of RCC in the roadway, submit a proposed mix design to the Engineer. If RCC has not been provided to the Department under the submitted mix design a trial batch will be required. Perform batch mixture preparation and testing in the presence of representatives of the District Materials Engineer and the Central Office Division of Materials. Deliver no concrete to the project until an approved mix design has been obtained.

3.2 Trial Batch. Use a mix design that demonstrates a compressive strength of 3500 psi within 28 days. If the pavement is to be opened earlier than 28 days, base the trial batch strengths on the proposed schedule of opening. If the concrete mixture is a design that the producer has not previously furnished to a Department project, have the producer provide trial batches of at least 4 cubic yards to demonstrate that the mixture will conform to the requirements for slump, density, and strength at the placement time frames the project will require. Have the producer make the trial batches using the ingredients, proportions, and equipment (including batching, mixing and delivery time with pavers and proposed rollers) to be used on this project. Have the producer make at least 2 consecutive trial batches conforming to all specified

requirements. Trial batches may be placed on the project, but at a quantity not to exceed 20 cubic yards. Central Office Materials will observe all phases of the trial batches. Provide cores and batch tickets along with a report containing mix proportions and actual gradations for each trial batch to the Engineer for Central Office Materials review and approval.

3.3 Preparation of Subgrade. Before the RCC processing begins, prepare the subgrade in accordance with Section 207. Prior to RCC placement, ensure that the surface of the subbase is clean and free of foreign material, ponded water, and frost. Ensure that the subbase is uniformly moist at the time of RCC placement. If sprinkling of water is required to remoisten certain areas, ensure that the method of sprinkling will not form mud or pools of freestanding water.

3.4 Weather Limitations and Protection. Conform to 501.03.05. Additionally, conduct no placement of RCC pavement during rain conditions. Placement may continue during very light rain or mists provided the surface of the RCC pavement is not eroded, diluted, or damaged in any way. Use dump truck covers during these periods. The Engineer may terminate paving at any time when, in the Engineer's judgement, the rain is detrimental to the finished product.

3.5 Mixing. Mix according to 601.03.08. Use the same mixture for the entire project. If, during production, a material source is changed, then suspend production and submit a new mix design to the Engineer for approval. Do not exceed the manufacturer's rated capacity for dry concrete mixtures in the mixing chamber. Keep the sides of the mixer and mixer blades free of hardened RCC or other buildups. Routinely check mixer blades for wear and replace if wear is sufficient to cause inadequate mixing.

Ensure that the mixing plant receives the quantities of individual ingredients to within the following tolerances:

Material	Variation by Weight
Cementious Materials	± 1.0% (-0 to +4 for Continuous Mixers)
Water	± 1.0%
Aggregates	± 2.0%

3.6 Transportation. Transport the RCC pavement material from the plant to the areas to be paved in dump trucks equipped with retractable protective covers for protection from rain or excessive evaporation. Ensure that the trucks are dumped clean with no buildup or hanging of RCC material in the corners. Have the dump trucks deposit the RCC material directly into the hopper of the paver or into a secondary material distribution system that deposits the material into the paver hopper. Dump truck delivery must be timed and scheduled so that RCC material is spread and compacted within the specified time limits.

The Department will also allow delivery by performance tested mixer trucks.

3.7 Paving. Do not allow the quantity of RCC material in the paver to approach empty between loads. Maintain the material above the auger at all times during paving. Ensure that the paver proceeds in a steady, continuous operation with minimal starts and stops, except to begin a new lane. Maximum paver speed during laydown is 10 feet per minute. Higher paver speeds may be allowed at the discretion of the Engineer if the higher speeds may be obtained without

distress to the final product or cause additional starts and stops. Ensure that the surface of the RCC pavement is smooth, uniform, and continuous without excessive tears, ridges, or aggregate segregation once it leaves the paver.

Broadcasting or fanning the RCC material across areas being compacted is not permissible. Such additions of materials may only be done immediately behind the paver and before any compaction has taken place. Remove any segregated coarse aggregate from the surface before rolling.

If segregation occurs in the RCC during paving operations, stop placement until the cause is determined and corrected to the satisfaction of the Engineer. If the segregation is judged by the Engineer to be severe, remove and replace the segregated area at no additional cost to the Department.

Pave all areas inaccessible to either roller or paver with cast-in-place Class A concrete.

3.8 Compaction. Ensure that compaction begins with the placement process and is completed within 60 minutes of the start of the mixing at the plant. The time may be increased or decreased at the discretion of the Engineer depending on ambient conditions of temperature and humidity. Do not permit delays in rolling unless approved by the Engineer. Mark all areas where roller compaction operations do not begin within 15 minutes after spreading the RCC mix. Plan operations and supply sufficient equipment to ensure that these criteria are met.

Determine the sequence and number of passes by vibratory and non-vibratory rollers to obtain the specified density and surface finish. Only operate rollers in the vibratory mode while in motion. Rubber-tire rollers may be used for final compaction. Use additional rollers if specific density requirements are not obtained or if placing operations get ahead of the rolling operations.

3.9 Quality Control Testing. Continuously monitor the compaction operation and make cylinders as necessary.

3.9.1 Nuclear Density Gauges. Conduct Field density tests using a nuclear moisture-density gauge as soon as possible, but no later than 30 minutes after the completion of the rolling. Calibrate the gauge for moisture content at the beginning of the work and at any time conditions change during the work. The required minimum density is 98 percent of the maximum laboratory density obtained according to AASHTO T 180 (Method D). If field density readings below 95% of the maximum laboratory density are obtained, stop production until the cause is determined and corrective are made to the Engineer’s satisfaction.

3.9.2 Concrete Cylinders. When opening to traffic prior to coring will be necessary, prepare at least two sets of test specimens in accordance with ASTM C 1435 under the direct observation of the Department for each day’s production. A set of specimens consists of three cylinders.

3.10 Joints.

3.10.1 Fresh Vertical Joints. A joint is considered a fresh joint when RCC is placed within 60 minutes of placing the previous material or as specified by the Engineer based on ambient conditions. Fresh joints do not require special treatment.

3.10.2 Cold Vertical Joints. Any planned or unplanned construction joints that do not qualify as fresh joints are considered cold joints. Prior to placing fresh RCC mixture against a compacted cold vertical joint, thoroughly clean the cold joint of loose or foreign material. Wet the vertical joint face and maintain it in a moist condition immediately prior to placement the fresh material.

For uncompacted surfaces or slopes more than 15 degrees from the vertical, cut the joint vertically for the full depth. Within 2 hours of final compaction, the edge of a cold joint may be cut with approved mechanical equipment. For edges cut after 2 hours, saw cut to the full depth of the pavement. Demonstrate any modification or substitution of the saw cutting procedure to the Engineer for approval prior to use. In no case allow cutting of the edge to cause raveling or tearing of the surface. Moisten the cut edge immediately prior to placement of the fresh material.

3.10.3 Joints at Structures. Place 1/2-inch expansion joint material against all box inlets, manholes, concrete barriers, retaining walls, bridge abutments, concrete gutter, and similar structures that project through, into, or against the pavement.

3.10.4 Control Joints. Construct transverse contraction joints in the RCC pavement by sawing. The Department will allow soft-cut or green-cut saws used as soon as possible behind the rolling operation and set to manufacturer's recommendations. Conventional cut saws must be used as soon as the sawing operation will not result in raveling or other damage to the RCC pavement, but no later than 18 hours after RCC placement. Cut all joints to 1/4 the depth of the RCC pavement to a single saw blade width. Joints should be spaced at maximum intervals equal to 24 times the nominal pavement thickness unless otherwise indicated on the Plans or directed by the Engineer. Ensure the joints are offset from the JPC pavement joints, as closely to mid-panel as possible.

3.10.5 Longitudinal Construction Joints. Saw cut 1 1/2-inch deep joints and seal with hot-pour elastic joint seal according to the Standard Drawings.

3.11 Finishing. Ensure that the finished surface of the RCC pavement, when tested with a 10-foot straightedge or crown surface template, does not vary from the straightedge or template by more than 1/4 inch at any one point and shall be within 5/8 inch of the specified finished grade. When surface irregularities are outside these tolerances, diamond-grind the surface to meet the tolerance at no additional cost.

3.12 Curing. Immediately after final rolling and compaction testing, cure according to Subsection 501.03.15. Do not use curing compounds when the RCC material is to be promptly covered with asphalt.

3.11 Opening to Traffic. Protect the RCC from vehicular traffic during the curing period. Completed portions of the RCC pavement may be opened for use as shoulder when cylinders or cores attain 2,500-psi strength and for traffic lane use at 3,000-psi strength.

3.12 Thickness and Strength. Take 2 cores to represent each 1,000 linear foot section, or portion thereof, at the locations the Engineer directs. Additionally, core all areas marked for delayed rolling. Immediately provide the cores to the Engineer at the coring site. Repair the core holes using a non-shrink grout or rapid patch material from the Department's List of Approved Materials. The Engineer will determine the thickness according to KM 64-309 and Strength according to Part 5 of KM 64-314. The Engineer will evaluate areas found deficient in thickness or strength. When the Engineer deems the areas warrant removal, remove and replace the areas with conforming concrete.

4.0 MEASUREMENT.

4.1 Roller Compacted Concrete (RCC). The Department will measure the quantity in square yards according to the Plan dimensions as shown in the Record Plans. The Department will determine the final quantity based on the design quantity with increases or decreases by authorized adjustments. Authorized adjustments include changes in the Record Plan dimensions, additional areas not shown in the Record Plans, and errors and omissions in the design quantity in excess of one percent.

The Department will not measure nuclear density testing, coring, or patching of core holes for payment and will consider them incidental to this item of work.

The Department will not measure rumble strips for payment, unless they are constructed in a separate operation because the shoulder was used to maintain traffic, and will consider them incidental to this item of work.

4.2 Rumble Strips, Type 3. The Department will measure the quantity in linear feet. The Department will not measure Type 3 rumble strips for payment unless they are constructed in a separate operation because the shoulder was used to maintain traffic.

4.3 Thickness. The Department will measure the pavement thickness tolerance according to KM 64-309. The Department will not measure the pavement thickness tolerance as a separate pay unit, but will use the pavement thickness tolerance to calculate an adjusted Contract unit price. The Department will adjust the Contract unit price for by the Schedule for Adjusted Payment for Thickness Deficiency. The Department will not measure coring for payment and will consider it incidental to the concrete pay items.

4.4 Strength. The Department will measure core strength tolerance according to Part 5 of KM 64-314. The Department will not measure the core strength as a separate pay unit, but will use the strength tolerance to calculate an adjusted Contract unit price. The Department will not measure coring for payment and will consider it incidental to the concrete pay items.

5.0 PAYMENT. Department will make payment for the completed and accepted quantities under the following:

Code	Pay Item	Pay Unit
------	RCC Shoulders, Thickness	Square Yard
02695	Rumble Strips, Type 3	Linear Foot

Schedule for Adjusted Payment for Thickness Deficiency

Thickness Deficiency (inches)	Deduction (Percent of Contract Unit Bid Price)
0.00 to 0.20	0
0.21 to 0.30	20
0.31 to 0.40	28
0.41 to 0.50	32
0.51 to 0.75	43
0.76 to 1.00	50
Greater than 1.00	(1)

(1) *Remove and replace these areas with concrete of the specified thickness at no expense to the Department when the Engineer directs.*

Schedule for Adjusted Payment for Compressive Strength Deficiency

Strength (psi)	Deduction (Percent of Contract Unit Bid Price)
≥ 3325	0
3150 to 3324	15
2975 to 3149	25
2800 to 2974	35
< 2800	(1)

(1) *Remove and replace these areas with concrete no expense to the Department when the Engineer directs.*

August 6, 2010

SPECIAL NOTE FOR
TREES CUTTING RESTRICTION

TREES CUTTING SHALL BE RESTRICTED TO BETWEEN THE DATES OF NOVEMBER 15 – MARCH 31 TO AVOID POTENTIAL DIRECT EFFECTS ON SUMMER ROOSTING AND SWARMING INDIANA BATS. TREES CUTTING SHALL ACT IN ACCORDANCE WITH THE AGREEMENTS BETWEEN KENTUCKY TRANSPORTATION CABINET AND UNITED STATES FISH AND WILDLIFE SERVICE AS STATED IN THE "UNITED STATES FISH AND WILDLIFE SERVICE CONCURRENCE LETTER (04-06-2012)" AND "THE BIOLOGICAL ANALYSIS ADDENDUMS".

5/23/12

US 460, Menifee County
Item Number: 10-117.01

SPECIAL NOTE
ALTERNATE PAVEMENT BID ADJUSTMENT

This project includes alternate bidding for asphalt or concrete pavement. There are specific items listed for each pavement type to be bid with the alternate selected by the Contractor. There is also a line item in the alternate categories for each alternate to adjust for the projected out-year life-cycle costs to the Cabinet. These line item adjustments are as follows:

Asphalt Pavement Adjustment= **$386,405**

Concrete Pavement Adjustment= **$169,920**

NOTE: The Concrete Pavement Adjustment will be the same regardless of the shoulder alternate chosen.

The amount reflective of the pavement type selected by each contractor will be added to their respective bid for comparison of the low bid. The adjustment ***shall be used only for determination of the lowest bidder*** *and* ***shall not be used to determine the final payment*** to the contractor when the project is completed.

Please note that these adjustments should not be used for the calculation of the maximum Mobilization amount and are not required to be included in the minimum Demobilization amount.

Proposal Guaranty

As a supplement to Section 102 of the current Standard Specifications, it will not be necessary for the Proposal Guaranty to include an amount necessary to cover the amount of the bid adjustment.

SPECIAL NOTE CONCERNING BIOLOGICAL ASSESSMENT AND BEGIN WORK ON PROJECT

MENIFEE COUNTY

US460 REALIGNMENT PROJECT

10-117.01

As part of the Biological Assessment and subsequent addendum dated February 24, 2012, regarding the federally listed gray bat, Indiana bar and Virginia big-eared bat, KYTC has committed to hold the award until November 15, 2012. At which time tree cutting will be allowed from November 15, 2012 thru March 31st, 2013.

Right-of-Way Certification Form

Revised 2/22/11

☑ Federal Funded ☐ State Funded

☑ Original ☐ Re-Certification

This form must be completed and submitted to FHWA with the PS&E package for federal-aid funded Interstate, Appalachia, and Major projects. This form shall also be submitted to FHWA for all federal-aid projects that fall under Conditions No. 2 or 3 outlined elsewhere in this form. When Condition No. 2 or 3 apply, KYTC shall resubmit this ROW Certification prior to construction contract Award. For all other federal-aid projects, this form shall be completed and retained in the KYTC project file.

Date: 7 May 2K12

Project Name: Frenchburg-West Liberty Rd(US460)
Project #: FD52 CO83 6169401R
Item #: 10-117.00

Letting Date: 15 June 2K12
County: Menifee
Federal #: STPS 460-2

Description of Project: US 460 reconstruction/realignment vicinity Mariba.

Projects that require NO new or additional right-of-way acquisitions and/or relocations

☐ The proposed transportation improvement will be built within the existing rights-of -way and there are no properties to be acquired, individuals, families, and businesses ("relocatees") to be relocated, or improvements to be removed as a part of this project.

Projects that require new or additional right-of-way acquisitions and/or relocations

☐ Per 23 CFR 635.309, the KYTC hereby certify that all relocatees have been relocated to decent, safe, and sanitary housing or that KYTC has made available to relocatees adequate replacement housing in accordance with the provisions of the current FHWA directive(s) covering the administration of the Highway Relocation Assistance Program and that at least one of the following three conditions has been met. (Check those that apply.)

☐ **Condition 1.** All necessary rights-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. Fair market value has been paid or deposited with the court.

☐ **Condition 2.** Although all necessary rights-of-way have 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. Trial or appeal of 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. Fair market value has been paid or deposited with the court for most parcels. Fair market value for **all** pending parcels will be paid or deposited with the court prior to AWARD of construction contract. (See note 1 below.)

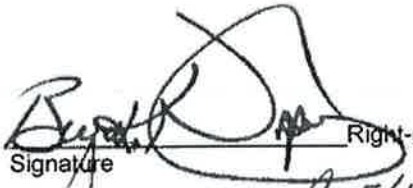
Note 1: The KYTC shall re-submit a right-of-way certification form for this project prior to AWARD of **all** Federal-Aid construction contracts. Award must not to be made until after KYTC has obtained full legal possession and fair market value for all parcels has been paid or deposited with the court and FHWA has concurred in the re-submitted right-of-way certification.

Right-of-Way Certification Form

Revised 2/22/11

☐ **Condition 3.** The acquisition or right of occupancy and use of a few remaining parcels are not complete and/or some parcels still have occupants. However, all remaining occupants have had replacement housing made available to them in accordance with 49 CFR 24.204. The KYTC is hereby requesting authorization to advertise this project for bids and to proceed with bid letting even though the necessary rights-of-way will not be fully acquired, and/or some occupants will not be relocated, and/or the fair market value 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. A full explanation and reason for this request, including identification of each such parcel and dates on which acquisitions, payments, and relocations will be completed, is attached to this certification form for FHWA concurrence. (See note 2.)

Note 2: The KYTC may request authorization on this basis only in unique and unusual circumstances. Proceeding to bid letting shall be the exception and never become the rule. In all cases, the KYTC shall make extraordinary efforts to expedite completion of the acquisition, payment for all affected parcels, and the relocation of all relocatees prior to AWARD of all Federal-Aid construction contracts or force account construction.

Approved:	Bruce K. Napier Printed Name	 Signature	Right-of-Way Supervisor
Approved:	DAVID L. ORR Printed Name	5/14/12 Signature	KYTC, Director of ROW &Utilities
Approved:	Steven R. Mills Printed Name	 Signature	5/23/12 FHWA, ROW Officer (when applicable)

Right-of-Way Certification Form

Revised 2/22/11

Date: 7 May 2K12

Project Name: Frenchburg-West Liberty Rd(US460)
Project #: FD52 CO83 6169401R
Item #: 10-117.00
Letting Date: 15 June 2K12

County: Menifee
Federal #: STPS 460-2

This project has 66 total number of parcels to be acquired, and 18 total number of individuals or families to be relocated, as well as 3 total number of businesses to be relocated.

54 Parcels where acquired by a signed fee simple deed and fair market value has been paid

10 Parcels have been acquired by IOJ through condemnation and fair market value has been deposited with the court

____ Parcels have not been acquired at this time *(explain below for each parcel)*

2 Parcels have been acquired or have a "right of entry" but fair market value has not been paid or has not been deposited with the court *(explain below for each parcel)*

X Relocatees have not been relocated from parcels 16, ____, ____, ____, ____, ____, ____, and ____ *(explain below for each parcel)*

Parcel #	Name/Station	Explanation for delayed acquisition, delayed relocation, or delayed payment of fair market value	Proposed date of payment or of relocation
016	Phyllis Lawson	Settlement reached at mediation. Property owner given 90 days after payment to vacate.	Payment: 5/24/12; Vacate 8/24/12
001	Jerry Wells et ux	Interlocutory Order & Judgement obtained. Mediation being scheduled. Commissioners' Award not deposited with court as of this date.	5/31/12
002	Jerry Wells et ux	Interlocutory Order & Judgement obtained. Mediation being scheduled. Commissioners' Award not deposited with court as of this date.	5/31/12
*wells	Various	16,18,19,20,32,36,37,38,41,42,44,46,47,48,56,61,66	

There are 0 billboards and/or 0 cemeteries involved on this project.

There are 22 water or monitoring wells on parcels 4, 9, 12, 13, and 14*. All have been acquired and are the responsibility of the project contractor to close/cap.

Form Effective Date: April 1, 2006
Last Revised: February 22, 2011

UTILITY NOTES TO BE INCLUDED IN THE PROPOSAL
SPECIAL NOTES FOR UTILITY CLEARANCE
IMPACT ON CONSTRUCTION

MENIFEE COUNTY, ACSTPR 460-2 (72)
FD52 083 61694 01 U
Frenchburg - West Liberty Road (US 460)
Item No. 10 - 117.01

CLARK ENERGY COOPERATIVE - The electric company will be relocating their facilities at the following stations:
250' Lt. Main Line CL sta. 108 + 50, 100' Lt. Main Line CL. Sta. 110+35 to 300' Rt. Main Line Sta. 110+00, 250' Lt. Main Line CL Sta. 13+00 to 100' Rt. Main Line CL. Sta. 15+50, 175' Rt. Main Line CL. Sta. 124+00 to 175' Lt. Main Line CL. Sta. 125+00, 150' Rt. Main Line CL Sta. 128+50 to 250' Lt. Main Line CL. Sta. 129+00, 150' Rt. Main Line Sta. 131+00 to 150' Rt. Main Sta. 133 + 00, 150' Rt. Main Line CL. Sta. 137+00 to 90' Lt. Main Line St. 138 + 50. 150' Rt. Main Line CL. Sta. 140+25 to 175' Lt. Main Line CL. Sta. 140 + 25. 90' Lt. Main Line CL. Sta. 144 + 50, 100' Rt. Main Line CL. Sta. 145 + 00. 175' Rt. Main Line CL. Sta. 148+00 to 150' Rt. Main Line CL. Sta. 151+50, 100' Rt. Main Line Sta. CL. 152+50 to 50' Lt. Main Line CL. Sta. 154 +75, 50' Lt. Main Line CL. Sta. 154 + 75 to 150' Lt. Main Line CL. Sta. 157 + 75, 60' Rt. Connector #3 CL. Sta. 48 + 00 to 25' Lt. Connector #3 CL. Sta. 46 + 60, 110' Lt. Main Line CL. Sta. 221+ 50 to 150' Rt. Main Line CL. Sta. 221 + 50, 100' Lt. Main Line CL. Sta. 250+ 00 to 50' Rt. Main Line CL. Sta. 251 + 60, 75' Lt. CL. KY 1242 Sta. 27 + 90 to 50' Rt. CL. KY 1242 Sta. 28 + 00, 150' Lt. CL. KY 1242 Sta. 39 + 00 to 125'Rt. CL. KY 1242 Sta. 41+25. Company relocation estimated by Nov. 30, 2012

MOUNTAIN TELEPHONE COOPERATIVE - The telephone company will be relocating their facilities at the following stations:
Rt. Main Line CL. Sta. 108 + 50 to 100' Lt. Main Line CL. Sta. 110 + 00 to Main Line CL. Sta. 115 + 00 to Main Line CL. Sta. 125 + 00, Lt. Main Line Sta. 125 + 00 to 150' Lt. Main Line CL. 128 + 50, 150' Rt. Main Line CL. 131 + 00 to150' Rt. Main Line CL. Sta. 138+50, 150' Rt. Main Line CL. Sta. 137 + 00 to 90' Lt. Main Line CL. Sta. 138 + 00, Main Line CL. Sta. 139 + 00 to Main Line CL. Sta. 154 + 00, Rt. Main Line CL. Sta. 152 + 50 to 50' Lt. Main Line Sta. 154 +25, 150' Lt. Main Line CL. Sta. 189 + 50 to Main Line CL. Sta. 191+90 to 150' Lt. Main Line CL Sta. 194+00, 100' Lt. Main Line CL. Sta. 220 + 70 to 150' Rt. Main Line CL. 220 + 70, 225' Lt. Main Line Sta. 242+50 to 200' Rt. Main Line CL. Sta. 250+00, 250' Lt. CL. KY 1242 Sta. 45+00 to 75' Rt. CL. KY 1242 Sta. 44 + 00. Company relocation estimated by Nov. 30, 2012

MOUNTAIN TELECOMMUNICATIONS - The television cable company will be relocating their facilities at the following stations:
Rt. Main Line CL. Sta. 108 + 50 to 100' Lt. Main Line CL. Sta. 110 + 00 to Main Line CL. Sta. 115 + 00 to Main Line CL. Sta. 125 + 00, Lt. Main Line Sta. 125 + 00 to 150'

Lt. Main Line CL. 128 + 50, 150’ Rt. Main Line CL. 131 + 00 to150’ Rt. Main Line CL. Sta. 138+50, 150’ Rt. Main Line CL. Sta. 137 + 00 to 90’ Lt. Main Line CL. Sta. 138 + 00, Main Line CL. Sta. 139 + 00 to Main Line CL. Sta. 154 + 00, Rt. Main Line CL. Sta. 152 + 50 to 50’ Lt. Main Line Sta. 154 +25, 150’ Lt. Main Line CL. Sta. 189 + 50 to Main Line CL. Sta. 191+90 to 150’ Lt. Main Line CL Sta. 194+00, 100’ Lt. Main Line CL. Sta. 220 + 70 to 150’ Rt. Main Line CL. 220 + 70, 225’ Lt. Main Line Sta. 242+50 to 200’ Rt. Main Line CL. Sta. 250+00, 250’ Lt. CL. KY 1242 Sta. 45+00 to 75’ Rt. CL. KY 1242 Sta. 44 + 00. Company relocation estimated by Nov. 30, 2012

CITY OF FRENCHBURG (WATER & SEWER) - The waterline facilities will be supplemented into the Roadway Contract.

