CALL NO. 325

CONTRACT ID. 151240

WAYNE COUNTY

FED/STATE PROJECT NUMBER FD04 116 0090 009-013

DESCRIPTION KY 90 MONTICELLO-SOMERSET ROAD

WORK TYPE GRADE & DRAIN WITH ASPHALT SURFACE

PRIMARY COMPLETION DATE 11/15/2015

LETTING DATE: July 31,2015

Sealed Bids will be received electronically through the Bid Express bidding service until 10:00 AM EASTERN DAYLIGHT TIME July 31,2015. Bids will be publicly announced at 10:00 AM EASTERN DAYLIGHT TIME.

PLANS AVAILABLE FOR THIS PROJECT.

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

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PART I

SCOPE OF WORK

ADMINISTRATIVE DISTRICT - 08

CONTRACT ID - 151240

FD04 116 0090 009-013

COUNTY - WAYNE

PCN - DE116009015R1
FD04 116 0090 009-013

KY 90 MONTICELLO-SOMERSET ROAD (MP 9.500) INSTALL TURN LANES ON KY 90 IN THE VICINITY OF WALMART (MP 13.000), A DISTANCE OF 02.52 MILES.GRADE & DRAIN WITH ASPHALT SURFACE SYP NO. 08-00397.00.

GEOGRAPHIC COORDINATES LATITUDE 36:51:02.00 LONGITUDE 84:51:19.00

COMPLETION DATE(S):

COMPLETED BY 11/15/2015 APPLIES TO ENTIRE CONTRACT

CONTRACT NOTES

PROPOSAL ADDENDA

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

BID SUBMITTAL

Bidder must use the Department's Expedite Bidding Program available on the Internet web site of the Department of Highways, Division of Construction Procurement. (www.transportation.ky.gov/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 is advised that the Underground Facility Damage Protection Act of 1994, became law January 1, 1995. It is the contractor's responsibility to determine the impact of the act regarding this project, and take all steps necessary to be in compliance with the provision of the act.

SPECIAL NOTE FOR COMPOSITE OFFSET BLOCKS

Contrary to the Standard Drawings (2012 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. (See attachment)

10/29/12

Steven L. Beshear
Governor

Commonwealth of Kentucky
Finance and Administration Cabinet
OFFICE OF THE SECRETARY
Room 383, Capitol Annex
702 Capital Avenue
Frankfort, KY 40601-3462
(502) 564-4240
Fax (502) 564-6785

Lori H. Flanery
Secretary

SECRETARY'S ORDER 11-004

FINANCE AND ADMINISTRATION CABINET

Vendor Document Disclosure

WHEREAS, in order to promote accountability and transparency in governmental operations, the Finance and Administration Cabinet believes that a mechanism should be created which would provide for review and assistance to an Executive Branch agency if said agency cannot obtain access to documents that it deems necessary to conduct a review of the records of a private vendor that holds a contract to provide goods and/or services to the Commonwealth; and

WHEREAS, in order to promote accountability and transparency in governmental operations, the Finance and Administration Cabinet believes that a mechanism should be created which would provide for review and assistance to an Executive Branch agency if said agency cannot obtain access to documents that it deems necessary during the course of an audit, investigation or any other inquiry by an Executive Branch agency that involves the review of documents; and

WHEREAS, KRS 42.014 and KRS 12.270 authorizes the Secretary of the Finance and Administration Cabinet to establish the internal organization and assignment of functions which are not established by statute relating to the Finance and Administration Cabinet; further, KRS Chapter 45A.050 and 45A.230 authorizes the Secretary of the Finance and Administration Cabinet to procure, manage and control all supplies and services that are procured by the Commonwealth and to intervene in controversies among vendors and state agencies; and

NOW, THEREFORE, pursuant to the authority vested in me by KRS 42.014, KRS 12.270, KRS 45A.050, and 45A.230, I, Lori H. Flanery, Secretary of the Finance and Administration Cabinet, do hereby order and direct the following:

I. Upon the request of an Executive Branch agency, the Finance and Administration Cabinet ("FAC") shall formally review any dispute arising where the agency has requested documents from a private vendor that holds a state contract and the vendor has refused access to said documents under a claim that said documents are not directly pertinent or relevant to the agency's inquiry upon which the document request was predicated.

II. Upon the request of an Executive Branch agency, the FAC shall formally review any situation where the agency has requested documents that the agency deems necessary to

conduct audits, investigations or any other formal inquiry where a dispute has arisen as to what documents are necessary to conclude the inquiry.

III. Upon receipt of a request by a state agency pursuant to Sections I & II, the FAC shall consider the request from the Executive Branch agency and the position of the vendor or party opposing the disclosure of the documents, applying any and all relevant law to the facts and circumstances of the matter in controversy. After FAC's review is complete, FAC shall issue a Determination which sets out FAC's position as to what documents and/or records, if any, should be disclosed to the requesting agency. The Determination shall be issued within 30 days of receipt of the request from the agency. This time period may be extended for good cause.

IV. If the Determination concludes that documents are being wrongfully withheld by the private vendor or other party opposing the disclosure from the state agency, the private vendor shall immediately comply with the FAC's Determination. Should the private vendor or other party refuse to comply with FAC's Determination, then the FAC, in concert with the requesting agency, shall effectuate any and all options that it possesses to obtain the documents in question, including, but not limited to, jointly initiating an action in the appropriate court for relief.

V. Any provisions of any prior Order that conflicts with the provisions of this Order shall be deemed null and void.

SPECIAL NOTE FOR RECIPROCAL PREFERENCE

Reciprocal preference to be given by public agencies to resident bidders

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

ASPHALT MIXTURE

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

INCIDENTAL SURFACING

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

FUEL AND ASPHALT PAY ADJUSTMENT

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

OPTION A

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

SPECIAL NOTE FOR CONCRETE TESTING EQUIPMENT (Moisture Cabinet)

Provide the following test equipment as part of this contract:

New SHAPCO ATMOSHPERIC CABINET, TYPE G, manufactured to comply with the moisture cabinet requirements specified in ASTM C511. The cabinet is to be furnished with applicable equipment mounted on the left hand side when facing the front of the cabinet. The cabinet and its components are to be warranted by the manufacturer for parts and labor for a period of one year from date of delivery with a warranty extension of four years on the unit's compressor.

Purchase is to include freight and insurance with delivery to the Division of Materials, located at 1227 Wilkinson Boulevard, Frankfort, Kentucky 40061.

The equipment order is to be placed upon award of contract, no later than July 31, 2015. Delivery of the equipment is expected three to five months from date of order.

The Department will measure the quantity for this equipment as LUMP SUM. The Department will make payment for the laboratory testing equipment satisfying the Department's requirements. The Department will consider payment for the laboratory testing equipment as full compensation for furnishing all work required in this note. Contrary to the Standard Specifications, the bid item for laboratory test equipment shall not be considered for mobilization and demobilization payments.

SPECIAL NOTE FOR
GUARDRAIL END TREATMENT TYPE 1

Contrary to KYTC Standard Drawing RBR-020-05 the guardrail end treatment ET-Plus manufactured by Trinity Industries will not be permitted as an option for bid item “Guardrail End Treatment Type 1”.

