CALL NO. 419

CONTRACT ID. 162201

LETCHER COUNTY

FED/STATE PROJECT NUMBER 067GR16P067-FD51 PW 241

DESCRIPTION KY 1148, KY 2034, AND KY 3402

WORK TYPE FLOOD REPAIR FOR FEMA

PRIMARY COMPLETION DATE 7/31/2017

LETTING DATE: July 29,2016

Sealed Bids will be received electronically through the Bid Express bidding service until 10:00 AM EASTERN DAYLIGHT TIME July 29,2016. Bids will be publicly announced at 10:00 AM EASTERN DAYLIGHT TIME.

NO PLANS ASSOCIATED WITH THIS PROJECT.

DEFERRED PAYMENT

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

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PART I

SCOPE OF WORK

ADMINISTRATIVE DISTRICT - 12

CONTRACT ID - 162201

067GR16P067-FD51 PW 241

COUNTY - LETCHER

PCN - MP06711481601
FD51 067 1148 000-003

LITTLE COLLEY ROAD (KY1148) (MP 0.330) FROM 385 FEET EAST OF LADD DRIVE EXTENDING EAST TO 417 FEET WEST OF HANNA DRIVE (MP 2.315), A DISTANCE OF 01.99 MILES.FLOOD REPAIR FOR FEMA

GEOGRAPHIC COORDINATES LATITUDE 37:10:55.00 LONGITUDE 82:51:03.00

PCN - MP06720341601
FD51 067 2034 004-005

CRAFTS COLLEY ROAD (KY 2034) (MP 4.090) FROM 635 FEET NORTH OF WEST WIND LANE EXTENDING NORTH TO 216 FEET SOUTH OF RATTLESNAKE ROAD (MP 4.320), A DISTANCE OF 0.23 MILES.FLOOD REPAIR FOR FEMA

GEOGRAPHIC COORDINATES LATITUDE 37:09:45.00 LONGITUDE 82:48:11.00

PCN - MP06734021601
FD51 067 3402 000-003

LITTLE DRYFORK ROAD (KY 3402) (MP 0.850) FROM 180 FEET SOUTH OF CHARITY DRIVE EXTENDING NORTH TO 285 FEET SOUTH OF NETWORK ROAD (MP 2.003), A DISTANCE OF 01.15 MILES.FLOOD REPAIR FOR FEMA

GEOGRAPHIC COORDINATES LATITUDE 37:09:12.00 LONGITUDE 82:50:28.00

COMPLETION DATE(S):

COMPLETED BY 07/31/2017	SPECIFIED COMPLETION DATE - ALL ITEMS IN 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/construction-procurement)

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

SPECIAL NOTE FOR COMPOSITE OFFSET BLOCKS

Contrary to the Standard Drawings (2016 edition) the Cabinet will allow 6" composite offset blocks in lieu of wooden offset blocks, except as specified on proprietary end treatments and crash cushions. The composite blocks shall be selected from the Cabinet's List of Approved Materials.

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.

HARDWOOD REMOVAL RESTRICTIONS

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

INSTRUCTIONS FOR EXCESS MATERIAL SITES AND BORROW SITES

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

ACCESS TO RECORDS

The contractor, as defined in KRS 45A.030 (9) agrees that the contracting agency, the Finance and Administration Cabinet, the Auditor of Public Accounts, and the Legislative Research Commission, or their duly authorized representatives, shall have access to any books, documents, papers, records, or other evidence, which are directly pertinent to this contract for the purpose of financial audit or program review. Records and other prequalification information confidentially disclosed as part of the bid process shall not be deemed as directly pertinent to the contract and shall be exempt from disclosure as provided in KRS 61.878(1)(c). The contractor also recognizes that any books, documents, papers, records, or other evidence, received during a financial audit or program review shall be subject to the Kentucky Open Records Act, KRS 61.870 to 61.884.

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

06/01/16

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.

DEFERRED PAYMENT: The contractor shall have the distinct understanding that payment for any Work Performed Estimates may be delayed until November 30, 2016.

DGA BASE

Unless otherwise noted, the Department estimates the rate of application for DGA Base to be 115 lbs/sy per inch of depth.

DGA BASE FOR SHOULDERS

Unless otherwise noted, the Department estimates the rate of application for DGA Base for Shoulders to be 115 lbs/sy per inch of depth. The Department will not measure necessary grading and/or shaping of existing shoulders prior to placing of DGA Base, but shall be incidental to the Contract unit price per ton for DGA Base.

Accept payment at the Contract unit price per ton as full compensation for all labor, materials, equipment, and incidentals for grading and/or shaping of existing shoulders and furnishing, placing, and compacting the DGA Base.

SPECIAL NOTES FOR SLIDE REPAIR
FD51 067 1148 000-003
FD51 067 2034 004-005
FD51 067 3402 000-003

I. DESCRIPTION

Except as specified herein, perform all work in accordance with the Department's 2012 Standard and Supplemental Specifications, Special Provisions and Special Notes, and Standard and Sepia Drawings, current editions. Article references are to the Standard Specifications. Furnish all equipment, labor, materials, and incidentals for the following work:

(1) Maintain and Control Traffic; (2) Site Preparation; (3) Erosion Control; (4) Drilled railroad rail piling with cribbing; (5) Excavation and Backfill; (6) Guardrail; (7) Pavement and shoulder restoration; and (8) All other work specified as part of this contract.

II. MATERIALS

Provide for materials to be sampled and tested in accordance with the Department's Sampling Manual. Unless otherwise specified herein, make materials available for sampling a sufficient time in advance of the use of the materials to allow for the necessary time for testing.

A. Maintain and Control Traffic. See Traffic Control Plan.

B. Railroad Rails. Use new or used railroad rail with a nominal weight of 130 pounds per yard or greater. See Typical Identification of Railroad Rail Sizes Classification Stamp. If the manufacturer's classification stamp is unidentifiable, provide certification for nominal weight. Furnish only visibly straight and structurally sound rails with no splices. Obtain the Engineer's approval of the rails prior to use.

C. Cribbing. The Department will furnish used steel "W" beam guardrail for cribbing. The Department will make the cribbing available to the Contractor at the Department's Letcher County maintenance facility. Determine requirements, schedule pickup with the Engineer, provide labor and equipment to load the materials on the Contractor's vehicles, and deliver the cribbing materials to the project work sites.

D. Backfill. For backfill around the railroad rails in the drilled sockets, use concrete, free flowing sand, pea gravel, or crushed limestone or crushed sandstone with 100% passing a one-half (½) inch sieve. Do not use auger tailings. The Engineer will use

visual inspection and/or material testing as applicable to determine acceptability. For interior backfill behind cribbing, use Crushed Limestone Aggregate Size No. 2 or Size No. 23 meeting the requirements of Section 805. Do not use excavated spoil from the existing roadway. The Engineer will use visual inspection and/or material testing as applicable to determine acceptability.

E. Geotextile Fabric. For interior backfill wrap behind cribbing, furnish Type IV Geotextile Fabric.

F. Erosion Control. See Special Note for Erosion Control.

G. Guardrail. See Special Notes for Guardrail.

H. Shoulders. Use Dense Graded Aggregate Base (DGA) according to Section 302.02, do not use Crushed Stone Base (CSB) in lieu of DGA.

III. CONSTRUCTION METHODS

A. Maintain and Control Traffic. See Traffic Control Plan.

B. Erosion Control. See Special Note for Erosion Control.

C. Site Preparation. Be responsible for all Site Preparation, including but not limited to, clearing and grubbing, trenching, roadway and special excavation (except for excavation behind cribbed railroad rails for the crushed limestone backfill), structure excavation, embankment and embankment in place, sweeping and/or otherwise removing debris from pavement and shoulders, removal of obstructions or any other items; disposal of materials; and final dressing and restoration. Clear and grub the minimum areas required to perform the other items of work; the Department has not determined the acreage of clearing and grubbing and the bidder must draw his own conclusions. Provide positive drainage of pavement, slopes, and ditches at all times during and upon completion of construction. Perform all site preparation only as approved or directed by the Engineer. Dispose of excess excavation, waste, and debris off the right-of-way at sites obtained by the Contractor at no additional cost to the Department. See Special Note for waste and Borrow.

D. Railroad Rails (Drilled). Consider the extents and depths on the summary break sheets to be approximate only; the Engineer will determine exact locations at the time of construction. If necessary, excavate a trench behind the proposed location of drilled railroad rails as directed by the Engineer to provide a platform for drilling operations. Install railroad rail in drilled sockets in rock or stable material under the landslides (see Figure 1) or the eroded areas (see Figure 2) at the specified locations.

Contrary to Figure 3 and Table I, unless directed otherwise by the Engineer drill rail sockets parallel to the centerline of the roadway in a single row spaced three (3) feet on centers. The Department will not allow a change in the scope of work or increase in quantities without prior written approval from the District 12 Project and Delivery and Preservation Branch Manager

Drill sockets of not more than 12 inches in diameter to allow free insertion of the railroad rails. Drill sockets to allow installation of the railroad rails such that the pavement and shoulder widths approximate the widths shown on the typical section. If the typical section varies from the adjacent roadway, the Engineer will determine the pavement and shoulder widths to be constructed. Use each drilled socket as a sounding for the rail to be installed in it. Unless directed otherwise by the Engineer, install no less than one-half the free end length as embedment into solid rock (See Fig. 1 and Fig. 2). If solid rock cannot be obtained, the Engineer will determine the length of embedment required in other stable foundation.

If the Engineer directs double or triple rows, stagger the rows as shown on Figure 3 to obtain the required spacing; however do not space rows more than 2 feet apart. Determine rail spacing in each row according to Table I. Obtain the Engineer's approval of the row and line spacing prior to drilling at each site.

After each hole is drilled, immediately install the railroad rail with the flanges positioned perpendicular to the direction of the landslide or break (see Figure 3). Set height of rail to that needed to reestablish pavement and shoulder typical section. Immediately after the railroad rail is installed, backfill the drilled hole. Shovel the material into the hole in small amounts so as to avoid bridging between the rail and the sides of the hole. Do not use auger tailings for backfilling the socket. Cut off any excess rail length flush with the proposed ground line. If possible, use cutoffs elsewhere in the project. Retain possession of unusable cutoffs.

E. Cribbing. Expose the railroad rail before backfilling. Install Cribbing to restrain the proposed backfill as shown on Figures 1 and 2. Attach the cribbing by welding to the railroad steel with a minimum of three welded connections per section of guardrail, placed so that the guardrail ends align with and overlap at the installed railroad rail, and are not spliced between installed railroad rails. Extend cribbing 2 feet below existing ground line. If solid rock is encountered, extend cribbing to solid rock line. The Engineer may direct specific methods and procedures as required by site conditions. Deliver excess cribbing furnished by the Department to the Department's Letcher County maintenance facility.

F. Backfill. Backfill the excavated trench behind the installed cribbing with the crushed stone backfill wrapped in Type IV Geotextile Fabric to approximate the existing roadway and shoulder widths as shown on the typical section or as

directed by the Engineer. Do not use excavated spoil from the existing roadway as fill material.

G. Restoration. Consider the extents and depths on the summary break sheets to be approximate only; the Engineer will determine exact locations at the time of construction. Use suitable excavated earth and/or borrow material aerated to proper moisture content prior to use for embankment and restoration in areas outside the limits of the drilled railroad rail wall. Obtain approval from the Engineer prior to reuse of the excavated soil.

Excavate for ditches, slopes, and pavement drainage and construct embankments, slopes, and channel lining according to Sections 206 and 703 or as directed by the Engineer. Warp and tie the slopes into the adjacent existing roadway to match existing slopes and ditches. In addition to the requirements of Section 703, the Engineer may require additional hand placement of some or all of the Channel Lining. Provide positive drainage of pavement, shoulders, slopes, and ditches at all times during and upon completion of construction.

If sufficient quantities of excavation are not available to construct embankments, obtain borrow for embankment in place from approved sources off the right of way obtained by the Contractor at no additional cost to the Department. Waste excess excavation and excavation unsuitable for reuse at sites off the right of way obtained by the Contractor at no additional cost to the Department. See Special Note for Waste and Borrow.

Reconstruct shoulder areas with DGA to the approximate existing elevation and width of the adjacent undisturbed roadway typical section; however provide a minimum shoulder width of two (2) feet at each site. Provide positive drainage and do not allow water to pond on the shoulder area or at the shoulder edge. Reconstruct shoulders before installing guardrail, if required.

H. Guardrail. See Special Notes for Guardrail.

I. Asphalt Paving & Patching. Asphalt paving and patching will be by others.

J. Final Dressing, Clean Up, and Seeding. After all work is completed, perform Class A Final Dressing on all disturbed areas, both on and off the Right of-Way. Dispose of all waste and debris off the right of way at sites obtained by the Contractor at no additional cost to the Department. See Special Note for Waste and Borrow and Special Note for Erosion Control for additional requirements.

K. Property Damage. Be responsible for all damage to public and/or private property resulting from the work. Restore all damaged property and other disturbed areas in like kind materials and design or as directed by the Engineer.

L. Disposal of Waste. Dispose of all removed concrete, pipe, pavement, debris, excess and unsuitable excavation, and all other waste and debris at sites off the right of way obtained by the Contractor at no additional cost to the Department. See Special Note for Waste and Borrow.

M. On-Site Inspection. Make a thorough inspection of the site prior to submitting bid and become thoroughly familiar with existing conditions so that the work can be expeditiously performed after a contract is awarded. The Department will consider submission of a bid as evidence of this inspection having been made. The Department will not honor any claims resulting from site conditions.

N. Right-of-Way Limits. The Department has not established exact limits of Right-of-Way. Limit work activities to obvious Right-of-Way and work areas secured by the Department through Consent and Release of the adjacent property owners. Be responsible for all encroachments onto private lands.

O. Utility Clearance. The Department has not located utilities. Locate all underground, above ground and overhead utilities prior to beginning construction. Be responsible for contacting and maintaining liaison with all utility companies that have utilities located within the project limits. Work around and do not disturb existing utilities. Be responsible for repairing all utility damage that occurs as a result of the work

The Department does not anticipate that utilities will require relocation; however, if utility relocation is required, the utility companies will work concurrently with the Contractor while relocating their facilities. Notify the Engineer and the utility owner(s) immediately when it is discovered or anticipated that any utility conflict could delay the Contractor’s operations. If utility relocation is required, the Department will not charge working days for those days on which work on the controlling item is delayed, as provided in the Specifications. If the total delay exceeds ten working days, an extension of the specified completion date will be negotiated with the Contractor for delay to the Contractor's work; however no extension will be granted for any delay caused by the Contractor’s failure to notify the Engineer and/or the utility company as specified above when a conflict is discovered or anticipated. Comply with applicable sections of Chapter 107.

P. Caution. Consider the information in this proposal and shown on the drawings and the type of work listed herein to be approximate only and do not take the information as an accurate evaluation of the materials and conditions to be

encountered during construction. Be aware that any reference to rock, earth, excavation, embankment, or any other material on the drawings, whether in numbers or words, letters, or lines, is solely for the Department's information and is not to be taken as an indication of classified excavation or the quantity of either rock, earth, or any other material involved. The bidder must draw his own conclusions. The Department does not give any guarantee as to the accuracy of the data and will not consider any claims for money or time extensions if the conditions encountered are not in accordance with the information shown.

Q. Control. Perform all work included in this contract under the absolute control of the Department of Highways. Obtain the Engineer's approval of all designs required to be furnished by the Contractor prior to incorporation into the work. The Department reserves the right to have other work performed by other contractors and its own forces and to permit public utility companies and others to do work during the construction within the limits of, or adjacent to, the project. Conduct operations and cooperate with such other parties so that interference with each other's work will be reduced to a minimum. By submitting bid, the Contractor agrees to make no claims against the Department for additional compensation due to delays or other conditions created by the operations of such other parties. Should a difference of opinion arise as to the rights of the Contractor and others working within the limits of, or adjacent to, the project, the Engineer will decide as to the respective rights of the various parties involved in order to assure the completion of the work in general harmony and in a satisfactory manner, and his decision shall be final and binding upon the Contractor.

IV. METHOD OF MEASUREMENT

The Department will measure only the bid items listed for payment. The Department will consider all other items required to complete the work incidental to the listed items.

A. Maintain and Control Traffic. See Traffic Control Plan; however, the Department will measure Maintain and Control Traffic as one Lump Sum for each site.

B. Site Preparation. The Department will not measure Site Preparation for separate payment but shall be incidental to Railroad Rails-Drilled, Excavation and Backfill, and DGA as applicable.

C. Railroad Rails-Drilled. The Department will measure drilled railroad rails in linear feet of finished in-place length. The Department will not measure cutoffs not used elsewhere in the work, rails rejected by the Engineer, excess, and waste. The Department will not measure the drilled sockets for separate payment, but shall be

incidental to railroad Rails-Drilled; however, if the Engineer determines from the sounding obtained at a drilled socket that railroad rail piling cannot be used in that socket, 50% of the drilled depth will be measured for payment as Railroad Rail-Drilled.

D. Excavation and Backfill. The Department will not measure backfill for the drilled sockets, but shall be incidental to Railroad Rail-Drilled. The Department will measure Excavation and Backfill behind cribbed railroad rails in Cubic Yards by field measurement according to Section 204 or other accepted methods of measurement determined by the Engineer.

E. Roadway Excavation and Embankment. The Department will not measure excavation and embankment outside the limits of the railroad rails and cribbing for separate payment but shall be incidental to Excavation and Backfill.

F. Geotextile Fabric. The Department will measure Geotextile Fabric Type IV behind cribbed railroad rails in square yards of finished in place area. The Department will not measure laps, cutoffs, excess, and waste.

G. Erosion Control. See Special Note for Erosion Control.

H. Cribbing. The Department will measure installed Cribbing furnished by the Department in square feet of finished in-place area. The Department will not measure laps, cutoffs, excess, and waste.

I. Dense Graded Aggregate Base. See Section 302.04.01

I. Guardrail. See Special Notes for Guardrail.

J. Staking. See Special Notes for Staking.

V. BASIS OF PAYMENT

The Department will not make direct payment other than for the bid items listed. The Department will consider payment for all other items required to complete the work incidental to the listed items

A. Maintain and Control Traffic. See Traffic Control Plan.

B. Erosion Control. See Special Note for Erosion Control.

D. Railroad Rails-Drilled. Accept payment at the Contract unit price per linear foot of finished in place length as full compensation for all labor, equipment,

materials, and incidentals necessary for site preparation, drill the hole and socket, furnish and install the railroad rail, and backfill the hole and socket.

E. Cribbing. Accept payment at the contract unit price per square foot of finished in place area as full compensation for all labor, equipment, materials, and incidentals necessary to pick up and load cribbing furnished by the Department, deliver cribbing to the project site, and install on the drilled railroad rails.

F. Excavation and Backfill. Accept payment at the contract unit price per cubic yard of Excavation and Backfill as full compensation for all labor, equipment, materials and incidentals for site preparation, excavating behind the drilled railroad rails, and furnishing and placing crushed limestone backfill wrapped in geotextile fabric behind the cribbed railroad rails.

G. Geotextile Fabric. Accept payment at the contract unit price per square yard of finished in place area as full compensation for all labor, equipment, materials and incidentals for furnishing and placing Geotextile Fabric to wrap the crushed limestone backfill behind the cribbed railroad rails.

H. Dense Graded Aggregate Base. See Section 302.05.

I. Guardrail. See Special Notes for Guardrail.

J. Staking. See Special Notes for Staking.

IDENTIFICATION OF RAILROAD RAIL SIZES

1. Typically classified in units of lbs-per-yard.

   Examples :

   155 lbs/yd, 140 lbs/yd, 132 lbs/yd, 90 lbs/yd

2. Each rail has a classification stamped in web:

   Example :

   112 25 RE OH ILLINOIS USA 1935 IIIIII

   Weight in lbs/yd

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TYPICAL SECTION DEPICTING INSTALLATION OF RECYCLED RAILROAD RAIL PLACED IN DRILLED SOCKET FOR LANDSLIDE CORRECTION

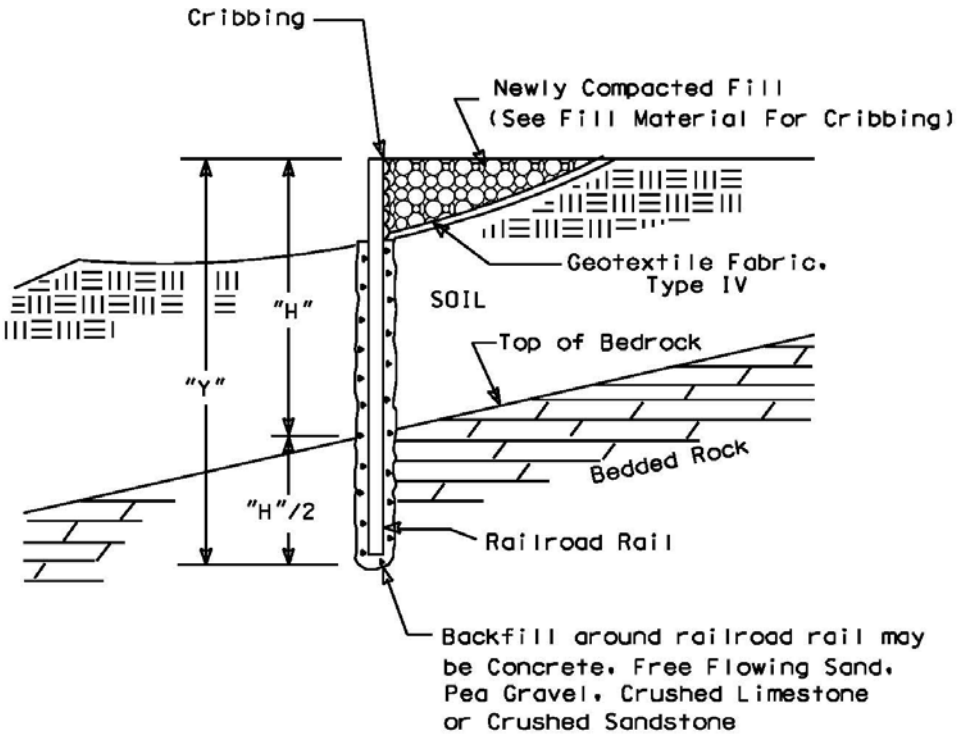

Figure 1

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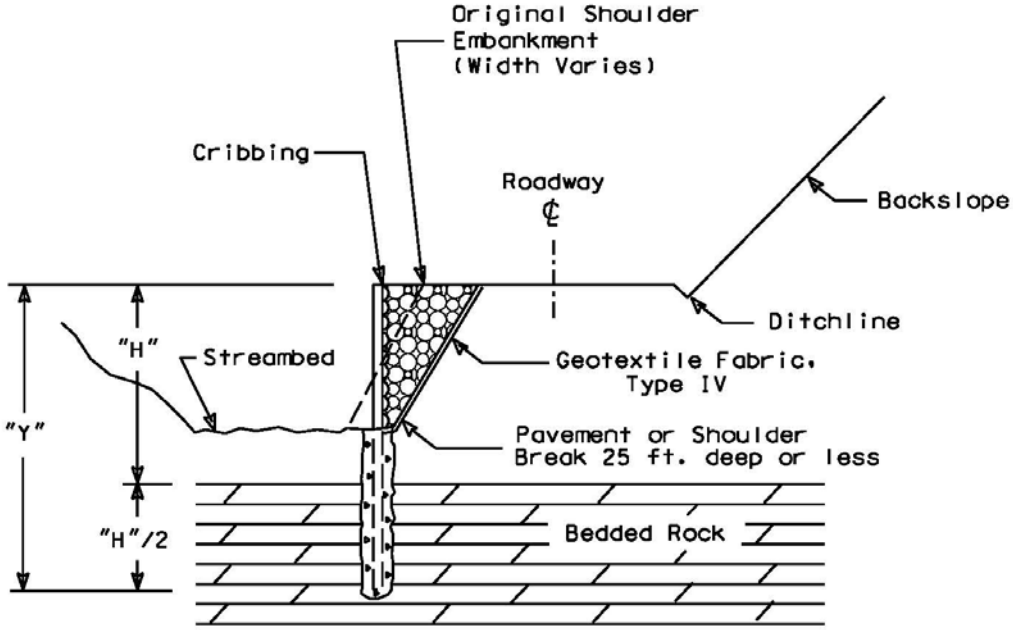
TYPICAL CROSS SECTION OF ROADWAY REPAIRS UTILIZING RECYCLED RAILROAD RAILS IN DRILLED SOCKETS FOR EMBANKMENT EROSION CORRECTION

NOTE:
Spacing from edge to edge of drilled socket : 3 ft. max.



NOTE :
"H"/2 Depth of Rail into bedded rock = 1/3 total length where rock is present.

Figure 2

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ALTERNATE SCHEMES FOR INSTALLING RAILROAD RAILS IN DRILLED SOCKETS

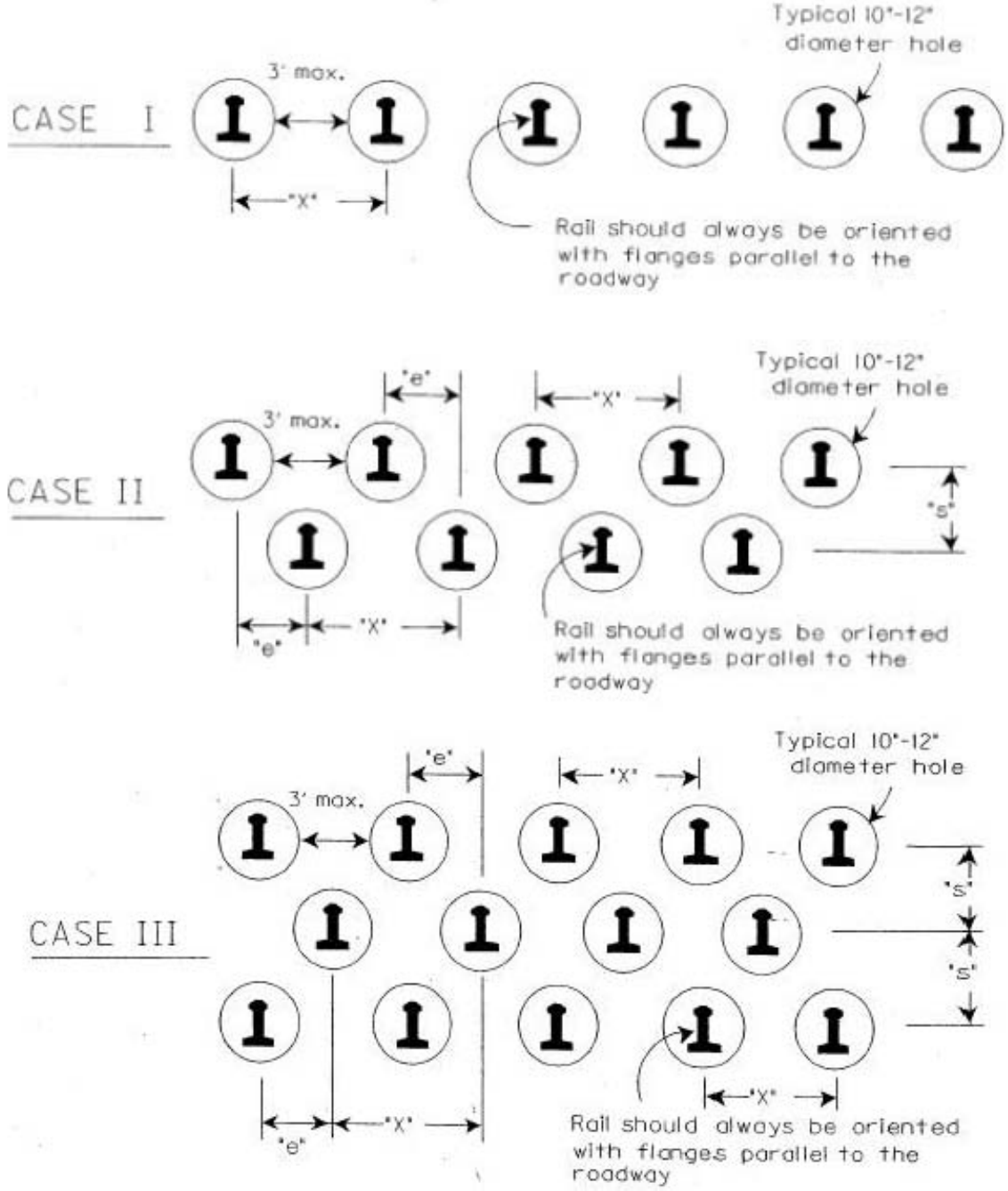

Figure 3

TABLE I
DESIGN CHART
130LBS/YD TO 133 LBS/YD RECYCLED (USED) RAILROAD RAILS
FACTOR OF SAFETY = 1

Soil Depth to Bedded Rock "H" (Feet)	Minimum Embedment into Bedded Rock "H/2" (Feet)	Total Length of Installed Railroad Rail "Y" (Feet)	Required Number of Rows	Maximum Spacing Between Rails "X" (Max. 48") (Inches)	Effective Spacing Between Rows of Rails "e'" (Inches)
8	4	12	1	48	N/A
9	4.5	13.5	1	48	N/A
10	5	15	1	48	N/A
11	5.5	16.5	1	48	N/A
12	6	18	1	48	N/A
13	6.5	19.5	1	48	N/A
14	7	21	1	32	N/A
15	7.5	22.5	2	48	24
16	8	24	2	44	22
17	8.5	25.5	2	36	18
18	9	27	2	28	14
19	9.5	28.5	2	24	12
20	10	30	3	33	11
21	10.5	31.5	3	28.5	9.5
>21	N/A	N/A	N/A	N/A	N/A

NOTES:
1. REFER TO FIGURES 1, 2, & 3 FOR DIMENSIONS SHOWN
2. FOR SOIL DEPTHS "H" GREATER THAN 21 FEET CONTACT THE ENGINEER.