CAVE RUN WATER COMMISSION - The water line facilities will be supplemented into the Roadway Contract.

CROWN CASTLE USA, INC. - The telecommunications tower removal scheduled and will be dismantled before contract awarding. Company relocation estimated by Nov. 30, 2012

COLUMBIA GAS TRANSMISSION CORPORATION - The gas transmission line has been relocated.

EAST KENTUCKY POWER COOPERATIVE - The power transmission line has been relocated.

There is no railroad involvement on the subject project.

COORDINATION WITH UTILITY FACILITY OWNERS

The Contractor will be responsible for contacting all utility facility owners on the subject project to have existing facilities located in the field. The Contractor will coordinate his activities with the utility facility owners to minimize and, where possible, avoid conflicts with utility facilities.

Where conflicts with utility facilities are unavoidable the Contractor will coordinate any necessary relocation work with the facility owner. There will be no damages awarded for delays caused by necessary utility relocations and/or adjustments.

PROTECTION OF UTILITIES

The location of utilities provided in the contract document has been furnished by the Facility owners and/or by reviewing record drawing and may not be accurate. It will be the Roadway Contractor's responsibility to locate utilities before excavating by calling the various utility owners and by examining any supplemental information supplied by the Cabinet. If necessary, the Roadway Contractor shall determine the exact location and elevation of utilities by hand digging to expose utilities before excavating in the area of a Utility. The cost for repair and any other associated costs for any damage to utilities caused by the Roadway Contractor's operations shall be borne by the Roadway Contractor. The Contractor is advised to contact BUD on-call system; however, the Contractor should be aware that owners of underground facilities are not required to be members of the BUD one-call system. It may be necessary for the Contractor to contact the County Court Clerk to determine what utility companies have facilities in the project area.

BEFORE-U-DIG (BUD)

The Contractor is instructed to call 1-800-752-6007 to reach KY 811, the one-call system for information on the location of existing underground utilities. The call is to be placed a minimum of two (2) and no more than ten (10) business days prior to excavation. The Contractor should be aware that owners of underground facilities are not required to be members of the KY 811 one-call Before-U-Dig (BUD) service. The Contractor must coordinate excavation with the utility owners, including those whom do not subscribe to KY 811. It may be necessary for the Contractor to contact the County Court Clerk to determine what utility companies have facilities in the project area.

SECTION 02600

BURIED PIPING AND APPURTENANCES

PART 1–GENERAL

1.01 SUMMARY

A. Work Included:
1. All underground piping and valves of every description.
2. Excavation, dewatering, and backfilling for all work under this section unless otherwise noted.
3. Concrete reaction blocking, gaskets, and all miscellaneous equipment furnished under this section.
4. Underground piping connections to all equipment, whether furnished under this section or not.

PART 2–PRODUCTS

2.01 MATERIALS OF CONSTRUCTION

A. All materials used in the manufacture, assembly, and painting of piping and valves in contact with water shall be compatible with potable water supplies and in contact with chemical feed systems shall be compatible with the chemicals being used. All glues, solvents, solders, etc., shall likewise be compatible. For instance, no lead-base solders shall be used. All materials shall be National Sanitation Foundation (NSF)-approved.

B. Size and Type:
1. All materials shall conform to the size and type shown on the drawings or called for in the specifications.
2. In joining two dissimilar types of pipe, standard fittings shall be used when available. In the event standard fittings are not available, the method of joining shall be standard selected by CONTRACTOR and submitted for review.

C. Piping appurtenances shall be made of the materials specified. All appurtenances not designated as to type shall be selected by CONTRACTOR and submitted for review.

2.02 BURIED PIPING

A. Ductile Iron Piping and Fittings:
1. Unless otherwise specified, all exterior piping shall conform to AWWA C151 with wall thickness provided in accordance with AWWA C150 for the depth of cover shown on the drawings using a minimum rated working pressure of 250 psi and Laying Condition 3; unless otherwise shown or specified. The words "ductile iron," weight and class of pipe shall be plainly marked on each piece of exterior pipe.
2. Except where shown, exterior pipe joints shall be mechanical joint or push-on joint.
3. Exterior joints and gaskets shall conform to AWWA C110 and C111.
4. Bolts on exterior joints shall be high-strength low-alloy steel (Corten, or equal) conforming to AWWA C111. Certificate to that effect shall be provided.

5. Except where shown otherwise, exterior fittings shall be mechanical joint or push-on joint. Exterior fittings and gaskets shall comply with AWWA C110, Ductile Iron Fittings, or C153, Ductile Iron Compact Fittings, and C111, as applicable, with a minimum rated working pressure of 250 psi.
6. Exterior and/or buried pipe and fittings shall be cement-mortar lined and asphaltic coated inside and asphaltic coated outside. Cement-mortar lining shall be in accordance with AWWA C104. Asphaltic coating shall conform to applicable standards herein for the pipe and fittings.
7. All ductile iron pipe and fittings shall be American, Clow, Griffin, Tyler, U.S. Pipe, or equal.

B. Copper Piping: All buried copper piping shall be provided as specified in Section 15040-Piping and Accessories.

C. Service Tubing: All buried service tubing shall be as specified in Section 15040–Piping and Accessories.

D. PVC Piping:
1. Water Main:
   a. PVC water main shall be PVC pressure rated pipe and shall conform to the requirements of AWWA C900 for pipe 4 inches through 12 inches and AWWA C905 for pipe from 14 inches through 36 inches. Pipe shall be furnished with integral elastomeric bell and spigot joints. Pipe shall conform to the O.D. of ductile iron pipe. C900 pipe shall be DR14. C905 pipe shall be DR18.
   b. Pipe sizes 2 inch and 3 inch shall conform to the requirements of ASTM D2241, with Class 250 pressure rating and DR17 dimension ratio.
   c. Markings on pipe shall include the following: Nominal pipe size, type of plastic pipe material, DR number, AWWA Designation with which the pipe complies, manufacturer's name, and the seal or mark of the laboratory making the evaluation of the suitability of the pipe for transport of potable water.
2. Provide tracer wire for underground PVC piping as specified herein, unless otherwise noted.

E. Tracer Wire:
1. Install 10-gauge solid tracer wire with buried pipe where specified. Wire shall be continuous and terminate at valve boxes, manholes, or PVC test stations. Wire shall be taped to pipe at 5-foot intervals for all piping. Any splices in copper wire shall be soldered and fitted with a Raco, or equal, insulated watertight boot.

2.03 VALVES

A. Valves: Valves and accessories for underground service are specified in Section 15040-Piping and Accessories.

PART 3–EXECUTION

3.01 INSTALLATION

A. Installation Standards:
1. Except where noted or specified, all underground water main piping shall be laid in accordance with AWWA C600 with all sewer clearances and separations from water main in accordance with the Kentucky Building Code.

B. General Excavation:
1. CONTRACTOR shall do all excavation, undercutting, dewatering, and backfilling necessary for work under this contract, unless otherwise noted.
2. The width of trench below the top of the pipe shall not exceed the nominal diameter of the pipe plus 2 feet for all pipelines.
3. Where the maximum trench width is exceeded, the pipe shall be placed in a concrete cradle or a stronger pipe used as necessary.
4. If the maximum trench width is exceeded for any reason other than by request of ENGINEER, the concrete cradle or the stronger pipe shall be placed at CONTRACTOR's expense.
5. Excavation shall include all necessary clearing of excavated areas, tree removal, all grubbing, all wet, dry, fill, and rock excavation, the removal of pavement, and all incidental work thereto. All above work shall be included in the Unit Price Bid, including unclassified rock excavation.
6. CONTRACTOR shall excavate whatever materials are encountered as required to place at the elevations shown, all pipe, manholes, and other work as required to complete the project as shown.
7. The bottom of the excavation shall be leveled off, all loose and disturbed soil shall be removed, and it shall be hand-tamped prior to pipe, manhole, etc., installation. Where requested by ENGINEER, original material below the excavation necessary for construction according to grades shown or specified shall be removed and replaced.
8. The excavation at the crossing of all underground utility services in place shall be as narrow as practicable.
9. All underground services shall be protected from damage and maintained in service at their original location and grade during the process of the work.
10. Any damage to underground services shall be replaced or repaired at no cost to OWNER or to the owner of the service.
11. The present underground services shown on the drawings are located in accordance with available data.
12. Encountering these services at a different location or encountering services not shown shall not release CONTRACTOR from the above-stated conditions.
13. Any service connections encountered which are to be removed shall be cut off at the limits of the excavation and capped in accordance with the requirements of owners of such connections.
14. Excavated material that is unsuitable or not required for filling shall be wasted.
15. Materials to be used for fill and suitable for this purpose shall be deposited where required, except that no fill shall be placed where trenches for sewers, water lines or other services will be located until after the trench work is completed.
16. CONTRACTOR shall provide adequate shoring, sheet piling, and bracing to prevent earth from caving or washing into the excavation and shall do all shoring and underpinning necessary to properly support adjacent or adjoining structures. All shoring, sheet piling, and underpinning must be maintained until permanent support is provided.

C. Laying Pipe:
1. Water lines shall have a minimum of 42 inches of cover in highway rights-of-way unless noted otherwise.
2. Any pipe or fittings cracked in cutting or handling or otherwise not free from defects shall not be used.
3. Pipe must be kept clean of mortar, cement, clay, sand or other material.
4. Trenches shall be kept water-free and dry during bedding, laying, and jointing.
5. CONTRACTOR shall provide, operate, and maintain all pumps or other equipment necessary to drain and keep all excavation pits and trenches and the entire subgrade area free from water under any and all circumstances that may arise.
6. All trees, shrubs, and improved areas outside the excavation shall be protected from damage.

D. Restraint Based on Concrete Thrust Blocking:
1. Except where noted or indicated, all bends, caps, plugs, tees, and other fittings shall be anchored with poured concrete to resist thrust. The thrust block sizes are based on assumed minimum soil bearing pressures of 4,000 lbs/ft^2.
2. If CONTRACTOR determines soil bearing pressure is under 4,000 lb/ft^2 or if adequate support against undisturbed soil cannot be obtained, CONTRACTOR shall provide proportionally larger thrust blocks or shall provide tie rods or restraining joints.
3. Where indicated as a "restrained" joint or where use of concrete thrust block is not possible, mechanical joints on ductile iron pipe shall be restrained by MEGALUG® 1100 or 1100SD Series by EBAA Iron Sales, Inc. or equal restraining system.
4. Where indicated as a "restrained" joint or where use of concrete thrust block is not possible, ductile iron push-on joint pipe shall be restrained by Lok-Ring Joint by American Ductile Iron Pipe, TRFLEX by U.S. Pipe, MEGALUG®1100HD Series by EBAA Iron Sales, Inc., or equal.
5. Push-on joints for PVC piping shall be restrained with MEGALUG® Series 1500 (AWWA C900) or Series 2800 (AWWA C905) by EBAA Iron Sales, Inc., UNIFLANGE SERIES 1350 by Ford Meter Box Co., Inc., or equal. PVC piping with ductile iron mechanical joint fittings shall be restrained with MEGALUG® Series 2000 PV by EBBA Iron Sales Inc., UNIFLANGE Series 1500 by Ford Meter Box Co., Inc., or equal.
6. If flexible restraint system used in lieu of concrete reaction blocking, submit to ENGINEER calculations determining the minimum number of restrained joints on both sides of fitting required to restrain pipe.

E. Bedding:
1. All underground pipe shall be bedded in compacted granular material, or material as shown on the Drawings.
2. Copper and polyethylene encased pipe piping shall be bedded in compacted sand.
3. Immediately prior to placing the pipe, bedding shall be shaped by hand to fit the entire bottom quadrant of the pipe between bell holes.
4. Bell holes shall be large enough to permit proper making of the joint but not larger than necessary to make the joint.
5. All adjustments to line and grade must be done by scraping away or filling in bedding under the body of the pipe. Bedding must be tamped into place.
6. If necessary to obtain uniform contact of the pipe with the bedding, a template shall be used.

F. Cover Material:
   1. Material which is to be placed from the bedding material around and to 1 foot above the top of all pipe shall be termed cover material.
   2. If clear native material, free of stone, debris and organic material is not available, No.9 crushed stone shall be used for Zone 3 bedding and backfill.
   3. Cover material shall be deposited in the trench for its full width on each side of the pipe, fittings, and appurtenances simultaneously.
   4. Cover material shall be placed by hand in 6-inch layers and shall be compacted using hand-tamping bars and/or mechanical tampers.

G. Backfill: Backfill above 1 foot above the pipe shall be as shown in the bedding and backfill detail.

3.02 REPAIR/RESTORATION

A. Upon completion of the work, all improvements disturbed by CONTRACTOR's operations shall be repaired or replaced, including all site improvements, landscaping, and/or paving material as existed prior to construction.

3.03 FIELD QUALITY CONTROL

A. Site Tests:
   1. CONTRACTOR shall include the cost of all testing, cleaning, and disinfection in the price bid.
   2. All piping shall be subject to test before being covered with base course or pavement. All piping and appurtenances shall be watertight or airtight and free from visible leaks.
   3. All piping and appurtenances shall be flushed or cleaned after installation prior to testing.
   4. All air shall be removed from piping by flushing and/or installation of corporations at high points in system. Presence or absence of air will be determined during pressurization of the piping system.
   5. CONTRACTOR shall provide all necessary piping connections, water, air, test pumping equipment, water meter, bulkheads, valves, pressure gauge, and other equipment, materials, and facilities necessary to complete the specified tests. CONTRACTOR shall provide all temporary sectionalizing devices and vents for testing. Note, when pressure testing against existing valves or piping, CONTRACTOR shall assume these items will fail and provide temporary plugging or valving as required.
   6. Pressure Tests: The test pressure shall be held for one hour during which time the leakage allowance shall not exceed that specified. In case repairs are required, the pressure test shall be repeated until the pipeline installation conforms to the specified requirements. Pumps, air compressors, instrumentation, and similar equipment shall not be subjected to the pressure tests.

3.04 CLEANING AND DISINFECTION

A. All equipment and materials shall be clean before installation. CONTRACTOR shall disinfect and flush the system before it is put on line. Water main, including buried and exposed piping, shall be disinfected according to AWWA C651.

B. In accordance with the requirements of AWWA C651-05, at least one set of samples shall be collected from every 1,200 feet of new water main, plus one set from the end of the line and at least one set from each branch.

C. CONTRACTOR shall obtain water samples and arrange for analysis of water in potable systems for bacteria as part of the Bid. Copies of test results shall be submitted to OWNER and ENGINEER.

D. Broken concrete, rubble fill, and other excess material shall be removed from the site and wasted.

E. All waste disposal areas and all areas used for the storage of materials or the temporary deposit of excavated earth shall be leveled off, cleaned up, and returned to condition that existed prior to construction.

F. All surplus material, tools, and equipment shall be removed, and the premises shall be left free of everything of the kind.

END OF SECTION

SECTION 15040

PIPING AND ACCESSORIES

PART 1–GENERAL

1.01 SUMMARY

A. Work Included:
   1. Aboveground and exposed piping and valves of every description.
   2. Piping connections to all aboveground or exposed equipment whether furnished under this section or not.

1.02 SUBMITTALS

A. Shop Drawings: General arrangement drawings of all interior cast or ductile iron or steel piping with all equipment attached shall be submitted. Drawings shall include proposed length, location and elevation of pipe, fittings, valves, and other appurtenances.

PART 2–PRODUCTS

2.01 MATERIALS–GENERAL

A. All materials used in the manufacture, assembly, and painting of piping and valves in contact with water shall be compatible with potable water supplies and in contact with chemical feed systems shall be compatible with the chemicals being used. All glues, solvents, solders, etc., shall likewise be compatible. For instance, no lead-base solders shall be used. All materials shall be National Sanitation Foundation (NSF)-approved.

B. Size, Type, and Joining:
   1. All materials shall conform to the size and type shown on the drawings or called for in the specifications.
   2. In joining two dissimilar types of pipe, standard fittings shall be used when available. In the event fittings are not available, the method of joining shall be selected by CONTRACTOR and submitted for review.

C. Piping appurtenances shall be made of the materials specified. All appurtenances not designated as to type shall be subject to approval of ENGINEER.

2.02 PIPE MATERIALS

A. Ductile Iron Piping and Fittings:
   1. Unless otherwise shown or specified, all interior piping 4 inches in diameter or larger shall be ductile iron conforming to AWWA C151.
   2. Interior piping shall be minimum Special Class 53 with a minimum rated working pressure of 250 psi.
   3. Except where shown, interior pipe joints shall be flanged. Flanged joints shall conform to applicable flanged joint sections of AWWA C110 and C115 and shall be compatible with ANSI B16.1 Class 125. Flanges shall be cast or ductile iron.

4. Flanged gaskets shall be minimum 1/8-inch-thick rubber "ring" gaskets, not full faced gaskets. Thicker gaskets shall be provided as recommended by the manufacturer to meet joint tolerances.
5. Gaps between flanges and all locations where a gap exists at flange hub/pipe intersection shall be caulked prior to finish painting with Sonneborn NP-1 by Sonneborn-Chem Rex, Inc., Sika FLEX 1-A, or equal.
6. Flange bolts shall be standard zinc-plated steel with hex head and hex nuts for the rated working pressures and installation conditions specified or shown.
7. Interior fittings shall be flanged and of ductile or cast iron. Flange fittings shall conform to AWWA C110 and ANSI B16.1, as applicable, with a minimum rated working pressure of 150 psi.
8. All ductile iron fittings shall be American, Clow, Griffin, Tyler, U.S. Pipe, or equal.
9. All flanged sections of pipe shall be made up in accordance with AWWA C115 specifications. No field make-up flanges will be allowed unless strictly conforming to AWWA C115 with facing done after turning pipe through flange.
10. Interior pipe and fittings shall be cement-mortar lined and asphaltic coated inside and shall be shop primed outside. Submerged pipe and fittings shall be cement mortar lined and asphaltic coated inside and asphaltic coated outside. Cement-mortar lining shall be in accordance with AWWA C104. Asphaltic coating shall conform to applicable standards herein for the pipe and fittings. Shop priming with products equal to and compatible with those listed under painting in Division 9 of these specifications shall be provided.

B. Copper Piping:
1. Copper piping shall conform to the requirements of the "Specifications for Seamless Copper Water Tube," ASTM B88.
2. Unless otherwise shown or specified, all interior or aboveground potable and nonpotable water supply piping 3 inches in diameter or smaller shall be Type K hard copper.
3. Fittings shall be soldered or sweated on and shall be of cast bronze or forged brass containing 85% copper.
4. All underground water supply piping 3 inches or smaller shall be Type K soft copper with compression fittings. Joints shall not be used under floor slabs.
5. Shutoff valves shall be placed on each branch for all underground, aboveground, or interior piping.

C. Polyethylene Tubing: Water service piping shall be polyethylene tubing, unless otherwise shown or specified. All tubing bends, tees, adapters, and unions shall be clear polypropylene, or 304 stainless steel compatible with the tubing, or equal. Tubing inserts shall be used at all fittings. Tubing and fittings shall be rated for operating pressures of 200 psi, minimum. Tubing runs in excess of 10 feet shall be run in adequately supported minimum 2-inch ID Schedule 40 PVC conduits. Conduit runs shall be broken at all fittings and bends to allow easy access to interior tubing. Conduit shall be supported as specified for PVC piping.

2.03 VALVE MATERIALS

A. Gate Valves:
1. Where shown or specified, gate valves in lines 4 inches through 12 inches in diameter or larger shall be AWWA C509 iron body, resilient wedge, nonrising stem, 150 psi working pressure with O-ring above and below the thrust collar.

2. All interior valves shall be flanged and have handwheels. Right angle operators shall be provided, if required, because of valve position.
3. Underground valves shall have either mechanical joints or push-on joints, extended stem for maximum depth of 5 feet from operating nut to surface, valve box, and key. Valve boxes shall be cast iron telescopic adjustable as specified herein.
4. Shutoff valves in water lines 3 inches to 1 inch in diameter shall be gate valves, Class 150 pound bronze or iron body bronze mounted, solid wedge disk, threaded, rising stem, Nibco T-131, Milwaukee Valve 1150, or equal. Provide unions for ease of valve removal.

2.04 VALVE BOXES

A. A valve box shall be provided for fire hydrant auxiliary valves and valves in the main. The valve box shall be centered and plumb over the wrench nut of the valve with the box cover flush with the finished ground elevation. The valve box shall not transmit shock or stress to the valve.

B. Valve boxes shall be made of cast iron conforming to ASTM A48, Class 20. The castings shall be free from blowholes, porosity, hard spots, shrinkage defects or cracks, or other injurious defects and shall have a normal smooth casting finish. The castings shall be thoroughly coated with a 1 mil minimum thickness bituminous coating. Valve boxes shall be 5 1/4 inches in diameter. Valve boxes shall have a maximum length of 7 feet when extended without extension sections.

C. Valve boxes shall consist of a base section, tubular mid and top sections, sliding type by which one can be telescoped on the other, extension sections if required, and a circular drop cover.

2.05 METERS, SETTERS, AND METER BOXES

A. Meters shall be 5/8-inch x 3/4-inch, cold water rotating type with hermetically sealed magnetically driven registers. The meters shall have a single register, sweep test hand, and a split case body - bronze bottom with plastic top. The meters must have a working pressure of 150 psi and meter the requirements of AWWA C700. The registers shall be straight reading, U.S. gallon type.

B. Meter setters for 1 inch and under services shall be copper with plain stop, have riser as indicated by appropriate model listed below, and have brace pipe eye as manufactured by Ford, Mueller, or equal. Meter setters for 1 1/2-inch or 2-inch services shall be custom setters as manufactured by Ford, Mueller, or equal. Meter setters for services with pressure reducing valves (RV) shall be as manufactured by Ford, Mueller, or equal.

C. Meter boxes shall be 18 inches in diameter and 3 feet long and made of PVC material and cast iron lid. Meter boxes shall be "ultra-rib" boxes as manufactured by Extrusion Technologies, Inc. Denver, CO. Lids shall be cast iron type.

2.06 TAPPING SLEEVES AND VALVES

A. Tapping sleeves shall be ductile iron, 200 psi working pressure with cadmium plated cast iron nuts and bolts. Provide gaskets for full area of sleeve flanges. Tapping valves shall conform to requirements for gate valves except that one end shall be flanged and the other

mechanical joint. Tapping valves shall be provided with oversized openings to permit use of full sized cutters..

2.07 FLUSHING HYDRANT

A. Hydrants for flushing assembly shall be constructed of the highest grade materials and shall conform in all respects to the AWWA standard specifications for Fire Hydrants (AWWA C502). Each hydrant shall have two 2 1/2-inch hose nozzles. The hydrants shall have 4-inch mechanical joint inlet connections on mains larger than 4 inches. The main valve opening on the hydrant shall open by turning to the left. Fire hydrants shall be M&H, Mueller, or equal.