Right-of-Way Certification Form

Revised 2/22/11

☐ Federal Funded
☑ State Funded
☑ Original
☐ Re-Certification

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

Date: May 20, 2015

Project Name: Safety Project
Letting Date: June 26, 2015
Project #: 89399 01D
County: Wayne
Item #: 08-397.00
Federal #: N/A

Description of Project:
Install Turn Lanes on KY 90 in the Vicinity of Walmart

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

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

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

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

☐ **Condition 1.** All necessary rights-of-way, including control of access rights when applicable, have been acquired including legal and physical possession. Trial or appeal of cases may be pending in court but legal possession has been obtained. There may be some improvements remaining on the right-of-way, but all occupants have vacated the lands and improvements, and KYTC has physical possession and the rights to remove, salvage, or demolish all improvements and enter on all land. Fair market value has been paid or deposited with the court.

☐ **Condition 2.** Although all necessary rights-of-way have not been fully acquired, the right to occupy and to use all rights-of-way required for the proper execution of the project has been acquired. Trial or appeal of some parcels may be pending in court and on other parcels full legal possession has not been obtained, but right of entry has been obtained, the occupants of all lands and improvements have vacated, and KYTC has physical possession and right to remove, salvage, or demolish all improvements. Fair market value has been paid or deposited with the court for most parcels. Fair market value for all pending parcels will be paid or deposited with the court prior to AWARD of construction contract. (See note 1 below.)

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

Right-of-Way Certification Form

Revised 2/22/11

☐ **Condition 3.** The acquisition or right of occupancy and use of a few remaining parcels are not complete and/or some parcels still have occupants. However, all remaining occupants have had replacement housing made available to them in accordance with 49 CFR 24.204. The KYTC is hereby requesting authorization to advertise this project for bids and to proceed with bid letting even though the necessary rights-of-way will not be fully acquired, and/or some occupants will not be relocated, and/or the fair market value will not be paid or deposited with the court for some parcels until after bid letting. KYTC will fully meet all the requirements outlined in 23 CFR 635.309(c)(3) and 49 CFR 24.102(j) and will expedite completion of all acquisitions, relocations, and full payments after bid letting and prior to AWARD of the construction contract or force account construction. A full explanation and reason for this request, including identification of each such parcel and dates on which acquisitions, payments, and relocations will be completed, is attached to this certification form for FHWA concurrence. (See note 2.)

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

Approved: Charles Hale _____ _____ Right-of-Way Supervisor
Printed Name Signature

Approved: Dean M Lay _____ _____ KYTC, Director of ROW &Utilities
Printed Name Signature

No Signature Required
as per FHWA - KYTC
2013 Stewardship Agreement

Approved: _____ _____ FHWA, ROW Officer (when applicable)
Printed Name Signature

Right-of-Way Certification Form

Revised 2/22/11

Date: May 20, 2015

Project Name: Safety Project
Project #: 89399 01D
Item #: 08-397.00
Letting Date: June 26, 2015

County: Wayne
Federal #: N/A

This project has 0 total number of parcels to be acquired, and 0 total number of individuals or families to be relocated, as well as 0 total number of businesses to be relocated.

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

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

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

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

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

Parcel #	Name/Station	Explanation for delayed acquisition, delayed relocation, or delayed payment of fair market value	Proposed date of payment or of relocation

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

There are 0 water or monitoring wells on parcels ____, ____, ____, ____, and ____. All have been acquired and are the responsibility of the project contractor to close/cap.

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

SPECIAL NOTES FOR UTILITY CLEARANCE

IMPACT ON CONSTRUCTION

WAYNE COUNTY
FD04 116 89399 01D
INSTALL TURN LANES ON KY 90 IN THE VICINITY OF WALMART
8-397.00

GENERAL PROJECT NOTE ON UTILITY PROTECTION

Utility coordination efforts determined that no significant utility relocation work is required to complete the project. Any work pertaining to these utility facilities is defined in the bid package and is to be carried out as instructed by the Kentucky Transportation Cabinet. The contractor will be responsible for any coordination or adjustments that are discussed or quantified in the proposal.

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

Monticello Utility Commission has both water and waste-water facilities throughout the project as shown on plans. These are to remain in service at all times.

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

THE FOLLOWING COMPANIES ARE RELOCATING/ADJUSTING THEIR UTILITIES WITHIN THE PROJECT LIMITS AND WILL BE COMPLETE PRIOR TO CONSTRUCTION

None when applicable

THE FOLLOWING COMPANIES HAVE FACILITIES TO BE RELOCATED/ADJUSTED BY THE COMPANY OR THE COMPANY'S SUBCONTRACTOR AND IS TO BE COORDINATED WITH THE ROAD CONTRACT

None when applicable

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

Monticello Utility Commission has a 16 inch waterline to be relocated by the road contractor between approximate stations 131+60 and 133+20.

SPECIAL NOTES FOR UTILITY CLEARANCE
IMPACT ON CONSTRUCTION

WAYNE COUNTY
FD04 116 89399 01D
INSTALL TURN LANES ON KY 90 IN THE VICINITY OF WALMART
8-397.00

SPECIAL CAUTION NOTE – PROTECTION OF UTILITIES

The contractor will be responsible for contacting all utility facility owners on the subject project to coordinate his activities. The contractor will coordinate his activities to minimize and, where possible, avoid conflicts with utility facilities. Due to the nature of the work proposed, it is unlikely to conflict with the existing utilities beyond minor facility adjustments. Where conflicts with utility facilities are unavoidable, the contractor will coordinate any necessary relocation work with the facility owner and Resident Engineer. The Kentucky Transportation Cabinet maintains the right to remove or alter portions of this contract if a utility conflict occurs.

The utility facilities as noted in the previous section(s) have been determined using data garnered by varied means and with varying degrees of accuracy: from the facility owners, a result of S.U.E., field inspections, and/or reviews of record drawings. The facilities defined may not be inclusive of all utilities in the project scope and are not Level A quality, unless specified as such. It is the contractor's responsibility to verify all utilities and their respective locations before excavating.

BEFORE YOU DIG

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

Please Note: The information presented in this Utility Note is informational in nature and the information contained herein is not guaranteed.

SPECIAL NOTES FOR UTILITY CLEARANCE

IMPACT ON CONSTRUCTION

WAYNE COUNTY
FD04 116 89399 01D
INSTALL TURN LANES ON KY 90 IN THE VICINITY OF WALMART
8-397.00

AREA UTILITIES CONTACT LIST

Utility Company/Agency	Contact Name	Contact Information
Monticello Utility Commission	Scott Upchurch	P.O. Box 549 Monticello, KY. 42633 (606) 348-8473

568-STD Water (6/08)

SECTION 02610

WATER MAINS

PART 1 GENERAL

1.01 SUMMARY

A. For Cover Pipe and Boring and/or Jacking see Section 02326.

B. Ductile iron piping is required for all water lines greater than 3 inches. PVC piping may be approved by the Monticello Utility Commission on a case by case basis.