SPECIAL NOTE FOR CONTRACTOR STAKING
DRILLED RAILROAD RAIL REPAIRS
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FD51 067 2034 004-005
FD51 067 3402 000-003

Contrary to Section 201, perform only the following items:

1. Be responsible for field layout of the drilled railroad rails on designated spacing; and
2. Control the drilling and setting of the railroad rails to ensure the rails are plumb, installed at the designated spacing, and with the appropriate alignment; and
3. Determine the height of rail that is needed to reestablish pavement and shoulder typical section and mark cut-offs; and
4. Establish proper slope elevations and ratios, shoulder widths, existing ditch profile, and final ditch profile to insure positive drainage.

Contrary to Section 201, the Department will not measure Contractor Staking for separate payment, but shall be incidental to the applicable items of the work.

Except as provided herein, the Department will perform Staking.

SPECIAL PROVISION FOR WASTE AND BORROW SITES

Obtain U.S. Army Corps of Engineer's approval before utilizing a waste or borrow site that involves "Waters of the United States". The Corps of Engineers defines "Waters of the United States" as perennial or intermittent streams, ponds or wetlands. The Corps of Engineers also considers ephemeral streams, typically dry except during rainfall but having a defined drainage channel, to be jurisdictional waters. Direct questions concerning any potential impacts to "Waters of the United States" to the attention of the appropriate District Office for the Corps of Engineers for a determination prior to disturbance. Be responsible for any fees associated with obtaining approval for waste and borrow sites from the U.S. Army Corps of Engineer or other appropriate regulatory agencies.

1-296 Waste & Borrow Sites
01/02/2012

COORDINATION OF WORK WITH OTHERS
FD51 067 1148 000-003
FD51 067 2034 004-005
FD51 067 3402 000-003

Be advised, the Department may issue permits for work on the Department's right of way within the limits of this project. See Sections 107.06 and 107.14. The Engineer will coordinate the work of the Contractor and the permit holders.

Be advised, there may be an active project(s) adjacent to or within this project. The Engineer will coordinate the work of the Contractors. See Section 105.06.

Be advised the Department may be performing work adjacent to or within this project. The Engineer will coordinate the Department's operations with the Contractor's work. Allow sufficient time for the Department's available resources to complete its respective phases of the work. Delays due to inclement weather, shortage of materials, or other unforeseen causes may affect the Department's ability to complete its operations. Consider these factors when submitting a bid and scheduling work. The Department will not grant any time extension or monetary consideration, and will not consider any claims if the Department's forces are delayed in its operations.

SPECIAL NOTE FOR SHOULDER PREPARATION
FD51 067 1148 000-003
FD51 067 2034 004-005
FD51 067 3402 000-003

Grade, shape, and compact shoulder as shown on the typical section and as directed by the Engineer to provide proper template and foundation. The Department will not measure grading, shaping, and compacting shoulders for separate payment, but shall be incidental to the Dense Graded Aggregate Base (DGA) placed on the shoulder.

SPECIAL NOTES FOR GUARDRAIL
FD51 067 1148 000-003
FD51 067 2034 004-005
FD51 067 3402 000-003

I. DESCRIPTION

Except as specified herein, perform all work in accordance with the Department's 2012 Standard and Supplemental Specifications, Special Provisions and Special Notes, and Standard and Sepia Drawings, current editions. Article references are to the Standard Specifications.

Furnish all equipment, labor, materials, and incidentals for the following work:

(1) Site preparation; (2) Remove guardrail end treatments; (3) Remove and reset guardrail; (4) Install guardrail furnished by the Department; (5) Construct End Treatments; (6) Maintain and Control traffic; and (7) All other work specified as part of this contract.

II. MATERIALS

Except as specified herein, provide for all materials to be sampled and tested in accordance with the Department's Sampling Manual and make the materials available for sampling a sufficient time in advance of the use of the materials to allow for the necessary time for testing.

A Maintain and Control Traffic. See Traffic Control Plan.

B. Erosion Control. See Special Notes for Erosion Control.

C. Guardrail Steel W Beam Single Face, Install. The Department will furnish guardrail elements and radius rail, steel posts, extra length (9 foot) steel posts if required, and timber off set blocks in general conformance to Section 814 and the Standard Drawings, but may vary in some respects, such as gage, pre-punched hole patterns, etc. The Department will make the materials available to the Contractor at the Department’s Letcher County maintenance facility. Determine curvature of radius rail and provide the Engineer a list of requirements fourteen (14) days prior to beginning work; schedule pickup with the Engineer, provide labor and equipment to load the materials on the Contractor’s vehicles, and deliver the materials to the project work sites The Contractor shall furnish guardrail hardware (nuts, bolts, and washers) and End Treatments in accordance with Section 814 and the Standard Drawings.

D. Delineators for Guardrail. See Standard Drawing RBR-055.

III. CONSTRUCTION METHODS

A. Maintain and Control Traffic. See Traffic Control Plan.

B. Site Preparation. Be responsible for all site preparation, including but not limited to, clearing and grubbing, excavation, embankment, and removal of all obstructions or any other items; regrading, reshaping, adding and compacting of suitable materials on the existing shoulders to provide proper template or foundation for the guardrail; temporary pollution and erosion control; disposal, of excess and waste materials and debris; and final dressing, cleanup, and seeding and protection. Perform all site preparation as approved or directed by the Engineer.

C. Remove End Treatment. Remove existing guardrail end treatments as shown on the summary. Fill all voids left from pulling posts with dry natural sand. Contrary to Section 719.03.07, deliver salvageable materials from removed end treatments to the Departments Letcher County Maintenance Facility. Dispose of unsalvageable materials and concrete anchors at sites off the Right-of Way obtained by the Contractor at no additional cost to the Department; see Special Note for Waste and Borrow.

Do not leave the blunt end exposed where it would be hazardous to the public. Provide a temporary end by connecting at least 25 feet of rail to the last post, and by slightly flaring, and burying the end of the rail completely into the existing shoulder. If left overnight, place a drum with bridge panel in advance of the guardrail end and maintain during use.

D. Remove and Reset Guardrail. The Engineer will determine the exact termini and locations for removing guardrail at the time of construction. With a full lane closure in place, remove existing guardrail according to Section 719.03.03. Store and protect removed guardrail for resetting. Fill all voids left from pulling posts with dry natural sand. Store and protect removed guardrail for resetting. After guardrail is removed, do not leave blunt ends exposed where they would be hazardous to the public; provide a temporary end by connecting at least 25 feet of rail to the last post, and by slightly flaring, and burying the end of the rail completely into the existing shoulder. If left overnight, place a drum with bridge panel in advance of the guardrail end, maintain during use, and maintain a shoulder closure until new guardrail is constructed in the removal area. Upon completion of other items of work, reset the guardrail to the lines and grades shown on current Standard Drawings or as directed by the Engineer by any method approved by the Engineer which allows construction of the guardrail to the true grade without apparent sags. If required, construct new end anchor for reset end treatment. Unless directed otherwise by the Engineer, provide minimum shoulder widths as shown on the typical section. If the Engineer determines any portion of the existing guardrail components are too damaged or deteriorated to be reused, the Department will furnish replacement rail, posts, and offset blocks. The Contractor shall replace guardrail lost or damaged by the Contractor at no additional cost to the Department.

Contrary to Section 719.03.07, deliver removed guardrail components not reincorporated into the work to the Department's Letcher County Maintenance Facility.

E. Guardrail Steel W-Beam, Install. Remove existing guardrail end treatments as shown on the summaries and/or as directed by the Engineer. Except as specified herein, construct guardrail system according to Section 719 and the Standard Drawings. Construct new guardrail as shown on the summaries and/or as directed by the Engineer. Consider locations listed on the summaries and/or shown on the drawings to be approximate only. The Engineer will determine the exact termini and type of guardrail for individual guardrail installations at the time of construction. Unless directed otherwise by the Engineer, provide a minimum two (2) foot shoulder width. Construct radii at entrances and road intersections as directed by the Engineer. Deliver guardrail components furnished by the Department not incorporated into the work to the Department's Letcher County Maintenance Facility.

Erect guardrail to the lines and grades shown on current Standard Drawings or as directed by the Engineer by any method approved by the Engineer which allows construction of the guardrail to the true grade without apparent sags.

When installing guardrail, do not leave the blunt end exposed where it would be hazardous to the public. When it is not practical to complete the construction of the guardrail and the permanent end treatments and terminal sections first, provide a temporary end by connecting at least 25 feet of rail to the last post, and by slightly flaring, and burying the end of the rail completely into the existing shoulder. If left overnight, place a drum with bridge panel in advance of the guardrail end and maintain during use.

F. Delineators for Guardrail. See Standard Drawing RBR-055; however, space Delineators for Guardrail 50 feet on centers, regardless of roadway curvature.

G. Property Damage. Be responsible for all damage to public and/or private property resulting from the work. Restore damaged roadway features and private property at no additional cost to the Department.

H. Coordination with Utility Companies. Locate all underground, above ground and overhead utilities prior to beginning construction. Be responsible for contacting and maintaining liaison with all utility companies that have utilities located within the project limits. Do not disturb existing overhead or underground utilities. It is not anticipated that any utility facilities will need to be relocated and/or adjusted; however, in the event that it is discovered that the work does require that utilities be relocated and/or adjusted, the utility companies will work concurrently with the Contractor while relocating their facilities. Be responsible for repairing all utility damage that occurs as a result of guardrail operations at no additional cost to the Department.

I. Right of Way Limits. The Department has not established exact limits of the Right-of-Way. Limit work activities to obvious Right-of-Way, permanent or temporary easements, and work areas secured by the Department through consent and release of the adjacent property owners. Be responsible for all encroachments onto private lands.

J. Disposal of Waste. Dispose of all removed concrete, other waste, and debris off the Right-of-Way at sites obtained by the Contractor at no additional cost to the Department. See Special Note for Waste and Borrow.

K. Final Dressing, Clean Up, and Seeding and Protection. Apply Class A Final Dressing to all disturbed areas, both on and off the Right-of-Way. Sow all disturbed earthen areas according to the Special Notes for Erosion Control.

L. Erosion Control. See Special Notes for Erosion Control.

IV. METHOD OF MEASUREMENT

A. Maintain and Control Traffic. See Traffic Control Plan.

B. Site preparation. See Special Notes for Slide Repair.

C. Erosion Control. See Special Notes for Erosion Control.

D. Remove End Treatment. The Department will measure the quantity by each individual unit.

E. Remove and Reset Guardrail. The Department will measure guardrail removed and reset according to Section 719.04.01; however the Department will include the length of removed end treatments attached to removed guardrail that are not reset in the measured lengths of the removed guardrail. Contrary to Section 719.04.01, the Department will measure reset shop curved guardrail as the actual length reset and will not measure the length as 1.3 times the actual length to determine the pay quantity.

F. Guardrail Steel W Beam Single Face, Install. The Department will measure the actual length of guardrail furnished by the Department and installed by the Contractor in linear feet. Contrary to section 719.04.01, the Department will measure the actual length of shop curved guardrail in linear feet and will not multiply the actual length by a factor of 1.3 to determine the pay quantity. Contrary to Section 719.04.03, the Department will not measure installing extra length posts furnished by the Department for separate payment, but shall be incidental to Guardrail, Steel W Beam Single Face, Install.

G. Guardrail End Treatment Type 7. See Section 719.04.04.

H. Delineators for Guardrail. See Standard Drawing RBR-055.

V. BASIS OF PAYMENT

A. Maintain and Control Traffic. See Traffic Control Plan.

B. Remove End Treatment. Accept payment at the Contract unit price Each as full compensation for all labor, equipment, materials, and incidentals for removing end treatment; filling voids left from pulling posts with dry natural sand; delivering salvageable materials to the Department's maintenance facility; and disposing of unsalvageable materials, waste, and debris.

C. Remove and Reset Guardrail. Accept payment at the Contract unit price per Linear Foot as full compensation for all labor, equipment, and materials and incidentals for removing, storing, protecting, and resetting guardrail systems and disposing of waste and debris.

D. Guardrail Steel W Beam Single Face, Install. See Section 719.05.

E. Guardrail End Treatment Type 7. See Section 719.05.

F. Delineators for Guardrail. See Standard Drawing RBR-055.

SPECIAL NOTE FOR TYPICAL SECTION DIMENSIONS

Consider the dimensions shown on the typical sections for pavement and shoulder widths and thickness' to be nominal or typical dimensions. The Engineer may direct or approve varying the actual dimensions to be constructed to fit existing conditions. Do not widen existing pavement or shoulders unless specified elsewhere in this proposal or directed by the engineer.

1-3725 Typical Section Dimensions
01/02/2012

TRAFFIC CONTROL PLAN FOR SLIDE CORRECTION
FD51 067 1148 000-003
FD51 067 2034 004-005
FD51 067 3402 000-003

TRAFFIC CONTROL GENERAL

Except as specified herein, maintain and control traffic in accordance with the 2012 Standard and Supplemental Specifications, Special Provisions and Special Notes, and the Standard and Sepia Drawings, current editions. Except for the roadway and traffic control bid items listed, furnish all other items necessary to maintain and control traffic incidental to the Contract lump sum price Maintain and Control Traffic.

Contrary to Section 106.01, furnish new, or used in like new condition, traffic control devices, at the beginning of the work and maintain the devices in like new condition until completion of the work.

PROJECT PHASING & CONSTRUCTION PROCEDURES

At the discretion of the Engineer, the Department may specify days and hours when lane closures will not be allowed. Prior to beginning work, provide a proposed lane closure and work schedule for the approval of the Engineer. The Department will provide public notification. Notify the Engineer immediately and obtain prior approval of any proposed deviations from the approved schedule.

Maintain alternating one way traffic during construction. Unless directed otherwise by the Engineer, provide a minimum clear lane width of eight (8) feet. If traffic should be stopped due to construction operations, and a school bus on an official run arrives on the scene, immediately make provisions for the passage of the bus.

If the Engineer determines that work site conditions require all traffic be stopped while drilling operations are in progress, stop traffic for the length of time required to drill and set one rail. Allow all waiting traffic to pass before starting the next hole. If an emergency vehicle or school bus is present in the queue, stop drilling and allow traffic to pass immediately.

LANE & SHOULDER CLOSURES

Do not leave lane closures in place during non-working hours. Shoulder closures may be maintained during nonworking hours; however do not park vehicles or store materials on a closed shoulder during non-working hours.

CHANGEABLE MESSAGE SIGNS

If deemed necessary by the Engineer, the Department will furnish, operate, and maintain Changeable Message Signs.

SIGNS

The Engineer may require additional signing and/or traffic control devices in addition to the items shown on the Standard Drawings. Sign posts and splices shall be compliant with NCHRP 350 or MASH. Manufacturer's documentation validating this compliance shall be provided to the Engineer prior to installation. Signs, including any splices, shall be installed according to manufacturer's specifications and installation recommendations. Contrary to section 112.04.02, the Department will measure only long term signs (signs intended to be continuously in place for more than 3 days) for payment. The Department will not measure; short term signs (signs intended to be left in place for 3 days or less) for payment, but shall be incidental to Maintain and Control Traffic. Contrary to Section 112.04.02, the Department will measure individual signs only once for payment, regardless of how many times they are erected or relocated. The Department will not measure replacements for damaged signs directed by the Engineer to be replaced due to poor condition or reflectivity.

BARRICADES

The Department will not measure Barricades used in lieu of barrels and cones for channelization or delineation, but shall be incidental to Maintain and Control Traffic according to Section 112.04.01. The Department will measure Barricades used for protection of excavated areas and road closures according to Section 112.04.04. The Department will not measure replacements for damaged barricades directed by the Engineer to be replaced due to poor condition or reflectivity. Retain possession of the barricades upon completion of the work.

PAVEMENT EDGE DROP-OFFS

Do not allow a difference in elevation of a pavement edge between opposing directions of traffic or lanes that traffic is expected to cross in a lane change situation greater than 1½". Place warning signs (MUTCD W8-9, W8-11, or W8-17) in advance of and at 1500 feet intervals throughout the drop-off area. Dual post the signs on both sides of the traveled way. Wedge transverse transitions between newly surfaced pavement and the existing pavement areas that traffic may cross with asphalt mixtures. Remove wedges prior to placement of the final surface course.

Treat pavement edges that traffic is not expected to cross, except accidentally, as follows:

Less than 2” - No protection required.

2” to 4” - Place plastic drums, vertical panels, or barricades every 50 feet. The Engineer will allow cones to be used in lieu of plastic drums, panels, and barricades during daylight working hours only. Wedge drop-offs within 10 feet of traffic with stone or asphalt mixtures as directed or approved by the Engineer with a 1:1 or flatter slope in daylight working hours, or 3:1 or flatter slope during nighttime hours or when work is not active in the drop-off area.

Greater than 4” – Protect drop-offs greater than 4 inches within 10 feet of traffic by placing drums, vertical panels, or barricades every 25 feet. The Engineer will not allow the use of cones in lieu of drums, vertical panels, or barricades for drop-offs greater than 4”. Place Type III Barricades directly in front of the drop-off facing oncoming traffic in both directions of travel. Provide warning signs as shown on the Standard Drawings or as directed by the Engineer.

Pedestrians and Bicycles – Protect pedestrians and bicycles as directed by the Engineer.

SPECIAL NOTE FOR EROSION CONTROL
FD51 067 1148 000-003
FD51 067 2034 004-005
FD51 067 3402 000-003

I. DESCRIPTION

Perform all erosion and water pollution control work in accordance with the Department's 2012 Standard and Interim Supplemental Specifications, Special Provisions and Special Notes, and Standard and Sepia Drawings, current editions, and as directed by the Engineer. Section references are to the Standard Specifications. This work shall consist of:

> (1) Developing and preparing a Best Management Practices Plan (BMP) tailored to suit the specific construction phasing for each site within the project; (2) Preparing the project site for construction, including locating, furnishing, installing, and maintaining temporary and/or permanent erosion and water pollution control measures as required by the BMP prior to beginning any earth disturbing activity on the project site; (3) Clearing and grubbing and removal of all obstructions as required for construction; (4) Removing all erosion control devices when no longer needed; (5) Restoring all disturbed areas as nearly as possible to their original condition; (6) Preparing seedbeds and permanently seeding all disturbed areas; (7) Providing a Kentucky Erosion Prevention and Sediment Control Program (KEPSC) qualified inspector; and (8) Performing any other work to prevent erosion and/or water pollution as specified by this contract, required by the BMP, or as directed by the Engineer.

II. MATERIALS

Furnish materials in accordance with these notes, the Standard Specifications and Interim Supplemental Specifications, and applicable Special Provisions and Special Notes, and Standard and Sepia Drawings, current editions. Provide for all materials to be sampled and tested in accordance with the Department's Sampling Manual. Unless directed otherwise by the Engineer, make the materials available for sampling a sufficient time in advance of the use of the materials to allow for the necessary time for testing.

III. CONSTRUCTION

Be advised, these Erosion Control Plan Notes do not constitute a BMP plan for the project. Jointly with the Engineer, prepare a site specific BMP plan for each drainage area within the project in accordance with Section 213. Provide a unique BMP at each project site using good engineering practices taking into account existing site conditions, the type of work to be performed, and the construction phasing, methods and techniques to be utilized to complete the work. Be responsible

for all erosion prevention, sediment control, and water pollution prevention measures required by the BMP for each site. Represent and warrant compliance with the Clean Water Act (33 USC Section 1251 et seq.), the 404 Permit, the 401 Water Quality Certification, and applicable state and local government agency laws, regulations, rules, specifications, and permits. Contrary to Section 105.05, in case of discrepancy between theses notes, the Standard Specifications, Interim Supplemental Specifications, Special and Special Notes, Standard and Sepia Drawings, and such state and local government agency requirements, adhere to the most restrictive requirement.

Conduct operations in such a manner as to minimize the amount of disturbed ground during each phase of the construction and limit the haul roads to the minimum required to perform the work. Preserve existing vegetation not required to be removed by the work or the contract. Seed and/or mulch disturbed areas at the earliest opportunity. Use silt fence, silt traps, temporary ditches, brush barriers, erosion control blankets, sodding, channel lining, and other erosion control measures in a timely manner as required by the BMP and as directed or approved by the Engineer. Prevent sediment laden water from leaving the project, entering an existing drainage structure, or entering a stream.

Provide for erosion control measures to be in place and functioning prior to any earth disturbance within a drainage area. Compute the volume and size of silt control devices necessary to control sediment during each phase of construction. Remove sediment from silt traps before they become a maximum of ½ full. Maintain silt fence by removing accumulated trappings and/or replacing the geotextile fabric when it becomes clogged, damaged, or deteriorated, or when directed by the Engineer. Properly dispose of all materials trapped by erosion control devices at approved sites off the right of way obtained by the Contractor at no additional cost to the Department (See Special Note for Waste and Borrow).

As work progresses, add or remove erosion control measures as required by the BMP applicable to the Contractor's project phasing and construction methods and techniques. Update the volume calculations and modify the BMP as necessary throughout the duration of the project. Ensure that an updated BMP is kept on site and available for public inspection throughout the life of the project.

After all construction is complete, restore all disturbed areas in accordance with Section 212. Completely remove all temporary erosion control devices not required as part of the permanent erosion control from the construction site. Prior to removal, obtain the Engineer's concurrence of items to be removed. Grade the remaining exposed earth (both on and off the Right of-Way) as nearly as possible to its original condition, or as directed by the Engineer. Prepare the seed bed areas and sow all exposed earthen areas with the applicable seed mixture(s) according to Section 212.03.03.

IV. MEASUREMENT

Erosion Control Blanket. If required by the BMP, the Department will measure Erosion Control Blanket according to Section 212.04.07.

Sodding. If required by the BMP, the Department will measure Sodding according to Section 212.04.08.

Channel Lining. If required by the BMP, the Department will measure Channel Lining according to Sections 703.04.04-703.04.07.

Erosion Control. Contrary to Sections 212.04, 213.04, and 703.04, other than Erosion Control Blankets, Sodding, and Channel Lining, the Department will not measure Erosion Control for separate payment but shall be incidental to Excavation and Backfill, Railroad Rails-Drilled, and DGA as applicable. The Department will not measure developing, updating, and maintaining a BMP plan for each site; providing a KEPSC qualified inspector; locating, furnishing, installing, inspecting, maintaining, and removing erosion and water pollution control items; Roadway Excavation, Borrow Excavation, Embankment In Place, Topsoil Furnished and Placed, and Spreading Stockpiled Topsoil; Topdressing Fertilizer, Temporary and Permanent Seeding and Protection, Special Seeding Crown Vetch, and Temporary Mulch; Sedimentation Basin and Clean Sedimentation Basin, Silt Trap Type "A" and Clean Silt Trap Type "A"; Silt Trap Type "B" and Clean Silt Trap Type "B"; Silt Trap Type "C" and Clean Silt Trap Type "C"; Temporary Silt Fence and Clean Temporary Silt Fence; Plants, Vines, Shrubs, and Trees; Gabion and Dumped Stone Deflectors and Riffle Structures; Boulders; Temporary Ditches and clean Temporary Ditches; Geotextile Fabric, and all other erosion and water pollution control items required by the BMP or the Engineer, but shall be incidental to Excavation and Backfill, Railroad Rails-Drilled, and DGA as applicable.

V. Basis of Payment

Erosion Control Blanket. If not listed as a bid item, but required by the BMP, the Department will pay for Erosion Control Blankets as Extra Work according to Sections 104.03 and 109.04.

Sodding. If not listed as a bid item, but required by the BMP, the Department will pay for Sodding as Extra Work according to Sections 104.03 and 109.04.

Channel Lining. If not listed as a bid item, but required by the BMP, the Department will pay for Channel Lining as Extra Work according to Sections 104.03 and 109.04.

STEVEN L. BESHEAR
GOVERNOR

LEONARD K. PETERS
SECRETARY

ENERGY AND ENVIRONMENTAL PROTECTION CABINET
DEPARTMENT FOR ENVIRONMENTAL PROTECTION
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General Certification--Nationwide Permit # 14
Linear Transportation Projects

This General Certification is issued March 19, 2012, in conformity with the requirements of Section 401 of the Clean Water Act of 1977, as amended (33 U.S.C. §1341), as well as Kentucky Statute KRS 224.16-050.

For this and all nationwide permits, the definition of surface water is as per 401 KAR 10:001 Chapter 10, Section 1(80): Surface Waters means those waters having well-defined banks and beds, either constantly or intermittently flowing; lakes and impounded waters; marshes and wetlands; and any subterranean waters flowing in well-defined channels and having a demonstrable hydrologic connection with the surface. Lagoons used for waste treatment and effluent ditches that are situated on property owned, leased, or under valid easement by a permitted discharger are not considered to be surface waters of the commonwealth.

Agricultural operations, as defined by KRS 224.71-100(1) conducting activities pursuant to KRS 224.71-100 (3), (4), (5), (6), or 10 are deemed to have certification if they are implementing an Agriculture Water Quality Plan pursuant to KRS 224.71-145.

For all other operations, the Commonwealth of Kentucky hereby certifies under Section 401 of the Clean Water Act (CWA) that it has reasonable assurances that applicable water quality standards under Kentucky Administrative Regulations Title 401, Chapter 10, established pursuant to Sections 301, 302, 304, 306 and 307 of the CWA, will not be violated for the activity covered under NATIONWIDE PERMIT 14, namely Linear Transportation Projects, provided that the following conditions are met:

1. The activity will not occur within surface waters of the Commonwealth identified by the Kentucky Division of Water as Outstanding State or National Resource Water, Cold Water Aquatic Habitat, or Exceptional Waters.

2. The activity will not occur within surface waters of the Commonwealth identified as perpetually-protected (e.g. deed restriction, conservation easement) mitigation sites.

3. The activity will impact less than 1/2 acre of wetland/marsh.

4. The activity will impact less than 300 linear feet of surface waters of the Commonwealth. Stream realignment greater than 100 feet is not covered under this general water quality certification.

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Linear Transportation Projects
Page 2

5. For a single and complete linear transportation project, the cumulative length of impacts less than 300 linear feet of surface waters within each Hydrologic Unit Code (HUC) 14 watershed will not exceed 500 linear feet.

6. Stream impacts covered under this General Water Quality Certification and undertaken by those persons defined as an agricultural operation under the Agricultural Water Quality Act must be completed in compliance with the Kentucky Agricultural Water Quality Plan (KWQP).

7. 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.

8. Activities that do not meet the conditions of this General Water Quality Certification require an Individual Section 401 Water Quality Certification.

9. Activities qualifying for coverage under this General Water Quality Certification are subject to the following conditions:

    - 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 (401 KAR 10:031 Section 2 and KRS 224.70-100).
    - Sediment and erosion control measures, such as check-dams constructed of any material, silt fencing, hay bales, etc., 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, design and placement of temporary erosion control measures shall not be conducted in such a manner that may result in instability of streams that are adjacent to, upstream, or downstream of the structures. All sediment and erosion control devices shall be removed and the natural grade restored within the completion timeline of the activities.
    - Measures shall be taken to prevent or control spills of fuels, lubricants, or other toxic materials used in construction from entering the watercourse.
    - Removal of riparian vegetation in the utility line right-of-way shall be limited to that necessary for equipment access.
    - To the maximum extent practicable, all in-stream work under this certification shall be performed under low-flow conditions.

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Linear Transportation Projects
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- 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 in which such in-stream work is unavoidable, then it shall be performed in such a manner and duration as to minimize turbidity and disturbance to substrates and bank or riparian vegetation.
- Any fill shall be of such composition that it will not adversely affect the biological, chemical, or physical properties of the receiving waters and/or cause violations of water quality standards. If rip-rap is utilized, it should be of such weight and size that bank stress or slump conditions will not be created because of its placement.
- If there are water supply intakes located downstream that may be affected by increased turbidity and suspended solids, the permittee shall notify the operator when such work will be done.
- Should evidence of stream pollution or jurisdictional 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 KDOW shall be notified immediately by calling (800) 928-2380.

Non-compliance with the conditions of this general certification or violation of Kentucky state water quality standards may result in civil penalties.