Hydrants shall have permanent markings identifying the manufacturer by names, initials, insignia, or abbreviations in common usage, and designating the size of the main valve opening and the year of manufacture. Markings shall be placed as to be readily discernible and legible after hydrants have been installed.

CONTRACTOR shall furnish certification that hydrant and all materials used in its construction conform to the applicable requirements of AWWA C502 and the supplementary requirements thereto.

All joints on the hydrant leads shall be made using MEGALUG® or Uni-flange pipe restraint specified herein, or other approved restrained joint. Approximately one-half cubic yard of clear stone shall be placed from the bottom of the trench around the hydrant elbow and up the hydrant barrel. Clear stone shall be wrapped completely in filter fabric to prevent the immigration of fine materials.

Hydrants shall be provided with reaction backing.

CONTRACTOR shall furnish all necessary fittings in the hydrant lead to install the hydrant in a plumb condition at locations shown on the Drawings and at the specified depth of bury.

2.08 AIR RELEASE VALVES

A. Automatic air release valves shall be installed at locations shown on the Drawings. Automatic air release valves shall be Val-Matic Model 25, APCO, or equal iron body with bronze or stainless steel internals with 1-inch screw connection. Air release valves shall be lever and pin operated, 150 psi working pressure with flanged top plate cover for ease of repair. Valve body shall contain drain and blow-off plugs.

PART 3–EXECUTION

NOT APPLICABLE

END OF SECTION

N O T I C E

DEPARTMENT OF THE ARMY

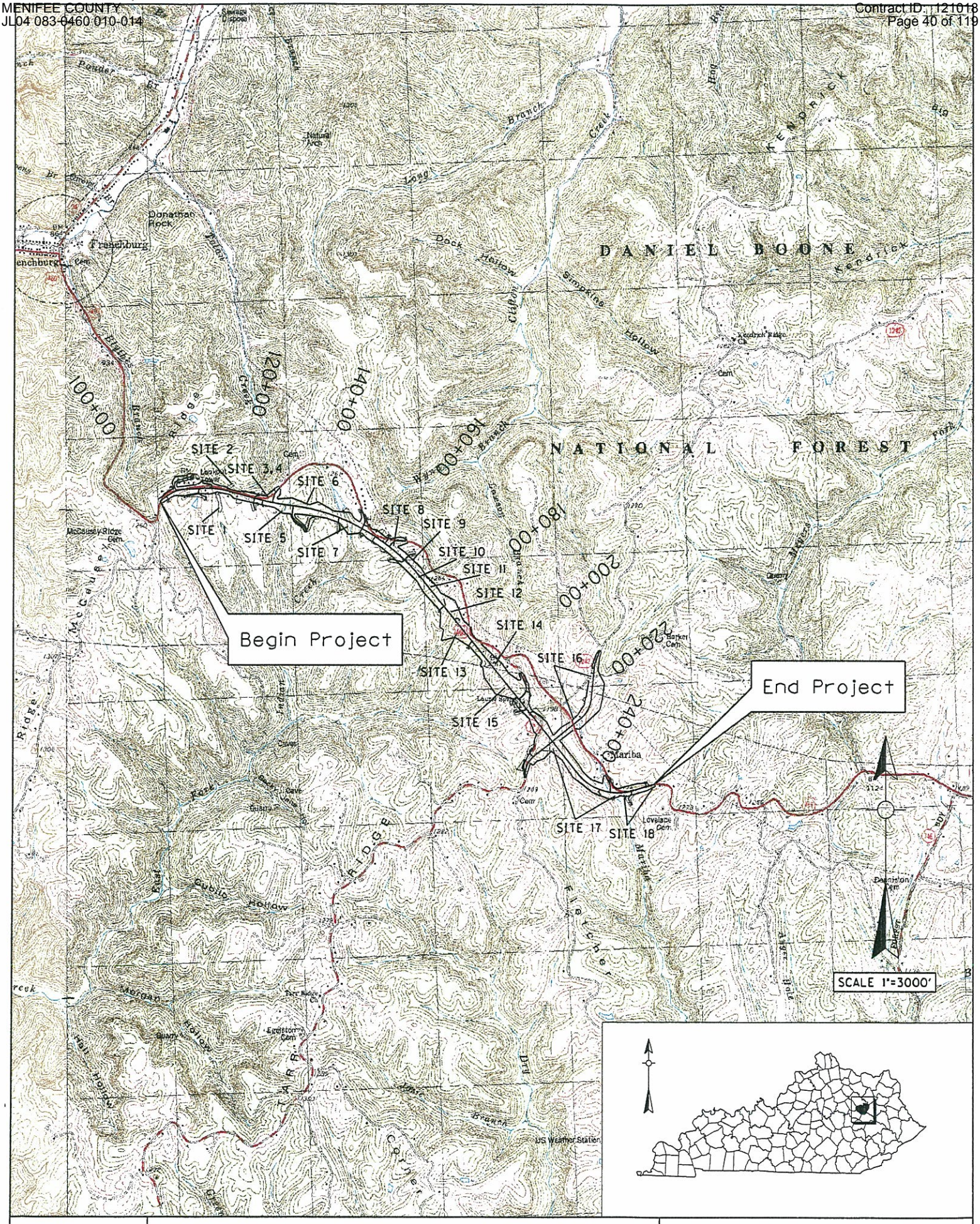
CORPS OF ENGINEERS

Pending Letter of Permission (LOP)

PROJECT: Menifee County, Item 10-0117.01
US 460 Reconstruction

THIS SHALL SERVE AS A NOTICE TO THE CONTRACTOR THAT A DEPARTMENT OF THE ARMY SECTION 404 LETTER OF PERMISSION PERMIT IS REQUIRED AND IS PENDING APPROVAL FOR PORTIONS OF THIS PROJECT. THIS NOTICE IS FOR INFORMATIONAL PURPOSES ONLY AND SHALL BE SUPERSEDED UPON RECEIPT OF THE APPROVED LOP PERMIT.

THE DEPARTMENT OF THE ARMY PERMITS ARE AUTHORIZED AND ISSUED UNDER AUTHORITY OF SECTION 10 OF THE RIVERS AND HARBOR ACT AND SECTION 404 OF THE CLEAN WATER ACT. IN COMPLIANCE WITH THE U.S. ARMY CORPS OF ENGINEERS' SECTION 404 REGULATIONS AND PROCEDURES, THE CONTRACTOR **SHALL NOT** PERFORM THE PROPOSED WORK AS LISTED WITHIN THE "SUMMARY OF IMPACTS", WHICH INVOLVES IMPACTS TO WATERS OF THE UNITED STATES, UNTIL THE KENTUCKY TRANSPORTATION CABINET HAS SECURED THE APPROPRIATE APPROVALS AND HAS PROVIDED COPIES OF THESE APPROVALS TO THE CONTRACTOR.



Kentucky Transportation	PROJECT: US 460 Reconstruction			STREAMS: East Fork Indian Ck., Mariba Fork & UT's	
	COUNTY: MENIFEE COUNTY	STATE: KENTUCKY	NEAR: Frenchburg	ITEM: 10-117.01	VICINITY MAP

SUMMARY OF IMPACTS

Item No. 10-117.01

1. Right Sta. 116+00 – Construct 575' of channel improvement on an **intermittent** tributary, with **wetlands**; to East Fork Indian Creek. This replaces **374'** of existing channel (Reach 1A & 1B) and **0.031 acres of wetlands** (Wetland A). The total impact to waters is **0.042 acres** (**0.011 acres** of stream and **0.031 acres** of wetlands). The drainage area affected is **8.3 acres**. The site is located at N37-56-02, W83-36-42.

2. Left Sta. 117+25 to Lt. Sta. 118+75 – Construct 190' of rock-lined outlet channel, on an **ephemeral** tributary to Tolan Creek. This replaces **194'** of existing channel. The impact to waters is **0.007 acres**. The drainage area affected is **0.4 acres**. The site is located at N37-56-05, W83-36-39.

3. Left Sta. 126+25 to Left Sta. 128+20 – Fill **152'** of an **ephemeral** tributary to Tolan Creek, and construct 139' of roadside drainage channel. The impact to waters is **0.009 acres.** The drainage area affected is **1.1 acres**. The site is located at N37-56-03, W83-36-28.

4. Left Sta. 128+50 – Fill a **0.093 acre wetland** (Wetland B), which drains via a culvert to Tolan Creek. The drainage area affected is **2.3 acres**. The site is located at N37-56-02, W83-36-27.

5. Right Sta. 132+00 to Left Sta. 134+50 – Construct 343' of pipe culvert (Sta. 133+20), with 44' of inlet and 14' of outlet channel improvement; at the head of an **intermittent** tributary to East Fork Indian Creek. This replaces **477'** of existing channel (Reach 2A, 2B). Additionally, fill **162'** of an **ephemeral** tributary. The impact to waters is **0.047 acres** (**0.041 acres** of intermittent and **0.006 acres** of ephemeral). The drainage area affected is **17.9 acres**. The site is located at N37-56-02, W83-36-19.

6. Left Sta. 138+50 - Fill **139'** of an **ephemeral** tributary to East Fork Indian Creek. The impact to waters is **0.008 acres**. The drainage area affected is **1.9 acres**. The site is located at N37-56-01, W83-36-14.

7. Sta. 147+18 – Construct a 3 span (100'-100'-100) Type 4 PCI Beams bridge over East Fork Indian Creek, a **perennial** stream. The bridge will completely span the stream and no impact will occur below the ordinary high water mark. The site is located at N37-55-57, W83-36-02.

8. Sta. 161+22 – Construct 242' of pipe culvert, with 25' of inlet and 89' of outlet channel improvement, on an **ephemeral/intermittent** tributary to a **wetland** and East Fork Indian Creek. This replaces **216'** of **intermittent** channel (Reach 4), **94'** of **ephemeral** channel, and impacts **0.041 acres of the wetland** (Wetland D). The total impact to waters is **0.055 acres** (**0.010 acres** of intermittent, **0.004 acres** of ephemeral and **0.041 acres** of wetlands). The drainage area affected is **10.0 acres**. The site is located at N37-55-50, W83-35-51.

9. Sta. 167+13 – Drain an existing **0.103 acre pond** with **wetlands**, and construct 165' of pipe culvert with 34' of inlet and 15' of outlet channel improvement; on an **intermittent** tributary (Reach 5) to East Fork Indian Creek. This replaces **191'** of stream (**89'** of existing channel and **102'** assumed thru pond) and **0.115 acres of wetlands** (Wetland E). The total impact to waters is **0.124 acres** (**0.009 acres** of stream and **0.115 acres** of wetlands). The drainage area affected is **5.4 acres**. The site is located at N37-55-35, W83-35-45.

10. Right Sta. 171+42 – Fill **37'** of an **ephemeral** tributary to East Fork Indian Creek. The impact to waters is **0.002 acres**. The drainage area affected is **2.0 acres**. The site is located at N37-55-42, W83-35-41.

11. Sta. 175+26 – Construct 216' of pipe culvert, with 12' of inlet and 45' of outlet channel improvement; on an **ephemeral** tributary to East Fork Indian Creek. This replaces **283'** of existing channel. The impact to waters is **0.006 acres**. The drainage area affected is **5.6 acres**. The site is located at N37-55-41, W83-35-38.

12. Sta. 183+76 – Construct 554' of pipe culvert with 20' of outlet channel improvement; on an **intermittent** tributary, with **wetlands**; to East Fork Indian Creek. This replaces **709'** of existing channel (Reach 6) and **0.033 acres of wetlands** (Wetland F). The total impact to waters is **0.090 acres** (**0.057 acres** of intermittent and **0.033 acres** of wetlands). The drainage area affected is **16.1 acres**. The site is located at N37-55-31, W83-35-31.

13. Sta. 188+07 – Drain a **0.092 acre pond** with **wetlands** and construct 346' of pipe culvert, with 10' of inlet and 40' of outlet channel improvement; on an **ephemeral/intermittent** tributary (Reach 7) to East Fork Indian Creek. This replaces **130'** of **intermittent** channel (**48'** of existing channel and **82'** assumed thru pond), **303'** of **ephemeral** channel and **0.008 acres of wetlands** (Wetland G). The total impact to waters is **0.025 acres** (**0.010 acres** of intermittent, **0.007 acres** of ephemeral, and **0.008 acres** of wetlands). The drainage area affected is **11.2 acres**. The site is located at N37-55-28, W83-35-31.

14. Sta. 200+42 – Drain a **0.316 acre pond** with **wetlands** and construct 462' of pipe culvert with 13' of outlet channel improvement; on an **intermittent** tributary (Reach 8) to East Fork Indian Creek. This replaces **518'** of stream (**358'** of existing channel and **160'** assumed thru pond) and **0.148 acres of wetlands** (Wetland H). The total impact to waters is **0.178 acres** (**0.030 acres** of channel and **0.148 acres** of wetlands). The drainage area affected is **9.6 acres**. The site is located at N37-55-18, W83-35-19.

15. Sta. 205+47 – Construct 490' of pipe culvert, with 50' of inlet and 20' of outlet channel improvement; on **ephemeral/intermittent** tributaries to East Fork Indian Creek. This replaces **380'** of **intermittent** channel (Reach 9A, 9B) and **617'** of **ephemeral** channel. The impact to waters is **0.045 acres** (**0.017 acres** of intermittent and **0.028 acres** of ephemeral). The drainage area affected is **13.4 acres**. The site is located at N37-55-16, W83-35-12.

16. Left Sta. 224+00 (KY1242, Sta. 31+55 to 42+77) – Construct 1438' of stream relocation on an **intermittent** tributary (Reach 11), with **wetlands**; to Mariba Fork. Additionally, construct 104' of pipe culvert (KY1242, Sta. 42+21), with 68' of inlet and 119' of outlet channel, on Mariba Fork, a **perennial** stream (Reach 10); and drain and fill a **pond**. This replaces **1134'** of **intermittent** stream, **302'** of **perennial**, **0.508 acres** of **wetland** (Wetland I), and a **0.034 acre pond**. The total impact to waters is **0.706 acres** (**0.021 acres** of perennial, **0.143 acres** of intermittent, **0.508 acres** of wetland, and **0.034 acres** of pond). The drainage area affected is **105.4 acres**. The site is located from N37-55-14, W83-34-41 to N37-55-06, W83-34-51.

17. Left Sta. 225+00 to Right Sta. 244+50 – Construct 1766' of new channel, on an **intermittent** tributary (Reach 12A, 12B), to the entrance of a new culvert on Mariba Fork; which is a **perennial** stream (Reach 13). The new culvert (Sta. 243+35) is a 8'X 5' box culvert, 257' in length; with 97' of inlet and 65' of outlet channel improvement. This replaces **1742'** of **intermittent** channel (including **179'** assumed thru a **0.096 acre in-stream pond)**, and **452'** of **perennial** channel. The impact to waters is **0.140 acres** (**0.080 acres** of intermittent channel with **0.008 acres** of assumed stream thru pond, and **0.052 acres** of perennial). The drainage area affected is **227.1 acres**. The site is located from N37-55-01, W83-34-56 to N37-54-50, W83-34-41. **Other impacts associated with tributaries to these main channels are:**

    Sta. 229+20 - Construct a 136' pipe culvert, with 40' of inlet and 30' of outlet channel improvement; on an **ephemeral** tributary to the intermittent stream. This replaces **167'** of existing channel. The impact to waters is **0.008 acres**. The site is located at N37-54-59, W83-34-56.

    Left Sta. 243+00 to Left Sta. 254+00 – Upstream to downstream: construct 48' of new entrance pipe and 1110' of roadside drainage channel to the inlet of a 58' pipe culvert (Conn. Rd.#4, Sta. 47+83), with 104' of outlet channel; on **ephemeral** and **intermittent** tributaries to Mariba Fork. This replaces a **25'** entrance pipe and **1075'** of **ephemeral** channel; and **40'** of existing culvert and **116'** of **intermittent** channel (Reach 14). The impact to waters is **0.057 acres**

(**0.049 acres** of ephemeral and **0.008 acres** of intermittent). The site is located from N37-54-51, W83-34-42 to N37-54-51, W83-34-29.

The total impact for Site 17 is **0.205 acres (0.052 acres of perennial, 0.096 acres of intermittent** and **0.057 acres of ephemeral).**

18. Right Sta. 247+60 to Right Sta. 254+00 – Construct a 153' entrance pipe on an **intermittent** tributary (Reach 15), with **wetlands**, to Mariba Fork. This replaces **35'** of existing channel and **0.115 acres of wetlands** (0.087 acres of Wetland J, and all of Wetland K's 0.028 acres). The total impact to water is **0.117 acres (0.002 acres** of channel and **0.115 acres** of wetlands). The drainage area affected is **14.5 acres**. The site is located at N37-54-50, W83-34-31.

N O T I C E

KY DIVISION OF WATER

WATER QUALITY CERTIFICATION

WQC #2012-024-7

PROJECT: Menifee County (US-460) Item No. 10-0117.01
US 460 Reconstruction

The Division of Water has previously approved the Section 401 activities for this project by issuance of a Water Quality Certification. In order for this authorization to be valid, the attached conditions must be followed. The contractor shall post a copy of this Water Quality Certification in a conspicuous location at the project site for the duration of construction and comply with the general conditions as required.

To more readily expedite construction, the contractor may elect to alter the design or perform the work in a manner different from what was originally proposed and specified. Prior to commencing such alternative work, the contractor shall obtain **written** permission from the Division of Construction and the appropriate permit agency. A copy of any request to alter this proposal and subsequent responses shall be forwarded to the Division of Environmental Analysis, DA Permit Coordinator, for office records and for informational purposes.

STEVEN L. BESHEAR
GOVERNOR

LEONARD K. PETERS
SECRETARY

ENERGY AND ENVIRONMENT CABINET
DEPARTMENT FOR ENVIRONMENTAL PROTECTION
DIVISION OF WATER
200 FAIR OAKS LANE, 4TH FLOOR
FRANKFORT, KENTUCKY 40601
www.kentucky.gov

April 30, 2012

David Waldner, Director
KYTC, Environmental Analysis
200 Mero Street, 5th Floor
Frankfort, KY 40622

Re: Water Quality Certification #2012-024-7
US 460 - Menifee Co
KYTC Item No. 10-117.01
AI No.: 97236
Activity ID: APE20120001
E. Fork Indian Creek UTs and Gladie Creek
Menifee County, Kentucky

Dear Mr. Waldner:

Pursuant to Section 401 of the Clean Water Act (CWA), the Commonwealth of Kentucky certifies it has reasonable assurances that applicable water quality standards under Kentucky Administrative Regulations Title 401, Chapter 10, established pursuant to Sections 301, 302, 303, 304, 306, and 307 of the CWA, will not be violated by the above referenced project provided that the U.S. Army Corps of Engineers authorizes the activity under 33 CFR part 330, and the attached conditions are met.

All future correspondence on this project must reference **AI No. 97236**. **The attached document is your official Water Quality Certification; please read it carefully**. If you should have any questions concerning the conditions of this water quality certification, please contact Adam Jackson of my staff by calling (502) 564-3410.

Sincerely,

E-Signed by Clark Dorman
VERIFY authenticity with ApproveIt

Clark Dorman, KDOW WQB Manager
Water Quality Certification Section
Kentucky Division of Water

KCD: AJ
Attachment
cc: Lee Anne Devine, USACE: Louisville District
Lee Andrews, USFWS: Frankfort
Ronald Rigney II, KYTC DEA

KTC Water Quality Certification

US 460 - Menifee Co
Facility Requirements
Permit Number: WQC#2012-024-7
Activity ID No.: APE20120001

AAZZ0000000001 (KYTC Item #10-117.01) US 460 Reconstruction - Menifee County:

Submittal/Action Requirements:

Condition No.	Condition
S-1	The Kentucky Transportation Cabinet shall submit notification: Due prior to any construction activity to the Kentucky Division of Water, Water Quality Certification Section. Notification shall confirm the purchase of 2.184 wetland credits from the Kentucky Department of Fish and Wildlife Resources Stream and Wetland Restoration Fund. The U.S. Army Corps of Engineers (USACE) may require an additional and different amount of requested mitigation. [Clean Water Act]
S-2	The Kentucky Transportation Cabinet must submit analytical results: Due every 30 days after construction commencement of the stream relocation portion of this project to the Division of Water, Water Quality Certification Section showing photographic evidence of the status of the project, as well as on-going analysis of the pH, Dissolved Oxygen, Water Temperature, Alkalinity, and Conductivity measurements from consistent sampling locations at Site numbers 16 and 17 (as previously identified within the WQC application package submitted to the DOW on January 11, 2012. E-mail transmittal of this report is satisfactory to adam.jackson@ky.gov. [Clean Water Act]
S-3	The Kentucky Transportation Cabinet must notify the Division: Due prior to any construction activity. Notify Adam Jackson at adam.jackson@ky.gov or (502) 564-3410 at least two weeks prior to construction. [Clean Water Act]
S-4	The Kentucky Transportation Cabinet must notify the Division: Due when construction is complete. Notify Adam Jackson at adam.jackson@ky.gov or (502) 564-3410 no later than two weeks post-construction. [Clean Water Act]

KTC Water Quality Certification

US 460 - Menifee Co
Facility Requirements
Permit Number: WQC#2012-024-7
Activity ID No.: APE20120001

AAZZ0000000001 (continued):

Narrative Requirements:

Condition No.	Condition
T-1	The work approved by this certification shall be limited to the filling and loss of: - 374 linear feet of poor unnamed intermittent tributary to East Fork of Indian Creek due to channel improvement and culverting (Station 116+00). - 477 linear feet of poor unnamed intermittent tributary to East Fork of Indian Creek due to culverting (Station 132+00). - 216 linear feet of unnamed intermittent tributary to East Fork of Indian Creek due to culverting (Station 161+22). - 191 linear feet of poor unnamed intermittent tributary to East Fork of Indian Creek due to culverting (Station 167+13). - 709 linear feet of poor unnamed intermittent tributary to East Fork of Indian Creek due to culverting (Station 183+76). - 130 linear feet of poor unnamed intermittent tributary to East Fork of Indian Creek due to culverting (Station 188+07). - 518 linear feet of poor unnamed intermittent tributary to East Fork of Indian Creek due to culverting (Station 200+42). - 380 linear feet of poor unnamed intermittent tributary to East Fork of Indian Creek due to culverting (Station 205+47). - 35 linear feet of poor unnamed intermittent tributary to Gladie Creek due to culverting (Station 247+60). - 0.031 acres of Wetland A (Station 116+00), 0.041 acres of Wetland D (Station 161+22), 0.115 acres of Wetland E (Station 167+13), 0.033 acres of Wetland F (Station 183+76), 0.008 acres of Wetland G (Station 188+07), 0.148 acres of Wetland H (Station 200+42), 0.093 acres of Wetland B (Station 128+50), 0.508 acres of Wetland I (Station 224+00), 0.115 acres of Wetland J (Station 247+60) for a total of 1.092 acres of jurisdictional wetland impact as a result of the road project. [Clean Water Act]
T-2	The work approved under this certification shall be limited to the relocation of: - 1134 linear feet of an unnamed intermittent tributary to Mariba Fork / Gladie Creek (Station 224+00). - 302 linear feet of an unnamed perennial tributary to Mariba Fork / Gladie Creek (Station 224+00). - 1742 linear feet of an unnamed intermittent tributary to Mariba Fork / Gladie Creek (Station 225+00). - 452 linear feet of an unnamed perennial tributary to Mariba Fork / Gladie Creek (Station 225+00). - 116 linear feet of an unnamed intermittent tributary to Mariba Fork / Gladie Creek (Station 243+00). - 167 linear feet of an unnamed ephemeral tributary to Mariba Fork / Gladie Creek (Station 229+20). - 1075 linear feet of an unnamed ephemeral tributary to Mariba Fork / Gladie Creek (Station 243+00). [Clean Water Act]
T-3	All work performed under this certification shall adhere to the design and specifications set forth in the Water Quality Certification Application submitted to the Kentucky Division of Water on January 11, 2012. All work performed under this certification shall also adhere to the design and specifications set forth in the Gladie Creek Basin Supplemental Information addressing site stabilization, submitted to the Kentucky Division of Water on February 17, 2012. [Clean Water Act]