1.02 SUBMITTALS

A. The CONTRACTOR shall submit to the Monticello Utility Commission three (3) copies of the bills of material, manufacturer's descriptive literature for all piping.

B. Supplemental Submittal Requirements

PART 2 PRODUCTS

2.01 MATERIALS - PRESSURE PIPE

A. Ductile Iron Pipe - Mechanical and Rubber Slip Joint Type

1. Pipe

a. General

(1) Ductile iron pipe shall be furnished for all piping 3 inches and over in size designated "D.I." on Drawings and shall be designed in accordance with ANSI/AWWA C150/A21.50-02 and ANSI/AWWA C151/A21.51-02 specifications and supplements thereto, and for pressures and conditions as stated in Article b.(1) below.

b. Design Conditions

(1) Pressure: Minimum 350 psi operating pressure, plus 100 psi water hammer allowance.

(2) Trench Loading: Laying Condition Type 3, depth of cover as shown on Drawings.

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c. Lengths

(1) Pipe may be furnished in 18 or 20 foot nominal laying lengths.

d. Marking

(1) The net weight, class or nominal thickness, and casting period shall be shown on each pipe. The manufacturer's mark, the year in which the pipe was produced, and the letters "DI" or "DUCTILE" shall be cast or stamped on the pipe.

e. Spigot End of Pipe

(1) The spigot end of the pipe shall be free of blemishes and defects which might be responsible for a poor fit with the rubber ring gasket and result in leakage.

2. Fittings

a. General

(1) Ductile iron compact fittings, meeting the requirements of ANSI/AWWA C153/A21.53-06, will be accepted through 24-inch diameter. Fittings larger than 24-inch diameter shall meet the requirements of ANSI/AWWA C110/A21.10-03.

(2) Fittings shall be 350 psi pressure rated for all sizes through 24 inches.

b. Lining and Coating

(1) All fittings shall be lined and coated the same as adjacent pipe.

3. Joints

a. General

(1) Pipe joints shall be mechanical joint, rubber ring slip joint or restrained joint as shown on the Drawings.

(2) All items used for jointing pipe shall be furnished with the pipe. The joints shall be made with tools and lubricant in strict conformity with the manufacturer's instructions. Copies of the instructions shall be delivered to the Monticello Utility Commission at start of construction in sufficient numbers that will permit the Monticello Utility Commission to retain 3 copies.

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b. Mechanical Joints

(1) Mechanical joints are to be furnished according to ANSI/AWWA C111/A21.11-00. All pipe joints must be furnished complete with all accessories. Mechanical joint bolts and nuts shall be of alloy cast iron or alloy steel (Corten type such as U.S. Alloy) or equal. Rubber gaskets shall be made of plain first grade rubber, free of imperfections and porosity. Hardness shall be 75 ∀ 5 durometer.

c. Rubber Ring Slip Joint (Push On)

(1) Rubber ring slip joint shall be equal to ANSI/AWWA C111/A21.11-00. The joints shall be of the following materials and assembled in the sequence outlined below:

(a) Rubber ring gasket compressed in groove in bell of pipe.

(b) Beveled spigot end of pipe for initial centering into rubber gasket in bell.

d. Restrained Joints

(1) For Pipe

(a) Restrained joint for push-on type bell with rubber O-ring shall meet the applicable requirements of ANSI/AWWA C111/A21.11-90. The bell/spigot configuration for the restrained joint shall be such that restraint shall be provided for the joint based on a sustained pressure equal to the pressure class of the pipe without separation.

(b) The restrained joint shall allow the same deflection as standard push-on joint pipe.

(c) Where field welding is required for restrained field cut pipe, the welder shall be properly instructed in the methods and materials for use on ductile iron pipe by the manufacturer, on site.

(2) For Fittings

(a) Where restrained joint fittings are called for, the bell configuration for the fitting shall be the same as for the pipe.

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(b) Where fittings with restrained joint bell configurations are not available, restraint materials for use with mechanical joint bell configurations shall be as follows:

(i) Connect mechanical joint bell assemblies with stainless steel, all thread rods.

(ii) Install restraint glands on each side of the fitting. The restraining glands shall be "Meg-A-Lug," as manufactured by EBAA Iron Sales, Inc., of Eastland, Texas; "Grip Ring," as manufactured by Romac Industries, Inc. of Seattle, Washington; or equal.

e. Special Gaskets

(1) Where a water main is located within a 200-foot radius of an underground storage tank (UST), ductile iron pipe with special rubber gaskets shall be provided for the water main joints. Service lines within this 200-foot radius shall be copper with brass compression fittings.

(2) These gaskets shall be manufactured of "nitrile rubber" material or other acceptable material possessing superior resistance to deterioration from petroleum based products.

(3) This requirement will apply to the gaskets supplied for mechanical joints and push-on joints when located within the 200-foot radius of a UST.

4. Lining and Coating

a. All ductile iron pipe for water service shall have manufacturer's standard outside bituminous or asphaltic base coating and a cement lining and bituminous seal coat on the inside. Cement mortar lining and bituminous seal coat inside shall conform to ANSI/AWWA C104/A21.4-95.

B. Ductile Iron Pipe - Flanged

1. Pipe

a. Flanged Pipe

(1) Flanged pipe shall be made in accordance with ANSI/AWWA C115/A21.15-99 Specifications, and shall be thickness Class 53.

568-STD Water (6/08)

2. Fittings

a. Flanged Pipe

(1) Flanged joint fittings shall conform to ANSI/AWWA C110/A21.10-03 Standard for Gray Iron and Ductile Iron Fittings - 3 inch through 48 inch.

(2) Fittings shall be 250 psi pressure rating for all sizes.

(3) Fittings shall be ductile iron meeting the above requirements and shall be furnished complete with all joint accessories.

3. Joints

a. General

(1) All items used for jointing pipe shall be furnished with the pipe. The joints shall be made with tools and lubricant in strict conformity with the manufacturer's instructions. Copies of the instructions shall be delivered to the Monticello Utility Commission at start of construction in sufficient numbers that will permit the Monticello Utility Commission to retain 3 copies.

b. Flanged Pipe

(1) All ductile iron flanged pipe shall have flanges faced and drilled, 125 pound in accordance with ANSI/AWWA C110/A21.10-03 unless otherwise specified.

(2) Flanges may be cast integrally with the pipe or they may be screwed on specially designed long hub flanges, refaced across both face of flange and end of pipe.

(3) Flanged joints are to be furnished according to ANSI/AWWA C115/A21.15-99 and shall be ductile iron only. Flanged joints shall have 1/8 inch rubber full face gaskets made especially for water pipe use. Bolts for ductile iron flanged pipe must be of standard sizes for pipe to be fitted, and must be black steel, machine bolts with heavy hexagon heads and nuts meeting ANSI B18.2.1 and ANSI B18.2.2, respectively. In unheated vaults, submerged and/or damp locations, bolts and nuts for ductile iron flanged pipe shall be stainless steel.