US Army Corps of Engineers

Nationwide Permit
No. 14, Linear Transportation Projects

Activities required for the construction, expansion, modification, or improvement of linear transportation projects (e.g., roads, highways, railways, trails, airport runways, and taxiways) in waters of the United States.

a. For linear transportation projects in non-tidal waters, the discharge cannot cause the loss of greater than 1/2-acre of waters of the United States. For linear transportation projects in tidal waters, the discharge cannot cause the loss of greater than 1/3-acre of waters of the United States.

b. Any stream channel modification, including bank stabilization, is limited to the minimum necessary to construct or protect the linear transportation project; such modifications must be in the immediate vicinity of the project.

c. This NWP also authorizes temporary structures, fills, and work necessary to construct the linear transportation project. Appropriate measures must be taken to maintain normal downstream flows and minimize flooding to the maximum extent practicable, when temporary structures, work, and discharges, including cofferdams, are necessary for construction activities, access fills, or dewatering of construction sites. Temporary fills must consist of materials, and be placed in a manner, that will not be eroded by expected high flows. Temporary fills must be removed in their entirety and the affected areas returned to pre-construction elevations. The areas affected by temporary fills must be revegetated, as appropriate.

d. This NWP cannot be used to authorize non-linear features commonly associated with transportation projects, such as vehicle maintenance or storage buildings, parking lots, train stations, or aircraft hangars.

Notification: The permittee must submit a pre-construction notification to the district engineer prior to commencing the activity if: (1) the loss of waters of the United States exceeds
1/10-acre; or (2) there is a discharge in a special aquatic site, including wetlands. (See general condition 31.) (Sections 10 and 404)

Note: Some discharges for the construction of farm roads or forest roads, or temporary roads for moving mining equipment, may qualify for an exemption under Section 404(f) of the Clean Water Act (see 33 CFR 323.4).

Valid from March 19, 2012 through March 18, 2017

Nationwide Permit General Conditions

Note: To qualify for NWP authorization, the prospective permittee must comply with the following general conditions, as applicable, in addition to any regional or case-specific conditions imposed by the division engineer or district engineer. Prospective permittees should contact the appropriate Corps district office to determine if regional conditions have been imposed on an NWP. Prospective permittees should also contact the appropriate Corps district office to determine the status of Clean Water Act Section 401 water quality certification and/or Coastal Zone Management Act consistency for an NWP. Every person who may wish to obtain permit authorization under one or more NWPs, or who is currently relying on an existing or prior permit authorization under one or more NWPs, has been and is on notice that all of the provisions of 33 CFR §§ 330.1 through 330.6 apply to every NWP authorization. Note especially 33 CFR § 330.5 relating to the modification, suspension, or revocation of any NWP authorization.

1. Navigation. (a) No activity may cause more than a minimal adverse effect on navigation.

(b) Any safety lights and signals prescribed by the U.S. Coast Guard, through regulations or otherwise, must be installed and maintained at the permittee's expense on authorized facilities in navigable waters of the United States.

(c) The permittee understands and agrees that, if future operations by the United States require the removal, relocation, or other alteration, of the structure or work herein authorized, or if, in the opinion of the Secretary of the Army or his authorized representative, said structure or work shall cause unreasonable obstruction to the free navigation of the navigable waters, the permittee will be required, upon due notice from the Corps of Engineers, to remove, relocate, or alter the structural work or obstructions caused thereby, without expense to the United States. No claim shall be made against the United States on account of any such removal or alteration.

2. Aquatic Life Movements. No activity may substantially disrupt the necessary life cycle movements of those species of aquatic life indigenous to the waterbody, including those species that normally migrate through the area, unless the activity's primary purpose is to impound water. All permanent and temporary crossings of waterbodies shall be suitably culverted, bridged, or otherwise designed and constructed to maintain low flows to sustain the movement of those aquatic species.

3. Spawning Areas. Activities in spawning areas during spawning seasons must be avoided to the maximum extent practicable. Activities that result in the physical destruction (e.g., through excavation, fill, or downstream smothering by substantial turbidity) of an important spawning area are not authorized.

4. Migratory Bird Breeding Areas. Activities in waters of the United States that serve as breeding areas for migratory birds must be avoided to the maximum extent practicable.

5. Shellfish Beds. No activity may occur in areas of concentrated shellfish populations, unless the activity is directly related to a shellfish harvesting activity authorized by NWPs 4 and 48, or is a shellfish seeding or habitat restoration activity authorized by NWP 27.

6. Suitable Material. No activity may use unsuitable material (e.g., trash, debris, car

bodies, asphalt, etc.). Material used for construction or discharged must be free from toxic pollutants in toxic amounts (see Section 307 of the Clean Water Act).

7. Water Supply Intakes. No activity may occur in the proximity of a public water supply intake, except where the activity is for the repair or improvement of public water supply intake structures or adjacent bank stabilization.

8. Adverse Effects From Impoundments. If the activity creates an impoundment of water, adverse effects to the aquatic system due to accelerating the passage of water, and/or restricting its flow must be minimized to the maximum extent practicable.

9. Management of Water Flows. To the maximum extent practicable, the pre-construction course, condition, capacity, and location of open waters must be maintained for each activity, including stream channelization and storm water management activities, except as provided below. The activity must be constructed to withstand expected high flows. The activity must not restrict or impede the passage of normal or high flows, unless the primary purpose of the activity is to impound water or manage high flows. The activity may alter the pre-construction course, condition, capacity, and location of open waters if it benefits the aquatic environment (e.g., stream restoration or relocation activities).

10. Fills Within 100-Year Floodplains. The activity must comply with applicable FEMA-approved state or local floodplain management requirements.

11. Equipment. Heavy equipment working in wetlands or mudflats must be placed on mats, or other measures must be taken to minimize soil disturbance.

12. Soil Erosion and Sediment Controls. Appropriate soil erosion and sediment controls must be used and maintained in effective operating condition during construction, and all exposed soil and other fills, as well as any work below the ordinary high water mark or high tide line, must be permanently stabilized at the earliest practicable date. Permittees are encouraged to perform work within waters of the United States during periods of low-flow or no-flow.

13. Removal of Temporary Fills. Temporary fills must be removed in their entirety and the affected areas returned to pre-construction elevations. The affected areas must be revegetated, as appropriate.

14. Proper Maintenance. Any authorized structure or fill shall be properly maintained, including maintenance to ensure public safety and compliance with applicable NWP general conditions, as well as any activity-specific conditions added by the district engineer to an NWP authorization.

15. Single and Complete Project. The activity must be a single and complete project. The same NWP cannot be used more than once for the same single and complete project.

16. Wild and Scenic Rivers. No activity may occur in a component of the National Wild and Scenic River System, or in a river officially designated by Congress as a "study river" for possible inclusion in the system while the river is in an official study status, unless the appropriate Federal agency with direct management responsibility for such river, has determined in writing that the proposed activity will not adversely affect the Wild and Scenic River

designation or study status. Information on Wild and Scenic Rivers may be obtained from the appropriate Federal land management agency responsible for the designated Wild and Scenic River or study river (e.g., National Park Service, U.S. Forest Service, Bureau of Land Management, U.S. Fish and Wildlife Service).

17. Tribal Rights. No activity or its operation may impair reserved tribal rights, including, but not limited to, reserved water rights and treaty fishing and hunting rights.

18. Endangered Species. (a) No activity is authorized under any NWP which is likely to directly or indirectly jeopardize the continued existence of a threatened or endangered species or a species proposed for such designation, as identified under the Federal Endangered Species Act (ESA), or which will directly or indirectly destroy or adversely modify the critical habitat of such species. No activity is authorized under any NWP which "may affect" a listed species or critical habitat, unless Section 7 consultation addressing the effects of the proposed activity has been completed.

(b) Federal agencies should follow their own procedures for complying with the requirements of the ESA. Federal permittees must provide the district engineer with the appropriate documentation to demonstrate compliance with those requirements. The district engineer will review the documentation and determine whether it is sufficient to address ESA compliance for the NWP activity, or whether additional ESA consultation is necessary.

(c) Non-federal permittees must submit a pre-construction notification to the district engineer if any listed species or designated critical habitat might be affected or is in the vicinity of the project, or if the project is located in designated critical habitat, and shall not begin work on the activity until notified by the district engineer that the requirements of the ESA have been satisfied and that the activity is authorized. For activities that might affect Federally-listed endangered or threatened species or designated critical habitat, the pre-construction notification must include the name(s) of the endangered or threatened species that might be affected by the proposed work or that utilize the designated critical habitat that might be affected by the proposed work. The district engineer will determine whether the proposed activity "may affect" or will have "no effect" to listed species and designated critical habitat and will notify the non-Federal applicant of the Corps' determination within 45 days of receipt of a complete pre-construction notification. In cases where the non-Federal applicant has identified listed species or critical habitat that might be affected or is in the vicinity of the project, and has so notified the Corps, the applicant shall not begin work until the Corps has provided notification the proposed activities will have "no effect" on listed species or critical habitat, or until Section 7 consultation has been completed. If the non-Federal applicant has not heard back from the Corps within 45 days, the applicant must still wait for notification from the Corps.

(d) As a result of formal or informal consultation with the FWS or NMFS the district engineer may add species-specific regional endangered species conditions to the NWPs.

(e) Authorization of an activity by a NWP does not authorize the "take" of a threatened or endangered species as defined under the ESA. In the absence of separate authorization (e.g., an ESA Section 10 Permit, a Biological Opinion with "incidental take" provisions, etc.) from the U.S. FWS or the NMFS, The Endangered Species Act prohibits any person subject to the jurisdiction of the United States to take a listed species, where "take" means to harass, harm, pursue, hunt, shoot, wound, kill, trap, capture, or collect, or to attempt to engage in any such conduct. The word "harm" in the definition of "take" means an act which actually kills or injures wildlife. Such an act may include significant habitat modification or degradation where it actually kills or injures wildlife by significantly impairing essential behavioral patterns, including breeding, feeding or sheltering.

(f) Information on the location of threatened and endangered species and their critical habitat can be obtained directly from the offices of the U.S. FWS and NMFS or their world wide web pages at http://www.fws.gov/ or http://www.fws.gov/ipac and http://www.noaa.gov/fisheries.html respectively.

19. Migratory Birds and Bald and Golden Eagles. The permittee is responsible for obtaining any "take" permits required under the U.S. Fish and Wildlife Service's regulations governing compliance with the Migratory Bird Treaty Act or the Bald and Golden Eagle Protection Act. The permittee should contact the appropriate local office of the U.S. Fish and Wildlife Service to determine if such "take" permits are required for a particular activity.

20. Historic Properties. (a) In cases where the district engineer determines that the activity may affect properties listed, or eligible for listing, in the National Register of Historic Places, the activity is not authorized, until the requirements of Section 106 of the National Historic Preservation Act (NHPA) have been satisfied.

(b) Federal permittees should follow their own procedures for complying with the requirements of Section 106 of the National Historic Preservation Act. Federal permittees must provide the district engineer with the appropriate documentation to demonstrate compliance with those requirements. The district engineer will review the documentation and determine whether it is sufficient to address section 106 compliance for the NWP activity, or whether additional section 106 consultation is necessary.

(c) Non-federal permittees must submit a pre-construction notification to the district engineer if the authorized activity may have the potential to cause effects to any historic properties listed on, determined to be eligible for listing on, or potentially eligible for listing on the National Register of Historic Places, including previously unidentified properties. For such activities, the pre-construction notification must state which historic properties may be affected by the proposed work or include a vicinity map indicating the location of the historic properties or the potential for the presence of historic properties. Assistance regarding information on the location of or potential for the presence of historic resources can be sought from the State Historic Preservation Officer or Tribal Historic Preservation Officer, as appropriate, and the National Register of Historic Places (see 33 CFR 330.4(g)). When reviewing pre-construction notifications, district engineers will comply with the current procedures for addressing the requirements of Section 106 of the National Historic Preservation Act. The district engineer shall make a reasonable and good faith effort to carry out appropriate identification efforts, which may include background research, consultation, oral history interviews, sample field investigation, and field survey. Based on the information submitted and these efforts, the district engineer shall determine whether the proposed activity has the potential to cause an effect on the historic properties. Where the non-Federal applicant has identified historic properties on which the activity may have the potential to cause effects and so notified the Corps, the non-Federal applicant shall not begin the activity until notified by the district engineer either that the activity has no potential to cause effects or that consultation under Section 106 of the NHPA has been completed.

(d) The district engineer will notify the prospective permittee within 45 days of receipt of a complete pre-construction notification whether NHPA Section 106 consultation is required. Section 106 consultation is not required when the Corps determines that the activity does not have the potential to cause effects on historic properties (see 36 CFR §800.3(a)). If NHPA section 106 consultation is required and will occur, the district engineer will notify the non-Federal applicant that he or she cannot begin work until Section 106 consultation is completed. If the non-Federal applicant has not heard back from the Corps within 45 days, the applicant must

still wait for notification from the Corps.

(e) Prospective permittees should be aware that section 110k of the NHPA (16 U.S.C. 470h-2(k)) prevents the Corps from granting a permit or other assistance to an applicant who, with intent to avoid the requirements of Section 106 of the NHPA, has intentionally significantly adversely affected a historic property to which the permit would relate, or having legal power to prevent it, allowed such significant adverse effect to occur, unless the Corps, after consultation with the Advisory Council on Historic Preservation (ACHP), determines that circumstances justify granting such assistance despite the adverse effect created or permitted by the applicant. If circumstances justify granting the assistance, the Corps is required to notify the ACHP and provide documentation specifying the circumstances, the degree of damage to the integrity of any historic properties affected, and proposed mitigation. This documentation must include any views obtained from the applicant, SHPO/THPO, appropriate Indian tribes if the undertaking occurs on or affects historic properties on tribal lands or affects properties of interest to those tribes, and other parties known to have a legitimate interest in the impacts to the permitted activity on historic properties.

21. Discovery of Previously Unknown Remains and Artifacts. If you discover any previously unknown historic, cultural or archeological remains and artifacts while accomplishing the activity authorized by this permit, you must immediately notify the district engineer of what you have found, and to the maximum extent practicable, avoid construction activities that may affect the remains and artifacts until the required coordination has been completed. The district engineer will initiate the Federal, Tribal and state coordination required to determine if the items or remains warrant a recovery effort or if the site is eligible for listing in the National Register of Historic Places.

22. Designated Critical Resource Waters. Critical resource waters include, NOAA-managed marine sanctuaries and marine monuments, and National Estuarine Research Reserves. The district engineer may designate, after notice and opportunity for public comment, additional waters officially designated by a state as having particular environmental or ecological significance, such as outstanding national resource waters or state natural heritage sites. The district engineer may also designate additional critical resource waters after notice and opportunity for public comment.

(a) Discharges of dredged or fill material into waters of the United States are not authorized by NWPs 7, 12, 14, 16, 17, 21, 29, 31, 35, 39, 40, 42, 43, 44, 49, 50, 51, and 52 for any activity within, or directly affecting, critical resource waters, including wetlands adjacent to such waters.

(b) For NWPs 3, 8, 10, 13, 15, 18, 19, 22, 23, 25, 27, 28, 30, 33, 34, 36, 37, and 38, notification is required in accordance with general condition 31, for any activity proposed in the designated critical resource waters including wetlands adjacent to those waters. The district engineer may authorize activities under these NWPs only after it is determined that the impacts to the critical resource waters will be no more than minimal.

23. Mitigation. The district engineer will consider the following factors when determining appropriate and practicable mitigation necessary to ensure that adverse effects on the aquatic environment are minimal:

(a) The activity must be designed and constructed to avoid and minimize adverse effects, both temporary and permanent, to waters of the United States to the maximum extent practicable at the project site (i.e., on site).

(b) Mitigation in all its forms (avoiding, minimizing, rectifying, reducing, or compensating for resource losses) will be required to the extent necessary to ensure that the adverse effects to the aquatic environment are minimal.

(c) Compensatory mitigation at a minimum one-for-one ratio will be required for all wetland losses that exceed 1/10-acre and require pre-construction notification, unless the district engineer determines in writing that either some other form of mitigation would be more environmentally appropriate or the adverse effects of the proposed activity are minimal, and provides a project-specific waiver of this requirement. For wetland losses of 1/10-acre or less that require pre-construction notification, the district engineer may determine on a case-by-case basis that compensatory mitigation is required to ensure that the activity results in minimal adverse effects on the aquatic environment. Compensatory mitigation projects provided to offset losses of aquatic resources must comply with the applicable provisions of 33 CFR part 332.

(1) The prospective permittee is responsible for proposing an appropriate compensatory mitigation option if compensatory mitigation is necessary to ensure that the activity results in minimal adverse effects on the aquatic environment.

(2) Since the likelihood of success is greater and the impacts to potentially valuable uplands are reduced, wetland restoration should be the first compensatory mitigation option considered.

(3) If permittee-responsible mitigation is the proposed option, the prospective permittee is responsible for submitting a mitigation plan. A conceptual or detailed mitigation plan may be used by the district engineer to make the decision on the NWP verification request, but a final mitigation plan that addresses the applicable requirements of 33 CFR 332.4(c)(2) – (14) must be approved by the district engineer before the permittee begins work in waters of the United States, unless the district engineer determines that prior approval of the final mitigation plan is not practicable or not necessary to ensure timely completion of the required compensatory mitigation (see 33 CFR 332.3(k)(3)).

(4) If mitigation bank or in-lieu fee program credits are the proposed option, the mitigation plan only needs to address the baseline conditions at the impact site and the number of credits to be provided.

(5) Compensatory mitigation requirements (e.g., resource type and amount to be provided as compensatory mitigation, site protection, ecological performance standards, monitoring requirements) may be addressed through conditions added to the NWP authorization, instead of components of a compensatory mitigation plan.

(d) For losses of streams or other open waters that require pre-construction notification, the district engineer may require compensatory mitigation, such as stream rehabilitation, enhancement, or preservation, to ensure that the activity results in minimal adverse effects on the aquatic environment.

(e) Compensatory mitigation will not be used to increase the acreage losses allowed by the acreage limits of the NWPs. For example, if an NWP has an acreage limit of 1/2-acre, it cannot be used to authorize any project resulting in the loss of greater than 1/2-acre of waters of the United States, even if compensatory mitigation is provided that replaces or restores some of the lost waters. However, compensatory mitigation can and should be used, as necessary, to ensure that a project already meeting the established acreage limits also satisfies the minimal impact requirement associated with the NWPs.

(f) Compensatory mitigation plans for projects in or near streams or other open waters will normally include a requirement for the restoration or establishment, maintenance, and legal protection (e.g., conservation easements) of riparian areas next to open waters. In some cases, riparian areas may be the only compensatory mitigation required. Riparian areas should consist

of native species. The width of the required riparian area will address documented water quality or aquatic habitat loss concerns. Normally, the riparian area will be 25 to 50 feet wide on each side of the stream, but the district engineer may require slightly wider riparian areas to address documented water quality or habitat loss concerns. If it is not possible to establish a riparian area on both sides of a stream, or if the waterbody is a lake or coastal waters, then restoring or establishing a riparian area along a single bank or shoreline may be sufficient. Where both wetlands and open waters exist on the project site, the district engineer will determine the appropriate compensatory mitigation (e.g., riparian areas and/or wetlands compensation) based on what is best for the aquatic environment on a watershed basis. In cases where riparian areas are determined to be the most appropriate form of compensatory mitigation, the district engineer may waive or reduce the requirement to provide wetland compensatory mitigation for wetland losses.

(g) Permittees may propose the use of mitigation banks, in-lieu fee programs, or separate permittee-responsible mitigation. For activities resulting in the loss of marine or estuarine resources, permittee-responsible compensatory mitigation may be environmentally preferable if there are no mitigation banks or in-lieu fee programs in the area that have marine or estuarine credits available for sale or transfer to the permittee. For permittee-responsible mitigation, the special conditions of the NWP verification must clearly indicate the party or parties responsible for the implementation and performance of the compensatory mitigation project, and, if required, its long-term management.

(h) Where certain functions and services of waters of the United States are permanently adversely affected, such as the conversion of a forested or scrub-shrub wetland to a herbaceous wetland in a permanently maintained utility line right-of-way, mitigation may be required to reduce the adverse effects of the project to the minimal level.

24. Safety of Impoundment Structures. To ensure that all impoundment structures are safely designed, the district engineer may require non-Federal applicants to demonstrate that the structures comply with established state dam safety criteria or have been designed by qualified persons. The district engineer may also require documentation that the design has been independently reviewed by similarly qualified persons, and appropriate modifications made to ensure safety.

25. Water Quality. Where States and authorized Tribes, or EPA where applicable, have not previously certified compliance of an NWP with CWA Section 401, individual 401 Water Quality Certification must be obtained or waived (see 33 CFR 330.4(c)). The district engineer or State or Tribe may require additional water quality management measures to ensure that the authorized activity does not result in more than minimal degradation of water quality.

26. Coastal Zone Management. In coastal states where an NWP has not previously received a state coastal zone management consistency concurrence, an individual state coastal zone management consistency concurrence must be obtained, or a presumption of concurrence must occur (see 33 CFR 330.4(d)). The district engineer or a State may require additional measures to ensure that the authorized activity is consistent with state coastal zone management requirements.

27. Regional and Case-By-Case Conditions. The activity must comply with any regional conditions that may have been added by the Division Engineer (see 33 CFR 330.4(e)) and with

any case specific conditions added by the Corps or by the state, Indian Tribe, or U.S. EPA in its section 401 Water Quality Certification, or by the state in its Coastal Zone Management Act consistency determination.

28. Use of Multiple Nationwide Permits. The use of more than one NWP for a single and complete project is prohibited, except when the acreage loss of waters of the United States authorized by the NWPs does not exceed the acreage limit of the NWP with the highest specified acreage limit. For example, if a road crossing over tidal waters is constructed under NWP 14, with associated bank stabilization authorized by NWP 13, the maximum acreage loss of waters of the United States for the total project cannot exceed 1/3-acre.

29. Transfer of Nationwide Permit Verifications. If the permittee sells the property associated with a nationwide permit verification, the permittee may transfer the nationwide permit verification to the new owner by submitting a letter to the appropriate Corps district office to validate the transfer. A copy of the nationwide permit verification must be attached to the letter, and the letter must contain the following statement and signature:

"When the structures or work authorized by this nationwide permit are still in existence at the time the property is transferred, the terms and conditions of this nationwide permit, including any special conditions, will continue to be binding on the new owner(s) of the property. To validate the transfer of this nationwide permit and the associated liabilities associated with compliance with its terms and conditions, have the transferee sign and date below."

_____
(Transferee)

_____
(Date)

30. Compliance Certification. Each permittee who receives an NWP verification letter from the Corps must provide a signed certification documenting completion of the authorized activity and any required compensatory mitigation. The success of any required permittee-responsible mitigation, including the achievement of ecological performance standards, will be addressed separately by the district engineer. The Corps will provide the permittee the certification document with the NWP verification letter. The certification document will include:

(a) A statement that the authorized work was done in accordance with the NWP authorization, including any general, regional, or activity-specific conditions;

(b) A statement that the implementation of any required compensatory mitigation was completed in accordance with the permit conditions. If credits from a mitigation bank or in-lieu fee program are used to satisfy the compensatory mitigation requirements, the certification must include the documentation required by 33 CFR 332.3(l)(3) to confirm that the permittee secured the appropriate number and resource type of credits; and

(c) The signature of the permittee certifying the completion of the work and mitigation.

31. Pre-Construction Notification. (a) Timing. Where required by the terms of the NWP, the prospective permittee must notify the district engineer by submitting a pre-construction notification (PCN) as early as possible. The district engineer must determine if the PCN is complete within 30 calendar days of the date of receipt and, if the PCN is determined to be incomplete, notify the prospective permittee within that 30 day period to request the additional information necessary to make the PCN complete. The request must specify the information needed to make the PCN complete. As a general rule, district engineers will request additional information necessary to make the PCN complete only once. However, if the prospective permittee does not provide all of the requested information, then the district engineer will notify the prospective permittee that the PCN is still incomplete and the PCN review process will not commence until all of the requested information has been received by the district engineer. The prospective permittee shall not begin the activity until either:

(1) He or she is notified in writing by the district engineer that the activity may proceed under the NWP with any special conditions imposed by the district or division engineer; or

(2) 45 calendar days have passed from the district engineer's receipt of the complete PCN and the prospective permittee has not received written notice from the district or division engineer. However, if the permittee was required to notify the Corps pursuant to general condition 18 that listed species or critical habitat might be affected or in the vicinity of the project, or to notify the Corps pursuant to general condition 20 that the activity may have the potential to cause effects to historic properties, the permittee cannot begin the activity until receiving written notification from the Corps that there is "no effect" on listed species or "no potential to cause effects" on historic properties, or that any consultation required under Section 7 of the Endangered Species Act (see 33 CFR 330.4(f)) and/or Section 106 of the National Historic Preservation (see 33 CFR 330.4(g)) has been completed. Also, work cannot begin under NWPs 21, 49, or 50 until the permittee has received written approval from the Corps. If the proposed activity requires a written waiver to exceed specified limits of an NWP, the permittee may not begin the activity until the district engineer issues the waiver. If the district or division engineer notifies the permittee in writing that an individual permit is required within 45 calendar days of receipt of a complete PCN, the permittee cannot begin the activity until an individual permit has been obtained. Subsequently, the permittee's right to proceed under the NWP may be modified, suspended, or revoked only in accordance with the procedure set forth in 33 CFR 330.5(d)(2).

(b) Contents of Pre-Construction Notification: The PCN must be in writing and include the following information:

(1) Name, address and telephone numbers of the prospective permittee;

(2) Location of the proposed project;

(3) A description of the proposed project; the project's purpose; direct and indirect adverse environmental effects the project would cause, including the anticipated amount of loss of water of the United States expected to result from the NWP activity, in acres, linear feet, or other appropriate unit of measure; any other NWP(s), regional general permit(s), or individual permit(s) used or intended to be used to authorize any part of the proposed project or any related activity. The description should be sufficiently detailed to allow the district engineer to determine that the adverse effects of the project will be minimal and to determine the need for compensatory mitigation. Sketches should be provided when necessary to show that the activity complies with the terms of the NWP. (Sketches usually clarify the project and when provided results in a quicker decision. Sketches should contain sufficient detail to provide an illustrative

description of the proposed activity (e.g., a conceptual plan), but do not need to be detailed engineering plans);

(4) The PCN must include a delineation of wetlands, other special aquatic sites, and other waters, such as lakes and ponds, and perennial, intermittent, and ephemeral streams, on the project site. Wetland delineations must be prepared in accordance with the current method required by the Corps. The permittee may ask the Corps to delineate the special aquatic sites and other waters on the project site, but there may be a delay if the Corps does the delineation, especially if the project site is large or contains many waters of the United States. Furthermore, the 45 day period will not start until the delineation has been submitted to or completed by the Corps, as appropriate;

(5) If the proposed activity will result in the loss of greater than 1/10-acre of wetlands and a PCN is required, the prospective permittee must submit a statement describing how the mitigation requirement will be satisfied, or explaining why the adverse effects are minimal and why compensatory mitigation should not be required. As an alternative, the prospective permittee may submit a conceptual or detailed mitigation plan.

(6) If any listed species or designated critical habitat might be affected or is in the vicinity of the project, or if the project is located in designated critical habitat, for non-Federal applicants the PCN must include the name(s) of those endangered or threatened species that might be affected by the proposed work or utilize the designated critical habitat that may be affected by the proposed work. Federal applicants must provide documentation demonstrating compliance with the Endangered Species Act; and

(7) For an activity that may affect a historic property listed on, determined to be eligible for listing on, or potentially eligible for listing on, the National Register of Historic Places, for non-Federal applicants the PCN must state which historic property may be affected by the proposed work or include a vicinity map indicating the location of the historic property. Federal applicants must provide documentation demonstrating compliance with Section 106 of the National Historic Preservation Act.

(c) Form of Pre-Construction Notification: The standard individual permit application form (Form ENG 4345) may be used, but the completed application form must clearly indicate that it is a PCN and must include all of the information required in paragraphs (b)(1) through (7) of this general condition. A letter containing the required information may also be used.

(d) Agency Coordination: (1) The district engineer will consider any comments from Federal and state agencies concerning the proposed activity's compliance with the terms and conditions of the NWPs and the need for mitigation to reduce the project's adverse environmental effects to a minimal level.

(2) For all NWP activities that require pre-construction notification and result in the loss of greater than 1/2-acre of waters of the United States, for NWP 21, 29, 39, 40, 42, 43, 44, 50, 51, and 52 activities that require pre-construction notification and will result in the loss of greater than 300 linear feet of intermittent and ephemeral stream bed, and for all NWP 48 activities that require pre-construction notification, the district engineer will immediately provide (e.g., via e-mail, facsimile transmission, overnight mail, or other expeditious manner) a copy of the complete PCN to the appropriate Federal or state offices (U.S. FWS, state natural resource or water quality agency, EPA, State Historic Preservation Officer (SHPO) or Tribal Historic Preservation Office (THPO), and, if appropriate, the NMFS). With the exception of NWP 37, these agencies will have 10 calendar days from the date the material is transmitted to telephone or fax the district engineer notice that they intend to provide substantive, site-specific comments.