KTC Water Quality Certification
US 460 - Menifee Co
Facility Requirements
Permit Number: WQC#2012-024-7
Activity ID No.: APE20120001

AAZZ0000000001 (continued):

Narrative Requirements:

Condition No.	Condition
T-4	The Kentucky Division of Water (KDOW) requires mitigation for the 1.092 acres of wetland impact listed within this certification. The Kentucky Transportation Cabinet (KYTC) has proposed to make an in-lieu-fee payment to the Kentucky Department of Fish and Wildlife Resources (KDFWR) Stream and Wetland Restoration Fund for proposed stream and wetland impacts requiring mitigation. The KDOW requires that KYTC purchase 2.184 wetland credits from the KDFWR Stream and Wetland Restoration Fund. The KDOW does not require an in-lieu-fee payment for the proposed stream impacts associated with this project due to the fact that the permanent stream impacts do not occur within a section of stream that contains a watershed greater than or equal to 250 acres. The U.S. Army Corps of Engineers (USACE) may require a different amount. [Clean Water Act]
T-5	No in-stream work or disturbance shall be conducted or in place within the Mariba Fork of Gladie Creek watershed (proposed stream relocation portions) during the fish spawning season (APRIL 15th through JUNE 15th). Increased sediment contributions may be detrimental to the aquatic life that is associated with the Cold Water Aquatic Habitat (CWAH) designation of this watershed. [Clean Water Act]
T-6	Newly created and relocated stream channels must be constructed and stabilized in vegetative and structured manners that prevent excessive sediment loss and / or erosion prior to permanently conveying the normal stream flow and volume through the channel. This may be accomplished by constructing and stabilizing in phases, as well as preventing impacts, filling, and relocation to the present channel until the newly constructed channel is properly established. [Clean Water Act]
T-7	During the stream relocation portions of this project, only natural and native soil, vegetation, and hard structures may be utilitzed. The use of grouted concrete or stone is not authorized throughout this portion of the project. [Clean Water Act]
T-8	Existing vegetation shall be retained on site as long as possible and permanent seeding of finished areas will take place as soon as possible. [Clean Water Act]
T-9	The Division of Water, Water Quality Certification shall be notified of the date of any pre-construction meetings with the contractor selected for this project. [Clean Water Act]
T-10	The Division of Water, Water Quality Certification shall be notified when work begins on the stream relocation portion of this project. [Clean Water Act]
T-11	DOW shall perform a final inspection of the stream relocation project prior to the completion of the highway project. The intent of this stream relocation project is to create a naturally stable stream channel in a new location. Should this final inspection show that this was not accomplished, KTC will be responsible for further compensatory mitigation to be determined by DOW. [Clean Water Act]
T-12	During site construction, sediment control structures shall not be placed within the channels of intermittent or perennial streams. [Clean Water Act]
T-13	During construction, heavy equipment must not enter any stream channel except over approved low water crossing structures. [Clean Water Act]

KTC Water Quality Certification
US 460 - Menifee Co
Facility Requirements
Permit Number: WQC#2012-024-7
Activity ID No.: APE20120001

AAZZ0000000001 (continued):

Narrative Requirements:

Condition No.	Condition
T-14	The Kentucky Transportation Cabinet is responsible for preventing degradation of waters of the Commonwealth from soil erosion. An erosion and sedimentation control plan must be designed, implemented and maintained in effective operating condition at all times during construction. [Clean Water Act]
T-15	The Division of Water reserves the right to modify or revoke this certification should it be determined that the activity is in noncompliance with any condition set forth in this certification. [Clean Water Act]
T-16	If construction does not commence within two years of the date of this letter, this certification will become void. A letter requesting a renewal should be submitted. [Clean Water Act]
T-17	Attached with this letter is a listing of General Conditions for Water Quality Certification that apply to this project. [Clean Water Act]
T-18	Other permits may be required from the Division of Water for this project. If this project will disturb 1 acre or more of land, a KPDES general storm water permit will be required from the Surface Water Permits Branch. The contact person is Allen Ingram. He can be reached at 502-564-3410. [Clean Water Act]

STEPHEN L. BESHEAR
GOVERNOR

ENERGY AND ENVIRONMENT CABINET
DEPARTMENT FOR ENVIRONMENTAL PROTECTION
DIVISION OF WATER
200 FAIR OAKS LANE
FRANKFORT, KENTUCKY 40601
www.kentucky.gov

LEONARD K. PETERS
SECRETARY

ATTENTION APPLICANT

If your project involves one or more of the following activities, you may need more than one permit from the Kentucky Division of Water.

***building in a floodplain *road culvert in a stream**
***streambank stabilization *stream cleanout**
***utility line crossing a stream**
***construction sites an acre or more**

- **If the project will disturb one acre or more of land, or is part of a larger common plan of development or sale that will ultimately disturb one acre or more of land, a Kentucky Pollution Discharge Elimination System (KPDES) stormwater permit shall be required from the Operational Permits Section. This permit requires the creation of an erosion control plan.**

  Contact Allen Ingram.

- **Projects that involve filling in the floodplain will require a stream construction permit from the Floodplain Management Section.**

  Contact Todd Powers.

- **Projects that involve work IN a stream, such as bank stabilization, road culverts, utility line crossings, and stream alteration will require a stream construction permit and a Water Quality Certification from the Water Quality Certification Section.**

  Contact Barbara Scott.

All three contacts listed above can be reached at 502/564-3410. A complete listing of environmental programs administered by the Kentucky Department for Environmental Protection is available from Pete Goodman by calling 502/564-3410.

GENERAL CONDITIONS FOR WATER QUALITY CERTIFICATION

1. The Kentucky Division of Water may require submission of a formal application for an Individual Certification for any project if the project has been determined to likely have a significant adverse effect upon water quality or degrade the waters of the Commonwealth so that existing uses of the water body or downstream waters are precluded.

2. Nationwide permits issued by the U.S. Army Corps of Engineers for projects in Outstanding State Resource Waters, Cold Water Aquatic Habitats, and Exceptional Waters as defined by 401 KAR 10:026 shall require individual water quality certifications.

3. Erosion and sedimentation pollution control plans and Best Management Practices must be designed, installed, and maintained in effective operating condition at all times during construction activities so that violations of state water quality standards do not occur.

4. Sediment and erosion control measures (e.g., check-dams, silt fencing, or hay bales) shall not be placed within surface waters of the Commonwealth, either temporarily or permanently, without prior approval by the Kentucky Division of Water's Water Quality Certification Section. If placement of sediment and erosion control measures in surface waters is unavoidable, placement shall not be conducted in such a manner that may cause instability of streams that are adjacent to, upstream, or downstream of the structures. All sediment and erosion control measures shall be removed and the natural grade restored prior to withdrawal from the site.

5. Measures shall be taken to prevent or control spills of fuels, lubricants, or other toxic materials used in construction from entering the watercourse.

6. To the maximum extent practicable, all in-stream work under this certification shall be performed during low flow.

7. Heavy equipment (e.g. bulldozers, backhoes, draglines, etc.), if required for this project, should not be used or operated within the stream channel. In those instances where such in-stream work is unavoidable, then it shall be performed in such a manner and duration as to minimize re-suspension of sediments and disturbance to the channel, banks, or riparian vegetation.

8. If there are water supply intakes located downstream that may be affected by increased turbidity, the permittee shall notify the operator when work will be performed.

9. Removal of existing riparian vegetation should be restricted to the minimum necessary for project construction.

10. Should stream pollution, wetland impairment, and/or violations of water quality standards occur as a result of this activity (either from a spill or other forms of water pollution), the Kentucky Division of Water shall be notified immediately by calling 800/564-2380.

SPECIAL NOTE FOR KPDES PERMITS

THE KENTUCKY DIVISION OF WATER CATEGORIZES EAST FORK INDIAN CREEK AND MARIBA FORK OUTSTANDING STATE RESOURCE WATERS. SPECIAL CONDITIONS ARE REQUIRED FOR THE APPROVED WATER QUALITY CERTIFICATION AND INDIVIDUAL KPDES PERMIT. REFER TO PROJECT EROSION CONTROL PLAN AND THE KPDES PERMIT APPLICATION FOR DETAILS.

Kentucky Transportation Cabinet

Highway District 10

And

_____(2), Construction

Kentucky Pollutant Discharge Elimination System
Permit KYR10
Best Management Practices (BMP) plan

Groundwater protection plan

For Highway Construction Activities

For

US 460 Re-alignment in Menifee County

Contract ID ###### (2)

Six Year Plan Item 10-117.01

KYTC BMP Plan for Contract ID ######

Project Information

Note – (1) = Design (2) = Construction (3) = Contractor

1. Owner – Kentucky Transportation Cabinet, District 3
2. Resident Engineer:
3. Contractor Name: (2)
   Address: (2)
   Phone number: (2)
   Contact: (2)
   Contractors agent responsible for compliance with the KPDES permit requirements: (3)
4. Contract ID Number: (2)
5. Route (Address): US 460, Menifee, KY
6. Latitude/Longitude (project mid-point) 37° 55' 38" N, 83° 35' 33" W
7. County (project mid-point): Menifee County
8. Project start date (date work will begin): (2)
9. Projected completion date: (2)

KYTC BMP Plan for Contract ID ######

1.0 SITE DESCRIPTION.

1) Nature of construction activity (from letting project description). Re-alignment of almost 3.3 miles of US 460 in Menifee County.
2) Order of major soil disturbing activities. (2) and (3)
3) Projected volume of material to be moved. 1,142,743 Cu. Yd.
4) Estimate of total project area (acres). 140 acres
5) Estimate of area to be disturbed (acres). 106 acres
6) Post construction runoff coefficient will be included in the project drainage folder. Persons needing information pertaining to the runoff coefficient will contact the resident engineer to request this information.
7) Data describing existing soil condition. According to the US Agriculture Soil Survey for this area, the soils consist of 0.4% Cranston gravelly silt loam, 30.8% Latham silt loam, 58.1% Latham-Shelocta silt loams, 2.1% Morehead silt loam, 1.1% Rigley stony fine sandy loam, 1.9% Steinsburg-Ramsey rocky sandy loams, 4.0% Tilsit silt loam, 1.2% Whitley silt loam, and 0.5 % water.
8) Data describing existing discharge water quality (if any). Existing discharge is in the form of point discharges with little to no BMPs associated with them.
9) Receiving water name. East Fork of Indian Creek, Mariba Fork of Gladie Creek (Basin)
10) TMDLs and Pollutants of Concern in Receiving Waters. There is one segment of Indian Creek approximately 7.8 miles downstream of the project site that is impaired for Total Dissolved Solids and Sedimentation/Siltation. This project is located on East Fork of Indian, which eventually discharges into Indian Creek..
11) Site Map. Project layout sheet plus the erosion control sheets in the project plans that depict Disturbed Drainage Areas (DDAs) and related information. These sheets depict the existing project conditions with areas delineated by DDA (drainage area bounded by watershed breaks and right of way limits), the storm water discharge locations (either as a point discharge or as overland flow) and the areas that drain to each discharge point. These plans define the limits of areas to be disturbed and the location of control measures. Controls will be either site specific as designated by the designer or will be annotated by the contractor and resident engineer before disturbance commences. The project layout sheet shows the surface waters and wetlands.
12) Potential sources of pollutants. The primary source of pollutants is solids that are mobilized during storm events. Other sources of pollutants include oil/fuel/grease from servicing and operating construction equipment, concrete washout water, sanitary wastes and trash/debris, and surface mining.(3)

2.0 SEDIMENT AND EROSION CONTROL MEASURES.

2.1 Erosion Control Sheets. Plans for highway construction projects will include erosion control sheets that depict Disturbed Drainage Areas (DDAs) and related information. These plan sheets will show the existing project conditions with areas delineated by DDA within the right of way limits, the discharge points and the areas that drain to each discharge point. Project managers and designers will analyze the DDAs and identify Best Management Practices

(BMPs) that are site specific. The balance of the BMPs for the project will be listed in the bid documents for selection and use by the contractor on the project with approval by the resident engineer.

Projects that do not have DDAs annotated on the erosion control sheets will employ the same concepts for development and managing BMP plans.

The following non-structural BMPs will be implemented throughout the project duration:

- Sediment control BMPs will be maintained when the sediment reaches 1/3 the depth of the BMP.
- Appropriate stock of straw erosion control blanket (ECB) and straw bales shall be available onsite at all times.
- Straw ECB or seeding mulched with blown straw followed by crimping shall be applied within 7 days of the cessation of the land disturbing activity. If blown straw is used, the blower and crimping equipment shall be kept on-site during land disturbing activities.
- Disturbed areas shall be stabilized prior to a forecasted rain event.
- EPSC/SWPPP inspections shall be performed at least twice a week.

2.2 Annotations. Following award of the contract, the contractor and resident engineer will annotate the erosion control sheets showing location and type of BMPs for each of the DDAs that will be disturbed at the outset of the project. This annotation will be accompanied by an order of work that reflects the order or sequence of major soil moving activities. The remaining DDAs are to be designated as "Do Not Disturb" until the contractor and resident engineer prepare the plan for BMPs to be employed. The initial BMPs shall be for the first phase (generally Clearing and Grubbing) and shall be modified as needed as the project changes phases. The BMP Plan will be modified to reflect disturbance in additional DDA's as the work progresses. <u>All DDA's will have adequate BMPs in place before being disturbed.</u>

2.3 Disturbed Drainage Areas. As DDAs are prepared for construction, the following will be addressed for the project as a whole or for each DDA as appropriate:

A) Construction Access. This is the first land-disturbing activity. As soon as construction begins, bare areas will be stabilized with straw ECB or straw followed by crimping and designated construction entrances will be installed.

B) Sources. At the beginning of the project, all DDAs for the project will be inspected for areas that are a source of storm water pollutants. Areas that are a source of pollutants will receive appropriate cover or BMPs to arrest the introduction of pollutants into storm water. Areas that have not been opened by the contractor will be inspected periodically (once per month) to determine if there is a need to employ BMPs to keep pollutants from entering storm water.

C) Clearing and Grubbing. The following BMPs will be considered and used where appropriate.

1) Leaving areas undisturbed when possible.
2) Silt Basins to provide silt volume for large areas.

3) Silt Traps Type A for small areas.
4) Silt Traps Type C in front of existing and drop inlets which are to be saved.
5) Diversion ditches to catch sheet runoff and carry it to basins or traps or to divert it around areas to be disturbed.
6) Brush and/or other barriers to slow and/or divert runoff.
7) Silt fences to catch sheet runoff on short slopes. For longer slopes, multiple rows of silt fence may be considered.
8) Temporary Mulch for areas which are not feasible for the fore mentioned types of protections.
9) Non-standard or innovative methods.

D) Cut and Fill and Placement of Drainage Structures. The BMP Plan will be modified to show additional BMPs such as:

1) Silt Traps Type B in ditches and/or drainways as they are completed.
2) Silt Traps Type C in front of pipes after they are placed.
3) Channel Lining
4) Erosion Control Blanket
5) ECB and/or straw, and seeding for areas where construction activities will be ceased for one day or more.
6) Non-standard or innovative methods.
7) Turf reinforcement mats

E) Profile and X-Section in Place. The BMP Plan will be modified to show elimination of BMPs which had to be removed and the addition of new BMPs as the roadway was shaped. Probably changes include:

1) Silt Trap Type A, Brush and/or other barriers, Temporary Mulch, and any other BMP which had to be removed for final grading to take place.
2) Additional Silt Traps Type B and Type C to be placed as final drainage patterns are put in place.
3) Additional Channel Lining and/or Erosion Control Blanket and/or Turf Reinforcement Mats.
4) Temporary Mulch and/or seeding for areas where construction activities will be ceased for one day or more.

F) Finish Work (Paving, Seeding, Protect, etc.). A final BMP Plan will result from modifications during this phase of construction. Probable changes include:

1) Removal of Silt Traps Type B from ditches and drainways if they are protected with other BMPs which are sufficient to control erosion, i.e. Erosion Control Blanket, Turf Reinforcement Mats or Permanent Seeding and Protection on moderate grades.
2) Permanent Seeding and Protection.
3) Placing Sod.
4) Planting trees and/or shrubs where they are included in the project.

G) Post Construction. BMPs including Stormwater Management Devices such as velocity dissipation devices and Karst policy BMPs to be installed during construction to control the pollutants in stormwater discharges that will occur after construction has been completed are:

- Turf reinforcement mats: TRMs will be used in areas of concentrated flow within the project limits.

- Enhanced Silt Check: Channels will be used in areas of concentrated flow within areas with steep grade associated with the Outstanding State Resource Waters outfall. Enhanced silt traps will be used to control grade, reduce flow velocity, aerate waters and capture silt from headwaters before reaching the East Fork of Indian Creek or Mariba Fork or the Gladie Creek (Basin).

- Bank stabilization with live stakes: In areas where turf reinforcement mats are used live stakes will be placed in order to provide temporary stabilize the banks outside of the water path as well as give long-term shading for these areas to help in temperature control. The main vegetation selection criteria were plant height and whether the stakes were native species.

Example drawings for these BMPs are attached. Though these drawings are not detailed design drawings, they provide the guidance needed to design and construct them.

3.0 OTHER CONTROL MEASURES.

1) Solid Materials. No solid materials, including building materials, shall be discharged to waters of the commonwealth, except as authorized by a Section 404 permit.
2) Waste Materials. All waste materials that may leach pollutants (paint and paint containers, caulk tubes, oil/grease containers, liquids of any kind, soluble materials, etc.) will be collected and stored in appropriate covered waste containers. Waste containers shall be removed from the project site on a sufficiently frequent basis as to not allow wastes to become a source of pollution. All personnel will be instructed regarding the correct procedure for waste disposal. Wastes will be disposed in accordance with appropriate regulations. Notices stating these practices will be posted in the office.

3) Hazardous Waste. All hazardous waste materials will be managed and disposed of in the manner specified by local or state regulation. The contractor shall notify the Resident Engineer if there are any hazardous wastes being generated at the project site and how these wastes are being managed. Site personnel will be instructed with regard to proper storage and handling of hazardous wastes when required. The Transportation Cabinet will file for generator, registration when appropriate, with the Division of Waste Management and advise the contractor regarding waste management requirements.
4) Spill Prevention. The following material management practices will be used to reduce the risk of spills or other exposure of materials and substances to the weather and/or runoff. (3)

2.4 Good Housekeeping. The following good housekeeping practices will be followed onsite during the construction project.

1) An effort will be made to store only enough product required to do the job.
2) All materials stored onsite will be stored in a neat, orderly manner in their appropriate containers and, if possible, under a roof or other enclosure.
3) Products will be kept in their original containers with the original manufacturer's label.
4) Substances will not be mixed with one another unless recommended by the manufacturer.
5) Whenever possible, all of the product will be used up before disposing of the container.
6) Manufacturers' recommendations for proper use and disposal will be followed
7) The site contractor will inspect daily to ensure proper use and disposal of materials onsite.

2.5 Hazardous Products. These practices will be used to reduce the risks associated with any and all hazardous materials.

1) Products will be kept in original containers unless they are not re-sealable.
2) Original labels and material safety data sheets (MSDS) will be reviewed and retained.
3) Contractor will follow procedures recommended by the manufacturer when handling hazardous materials.
4) If surplus product must be disposed of, manufacturers' or state/local recommended methods for proper disposal will be followed.

2.6 The following product-specific practices will be followed onsite:

A) Petroleum Products. Vehicles and equipment that are fueled and maintained on site will be monitored for leaks, and receive regular preventative maintenance to reduce the chance of leakage. Petroleum products onsite will be stored in tightly sealed containers, which are clearly labeled and will be protected from exposure to weather.

The contractor shall prepare an Oil Pollution Spill Prevention Control and Countermeasure plan when the project that involves the storage of petroleum

products in 55 gallon or larger containers with a total combined storage capacity of 1,320 gallons. This is a requirement of 40 CFR 112.

This project (will / will not) (3) have over 1,320 gallons of petroleum products with a total capacity, sum of all containers 55 gallon capacity and larger.

B) Fertilizers. Fertilizers will be applied at rates prescribed by the contract, standard specifications or as directed by the resident engineer. Once applied, fertilizer will be covered with mulch or blankets or worked into the soil to limit exposure to storm water. Storage will be in a covered shed. The contents of any partially used bags of fertilizer will be transferred to a sealable plastic bin to avoid spills.

C) Paints. All containers will be tightly sealed and stored indoors or under roof when not being used. Excess paint or paint wash water will not be discharged to the drainage or storm sewer system but will be properly disposed of according to manufacturers' instructions or state and local regulations.

D) Concrete Truck Washout. Concrete truck mixers and chutes will not be washed on pavement, near storm drain inlets, or within 75 feet of any ditch, stream, wetland, lake, or sinkhole. Where possible, excess concrete and wash water will be discharged to areas prepared for pouring new concrete, flat areas to be paved that are away from ditches or drainage system features, or other locations that will not drain off site. Where this approach is not possible, a shallow earthen wash basin will be excavated away from ditches to receive the wash water.

E) Spill Control Practices. In addition to the good housekeeping and material management practices discussed in the previous sections of this plan, the following practices will be followed for spill prevention and cleanup**:**

1) Manufacturers' recommended methods for spill cleanup will be clearly posted. All personnel will be made aware of procedures and the location of the information and cleanup supplies.
2) Materials and equipment necessary for spill cleanup will be kept in the material storage area. Equipment and materials will include as appropriate, brooms, dust pans, mops, rags, gloves, oil absorbents, sand, sawdust, and plastic and metal trash containers.
3) All spills will be cleaned up immediately after discovery.
4) The spill area will be kept well ventilated and personnel will wear appropriate protective clothing to prevent injury from contract with a hazardous substance.
5) Spills of toxic or hazardous material will be reported to the appropriate state/local agency as required by KRS 224 and applicable federal law.
6) The spill prevention plan will be adjusted as needed to prevent spills from reoccurring and improve spill response and cleanup.
7) Spills of products will be cleaned up promptly. Wastes from spill clean up will be disposed in accordance with appropriate regulations. Spills will be addressed in the "dry", and will not be "washed away" to clean.

4.0 OTHER STATE AND LOCAL PLANS. This BMP plan shall include any requirements specified in sediment and erosion control plans, storm water management plans or permits that have been approved by other state or local officials. This provision does not apply to master or comprehensive plans, non-enforceable guidelines or technical guidance documents

that are not identified in a specific plan or permit issued for the construction site by state or local officials.

5.0 MAINTENANCE. The BMP plan shall include a clear description of the maintenance procedures necessary to keep the control measures in good and effective operating condition.

Maintenance of BMPs during construction shall be a result of twice a week and post rain event inspections with action being taken by the contractor to correct deficiencies within three working days.

Post Construction maintenance will be a function of normal highway maintenance operations. Following final project acceptance by the cabinet, district highway crews will be responsible for identification and correction of deficiencies regarding ground cover and cleaning of storm water BMPs. Post-construction BMP maintenance will be covered in the cabinets MS4 permit under MCM 5 activities.