568-STD Water (6/08)

C. Polyvinyl Chloride (PVC) Pipe (ASTM)

1. Pipe

a. This Specification covers rigid polyvinyl chloride pipe and fittings, hereinafter called PVC pipe and PVC fittings, for sizes 3/4 inch through 12 inch.

b. PVC pipe shall be extruded from Class 12454-B polyvinyl chloride material with a hydrostatic design stress of 2000 psi for water at 73.4 degrees Fahrenheit, designated as PVC 1120, meeting ASTM Specifications D 1784-81 for material. Three-fourths inch through 1-1/2 inch water service piping shall be PVC Schedule 40 as specified in ASTM D 1785-76. Two inch through 12-inch pipe for water service shall be SDR 17 for 250 psi allowable working pressure at 73.4 degrees Fahrenheit and a safety factor of 2.0, as specified in ASTM D 2241-80.

c. The pipe shall be homogeneous throughout and free from cracks, holes, foreign inclusions or other defects. The pipe shall be as uniform as commercially practical in color.

d. The workmanship, pipe dimensions and tolerances, outside diameters, wall thickness, eccentricity, sustained pressures, burst pressures, flattening, extrusion quality, marking and all other requirements of ASTM D 2241-80 shall be conformed with in all respects.

e. Pipe shall be furnished in 20 foot lengths. The pipe may be double plain end or with bell on one end. Male ends of pipe must be beveled on the outside.

f. Pipe shall have a ring painted around the male end or ends in such a manner as to allow field checking of setting depth of pipe in the socket. This requirement is made to assist construction superintendents and inspectors in visual inspection of pipe installation.

g. Pipe must be delivered to job site by means which will adequately support it, and not subject it to undue stresses. In particular, the load shall be so supported that the bottom rows of pipe are not damaged by crushing. Pipe shall be unloaded carefully and strung or stored as close to the final point of placement as is practical.

h. Pipe must not be exposed to the direct rays of the sun for an extended period of time. If pipe is not to be installed shortly after delivery to the job site, it must be stored in a shaded location.

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2. Fittings

a. Ductile Iron

(1) Ductile iron mechanical joint or push-in type fittings with appropriate adapters may be used with exterior PVC pipe. All such fittings shall be approved by the pipe manufacturer, and complete data submitted to the Monticello Utility Commission, including the manufacturer's approval, for review. Use of transition gaskets will not be allowed unless specifically approved by the pipe manufacturer.

3. Joints

a. Exterior Buried Pipe - Slip Joint Type

(1) Exterior buried pipe shall be jointed with slip-type joints with rubber gaskets.

(2) Pipe with bells shall have all parts of the bell, including the gasket groove, made from the same extruded piece, integral with the pipe, and shall be thickened to meet standard dimension ratios of wall thickness to outside diameter. The gasket groove shall be constructed such that gasket rollout will not occur. Rubber gasketing shall conform to ASTM D 3139-77.

b. Interior - Solvent Weld

(1) Interior pipe shall be joined by solvent welds.

(2) Since PVC welding solvent is engineered and formulated to perform with a given joint design, all solvent must be purchased from the manufacturer of the pipe.

(3) The PVC welding solvent shall be compounded to conform with the socket fit and the weather conditions at the time of installation and be such as to assure minimum installation cost and a weld of maximum strength.

c. Couplings

(1) Couplings shall be of the same material as the pipe and may be of the molded or extruded type. They shall have a beveled entrance to prevent the wiping off of the lubricant from the male end of the pipe.

(2) PVC couplings shall have a minimum rating of 200 psi for continuous operation at 73.4 degrees Fahrenheit.

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(3) The couplings shall have a positive pipe stop that will automatically and accurately position the pipe ends within the couplings. The pipe stop shall also permit the thermal expansion or contraction of the pipe ends.

D. Copper Pipe and Fittings

1. Inside, Rigid with Solder Joint Connections

a. Small piping inside structures shall consist of standard copper tubing for water; Type “L” for general plumbing purposes. All fittings shall be “solder joint connection” cast or wrought bronze for water service for inside diameter of pipe sizes given. All stops, valves, hose bibbs, and unions shall be made with same joints or threaded iron pipe standard, and be of brass or copper.

b. Outside, Underground Tubing with Compression Joints

(1) Buried piping shall be of standard soft copper tubing for water service pipe, ASTM Specifications B 88-81, Type “K,” with bronze fittings, stops, and valves having compression connections for flared copper tubing.

E. Polyethylene Pipe for Water Service

1. Pipe

a. Polyethylene flexible pipe (copper pipe O.D.) for sizes 2 inch through 2 inch water service piping shall be PE 3408, Type III, Grade P34 Class C, DR-9, OD Based for 200 psi working pressure at 73.4 degrees Fahrenheit, meeting ASTM Specification D 1248-81a for material, D 3350-84 for cell classification and AWWA C901-02 Specification for pipe.

F. Service Connections

1. All service connections shall be made by means of tees, factory tapped couplings, or bronze service clamps manufactured specifically for use with PVC pipe, with Mueller threads, Mueller Catalog No. H-13000, or equal. Whenever possible, corporation stops shall be placed in plastic lines before conducting hydrostatic tests.

2.03 SOURCE QUALITY CONTROL

A. Ductile Iron Pipe (Mechanical Joint and Rubber Slip Joint Type)

1. Hydrostatic and physical properties acceptance tests shall be in accordance with ANSI/AWWA Specification C151/A21.51-02 for ductile iron pipe centrifugally cast in metal molds or sand lined molds for water or other liquids.

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2. The Monticello Utility Commission shall be provided with sufficient copies of each of the tests for each Contract to permit the retainage of 3 copies.

3. All items used for jointing pipe shall be tested before shipment.

B. Polyvinyl Chloride (PVC) Pipe (ASTM)

1. Samples of pipe and physical and chemical data sheets shall be submitted to the Monticello Utility Commission for review and acceptance before pipe is delivered to job.

2. Samples of solvents and the recommended instruction for their use must be submitted for the commission's review and acceptance before delivery of solvent to the job.

C. Polyethylene Pipe for Water Service Lines

1. Results of tests on the raw materials and the polyethylene pipe in accordance with ASTM standards and the Plastic Pipe Institute shall be furnished along with catalogs and other descriptive literature in the number of copies required before the materials are sent to the job site.

PART 3 EXECUTION

3.01 TRENCH EXCAVATION - PRESSURE PIPE

A. General

1. Trenching includes such items as railroad, street, road, sidewalk, pipe and small creek crossings; cutting, moving or repairing damage to fences, poles or gates and other surface structures, regardless of whether shown on the Drawings. The CONTRACTOR shall protect existing facilities against danger or damage while pipeline is being constructed and backfilled or from damage due to settlement of the backfill.

2 All excavation shall be open trenches, except where the Drawings call for boring or jacking under structures, railroads, sidewalks, roads or highways.

B. Trees and Shrubs

1. Where pipelines run through wooded terrain, cutting of trees within limits of maximum permissible trench widths, as set forth in this article, will be permitted. However, cutting of additional trees on sides of trench to accommodate operating of trenching machine will not be permitted. The CONTRACTOR shall obtain specific permission of the Monticello Utility Commission before cutting any tree larger than 4 inches in diameter.