The comments must explain why the agency believes the adverse effects will be more than minimal. If so contacted by an agency, the district engineer will wait an additional 15 calendar days before making a decision on the pre-construction notification. The district engineer will fully consider agency comments received within the specified time frame concerning the proposed activity's compliance with the terms and conditions of the NWPs, including the need for mitigation to ensure the net adverse environmental effects to the aquatic environment of the proposed activity are minimal. The district engineer will provide no response to the resource agency, except as provided below. The district engineer will indicate in the administrative record associated with each pre-construction notification that the resource agencies' concerns were considered. For NWP 37, the emergency watershed protection and rehabilitation activity may proceed immediately in cases where there is an unacceptable hazard to life or a significant loss of property or economic hardship will occur. The district engineer will consider any comments received to decide whether the NWP 37 authorization should be modified, suspended, or revoked in accordance with the procedures at 33 CFR 330.5.

(3) In cases of where the prospective permittee is not a Federal agency, the district engineer will provide a response to NMFS within 30 calendar days of receipt of any Essential Fish Habitat conservation recommendations, as required by Section 305(b)(4)(B) of the Magnuson-Stevens Fishery Conservation and Management Act.

(4) Applicants are encouraged to provide the Corps with either electronic files or multiple copies of pre-construction notifications to expedite agency coordination.

D. District Engineer's Decision

1. In reviewing the PCN for the proposed activity, the district engineer will determine whether the activity authorized by the NWP will result in more than minimal individual or cumulative adverse environmental effects or may be contrary to the public interest. For a linear project, this determination will include an evaluation of the individual crossings to determine whether they individually satisfy the terms and conditions of the NWP(s), as well as the cumulative effects caused by all of the crossings authorized by NWP. If an applicant requests a waiver of the 300 linear foot limit on impacts to intermittent or ephemeral streams or of an otherwise applicable limit, as provided for in NWPs 13, 21, 29, 36, 39, 40, 42, 43, 44, 50, 51 or 52, the district engineer will only grant the waiver upon a written determination that the NWP activity will result in minimal adverse effects. When making minimal effects determinations the district engineer will consider the direct and indirect effects caused by the NWP activity. The district engineer will also consider site specific factors, such as the environmental setting in the vicinity of the NWP activity, the type of resource that will be affected by the NWP activity, the functions provided by the aquatic resources that will be affected by the NWP activity, the degree or magnitude to which the aquatic resources perform those functions, the extent that aquatic resource functions will be lost as a result of the NWP activity (e.g., partial or complete loss), the duration of the adverse effects (temporary or permanent), the importance of the aquatic resource functions to the region (e.g., watershed or ecoregion), and mitigation required by the district engineer. If an appropriate functional assessment method is available and practicable to use, that assessment method may be used by the district engineer to assist in the minimal adverse effects determination. The district engineer may add case-specific special conditions to the NWP authorization to address site-specific environmental concerns.

2. If the proposed activity requires a PCN and will result in a loss of greater than 1/10-acre of wetlands, the prospective permittee should submit a mitigation proposal with the PCN. Applicants may also propose compensatory mitigation for projects with smaller impacts. The district engineer will consider any proposed compensatory mitigation the applicant has included in the proposal in determining whether the net adverse environmental effects to the aquatic environment of the proposed activity are minimal. The compensatory mitigation proposal may be either conceptual or detailed. If the district engineer determines that the activity complies with the terms and conditions of the NWP and that the adverse effects on the aquatic environment are minimal, after considering mitigation, the district engineer will notify the permittee and include any activity-specific conditions in the NWP verification the district engineer deems necessary. Conditions for compensatory mitigation requirements must comply with the appropriate provisions at 33 CFR 332.3(k). The district engineer must approve the final mitigation plan before the permittee commences work in waters of the United States, unless the district engineer determines that prior approval of the final mitigation plan is not practicable or not necessary to ensure timely completion of the required compensatory mitigation. If the prospective permittee elects to submit a compensatory mitigation plan with the PCN, the district engineer will expeditiously review the proposed compensatory mitigation plan. The district engineer must review the proposed compensatory mitigation plan within 45 calendar days of receiving a complete PCN and determine whether the proposed mitigation would ensure no more than minimal adverse effects on the aquatic environment. If the net adverse effects of the project on the aquatic environment (after consideration of the compensatory mitigation proposal) are determined by the district engineer to be minimal, the district engineer will provide a timely written response to the applicant. The response will state that the project can proceed under the terms and conditions of the NWP, including any activity-specific conditions added to the NWP authorization by the district engineer.

3. If the district engineer determines that the adverse effects of the proposed work are more than minimal, then the district engineer will notify the applicant either: (a) that the project does not qualify for authorization under the NWP and instruct the applicant on the procedures to seek authorization under an individual permit; (b) that the project is authorized under the NWP subject to the applicant's submission of a mitigation plan that would reduce the adverse effects on the aquatic environment to the minimal level; or (c) that the project is authorized under the NWP with specific modifications or conditions. Where the district engineer determines that mitigation is required to ensure no more than minimal adverse effects occur to the aquatic environment, the activity will be authorized within the 45-day PCN period, with activity-specific conditions that state the mitigation requirements. The authorization will include the necessary conceptual or detailed mitigation or a requirement that the applicant submit a mitigation plan that would reduce the adverse effects on the aquatic environment to the minimal level. When mitigation is required, no work in waters of the United States may occur until the district engineer has approved a specific mitigation plan or has determined that prior approval of a final mitigation plan is not practicable or not necessary to ensure timely completion of the required compensatory mitigation.

E. Further Information

1. District Engineers have authority to determine if an activity complies with the terms and conditions of an NWP.
2. NWPs do not obviate the need to obtain other federal, state, or local permits, approvals, or authorizations required by law.
3. NWPs do not grant any property rights or exclusive privileges.
4. NWPs do not authorize any injury to the property or rights of others.
5. NWPs do not authorize interference with any existing or proposed Federal project.

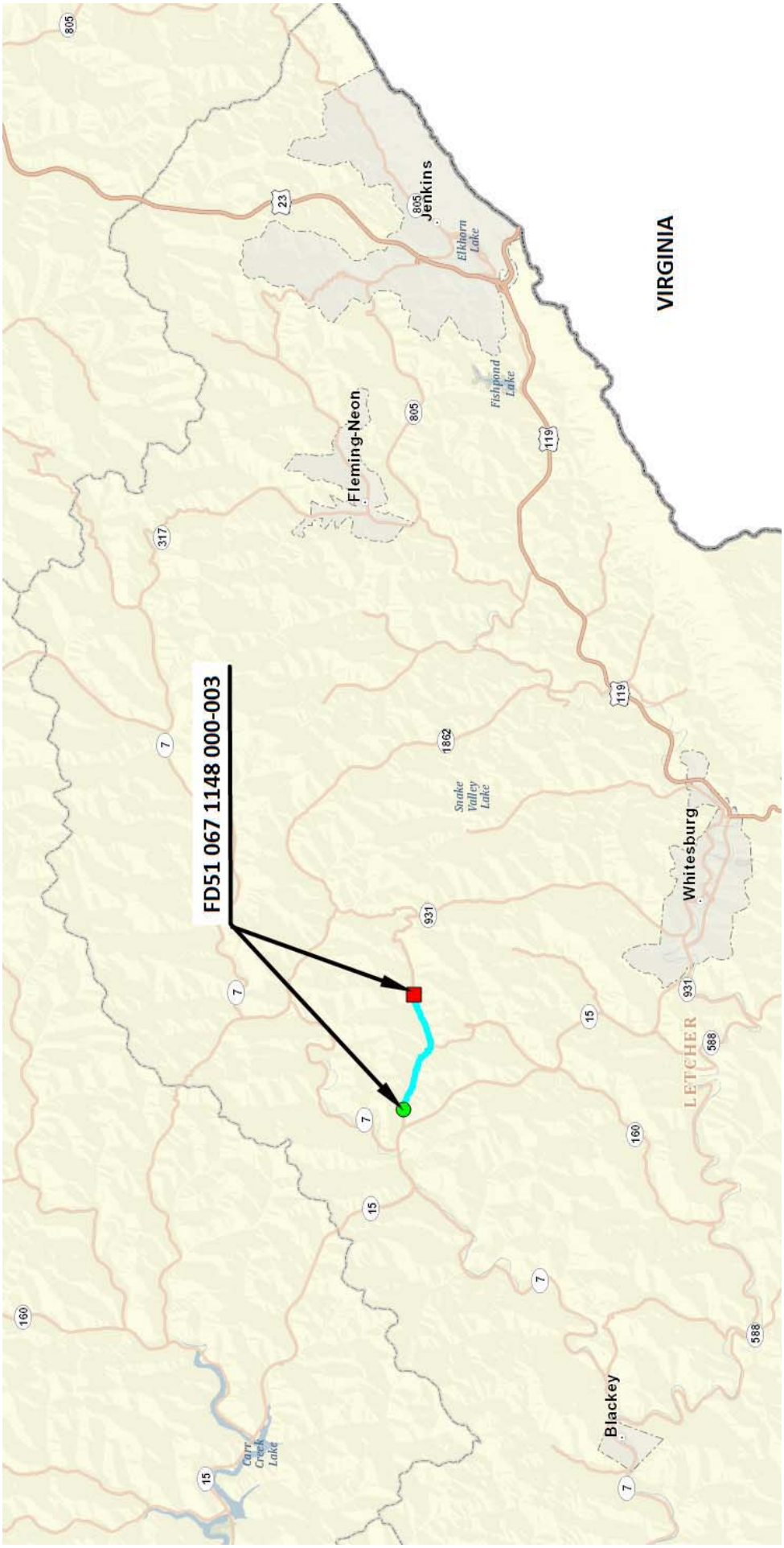
GENERAL WATER QUALITY CERTIFICATION & NATIONWIDE PERMIT
FD51 067 1148 000-003
FD51 067 2034 004-005
FD51 067 3402 000-003

Perform all work in accordance with the attached General Water Quality Certification and Corps of Engineers Nationwide Permit #14. Provide all work crews and subcontractors copies of the attachments and require the attachments to be present at all active worksites when operations are in progress. Present the attachments to regulators and inspectors upon request.

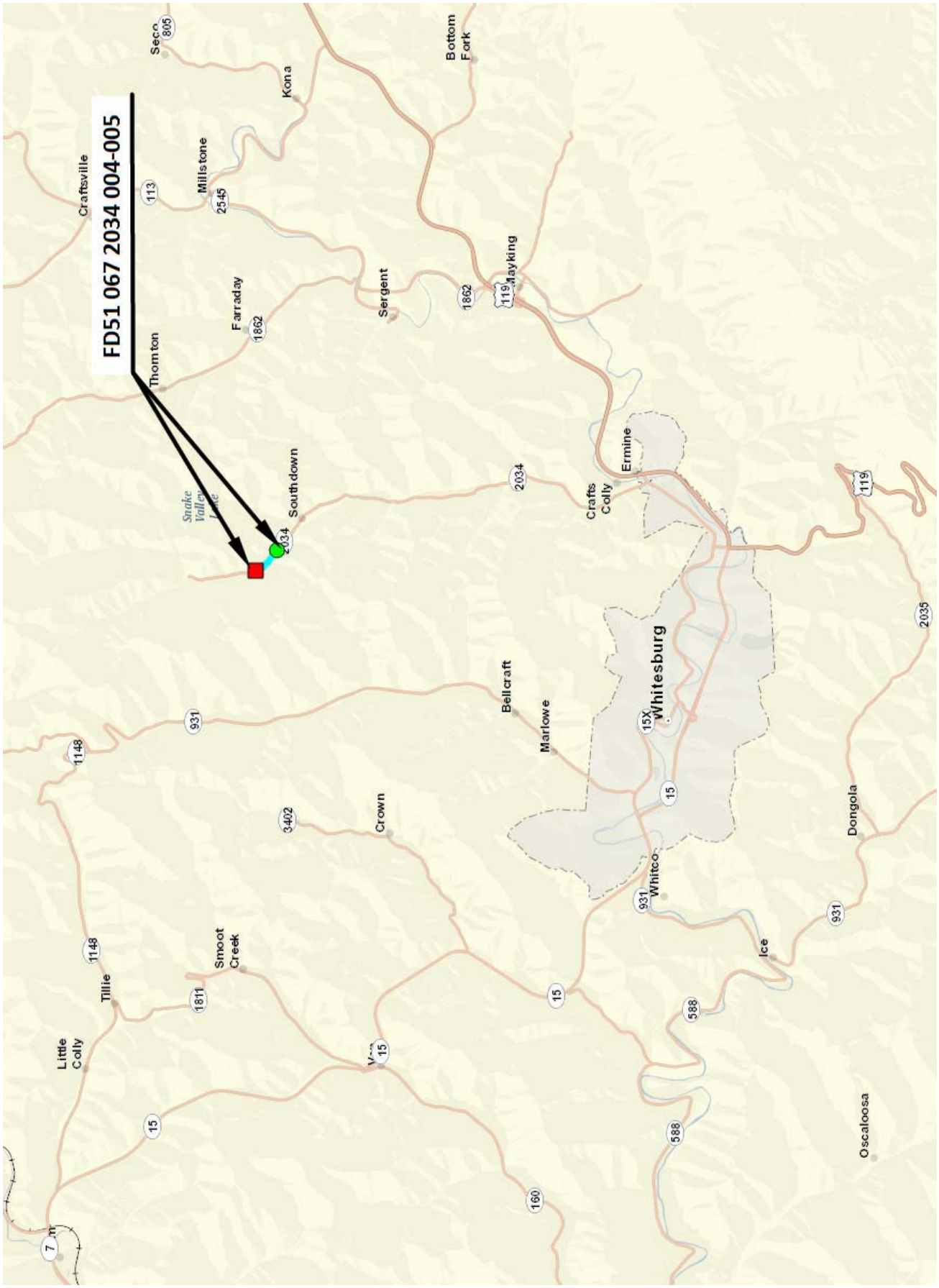
In addition to the requirements of the General Certification and Nationwide Permit, comply with the following requirements:

> If the work requires deviation from the attachments, notify the Engineer and do not proceed without written permission from the Kentucky Division of Water (KDW).
>
> Although not specifically mentioned in the attachments, do not grout rip rap unless the Engineer provides written permission from the KDW.
>
> Do not operate machinery in any waterway. If instream work is unavoidable, obtain concurrence from the Engineer before beginning work.

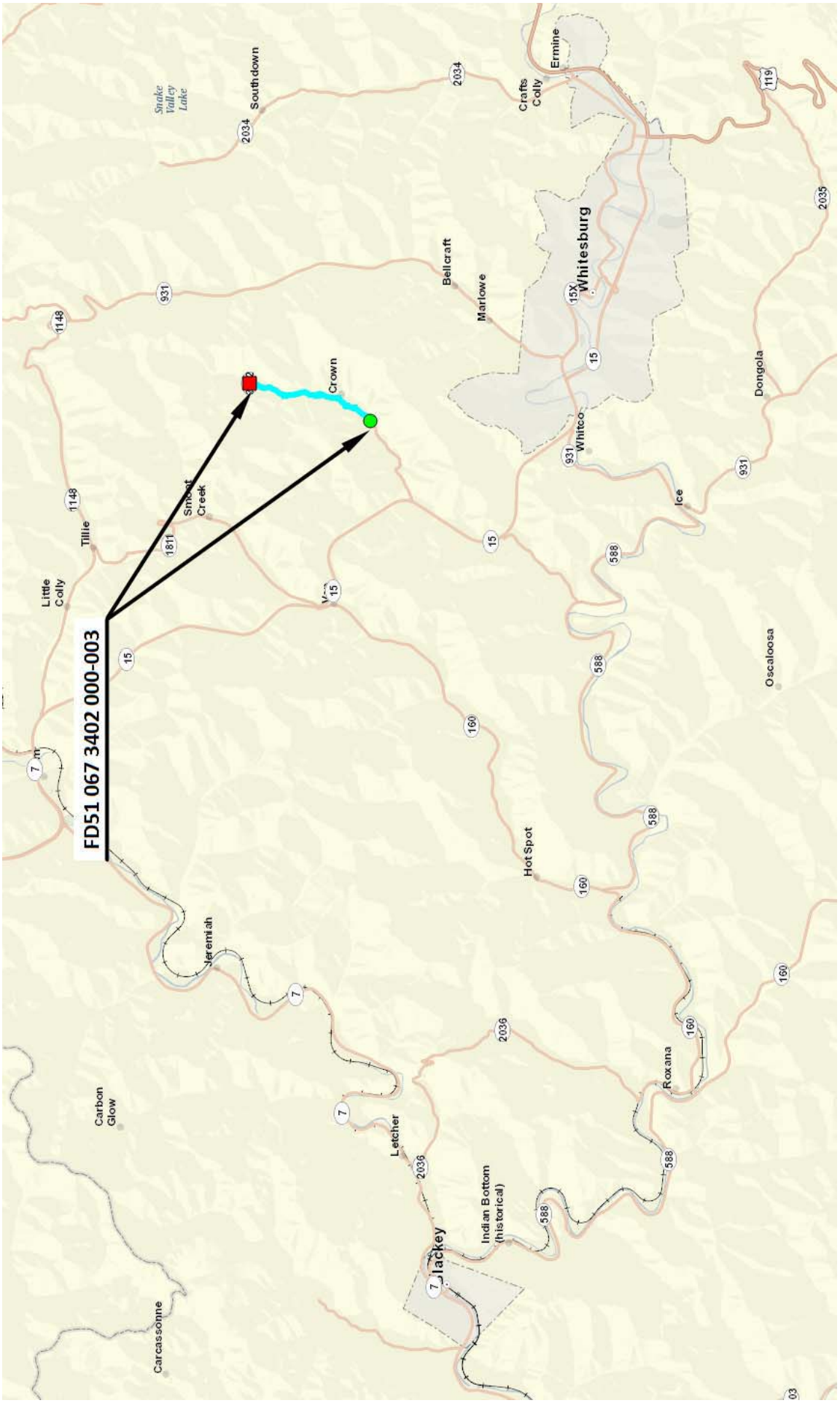
LETCHER COUNTY



LETCHER COUNTY



LETCHER COUNTY



MATERIAL SUMMARY

CONTRACT ID: 162201 **067GR16P067-FD51 PW 241** **MP06711481601**

LITTLE COLLEY ROAD (KY1148) FROM 385 FEET EAST OF LADD DRIVE EXTENDING EAST TO 417 FEET WEST OF HANNA DRIVE FLOOD REPAIR FOR FEMA, A DISTANCE OF 1.99 MILES.

Project Line No	Bid Code	DESCRIPTION	Quantity	Unit
0005	00001	DGA BASE	2.00	TON
0010	01987	DELINEATOR FOR GUARDRAIL BI DIRECTIONAL WHITE	2.00	EACH
0015	02014	BARRICADE-TYPE III	2.00	EACH
0020	02383	REMOVE & RESET GUARDRAIL	37.50	LF
0025	02562	TEMPORARY SIGNS	75.00	SQFT
0030	02599	FABRIC-GEOTEXTILE TYPE IV	20.00	SQYD
0035	02650	MAINTAIN & CONTROL TRAFFIC - KY 1148 SITE 1	1.00	LS
0040	03234	RAILROAD RAILS-DRILLED	125.00	LF
0045	03235	EXCAVATION AND BACKFILL	15.00	CUYD
0050	03236	CRIBBING	75.00	SQFT
0055	00001	DGA BASE	2.00	TON
0060	01987	DELINEATOR FOR GUARDRAIL BI DIRECTIONAL WHITE	1.00	EACH
0065	02014	BARRICADE-TYPE III	2.00	EACH
0070	02383	REMOVE & RESET GUARDRAIL	12.50	LF
0075	02599	FABRIC-GEOTEXTILE TYPE IV	20.00	SQYD
0080	02650	MAINTAIN & CONTROL TRAFFIC - KY 1148 SITE 2	1.00	LS
0085	03234	RAILROAD RAILS-DRILLED	235.00	LF
0090	03235	EXCAVATION AND BACKFILL	10.00	CUYD
0095	03236	CRIBBING	60.00	SQFT
0100	00001	DGA BASE	14.00	TON
0105	01987	DELINEATOR FOR GUARDRAIL BI DIRECTIONAL WHITE	5.00	EACH
0110	02014	BARRICADE-TYPE III	2.00	EACH
0115	02383	REMOVE & RESET GUARDRAIL	162.50	LF
0120	02562	TEMPORARY SIGNS	75.00	SQFT
0125	02599	FABRIC-GEOTEXTILE TYPE IV	150.00	SQYD
0130	02650	MAINTAIN & CONTROL TRAFFIC - KY 1148 SITE 3	1.00	LS
0135	03234	RAILROAD RAILS-DRILLED	985.00	LF
0140	03235	EXCAVATION AND BACKFILL	80.00	CUYD
0145	03236	CRIBBING	525.00	SQFT
0150	00001	DGA BASE	3.00	TON
0155	01987	DELINEATOR FOR GUARDRAIL BI DIRECTIONAL WHITE	2.00	EACH
0160	02014	BARRICADE-TYPE III	2.00	EACH
0165	02383	REMOVE & RESET GUARDRAIL	37.50	LF
0170	02599	FABRIC-GEOTEXTILE TYPE IV	35.00	SQYD
0175	02650	MAINTAIN & CONTROL TRAFFIC - KY 1148 SITE 4	1.00	LS
0180	03234	RAILROAD RAILS-DRILLED	230.00	LF
0185	03235	EXCAVATION AND BACKFILL	20.00	CUYD
0190	03236	CRIBBING	120.00	SQFT
0195	00001	DGA BASE	3.00	TON
0200	01987	DELINEATOR FOR GUARDRAIL BI DIRECTIONAL WHITE	2.00	EACH
0205	02014	BARRICADE-TYPE III	2.00	EACH
0210	02383	REMOVE & RESET GUARDRAIL	37.50	LF
0215	02562	TEMPORARY SIGNS	75.00	SQFT

MATERIAL SUMMARY

Project Line No	Bid Code	DESCRIPTION	Quantity	Unit
0220	02599	FABRIC-GEOTEXTILE TYPE IV	30.00	SQYD
0225	02650	MAINTAIN & CONTROL TRAFFIC - KY 1148 SITE 5	1.00	LS
0230	03234	RAILROAD RAILS-DRILLED	190.00	LF
0235	03235	EXCAVATION AND BACKFILL	25.00	CUYD
0240	03236	CRIBBING	145.00	SQFT
0245	00001	DGA BASE	3.00	TON
0250	01987	DELINEATOR FOR GUARDRAIL BI DIRECTIONAL WHITE	2.00	EACH
0255	02014	BARRICADE-TYPE III	2.00	EACH
0260	02383	REMOVE & RESET GUARDRAIL	37.50	LF
0265	02599	FABRIC-GEOTEXTILE TYPE IV	30.00	SQYD
0270	02650	MAINTAIN & CONTROL TRAFFIC - KY 1148 SITE 6	1.00	LS
0275	03234	RAILROAD RAILS-DRILLED	190.00	LF
0280	03235	EXCAVATION AND BACKFILL	20.00	CUYD
0285	03236	CRIBBING	145.00	SQFT
0290	00001	DGA BASE	4.00	TON
0295	01987	DELINEATOR FOR GUARDRAIL BI DIRECTIONAL WHITE	2.00	EACH
0300	02014	BARRICADE-TYPE III	2.00	EACH
0305	02383	REMOVE & RESET GUARDRAIL	37.50	LF
0310	02562	TEMPORARY SIGNS	75.00	SQFT
0315	02599	FABRIC-GEOTEXTILE TYPE IV	65.00	SQYD
0320	02650	MAINTAIN & CONTROL TRAFFIC - KY 1148 SITE 7	1.00	LS
0325	03234	RAILROAD RAILS-DRILLED	470.00	LF
0330	03235	EXCAVATION AND BACKFILL	60.00	CUYD
0335	03236	CRIBBING	395.00	SQFT
0340	02569	DEMOBILIZATION	1.00	LS

CONTRACT ID: 162201 **067GR16P067-FD51 PW 241** **MP06720341601**

CRAFTS COLLEY ROAD (KY 2034) FROM 635 FEET NORTH OF WEST WIND LANE EXTENDING NORTH TO 216 FEET SOUTH OF RATTLESNAKE ROAD FLOOD REPAIR FOR FEMA, A DISTANCE OF .23 MILES.

Project Line No	Bid Code	DESCRIPTION	Quantity	Unit
0005	00001	DGA BASE	11.00	TON
0010	01987	DELINEATOR FOR GUARDRAIL BI DIRECTIONAL WHITE	3.00	EACH
0015	02014	BARRICADE-TYPE III	2.00	EACH
0020	02383	REMOVE & RESET GUARDRAIL	125.00	LF
0025	02562	TEMPORARY SIGNS	75.00	SQFT
0030	02599	FABRIC-GEOTEXTILE TYPE IV	120.00	SQYD
0035	02650	MAINTAIN & CONTROL TRAFFIC - KY 2034 SITE 1	1.00	LS
0040	03234	RAILROAD RAILS-DRILLED	500.00	LF
0045	03235	EXCAVATION AND BACKFILL	65.00	CUYD
0050	03236	CRIBBING	430.00	SQFT
0055	00001	DGA BASE	5.00	TON
0060	01987	DELINEATOR FOR GUARDRAIL BI DIRECTIONAL WHITE	2.00	EACH
0065	02014	BARRICADE-TYPE III	2.00	EACH
0070	02383	REMOVE & RESET GUARDRAIL	50.00	LF
0075	02599	FABRIC-GEOTEXTILE TYPE IV	55.00	SQYD

MATERIAL SUMMARY

Project Line No	Bid Code	DESCRIPTION	Quantity	Unit
0080	02650	MAINTAIN & CONTROL TRAFFIC - KY 2034 SITE 2	1.00	LS
0085	03234	RAILROAD RAILS-DRILLED	230.00	LF
0090	03235	EXCAVATION AND BACKFILL	30.00	CUYD
0095	03236	CRIBBING	190.00	SQFT
0100	00001	DGA BASE	5.00	TON
0105	01987	DELINEATOR FOR GUARDRAIL BI DIRECTIONAL WHITE	3.00	EACH
0110	02014	BARRICADE-TYPE III	2.00	EACH
0115	02353	INSTALL GUARDRAIL-STEEL W BM-S FACE	75.00	LF
0120	02371	GUARDRAIL END TREATMENT TYPE 7	1.00	EACH
0125	02383	REMOVE & RESET GUARDRAIL	12.50	LF
0130	02396	REMOVE GUARDRAIL END TREATMENT - TYPE 7	1.00	EACH
0135	02599	FABRIC-GEOTEXTILE TYPE IV	60.00	SQYD
0140	02650	MAINTAIN & CONTROL TRAFFIC - KY 2034 SITE 3	1.00	LS
0145	03234	RAILROAD RAILS-DRILLED	230.00	LF
0150	03235	EXCAVATION AND BACKFILL	30.00	CUYD
0155	03236	CRIBBING	180.00	SQFT
0160	00001	DGA BASE	9.00	TON
0165	01987	DELINEATOR FOR GUARDRAIL BI DIRECTIONAL WHITE	3.00	EACH
0170	02014	BARRICADE-TYPE III	2.00	EACH
0175	02353	INSTALL GUARDRAIL-STEEL W BM-S FACE	25.00	LF
0180	02371	GUARDRAIL END TREATMENT TYPE 7	1.00	EACH
0185	02383	REMOVE & RESET GUARDRAIL	62.50	LF
0190	02396	REMOVE GUARDRAIL END TREATMENT - TYPE 7	1.00	EACH
0195	02562	TEMPORARY SIGNS	75.00	SQFT
0200	02599	FABRIC-GEOTEXTILE TYPE IV	90.00	SQYD
0205	02650	MAINTAIN & CONTROL TRAFFIC - KY 2034 SITE 4	1.00	LS
0210	03234	RAILROAD RAILS-DRILLED	380.00	LF
0215	03235	EXCAVATION AND BACKFILL	50.00	CUYD
0220	03236	CRIBBING	325.00	SQFT
0225	02569	DEMOBILIZATION	1.00	LS

MATERIAL SUMMARY

CONTRACT ID: 162201 **067GR16P067-FD51 PW 241** **MP06734021601**

LITTLE DRYFORK ROAD (KY 3402) FROM 180 FEET SOUTH OF CHARITY DRIVE EXTENDING NORTH TO 285 FEET SOUTH OF NETWORK ROAD FLOOD REPAIR FOR FEMA, A DISTANCE OF 1.15 MILES.