6.0 INSPECTIONS. Inspection and maintenance practices that will be used to maintain erosion and sediment controls:

1) All erosion prevention and sediment control measures will be inspected by the Contractor at least twice each week.
2) Inspections will be conducted by individuals that have received Kentucky Erosion Prevention and Sediment Control (KEPSC) training or other qualification as prescribed by the Cabinet that includes instruction concerning sediment and erosion control.
3) Inspection reports will be written, signed, dated, and kept on file.
4) Stabilization of disturbed areas shall be performed within 24 hours of the cessation of the land disturbing activity.
5) Disturbed areas shall be stabilized prior to a forecasted rain event.
6) Sediment control BMPs will be maintained when the sediment reaches 1/3 the depth of the BMP.
7) All measures will be maintained in good working order. If a repair is necessary, it will be initiated within 24 hours of being reported and completed within three working days.
8) Silt fences will be inspected for bypassing, overtopping, undercutting, depth of sediment, tears, and to ensure attachment to secure posts.
9) Diversion dikes and berms will be inspected and any breaches promptly repaired. Areas that are eroding or scouring will be repaired and re-seeded / mulched as needed.
10) Temporary and permanent seeding and mulching will be inspected for bare spots, washouts, and healthy growth. Bare or eroded areas will be repaired as needed.
11) All material storage and equipment servicing areas that involve the management of bulk liquids, fuels, and bulk solids will be inspected weekly for conditions that represent a release or possible release of pollutants to the environment.

7.0 NON-STORM WATER DISCHARGES. It is expected that non-storm water discharges may occur from the site during the construction period. Examples of non-storm water discharges include:

1) Water from water line flushings.
2) Water form cleaning concrete trucks and equipment.
3) Pavement wash waters (where no spills or leaks of toxic or hazardous materials have occurred).
4) Uncontaminated groundwater and rain water (from dewatering during excavation).

All non-storm water discharges will be directed to the sediment basin or to a filter fence enclosure in a flat vegetated infiltration area or be filtered via another approved commercial product.

8.0 GROUNDWATER PROTECTION PLAN.

This plan serves as the groundwater protection plan as required by 401 KAR 5:037.

Contractor's statement: (3)

The following activities, as enumerated by 401 KAR 5:037 Section 2, require the preparation and implementation of a groundwater protection plan, and will or may be conducted as part of this construction project: (2)

_____ (e) Land treatment or land disposal of a pollutant;

_____ (f) Storing, treating, disposing, or related handling of hazardous waste, solid waste or special waste, or special waste in landfills, incinerators, surface impoundments, tanks, drums, or other containers, or in piles, (This does not include wastes managed in a container placed for collection and removal of municipal solid waste for disposal off site);

_____ (g) Handling of materials in bulk quantities (equal or greater than 55 gallons or 100 pounds net dry weight transported held in an individual container) that, if released to the environment, would be a pollutant;

_____ (j) Storing or related handling of road oils, dust suppressants, or deicing agents at a central location;

_____ (k) Application or related handling of road oils, dust suppressants or deicing materials, (does not include use of chloride-based deicing materials applied to roads or parking lots);

_____ (m) Installation, construction, operation, or abandonment of wells, bore holes, or core holes, (this does not include bore holes for the purpose of explosive demolition);

Or, check the following only if there are no qualifying activities

KYTC BMP Plan for Contract ID ######

_____ There are no activities for this project as listed in 401 KAR 5:037 Section 2 that require the preparation and implementation of a groundwater protection plan.

The contractor is responsible for the preparation of a plan that addresses the 401 KAR 5:037 Section 3. (3)

Elements of site specific groundwater protection plan:

(a) General information about this project is covered in the Project information;
(b) Activities that require a groundwater protection plan have been identified above;
(c) Practices that will protect groundwater from pollution are addressed in Section 3. Other Control Measures.
(d) Implementation schedule – all practices required to prevent pollution of groundwater are to be in place prior to conducting the activity;
(e) Training is required as a part of the ground water protection plan. All employees of the contractor, sub-contractor and resident engineer personnel will be trained to understand the nature and requirements of this plan as they pertain to their job function(s). Training will be accomplished within one week of employment and annually thereafter. A record of training will be maintained by the contractor with a copy provide to the resident engineer.
(f) Groundwater plan activities will be inspected during the EPSC inspections
(g) Certification (see signature page.)

KYTC BMP Plan for Contract ID ######

Contractor and Resident Engineer Plan Certification

The contractor that is responsible for implementing this BMP plan is identified in the Project Information section of this plan.

The following certification applies to all parties that are signatory to this BMP plan:

I certify under penalty of law that this document and all attachments were prepared under my direction or supervision in accordance with a system designed to assure that qualified personnel properly gathered and evaluated the information submitted. Based on my inquiry of the person or persons who manage the system, or those persons directly responsible for gathering the information, the information submitted is, to the best of my knowledge and belief, true, accurate, and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment for knowing violations. Further, this plan complies with the requirements of 401 KAR 5:037. By this certification, the undersigned state that the individuals signing the plan have reviewed the terms of the plan and will implement its provisions as they pertain to ground water protection.

Contractor and Resident Engineer Certification:

(3)
Signed _____ title _____ , _____
typed or printed name[1] *signature*

(2)
Signed _____ title _____ , _____
typed or printed name[2] *signature*

1. *Contractors Note: to be signed by a person who is the owner, a responsible corporate officer, a general partner or the proprietor or a person designated to have the authority to sign reports by such a person in accordance with 401 KAR 5:060 Section 9. This delegation shall be in writing to: Manager, KPDES Branch, Division of Water, 300 Fair Oaks Lane, Frankfort, Kentucky 40601. Reference the Contract ID number and KPDES number when one has been issued.*

2. *KYTC Note: to be signed by the Chief District Engineer or a person designated to have the authority to sign reports by such a person (usually the resident engineer) in accordance with 401 KAR 5:060 Section 9. This delegation shall be in writing to: Manager, KPDES Branch, Division of Water, 300 Fair Oaks Lane, Frankfort, Kentucky 40601 Reference the Contract ID number and KPDES number when one has been issued.*

KYTC BMP Plan for Contract ID ######

Sub-Contractor Certification

The following sub-contractor shall be made aware of the BMP plan and responsible for implementation of BMPs identified in this plan as follows:

Subcontractor Name:

Address:

Phone:

The part of BMP plan this subcontractor is responsible to implement is:

I certify under penalty of law that I understand the terms and conditions of the general Kentucky Pollutant Discharge Elimination System permit that authorizes the storm water discharges, the BMP plan that has been developed to manage the quality of water to be discharged as a result of storm events associated with the construction site activity and management of non-storm water pollutant sources identified as part of this certification.

Signed _____ title _____ , _____
typed or printed name[1] *signature*

1. *Sub Contractor Note: To be signed by a person who is the owner, a responsible corporate officer, a general partner or the proprietor or a person designated to have the authority to sign reports by such a person in accordance with 401 KAR 5:060 Section 9. This delegation shall be in writing to: Manager, KPDES Branch, Division of Water, 300 Fair Oaks Lane, Frankfort, Kentucky 40601. Reference the Contract ID number and KPDES number when one has been issued.*

KPDES FORM 1

KENTUCKY POLLUTANT DISCHARGE ELIMINATION SYSTEM

PERMIT APPLICATION

This is an application to: (check one)
- ☒ Apply for a new permit.
- ☐ Apply for reissuance of expiring permit.
- ☐ Apply for a construction permit.
- ☐ Modify an existing permit.
  Give reason for modification under Item II.A.

A complete application consists of this form and one of the following:
Form A, Form B, Form C, Form F, or Form SC

For additional information contact:
KPDES Branch (502) 564-3410

I. FACILITY LOCATION AND CONTACT INFORMATION	AGENCY USE
A. Name of Business, Municipality, Company, Etc. Requesting Permit Kentucky Transportation Cabinet	
B. Facility Name and Location	C. Primary Mailing Address (all facility correspondence will be sent to this address). **Include owner's mailing address (if different) in D.**
Facility Location Name: US 460 in Menifee County, KY	Facility Contact Name and Title: Mr. ☒ Ms. ☐ David M. Waldner, P.E.
Facility Location Address (i.e. street, road, etc., **not P.O. Box**): US 460 in Menifee County	Mailing Address: 200 Mero Street
Facility Location City, State, Zip Code: Within the county limits of Menifee, KY	Mailing City, State, Zip Code: Frankfort, KY 40622
D. Owner's name (if not the same as in part A and C): N/A	Facility Contact Telephone Number: (502) 564-7250
Owner's Mailing Address: N/A	Owner's Telephone Number (if different): N/A

II. FACILITY DESCRIPTION

A. Provide a brief description of activities, products, etc: Widening and realignment of U.S. 460 for approximately 3 miles in Menifee County.

B. Standard Industrial Classification (SIC) Code and Description

Principal SIC Code & Description:	1611 - Linear Projects		
Other SIC Codes:	N/A	N/A	N/A

III. FACILITY LOCATION

A. Attach a U.S. Geological Survey 7 ½ minute quadrangle map for the site. (See instructions) Scranton Quad

B. County where facility is located: Menifee	City where facility is located (if applicable): Near the city of Frenchburg, KY
C. Body of water receiving discharge: East Fork of Indian Creek of Indian Creek of Red River, Mariba Fork of Gladie Creek (Basin)	
D. Facility Site Latitude (degrees, minutes, seconds): 37° 55' 38" N	Facility Site Longitude (degrees, minutes, seconds): 83° 35' 33" W
E. Method used to obtain latitude & longitude (see instructions):	Topographic Map Coordinates
F. Facility Dun and Bradstreet Number (DUNS #) (if applicable):	N/A

IV. OWNER/OPERATOR INFORMATION

A. Type of Ownership:
☐ Publicly Owned ☐ Privately Owned ☒ State Owned ☐ Both Public and Private Owned ☐ Federally owned

B. Operator Contact Information (See instructions)

Name of Treatment Plant Operator:	Telephone Number:
N/A	N/A
Operator Mailing Address (Street): N/A	
Operator Mailing Address (City, State, Zip Code): N/A	
Is the operator also the owner? Yes ☐ No ☐	Is the operator certified? If yes, list certification class and number below. Yes ☐ No ☐
Certification Class: N/A	Certification Number: N/A

V. EXISTING ENVIRONMENTAL PERMITS

Current NPDES Number:	Issue Date of Current Permit:	Expiration Date of Current Permit:
N/A	N/A	N/A
Number of Times Permit Reissued:	Date of Original Permit Issuance:	Sludge Disposal Permit Number:
N/A	N/A	N/A
Kentucky DOW Operational Permit #:	Kentucky DSMRE Permit Number(s):	
N/A	N/A	N/A

Which of the following additional environmental permit/registration categories will also apply to this facility?

CATEGORY	EXISTING PERMIT WITH NO.	PERMIT NEEDED WITH PLANNED APPLICATION DATE
Air Emission Source	N/A	N/A
Solid or Special Waste	N/A	N/A
Hazardous Waste - Registration or Permit	N/A	N/A

VI. DISCHARGE MONITORING REPORTS (DMRs)

KPDES permit holders are required to submit DMRs to the Division of Water on a regular schedule (as defined by the KPDES permit). Information in this section serves to specifically identify the name and telephone number of the DMR official and the DMR mailing address (if different from the primary mailing address in Section I.C).

A. DMR Official (i.e., the department, office or individual designated as responsible for submitting DMR forms to the Division of Water):	Mr. Dave Harmon
DMR Official Telephone Number:	502 - 564 - 7250

B. DMR Mailing Address:
- Address the Division of Water will use to mail DMR forms (if different from mailing address in Section I.C), or
- Contact address if another individual, company, laboratory, etc. completes DMRs for you; e.g., contract laboratory address.

DMR Mailing Name:	N/A
DMR Mailing Address:	N/A
DMR Mailing City, State, Zip Code:	N/A

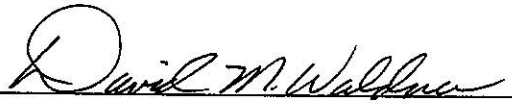
VII. APPLICATION FILING FEE

KPDES regulations require that a permit applicant pay an application filing fee equal to twenty percent of the permit base fee. Please examine the base and filing fees listed below and in the Form 1 instructions and enclose a check payable to "Kentucky State Treasurer" for the appropriate amount (for permit renewals, please include the KPDES permit number on the check to ensure proper crediting). Descriptions of the base fee amounts are given in the "General Instructions."

Facility Fee Category:	Filing Fee Enclosed:
N/A	$0

VIII. CERTIFICATION

I certify under penalty of law that this document and all attachments were prepared under my direction or supervision in accordance with a system designed to assure that qualified personnel properly gather and evaluate the information submitted. Based on my inquiry of the person or persons who manage the system, or those persons directly responsible for gathering the information, the information submitted is, to the best of my knowledge and belief, true, accurate, and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment for knowing violations.

NAME AND OFFICIAL TITLE (type or print):	TELEPHONE NUMBER (area code and number):
Mr. ☒ Ms. ☐ David M. Waldner, Director of DEA	502-564-7250
SIGNATURE 	DATE: 9/28/11

Return completed application form and attachments to: **KPDES Branch, Division of Water, Frankfort Office Park, 14 Reilly Road, Frankfort, KY 40601. Direct questions to: KPDES Branch at (502) 564-3410.**

KPDES FORM F

KENTUCKY POLLUTANT DISCHARGE ELIMINATION SYSTEM

PERMIT APPLICATION

A complete application consists of this form and Form 1.
For additional information, Contact KPDES Branch, (502) 564-3410.

I. OUTFALL LOCATION | AGENCY USE

For each outfall list the latitude and longitude of its location to the nearest 15 seconds and name the receiving water.

A. Outfall Number	B. Latitude or Station	C. Longitude or Offset	D. Receiving Water (name)	D. Receiving Water use Classification
1	37° 56' 5" N	83° 36' 56" W	Unnamed Trib to East Fork Indian Creek	Warm Water Aquatic Habitat, Primary Contact Recreation, Secondary Contract Recreation
2	37° 56' 4" N	83° 36' 56" W	Unnamed Trib to East Fork Indian Creek	Warm Water Aquatic Habitat, Primary Contact Recreation, Secondary Contract Recreation
3	37° 55' 60" N	83° 36' 41" W	Unnamed Trib to East Fork Indian Creek	Warm Water Aquatic Habitat, Primary Contact Recreation, Secondary Contract Recreation
4	37° 56' 6" N	83° 36' 36" W	Unnamed Trib to East Fork Indian Creek	Warm Water Aquatic Habitat, Primary Contact Recreation, Secondary Contract Recreation
5	37° 56' 4" N	83° 36' 25" W	Tolan Creek	Warm Water Aquatic Habitat, Primary Contact Recreation, Secondary Contract Recreation
6	37° 55' 59" N	83° 36' 21" W	Tolan Creek	Warm Water Aquatic Habitat, Primary Contact Recreation, Secondary Contract Recreation
7	37° 55' 56" N	83° 36' 13" W	Unnamed Trib to East Fork Indian Creek	Warm Water Aquatic Habitat, Primary Contact Recreation, Secondary Contract Recreation
8A	37°55'58" N	83°36'02" W	East Fork Indian Creek	Cold Water Aquatic Habitat, Outstanding State Resource Water, Primary Contact Recreation, Secondary Contract Recreation
8B	37°55'58" N	83°36'03" W	East Fork Indian Creek	Cold Water Aquatic Habitat, Outstanding State Resource Water, Primary Contact Recreation, Secondary Contract Recreation
8C	37°55'55" N	83°36'01" W	East Fork Indian Creek	Cold Water Aquatic Habitat, Outstanding State Resource Water, Primary Contact Recreation, Secondary Contract Recreation
8D	37°55'55" N	83°36'01" W	East Fork Indian Creek	Cold Water Aquatic Habitat, Outstanding State Resource Water, Primary Contact Recreation, Secondary Contract Recreation
9	37° 55' 55" N	83° 35' 52" W	Unnamed Trib to East Fork Indian Creek	Warm Water Aquatic Habitat, Primary Contact Recreation, Secondary Contract Recreation
10	37°55' 50" N	83° 35' 50" W	Wynn Branch	Warm Water Aquatic Habitat, Primary Contact Recreation, Secondary Contract Recreation
11	37° 55' 46" N	83° 35' 43" W	Unnamed Trib to East Fork Indian Creek	Warm Water Aquatic Habitat, Primary Contact Recreation, Secondary Contract Recreation
12	37° 55' 40" N	83° 35' 38" W	Unnamed Trib to East Fork Indian Creek	Warm Water Aquatic Habitat, Primary Contact Recreation, Secondary Contract Recreation
13	37° 55' 31" N	83° 35' 31" W	Unnamed Trib to East Fork Indian Creek	Warm Water Aquatic Habitat, Primary Contact Recreation, Secondary Contract Recreation
14	37° 55' 29" N	83° 35' 27" W	Unnamed Trib to East Fork Indian Creek	Warm Water Aquatic Habitat, Primary Contact Recreation, Secondary Contract Recreation
15	37° 55' 18" N	83° 35' 18" W	Unnamed Trib to East Fork Indian Creek	Warm Water Aquatic Habitat, Primary Contact Recreation, Secondary Contract Recreation
16	37° 55' 14" N	83° 35' 15" W	Unnamed Trib to East Fork Indian Creek	Warm Water Aquatic Habitat, Primary Contact Recreation, Secondary Contract Recreation
17	37° 55' 6" N	83° 34' 49" W	Mariba Fork of Gladie Creek (Basin)	Cold Water Aquatic Habitat, Primary Contact Recreation, Secondary Contract Recreation
18	37° 54' 48" N	83° 34' 39" W	Mariba Fork of Gladie Creek (Basin)	Cold Water Aquatic Habitat, Primary Contact Recreation, Secondary Contract Recreation
19	37°54'48" N	83°34'36" W	Unnamed Trib to Mariba Fork of Gladie Creek (Basin)	Cold Water Aquatic Habitat, Primary Contact Recreation, Secondary Contract Recreation

II. IMPROVEMENTS

A. Are you now required by any federal, state, or local authority to meet any implementation schedule for the construction, upgrading or operation of wastewater treatment equipment or practices or any other environmental programs which may affect the discharges described in this application? This includes, but is not limited to, permit conditions, administrative or enforcement orders, enforcement compliance schedule letters, stipulations, court orders, and grant or loan conditions.

1. Identification of Conditions, Agreements, Etc.	2. Affected Outfalls No.	Source of Discharge	3. Brief Description of Project	4. Final Compliance Date a. req.	b. proj.
N/A	N/A	N/A	N/A	N/A	N/A

B. You may attach additional sheets describing any additional water pollution (or other environmental projects which may affect your discharges) you now have under way or which you plan. Indicate whether each program is now under way or planned, and indicate your actual or planned schedules for construction.

III. SITE DRAINAGE MAP

Attach a site map showing topography (or indicating the outline of drainage areas served by the outfall(s) covered in the application if a topographic map is unavailable) depicting the facility including: each of its intake and discharge structures; the drainage area of each storm water outfall; paved areas and buildings within the drainage area of each storm water outfall, each know past or present areas used for outdoor storage or disposal of significant materials, each existing structural control measure to reduce pollutants in storm water runoff, materials loading and access areas, areas where pesticides, herbicides, soil conditioners and fertilizers are applied; each of its hazardous waste treatment, storage of disposal units (including each area not required to have a RCRA permit which is used for accumulating hazardous waste under 40 CFR 262.34); each well where fluids from the facility are injected underground; springs, and other surface water bodies which receive storm water discharges from the facility.

IV. NARRATIVE DESCRIPTION OF POLLUTANT SOURCES

A. For each outfall, provide an estimate of the area (include units) of impervious surfaces (including paved areas and building roofs) drained to the outfall, and an estimate of the total surface area drained by the outfall.

Outfall Number	Area of Impervious Surface (provide units)	Total Area Drained (provide units)	Outfall Number	Area of Impervious Surface (provide units)	Total Area Drained (provide units)
1	1.15 acres	3.82 acres	11	0.40 acres	4.38 acres
2	0.37 acres	1.70 acres	12	0.32 acres	5.18 acres
3	0.78 acres	7.72 acres	13	1.21 acres	39.7 acres
4	0.56 acres	17.8 acres	14	1.31 acres	9.63 acres
5	2.17 acres	8.30 acres	15	0.47 acres	8.75 acres
6	0.90 acres	18.1 acres	16	1.20 acres	12.4 acres
7	0.09 acres	1.86 acres	17	3.29 acres	109 acres
8A	0.108 acres	76.93 acres	18	8.67 acres	238 acres
8B	0.14 acres	2.68 acres	19	0.34 acres	11.22 acres
8C	0.64 acres	2.30 acres			
8D	0.32 acres	1.49 acres			
9	0.25 acres	2.77 acres			
10	1.27 acres	10.5 acres			

B. Provide a narrative description of significant materials that are currently or in the past three years have been treated, stored or disposed in a manner to allow exposure to storm water; method of treatment, storage, or disposal; past and present materials management practices employed to minimize contact by these materials with storm water runoff; materials loading and access areas; and the location, manner, and frequency in which pesticides, herbicides, soil conditioners, and fertilizers are applied.

During the construction of roadways, the main pollutant of concern is sediment associated with land disturbing activities. Due to the cold water aquatic habitat, temperature and dissolved oxygen are also pollutants of concern for this road project. Typical pollutants associated with a roadway once they are in use include the following:

- Heavy metals from tire tread and brake linings
- pH from road treatment operations during freezing weather
- Petrochemicals, oil and grease from auto leaks
- TSS from dirt and debris that is transported by tires

The associated BMP Template and Supplemental Data discuss how these pollutants will be addressed.

C. For each outfall, provide the location and a description of existing structural and nonstructural control measures to reduce pollutants in storm water runoff; and a description of the treatment the storm water receives, including the schedule and type of maintenance for control and treatment measures and the ultimate disposal of any solid or fluid wastes other than by discharge.

Outfall Number	Treatment	List Codes from Table F-1
1	Silt Check	1-F, 1-U
2	Silt Check	1-F, 1-U
3	Sediment Trap Checks, Silt Checks0	1-F, 1-U
4	Sediment Trap Checks, Silt Checks	1-F, 1-U
5	Sediment Trap Checks, Silt Checks	1-F, 1-U
6	Sediment Trap Checks, Silt Checks	1-F, 1-U
7	Sediment Trap Checks, Silt Checks	1-F, 1-U
8A	Sediment Trap Checks, Silt Checks; Enhanced Silt Trap, Turf Reinforcement Mat, Live Stake Plantings	1-F, 1-U
8B	Sediment Trap Checks, Silt Checks; Enhanced Silt Trap, Turf Reinforcement Mat, Live Stake Plantings	1-F, 1-U
8C	Sediment Trap Checks, Silt Checks; Enhanced Silt Trap, Turf Reinforcement Mat, Live Stake Plantings	1-F, 1-U
8D	Sediment Trap Checks, Silt Checks; Enhanced Silt Trap, Turf Reinforcement Mat, Live Stake Plantings	1-F, 1-U
9	Sediment Trap Checks, Silt Checks	1-F, 1-U
10	Sediment Trap Checks, Silt Checks	1-F, 1-U
11	Sediment Trap Checks, Silt Checks	1-F, 1-U
12	Sediment Trap Checks, Silt Checks	1-F, 1-U
13	Sediment Trap Checks, Silt Checks	1-F, 1-U
14	Sediment Trap Checks, Silt Checks	1-F, 1-U
15	Sediment Trap Checks, Silt Checks	1-F, 1-U
16	Sediment Trap Checks, Silt Checks	1-F, 1-U
17	Sediment Trap Checks, Silt Checks; Turf Reinforcement Mat, Live Stake Plantings	1-F, 1-U
18	Sediment Trap Checks, Silt Checks; Turf Reinforcement Mat, Live Stake Plantings	1-F, 1-U
19	Sediment Trap Checks, Silt Checks; Turf Reinforcement Mat, Live Stake Plantings	1-F, 1-U

V. NON-STORM WATER DISCHARGES

A. I certify under penalty of law that the outfal0l(s) covered by this application have been tested or evaluated for the presence of non-storm water discharges, and that all non-storm water discharges from these outfall(s) are identified in either an accompanying Form C or Form SC application for the outfall.