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C. Highways, Streets and Railroads

1. Construction equipment injurious to paving encountered shall not be used. Curbs, sidewalks, and other structures shall be protected by the CONTRACTOR from damage by his construction equipment.

2. Where trenching is cut through paving which does not crumble on edges, trench edge shall be cut to at least 2 inches deep to straight and neat edges, before excavation is started, and care taken to preserve the edge to facilitate neat repaving.

3. The CONTRACTOR shall so coordinate his work as to produce a minimum of interference with normal traffic on highways and streets. He may, with the approval of the governing agency, close a street to traffic for such length of time considered necessary, provided persons occupying property abutting the street have an alternate route of access to the property which is suitable for their needs during the time of closure. It shall be the responsibility of the CONTRACTOR to give 24 hours advance notice to fire and police departments and to occupants of a street which will be closed, in a manner approved by the governing body.

4. The CONTRACTOR shall maintain road crossings in a passable condition for traffic until the final acceptance of the work.

5. Kentucky Transportation Cabinet permits shall be obtained by the CONTRACTOR prior to any work on state maintained roads and rights-of-way. Highway Department requirements in regard to trenching, boring and jacking shall take precedence over the foregoing general specifications and the following boring or jacking specifications, where they are involved.

D. Existing Utilities

1. The CONTRACTOR shall determine, as far as possible in advance, the location of all existing sewer, culvert, drain, water, electric, telephone conduits, and gas pipes, and other subsurface structures and avoid disturbing same in opening his trenches. In case of sewer, water and gas services and other facilities easily damaged by machine trenching, same shall be uncovered without damage ahead of trenching machine and left intact or removed without permanent damage ahead of trenching and restored immediately after trenching machine has passed. The CONTRACTOR shall protect such existing facilities, including power and telephone poles and guy wires, against danger or damage while pipeline is being constructed and backfilled, or from damage due to settlement of his backfill. It shall be the responsibility of the CONTRACTOR to inform the customers of utilities of disruption of any utility service as soon as it is known that it has been or will be cut off.

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2. The CONTRACTOR shall, at all times during trenching operations, carry a stock of pipe and fittings likely to be needed for replacement of pipelines to facilitate immediate repair.

E. Pipelines in Same Trench

1. Pipelines, force mains, and sewers laid in same trench shall, in all cases, be bedded on original earth, or other specified bedding materials, regardless of divergence in their elevations, unless otherwise specified. They shall never be laid in unsupporting backfill or one above the other.

F. Trench Requirements

1. All trenches must be dug neatly to lines and grades.

2. The opening of more than 500 feet of trench ahead of pipe laying and more than 500 feet of open ditch left behind pipe laying, before backfilling, will not be permitted, except upon written consent of the OWNER. No trench shall be left open or work stopped on same for a considerable length of time. In case of objectionable delay trench shall be refilled according to backfill specifications.

3. Where subgrade of trench has insufficient stability to support the pipeline and hold it to its original grade, the Monticello Utility Commission may order stabilization by various means, exclusive of dewatering normally required for construction.

4. Excavation for pipe laying must be made of sufficient width to allow for proper jointing and alignment of the pipe, but not greater than the maximums permitted in the following table:

MAXIMUM TRENCH WIDTH AT TOP OF PIPE

Nominal Pipe Size (Ins.)	Trench Width (Ins.)	Nominal Pipe Size (Ins.)	Trench Width (Ins.)
4	28	20	44
6	30	24	48
8	32	30	54
10	34	36	60
12	36	42	66
14	38	48	72
16	40	54	78
18	42		

5. Trenches in earth or rock shall be dug as shown on the Drawings and be sufficiently deep to insure a 30 inch or 36 inch minimum cover over water mains, as noted on the Drawings. Depths of trenching shall also be adequate for at least l foot minimum cover over valve nuts. In order to

eliminate the necessity for digging bell holes into the trench subgrade by hand and to insure an earth cushion under the pipe for uniform bearing, trench depth shall be the cover requirement plus outside diameter of barrel of pipe plus the required bedding cushion.

6. Trench line stations and locations of accessories will be set ahead of the trenching. These will be set at least each 100 feet of pipeline. Trenches must be dug true to alignment of stakes. Alignment of trenches or pipes in trench must not be changed to pass around obstacles such as poles, fences and other evident obstructions without the permission of the Monticello Utility Commission. Lines will be laid out to avoid obstacles as far as possible, contingent with maintenance of alignment necessary to finding pipeline in the future and avoiding obstruction to future utilities.

G. Damage to Existing Structures

1. Hand trenching is required, at no extra payment, where undue damage would be caused to existing structures and facilities by machine trenching.

2. In case of damage to any existing structures, repair and restoration shall be made at once and backfill shall not be replaced until this is done. In all cases, restoration and repair shall be such that the damaged structure will be in as good condition and serve its purpose as completely as before. Where there is the possibility of damage to existing utility lines by trenching machine, the CONTRACTOR shall make hand search excavation ahead of machine trenching, to uncover same.

H. Dewatering of Trenches

1. Dewatering of trenches shall be considered a part of trenching. Dewatering of trenches shall include groundwater and storm or sanitary sewage. Suitable pumping and other dewatering equipment is to be provided by the CONTRACTOR, to insure the installation of the pipeline structure in a dewatered trench and under the proper conditions. Dewatering shall include all practical means available for prevention of surface runoff into trenches and scouring against newly laid pipe. Dewatering shall be in accordance with the Best Management Practices (BMP) plan.

2. Piles of excavated materials shall be trenched or temporarily piped to prevent, as far as practical, blockage of drainage ditches and gutters, and water carriage of excavated materials over street and highway surfaces.

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3.02 LAYING PRESSURE PIPE

A. General

1. Inspection of Materials

a. All pipe, fittings and accessories shall be subject to an inspection by the Monticello Utility Commission at the job site. Any damaged materials shall be repaired or replaced to the satisfaction of the Monticello Utility Commission. Should repairs to the piping materials be necessary, then same shall be made in the presence of the Monticello Utility Commission using proven methods prescribed by the pipe manufacturer.

b. The Monticello Utility Commission's inspection of materials shall in no way relieve the CONTRACTOR of his responsibility.

2. Laying Requirements

a. Pressure pipe shall be laid to lines, cover or grades shown on the Drawings.

b. Pipes must be swabbed out before lowering into trench. In the case of pipelines 4 inch through 20 inch, a swab must also be dragged through the pipe after it is in place. Larger size pipe shall be visually inspected for cleanliness and proper jointing.

c. The points insisted upon in the laying of pipe will be: Proper alignment, evenness of width and depth of joints, perfection in jointing, and care of the pipe in handling.

d. Precautions must be taken to prevent flotation of the pipe should water enter the trench prior to putting the pipeline into operation.

e. In wet, yielding and mucky locations where pipe is in danger of sinking below grade or floating out of grade or alignment, or where the backfill materials are of such a fluid nature that such movements of the pipe might take place during the placing of the backfill, the pipe must be weighted or secured permanently in place by such means as will prove effective.

f. Whenever pipe laying is stopped, the end of the pipe shall be securely plugged with the manufacturer's standard plug held in place by bracing or backing as required.

g. Elbows, plugs, dead end valves, and tees shall be firmly blocked to prevent internal pressure from springing the pipe from the intended alignment, with permanent materials solidly placed without covering pipe joints. Restrained type pipe joints may be

substituted for thrust blocks with the Monticello Utility Commission's permission.

h. Pipe shall not be laid resting on solid rock, blocking or other unyielding objects. Jointing before placing in the trench and subsequent lowering of more than one section jointed together may be allowed, subject to the Monticello Utility Commission's permission.