Project Line No	Bid Code	DESCRIPTION	Quantity	Unit
0005	00001	DGA BASE	4.00	TON
0010	01987	DELINEATOR FOR GUARDRAIL BI DIRECTIONAL WHITE	2.00	EACH
0015	02014	BARRICADE-TYPE III	2.00	EACH
0020	02353	INSTALL GUARDRAIL-STEEL W BM-S FACE	37.50	LF
0025	02371	GUARDRAIL END TREATMENT TYPE 7	2.00	EACH
0030	02562	TEMPORARY SIGNS	75.00	SQFT
0035	02599	FABRIC-GEOTEXTILE TYPE IV	50.00	SQYD
0040	02650	MAINTAIN & CONTROL TRAFFIC - KY 3402 SITE 1	1.00	LS
0045	03234	RAILROAD RAILS-DRILLED	255.00	LF
0050	03235	EXCAVATION AND BACKFILL	35.00	CUYD
0055	03236	CRIBBING	230.00	SQFT
0060	00001	DGA BASE	5.00	TON
0065	01987	DELINEATOR FOR GUARDRAIL BI DIRECTIONAL WHITE	2.00	EACH
0070	02014	BARRICADE-TYPE III	2.00	EACH
0075	02353	INSTALL GUARDRAIL-STEEL W BM-S FACE	50.00	LF
0080	02371	GUARDRAIL END TREATMENT TYPE 7	2.00	EACH
0085	02562	TEMPORARY SIGNS	75.00	SQFT
0090	02599	FABRIC-GEOTEXTILE TYPE IV	60.00	SQYD
0095	02650	MAINTAIN & CONTROL TRAFFIC - KY 3402 SITE 2	1.00	LS
0100	03234	RAILROAD RAILS-DRILLED	200.00	LF
0105	03235	EXCAVATION AND BACKFILL	45.00	CUYD
0110	03236	CRIBBING	295.00	SQFT
0115	00001	DGA BASE	2.00	TON
0120	01987	DELINEATOR FOR GUARDRAIL BI DIRECTIONAL WHITE	2.00	EACH
0125	02014	BARRICADE-TYPE III	2.00	EACH
0130	02383	REMOVE & RESET GUARDRAIL	37.50	LF
0135	02562	TEMPORARY SIGNS	150.00	SQFT
0140	02599	FABRIC-GEOTEXTILE TYPE IV	20.00	SQYD
0145	02650	MAINTAIN & CONTROL TRAFFIC - KY 3402 SITE 3	1.00	LS
0150	03234	RAILROAD RAILS-DRILLED	125.00	LF
0155	03235	EXCAVATION AND BACKFILL	15.00	CUYD
0160	03236	CRIBBING	90.00	SQFT
0165	02569	DEMOBILIZATION	1.00	LS

SITE LOCATION SUMMARY
067GR16P067-FD51

PROJECT	ROUTE	ROAD NAME	SITE	MILEPOINT BEGIN	MILEPOINT END
FD51 067 1148 000-003	KY 1148	LITTLE COLLEY ROAD	1	0.330	0.334
			2	0.557	0.559
			3	1.153	1.193
			4	1.143	1.149
			5	1.910	1.915
			6	2.207	2.212
			7	2.309	2.315
FD51 067 2034 004-005	KY 2034	CRAFTS COLLEY ROAD	1	4.090	4.112
			2	4.130	4.140
			3	4.166	4.182
			4	4.304	4.320
FD51 067 3402 000-003	KY 3402	LITTLE DRYFORK ROAD	1	0.850	0.856
			2	1.098	1.106
			3	1.997	2.003

BREAK SUMMARY
FD51 067 1148 000-003

Site	Row	Begin Milepoint	End Milepoint	Length (LF)	Cribbing Depth (FT)	Excavation Width (FT)	Number of Rows	Depth to Rock (FT)	Rail Spacing (FT)	Cribbing (SF)	RR Steel (LF)	Excav. & Backfill (CY)	Type IV Geotextile Fabric (SY)	DGA (TON)
1		0.332	0.334	15	5	4	1	14	3	75	125	15	20	2
2		0.557	0.559	15	4	4	1	26	3	60	235	10	20	2
3	A	1.153	1.165	63	4	4	1	14	3	250	460	40	70	
3	B	1.166	1.174	45	4	4	1	14	3	180	335	25	50	14
3	C	1.188	1.192	24	4	4	1	14	3	95	190	15	30	
4		1.143	1.149	30	4	4	1	14	3	120	230	20	35	3
5		1.910	1.914	24	6	4	1	14	3	145	190	25	30	3
6		2.208	2.212	24	6	4	1	14	3	145	190	20	30	3
7		2.309	2.315	33	12	4	1	26	3	395	470	60	65	4
								TOTALS		**1,465**	**2,425**	**230**	**350**	**31**

BREAK SUMMARY
FD51 067 2034 004-005

Site	Row	Begin Milepoint	End Milepoint	Length (LF)	Cribbing Depth (FT)	Excavation Width (FT)	Number of Rows	Depth to Rock (FT)	Rail Spacing (FT)	Cribbing (SF)	RR Steel (LF)	Excav. & Backfill (CY)	Type IV Geotextile Fabric (SY)	DGA (TON)
1		4.091	4.111	108	4	4	1	9	3	430	500	65	120	11
2		4.130	4.140	48	4	4	1	9	3	190	230	30	55	5
3	A	4.166	4.170	21	4	4	1	9	3	85	110	15	30	5
3	B	4.178	4.182	24	4	4	1	9	3	95	120	15	30	
4		4.304	4.320	81	4	4	1	9	3	325	380	50	90	9
								TOTALS		**1,125**	**1,340**	**175**	**325**	**30**

BREAK SUMMARY
FD51 067 3402 000-003

Site	Begin Milepoint	End Milepoint	Length (LF)	Cribbing Depth (FT)	Excavation Width (FT)	Number of Rows	Depth to Rock (FT)	Rail Spacing (FT)	Cribbing (SF)	RR Steel (LF)	Excav. & Backfill (CY)	Type IV Geotextile Fabric (SY)	DGA (TON)
1	0.850	0.856	33	7	4	1	14	3	230	255	35	50	4
2	1.098	1.106	42	7	4	1	9	3	295	200	45	60	5
3	1.999	2.001	15	6	4	1	14	3	90	125	15	20	2
							TOTALS		**615**	**580**	**95**	**130**	**11**

GUARDRAIL SUMMARY
FD51 067 1148 000-003

GUARDRAIL SINGLE FACE INSTALL							REMOVE & RESET GUARDRAIL				
LANE	END TREAT.	BEGIN MILEPOINT	END MILEPOINT	END TREAT.	LIN FEET	REMARKS	LANE	BEGIN MILEPOINT	END MILEPOINT	LIN FEET	REMARKS
							Left	0.330	0.336	37.5	1
							Left	0.557	0.559	12.5	2
							Right	1.153	1.165	75.0	3
							Right	1.166	1.174	50.0	3
							Right	1.187	1.193	37.5	3
							Right	1.143	1.149	37.5	4
							Left	1.910	1.915	37.5	5
							Left	2.207	2.212	37.5	6
							Left	2.309	2.315	37.5	7
		TOTALS			0.0					362.5	

REMARKS

1. Site 1.
2. Site 2
3. Site 3
4. Site 4
5. Site 5
6. Site 6
7. Site 7

GUARDRAIL SUMMARY
FD51 067 2034 004-005

GUARDRAIL SINGLE FACE INSTALL							REMOVE & RESET GUARDRAIL					REMOVE END TREATMENT TY 7		
LANE	END TREAT.	BEGIN MILEPOINT	END MILEPOINT	END TREAT.	LIN FEET	REMARKS	LANE	BEGIN MILEPOINT	END MILEPOINT	LIN FEET	REMARKS	LANE	MILEPOINT	REMARKS
							Right	4.090	4.112	125.0	1			
							Right	4.131	4.140	50.0	2			
							Right	4.166	4.168	12.5	3	Right	4.168	3
Right	Tie to Existing	4.168	4.182	Type 7	75.0	3								
							Right	4.304	4.315	62.5		Right	4.304	4
Right	Tie to Reset	4.315	4.319	Type 7	25.0	4								
		TOTALS			100.0					250.0			2	

REMARKS

1. Site 1.
2. Site 2.
3. Site 3
4. Site 4.

GUARDRAIL SUMMARY
FD51 067 3402 000-003

GUARDRAIL SINGLE FACE INSTALL							REMOVE & RESET GUARDRAIL				
LANE	END TREAT.	BEGIN MILEPOINT	END MILEPOINT	END TREAT.	LIN FEET	REMARKS	LANE	BEGIN MILEPOINT	END MILEPOINT	LIN FEET	REMARKS
Left	type 7	0.850	0.856	Type 7	37.5	1					
Left	Type7	1.098	1.106	Type 7	50.0	2					
							Left	1.997	2.003	37.5	3
		TOTALS			87.5					37.5	

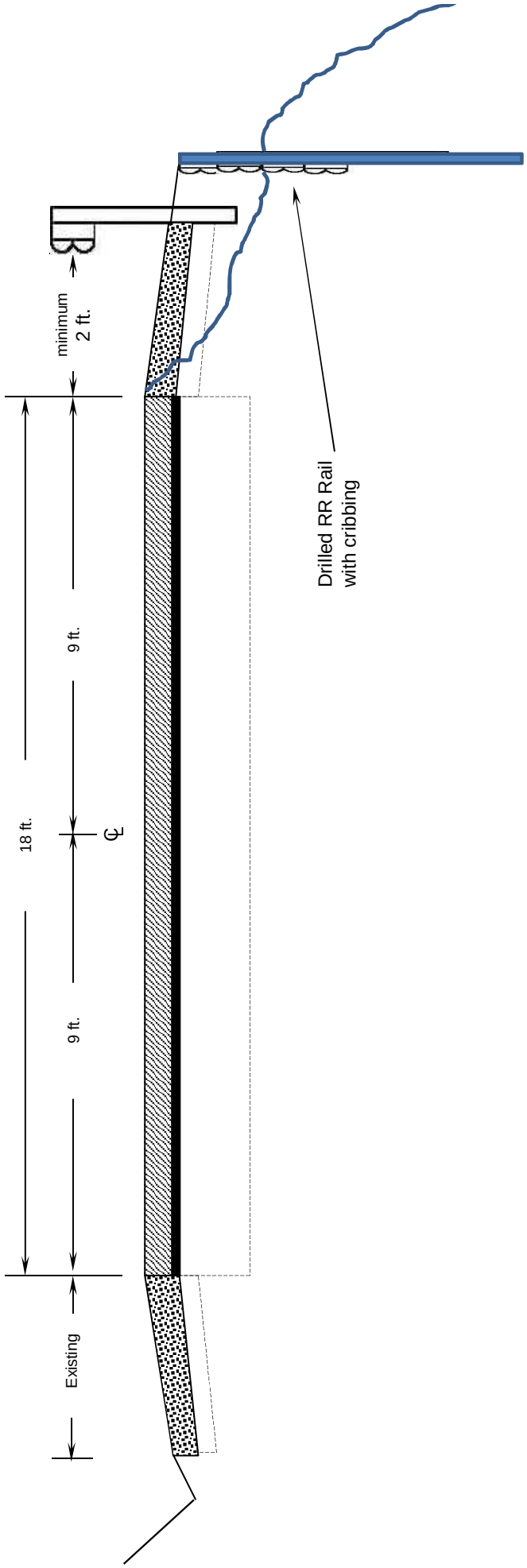
REMARKS

1. Site 1.

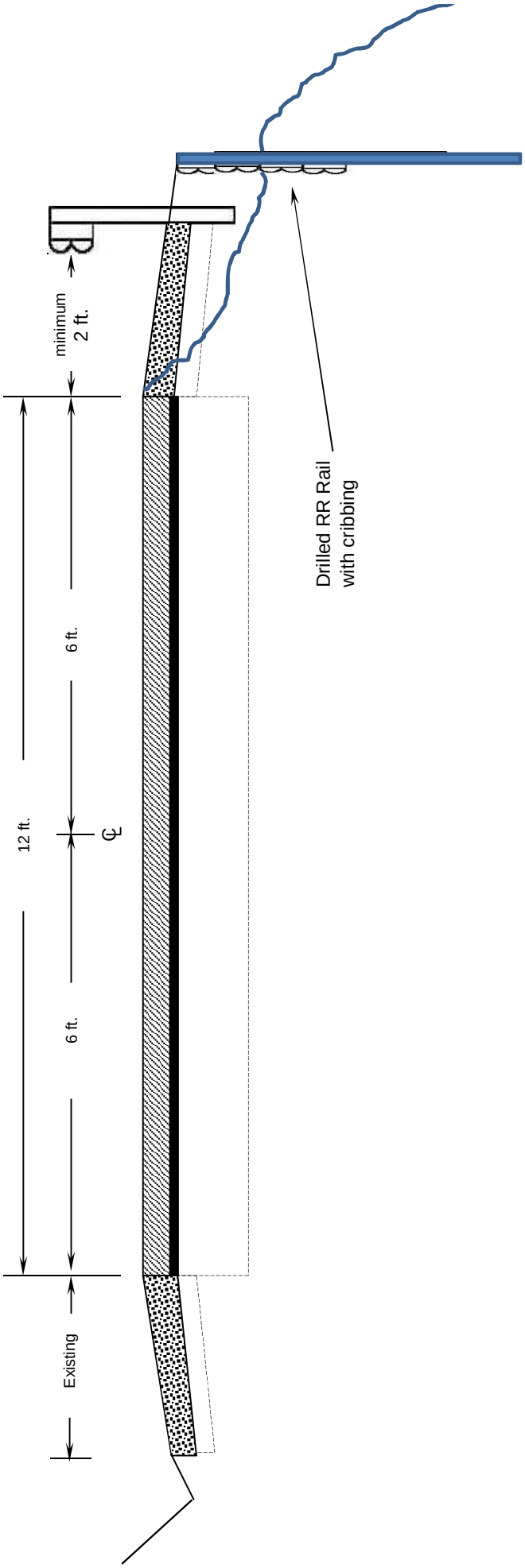
2. Site 2

3. Site 3

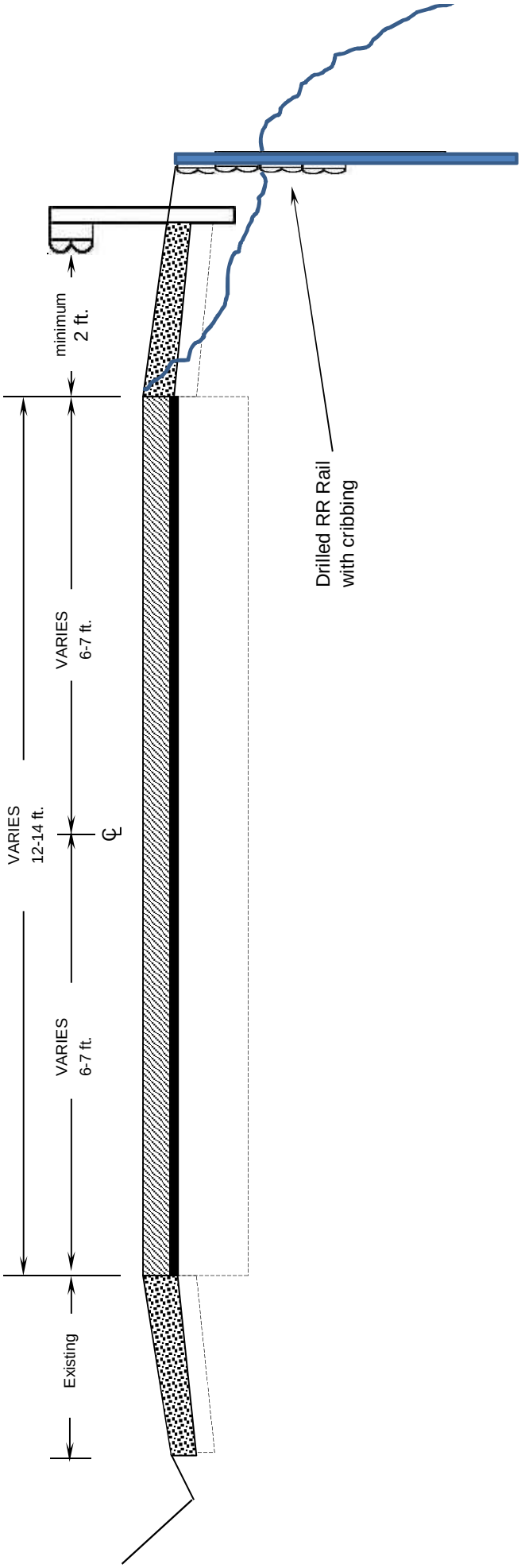
DRILLED RAILROAD RAIL WITH GUARDRAIL TYPICAL SECTION
FD51 067 1148 000-003

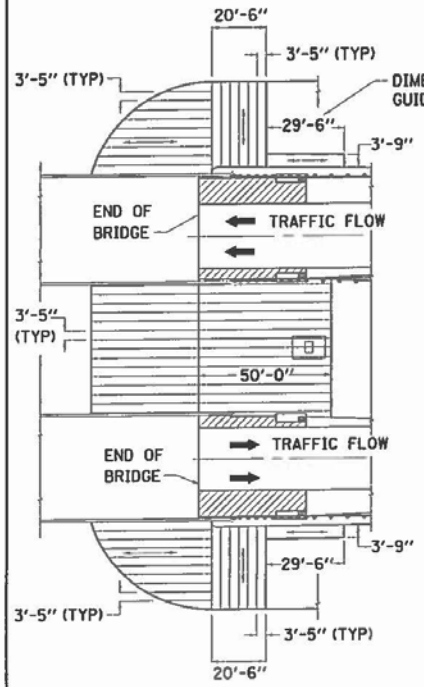


DRILLED RAILROAD RAIL WITH GUARDRAIL TYPICAL SECTION
FD51 067 2034 004-005

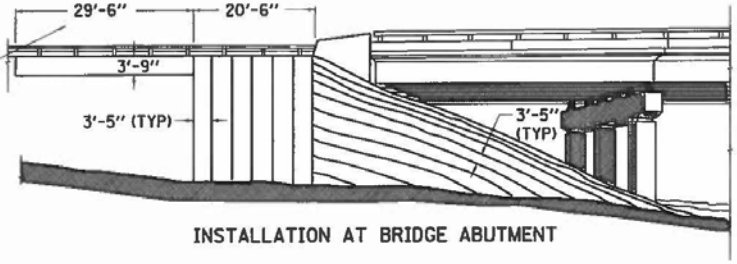


DRILLED RAILROAD RAIL WITH GUARDRAIL TYPICAL SECTION
FD51 067 3402 000-003

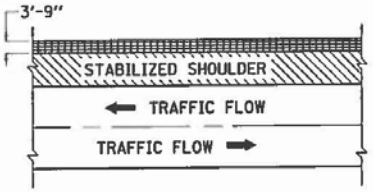




PLAN VIEW
INSTALLATION AT BRIDGE ABUTMENT



INSTALLATION AT BRIDGE ABUTMENT



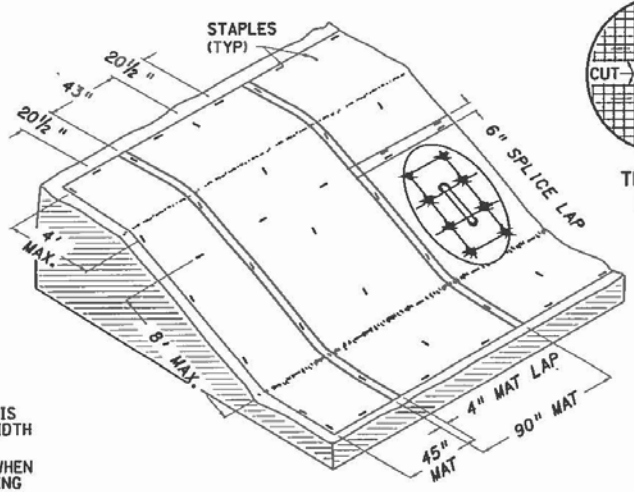
INSTALLATION ADJACENT TO ROADWAY

ANY AREA WITHIN 8'-0" OF THE ROADWAY THAT IS SEEDED SHALL BE PROTECTED WITH ONE 3'-9" WIDTH OF NETTING.

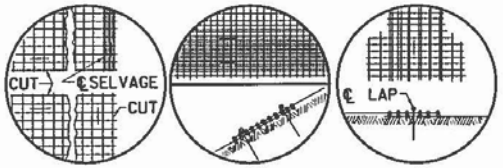
STABILIZED SHOULDERS HAVE BEEN DEPICTED. WHEN THE SHOULDERS ARE EARTH THE STRIP OF NETTING SHALL BE ADJACENT TO THE ROADWAY.

NOTES

1. METHOD OF MEASUREMENT AND BASIS OF PAYMENT SHALL BE IN ACCORDANCE WITH KENTUCKY STANDARD SPECIFICATIONS FOR ROAD AND BRIDGE CONSTRUCTION.
2. BLACK PLASTIC NETTING: MANUFACTURED FROM EXTRUDED RECTANGULAR MESH PLASTIC; A MINIMUM OF 45" WIDE, APPROXIMATELY ¾"X1" MESH OPENINGS; WEIGHING NOT LESS THAN 2.6 LBS. PER 1000 SQ. FT. (±0.5 LB). OTHER NETTING MAY BE USED IF APPROVED BY THE ENGINEER.
3. STAPLES SHALL BE U-SHAPED AND MADE FROM STEEL WIRE OF NO. W1-W1.5 OR W2 AS NEEDED FOR INSTALLATION CONDITIONS. THE STAPLES SHALL HAVE A MINIMUM WIDTH OF 1" AND A MINIMUM LENGTH OF 6".
4. NETTING SHALL BE INSTALLED AT LOCATIONS SHOWN ON THE PLANS OR AS DIRECTED BY THE ENGINEER, ALL IN ACCORDANCE WITH THIS STANDARD DRAWING.
5. STAPLES SHALL BE DRIVEN FLUSH WITH SOIL SURFACE AT ALL EDGES AND LAPS IN ALTERNATE ROWS OF 4'-0" AND 8'-0" MAXIMUM SPACING DOWN THE SLOPE AS DEPICTED BELOW, (BEGIN AND END ALL INSTALLATIONS WITH A ROW OF STAPLES ON 4'-0" MAXIMUM SPACING) WITH THE STAPLE TOPS TURNED AS FOLLOWS: STAPLES ON 4'-0" SPACING, PARALLEL TO MAT LENGTH. STAPLES SHALL BRIDGE A MINIMUM OF TWO STRANDS OF NETTING AND BE LOCATED WITH AT LEAST TWO STRANDS BETWEEN STAPLE AND ALL EDGES. KEEP NETTING TAUT AND IN CONTACT WITH THE MULCH AT ALL POINTS, BUT DO NOT STRETCH.



INSTALLATION ON SLOPES



TERMINAL EDGES | 6" SPLICE LAP | 4" MAT LAP

NETTING

GUARDRAIL DELIVERY VERIFICATION SHEET

CONTRACT ID 162201

DESCRIPTION	UNIT	QUANTITIES FIELD VERIFIED	QUANTITIES DELIVERED
GUARDRAIL STEEL W BEAM	LF		
GUARDRAIL STEEL THRIE BEAM	LF		
GUARDRAIL THRIE BEAM-W BEAM CONNECTOR	EA		
GUARDRAIL TERMINAL SECTION No. 1	EA		
GUARDRAIL TERMINAL SECTION No. 2	EA		
GUARDRAIL TERMINAL SECTION No. 3	EA		
GUARDRAIL THRIE BEAM TERMINAL SECTION	EA		
CRASH CUSHION TYPE VI	EA		
CRASH CUSHION TYPE VII	EA		
CRASH CUSHION TYPE IX/IX-A	EA		
GUARDRAIL END TREATMENT TYPE 1	EA		
GUARDRAIL END TREATMENT TYPE 2A	EA		
GUARDRAIL END TREATMENT TYPE 3	EA		
GUARDRAIL END TREATMENT TYPE 4A	EA		
GUARDRAIL END TREATMENT TYPE 7	EA		
GUARDRAIL CONNECTOR TO BRIDGE END TYPE A/A-1	EA		
GUARDRAIL CONNECTOR TO BRIDGE END TYPE E/E-1	EA		
GUARDRAIL CONNECTOR TO BRIDGE END TYPE C	EA		
GUARDRAIL CONNECTOR TO BRIDGE END TYPE D	EA		
GUARDRAIL CONNECTOR TO CONC MED PIER	EA		
GUARDRAIL CONNECTOR TO CONC SHLDR PIER	EA		
GUARDRAIL POSTS-STEEL	EA		
GUARDRAIL OFFSET BLOCK TYPE 4	EA		
GUARDRAIL OFFSET BLOCK STEEL	EA		
GUARDRAIL OFFSET BLOCK THRIE BEAM	EA		
GUARDRAIL BACK-UP PLATE W BEAM	EA		
GUARDRAIL BACK-UP PLATE THRIE BEAM	EA		
GUARDRAIL NUTS, BOLTS, & WASHERS	BAG		

NOTES:

1. Dispose of concrete foundations and timber posts off the Right-of-Way at sites obtained by the Contractor at no additional cost to the Department.
2. Salvage and deliver removed guardrail system components, other than concrete foundations and timber posts, to the Department's Letcher County maintenance facility.
3. Prior to removing the materials from the project site, obtain the Contractor's and Engineer's representativ's signatures.
4. Upon delivery, obtain the Letcher County Facility's representative's signature and submit this completed form to the Engineer.
5. The Department will not measure removed guardrail components for payment without completed delivery verification sheet(s).

	PRINTED NAME	SIGNATURE	DATE
SECTIUON ENGINEER'S REPRESENTATIVE			
CONTRACTOR'S REPRESENTATIVE			
LETCHER COUNTY FACILITY'S REPRESENTATIVE			

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 2016.*

Supplemental Specifications to the Standard Specifications for Road and Bridge Construction, 2012 Edition Effective with the April 29, 2016 Letting

Subsection: **Revision:**	101.03 DEFINITIONS Add the following Definitions to this section: **Superpave Mix Design Technologist (SMDT)** - An inspector qualified by the KYTC to submit, adjust, or approve asphalt mix designs. **Superpave Plant Technologist (SPT)** - An inspector qualified by the KYTC to perform routine inspection and process control, acceptance, or verification testing on asphalt mixtures.
Subsection: **Revision:**	102.15 Process Agent. Replace the 1st paragraph with the following: Every corporation doing business with the Department shall submit evidence of compliance with KRS Sections 14A.4-010, 271B.11-010, 271B.11-070, 271B.11-080, 271B.5-010 and 271B.16-220, and file with the Department the name and address of the process agent upon whom process may be served.
Subsection: **Revision:**	105.13 Claims Resolution Process. Delete all references to TC 63-34 and TC 63-44 from the subsection as these forms are no longer available through the forms library and are forms generated within the AASHTO SiteManager software.
Subsection: **Revision:**	108.01 Subcontracting of Contract. Replace the section with the following: Do not subcontract, sell, transfer, assign, or otherwise dispose of the Contract or any portion of the Contract or Contracts, or of the right, title, or interest therein, without the Engineer's written consent. If the Contractor chooses to subcontract any portion of the Contract, a written request to sublet work must be submitted on the Subcontract Request (TC 63-35) form for the Engineer's approval. When directed by the Engineer, submit a certified copy of the actual subcontract agreement executed between the parties. The Engineer will allow the Contractor to subcontract a portion, but the Contractor must perform with his own organization work amounting to no less than 30 percent of the total Contract cost. The Engineer will not allow any subcontractor to exceed the percentage to be performed by the Contractor and will require the Contractor to maintain a supervisory role over the entire project. Do not allow any subcontractor to further subcontract any portion of the work without obtaining written consent from the Engineer. When the Engineer gives such consent, the first tier subcontractor may further subcontract a portion of his work not to exceed 50 percent of the work originally subcontracted to him by the Contractor. Do not allow any second tier subcontractor to subcontract any portion of the work. Extra work performed by subcontractors in accordance with Section 109 will not be utilized in the computation of total dollar amount subcontracted. Subcontract percentages are based upon the original contract amount. Payment to subcontractors for satisfactory performance of their work or materials supplied must be made within 7 calendar days from receipt of payment from the Engineer. Upon request by the Engineer, provide proof that payment has been made to the subcontractor within the 7 calendar days. Progress payments may be withheld for failure to comply with this request

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	The Engineer's written consent to subcontract, assign, or otherwise dispose of any portion of the Contract does not, under any circumstances, relieve the Contractor or the surety of their respective liabilities and obligations under the Contract. The Engineer will make transactions only with the Contractor. The Engineer will recognize subcontractors only in the similar capacity of employees or workers of the Contractor who are subject to the same requirements as to character and competence as specified in Subsection 108.06. Lease agreements are acceptable on Department projects. No additional paperwork is needed when equipment is rented from a commercial rental company unless the leased equipment comes with an operator. In these circumstances, payroll records for the operator of the leased equipment must be maintained and submitted by the contractor in accordance with Department policy. Lease agreements between contractors that involve equipment only will require the submittal of a TC 63-71 Department Equipment Rental Form. If a Contractor is found to be in violation of these requirements, the Engineer reserves the right to withhold payment for the work which was performed in violation of these requirements. This provision does not include the lease or use of equipment from a corporation or company wholly owned by the Contractor. The Contractor shall not use equipment in the performance of the Contract to which title is not held by the Contractor or an approved subcontractor without a submitted lease agreement. If a public official has provided a documented Declaration of Emergency, then the Engineer may verbally waive the requirement of submitting a TC 63-71 Department Equipment Rental Form until the situation has ended. After the emergency situation ends, immediately remove the equipment from the project or submit a completed TC 63-71 Department Equipment Rental Form to the Engineer.
Subsection: **Revision:**	108.03 Preconstruction Conference. Replace 8) Staking with the following: 8) Staking (designated by a Professional Engineer or Land Surveyor licensed in the Commonwealth of Kentucky.
Subsection: **Revision:**	109.07.02 Fuel. Revise item Crushed Aggregate Used for Embankment Stabilization to the following: Crushed Aggregate Used for Stabilization of Unsuitable Materials Used for Embankment Stabilization
	Delete the following item from the table. ~~Crushed Sandstone Base (Cement Treated)~~
Subsection: **Revision:**	110.02 Demobilization. Replace the first part of the first sentence of the second paragraph with the following: Perform all work and operations necessary to accomplish final clean-up as specified in the first paragraph of Subsection 105.12;
Subsection: **Revision:**	112.03.12 Project Traffic Coordinator (PTC). Replace the last paragraph of this subsection with the following: Ensure the designated PTC has sufficient skill and experience to properly perform the task assigned and has successfully completed the qualification courses.