Name and Official Title (type or print)	Signature	Date Signed
David M. Waldner, Director of DEA	David M. Waldner	9/28/11

B. Provide a description of the method used, the date of any testing, and the onsite drainage points that were directly observed during a test.

N/A

VI. SIGNIFICANT LEAKS OR SPILLS

Provide existing information regarding the history of significant leaks or spills of toxic or hazardous pollutants at the facility in the last three years, including the approximate date and location of the spill or leak, and the type and amount of material released.

N/A. Construction project.

VII. DISCHARGE INFORMATION

A,B,C, & D: See instructions before proceeding. Complete one set of tables for each outfall. Annotate the outfall number in the space provided. Tables F-1, F-2, and F-3 are included on separate pages.

E: Potential discharges not covered by analysis - is any toxic pollutant listed in Table F-2, F-3, or F-4, a substance which you currently use or manufacture as an intermediate or final product or by product.

☐ Yes (list all such pollutants below) ☒ No (go to Section IX)

N/A

VIII. BIOLOGICAL TOXICITY TESTING DATA

Do you have any knowledge or reason to believe that any biological test for acute or chronic toxicity has been made on any of your discharges or on a receiving water in relation to your discharge within the last 3 years?

☐ Yes (list all such results below) ☒ No (go to Section IX)

N/A Construction Project.

IX. CONTRACT ANALYSIS INFORMATION

Were any of the analyses reported in item VII performed by a contract laboratory or consulting firm?

☐ Yes (list the name, address and telephone number of, and pollutants analyzed by each such laboratory or firm below; use additional sheets if necessary).

☒ No (go to Section IX)

A. Name	B. Address	C. Area Code & Phone No.	D. Pollutants Analyzed
N/A	N/A	N/A	N/A

XIII. CERTIFICATION

I certify under penalty of law that this document and all attachments were prepared under my direction or supervision in accordance with a system designed to assure that qualified personnel properly gather and evaluate the information submitted. Based on my inquiry of the person or persons who manage the system or those persons directly responsible for gathering the information, the information submitted is, to the best of my knowledge and belief, true, accurate, and complete. I am aware that there are significant penalties for submitting false information including the possibility of fine and imprisonment for knowing violations.

NAME & OFFICIAL TITLE (type or print)	AREA CODE AND PHONE NO.
Mr. ☒ Ms. ☐ David M. Waldner	502-564-7250
SIGNATURE	**DATE SIGNED**
David M. Waldner	9/28/11

VII. DISCHARGE INFORMATION	OUTFALL NO:

Part A - **You must provide the results of at least one analysis for every pollutant in this table.** Complete one table for each outfall. See instructions for additional details.

Pollutant and CAS Number (if available)	Maximum Values (include units)		Average Values (include units)		Number of Storm Events Sampled	Sources of Pollutants
	Grab Sample Taken During 1st 20 Minutes	Flow-weighted Composite	Grab Sample Taken During 1st 20 Minutes	Flow-weighted Composite		
Oil and Grease		N/A	<5.0 mg/L			
Biological Oxygen Demand BOD_5			<5.0 mg/L			
Chemical Oxygen Demand (COD)			15 mg/L			
Total Suspended Solids (TSS)			300 mg/L			
Total Kjeldahl Nitrogen			1.1 mg/L			
Nitrate plus Nitrite Nitrogen			<2.6 mg/L			
Total Phosphorus			3.6 mg/L			
pH	Minimum	Maximum	7.58 Minimum	Maximum		

Part B - List each pollutant that is limited in an effluent guideline which the facility is subject to or any pollutant listed in the facility's KPDES permit for its process wastewater (if the facility is operating under an existing KPDES permit). Complete one table for each outfall. See the instructions for additional details and requirements.

Pollutant and CAS Number (if available)	Maximum Values (include units)		Average Values (include units)		Number of Storm Events Sampled	Sources of Pollutants
	Grab Sample Taken During 1st 20 Minutes	Flow-weighted Composite	Grab Sample Taken During 1st 20 Minutes	Flow-weighted Composite		

Part C - List each pollutant shown in Tables F-2, F-3, and F-4 that you know or have reason to believe is present. See the instructions for additional details and requirements. Complete one table for each outfall.

Pollutant and CAS Number (if available)	Maximum Values (include units)		Average Values (include units)		Number of Storm Events Sampled	Sources of Pollutants
	Grab Sample Taken During 1st 20 Minutes	Flow-weighted Composite	Grab Sample Taken During 1st 20 Minutes	Flow-weighted Composite		

Part D - Provide data for the storm event(s) which resulted in the maximum values for the flow-weighted composite sample.

1. Date of Storm Event	2. Duration of Storm Event (in minutes)	3. Total rainfall during storm event (in inches)	4. Number of hours between beginning of storm measured and end of previous measurable rain event	5. Maximum flow rate during rain event (gal/min or specify units)	6. Total flow from rain event (gallons or specify units)

7. Provide a description of the method of flow measurement or estimate.

KENTUCKY TRANSPORTATION CABINET
COMMUNICATING ALL PROMISES (CAP)
ACTIVE

Item No. 10 - 117.01 **Project Mgr.** CORBETT CAUDILL

County MENIFEE **Route** US-460

CAP #	Date of Promise	Promise made to:	Location of Promise
1	26-APR-11	District 10 Legal Section	House Left of Station 107+00

CAP Description

PROPERTY OWNER, GRANT SORRELL, REQUESTED A VISUAL INSPECTION OF HIS HOUSE FOUNDATIONS BEFORE CONSTRUCTION BEGINS.

2	27-APR-11	James Bryant	House and Metal Barn Right KY 77 #2 Station 58+00 +/-

CAP Description

REMOVE AND/OR BACKFILL, GRADE AND RESEED THE AREA OF CISTERN NEAR THE METAL BARN.

3	27-APR-11	Beverly Bartley	House Left of Station 108+00

CAP Description

RESURFACE EXISTING DRIVEWAY.

4	27-FEB-12	Wesley Smallwood	Entrance Right of Station 220+50

CAP Description

RESURFACE (ASPHALT PAVEMENT) 50 FEET OF GRAVEL ENTRANCE ON PARCEL 68, WESLEY SMALLWOOD. BUS TURN-AROUND.

5	27-FEB-12	Elizabeth & Christopher Mays	Septic System/Leach Field Left of Station 150+00 to Station 152+00

CAP Description

IF THE SUBJECT PROPERTY'S SEPTIC SYSTEM IS DAMAGED/DESTROYED DURING THE CONSTRUCTION OF THIS PROJECT, THE PROPERTY OWNER WILL BE COMPENSATED ACCORDINGLY BY THE PARTY RESPONSIBLE FOR THE DAMAGE.

6	06-APR-12	US Fish & Wildlife Service	Project Length

CAP Description

TREES CUTTING SHALL BE BETWEEN THE DATES OF NOVEMBER 15 - MARCH 31 TO AVOID POTENTIAL DIRECT EFFECTS ON SUMMER ROOSTING AND SWARMING INDIANA BATS.

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 2012* and *Standard Drawings, Edition of 2012 with the 2012 Revision.*

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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.

1I

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

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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:

Code	Pay Item	Pay Unit
02671	Portable Changeable Message Sign	Each

Effective June 15, 2012

11D

SPECIAL NOTE FOR ROCK BLASTING

This Special Note will apply when indicated on the plans or in the proposal. Section references herein are to the Department's 2012 Standard Specifications for Road and Bridge Construction.

1.0 DESCRIPTION. This work consists of fracturing rock and constructing stable final rock cut faces using presplit blasting and production blasting techniques.

2.0 MATERIALS. Deliver, store, and use explosives according to the manufacturer's recommendations and applicable laws. Do not use explosives outside their recommended use date. Verify date of manufacture and provide copies of the technical data sheets (TDS) and material safety data sheets (MSDS) to the Engineer. Explosives and initiating devices include, but are not necessarily limited to, dynamite and other high explosives, slurries, water gels, emulsions, blasting agents, initiating explosives, detonators, blasting caps, and detonating cord.

3.0 CONSTRUCTION. Furnish copies or other proof of all-applicable permits and licenses. Comply with Federal, State, and local regulations on the purchase, transportation, storage, and use of explosive material. Regulations include but are not limited to the following:

1) KRS 351.310 through 351.9901.
2) 805 KAR 4:005 through 4:165
3) Applicable rules and regulations issued by the Office of Mine Safety and Licensing.
4) Safety and health. OSHA, 29 CFR Part 1926, Subpart U.
5) Storage, security, and accountability. Bureau of Alcohol, Tobacco, and Firearms (BATF), 27 CFR Part 181.
6) Shipment. DOT, 49 CFR Parts 171-179, 390-397.

3.1 Blaster-in-Charge. Designate in writing a blaster-in-charge and any proposed alternates for the position. Submit documentation showing the blaster-in-charge, and alternates, have a valid Kentucky blaster's license. Ensure the blaster-in-charge or approved alternate is present at all times during blasting operations.

3.2 **Blasting Plans.** Blasting plans and reports are for quality control and record keeping purposes. Blasting reports are to be signed by the blaster-in-charge or the alternate blaster-in-charge. The general review and acceptance of blasting plans does not relieve the Contractor of the responsibility whatsoever for conformance to regulations or for obtaining the required results. All blasting plans shall be submitted to the Engineer. The Engineer will be responsible for submitting the plan to the Central Office Division of Construction and the Division of Mine Reclamation and Enforcement, Explosives and Blasting Branch at the following address: 2 Hudson Hollow, Frankfort, Kentucky, 40601.

A) General Blasting Plan. Submit a general blasting plan for acceptance at least 15 working days before drilling operations begin. Include, as a minimum, the following safety and procedural details:

1) Working procedures and safety precautions for storing, transporting, handling, detonating explosives. Include direction on pre and post blast audible procedures, methods of addressing misfires, and methods of addressing inclement weather, including lightning.
2) Proposed product selection for both dry and wet holes. Furnish Manufacturer's TDS and MSDS for all explosives, primers, initiators, and other blasting devices.
3) Proposed initiation and delay methods.
4) Proposed format for providing all the required information for the site specific blasting shot reports.

B) Preblast Meeting. Prior to drilling operations, conduct a preblast meeting to discuss safety and traffic control issues and any site specific conditions that will need to be addressed. Ensure, at a minimum, that the Engineer or lead inspector, Superintendent, blaster-in-charge, and all personnel involved in the blasting operation are present. Site specific conditions include blast techniques; communication procedures; contingency plans and equipment for dealing with errant blast material. The conditions of the General Blasting plan will be discussed at this meeting. Record all revisions and additions made to the blasting plan and obtain written concurrence by the blaster-in-charge. Provide a copy of the signed blast plan to the Engineer along with the sign in sheet from the preblast meeting.

3.3 Preblast Condition Survey and Vibration Monitoring and Control. Before blasting, arrange for a preblast condition survey of nearby buildings, structures, or utilities, within 500 feet of the blast or that could be at risk from blasting damage. Provide the Engineer a listing of all properties surveyed and any owners denying entry or failing to respond. Notify the Engineer and occupants of buildings at risk at least 24 hours before blasting.

Limit ground vibrations and airblast to levels that will not exceed limits of 805 KAR 4:005 through 4:165. More restrictive levels may be specified in the Contract.

Size all blast designs based on vibration, distance to nearest building or utility, blast site geometry, atmospheric conditions and other factors. Ground vibrations are to be controlled according to the blasting standards and scaled distance formulas in 805 KAR 4:020 or by the use of seismographs as allowed in 805 KAR 4:030. The Department will require seismographs at the nearest allowable location to the protected site when blasting occurs within 500 feet of buildings, structures, or utilities.

3.4 Blasting. Drill and blast at the designated slope lines according to the blasting plan. Perform presplitting to obtain smooth faces in the rock and shale formations. Perform the presplitting before blasting and excavating the interior portion of the specified cross section at any location. The Department may allow blasting for fall benches and haul roads prior to presplitting when blasting is a sufficient distance from the final slope and results are satisfactory to the Engineer. Use the types of explosives and blasting accessories necessary to obtain the required results.

Free blast holes of obstructions for their entire depth. Place charges without caving the blast hole walls. Stem the upper portion of all blast holes with dry sand or other granular material passing the 3/8-inch sieve. Dry drill cuttings are acceptable for stemming when blasts are more than 800 feet from the nearest dwelling.

Stop traffic during blasting operations when blasting near any road and ensure traffic does not pass through the Danger Zone. The blaster-in-charge will define the Danger Zone prior to each blast. Ensure traffic is stopped outside the Danger Zone, and in no case within 800 feet of the blast location.

Following a blast, stop work in the entire blast area, and check for misfires before allowing worker to return to excavate the rock.

Remove or stabilize all cut face rock that is loose, hanging, or potentially dangerous. Leave minor irregularities or surface variations in place if they do not create a hazard. Drill the next lift only after the cleanup work and stabilization work is complete.

When blasting operations cause fracturing of the final rock face, repair or stabilize it in an approved manner at no cost to the Department.

Halt blasting operations in areas where any of the following occur:

1) Slopes are unstable;
2) Slopes exceed tolerances or overhangs are created;
3) Backslope damage occurs;
4) Safety of the public is jeopardized;
5) Property or natural features are endangered;
6) Fly rock is generated; or
7) Excessive ground or airblast vibrations occur in an area where damage to buildings, structures, or utilities is possible.
8) The Engineer determines that materials have become unsuitable for blasting

Blasting operations may continue at a reasonable distance from the problem area or in areas where the problems do not exist. Make the necessary modifications to the blasting operations and perform a test blast to demonstrate resolution of the problem.

A) Drill Logs. Maintain a layout drawing designating hole numbers with corresponding drill logs and provide a copy of this information to the blaster prior to loading the hole. Ensure the individual hole logs completed by the driller(s) show their name; date drilled; total depth drilled; and depths and descriptions of significant conditions encountered during drilling that may affect loading such as water, voids, changes in rock type.

B) Presplitting. Conduct presplitting operations in conformance with Subsection 204.03.04 of the Standard Specifications for Road and Bridge Construction.

3.5 Shot Report. Maintain all shot reports on site for review by the Department. Within one day after a blast, complete a shot report according to the record keeping requirements of 805 KAR 4:050. Include all results from airblast and seismograph monitoring.

3.6 Unacceptable Blasting. When unacceptable blasting occurs, the Department will halt all blasting operations. Blasting will not resume until the Department completes its investigation and all concerns are addressed. A blast is unacceptable when it results in fragmentation beyond the final rock face, fly rock, excessive vibration or airblast, overbreak, damage to the final rock face or overhang. Assume the cost for all resulting damages to private and public property and hold the Department harmless.

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When an errant blast or fly rock causes damage to or blocks a road or conveyance adjacent to the roadway, remove all debris from the roadway as quickly as practicable and perform any necessary repairs. Additionally, when specified in the Contract, the Department will apply a penalty.

Report all blasting accidents to the Division of Mine Reclamation and Enforcement, Explosives and Blasting Branch at 502-564-2340.

4.0 MEASUREMENT AND PAYMENT. The Department will not measure this work for payment and will consider all items contained in this note to be incidental to either Roadway Excavation or Embankment-in-Place, as applicable. However, if the Engineer directs in writing slope changes, then the Department will pay for the second presplitting operation as Extra Work.

The Department will measure for payment material lying outside the typical section due to seams, broken formations, or earth pockets, including any earth overburden removed with this material, only when the work is performed under authorized adjustments.

The Department will not measure for payment any extra material excavated because of the drill holes being offset outside the designated slope lines.

The Department will not measure for payment any material necessary to be removed due to the inefficient or faulty blasting practices.

June 15, 2012

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SPECIAL NOTE FOR TURF REINFORCING MAT

1.0 DESCRIPTION. Install turf reinforcement mat at locations specified in the Contract or as the Engineer directs. Section references herein are to the Department's 2008 Standard Specifications for Road and Bridge Construction.

2.0 MATERIALS.

2.1 Turf Reinforcement Mat (TRM). Use a Turf Reinforcement Mat defined as permanent rolled erosion control product composed of non-degradable synthetic fibers, filaments, nets, wire mesh and/or other elements, processed into a three-dimensional matrix of sufficient thickness and from the Department's List of Approved Materials. Mats must be 100% UV stabilized materials. For TRMs containing degradable components, all physical property values must be obtained on the non-degradable portion of the matting exclusively. Ensure product labels clearly show the manufacturer or supplier name, style name, and roll number. Ensure labeling, shipment and storage follows ASTM D-4873. The Department will require manufacturer to provide TRMs that are machine constructed web of mechanically or melt bonded nondegradable fibers entangled to form a three dimensional matrix. The Department will require all long term performance property values in table below to be based on non degradable portion of the matting alone. Approved methods include polymer welding, thermal or polymer fusion, or placement of fibers between two high strength biaxially oriented nets mechanically bound by parallel stitching with polyolefin thread. Ensure that mats designated in the plans as Type 4 mats, are not to be manufactured from discontinuous or loosely held together by stitching or glued netting or composites. Type 4 mats shall be composed of geosynthetic matrix that exhibits a very high interlock and reinforcement capacities with both soil and root systems and with high tensile modulus. The Department will require manufacturer to use materials chemically and biologically inert to the natural soil environments conditions. Ensure the blanket is smolder resistant without the use of chemical additives. When stored, maintain the protective wrapping and elevate the mats off the ground to protect them from damage. The Department will not specify these materials for use in heavily acidic coal seam areas or other areas with soil problems that would severally limit vegetation growth.

A) Dimensions. Ensure TRMs are furnished in strips with a minimum width of 4 feet and length of 50 feet.
B) Weight. Ensure that all mat types have a minimum mass per unit area of 7 ounces per square yard according to ASTM D 6566.
C) Performance Testing: The Department will require AASHTO's NTPEP index testing. The Department will also require the manufacturer to perform internal MARV testing at a Geosynthetic Accreditation Institute – Laboratory Accreditation Program (GAI-LAP) accredited laboratory for tensile strength, tensile elongation, mass per unit area, and thickness once every 24,000 yds of production or whatever rate is required to ensure 97.7% confidence under ASTM D4439& 4354. The Department will require Full scale testing for slope and channel applications shear stress shall be done under ASTM D 6459, ASTM D 6460-07 procedures.

2.2 Classifications

The basis for selection of the type of mat required will be based on the long term shear stress level of the mat of the channel in question or the degree of slope to protect and will be designated in the contract. The Type 4 mats are to be used at structural backfills protecting critical

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structures, utility cuts, areas where vehicles may be expected to traverse the mat, channels with large heavy drift, and where higher factors of safety, very steep slopes and/or durability concerns are needed as determined by project team and designer and will be specified in the plans by designer.

Turf Reinforcement Matting					
Properties[1]	Type 1	Type 2	Type 3	Type 4	Test Method
Minimum tensile Strength lbs/ft	125	150	175	3000 by 1500	ASTM D6818[2]
UV stability (minimum % tensile retention)	80	80	80	90	ASTM D4355[3] (1000-hr exposure)
Minimum thickness (inches)	0.25	0.25	0.25	0.40	ASTM D6525
Slopes applications	2H:1V or flatter	1.5H:1V or flatter	1H:1V or flatter	1 H: 1V or greater	
Shear stress lbs/ft^2 Channel applications	6.0[4]	8.0[4]	10.0[4]	12.0[4]	ASTM D6459 ASTM D6460-07

[1] For TRMs containing degradable components, all physical property values must be obtained on the non-degradable portion of the matting alone.
[2]Minimum Average Roll Values for tensile strength of sample material machine direction.
[3]Tensile Strength percentage retained after stated 1000 hr duration of exposure under ASTM D4355 testing. Based on nondegradable components exclusively.
[4]Maximum permissible shear design values based on short-term (0.5 hr) vegetated data obtained by full scale flume testing ASTM D6459, D6460-07. Based on nondegradable components exclusively. Testing will be done at Independent Hydraulics Facility such as Colorado State University hydraulics laboratory, Utah State University hydraulics laboratory, Texas Transportation Institute (TTI) hydraulics and erosion control laboratory.

2.3 Quality Assurance Sampling, Testing, and Acceptance

A) Provide TRM listed on the Department's List of Approved Materials. Prior to inclusion on the LAM, the manufacturer of TRM must meet the physical and performance criteria as outlined in the specification and submit a Letter Certifying compliance of the product under the above ASTM testing procedures and including a copy of report from Full Scale Independent Hydraulics Facility that Fully Vegetated Shear Stress meets shear stress requirements tested under D6459 and D6460-07.

B) Contractors will provide a Letter of Certification from Manufacturer stating the product name, manufacturer, and that the product MARV product unit testing results meets Department criteria. Provide Letters once per project and for each product.

C) Acceptance shall be in accordance with ASTM D-4759 based on testing performed by a Geosynthetic Accreditation Institute – Laboratory Accreditation Program (GAI-LAP) accredited laboratory using Procedure A of ASTM D-4354.

Current mats meeting the above criteria are shown on the Department's List of Approved Materials.

2.4 Fasteners. When the mat manufacturer does not specify a specific fastener, use steel wire U-shaped staples with a minimum diameter of 0.09 inches (11 gauge), a minimum width of one inch and a minimum length of 12 inches. Use a heavier gauge when working in rocky or clay soils and longer lengths in sandy soils as directed by Engineer or Manufacturer's Representative. Provide staples with colored tops when requested by the Engineer.

3.0 CONSTRUCTION. When requested by the Engineer, provide a Manufacturer's Representative on-site to oversee and approve the initial installation of the mat. When requested by the Engineer, provide a letter from the Manufacturer approving the installation. When there is a conflict between the Department's criteria and the Manufacturer's criteria, construct using the more restrictive. The Engineer and Manufacturer's Representative must approve all alternate installation methods prior to execution. Construct according to the Manufacturer's recommendations and the following as minimum installation technique:

3.1 Site Preparation. Grade areas to be treated with matting and compact. Remove large rocks, soil clods, vegetation, roots, and other sharp objects that could keep the mat from intimate contact with subgrade. Prepare seedbed by loosening the top 2 to 3 inch of soil.

3.2 Installation. Install mats according to Standard Drawing Sepias "Turf Mat Channel Installation" and "Turf Mat Slope Installation." Install mats at the specified elevation and alignment. Anchor the mats with staples with a minimum length of 12 inches. Use longer anchors for installations in sandy, loose, or wet soils as directed by the Engineer or Manufacturer's Representative. The mat should be in direct contact with the soil surface.

4.0 MEASUREMENT. The Department will measure the quantity of Turf Reinforcement Mat by the square yard of surface covered. The Department will not measure preparation of the bed, providing a Manufacturer's Representative, topsoil, or seeding for payment and will consider them incidental to the Turf Reinforcement Mat. The Department will not measure any reworking of slopes or channels for payment as it is considered corrective work and incidental to the Turf Reinforcement Mat. Seeding and protection will be an incidental item.

5.0 PAYMENT. The Department will make payment for the completed and accepted quantities under the following:

Code	Pay Item	Pay Unit
23274EN11F	Turf Reinforcement Mat 1	Square Yard
23275EN11F	Turf Reinforcement Mat 2	Square Yard
23276EN11F	Turf Reinforcement Mat 3	Square Yard
23277EN11F	Turf Reinforcement Mat 4	Square Yard

SPECIAL PROVISION FOR EMBANKMENT AT BRIDGE END BENT STRUCTURES

This Special Provision will apply when indicated on the plans or in the proposal. Section references herein are to the Department's 2012 Standard Specifications for Road and Bridge Construction.

1.0 DESCRIPTION. Construct a soil, granular, or rock embankment with granular or cohesive pile core and place structure granular backfill, as the Plans require. Construct the embankment according to the requirements of this Special Provision, the Plans, Standard Drawing RGX 100 and 105, and the 2012 Standard Specifications.

2.0 MATERIALS.

2.1 Granular Embankment. Conform to Subsection 805.10. When Granular Embankment materials are erodible or unstable according to Subsection 805.03.04, use the Special Construction Methods found in 3.2 of the Special Provision.