3. Installing Water Pipe in Cover Pipe

a. Installation of water pipe in cover pipe is covered in Section 02326 of these specifications.

B. Laying Ductile Iron Pipe

1. Bedding and Backfilling

a. The pipe shall be bedded in 4 inches minimum loose soil and the hand placed loose soil backfill lightly consolidated to the top of the pipe. "Loose soil" or "select material" is defined as native soil excavated from the trench, free of rocks, foreign materials and frozen earth.

b. The selected material shall be hand placed to a point 12 inches above the barrel of the pipe. After the specified backfill is hand placed, rock may be used in machine placed backfill in pieces no larger than 8 inches in any dimension and to an extent not greater than one-half the volume of the backfill materials used.

c. The top 12 inches of backfill shall contain no rock over 1-1/2 inches in diameter or pockets of crushed rock.

d. Larger rock fill will be allowed in wide trenches where side slopes are low enough to prevent rock from dropping over pipeline. If additional earth is required, it must be obtained and placed by the CONTRACTOR. Filling with rock and earth shall proceed simultaneously, in order that all voids be filled with earth.

e. If select material is not available from the trench excavation, or if the CONTRACTOR so desires, he may use crushed stone bedding and backfill to the top of the pipe.

f. Sufficient space, limited to a maximum of 2 feet length, shall be left out of the specified earth or crushed stone bedding to facilitate proper jointing of the pipe.

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2. Installation of Pipe

a. Ductile iron pipe shall first be thoroughly cleaned at joints, then joined according to instructions and with tools recommended by the pipe manufacturer. Sufficient copies of the manufacturer's installation instructions shall be furnished to permit the Monticello Utility Commission to retain 3 copies. One copy shall be available at all times at the site of the work.

b. All pipes must be forced and held together or "homed" at the joints before bolting. Pipe must be aligned as each joint is placed, so as to present as nearly true, straight lines and grades as practical, and all curves and changes in grades must be laid in such manner that one-half of the maximum allowable deflection shown in the pipe manufacturer's catalog is not exceeded.

c. Concrete blocking of fittings shall be as specified hereinafter in this Specification Section 02610.

d. Cutting of pipe may be done by special pipe cutters as the CONTRACTOR may elect, but the CONTRACTOR will be held responsible for breakage or damage caused by careless cutting or handling. Cut edges of the pipe shall be made smooth and a bevel formed on the exterior of the pipe barrel when using rubber gasket type pipe.

C. Installation of Flanged or Threaded Pipe and Fittings (Interior)

1. Installation - General

a. The CONTRACTOR shall thoroughly clean the pipe and fittings before starting erection. All scale, rust and dirt shall be removed by power brushing and/or solvent cleaning.

b. The erection of piping requires that it progress from the equipment it is connected to, after the equipment has been accurately leveled and aligned, without putting a strain on same. The pipe shall be erected in a workmanlike manner with runs in the true horizontal or vertical plane or as shown on the Drawings.

c. The piping shall be supported by standard pipe hangers or piers rather than by the equipment. The pipe shall be free of all openings in walls and slabs when the final position of the piping is attained and before sealing the annular space about the pipe.

2. Flanged Joint Connection

a. All flanged type connections shall be made using an acceptable gasket and bolts. The bolts shall be tightened evenly to compress

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the gasket. Care is to be taken not to distort the flanges and/or piping by overtightening the bolts.

3. Threaded Joint Connection

a. All threads shall be full, complete and made with sharp dies. The ends of the pipe shall be reamed to remove all burrs and all threads must be free of rust and other foreign matter at the time the thread compound is applied. The thread compounds used must be approved by the Monticello Utility Commission before use.

b. Pipe threads shall be tapered and in accordance with API Standard 5B. Not more than 3 threads at each joint may be exposed after the connection is made.

c. Unions shall be included to allow for proper assembly and disassembly of each run of pipe. Provide a union on each run of pipe connecting to threaded valves, devices and equipment.

D. Laying Plastic Pipe

1. Bedding and Backfill

a. The pipe shall be bedded in 4 inches minimum depth (for pipe sizes through 16 inches) of "loose soil" or "select material" meeting the requirements of Class II or III of ASTM D 2321-75 (1980). For pipe sizes greater than 16 inches in diameter, the pipe bedding shall be a minimum depth of one-fourth the pipe diameter or 6 inches minimum.

b. Similar material shall be used for haunching up to the spring line of the pipe and it shall be worked under the haunch of the pipe to provide adequate side support. The same material shall then be hand placed to a point 12" above the top of the pipe.

c. After the placement of each lift of the Class II or III bedding, haunching and initial backfill material, the material shall be compacted to 85 percent and 90 percent Standard Proctor Density, respectively.

d. The remaining backfill, except for the top 12" which shall contain no rock over 1-1/2" diameter nor pockets of crushed rock, may be excavated material containing no rock over 8" in any dimension. Larger rock will be allowed in wide trenches where side slopes are low enough to prevent rock from dropping over pipeline. If additional earth is required, it must be obtained and placed by the CONTRACTOR. Filling with rock and earth shall proceed simultaneously, in order that all voids may be filled with earth.

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e. In trenches in solid rock or where flowing water is present, crushed stone bedding and backfill to 12" above the top of the pipe shall be substituted for the select material. Kentucky Department of Highways No. 8 stone shall be used for pipe up to 16 inches in diameter.

f. If select material is not available from the trench excavation, or if the CONTRACTOR so desires, he may use crushed stone bedding and backfill to a point 12 inches above the top of the pipe.

g. Sufficient space, limited to a maximum of 2 feet length, shall be left out of the bedding to facilitate proper jointing of the pipe.

h. Pipe shall not be laid resting on solid rock, blocking, or other unyielding objects. Jointing before placing in the trench and subsequent lowering of more than one section may be allowed subject to the permission of the Monticello Utility Commission.

2. Installation of Polyvinyl Chloride (PVC) Pressure Pipe

a. Prior to laying, all PVC pipe shall be stored in a shaded place for protection from the direct rays of the sun. Pipe shall be distributed from storage as the work progresses as permitted by the Monticello Utility Commission.

b. The pipe, fittings, and valves shall be placed in the trench with care. Under no circumstances shall pipe or other materials be dropped or dumped into the trench. The pipe shall not be dragged in a manner which would cause scratching of the pipe surface. An excessive amount of scratching on the surface of the pipe will be considered cause for rejection.

c. Sufficient copies of the pipe manufacturer's instructions for installing the pipe and accessories shall be furnished the Monticello Utility Commission by the CONTRACTOR to permit the retainage of 3 copies. A copy is to be available at the job site at all times.

d. Concrete blocking of fittings, as hereinafter specified, shall be required for PVC pipe with slip joints and rubber gaskets.

e. All dirt, dust and moisture shall be removed from the bell and spigot ends of pipes to be jointed. Insert gasket in bell. Apply the lubricant to spigot and gasket being careful to keep both ends free of dirt. The joint shall be homed to stop mark on spigot end of pipe. All jointing shall be done in accordance with pipe manufacturer's recommendations.

f. All cutting of the pipe shall be done in a neat and workmanlike manner with the least amount of waste of pipe involved and

without damage to existing or new lines. A fine tooth saw, tubing cutter or similar tool can be used to cut the pipe. Cut must be square and ragged edges removed with a cutting tool and/or file. A bevel or taper on the exterior of each spigot is required.