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Subsection: **Revision:**	112.04.18 Diversions (By-Pass Detours). Insert the following sentence after the 2nd sentence of this subsection. The Department will not measure temporary drainage structures for payment when the contract documents provide the required drainage opening that must be maintained with the diversion. The temporary drainage structures shall be incidental to the construction of the diversion. If the contract documents fail to provide the required drainage opening needed for the diversion, the cost of the temporary drainage structure will be handled as extra work in accordance with section 109.04.
Subsection: **Revision:**	201.03.01 Contractor Staking. Replace the first paragraph with the following: Perform all necessary surveying under the general supervision of a Professional Engineer or Land Surveyor licensed in the Commonwealth of Kentucky.
Subsection: **Revision:**	201.04.01 Contractor Staking. Replace the last sentence of the paragraph with the following: Complete the general layout of the project under the supervision of a Professional Engineer or Land Surveyor licensed in the Commonwealth of Kentucky.
Subsection: **Revision:**	206.04.01 Embankment-in-Place. Replace the fourth paragraph with the following: The Department will not measure **suitable** excavation included in the original plans that is disposed of for payment and will consider it incidental to Embankment-in-Place.
Subsection: **Revision:**	208.02.01 Cement. Replace paragraph with the following: Select Type I or Type II cement conforming to Section 801. Use the same type cement throughout the work.
Subsection: **Revision:**	208.03.06 Curing and Protection. Replace the fourth paragraph with the following: Do not allow traffic or equipment on the finished surface until the stabilized subgrade has cured for a total of 7-days with an ambient air temperature above 40 degrees Fahrenheit. A curing day consists of a continuous 24-hour period in which the ambient air temperature does not fall below 40 degrees Fahrenheit. Curing days will not be calculated consecutively, but must total seven (7) , 24-hour days with the ambient air temperature remaining at or above 40 degrees Fahrenheit before traffic or equipment will be allowed to traverse the stabilized subgrade. The Department may allow a shortened curing period when the Contractor requests. The Contractor shall give the Department at least 3 day notice of the request for a shortened curing period. The Department will require a minimum of 3 curing days after final compaction. The Contractor shall furnish cores to the treated depth of the roadbed at 500 feet intervals for each lane when a shortened curing time is requested. The Department will test cores using an unconfined compression test. Roadbed cores must achieve a minimum strength requirement of 80 psi.
Subsection: **Revision:**	208.03.06 Curing and Protection. Replace paragraph eight with the following: At no expense to the Department, repair any damage to the subgrade caused by freezing.

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Subsection:	212.03.03 Permanent Seeding and Protection.
Part:	A) Seed Mixtures for Permanent Seeding.
Revision:	Revise **Seed Mix Type I** to the mixture shown below: 50% Kentucky 31 Tall Fescue (Festuca arundinacea) 35% Hard Fescue (Festuca (Festuca longifolia) 10% Ryegrass, Perennial (Lolium perenne) 5% White Dutch Clover (Trifolium repens)
Subsection:	212.03.03 Permanent Seeding and Protection.
Part:	A) Seed Mixtures for Permanent Seeding.
Number:	2)
Revision:	Replace the paragraph with the following: Permanent Seeding on Slopes Greater than 3:1 in Highway Districts 4, 5, 6, and 7. Apply seed mix Type II at a minimum application rate of 100 pounds per acre. If adjacent to a golf course replace the crown vetch with Kentucky 31 Tall Fescue.
Subsection:	212.03.03 Permanent Seeding and Protection.
Part:	A) Seed Mixtures for Permanent Seeding.
Number:	3)
Revision:	Replace the paragraph with the following: Permanent Seeding on Slopes Greater than 3:1 in Highway Districts 1, 2, 3, 8, 9, 10, 11, and 12. Apply seed mix Type III at a minimum application rate of 100 pounds per acre. If adjacent to crop land or golf course, replace the Sericea Lespedeza with Kentucky 31 Fescue.
Subsection:	212.03.03 Permanent Seeding and Protection.
Part:	B) Procedures for Permanent Seeding.
Revision:	Delete the first sentence of the section.
Subsection:	212.03.03 Permanent Seeding and Protection.
Part:	B) Procedures for Permanent Seeding.
Revision:	Replace the second and third sentence of the section with the following: Prepare a seedbed and apply an initial fertilizer that contains a minimum of 100 pounds of nitrogen, 100 pounds of phosphate, and 100 pounds of potash per acre. Apply agricultural limestone to the seedbed when the Engineer determines it is needed. When required, place agricultural limestone at a rate of 3 tons per acre.
Subsection:	212.03.03 Permanent Seeding and Protection.
Part:	D) Top Dressing.
Revision:	Change the title of part to D) Fertilizer.
Subsection:	212.03.03 Permanent Seeding and Protection.
Part:	D) Fertilizer.
Revision:	Replace the first paragraph with the following: Apply fertilizer at the beginning of the seeding operation and after vegetation is established. Use fertilizer delivered to the project in bags or bulk. Apply initial fertilizer to all areas prior to the seeding or sodding operation at the application rate specified in 212.03.03 B). Apply 20-10-10 fertilizer to the areas after vegetation has been established at a rate of 11.5 pounds per 1,000 square feet. Obtain approval from the Engineer prior to the 2nd fertilizer application. Reapply fertilizer to any area that has a streaked appearance. The reapplication shall be at no additional cost to the Department. Re-establish any vegetation severely damaged or destroyed because of an excessive application of fertilizer at no cost to the Department.
Subsection:	212.03.03 Permanent Seeding and Protection.
Part:	D) Fertilizer.
Revision:	Delete the second paragraph.

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Subsection: **Revision:**	212.04.04 Agricultural Limestone. Replace the entire section with the following: The Department will measure the quantity of agricultural limestone in tons.
Subsection: **Revision:**	212.04.05 Fertilizer. Replace the entire section with the following: The Department will measure fertilizer used in the seeding or sodding operations for payment. The Department will measure the quantity by tons.
Subsection: **Revision:**	212.05 PAYMENT. Delete the following item code: Code Pay Item Pay Unit 05966 Topdressing Fertilizer Ton
Subsection: **Revision:**	212.05 PAYMENT. Add the following pay items: Code Pay Item Pay Unit 05963 Initial Fertilizer Ton 05964 20-10-10 Fertilizer Ton 05992 Agricultural Limestone Ton
Subsection: **Revision:**	213.03.02 Progress Requirements. Replace the third paragraph with the following: After exposing areas of erodible material, make every effort to stabilize and protect the areas as quickly as possible. Permanently seed and mulch all areas at final grade within 14 days. Temporary stabilization practices on those portions of the project where construction activities have temporarily ceased shall be initiated within 14 days of the date of activity cessation. The Engineer will suspend grading operations for instances where the Contractor fails to sustain erosion control measures to effectively control erosion and to prevent water pollution in accordance with the KPDES Permit. In addition, the Engineer will withhold monies due on current estimates until corrective work has been initiated and is continuously progressing to remediate noted deficiencies. Additionally, should noted deficiencies not be adequately addressed to the satisfaction of the Engineer within 7 calendar days of receipt of written notification of deficiencies, the Department will apply a penalty equal to the daily liquidated damages rate until all aspects of the work have been completed.
Subsection: **Part:** **Revision:**	213.03.05 Temporary Control Measures. E) Temporary Seeding and Protection. Delete the second sentence of the first paragraph.
Subsection: **Table:** **Revision:**	304.02.01 Physical Properties. Required Geogrid Properties Replace all references to Test Method "GRI-GG2-87" with ASTM D 7737.
Subsection: **Part:** **Revision:**	402.03.02 Contractor Quality Control and Department Acceptance. B) Sampling. Replace the second sentence with the following: The Department will determine when to obtain the quality control samples using the random-number feature of the mix design submittal and approval spreadsheet. The Department will randomly determine when to obtain the verification samples required in Subsections 402.03.03 and 402.03.04 using the Asphalt Mixture Sample Random Tonnage Generator.

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Subsection: **Part:** **Number:** **Revision:**	402.03.02 Contractor Quality Control and Department Acceptance. D) Testing Responsibilities. 3) VMA. Add the following paragraph below Number 3) VMA: Retain the AV/VMA specimens and one additional corresponding G_{mm} sample for 5 working days for mixture verification testing by the Department. For Specialty Mixtures, retain a mixture sample for 5 working days for mixture verification testing by the Department. When the Department's test results do not verify that the Contractor's quality control test results are within the acceptable tolerances according to Subsection 402.03.03, retain the samples and specimens from the affected sublot(s) for the duration of the project.
Subsection: **Part:** **Number:** **Revision:**	402.03.02 Contractor Quality Control and Department Acceptance. D) Testing Responsibilities. 4) Density. Replace the second sentence of the Option A paragraph with the following: Perform coring by the end of the following work day.
Subsection: **Part:** **Number:** **Revision:**	402.03.02 Contractor Quality Control and Department Acceptance. D) Testing Responsibilities. 5) Gradation. Delete the second paragraph.
Subsection: **Part:** **Number:** **Revision:**	402.03.02 Contractor Quality Control and Department Acceptance. H) Unsatisfactory Work. 1) Based on Lab Data. Replace the second paragraph with the following: When the Engineer determines that safety concerns or other considerations prohibit an immediate shutdown, continue work and the Department will make an evaluation of acceptability according to Subsection 402.03.05.
Subsection: **Revision:**	402.03.03 Verification. Replace the first paragraph with the following: **402.03.03 Mixture Verification.** For volumetric properties, the Department will perform a minimum of one verification test for AC, AV, and VMA according to the corresponding procedures as given in Subsection 402.03.02. The Department will randomly determine when to obtain the verification sample using the Asphalt Mixture Sample Random Tonnage Generator. For specialty mixtures, the Department will perform one AC and one gradation determination per lot according to the corresponding procedures as given in Subsection 402.03.02. However, Department personnel will not perform AC determinations according to KM 64-405. The Contractor will obtain a quality control sample at the same time the Department obtains the mixture verification sample and perform testing according to the procedures given in Subsection 402.03.02. If the Contractor's quality control sample is verified by the Department's test results within the tolerances provided below, the Contractor's sample will serve as the quality control sample for the affected sublot. The Department may perform the mixture verification test on the Contractor's equipment or on the Department's equipment.
Subsection: **Part:** **Revision:**	402.03.03 Verification. A) Evaluation of Sublot(s) Verified by Department. Replace the third sentence of the second paragraph with the following: When the paired *t* -test indicates that the Contractor's data and Department's data are possibly not from the same population, the Department will investigate the cause for the difference according to Subsection 402.03.05 and implement corrective measures as the Engineer deems appropriate.

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Subsection: **Part:** **Revision:**	402.03.03 Verification. B) Evaluation of Sublots Not Verified by Department. Replace the third sentence of the first paragraph with the following: When differences between test results are not within the tolerances listed below, the Department will resolve the discrepancy according to Subsection 402.03.05.
Subsection: **Part:** **Revision:**	402.03.03 Verification. B) Evaluation of Sublots Not Verified by Department. Replace the third sentence of the second paragraph with the following: When the F-test or t-test indicates that the Contractor's data and Department's data are possibly not from the same population, the Department will investigate the cause for the difference according to Subsection 402.03.05 and implement corrective measures as the Engineer deems appropriate.
Subsection: **Part:** **Revision:**	402.03.03 Verification. C) Test Data Patterns. Replace the second sentence with the following: When patterns indicate substantial differences between the verified and non-verified sublots, the Department will perform further comparative testing according to subsection 402.03.05.
Subsection: **Revision:**	402.03 CONSTRUCTION. Add the following subsection: **402.03.04 Testing Equipment and Technician Verification.** For mixtures with a minimum quantity of 20,000 tons and for every 20,000 tons thereafter, the Department will obtain an additional verification sample at random using the Asphalt Mixture Sample Random Tonnage Generator in order to verify the integrity of the Contractor's and Department's laboratory testing equipment and technicians. The Department will obtain a mixture sample of at least 150 lb at the asphalt mixing plant according to KM 64-425 and split it according to AASHTO R 47. The Department will retain one split portion of the sample and provide the other portion to the Contractor. At a later time convenient to both parties, the Department and Contractor will simultaneously reheat the sample to the specified compaction temperature and test the mixture for AV and VMA using separate laboratory equipment according to the corresponding procedures given in Subsection 402.03.02. The Department will evaluate the differences in test results between the two laboratories. When the difference between the results for AV or VMA is not within ± 2.0 percent, the Department will investigate and resolve the discrepancy according to Subsection 402.03.05.
Subsection: **Revision:**	402.03.04 Dispute Resolution. Change the subsection number to 402.03.05.
Subsection: **Part:** **Table:** **Revision:**	402.05 PAYMENT. Lot Pay Adjustment Schedule Compaction Option A Base and Binder Mixtures AC Replace the Deviation from JMF(%) that corresponds to a Pay Value of 0.95 to ±0.6.
Subsection: **Revision:**	403.01 Description. Replace the sentence three and four of the first paragraph with the following: Provide a Superpave Plant Technologist (SPT) or Superpave Mix Design Technician (SMDT) qualified by the Laboratories' Quality Acceptance program. Be available to address all Quality Control concerns arising during work performed under section 403.
Subsection: **Revision:**	403.02.10 Material Transfer Vehicle (MTV). Replace the first sentence with the following: In addition to the equipment specified above, provide a MTV with the following minimum characteristics:

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Subsection: **Part:** **Number:** **Revision:**	403.03.03 Preparation of Mixture C) Mix Design Criteria 2) Revise part 2) to read as follows: Selection of Optimum AC. Normally, the Department will approve the AC at an air-void content of 4.0 percent. The Engineer may assign an AC corresponding to other air-void levels as deemed appropriate. Ensure the optimum AC is a minimum of 5.2 percent by weight of the total mixture for all 0.5-inch nominal surface mixtures and 5.5 percent by weight of the total mixture for all 0.38-inch nominal surface mixtures.
Subsection: **Revision:**	412.02.09 Material Transfer Vehicle (MTV). Replace the paragraph with the following: Provide and utilize a MTV with the minimum characteristics outlined in section 403.02.10.
Subsection: **Revision:**	412.03.07 Placement and Compaction. Replace the first paragraph with the following: Use a MTV when placing SMA mixture in the driving lanes. The MTV is not required on ramps and/or shoulders unless specified in the contract. When the Engineer determines the use of the MTV is not practical for a portion of the project, the Engineer may waive its requirement for that portion of pavement by a letter documenting the waiver.
Subsection: **Revision:**	412.04 MEASUREMENT. Add the following subsection: 412.04.03. Material Transfer Vehicle (MTV). The Department will not measure the MTV for payment and will consider its use incidental to the asphalt mixture.
Subsection: **Part:** **Revision:**	501.03.19 Surface Tolerances and Testing Surface. B) Ride Quality. Add the following to the end of the first paragraph: The Department will specify if the ride quality requirements are Category A or Category B when ride quality is specified in the Contract. Category B ride quality requirements shall apply when the Department fails to classify which ride quality requirement will apply to the Contract.
Subsection: **Revision:**	501.03.05 Weather Limitations and Protection. Replace the reference to Subsection 501.03.19 in Paragraph 5, with Subsection 501.03.20.
Subsection: **Revision:**	601.02.02 Cement Replace the third sentence with the following: The Department will allow the use of Type IP(≤20), Type IS(≤30), Type IL, Type II, and Type III when the Engineer approves.
Subsection: **Revision:**	601.02.02 Cement Replace the fifth sentence with the following: If unsatisfactory test results are obtained using Type IP(≤20), Type IS(≤30), Type IL, Type II, or Type III cement complete the work using Type I cement.

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Subsection: 601.03.02 Concrete Producer Responsibilities.
Part: E) Trip Tickets.
Revision: Replace the section with the following:
Furnish a trip ticket containing the minimum information shown in the table below. Certify that the data on the ticket is correct and that the mixture conforms to the approved mix design. Ensure that the plant manager or a Level II concrete technician signs the ticket. The Department's jobsite inspector will complete all other necessary information on the back of the trip ticket.

Contract Id:	Proj. Number:	Date:	County:	
Truck No:	Producer Name:		SiteManager Sample Id:	
Qty(Yds^3):	Time Loaded (Non Agitated Concrete Only):			
Begin Mixing Time: _____ AM ____ PM ____ REV _____				
Set Retarder Used		Yes ___	Type____	No____
Water Reducer Used		Yes ___	Type____	No____
Water Underrun _____ Gal/Yd^3 _____ Total Gallons				
Design W/C:	Actual W/C:	Slump (inches)		
Batch Weight Information:				
Material:	Description:	Design Qty:	Required:	Batched:
Remarks:				

%Var:	%Moisture:	Actual:

The data on this ticket is correct for the approved concrete mix design.

Signature: _____ Date: _____
KRMCA Level II Technician or Plant Manager

Subsection: 601.03.03 Proportioning and Requirements
Part: A) Concrete
Revision: Revise Table for INGREDIENT PROPORTIONS AND REQUIREMENTS FOR VARIOUS CLASSES OF CONCRETE as follows: Replace "M1 w/ Type 1 cement" with "M1 w/ Type 1 or blended hydraulic cement"

Subsection: 601.03.03 Proportioning and Requirements
Part: C) Mixtures Using Type IP, IS, and I(SM) Cement or Mineral Admixtures
Revision: Revise part C) header to read as follows: Mixtures Using Type IP(≤20), IS(≤30), and IL Cement and Mineral Admixtures.

Subsection: 601.03.03 Proportioning and Requirements
Part: C) Mixtures Using Type IP, IS, and I(SM) Cement or Mineral Admixtures
Number: 1)
Revision: Revise first sentence to read as follows: Type IP(≤20), IS(≤30), IL Cement.

Subsection: 601.03.03 Proportioning and Requirements
Part: C) Mixtures Using Type IP, IS, and I(SM) Cement or Mineral Admixtures
Number: 2)
Revision: Revise second sentence to read as follows: The use of fly ash, blast furnace slag cement, or micosilica in concrete is the Contractor's option.

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Subsection: **Part:** **Number:** **Revision:**	601.03.03 Proportioning and Requirements C) Mixtures Using Type IP, IS, and I(SM) Cement or Mineral Admixtures 2) Revise the first sentence in the second paragraph to read as follows: When the ability to use blast furnace slag cement or microsilica has not been demonstrated have the concrete producer provide trial batches in accordance with Subsection 601.03.02 G) 1).
Subsection: **Part:** **Number:** **Part:** **Revision:**	601.03.03 Proportioning and Requirements C) Mixtures Using Type IP, IS, and I(SM) Cement or Mineral Admixtures 2) b) Revise first sentence to read as follows: Blast Furnace Slag Cement
Subsection: **Part:** **Number:** **Part:** **Revision:**	601.03.03 Proportioning and Requirements C) Mixtures Using Type IP, IS, and I(SM) Cement or Mineral Admixtures 2) b) Revise second sentence to read as follows: When added as a separate ingredient, use Grade 120 or Grade 100 slag to reduce the quantity of cement, except do not use blast furnace slag cement to reduce the quantity of Type IS(≤30) cement.
Subsection: **Part:** **Number:** **Part:** **Revision:**	601.03.03 Proportioning and Requirements C) Mixtures Using Type IP, IS, and I(SM) Cement or Mineral Admixtures 2) b) In part b), replace all references to "GGBF slag" with "blast furnace slag cement".
Subsection: **Part:** **Revision:**	601.03.04 Classes and Primary Uses H) Class M1 Revise part H) to read as follows: High early strength for bridge joint repair and full or partial depth bridge deck patching. (Type 1 cement or blended hydraulic cement)
Subsection: **Revision:**	603.03.06 Cofferdams. Replace the seventh sentence of paragraph one with the following: Submit drawings that are stamped by a Professional Engineer licensed in the Commonwealth of Kentucky.
Subsection: **Revision:**	605.03.04 Tack Welding. Insert the subsection and the following: 605.03.04 Tack Welding. The Department does not allow tack welding.
Subsection: **Part:** **Number:** **Revision:**	606.03.17 Special Requirements for Latex Concrete Overlays. A) Existing Bridges and New Structures. 1) Prewetting and Grout-Bond Coat. Add the following sentence to the last paragraph: Do not apply a grout-bond coat on bridge decks prepared by hydrodemolition.
Subsection: **Revision:**	609.03 Construction. Replace Subsection 609.03.01 with the following: 609.03.01 A) Swinging the Spans. Before placing concrete slabs on steel spans or precast concrete release the temporary erection supports under the bridge and swing the span free on its supports. 609.03.01 B) Lift Loops. Cut all lift loops flush with the top of the precast beam once the beam is placed in the final location and prior to placing steel reinforcement. At locations where lift loops are cut, paint the top of the beam with galvanized or epoxy paint.

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Subsection: **Revision:**	611.03.02 Precast Unit Construction. Replace the first sentence of the subsection with the following: Construct units according to ASTM C1577, **replacing Table 1 (Design Requirements for Precast Concrete Box Sections Under Earth, Dead and HL-93 Live Load Conditions) with KY Table 1 (Precast Culvert KYHL-93 Design Table)**, and Section 605 with the following exceptions and additions:
Subsection: **Number:** **Revision:**	613.03.01 Design. 2) Replace "AASHTO Standard Specifications for Highway Bridges" with "AASHTO LRFD Bridge Design Specifications"
Subsection: **Revision:**	615.06.02 Add the following sentence to the end of the subsection. The ends of units shall be normal to walls and centerline except exposed edges shall be beveled ¾ inch.
Subsection: **Revision:**	615.06.03 Placement of Reinforcement in Precast 3-Sided Units. Replace the reference of 6.6 in the section to 615.06.06.
Subsection: **Revision:**	615.06.04 Placement of Reinforcement for Precast Endwalls. Replace the reference of 6.7 in the section to 615.06.07.
Subsection: **Revision:**	615.06.06 Laps, Welds, and Spacing for Precast 3-Sided Units. Replace the subsection with the following: Tension splices in the circumferential reinforcement shall be made by lapping. Laps may not be tack welded together for assembly purposes. For smooth welded wire fabric, the overlap shall meet the requirements of AASHTO 2012 Bridge Design Guide Section 5.11.2.5.2 and AASHTO 2012 Bridge Design Guide Section 5.11.6.3. For deformed welded wire fabric, the overlap shall meet the requirements of AASHTO 2012 Bridge Design Guide Section 5.11.2.5.1 and AASHTO 2012 Bridge Design Guide Section 5.11.6.2. The overlap of welded wire fabric shall be measured between the outer most longitudinal wires of each fabric sheet. For deformed billet-steel bars, the overlap shall meet the requirements of AASHTO 2012 Bridge Design Guide Section 5.11.2.1. For splices other than tension splices, the overlap shall be a minimum of 12" for welded wire fabric or deformed billet-steel bars. The spacing center to center of the circumferential wires in a wire fabric sheet shall be no less than 2 inches and no more than 4 inches. The spacing center to center of the longitudinal wires shall not be more than 8 inches. The spacing center to center of the longitudinal distribution steel for either line of reinforcing in the top slab shall be not more than 16 inches.
Subsection: **Revision:**	615.06.07 Laps, Welds, and Spacing for Precast Endwalls. Replace the subsection with the following: Splices in the reinforcement shall be made by lapping. Laps may not be tack welded together for assembly purposes. For smooth welded wire fabric, the overlap shall meet the requirements of AASHTO 2012 Bridge Design Guide Section 5.11.2.5.2 and AASHTO 2012 Bridge Design Guide Section 5.11.6.3. For deformed welded wire fabric, the overlap shall meet the requirements of AASHTO 2012 Bridge Design Guide Section 5.11.2.5.1 and AASHTO 2012 Bridge Design Guide Section 5.11.6.2. For deformed billet-steel bars, the overlap shall meet the requirements of AASHTO 2012 Bridge Design Guide Section 5.11.2.1. The spacing center-to-center of the wire fabric sheet shall not be less than 2 inches or more than 8 inches.

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Subsection: **Revision:**	615.08.01 Type of Test Specimen. Replace the subsection with the following: Start-up slump, air content, unit weight, and temperature tests will be performed each day on the first batch of concrete. Acceptable start-up results are required for production of the first unit. After the first unit has been established, random acceptance testing is performed daily for each 50 yd^3 (or fraction thereof). In addition to the slump, air content, unit weight, and temperature tests, a minimum of one set of cylinders shall be required each time plastic property testing is performed.
Subsection: **Revision:**	615.08.02 Compression Testing. Delete the second sentence.
Subsection: **Revision:**	615.08.04 Acceptability of Core Tests. Delete the entire subsection.
Subsection: **Revision:**	615.12 Inspection. Add the following sentences to the end of the subsection: Units will arrive at jobsite with the "Kentucky Oval" stamped on the unit which is an indication of acceptable inspection at the production facility. Units shall be inspected upon arrival for any evidence of damage resulting from transport to the jobsite.
Subsection: **Revision:**	701.04.16 Deduction for Pipe Deflection. Insert the following at the end of the paragraph: The section length is determined by the length of the pipe between joints where the failure occurred.
Subsection: **Revision:**	716.02.02 Paint. Replace sentence with the following: Conform to Section 821.
Subsection: **Revision:**	716.03 CONSTRUCTION. Replace bullet 5) with the following: 5) AASHTO Standard Specifications for Structural Supports for Highway Signs, Luminaires, and Traffic Signals, 2013-6th Edition with current interims,
Subsection: **Revision:**	716.03.02 Lighting Standard Installation. Replace the paragraph with the following: Locate poles to avoid trees, drainage, structures, etc. Regardless of the station & offset noted, locate all poles/bases behind guardrail a minimum of 4 feet behind the face of the guardrail. All poles shall be placed as close to stations and offsets as stated on Plans to provide proper illumination. If any pole needs to be relocated from stations indicated, the Division of Traffic Operations shall be contacted. When submitting brochures for suggested luminaires include iso lux curves, IES type distribution, lamp lumens, and typical ballast factor used for each type of luminaire. Submit the photometric data in a digital IES format to the Division of Traffic Operations. Include with the submittal a point of contact and phone number to answer technical questions about the luminaire.
Subsection: **Part:** **Revision:**	716.03.02 Lighting Standard Installation. A) Conventional Installation. Replace the third sentence with the following: Orient the transformer base so the door is positioned on the side away from on-coming traffic.
Subsection: **Part:** **Number:** **Revision:**	716.03.02 Lighting Standard Installation. A) Conventional Installation. 1) Breakaway Installation and Requirements. Replace the first sentence with the following: For breakaway supports, conform to Section 12 of the AASHTO Standard Specifications for Structural Supports for Highway Signs, Luminaires, and Traffic Signals, 2013-6th Edition with current interims.

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Subsection: 716.03.02 Lighting Standard Installation.
Part: B) High Mast Installation
Revision: Replace the first three sentences of the first paragraph with the following: Install each high mast pole as noted on Plans. Install each high mast pole on a separate circuit and use luminaires with light patterns as indicated. Orient luminaires as shown in Plans.

Subsection: 716.03.02 Lighting Standard Installation.
Part: B) High Mast Installation
Number: 2) Concrete Base Installation
Revision: Modification of Chart and succeeding paragraphs within this section:

Drilled Shaft Depth Data							
Level Ground		3:1 Ground Slope		2:1 Ground Slope		1.5:1 Ground Slope (2)	
Soil	Rock	Soil	Rock	Soil	Rock	Soil	Rock
17 ft	7 ft	19 ft	7 ft	20 ft	7 ft	(1)	7 ft

Steel Requirements			
Vertical Bars		Ties or Spiral	
Size	Total	Size	Spacing or Pitch
#10	16	#4	12 inch

Note 1: Shaft length is 22 feet for cohesive soil only. For cohesionless soil, contact Geotechnical Branch for design.
Note 2: Do not construct high mast drilled shafts on ground slopes steeper than 1.5:1 without the approval of the Division of Traffic Operations.