2.2 Rock Embankment. Provide durable rock from roadway excavation that consists principally of Unweathered Limestone, Durable Shale (SDI equal to or greater than 95 according to KM 64-513), or Durable Sandstone.

2.3 Granular Pile Core. Select a gradation of durable rock to facilitate pile driving that conforms to Subsection 805.11. If granular pile core material hinders pile driving operations, take appropriate means necessary to reach the required pile tip elevation, at no expense to the Department.

2.4 Cohesive Pile Core. Conform to Section 206 of the Standard Specifications and use soil with at least 50 percent passing a No. 4 sieve having a minimum Plasticity Index (PI) of 10. In addition, keep the cohesive pile core free of boulders, larger than 6 inches in any dimension, or any other obstructions, which would interfere with drilling operations. If cohesive pile core material interferes with drilling operations, take appropriate means necessary to maintain excavation stability, at no expense to the Department.

2.5 Structure Granular Backfill. Conform to Subsection 805.11

2.6 Geotextile Fabric. Conform to Type I or Type IV in Section 214 and 843 as required in the plans.

3.0 CONSTRUCTION.

3.1 General. Construct roadway embankments at end bents according to Section 206 and in accordance with the Special Provision, the Plans, and Standard Drawings for the full embankment section. In some instances, granular or rock embankment will be required for embankment construction for stability purposes, but this special provision does not prevent the use of soil when appropriate. Refer to the plans for specific details regarding material requirements for embankment construction.

Place and compact granular or cohesive pile core, soil, granular or rock embankment, and structure granular backfill according to the applicable density requirements for the project. When constructing granular or rock embankments, use granular pile core for driven pile foundations and use cohesive pile core for pre-drilled pile or drilled shaft foundations. Place geotextile fabric, Type IV between cohesive pile core and structure

granular backfill and granular or rock embankment.

When granular or rock embankment is required for embankment construction, conform to the general requirements of Subsection 206.03.02 B). In addition, place the material in no greater than 2-foot lifts and compact with a vibrating smooth wheel roller capable of producing a minimum centrifugal force of 15 tons. Apply these requirements to the full width of the embankment for a distance of half the embankment height or 50 feet, whichever is greater, as shown on Standard Drawing RGX-105.

When using granular pile core, install 8-inch perforated underdrain pipe at or near the elevation of the original ground in the approximate locations depicted on the standard drawing, and as the Engineer directs, to ensure positive drainage of the embankment. Wrap the perforated pipe with a fabric of a type recommended by the pipe manufacturer.

After constructing the embankment, excavate for the end bent cap, drive piling or install shafts, place the mortar bed, construct the end bent, and complete the embankment to finish grade according to the construction sequence shown on the Plans or Standard Drawings and as specified hereinafter.

Certain projects may require widening of existing embankments and the removal of substructures. Construct embankment according to the plans. Substructure removal shall be completed according to the plans and Section 203. Excavation may be required at the existing embankment in order to place the structure granular backfill as shown in the Standard Drawings.

After piles are driven or shafts installed (see design drawings), slope the bottom of the excavation towards the ends of the trench as noted on the plans for drainage. Using a separate pour, place concrete mortar, or any class concrete, to provide a base for forming and placing the cap. Place side forms for the end bent after the mortar has set sufficiently to support workmen and forms without being disturbed.

Install 4-inch perforated pipe in accordance with the plans and Standard Drawings. In the event slope protection extends above the elevation of the perforated pipe, extend the pipe through the slope protection.

After placing the end bent cap and removing adjacent forms, fill the excavation with structure granular backfill material to the level of the berm prior to placing beams for the bridge. For soil embankments, place Type IV geotextile fabric between embankment material and structure granular backfill. After completing the end bent backwall, or after completing the span end wall, place the structure granular backfill to subgrade elevation. If the original excavation is enlarged, fill the entire volume with compacted structure granular backfill at no expense to the Department. Do not place backfill before removing adjacent form work. Place structure granular backfill material in trench ditches at the ends of the excavation. Place Geotextile Fabric, Type IV over the surface of structure granular backfill prior to placing aggregate base course.

Tamp the backfill with hand tampers, pneumatic tampers, or other means the Engineer approves. Thoroughly compact the backfill under the overhanging portions of the structure to ensure that the backfill is in intimate contact with the sides of the structure.

Do not apply seeding, sodding, or other vegetation to the exposed granular embankment.

3.2 Special Construction Methods. Erodible or unstable materials may erode even when protected by riprap or channel lining; use the special construction method described below when using these materials.

Use fine aggregates or friable sandstone granular embankment at “dry land” structures only. Do not use them at stream crossings or locations subject to flood waters.

For erodible or unstable materials having 50 percent or more passing the No. 4 sieve, protect with geotextile fabric. Extend the fabric from the original ground to the top of slope over the entire area of the embankment slopes on each side of, and in front of, the

end bent. Cover the fabric with at least 12 inches of non-erodible material.

For erodible or unstable materials having less than 50 percent passing a No. 4 sieve, cover with at least 12 inches of non-erodible material.

Where erodible or unstable granular embankment will be protected by riprap or channel lining, place geotextile fabric between the embankment and the specified slope protection.

4.0 MEASUREMENT.

4.1 Granular Embankment. The Department will measure the quantity in cubic yards using the plan quantity, increased or decreased by authorized adjustments as specified in Section 204. The Department will not measure for payment any Granular Embankment that is not called for in the plans.

The Department will not measure for payment any special construction caused by using erodible or unstable materials and will consider it incidental to the Granular Embankment regardless of whether the erodible or unstable material was specified or permitted.

4.2 Rock Embankment. The Department will not measure for payment any rock embankment and will consider it incidental to roadway excavation or embankment in place, as applicable. Rock embankments will be constructed using granular embankment on projects where there is no available rock present within the excavation limits of the project.

4.3 Granular Pile Core. The Department will measure the quantity in cubic yards using the plan quantity, increased or decreased by authorized adjustments as specified in Section 204. The Department will not measure for payment furnishing and placing 8-inch perforated underdrain pipe and will consider it incidental to the Granular pile core. The Department will not measure for payment any granular pile core that is necessary because the contractor elects to use granular or rock embankment when it is not specified in the plans.

4.4 Cohesive Pile Core. The Department will measure the quantity in cubic yards using the plan quantity, increased or decreased by authorized adjustments as specified in Section 204.

4.5 Structure Granular Backfill. The Department will measure the quantity in cubic yards using the plan quantity, increased or decreased by authorized adjustments as specified in Section 204. The Department will not measure any additional material required for backfill outside the limits shown on the Plans and Standard Drawings for payment and will consider it incidental to the work.

The Department will not measure structure excavation at the end bent or an existing embankment for payment and will consider it incidental to Structure Granular Backfill.

The Department will not measure for payment the 4-inch perforated underdrain pipe and will consider it incidental to the Structure Granular Backfill.

4.6 Geotextile Fabric. The Department will measure the quantities as specified in Section 214. The Department will not measure the quantity of fabric used for separating granular or rock embankment and cohesive pile core and will consider it incidental to cohesive pile core.

4.7 End Bent. The Department will measure the quantities according to the

Contract. The Department will not measure furnishing and placing the 2-inch mortar or concrete bed for payment and will consider it incidental to the end bent construction.

5.0 PAYMENT. The Department will make payment for the completed and accepted quantities under the following:

Code	Pay Item	Pay Unit
02223	Granular Embankment	Cubic Yards
20209EP69	Granular Pile Core	Cubic Yards
20210EP69	Cohesive Pile Core	Cubic Yards
02231	Structure Granular Backfill	Cubic Yards
02596, 02599	Geotextile Fabric, Type	See Section 214

The Department will consider payment as full compensation for all work required in this provision.

June 15, 2012

PART III

EMPLOYMENT, WAGE AND RECORD REQUIREMENTS

TRANSPORTATION CABINET
DEPARTMENT OF HIGHWAYS

LABOR AND WAGE REQUIREMENTS
APPLICABLE TO OTHER THAN FEDERAL-AID SYSTEM PROJECTS

I. APPLICATION

1. These contract provisions shall apply to all work performed on the contract by the contractor with his own organization and with the assistance of workmen under his immediate superintendence and to all work performed on the contract by piecework, station work or by subcontract. The contractor's organization shall be construed to include only workmen employed and paid directly by the contractor and equipment owned or rented by him, with or without operators.

2. The contractor shall insert in each of his subcontracts all of the stipulations contained in these Required Provisions and such other stipulations as may be required.

3. A breach of any of the stipulations contained in these Required Provisions may be grounds for termination of the contract.

II. NONDISCRIMINATION OF EMPLOYEES

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 (between forty and seventy); 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 (between forty and seventy). 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, disability or age (between forty and seventy), except that such notice or advertisement may indicate a preference, limitation, or specification based on religion, or national origin when religion, or national origin 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 (between forty and seventy), 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 administrating agency may direct as a means of enforcing such provisions, including sanctions for non-compliance.

III. PAYMENT OF PREDETERMINED MINIMUM WAGES

1. These special provisions are supplemented elsewhere in the contract by special provisions which set forth certain predetermined minimum wage rates. The contractor shall pay not less than those rates.

2. The minimum wage determination schedule shall be posted by the contractor, in a manner prescribed by the Department of Highways, at the site of the work in prominent places where it can be easily seen by the workers.

IV. STATEMENTS AND PAYROLLS

1. All contractors and subcontractors affected by the terms of KRS 337.505 to 337.550 shall keep full and accurate payroll records covering all disbursements of wages to their employees to whom they are required to pay not less than the prevailing rate of wages. Payrolls and basic records relating thereto will be maintained during the course of the work and preserved for a period of one (1) year from the date of completion of this contract.

2. The payroll records shall contain the name, address and social security number of each employee, his correct classification, rate of pay, daily and weekly number of hours worked, itemized deductions made and actual wages paid.

3. The contractor shall make his daily records available at the project site for inspection by the State Department of Highways contracting office or his authorized representative.

Periodic investigations shall be conducted as required to assure compliance with the labor provisions of the contract. Interrogation of employees and officials of the contractor shall be permitted during working hours.

Aggrieved workers, Highway Managers, Assistant District Engineers, Resident Engineers and Project Engineers shall report all complaints and violations to the Division of Contract Procurement.

The contractor shall be notified in writing of apparent violations. The contractor may correct the reported violations and notify the Department of Highways of the action taken or may request an informal hearing. The request for hearing shall be in writing within ten (10) days after receipt of the notice of the reported violation. The contractor may submit

records and information which will aid in determining the true facts relating to the reported violations.

Any person or organization aggrieved by the action taken or the findings established as a result of an informal hearing by the Division of Contract Procurement may request a formal hearing.

4. The wages of labor shall be paid in legal tender of the United States, except that this condition will be considered satisfied if payment is made by a negotiable check, on a solvent bank, which may be cashed readily by the employee in the local community for the full amount, without discount or collection charges of any kind. Where checks are used for payments, the contractor shall make all necessary arrangements for them to be cashed and shall give information regarding such arrangements.

5. No fee of any kind shall be asked or accepted by the contractor or any of his agents from any person as a condition of employment on the project.

6. No laborers shall be charged for any tools used in performing their respective duties except for reasonably avoidable loss or damage thereto.

7. Every employee on the work covered by this contract shall be permitted to lodge, board, and trade where and with whom he elects and neither the contractor nor his agents, nor his employees shall directly or indirectly require as a condition of employment that an employee shall lodge, board or trade at a particular place or with a particular person.

8. Every employee on the project covered by this contract shall be an employee of either the prime contractor or an approved subcontractor.

9. No charge shall be made for any transportation furnished by the contractor or his agents to any person employed on the work.

10. No individual shall be employed as a laborer or mechanic on this contract except on a wage basis, but this shall not be construed to prohibit the rental of teams, trucks or other equipment from individuals.

No Covered employee may be employed on the work except in accordance with the classification set forth in the schedule mentioned above; provided, however, that in the event additional classifications are required, application shall be made by the contractor to the Department of Highways and (1) the Department shall request appropriate classifications and rates from the proper agency, or (2) if there is urgent need for additional classification to avoid undue delay in the work, the contractor may employ such workmen at rates deemed comparable to rates established for similar classifications provided he has made written application through the Department of Highways, addressed to the proper agency, for the supplemental rates. The contractor shall retroactively adjust, upon receipt of the supplemental rates schedule, the wages of any employee paid less than the established rate and may adjust the wages of any employee overpaid.

11. 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 laborer or mechanic in any work-week in which he is employed on such work, to work in excess of eight hours in any calendar day or in excess of forty hours in such work-week unless such laborer or mechanic receives compensation at a rate not less than one and one half times his basic rate of pay for all hours worked in excess of eight hours in any calendar day or in excess of forty hours in such work-week. A laborer, workman or mechanic and an employer may enter into a written agreement or a collective bargaining agreement to work more than eight (8) hours a calendar day but not more than ten (10) hours a calendar day for the straight time hourly rate. This agreement shall be in writing and shall be executed prior to the employee working in excess of eight (8) hours, but not more than ten (10) hours, in any one (1) calendar day.

12. Payments to the contractor may be suspended or withheld due to failure of the contractor to pay any laborer or mechanic employed or working on the site of the work, all or part of the wages required under the terms of the contract. The Department may suspend or withhold payments only after the contractor has been given written notice of the alleged violation and the contractor has failed to comply with the wage determination of the Department of Highways.

13. Contractors and subcontractors shall comply with the sections of Kentucky Revised Statutes, Chapter 337 relating to contracts for Public Works.

Revised 2-16-95

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 (6) provides:
>
> No present or former public servant shall, within six (6) months of 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 the state in matters in which he was directly involved during 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, provided that, for a period of six (6) months, he personally refrains from working on any matter in which he was directly involved 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.
>
> KRS 11A.040 (8) states:
>
> A former public servant shall not represent a person in a matter before a state agency in which the former public servant was directly involved, 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, Room 136, Capitol Building, 700 Capitol Avenue, Frankfort, Kentucky 40601; telephone (502) 564-7954.

Kentucky Equal Employment Opportunity Act of 1978

The requirements of the Kentucky Equal Employment Opportunity Act of 1978 (KRS 45.560-45.640) shall apply to this Contract. The apparent low Bidder will be required to submit EEO forms to the Division of Construction Procurement, which will then forward to the Finance and Administration Cabinet for review and approval. No award will become effective until all forms are submitted and EEO/CC has certified compliance. The required EEO forms are as follows:

- EEO-1: Employer Information Report
- Affidavit of Intent to Comply
- Employee Data Sheet
- Subcontractor Report

These forms are available on the Finance and Administration's web page under ***Vendor Information, Standard Attachments and General Terms*** at the following address: **https://www.eProcurement.ky.gov**.

Bidders currently certified as being in compliance by the Finance and Administration Cabinet may submit a copy of their approval letter in lieu of the referenced EEO forms.

For questions or assistance please contact the Finance and Administration Cabinet by email at **finance.contractcompliance@ky.gov** or by phone at 502-564-2874.

KENTUCKY LABOR CABINET
PREVAILING WAGE DETERMINATION
CURRENT REVISION
HIGHWAY CONSTRUCTION LOCALITY NO. II

Determination No. CR-11-II-HWY

Project No.
Highway

Date of Determination: August 4, 2011

This schedule of the prevailing rate of wages for Locality No. II including the counties of ADAIR, BARREN, BELL, BREATHITT, CASEY, CLAY, CLINTON, CUMBERLAND, ESTILL, FLOYD, GARRARD, GREEN, HARLAN, HART, JACKSON, JOHNSON, KNOTT, KNOX, LAUREL, LAWRENCE, LEE, LESLIE, LETCHER, LINCOLN, MCCREARY, MAGOFFIN, MARTIN, MENIFEE, METCALFE, MONROE, MORGAN, OWSLEY, PERRY, PIKE, POWELL, PULASKI, ROCKCASTLE, RUSSELL, TAYLOR, WAYNE, WHITLEY, and WOLFE has been determined in accordance with the provisions of KRS 337.505 to 337.550. This determination shall be referred to as Prevailing Wage Determination No. CR-11-II-HWY.

The following schedule of rates is to be used for highway construction projects advertised or awarded by the Kentucky Transportation Cabinet. This includes any contracts for the relocation of any utilities or other incidental construction projects advertised or awarded by public authorities as a result of the highway construction project.

Apprentices or trainees shall be permitted to work in accordance with Administrative Regulations adopted by the Commissioner of the Department of Workplace Standards. Copies of these regulations will be furnished upon request to any interested person.

Overtime is to be computed at not less than one and one-half (1 1/2) times the indicated BASE RATE for all hours worked in excess of eight (8) hours per day, or in excess of forty (40) hours per week. However, KRS 337.540 permits an employee and employer to agree, in writing, that the employee will be compensated at a straight time base rate for hours worked in excess of eight (8) hours in any one calendar day, but not more than ten (10) hours worked in any one calendar day, if such written agreement is prior to the over eight (8) hours in a calendar day actually being worked, or where provided for in a collective bargaining agreement. The fringe benefit rate is to be paid for each hour worked at a straight time rate for all hours worked. Fringe benefit amounts are applicable for all hours worked except when otherwise noted. Welders will receive rate for craft in which welding is incidental.

No laborer, workman or mechanic shall be paid at a rate less than that of the General Laborer except those classified as bona fide apprentices registered with the Kentucky State Apprenticeship Supervisor unless otherwise specified in this schedule of wage rates.

Michael Donta, Deputy Commissioner
Department of Workplace Standards

CLASSIFICATIONS	RATE AND FRINGE BENEFITS	
BOILERMAKERS:	BASE RATE	$24.65
	FRINGE BENEFIT	12.94
BRICKLAYERS:		
Bricklayers:	BASE RATE	$22.90
	FRINGE BENEFITS	8.50
Stone Mason:	BASE RATE	$21.50
	FRINGE BENEFITS	8.50
CARPENTERS:		
Carpenters:	BASE RATE	$22.40
	FRINGE BENEFITS	8.75
Piledrivers:	BASE RATE	$22.05
	FRINGE BENEFITS	8.75
CEMENT MASONS:	BASE RATE	$21.25
	FRINGE BENEFITS	8.50
ELECTRICIANS:	*BASE RATE	$29.36
	FRINGE BENEFITS	10.55

*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 a direct 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.

LINEMAN:	*BASE RATE	$30.09
	FRINGE BENEFITS	10.94
EQUIPMENT OPERATOR:	*BASE RATE	$26.90
	FRINGE BENEFITS	10.31
GROUNDSMAN:	*BASE RATE	$17.79
	FRINGE BENEFITS	8.51
IRONWORKERS:	BASE RATE	$ 25.77
	FRINGE BENEFITS	18.54

CLASSIFICATIONS	RATE AND FRINGE BENEFITS	
LABORERS:		
General laborer, flagman, steam jenny:	BASE RATE	$20.84
	FRINGE BENEFITS	8.75
Batch truck dumper, deck hand or scow man, hand blade operator:	BASE RATE	$20.84
	FRINGE BENEFITS	8.75
Power driven tool operator of the following: wagon drill, chain saw, sand blaster, concrete chipper, pavement breaker, vibrator, power wheelbarrow, power buggy, sewer pipe layer, bottom men, dry cement handler, concrete rubber, mason tender:	BASE RATE	$21.09
	FRINGE BENEFITS	8.75
Asphalt lute and rakerman, side rail setter:	BASE RATE	$21.14
	FRINGE BENEFITS	8.75
Gunnite nozzle man, gunnite opeator:	BASE RATE	$21.14
	FRINGE BENEFITS	8.75
Tunnel laborer (free air):	BASE RATE	$21.14
	FRINGE BENEFITS	8.75
Tunnel mucker (free air):	BASE RATE	$21.74
	FRINGE BENEFITS	8.75
Tunnel miner, blaster and driller (free air):	BASE RATE	$21.74
	FRINGE BENEFITS	8.75
Caisson worker:	BASE RATE	$21.74
	FRINGE BENEFITS	8.75
Powderman:	BASE RATE	$21.44
	FRINGE BENEFITS	8.75
Drill operator of percussion type drills which are both powered and propelled by an independent air supply:	BASE RATE	$22.64
	FRINGE BENEFITS	8.75

CLASSIFICATIONS | RATE AND FRINGE BENEFITS

OPERATING ENGINEERS:

Group A:
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 points, 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, gradeall, 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:

BASE RATE	$23.80
FRINGE BENEFITS	8.75

Group B:
All air compressors (200 cu. ft. per min. or greater capacity), bituminous mixer, concrete mixer (under 21 cu. ft.), welding machine, form grader, tractor (50 H.P. and over), bull float, finish machine, outboard motor boat, brakeman, mechanic helper, whirly oiler, tractair and road widening trencher, articulating trucks:

BASE RATE	$21.55
FRINGE BENEFITS	8.75

Group B2:
Greaser on grease facilities servicing heavy equipment:

BASE RATE	$21.90
FRINGE BENEFITS	8.75

Group C:
Bituminous distributor, cement gun, conveyor, mud jack, paving joint machine, pump, tamping machine, tractors (under 50 H.P.), vibrator, oiler, air compressors (under 200 cu. ft. per min. capacity), concrete saw, burlap and curing machine, hydro seeder, power form handling equipment, deckhand oiler, hydraulic post driver:

BASE RATE	$21.31
FRINGE BENEFITS	8.75

PAINTERS:

All Excluding Bridges:

BASE RATE	$19.92
FRINGE BENEFITS	9.57

Bridges:

BASE RATE	$23.92
FRINGE BENEFITS	10.07

CLASSIFICATIONS	RATE AND FRINGE BENEFITS	
PLUMBERS:	BASE RATE	$22.52
	FRINGE BENEFITS	7.80
SHEET METAL:	BASE RATE	$20.40
	FRINGE BENEFITS	7.80
TRUCK DRIVERS:		
Truck helper and warehouseman:	BASE RATE	$21.10
	FRINGE BENEFITS	8.75
Driver, winch truck and A-Frame when used in transporting materials:	BASE RATE	$21.46
	FRINGE BENEFITS	8.75
Driver, (semi-trailer or pole trailer), driver (dump truck, tandem axle), driver of distributor:	BASE RATE	$21.45
	FRINGE BENEFITS	8.75
Driver on mixer trucks (all types):	BASE RATE	$21.45
	FRINGE BENEFITS	8.75
Truck mechanic:	BASE RATE	$21.38
	FRINGE BENEFITS	8.75
Driver (3 tons and under), tire changer and truck mechanic helper:	BASE RATE	$21.15
	FRINGE BENEFITS	8.75
Driver on pavement breakers:	BASE RATE	$21.46
	FRINGE BENEFITS	8.75
Driver (over 3 tons), driver (truck mounted rotary drill):	BASE RATE	$21.45
	FRINGE BENEFITS	8.75
Driver, Euclid and other heavy earth moving equipment and Low Boy:	BASE RATE	$21.46
	FRINGE BENEFITS	8.75
Greaser on greasing facilities:	BASE RATE	$21.15
	FRINGE BENEFITS	8.75

ERRATUM

Refer to the Locality Number and Determination Number listed below published by the Kentucky Labor Cabinet, Division of Employment Standards, Apprenticeship and Mediation dated August 4, 2011.

Locality: Highway Construction Locality No. II, including the following counties: Adair, Barren, Breathitt, Casey, Clay, Clinton, Cumberland, Estill, Floyd, Garrard, Green, Harlan, Hart, Jackson, Johnson, Knott, Knox, Laurel, Lawrence, Lee, Leslie, Letcher, Lincoln, McCreary, Magoffin, Martin, Menifee, Metcalfe, Monroe, Morgan, Owsley, Perry, Pike, Powell, Pulaski, Rockcastle, Russell, Taylor, Wayne, Whitley and Wolfe.