E. Laying Copper Pipe and Fittings

1. Bedding and Backfilling

a. The pipe shall be bedded in 4 inches minimum of loose soil and the hand placed backfill lightly consolidated to a depth of 12 inches above the top of the pipe. "Loose soil" or "select material" is defined as native soil excavated from the trench, free of rocks, foreign materials and frozen earth. The machine placed backfill may contain rock no larger than 8 inches in any dimension and to an extent no greater than 2 the volume of backfill materials used.

The top 12 inches of backfill shall contain no rocks over 1-1/2 inches in diameter or pockets of crushed rock.

2. Installing Copper Pipe and Fittings

a. Exterior copper pipe shall be laid of type K pipe, with brass compression fittings. Joints shall be neatly reamed and flared and joints drawn up firmly. Pipe shall have at least 30 inch cover. Joints shall be tested and all leakage stopped before backfilling the pipe trench.

b. All copper pipe shall be installed by experienced workmen.

F. Installing Polyethylene Pipe for Water Service

1. Bedding and Backfilling

a. The pipe shall be bedded in 4 inches minimum of No. 8 crushed stone and the hand placed backfill lightly consolidated to a depth of 12 inches above the top of the pipe. The machine placed backfill may contain rock no larger than 8 inches in any dimension and to an extent no greater than 2 the volume of backfill materials used.

The top 12 inches of backfill shall contain no rocks over 1-1/2 inches in diameter or pockets of crushed rock.

2. Installing Polyethylene Service Pipe

a. Polyethylene pipe for water services shall have the same outside diameter as copper tubing and shall be compatible for flared compression fittings. The joints to brass fittings shall be made by cutting the pipe with a tube cutter, keeping it clean and square, thence flaring the pipe and completing the joining in accordance with the manufacturer's instructions (a copy of the instructions

shall be at the job site at all times). All joints shall be tested and all leakage stopped before backfilling the pipe trench.

b. The pipe shall be snaked into the trench, employing the natural snaking tendency of the pipe. All short radius bends shall be made with fittings rather than with the pipe alone. The pipe shall be bent to a radius of not less than 12 inches.

c. The pipe will be rejected if it contains kinks and gouges.

G. Installation of Water Service Accessories

1. Water Service Meters

a. Water service meters and accessories shall be installed as shown on the Drawings, with meter box centered over the meter.

b. The location of water service connections shall be shown on the Drawings. Earth backfill shall be thoroughly tamped around meter boxes to prevent subsequent movement.

2. Air Valves and Corporation Stops

a. The location of air valve assemblies, while being noted on the Drawings, could possibly be shifted in actual construction. For this reason, the same statements relative to the methods of installation of meters and water service connections apply to the installation of air valve assemblies. Air valve assembly boxes shall be installed in the same manner as water meter boxes except that the box will be located slightly off center of the air valve, in order to give better access to the stopcock between the valve and water main.

b. Corporation stops, as shown on the Drawings, are required between the water main and the meter, and between the main and the air valve assembly.

H. Installation of Fire Hydrants

1. Fire hydrants shall be installed in the general location as shown on the Drawings. Exact location shall be determined in the field. Hydrants shall be set such that the breakaway of the hydrant flange is at ground level.

2. Hydrant drainage pits shall be excavated below the hydrant to the depth shown on the Drawings. Crushed stone drainage media shall be of the size shown on the Drawings. Hydrant shall be set vertical and anchored as hereinafter specified.

3. Hydrants installed on this project shall be anchored to prevent the hydrant from blowing off the feeder line when suddenly opened or closed. Likewise, the hydrant pilot valve shall be anchored to prevent blow-off

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when the hydrant is removed. The CONTRACTOR shall anchor the hydrant and pilot valve utilizing one of the following procedures:

a. Where the hydrant is located immediately adjacent to the water main, install all stainless steel thread rods from the main line branch tee to the valve inlet and from the valve outlet to the mechanical joint of the hydrant inlet piece.

b. Provide locked mechanical joint or restrained joint piping from the main to the hydrant including the main line tee.

c. Use method a or b from the water main to the pilot valve and provide a concrete thrust block on the hydrant.

d. Provide 1 hydrant wrench per hydrant.

I. Blocking of Pipe at Bends and Ends

1. Horizontal Bends

a. Concrete backing and/or blocking required at bends in the horizontal plane shall be accomplished per detail on the Drawings. The square footage of blocking area shall be obtained from Tables "A" and "B" through the following procedure:

Step No. 1 - From Table "A," select type soil and bearing area factor for particular fitting to be blocked.

Step No. 2 - From Table "B," select multiplier to be used for the size pipe being blocked and its test pressure.

Step No. 3 - Calculate actual bearing area required by multiplying bearing area factor from Table "A" by multiplier from Table "B" (e.g. - 16 inch tee with 250 psi test pressure in sandy clay - 9.42 x 1.78 = 16.7 S.F. of bearing area required). Bearing area shall in no case be less than the minimum shown in Table "B."

TABLE "A"

Type Soil	Soil Bearing Pressure (PSF)	Bearing Area Factor for Degree of Bend (Square Feet) 90E	Plug/Tee	45E	22 1/2E	11 1/4E
Sandy Clay	3,000	13.33	9.42	7.21	3.68	1.85
Hard Clay	6,000	6.66	4.71	3.61	1.84	0.92
Shale	12,000	3.33	2.36	1.80	0.92	0.46
Solid Rock	16,000	2.50	1.77	1.35	0.69	0.35

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TABLE "B"

Pipe Dia. (In.)	Min. Bearing Area (S.F.)	Multiplier for Pipe Test Pressure (TP) (TP) 350 psi	(TP) 300 psi	(TP) 250 psi	(TP) 200 psi	(TP) 150 psi	(TP) 100 psi	(TP) 50 psi
4	1.0	0.16	0.13	0.11	0.09	0.07	0.04	0.02
6	1.0	0.35	0.30	0.25	0.20	0.15	0.10	0.05
8	1.0	0.62	0.53	0.44	0.36	0.27	0.18	0.09
10	1.0	0.97	0.83	0.69	0.56	0.42	0.28	0.14
12	1.3	1.40	1.20	1.00	0.80	0.60	0.40	0.20
14	1.5	1.91	1.63	1.36	1.09	0.82	0.54	0.27
16	1.8	2.49	2.13	1.78	1.42	1.07	0.71	0.36
18	2.3	3.15	2.70	2.25	1.80	1.35	0.90	0.45
20	2.5	3.89	3.33	2.78	2.22	1.67	1.11	0.56
24	3.6	5.60	4.80	4.00	3.20	2.40	1.60	0.80
30	5.2	8.75	7.50	6.25	5.00	3.75	2.50	1.25
36	7.0	12.60	10.80	9.00	7.20	5.40	3.60	1.80
42	9.1	17.15	14.70	12.25	9.80	7.35	4.90	2.45
48	11.4	22.40	19.20	16.00	12.80	9.60	6.40	3.20
54	13.5	28.35	24.30	20.25	16.20	12.15	8.10	4.05
60	16.0	35.00	30.00	25.00	20.00	15.00	10.00	5.00

b. Consideration will be given to the use of restrained type pipe and fittings in lieu of concrete blocking. Use of the restrained joint pipe and fittings is subject to review and acceptance by the Monticello Utility Commission of the locking-method and adequacy of design for pressures involved.