If rock is encountered during drilling operations and confirmed by the Engineer to be of sound quality, the shaft is only required to be further advanced into the rock by the length of rock socket shown in the design table. The total length of the shaft need not be longer than that of soil alone. Both longitudinal rebar length and number of ties or spiral length shall be adjusted

If a shorter depth is desired for the drilled shaft, the Contractor shall provide, for the state's review and approval, a detailed column design with individual site specific soil and rock analysis performed and approved by a Professional Engineer licensed in the Commonwealth of Kentucky.

Spiral reinforcement may be substituted for ties. If spiral reinforcement is used, one and one-half closed coils shall be provided at the ends of each spiral unit. Subsurface conditions consisting of very soft clay or very loose saturated sand could result in soil parameters weaker than those assumed. Engineer shall consult with the Geotechnical Branch if such conditions

The bottom of the drilled hole shall be firm and thoroughly cleaned so no loose or compressible materials are present at the time of the concrete placement. If the drilled hole contains standing water, the concrete shall be placed using a tremie to displace water. Continuous concrete flow will be required to insure full displacement of any water.

The reinforcement and anchor bolts shall be adequately supported in the proper positions so no movement occurs during concrete placement. Welding of anchor bolts to the reinforcing cage is unacceptable, templates shall be used. Exposed portions of the foundation shall be formed to create a smooth finished surface. All forming shall be removed upon completion of foundation construction.

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Subsection: **Part:** **Revision:**	716.03.03 Trenching. A) Trenching of Conduit for Highmast Ducted Cables. Add the following after the first sentence: If depths greater than 24 inches are necessary, obtain the Engineer's approval and maintain the required conduit depths coming into the junction boxes. No payment for additional junction boxes for greater depths will be allowed.
Subsection: **Part:** **Revision:**	716.03.03 Trenching. B) Trenching of Conduit for Non-Highmast Cables. Add the following after the second sentence: If depths greater than 24 inches are necessary for either situation listed previously, obtain the Engineer's approval and maintain the required conduit depths coming into the junction boxes.
Subsection: **Revision:**	716.03.04 Conduit Installation. Replace the first two sentences of the paragraph with the following: Provide rigid steel conduit encasement for all conductors except as specified in the Contract. Provide conduit that is listed on the Department's List of Approved Materials.
Subsection: **Part:** **Number:** **Revision:**	716.03.04 Conduit Installation. A) Conduit Requirements in Junction Boxes. 1) Highmast Ducted Cable. Replace the first two sentences with the following: Install conduit horizontally through the junction box. Conduit shall be 4 inches from the bottom and 4 inches from the side of the junction box.
Subsection: **Revision:**	716.03.04 Conduit Installation. Add the following to the Part to the Subsection: **G) Bore and Jack.** Construction methods shall be in accordance with Subsections 706.03.02, paragraphs 1, 2 and 4.
Subsection: **Revision:**	716.03.08 Splicing. Replace the last sentence of the paragraph with the following: Ensure the splices are of the correct size for the wire being used.
Subsection: **Revision:**	716.03.10 Junction Boxes. Replace subsection title with the following: Electrical Junction Box and replace the last sentence of the paragraph with the following: Any additional junction boxes shall be approved by the Engineer.
Subsection: **Revision:**	716.03.13 Temporary Lighting. Change subsection heading to the following: **716.03.13 Temporary/Maintain Lighting.**
Subsection: **Revision:**	716.03.13 Temporary /Maintain Lighting. Replace the entire section with the following: The Contractor shall furnish and install all materials necessary to temporarily light the proposed roadway to design standards in Subsection 716.03. The Contractor shall submit his proposed design of temporary lighting to the Division of Traffic Operations for approval at least 30 days before installation. Maintain all lighting elements impacted within or outside the project limits until new lighting elements are installed and a functional inspection has been performed on the new lighting elements. The Contractor shall submit a proposed design for maintaining lighting to the Division of Traffic Operations for approval at least 30 days before installation.

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Subsection: **Revision:**	716.03.14 Remove Lighting. Replace the section with the following: Remove all lighting equipment that is identified by the Engineer as no longer necessary including, but not limited to, the following: pole bases, poles, junction boxes, cabinets, and wood poles. Pole bases shall be removed a minimum of one foot below finished grade by chipping off or other method that is approved by the Engineer. Dispose of all removed concrete off right-of-way. Wood poles shall be removed a minimum of one foot below finished grade. Backfill holes with material approved by the Engineer. Conduit may be abandoned in the ground. All materials shall be removed from the project as directed by the Engineer. Transformers not owned by a utility shall be tested for PCB's and disposed of in accordance with state regulations.
Subsection: **Revision:**	716.03.15 Painting. Replace the first sentence with the following: Clean non-galvanized or damaged surfaces of exposed junction boxes, pull boxes, control panels, poles, and similar equipment, and apply one coat of an inhibiting paint and two coats of aluminum paint.
Subsection: **Revision:**	716.04.01. Poles. Change the subsection heading to 716.04.01 Pole and replace the last sentence of the subsection with the following: The Department will not measure anchor bolts, washers, nuts, anchor bolt covers, ground lugs, and any associated hardware for payment and will consider them incidental to this item of work.
Subsection: **Revision:**	716.04.02 High Mast Pole. Replace the second sentence with the following: The Department will not measure the lowering device, anchor bolts, head frame assembly, cables, winch unit, power cables, wiring, connectors, circuit breakers, grounding lugs, ground wire, ground rods, conduits, test plugs,, adjustment and calibration of the unit to provide the desired operation, and any associated hardware for payment and will consider them incidental to this item of work.
Subsection: **Revision:**	716.04.03 Bracket. Replace the second sentence with the following: The Department will not measure any associated hardware needed for attaching the bracket to the pole for payment and will consider them incidental to this item of work.
Subsection: **Revision:**	716.04.04 Pole Base. Change the subsection heading to 716.04.04 Pole Bases and delete the paragraph.
Subsection: **Revision:**	716.04.04 Pole Bases. Insert the following: **A. Pole Base**. The Department will measure the quantity as each individual unit furnished and installed. The Department will not measure excavation, concrete, conduits, fittings, ground rods, ground wires, ground lugs, reinforcing steel, restoring disturbed areas to the satisfaction of the Engineer, and any associated hardware for payment and will consider them incidental to this item of work. **B. Pole Base High Mast**. The Department will measure the quantity in cubic yards furnished and installed. The Department will not measure excavation, concrete, conduits, fittings, ground rods, ground wires, ground lugs, reinforcing steel, restoring disturbed areas to the satisfaction of the Engineer, and any associated hardware for payment and will consider them incidental to this item of work.

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Subsection: **Revision:**	716.04.05 Pole Base in Median Wall. Replace the last sentence with the following: The Department will not measure conduits, fittings, junction boxes, additional reinforcing steel, ground rods, ground wire, ground lugs, and aluminum cover plates (if specified) for payment, and will consider them incidental to this item of work.
Subsection: **Revision:**	716.04.06 Transformer Base. Replace the last sentence with the following: The Department will not measure transformer door, ground lug, anchoring bolts, nuts, washers, and any associated hardware for payment and will consider them incidental to this item of work. The filling of any unused holes will also be considered incidental to this item of work.
Subsection: **Revision:**	716.04.07 Pole with Secondary Equipment. Replace the heading with the following: 716.04.07 Pole with Secondary Control Equipment.
Subsection: **Revision:**	716.04.07 Pole with Secondary Control Equipment. Replace the second and third sentence with the following: The Department will not measure mounting the cabinet to the pole, backfilling, restoration, any necessary hardware to anchor pole, electrical inspection fees, and required building fees involving utility secondary, and primary service for payment and will consider them incidental to this item of work. The Department will also not measure furnishing and installing electrical service conductors, specified conduits, meter base, transformer, service panel, fused cutout, fuses, lighting arrestors, photoelectrical control, circuit breaker, contactor, manual switch, ground rods, ground lugs, and ground wires for payment and will consider them incidental to this item of work. The filling of unused holes will also be considered incidental to this item of work.
Subsection: **Revision:**	716.04.08 Lighting Control Equipment. Replace the paragraph with the following: The Department will measure the quantity as each individual unit furnished and installed. The Department will not measure the concrete base, excavation, backfilling, restoration, any necessary anchors, electrical inspection fees, and required building fees involving utility secondary/primary service for payment and will consider them incidental to this item of work. The Department will also not measure furnishing and installing electrical service conductors, specified conduits, meter base, transformer, service panel, fused cutout, fuses, lighting arrestors, photoelectrical control, circuit breakers, contactor, manual switch, ground rods, ground lugs, and ground wires for payment and will consider them incidental to this item of work. The Department will not measure the filling of any unused holes with and will consider them incidental to this item of work.
Subsection: **Revision:**	716.04.09 Luminaire. Replace the paragraph with the following: The Department will measure the quantity as each individual unit furnished and installed. The Department will not measure lamps, starters, ballasts, drivers, surge protection, dimming modules, photo-control receptacle, specified shielding (if required), and any adjustments necessary to provide the desired lighting pattern for payment and will consider them incidental to this item of work.
Subsection: **Revision:**	716.04.10 Fused Connector Kits. Replace the heading with the following: 716.04.10 Fuse Connector Kits.

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Subsection: **Revision:**	716.04.10 Fuse Connector Kits. Replace the paragraph with the following: The Department will measure the quantity as each individual unit furnished and installed. The Department will not measure fuses/lugs for payment and will consider them incidental to this item of work.
Subsection: **Revision:**	716.04.11 Conduit. Replace the second sentence with the following: The Department will not measure installation in ground or on structures, conduit fittings, test plugs, expansion joints with bonding straps, grounding lugs, drill anchors, clamps, and any additional hardware required for payment and will consider them incidental to this item of work.
Subsection: **Revision:**	716.04.12 Markers. Replace the section with the following: The Department will measure the quantity as each individual unit furnished and installed.
Subsection: **Revision:**	716.04.13 Junction Box. Replace the subsection title with the following: Electrical Junction Box Type Various.
Subsection: **Revision:**	716.04.13 Electrical Junction Box Type Various. Replace the section with the following: The Department will measure the quantity as each individual unit furnished and installed. The Department will not measure additional junction boxes for greater depths than those identified in Plans, #57 aggregate, backfilling, restoration of disturbed areas to the satisfaction of the Engineer, geotextile filter fabric, concrete, hot dipped galvanized cover, stainless steel screws, rubber gasket, and any associated hardware for payment , and will consider them incidental to this item of work.
Subsection: **Part:** **Revision:**	716.04.13 Junction Box. A) Junction Electrical. Delete Part A.
Subsection: **Revision:**	716.04.14 Trenching and Backfilling. Replace the section with the following: The Department will measure the quantity in linear feet. The Department will not measure excavation, backfilling, underground utility warning tape (if required), and the restoration of disturbed areas to original condition for payment and will consider them incidental to this item of work.
Subsection: **Revision:**	716.04.15 Wire or Cable. Replace the section with the following: The Department will measure the quantity in linear feet furnished and installed. The Department will not measure installation within conduit, splice boots, and any other hardware required for installing cable for payment and will consider them incidental to this item of work.
Subsection: **Revision:**	716.04.16 Ducted Cable. Replace the second sentence of the paragraph with the following: The Department will not measure installation within trench or conduit and any other necessary hardware for payment and will consider them incidental to this item of work.
Subsection: **Revision:**	716.04.17 Temporary Lighting Rename the subsection as follows: 716.04.17 Temporary Lighting/Maintain Lighting.

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Subsection: **Revision:**	716.04.17 Temporary Lighting/Maintain Lighting. Delete the paragraph and add the following parts: A) Temporary Lighting. The Department will measure the quantity by lump sum. The Department will not measure poles, luminaires, wire, conduit, trenching and backfilling, control equipment, all relocations and removal, design (if required), and any other necessary hardware to make a complete installation for payment and will consider them incidental to this item of work. B) Maintain Lighting. The Department will measure the quantity by lump sum. The Department will not measure maintenance of lighting elements and design (if required) for payment and will consider them incidental to this item of work.
Subsection: **Revision:**	716.04.18 Remove Lighting. Replace the paragraph with the following: The Department will measure the quantity by lump sum. The Department will not measure backfilling and the disposal or transportation of equipment and materials associated with any structural or electrical component of the lighting system including, but not limited to pole bases, poles, junction boxes, cabinets, and wood poles for payment and will consider them incidental to this item of work.
Subsection: **Revision:** **Subsection:** **Revision:**	716.04.19 Remove Pole Base. Delete Subsection. 716.04.20 Bore and Jack Conduit. Renumber Subsection to 716.04.19 Bore and Jack Conduit.
Subsection: **Revision:**	716.04.19 Bore and Jack Conduit. Replace the paragraph with the following: The Department will measure the quantity in linear feet. This item shall include all work necessary for boring and installing conduit under an existing roadway.
Subsection: **Revision:**	716.05 PAYMENT. Revise the following under Code, Pay Item, and Pay Unit with the following: Code — Pay Item — Pay Unit 04700-04701 — Pole(Various)Mtg Ht — Each 04710-04714 — Pole(Various)Mtg Ht High Mast — Each 04810-04811 — Electrical Junction Box (Various) — Each 20391NS835 — Electrical Junction Box Type A — Each 20392NS835 — Electrical Junction Box Type C — Each 04770-04773 — Luminaire (Various) — Each 04780 — Fuse Connector Kit — Each 20410ED — Maintain Lighting — Lump Sum ~~04941 — Remove Pole Base — Each~~
Subsection: **Revision:**	723.02.02 Paint. Replace sentence with the following: Conform to Section 821.
Subsection: **Revision:**	723.03 CONSTRUCTION. Replace bullet 5) with the following: 5) AASHTO Standard Specifications for Structural Supports for Highway Signs, Luminaires, and Traffic Signals, 2013-6th Edition with current interims,
Subsection: **Revision:**	723.03.02 Poles and Bases Installation. Replace the title with the following: 723.03.02 Pole and Base Installation.

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Subsection: **Revision:**	723.03.02 Pole and Base Installation. Replace the first paragraph with the following: Regardless of the station and offset noted, locate all poles/bases behind the guardrail a minimum of four feet from the front face of the guardrail to the front face of the pole base. Orient the handhole door away from traffic travel path. If pole base is installed within a sidewalk the top of the pole base shall be the same grade as the sidewalk.
Subsection: **Part:** **Revision:**	723.03.02 Poles and Bases Installation. A) Steel Strain and Mastarm Poles Installation Replace the title of Part A) Steel Strain and Mast Arm Pole Installation.
Subsection: **Part:** **Revision:**	723.03.02 Pole and Base Installation. A) Steel Strain and Mast Arm Pole Installation. Insert the following sentence at the beginning of the first paragraph: Install pole bases 4 to 6 inches above grade.
Subsection: **Part:** **Revision:**	723.03.02 Pole and Base Installation. A) Steel Strain and Mast Arm Pole Installation. Replace the second paragraph with the following: For concrete base installation, see Subsection 716.03.02 B), 2), Paragraphs 2-6. Drilled shaft depth shall be based on the soil conditions encountered during drilling and slope condition at the site. Refer to the design chart below:
Subsection: **Part:** **Revision:**	723.03.02 Pole and Base Installation. B) Pedestal or Pedestal Post Installation. Replace the second sentence with the following: If over 12 feet high the base shall have the minimum depth and diameter as Subsection 716.03.02 (A), paragraph 2.
Subsection: **Part:** **Revision:**	723.03.02 Poles and Bases Installation. B) Pedestal or Pedestal Post Installation. Replace the fourth sentence of the paragraph with the following: For breakaway supports, conform to Section 12 of the AASHTO Standard Specifications for Structural Supports for Highway Signs, Luminaires, and Traffic Signals, 2013-6th Edition with current interims.
Subsection: **Revision:**	723.03.03 Trenching. Replace the first sentence with the following: See Subsection 716.03.03 (B).
Subsection: **Part:** **Revision:**	723.03.03 Trenching. A) Under Roadway. Delete Part A) Under Roadway.
Subsection: **Revision:**	723.03.05 Conduit Requirements in Junction Boxes. Delete the Subsection and replace with the following: 723.03.05 Fuse Connector Kits. See Subsection 716.03.09.
Subsection: **Revision:**	723.03.06 Coupling Installation. Delete the Subsection and replace with the following: 723.03.06 Painting. See Subsection 716.03.15.
Subsection: **Revision:**	723.03.07 Bonding Requirements. Delete the Subsection and replace with the following: 723.03.07 Electrical Junction Boxes. See Subsection 716.03.10.

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Subsection:	723.03.08 Painting.
Revision:	Replace with 723.03.06 Painting. See Subsection 716.03.15.
Subsection:	723.03.09 Underground Warning Tape.
Revision:	Renumber Subsection to 723.03.08 Underground Warning Tape.
Subsection:	723.03.10 Backfilling and Disturbed Areas.
Revision:	Renumber Subsection to 723.03.09 Backfilling and Disturbed Areas.
Subsection:	723.03.11 Wiring Installation.
Revision:	Renumber Subsection to 723.03.10 Wiring Installation.
Subsection:	723.03.10 Wiring Installation.
Revision:	Add the following sentence between the fifth and sixth sentences: Provide an extra two feet of loop wire and lead-in past the installed conduit in poles, pedestals, and junction boxes.
Subsection:	723.03.12 Loop Installation.
Revision:	Renumber Subsection to 723.03.11 Loop Installation.
Subsection:	723.03.11 Loop Installation.
Revision:	Replace the fourth sentence of the 2nd paragraph with the following: Provide an extra two feet of loop wire and lead-in past the installed conduit in poles, pedestals, and junction boxes.
Subsection:	723.03.13 Grounding Installation.
Revision:	Renumber Subsection to 723.03.12 Grounding Installation.
Subsection:	723.03.12 Grounding Installation.
Revision:	Replace the reference to "Standard Detail Sheets" in the first sentence with "Plans".
Subsection:	723.03.14 Splicing.
Revision:	Renumber Subsection to 723.03.13 Splicing.
Subsection:	723.03.13 Splicing.
Revision:	Delete the reference to (IMSA 19-2) from the 5th sentence of the paragraph.
Subsection:	723.03.15 Painting.
Revision:	Delete Subsection.
Subsection:	723.03.14 Splicing.
Revision:	Replace with new Subsection 723.03.14 Remove Signal Equipment.
Subsection:	723.03.14 Remove Signal Equipment.
Revision:	Insert the following for the new subsection: Remove all traffic signal equipment that is identified by the Engineer as no longer necessary including, but not limited to, the following: pole bases, poles, junction boxes, cabinets, wood poles, and advance warning flashers. Pole bases shall be removed a minimum of one foot below finished grade by chipping off or other method that is approved by the Engineer. Dispose of all removed concrete off right-of-way. Wood poles shall be removed a minimum of one foot below finished grade. Backfill holes with material approved by the Engineer. Conduit may be abandoned in the ground. Contact the district traffic Engineer to determine if any removed signal equipment needs to be returned to the district and to determine the location/time for such deliveries.
Subsection:	723.05.16 Drawings.
Revision:	Renumber the Subsection to 723.03.15 Drawings.

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Subsection: **Revision:**	723.03.15 Drawings. Replace Subsection with the following: Before final inspection of the traffic control device, provide a complete set of reproducible as-built drawings that show the arrangement and locations of all equipment including: junction boxes, conduits, spare conduits, etc. Keep a daily record of all conduits placed in trenches, showing the distance from the pavement edge, the depth, and the length of runs, and indicate this information on the as-built drawings.
Subsection: **Revision:**	723.03.17 Acceptance and Inspection Requirements. Renumber Subsection to 723.03.16 Acceptance and Inspection Requirements.
Subsection: **Revision:**	723.03.16 Acceptance and Inspection Requirements. Replace the first paragraph of the section with the following: See Subsection 105.12. In coordination with the District Traffic Engineer, energize traffic control device as soon as it is fully functional and ready for inspection. After the work has been completed, conduct an operational test demonstrating that the system operates in accordance with the Plans in the presence of the Engineer. The Department will also conduct its own tests with its own equipment before final acceptance. Ensure that the traffic control device remains operational until the Division of Traffic Operations has provided written acceptance of the electrical work.
Subsection: **Revision:**	723.04.01 Conduit. Replace the second sentence of the subsection with the following: The Department will not measure conduit fittings, ground lugs, test plugs, expansion joints, and clamps for payment and will consider them incidental to this item of work.
Subsection: **Revision:**	723.04.02 Junction Box. Replace subsection title with the following: Electrical Junction Box Type Various.
Subsection: **Revision:**	723.04.02 Electrical Junction Box Type Various. Replace the subsection with the following: The Department will measure the quantity as each individual unit furnished and installed. The Department will not measure additional junction boxes for greater depths than those identified in Plans, Aggregate (#57), backfilling, restoration of disturbed areas to the satisfaction of the Engineer, geotextile fabric, concrete, hot dipped galvanized cover, stainless steel screws, rubber gasket, and any associated hardware for payment and will consider them incidental to this item of work.
Subsection: **Revision:**	723.04.03 Trenching and Backfilling. Replace the second sentence with the following: The Department will not measure excavation, backfilling, underground utility warning tape, and the restoration of disturbed areas to original condition for payment and will consider them incidental to this item of work.
Subsection: **Revision:**	723.04.04 Open Cut Roadway. Replace the second sentence of the subsection with the following: The Department will not measure concrete, reinforcing steel, and asphalt for payment and will consider them incidental to this item of work.
Subsection: **Revision:**	723.04.05 Loop Wire. Replace the second sentence of the subsection with the following: The Department will not measure splice boots, cable rings, and any other necessary hardware for payment and will consider them incidental to this item of work.
Subsection: **Revision:**	723.04.06 Cable. Replace the second sentence of the subsection with the following: The Department will not measure splice boots, cable rings, and any other hardware for payment and will consider them incidental to this item of work.

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Subsection:	723.04.07 Pole-Wooden.
Revision:	Replace the second sentence of the subsection with the following: The Department will not measure excavation, backfilling, and restoring disturbed areas for payment and will consider them incidental to this item of work.
Subsection:	723.04.08 Steel Strain Pole.
Revision:	Replace the second sentence of the subsection with the following: The Department will not measure excavation, backfilling, and restoring disturbed areas for payment and will consider them incidental to this item of work.
Subsection:	723.04.09 Mast Arm Pole.
Revision:	Replace the second sentence of the subsection with the following: The Department will not measure anchor bolts, arms, mounting brackets, and any other necessary hardware for payment and will consider them incidental to this item of work.
Subsection:	723.04.10 Signal Pedestal.
Revision:	Replace the second sentence of the subsection with the following: The Department will not measure excavation, concrete, reinforcing steel, conduits, fittings, ground rods, ground wire, ground lugs, backfilling, restoring disturbed areas, and other necessary hardware for payment and will consider them incidental to this item of work.
Subsection:	723.04.11 Post.
Revision:	Replace the second sentence of the subsection with the following: The Department will not measure excavation, backfilling, and restoring disturbed areas for payment and will consider them incidental to this item of work.
Subsection:	723.04.12 Anchor.
Revision:	Replace the second sentence of the subsection with the following: . The Department will not measure down-guy, messenger, clamps, guy guard, or insulators, and possible installation in various soil conditions for payment and will consider them incidental to this item of work.
Subsection:	723.04.13 Messenger.
Revision:	Replace the second sentence of the subsection with the following: The Department will not measure strand vises, bolts, washers, and other necessary hardware for payment and will consider them incidental to this item of work.
Subsection:	723.04.14 Install Signal LED.
Revision:	Revise subsection title to 723.04.14 Install Beacon Controller - 2 Circuit.
Subsection:	723.04.14 Install Beacon Controller - 2 Circuit.
Revision:	Replace the subsection with the following: The Department will measure the quantity as each individual unit furnished and installed. The Department will not measure the controller housing, mounting equipment, S5-1 school zone sign, time clock, nema flasher, ground rods, ground wires, ground lugs, metering disconnect hardware, electrical inspection fees, and required building fees involving utility secondary/primary service for payment and will consider them incidental to this item of work.

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Subsection:	723.04.15 Loop Saw Slot and Fill.
Revision:	Replace the second sentence of the subsection with the following: The Department will not measure sawing, cleaning, filling induction loop saw slot, loop sealant, backer rod, drilling hole for conduit, and grout for payment and will consider them incidental to this item of work.
Subsection:	723.04.16 Pedestrian Detector.
Revision:	Replace the subsection with the following: The Department will measure the quantity as each individual unit furnished, installed and connected to pole/pedestal. The Department will not measure installing R10-3e signs, detector housing, and installing mounting hardware for sign for payment and will consider them incidental to this item of work.
Subsection:	723.04.17 Signal.
Revision:	Replace the second sentence of the subsection with the following: The Department will not measure furnishing and installing LED modules, retroreflective tape, back plates, and any other hardware for payment and will consider them incidental to this item of work.
Subsection:	723.04.18 Signal Controller- Type 170.
Revision:	Replace the second sentence of the subsection with the following: The Department will not measure the concrete base, mounting the cabinet, connecting the signal and detectors, excavation, backfilling, restoration, any necessary pole mounting hardware, electric service, electrical inspection fees, and building fees involving secondary/primary service for payment and will consider them incidental to this item of work. The Department will also not measure furnishing and connecting the induction of loop amplifiers, pedestrian isolators, load switches, model 400 modem card, electrical service conductors, conduits, anchors, meter base, fused cutout, fuses, ground rods, ground wires, and ground lugs for payment and will consider them incidental to this item of work.
Subsection:	723.04.19 Beacon Controller - 2 Circuit.
Revision:	Replace the second sentence of the subsection with the following: The Department will not measure the controller housing, mounting equipment, S5-1 school zone sign, time clock, nema flasher, ground rods, ground wires, ground lugs, metering disconnect hardware, electrical inspection fees, and required building fees involving utility secondary/primary service for payment and will consider them incidental to this item of work.
Subsection:	723.04.20 Install Signal Controller - Type 170.
Revision:	Replace the paragraph with the following: The Department will measure the quantity as each individual unit installed. The Department will not measure the concrete base, mounting the cabinet, connecting the signal and detectors, excavation, backfilling, restoration, any necessary pole mounting hardware, electric service, electrical inspection fees, and required building fees involving utility secondary/primary service for payment and will consider them incidental to this item of work. The Department will also not measure connecting the induction loop amplifiers, pedestrian isolators, load switches, model 400 modem card for payment and will consider them incidental to this item of work. The Department will also not measure furnishing and installing electrical service conductors, conduits, anchors, meter base, fused cutout, fuses, ground rods, ground lugs, and ground wires for payment and will consider them incidental to this item of work.
Subsection:	723.04.21 Install Steel Strain Pole.
Revision:	Replace the second sentence of the subsection with the following: The Department will not measure any necessary clamp assemblies for payment and will consider them incidental to this item of work.

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Subsection: **Revision:**	723.04.22 Remove Signal Equipment. Replace the paragraph with the following: The Department will measure the quantity by lump sum. The Department will not measure backfilling and the disposal or transportation of equipment and materials associated with any structural or electrical component of the signal system including, but not limited to pole bases, poles, junction boxes, cabinets, and wood poles for payment and will consider them incidental to this item of work.
Subsection: **Revision:**	723.04.23 Install Span/Pole Mounted Sign. Replace the second sentence of the subsection with the following: The Department will not measure the hanger or any other hardware necessary to install the sign for payment and will consider them incidental to this item of work.
Subsection: **Revision:**	723.04.24 Install Pedestrian Head LED. Insert the following sentence at the end of the paragraph: The Department will not measure the installation of LED modules and any other necessary hardware for payment and will consider them incidental to this item of work.
Subsection: **Revision:**	723.04.25 Install Signal LED. Insert the following sentence at the end of the paragraph: The Department will not measure the installation of LED modules, retroreflective tape, back plates, and any other necessary hardware for payment and will consider them incidental to this item of work.
Subsection: **Revision:**	723.04.26 Install Coordinating Unit. Replace the subsection with the following: The Department will measure the quantity as each individual unit installed. The Department will not measure radio, modem, cable(s), antenna(s), router, repeater, and any other necessary hardware for payment and will consider them incidental to this item of work.
Subsection: **Revision:**	723.04.27 Video Camera. Replace the second sentence of the subsection with the following: The Department will not measure video modules, mounting bracket, truss type arm, power cable, coaxial cable, and any other necessary hardware for payment and will consider them incidental to this item of work.
Subsection: **Revision:**	723.04.28 Install Pedestrian Detector Audible. Replace the second sentence with the following: The Department will not measure installing R10-3e sign, detector housing, and installing mounting hardware for payment and will consider them incidental to this item of work.
Subsection: **Revision:**	723.04.29 Audible Pedestrian Detector. Replace the second sentence with the following: The Department will not measure furnishing and installing the R10-3e sign, detector housing, and installing mounting hardware for payment and will consider them incidental to this item of work.
Subsection: **Revision:**	723.04.30 Bore and Jack Conduit. Replace the paragraph with the following: The Department will measure the quantity in linear feet. This item shall include all work necessary for boring and installing conduit under an existing roadway.