Determination Number: CR-II-II-HWY

DELETE:

Ironworkers	BASE RATE	$25.77
	FRINGE BENEFIT	18.54

INSERT:

Ironworker (Structural)	BASE RATE	$22.50
	FRINGE BENEFIT	8.75
Ironworker (Reinforcing)	BASE RATE	$22.30
	FRINGE BENEFIT	8.75

Michael L. Dixon, Commissioner
Department of Workplace Standards
Kentucky Labor Cabinet
Frankfort, KY 40601

This 8th day of November, 2011.

ERRATUM

Refer to the Locality Number and Determination Number listed below published by the Kentucky Labor Cabinet, Division of Employment Standards, Apprenticeship and Mediation dated August 4, 2011.

Locality: Highway Construction Locality No. II, including the following counties: Adair, Barren, Breathitt, Casey, Clay, Clinton, Cumberland, Estill, Floyd, Garrard, Green, Harlan, Hart, Jackson, Johnson, Knott, Knox, Laurel, Lawrence, Lee, Leslie, Letcher, Lincoln, McCreary, Magoffin, Martin, Menifee, Metcalfe, Monroe, Morgan, Owsley, Perry, Pike, Powell, Pulaski, Rockcastle, Russell, Taylor, Wayne, Whitley and Wolfe.

Determination Number: CR-II-II-HWY

DELETE:

Ironworker (Structural)	BASE RATE	$22.50
	FRINGE BENEFIT	8.75
Ironworker (Reinforcing)	BASE RATE	$22.30
	FRINGE BENEFIT	8.75

INSERT:

Ironworkers	BASE RATE	$25.77
	FRINGE BENEFIT	18.54

Michael L. Dixon, Commissioner
Department of Workplace Standards
Kentucky Labor Cabinet
Frankfort, KY 40601

This 4TH day of May, 2012.

Kentucky Determination No. CR-11-II-HWY dated August 04, 2011

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 the General Laborer except those classified as bona fide apprentices registered with the Kentucky State Apprenticeship Supervisor unless otherwise specified in this schedule of wage rates.

These rates are listed pursuant to the KentuckyDetermination No. CR-11-II HWY dated August 04, 2011, erratum dated November 8, 2011, and erratum dated May 4, 2012. 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.

Kentucky Determination No. CR-11-II-HWY dated August 04, 2011

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 after an employee works eight (8) hours a day or forty (40) hours a week, whichever gives the employee the greater wages. At least time and one-half the base rate is required for all overtime. A laborer, workman or mechanic and an employer may enter into a written agreement or a collective bargaining agreement to work more than eight (8) hours a calendar day but not more than ten (10) hours a calendar day for the straight time hourly rate. Wage violations or questions should be directed to the designated Engineer or to the undersigned.

Ryan Griffith, Director
Division of Construction Procurement
Frankfort, Kentucky 40622

PART IV

INSURANCE

INSURANCE

The Contractor shall procure and maintain the following insurance in addition to the insurance required by law:

1) Commercial General Liability-Occurrence form – not less than $2,000,000 General aggregate, $2,000,000 Products & Completed Aggregate, $1,000,000 Personal & Advertising, $1,000,000 each occurrence.

2) Automobile Liability- $1,000,000 per accident

3) Employers Liability:

   a) $100,000 Each Accident Bodily Injury
   b) $500,000 Policy limit Bodily Injury by Disease
   c) $100,000 Each Employee Bodily Injury by Disease

4) The insurance required above must be evidenced by a Certificate of Insurance and this Certificate of Insurance must contain one of the following statements:
   a) "policy contains no deductible clauses."
   b) "policy contains _____ (amount) deductible property damage clause but company will pay claim and collect the deductible from the insured."

5) KENTUCKY WORKMEN'S COMPENSATION INSURANCE. The contractor shall furnish evidence of coverage of all his employees or give evidence of self-insurance by submitting a copy of a certificate issued by the Workmen's Compensation Board.

The cost of insurance is incidental to all contract items. All subcontractors must meet the same minimum insurance requirements.

PART V

BID ITEMS

KENTUCKY TRANSPORTATION CABINET
DEPARTMENT OF HIGHWAYS
FRANKFORT, KY 40622

CONTRACT ID: 121018 PAGE: 1
COUNTY: MENIFEE LETTING: 06/15/12
PROPOSAL: JL04 083 0460 010-014 CALL NO: 310

LINE NO	ITEM	DESCRIPTION	APPROXIMATE UNIT QUANTITY	UNIT PRICE	AMOUNT
ALT GROUPIAA10001		PAVING-ASPHALT			
0010	00003	CRUSHED STONE BASE	63,703.000 TON		
0020	00013	LIME STABILIZED ROADBED	85,461.000 SQYD		
0030	00014	LIME	1,539.000 TON		
0040	00020	TRAFFIC BOUND BASE	838.000 TON		
0050	00069	CRUSHED AGGREGATE SIZE NO 3	500.000 TON		
0060	00078	CRUSHED AGGREGATE SIZE NO 2	319.000 TON		
0070	00100	ASPHALT SEAL AGGREGATE	657.000 TON		
0080	00212	CL2 ASPH BASE 1.00D PG64-22	34,361.000 TON		
0090	00221	CL2 ASPH BASE 0.75D PG64-22	342.000 TON		
0100	00291	EMULSIFIED ASPHALT RS-2	79.000 TON		
0110	00301	CL2 ASPH SURF 0.38D PG64-22	7,811.000 TON		
0120	00358	ASPHALT CURING SEAL	85.500 TON		
0130	02091	REMOVE PAVEMENT	4,903.000 SQYD		
0140	02099	CEM CONC ENT PAVEMENT-6 IN	68.000 SQYD		
0150	02230	EMBANKMENT IN PLACE	1,298,931.000 CUYD		
0160	02585	EDGE KEY	287.000 LF		
0170	02696	SHOULDER RUMBLE STRIPS-SAWED	30,500.000 LF		
0180	02702	SAND FOR BLOTTER	214.000 TON		
0190	10203ND	PAVEMENT ADJUSTMENT ASPHALT	(1.00) LS	386,405.00	386,405.00
0200	20458ES403	CENTERLINE RUMBLE STRIPS	15,250.000 LF		
ALT GROUPIAA20002		PAVING-CONC. WITH ASPH SHOULDER			

KENTUCKY TRANSPORTATION CABINET
DEPARTMENT OF HIGHWAYS
FRANKFORT, KY 40622

CONTRACT ID: 121018 PAGE: 2
COUNTY: MENIFEE LETTING: 06/15/12
PROPOSAL: JL04 083 0460 010-014 CALL NO: 310

LINE NO	ITEM	DESCRIPTION	APPROXIMATE UNIT QUANTITY	UNIT PRICE	AMOUNT
0210	00003	CRUSHED STONE BASE	61,726.000 TON		
0220	00013	LIME STABILIZED ROADBED	85,461.000 SQYD		
0230	00014	LIME	1,539.000 TON		
0240	00020	TRAFFIC BOUND BASE	838.000 TON		
0250	00069	CRUSHED AGGREGATE SIZE NO 3	500.000 TON		
0260	00078	CRUSHED AGGREGATE SIZE NO 2	319.000 TON		
0270	00100	ASPHALT SEAL AGGREGATE	657.000 TON		
0280	00212	CL2 ASPH BASE 1.00D PG64-22	14,053.000 TON		
0290	00221	CL2 ASPH BASE 0.75D PG64-22	342.000 TON		
0300	00291	EMULSIFIED ASPHALT RS-2	79.000 TON		
0310	00301	CL2 ASPH SURF 0.38D PG64-22	4,791.000 TON		
0320	00358	ASPHALT CURING SEAL	85.500 TON		
0330	02084	JPC PAVEMENT-8 IN	43,931.000 SQYD		
0340	02091	REMOVE PAVEMENT	4,903.000 SQYD		
0350	02099	CEM CONC ENT PAVEMENT-6 IN	68.000 SQYD		
0360	02230	EMBANKMENT IN PLACE	1,298,931.000 CUYD		
0370	02585	EDGE KEY	287.000 LF		
0380	02696	SHOULDER RUMBLE STRIPS-SAWED	30,500.000 LF		
0390	02702	SAND FOR BLOTTER	214.000 TON		
0400	10203ND	PAVEMENT ADJUSTMENT CONC WITH ASPH SHLD	(1.00) LS	169,920.00	169,920.00
0410	20458ES403	CENTERLINE RUMBLE STRIPS	15,250.000 LF		

ALT GROUPIAA30003 PAVING-CONC. WITH CONC. SHOULDER

KENTUCKY TRANSPORTATION CABINET
DEPARTMENT OF HIGHWAYS
FRANKFORT, KY 40622

CONTRACT ID: 121018 PAGE: 3
COUNTY: MENIFEE LETTING: 06/15/12
PROPOSAL: JL04 083 0460 010-014 CALL NO: 310

LINE NO	ITEM	DESCRIPTION	APPROXIMATE UNIT QUANTITY	UNIT PRICE	AMOUNT
0420	00003	CRUSHED STONE BASE	60,243.000 TON		
0430	00013	LIME STABILIZED ROADBED	85,461.000 SQYD		
0440	00014	LIME	1,539.000 TON		
0450	00020	TRAFFIC BOUND BASE	838.000 TON		
0460	00069	CRUSHED AGGREGATE SIZE NO 3	500.000 TON		
0470	00078	CRUSHED AGGREGATE SIZE NO 2	319.000 TON		
0480	00100	ASPHALT SEAL AGGREGATE	657.000 TON		
0490	00212	CL2 ASPH BASE 1.00D PG64-22	4,990.000 TON		
0500	00221	CL2 ASPH BASE 0.75D PG64-22	342.000 TON		
0510	00291	EMULSIFIED ASPHALT RS-2	79.000 TON		
0520	00301	CL2 ASPH SURF 0.38D PG64-22	1,959.000 TON		
0530	00358	ASPHALT CURING SEAL	85.500 TON		
0540	02084	JPC PAVEMENT-8 IN	43,931.000 SQYD		
0550	02091	REMOVE PAVEMENT	4,903.000 SQYD		
0560	02099	CEM CONC ENT PAVEMENT-6 IN	68.000 SQYD		
0570	02230	EMBANKMENT IN PLACE	1,298,931.000 CUYD		
0580	02585	EDGE KEY	287.000 LF		
0590	02696	SHOULDER RUMBLE STRIPS-SAWED	30,500.000 LF		
0600	02702	SAND FOR BLOTTER	214.000 TON		
0610	10203ND	PAVEMENT ADJUSTMENT CONC WITH CONC SHLD	(1.00) LS	169,920.00	169,920.00
0620	20458ES403	CENTERLINE RUMBLE STRIPS	15,250.000 LF		

KENTUCKY TRANSPORTATION CABINET
DEPARTMENT OF HIGHWAYS
FRANKFORT, KY 40622

CONTRACT ID: 121018 PAGE: 4
COUNTY: MENIFEE LETTING: 06/15/12
PROPOSAL: JL04 083 0460 010-014 CALL NO: 310

LINE NO	ITEM	DESCRIPTION	APPROXIMATE UNIT QUANTITY	UNIT PRICE	AMOUNT
0630	23950EC	RCC SHOULDER-6 IN	41,195.000 SQYD		
	SECTION 0004	ROADWAY			
0640	00440	ENTRANCE PIPE-15 IN	84.000 LF		
0650	00441	ENTRANCE PIPE-18 IN	1,110.000 LF		
0660	00443	ENTRANCE PIPE-24 IN	202.000 LF		
0670	00464	CULVERT PIPE-24 IN	1,106.000 LF		
0680	00468	CULVERT PIPE-36 IN	2,372.000 LF		
0690	00470	CULVERT PIPE-48 IN	58.000 LF		
0700	00472	CULVERT PIPE-60 IN	104.000 LF		
0710	01000	PERFORATED PIPE-4 IN	5,800.000 LF		
0720	01010	NON-PERFORATED PIPE-4 IN	2,100.000 LF		
0730	01020	PERF PIPE HEADWALL TY 1-4 IN	1.000 EACH		
0740	01024	PERF PIPE HEADWALL TY 2-4 IN	5.000 EACH		
0750	01028	PERF PIPE HEADWALL TY 3-4 IN	6.000 EACH		
0760	01032	PERF PIPE HEADWALL TY 4-4 IN	7.000 EACH		
0770	01390	METAL END SECTION TY 3-15 IN	4.000 EACH		
0780	01391	METAL END SECTION TY 3-18 IN	46.000 EACH		
0790	01393	METAL END SECTION TY 3-24 IN	4.000 EACH		
0800	01395	METAL END SECTION TY 3-36 IN	2.000 EACH		
0810	01397	METAL END SECTION TY 3-48 IN	2.000 EACH		
0820	01451	S & F BOX INLET-OUTLET-24 IN	5.000 EACH		

KENTUCKY TRANSPORTATION CABINET
DEPARTMENT OF HIGHWAYS
FRANKFORT, KY 40622

CONTRACT ID: 121018 PAGE: 5
COUNTY: MENIFEE LETTING: 06/15/12
PROPOSAL: JL04 083 0460 010-014 CALL NO: 310

LINE NO	ITEM	DESCRIPTION	APPROXIMATE UNIT QUANTITY	UNIT PRICE	AMOUNT
0830	01453	S & F BOX INLET-OUTLET-36 IN	9.000 EACH		
0840	01691	FLUME INLET TYPE 2	1.000 EACH		
0850	01825	ISLAND CURB AND GUTTER	45.000 LF		
0860	01891	ISLAND HEADER CURB TYPE 2	25.000 LF		
0870	01982	DELINEATOR FOR GUARDRAIL MONO DIRECTIONA	WHITE157.000 EACH		
0880	02014	BARRICADE-TYPE III	6.000 EACH		
0890	02159	TEMP DITCH	15,260.000 LF		
0900	02223	GRANULAR EMBANKMENT	14,000.000 CUYD		
0910	02235	BACKFILLING UNDERCUT	2,000.000 CUYD		
0920	02242	WATER	4,500.000 MGAL		
0930	02273	FENCE-4 FT CHAIN LINK	106.000 LF		
0940	02360	GUARDRAIL TERMINAL SECTION NO 1	21.000 EACH		
0950	02363	GUARDRAIL CONNECTOR TO BRIDGE END TY A	4.000 EACH		
0960	02367	GUARDRAIL END TREATMENT TYPE 1	34.000 EACH		
0970	02381	REMOVE GUARDRAIL	1,350.000 LF		
0980	02397	TEMP GUARDRAIL	1,675.000 LF		
0990	02429	RIGHT-OF-WAY MONUMENT TYPE 1	272.000 EACH		
1000	02430	RIGHT-OF-WAY MONUMENT TYPE 1A	2.000 EACH		
1010	02432	WITNESS POST	3.000 EACH		
1020	02483	CHANNEL LINING CLASS II	4,831.000 TON		
1030	02484	CHANNEL LINING CLASS III	3,207.000 TON		

KENTUCKY TRANSPORTATION CABINET
DEPARTMENT OF HIGHWAYS
FRANKFORT, KY 40622

CONTRACT ID: 121018 PAGE: 6
COUNTY: MENIFEE LETTING: 06/15/12
PROPOSAL: JL04 083 0460 010-014 CALL NO: 310

LINE NO	ITEM	DESCRIPTION	APPROXIMATE QUANTITY	UNIT	UNIT PRICE	AMOUNT
1040	02545	CLEARING AND GRUBBING 140 ACRES	(1.00)	LS		
1050	02562	SIGNS	2,920.000	SQFT		
1060	02598	FABRIC-GEOTEXTILE TYPE III	13,900.000	SQYD		
1070	02599	FABRIC-GEOTEXTILE TYPE IV	17,300.000	SQYD		
1080	02600	FABRIC GEOTEXTILE TY IV FOR PIPE	14,911.000	SQYD		
1090	02650	MAINTAIN & CONTROL TRAFFIC	(1.00)	LS		
1100	02653	LANE CLOSURE	1.000	EACH		
1110	02671	PORTABLE CHANGEABLE MESSAGE SIGN	2.000	EACH		
1120	02676	MOBILIZATION FOR MILL & TEXT	(1.00)	LS		
1130	02677	ASPHALT PAVE MILLING & TEXTURING	123.000	TON		
1140	02701	TEMP SILT FENCE	15,260.000	LF		
1150	02703	SILT TRAP TYPE A	140.000	EACH		
1160	02704	SILT TRAP TYPE B	140.000	EACH		
1170	02705	SILT TRAP TYPE C	140.000	EACH		
1180	02706	CLEAN SILT TRAP TYPE A	420.000	EACH		
1190	02707	CLEAN SILT TRAP TYPE B	420.000	EACH		
1200	02708	CLEAN SILT TRAP TYPE C	420.000	EACH		
1210	02709	CLEAN TEMP SILT FENCE	15,260.000	LF		
1220	02726	STAKING	(1.00)	LS		
1230	05950	EROSION CONTROL BLANKET	33,529.000	SQYD		
1240	05952	TEMP MULCH	346,850.000	SQYD		

KENTUCKY TRANSPORTATION CABINET
DEPARTMENT OF HIGHWAYS
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CONTRACT ID: 121018 PAGE: 7
COUNTY: MENIFEE LETTING: 06/15/12
PROPOSAL: JL04 083 0460 010-014 CALL NO: 310

LINE NO	ITEM	DESCRIPTION	APPROXIMATE UNIT QUANTITY	UNIT PRICE	AMOUNT
1250	05953	TEMP SEEDING AND PROTECTION	346,850.000 SQYD		
1260	05966	TOPDRESSING FERTILIZER	18.000 TON		
1270	05985	SEEDING AND PROTECTION	346,850.000 SQYD		
1280	06510	PAVE STRIPING-TEMP PAINT-4 IN	43,000.000 LF		
1290	06514	PAVE STRIPING-PERM PAINT-4 IN	85,000.000 LF		
1300	06568	PAVE MARKING-THERMO STOP BAR-24IN	264.000 LF		
1310	06578	PAVE MARKING-THERMO MERGE ARROW	3.000 EACH		
1320	08100	CONCRETE-CLASS A	58.000 CUYD		
1330	08150	STEEL REINFORCEMENT	3,816.000 LB		
1340	10030NS	ASPHALT ADJUSTMENT	102,422.000 DOLL	1.00	102,422.00
1350	20000ES724	TREE EASTERN HEMLOCK	15.000 EACH		
1360	20209EP69	GRANULAR PILE CORE	1,721.000 CUYD		
1370	21057ND	LIVE STAKES	2,253.000 EACH		
1380	21257ED	ENTRANCE PIPE-48 IN	75.000 LF		
1390	21802EN	G/R STEEL W BEAM-S FACE (7 FT POST)	15,662.500 LF		
1400	22581EN	ENTRANCE PIPE-36 IN	154.000 LF		
1410	23131ER701	PIPELINE VIDEO INSPECTION	1,820.000 LF		
1420	23274EN11F	TURF REINFORCEMENT MAT 1	6,698.000 SQYD		
1430	23542EC	ENHANCED SILT TRAP	4.000 EACH		
1440	23545EC	CLEAN ENHANCED SILT TRAP	12.000 EACH		

SECTION 0005 BRIDGE-CULVERT

KENTUCKY TRANSPORTATION CABINET
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CONTRACT ID: 121018 PAGE: 8
COUNTY: MENIFEE LETTING: 06/15/12
PROPOSAL: JL04 083 0460 010-014 CALL NO: 310

LINE NO	ITEM	DESCRIPTION	APPROXIMATE UNIT QUANTITY	UNIT PRICE	AMOUNT
1450	02231	STRUCTURE GRANULAR BACKFILL	574.000 CUYD		
1460	02555	CONCRETE-CLASS B	23.400 CUYD		
1470	02998	MASONRY COATING	905.000 SQYD		
1480	03299	ARMORED EDGE FOR CONCRETE	117.300 LF		
1490	08001	STRUCTURE EXCAVATION-COMMON	318.000 CUYD		
1500	08002	STRUCTURE EXCAV-SOLID ROCK	157.000 CUYD		
1510	08003	FOUNDATION PREPARATION 26586	(1.00) LS		
1520	08003	FOUNDATION PREPARATION 26791	(1.00) LS		
1530	08019	CYCLOPEAN STONE RIP RAP	500.000 TON		
1540	08033	TEST PILES	77.000 LF		
1550	08046	PILES-STEEL HP12X53	658.000 LF		
1560	08094	PILE POINTS-12 IN	22.000 EACH		
1570	08100	CONCRETE-CLASS A	1,096.700 CUYD		
1580	08104	CONCRETE-CLASS AA	536.300 CUYD		
1590	08150	STEEL REINFORCEMENT	169,588.000 LB		
1600	08151	STEEL REINFORCEMENT-EPOXY COATED	131,839.000 LB		
1610	08634	PRECAST PC I BEAM TYPE 4	2,095.300 LF		
1620	21532ED	RAIL SYSTEM TYPE III	607.400 LF		
	SECTION 0006	WATERLIN			
1630	00068	AGGREGATE FOR ENTRANCES	100.000 TON		
1640	01063	STEEL ENCASEMENT PIPE-6 IN OPEN CUT	90.000 LF		

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CONTRACT ID: 121018 PAGE: 9
COUNTY: MENIFEE LETTING: 06/15/12
PROPOSAL: JL04 083 0460 010-014 CALL NO: 310

LINE NO	ITEM	DESCRIPTION	APPROXIMATE UNIT QUANTITY	UNIT PRICE	AMOUNT
1650	01063	STEEL ENCASEMENT PIPE-6 IN ROAD BORE	386.000 LF		
1660	01069	STEEL ENCASEMENT PIPE-12 IN OPEN CUT	285.000 LF		
1670	01071	STEEL ENCASEMENT PIPE-14 IN OPEN CUT	226.000 LF		
1680	01071	STEEL ENCASEMENT PIPE-14 IN ROAD BORE	125.000 LF		
1690	01076	STEEL ENCASEMENT PIPE-20 IN	140.000 LF		
1700	01095	DUCTILE IRON PIPE-8 IN	1,396.000 LF		
1710	01101	DUCTILE IRON PIPE-14 IN	1,243.000 LF		
1720	03381	PVC PIPE-2 IN	808.000 LF		
1730	03382	PVC PIPE-3 IN	728.000 LF		
1740	03385	PVC PIPE-6 IN	3,480.000 LF		
1750	03387	PVC PIPE-8 IN	3,850.000 LF		
1760	03392	PVC PIPE-14 IN	618.000 LF		
1770	03430	INSTALL WATER METER	10.000 EACH		
1780	03439	FLUSH HYDRANT 6 IN	2.000 EACH		
1790	03463	TIE-IN 2 IN	5.000 EACH		
1800	03466	TIE-IN 6 IN	6.000 EACH		
1810	03468	TIE-IN 8 IN	8.000 EACH		
1820	03495	AIR RELEASE VALVE	1.000 EACH		
1830	03522	GATE VALVE-2 IN	5.000 EACH		
1840	03523	GATE VALVE-3 IN	3.000 EACH		
1850	03526	GATE VALVE-6 IN	5.000 EACH		

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CONTRACT ID: 121018 PAGE: 10
COUNTY: MENIFEE LETTING: 06/15/12
PROPOSAL: JL04 083 0460 010-014 CALL NO: 310

LINE NO	ITEM	DESCRIPTION	APPROXIMATE UNIT QUANTITY	UNIT PRICE	AMOUNT
1860	03528	GATE VALVE-8 IN	8.000 EACH		
1870	03529	GATE VALVE-14 IN	6.000 EACH		
1880	21233ED	ASPHALT PAVING REPLACEMENT	150.000 LF		
1890	22440NN	TIE-IN-3 IN	2.000 EACH		
1900	24052EC	CONNECT TO 14 IN	6.000 EACH		
	SECTION 0007	DEMOB AND MOB			
1910	02568	MOBILIZATION (NO MORE THAN 5%)	LUMP		
1920	02569	DEMOBILIZATION (AT LEAST 1.5%)	LUMP		
		TOTAL BID			