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Subsection: **Revision:**	723.04.31 Install Pedestrian Detector. Replace the paragraph with the following: The Department will measure the quantity as each individual unit installed and connected to pole/pedestal. The Department will not measure installing R 10-3e sign, detector housing, and installing mounting hardware for payment and will consider them incidental to this item of work.
Subsection: **Revision:**	723.04.32 Install Mast Arm Pole. Replace the second sentence with the following: The Department will not measure installation of arms, signal mounting brackets, anchor bolts, and any other necessary hardware for payment and will consider them incidental to this item of work.
Subsection: **Revision:**	723.04.33 Pedestal Post. Replace the second sentence with the following: The Department will not measure excavation, backfilling, restoration, furnishing and installing concrete, reinforcing steel, anchor bolts, conduit, fittings, ground rod, ground wire, ground lugs, or any other necessary hardware for payment and will consider them incidental to this item of work.
Subsection: **Revision:**	723.04.34 Span Mounted Sign. Revise subsection title to 723.04.34 Span/Pole-Mounted Sign.
Subsection: **Revision:**	723.04.34 Span/Pole-Mounted Sign. Replace the second sentence of the subsection with the following: The Department will not measure the hanger, sign, and any other necessary hardware for payment and will consider them incidental to this item of work.
Subsection: **Revision:**	723.04.35 Remove and Reinstall Coordinating Unit. Add the following sentence to the end of the subsection: The Department will not measure removing, storage, reinstalling, and connecting radio, modem, cable(s), antenna(s), router, repeater, and any other necessary hardware for payment and will consider them incidental to this item of work.
Subsection: **Revision:**	723.04.36 Traffic Signal Pole Base. Replace the second sentence of the subsection with the following: The Department will not measure excavation, backfilling, restoration, furnishing and installing reinforcing steel, anchor bolts, conduits, ground rods, ground wires, and ground lugs for payment and will consider them incidental to this item of work.
Subsection: **Revision:**	723.04.37 Install Signal Pedestal. Replace the second sentence of the subsection with the following: . The Department will not measure excavation, backfilling, restoration, furnishing and installing concrete, reinforcing steel, conduits, fittings, ground rod, ground wire, ground lugs, and any other necessary hardware for payment and will consider them incidental to this item of work.
Subsection: **Revision:**	723.04.38 Install Pedestal Post. Replace the second sentence of the subsection with the following: The Department will not measure excavation, backfilling, restoration, furnishing and installing concrete, reinforcing steel, conduit, fittings, ground rod, ground wire, ground lugs, and any other necessary hardware for payment and will consider them incidental to this item of work.
Subsection: **Revision:**	723.04.39 Install Antenna. Replace the second sentence of the subsection with the following: The Department will not measure any other materials necessary to complete the installation for payment and will consider them incidental to this item of work.

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Subsection: **Revision:**	723.05 PAYMENT. Replace items 04810-04811, 20391NS835, 20392NS835,23052NN and add item number 24526ED under Code, Pay Item, and Pay Unit with the following: Code — Pay Item — Pay Unit 04810 — Electrical Junction Box — Each 04811 — Electrical Junction Box Type B — Each 20391NS835 — Electrical Junction Box Type A — Each 20392NS835 — Electrical Junction Box Type C — Each 23052NN — Span/Pole-Mounted Sign — Each 24526ED — Install Beacon Controller 2 Cir — Each
Subsection: **Revision:**	801.01 REQUIREMENTS Replace first sentence in paragraph one with the following: Provide Portland cement *or blended hydraulic cement* from approved mills listed in the Department's List of Approved Materials.
Subsection: **Number:** **Revision:**	801.01 REQUIREMENTS 1) Replace first sentence with the following: Type I, II, III, and IV *Portland cement* conforms to ASTM C 150.
Subsection: **Number:** **Revision:**	801.01 REQUIREMENTS 3) Replace the first sentence with the following: Type IP (≤20), Portland-pozzolan cement, conforms to ASTM C595, and the following additional requirements to Type IP (≤20).
Subsection: **Number:** **Part:** **Revision:**	801.01 REQUIREMENTS 3) b) Delete part b)
Subsection: **Number:** **Part:** **Revision:**	801.01 REQUIREMENTS 3) c) Rename Part c) to Part b) and replace the text with the following: The cement manufacturer shall furnish to the Engineer reports showing the results of tests performed on the fly ash used in the manufacture of the Type IP(≤20) cement shipped to the project.
Subsection **Number:** **Part:** **Revision:**	801.01 REQUIREMENTS 3) d) Rename Part d) to Part c)
Subsection: **Number:** **Part:** **Revision:**	801.01 REQUIREMENTS 3) e) Rename Part e) to Part d) and replace the text with the following: Use only one brand of Type IP(≤20) cement throughout the project, unless the Engineer approved a change in brand in writing.
Subsection: **Number:** **Revision:**	801.01 REQUIREMENTS 4) Replace first sentence with the following: Type IS(≤30), Portland blast furnace slag cement, conforms to ASTM C 595 and the following requirements:

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Subsection:	801.01 REQUIREMENTS
Number:	4)
Part:	a)
Revision:	Replace part a) with the following: Use Grade 100 or 120 blast furnace slag cement conforming to the requirements of ASTM C 989.
Subsection:	801.01 REQUIREMENTS
Number:	4)
Part:	b)
Revision:	Delete part b)
Subsection:	801.01 REQUIREMENTS
Number:	4)
Part:	c)
Revision:	Rename Part c) to Part b) and replace the text with the following: The cement manufacturer shall furnish to the Engineer reports showing the results of the tests performed on the blast furnace slag cement used in the manufacturing of the Type IS(≤30) shipped to the project.
Subsection:	801.01 REQUIREMENTS
Number:	4)
Part:	d)
Revision:	Rename Part d) to Part c)
Subsection:	801.01 REQUIREMENTS
Number:	4)
Part:	e)
Revision:	Rename Part e) to Part d) and replace the text with the following: Use only one brand of Type IS(≤30) cement throughout the project, unless the Engineer approves otherwise.
Subsection:	801.01 REQUIREMENTS
Number:	5)
Revision:	Insert part 5) as the following: Type IL(5-15), Portland-limestone cement, conforms to ASTM C 595 and the following additional requirements:
Subsection:	801.01 REQUIREMENTS
Number:	5)
Part:	a)
Revision:	Insert part a) as the following: The cement manufacturer shall furnish to the Engineer reports showing the results of test performed on the limestone used in the manufacture of the Type IL cement shipped to the project.
Subsection:	801.01 REQUIREMENTS
Number:	5)
Part:	b)
Revision:	Insert part b) as the following: Use only one brand of Type IL cement throughout the project, unless the Engineer approves a brand change in writing.
Subsection:	801.01 REQUIREMENTS
Number:	5)
Part:	c)
Revision:	Insert part c) as the following: The Type IL blended cement shall be an intimate and uniform blend produced by intergrinding of the Portland cement and limestone.
Subsection:	804.01.02 Crushed Sand.
Revision:	Delete last sentence of the section.

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Subsection: 804.01.06 Slag.
Revision: Add subsection and following sentence.
Provide blast furnace slag sand where permitted. The Department will allow steel slag sand only in asphalt surface applications.

Subsection: 804.04 Asphalt Mixtures.
Revision: Replace the subsection with the following:
Provide natural, crushed, conglomerate, or blast furnace slag sand, with the addition of filler as necessary, to meet gradation requirements. The Department will allow any combination of natural, crushed, conglomerate or blast furnace slag sand when the combination is achieved using cold feeds at the plant. The Engineer may allow other fine aggregates.

Subsection: 806.03.01 General Requirements.
Revision: Replace the second sentence of the paragraph with the following:
Additionally, the material must have a minimum solubility of 99.0 percent when tested according to AASHTO T 44 and PG 76-22 must exhibit a minimum recovery of 60 percent, with a J_{NR} (non-recoverable creep compliance) between 0.1 and 0.5, when tested according to AASHTO TP 70.

Subsection: 806.03.01 General Requirements.
Table: PG Binder Requirements and Price Adjustment Schedule
Revision: Replace the Elastic Recovery, % [3] (AASHTO T301) and all corresponding values in the table with the following:

Test	Specification	100% Pay	90% Pay	80% Pay	70% Pay	50%Pay[1]
MSCR recovery, % [3] (AASHTO TP 70)	60 Min.	≥58	56	55	54	<53

Subsection: 806.03.01 General Requirements.
Table: PG Binder Requirements and Price Adjustment Schedule
Superscript: (3)
Revision: Replace [3] with the following:
Perform testing at 64°C.

Subsection: 808.07 Polypropylene Waterproofing Membrane.
Revision: Replace the paragraph and table with the following: Furnish a layered waterproofing membrane. The layers will consist of an internal puncture resistant woven polypropylene fabric sandwiched between two rubberized mastic layers. The mastic will have a heavy polyethylene membrane attached on the top and the bottom mastic layer will be covered by a protective release film.

Subsection: 808.09 Acceptance.
Revision: Replace the reference to "KMIMS" in the second paragraph with SiteManager.

Subsection: 811.10.04 Properties of the Coated Bar.
Part: B) Flexibility of Coating.
Revision: Replace the second sentence of the paragraph with the following: Ensure that the coated bars are capable of being bent to 180 degrees (after rebound) over a mandrel, without any visible evidence of cracking the coating.

Subsection: 813.04 Gray Iron Castings.
Revision: Replace the reference to "AASHTO M105" with "ASTM A48".

Subsection: 813.09.02 High Strength Steel Bolts, Nuts, and Washers.
Number: A) Bolts.
Revision: Delete first paragraph and "Hardness Number" Table. Replace with the following:
A) Bolts. Conform to ASTM A325 (AASHTO M164) or ASTM A490 (AASHTO 253) as applicable.

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Subsection: **Revision:**	814.04.02 Timber Guardrail Posts. Third paragraph, replace the reference to "AWPA C14" with "AWPA U1, Section B, Paragraph 4.1".
Subsection: **Revision:**	814.04.02 Timber Guardrail Posts. Replace the first sentence of the fourth paragraph with the following: Use any of the species of wood for round or square posts covered under AWPA U1.
Subsection: **Revision:**	814.04.02 Timber Guardrail Posts. Fourth paragraph, replace the reference to "AWPA C2" with "AWPA U1, Section B, Paragraph 4.1".
Subsection: **Revision:**	814.04.02 Timber Guardrail Posts. Delete the second sentence of the fourth paragraph.
Subsection: **Revision:**	814.05.02 Composite Plastic. 1) Add the following to the beginning of the first paragraph: Select composite offset blocks conforming to this section and assure blocks are from a manufacturer included on the Department's List of Approved Materials. 2) Delete the last paragraph of the subsection.
Subsection: **Revision:**	816.07.02 Wood Posts and Braces. First paragraph, replace the reference to "AWPA C5" with "AWPA U1, Section B, Paragraph 4.1".
Subsection: **Revision:**	816.07.02 Wood Posts and Braces. Delete the second sentence of the first paragraph.
Subsection: **Revision:**	818.07 Preservative Treatment. First paragraph, replace all references to "AWPA C14" with "AWPA U1, Section A".
Subsection: **Revision:**	833.01.02 Sheeting Signs. Replace the second sentence with the following: Provide a thickness of 125 mils if any single edge dimension of the sign exceeds 3 feet.
Subsection: **Revision:**	834.14 Lighting Poles. Replace the first sentence with the following: Lighting pole design shall be in accordance with loading and allowable stress requirements of the AASHTO Standard Specifications for Structural Supports for Highway Signs, Luminaires, and Traffic Signals, 2013-6th Edition with current interims, with the exception of the following: The Cabinet will waive the requirement stated in the first sentence of Section 5.14.6.2 – Reinforced Holes and Cutouts for high mast poles (only). The minimum diameter at the base of the pole shall be 22 inches for high mast poles (only).
Subsection **Revision:**	834.14.03 High Mast Poles. Remove the second and fourth sentence from the first paragraph.
Subsection **Revision:**	834.14.03 High Mast Poles. Replace the third paragraph with the following: Provide calculations and drawings that are stamped by a Professional Engineer licensed in the Commonwealth of Kentucky.

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Subsection: **Revision:**	834.14.03 High Mast Poles. Replace paragraph six with the following: Provide a pole section that conforms to ASTM A 595 grade A with a minimum yield strength of 55 KSI or ASTM A 572 with a minimum yield strength of 55 KSI. Use tubes that are round or 16 sided with a four inch corner radius, have a constant linear taper of .144 in/ft and contain only one longitudinal seam weld. Circumferential welded tube butt splices and laminated tubes are not permitted. Provide pole sections that are telescopically slip fit assembled in the field to facilitate inspection of interior surface welds and the protective coating. The minimum length of the telescopic slip splices shall be 1.5 times the inside diameter of the exposed end of the female section. Use longitudinal seam welds as commended in Section 5.15 of the AASHTO 2013 Specifications. The thickness of the transverse base shall not be less than 2 inches. Plates shall be integrally welded to the tubes with a telescopic welded joint or a full penetration groove weld with backup bar. The handhole cover shall be removable from the handhole frame. One the frame side opposite the hinge, provide a mechanism on the handhole cover/frame to place the Department's standard padlock as specified in Section 834.25. The handhole frame shall have two stainless studs installed opposite the hinge to secure the handhole cover to the frame which includes providing stainless steel wing nuts and washers. The handhole cover shall be manufactured from 0.25 inch thick galvanized steel (ASTM A 153) and have a neoprene rubber gasket that is permanently secured to the handhole frame to insure weather-tight protection. The hinge shall be manufactured from 7-guage stainless steel to provide adjustability to insure weather-tight fit for the cover. The minimum clear distance between the transverse plate and the bottom opening of the handhole shall not be less than the diameter of the bottom tube of the pole but needs to be at least 15 inches. Provide products that are hot-dip galvanized to the requirements of either ASTM A123 (fabricated products) or ASTM A 153 (hardware items).
Subsection: **Revision:**	834.16 ANCHOR BOLTS. Insert the following sentence at the beginning of the paragraph: The anchor bolt design shall follow the NCHRP Report 494 Section 2.4 and NCHRP 469 Appendix A Specifications.
Subsection: **Revision:**	834.17.01 Conventional. Add the following sentence after the second sentence: Provide a waterproof sticker mounted on the bottom of the housing that is legible from the ground and indicates the wattage of the fixture by providing the first two numbers of the wattage.
Subsection: **Revision:**	834.21.01 Waterproof Enclosures. Replace the last five sentences in the second paragraph with the following sentences: Provide a cabinet door with a louvered air vent, filter-retaining brackets and an easy to clean metal filter. Provide a cabinet door that is keyed with a factory installed standard no. 2 corbin traffic control key. Provide a light fixture with switch and bulb. Use a 120-volt fixture and utilize a L.E.D. bulb (equivalent to 60 watts minimum). Fixture shall be situated at or near the top of the cabinet and illuminate the contents of the cabinet. Provide a 120 VAC GFI duplex receptacle in the enclosure with a separate 20 amp breaker.

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Subsection: **Revision:**	835.07 Traffic Poles. Replace the first sentence of the first paragraph with the following: Pole diameter and wall thickness shall be calculated in accordance with the AASHTO Standard Specifications for Structural Supports for Highway Signs, Luminaires, and Traffic Signals, 2013-6th Edition with current interims.
Subsection: **Revision:**	835.07 Traffic Poles. *Replace the first sentence of the fourth paragraph with the following: Ensure transverse plates have a thickness ≥ 2 inches. *Add the following sentence to the end of the fourth paragraph: The bottom pole diameter shall not be less than 16.25 inches.
Subsection: **Revision:**	835.07 Traffic Poles. Replace the third sentence of the fifth paragraph with the following: For anchor bolt design, pole forces shall be positioned in such a manner to maximize the force on any individual anchor bolt regardless of the actual anchor bolt orientation with the pole.
Subsection: **Revision:**	835.07 Traffic Poles. Replace the first and second sentence of the sixth paragraph with the following: The pole handhole shall be 25 inches by 6.5 inches. The handhole cover shall be removable from the handhole frame. On the frame side opposite the hinge, provide a mechanism on the handhole cover/frame to place the Department's standard padlock as specified in Section 834.25. The handhole frame shall have two stainless studs installed opposite the hinge to secure the handhole cover to the frame which includes providing stainless steel wing nuts and washers. The handhole cover shall be manufactured from 0.25 inch thick galvanized steel (ASTM 153) and have a neoprene rubber gasket that is permanently secured to the handhole frame to insure weather-tight protection. The hinge shall be manufactured from 7 gauge stainless steel to provide adjustability to insure a weather-tight fit for the cover. The minimum clear distance between the transverse plate and the bottom opening of the handhole shall not be less than the diameter of the bottom tube but needs to be at least 12 inches.
Subsection: **Revision:**	835.07 Traffic Poles. *Replace the first sentence of the last paragraph with the following: Provide calculations and drawings that are stamped by a Professional Engineer licensed in the Commonwealth of Kentucky. *Replace the third sentence of the last paragraph with the following: All tables referenced in 835.07 are found in the AASHTO Standard Specifications for Structural Supports for Highway Signs, Luminaires, and Traffic Signals, 2013-6th Edition with current interims.
Subsection: **Revision:**	835.07.01 Steel Strain Poles. Replace the second sentence of the second paragraph with the following: The detailed analysis shall be certified by a Professional Engineer licensed in the Commonwealth of Kentucky.
Subsection: **Revision:**	835.07.01 Steel Strain Poles. Replace number 7. after the second paragraph with the following: 7. Fatigue calculations should be shown for all fatigue related connections. Provide the corresponding detail, stress category and example from table 11.9.3.1-1.
Subsection: **Revision:**	835.07.02 Mast Arm Poles. Replace the second sentence of the fourth paragraph with the following: The detailed analysis shall be certified by a Professional Engineer licensed in the Commonwealth of Kentucky.

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Effective with the April 29, 2016 Letting

Subsection: 835.07.02 Mast Arm Poles.
Revision: Replace number 7) after the fourth paragraph with the following: 7) Fatigue calculations should be shown for all fatigue related connections. Provide the corresponding detail, stress category and example from table 11.9.3.1-1.

Subsection: 835.07.03 Anchor Bolts.
Revision: Add the following to the end of the paragraph: There shall be two steel templates (one can be used for the headed part of the anchor bolt when designed in this manner) provided per pole. Templates shall be contained within a 26.5 inch diameter. All templates shall be fully galvanized (ASTM A 153).

Subsection: 835.16.05 Optical Units.
Revision: Replace the 3rd paragraph with the following:
The list of certified products can be found on the following website: http://www.intertek.com.

Subsection: 835.19.01 Pedestrian Detector Body.
Revision: Replace the first sentence with the following: Provide a four holed pole mounted aluminum rectangular housing that is compatible with the pedestrian detector.

Subsection: 843.01.01 Geotextile Fabric.
Table: TYPE I FABRIC GEOTEXTILES FOR SLOPE PROTECTION AND CHANNEL LINING
Revision: Add the following to the chart:

Property	Minimum Value(1)	Test Method
CBR Puncture (lbs)	494	ASTM D6241
Permittivity (1/s)	0.7	ASTM D4491

Subsection: 843.01.01 Geotextile Fabric.
Table: TYPE II FABRIC GEOTEXTILES FOR UNDERDRAINS
Revision: Add the following to the chart:

Property	Minimum Value(1)	Test Method
CBR Puncture (lbs)	210	ASTM D6241
Permittivity (1/s)	0.5	ASTM D4491

Subsection: 843.01.01 Geotextile Fabric.
Table: TYPE III FABRIC GEOTEXTILES FOR SUBGRADE OR EMBANKMENT STABILIZATION
Revision: Add the following to the chart:

Property	Minimum Value(1)	Test Method
CBR Puncture (lbs)	370	ASTM D6241
Permittivity (1/s)	0.05	ASTM D4491

Subsection: 843.01.01 Geotextile Fabric.
Table: TYPE IV FABRIC GEOTEXTILES FOR EMBANKMENT DRAINAGE BLANKETS AND PAVEMENT EDGE DRAINS
Revision: Add the following to the chart:

Property	Minimum Value(1)	Test Method
CBR Puncture (lbs)	309	ASTM D6241
Permittivity (1/s)	0.5	ASTM D4491

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Subsection: 843.01.01 Geotextile Fabric.

Table: TYPE V HIGH STRENGTH GEOTEXTILE FABRIC

Revision: Make the following changes to the chart:

Property	Minimum Value[1]	Test Method
CBR Puncture (lbs)	618	ASTM D6241
Apparent Opening Size	U.S. #40[3]	ASTM D4751

[3] Maximum average roll value.

2016 STANDARD DRAWINGS THAT APPLY
FD51 067 1148 000-003
FD51 067 2034 004-005
FD51 067 3402 000-003

TYPICAL GUARDRAIL INSTALLATIONS RBI-001-11
TYPICAL GUARDRAIL INSTALLATION RBI-002-07
STEEL BEAM GUARDRAIL (“W”-BEAM) RBR-001-12
GUARDRAIL COMPONENTS RBR-005-11
GUARDRAIL TERMINAL SECTIONS RBR-010-06
STEEL GUARDRAIL POSTS RBR-015-05
GUARDRAIL END TREATMENT TYPE 7 ..... RBR-050-07
GUARDRAIL END TREATMENT TYPE 7 ALTERNATE ANCHOR RBR-051
DELINEATORS FOR GUARDRAIL RBR-055
TEMPORARY SILT FENCE RDX-210-03
TEMPORARY SILT FENCE WITH WOVEN WIRE FENCE FABRIC RDX-215-01
SILT TRAP TYPE B RDX-225-01
CURVE WIDENING AND SUPERELEVATION TRANSITIONS RGS-001-07
MISCELLANEOUS STANDARDS RGX-001-06
ONE POINT PROCTER FAMILY OF CURVES RGX-200-01
APPROACHES, ENTRANCES, AND MAIL BOX TURNOUT RPM-110-07
LANE CLOSURE TWO-LANE HIGHWAY TTC-100-04
SHOULDER CLOSURE TTC-135-02
PAVEMENT CONDITION WARNING SIGNS TTD-125-02

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
II. Nondiscrimination of Employees (KRS 344)
III. Payment of Predetermined Minimum Wages
IV. Statements and Payrolls

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 not apply to this Contract.

TRANSPORTATION CABINET
DIVISION OF CONSTRUCTION PROCUREMENT
COMPLIANCE SECTION
PROJECT WAGE RATES

WORKERS……..MINIMUM HOURLY RATE…..$7.25

Note: Parts III and IV of **"Labor and Wage Requirements Applicable to Other Than Federal-Aid System Projects"** do not apply to this project.

EMPLOYEE RIGHTS

UNDER THE FAIR LABOR STANDARDS ACT

THE UNITED STATES DEPARTMENT OF LABOR WAGE AND HOUR DIVISION

FEDERAL MINIMUM WAGE

$7.25 PER HOUR

BEGINNING JULY 24, 2009

OVERTIME PAY

At least 1½ times your regular rate of pay for all hours worked over 40 in a workweek.

CHILD LABOR

An employee must be at least **16** years old to work in most non-farm jobs and at least **18** to work in non-farm jobs declared hazardous by the Secretary of Labor.

Youths **14** and **15** years old may work outside school hours in various non-manufacturing, non-mining, non-hazardous jobs under the following conditions:

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No more than

- **3** hours on a school day or **18** hours in a school week;
- **8** hours on a non-school day or **40** hours in a non-school week.

Also, work may not begin before **7 a.m.** or end after **7 p.m.**, except from June 1 through Labor Day, when evening hours are extended to **9 p.m.** Different rules apply in agricultural employment.

TIP CREDIT

Employers of "tipped employees" must pay a cash wage of at least $2.13 per hour if they claim a tip credit against their minimum wage obligation. If an employee's tips combined with the employer's cash wage of at least $2.13 per hour do not equal the minimum hourly wage, the employer must make up the difference. Certain other conditions must also be met.

ENFORCEMENT

The Department of Labor may recover back wages either administratively or through court action, for the employees that have been underpaid in violation of the law. Violations may result in civil or criminal action.

Employers may be assessed civil money penalties of up to $1,100 for each willful or repeated violation of the minimum wage or overtime pay provisions of the law and up to $11,000 for each employee who is the subject of a violation of the Act's child labor provisions. In addition, a civil money penalty of up to $50,000 may be assessed for each child labor violation that causes the death or serious injury of any minor employee, and such assessments may be doubled, up to $100,000, when the violations are determined to be willful or repeated. The law also prohibits discriminating against or discharging workers who file a complaint or participate in any proceeding under the Act.

ADDITIONAL INFORMATION

- Certain occupations and establishments are exempt from the minimum wage and/or overtime pay provisions.
- Special provisions apply to workers in American Samoa and the Commonwealth of the Northern Mariana Islands.
- Some state laws provide greater employee protections; employers must comply with both.
- The law requires employers to display this poster where employees can readily see it.
- Employees under 20 years of age may be paid $4.25 per hour during their first 90 consecutive calendar days of employment with an employer.
- Certain full-time students, student learners, apprentices, and workers with disabilities may be paid less than the minimum wage under special certificates issued by the Department of Labor.

For additional information:

1-866-4-USWAGE

(1-866-487-9243) TTY: 1-877-889-5627

WWW.WAGEHOUR.DOL.GOV

U.S. Department of Labor | Wage and Hour Division

WHD Publication 1088 (Revised July 2009)

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

162201

PROPOSAL BID ITEMS

Report Date 7/5/16

Section: 0001 - SITE 1

LINE	BID CODE	ALT	DESCRIPTION	QUANTITY	UNIT	UNIT PRIC	FP	AMOUNT
0010	00001		DGA BASE	72.00	TON		$	
0020	01987		DELINEATOR FOR GUARDRAIL BI DIRECTIONAL WHITE	33.00	EACH		$	
0030	02014		BARRICADE-TYPE III	28.00	EACH		$	
0040	02353		INSTALL GUARDRAIL-STEEL W BM-S FACE	187.50	LF		$	
0050	02371		GUARDRAIL END TREATMENT TYPE 7	6.00	EACH		$	
0060	02383		REMOVE & RESET GUARDRAIL	650.00	LF		$	
0070	02396		REMOVE GUARDRAIL END TREATMENT TYPE 7	1.00	EACH		$	
0080	02396		REMOVE GUARDRAIL END TREATMENT TYPE 7	1.00	EACH		$	
0090	02562		TEMPORARY SIGNS	750.00	SQFT		$	
0100	02599		FABRIC-GEOTEXTILE TYPE IV	805.00	SQYD		$	
0110	02650		MAINTAIN & CONTROL TRAFFIC KY 1148 SITE 1	1.00	LS		$	
0120	02650		MAINTAIN & CONTROL TRAFFIC KY 1148 SITE 2	1.00	LS		$	
0130	02650		MAINTAIN & CONTROL TRAFFIC KY 1148 SITE 3	1.00	LS		$	
0140	02650		MAINTAIN & CONTROL TRAFFIC KY 1148 SITE 4	1.00	LS		$	
0150	02650		MAINTAIN & CONTROL TRAFFIC KY 1148 SITE 5	1.00	LS		$	
0160	02650		MAINTAIN & CONTROL TRAFFIC KY 1148 SITE 6	1.00	LS		$	
0170	02650		MAINTAIN & CONTROL TRAFFIC KY 1148 SITE 7	1.00	LS		$	
0180	02650		MAINTAIN & CONTROL TRAFFIC KY 2034 SITE 1	1.00	LS		$	
0190	02650		MAINTAIN & CONTROL TRAFFIC KY 2034 SITE 2	1.00	LS		$	
0200	02650		MAINTAIN & CONTROL TRAFFIC KY 2034 SITE 3	1.00	LS		$	
0210	02650		MAINTAIN & CONTROL TRAFFIC KY 2034 SITE 4	1.00	LS		$	
0220	02650		MAINTAIN & CONTROL TRAFFIC KY 3402 SITE 1	1.00	LS		$	
0230	02650		MAINTAIN & CONTROL TRAFFIC KY 3402 SITE 2	1.00	LS		$	
0240	02650		MAINTAIN & CONTROL TRAFFIC KY 3402 SITE 3	1.00	LS		$	
0250	03234		RAILROAD RAILS-DRILLED	4,345.00	LF		$	
0260	03235		EXCAVATION AND BACKFILL	500.00	CUYD		$	
0270	03236		CRIBBING	3,205.00	SQFT		$	

Section: 0002 - DEMOBILIZATION

LINE	BID CODE	ALT	DESCRIPTION	QUANTITY	UNIT	UNIT PRIC	FP	AMOUNT
0280	02569		DEMOBILIZATION	1.00	LS		$	