2. Vertical Bends

a. The use of vertical bends in lieu of extra depth trenching shall be subject to permission by the Monticello Utility Commission.

b. Where the CONTRACTOR elects to use vertical bends, or where vertical bends are called for on the Drawings, the CONTRACTOR shall submit the blocking design, including calculations, to the Monticello Utility Commission for review and acceptance. Anchorages shall be designed to resist thrusts caused by the internal test pressure in the pipe. Protection against corrosion shall be inherent in the design.

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J. Supplemental Backfilling Information

1. General

a. Excavated materials from trenches, in excess of quantity required for trench backfill, shall be disposed of by the CONTRACTOR. It shall be the responsibility of the CONTRACTOR to obtain location or permits for its disposal.

b. Where sod is destroyed in areas maintained equivalent to residence yards, it shall be replaced on slightly ridged backfill on trench, and where destroyed in areas adjacent to the trench, it shall be replaced by the CONTRACTOR with fresh sod.

c. Where pastures, thin grass or cover crops are destroyed by trenching, laying, backfilling, or tunneling operations, surface shall be prepared by disking, fertilizing, and seeding.

d. Before completion of the project, all backfills shall be reshaped, holes filled, and surplus materials hauled away and all permanent walks, street, driveways, and highway paving and sod replacement.

e. Backfill material must be uniformly ridged over trench, and excess hauled away. Ridged backfill shall be confined to the width of the trench and not allowed to overlap onto firm original earth, and its height shall not be in excess of needs for replacement of settlement of backfill. Ridge shall not create ponding of rainwater runoff.

f. All rock, including crushed rock or gravel from construction, must be removed from yards and fields. Streets and walks shall be broomed to remove all earth and loose rock immediately following backfilling.

2. Special Requirements

a. In case of street, highway, railroad, sidewalk and driveway crossings or within any roadway paving, or about valve and meter boxes located in such paving, the following backfill material and procedure is required.

b. The pipe shall be bedded in 4 inches minimum depth (for pipe sizes through 16 inches) of crushed rock meeting the requirements of the Kentucky Department of Highways standard size No. 8. For pipe sizes greater than 16 inches in diameter, the pipe bedding shall be a minimum depth of 1/4 the pipe diameter and be of the material and gradation specified previously.

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c. Similar material shall be used for haunching up to the spring line of the pipe, and it shall be worked under the haunch of the pipe to provide adequate side support. The crushed rock shall then be hand placed to a point 12 inches above the top of the pipe.

d. After the above bedding and selected backfill have been placed, fill trench to within 6 inches of the surface with Kentucky Department of Highways No. 57 crushed stone, uniformly distributed, or other gradation acceptable to the Monticello Utility Commission. In order to accommodate compacted temporary surfacing it may be necessary to bulkhead or otherwise confine the stone fill at the open end of the trench.

e. Temporary surfacing of street, highway, railroad, sidewalk and driveway crossings, or within any roadway paving, or about valve and meter boxes located in such paving, shall consist of 6 inches compacted depth of dense graded aggregate as specified under Section 02235 for temporary walkway or road surfacing, placed and compacted in the trench. Compaction shall be accomplished by methods which shall be sufficient to confine stone to the trench under normal traffic. Backfills shall be maintained easily passable to traffic at original paving level until acceptance of project or replacement of paving or sidewalks.

f. Department of Highways requirements in regard to backfilling will take precedence over the above general specifications where they are involved.

K. Cut-Ins, Tie-Ins, and Cutting and Plugging

1. The Monticello Utility Commission shall not be responsible for extra costs of cut-ins, tie-ins, cutting and plugging, due to water not being entirely cut off by the existing water main valves. In some cases the Monticello Utility Commission may require the use of line stoppers for tie-ins. If necessary, the use of line stoppers shall be at the CONTRACTOR'S expense.

2. A cut-in is defined as the removal of one section of existing pipeline (2 cuts of pipe) and insertion of one or more new pipeline connections therein.

3. A tie-in is defined as the removal of an existing plug or cap and the connecting of the new pipeline into the existing pipeline or fitting or valve at the joint opened by such removal.

4. A cutting and plugging is defined as the cutting and installation of a plug in an existing line.

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3.03 FIELD QUALITY CONTROL

A. Testing Pressure Pipe for Leakage

1. The CONTRACTOR will be required to test all pipelines and appurtenances with water. The maximum test pressure, measured at the lowest elevation of the pipeline being tested, shall be the pressure class of the pipe unless a specific test pressure is requested by the Monticello Utility Commission.

2. When the line or section being tested is pumped up to the required pressure, it shall be valved off from the pump and a pressure gauge placed in the line. The pressure drop in the line, if any, shall be noted. If there is no pressure drop noted in 4 hours, the Monticello Utility Commission, at its discretion, may accept the line or section as being tested, or he may require the test run the full 24 hours.

3. At the end of the 24 hour test period, the pressure shall be recorded. If there is a drop in pressure, the CONTRACTOR will be required to pump the section being tested up to initial test pressure and maintain that pressure for 24 hours, measuring the amount of water required to accomplish this. The line will not be accepted until the leakage shall prove to be less than 10 gallons per inch diameter per mile of pipe per 24 hours.

4. Should there be leakage, the CONTRACTOR will be required to locate and repair the leaks and retest the section.

5. During the pressure test, all fire hydrant isolation valves must be open in order to test all piping and connections.

6. The CONTRACTOR shall furnish meter or suction tank, pipe test plugs, and bypass piping, and make all connections for conducting the above tests. The pumping equipment used shall be centrifugal pump, or other pumping equipment which will not place shock pressures on the pipeline. Power plunger or positive displacement pumps will not be permitted for use on closed pipe system for any purpose.

7. Inspection of pipe laying shall in no way relieve the CONTRACTOR of the responsibility for passing tests or correcting poor workmanship.

B. Disinfection of Water Mains

1. Upon completion of the work and cleaning up, and prior to final acceptance, the CONTRACTOR shall disinfect all water lines constructed which are to carry treated water.

2. Prior to starting disinfection, all water mains must be thoroughly flushed to remove mud, rocks, etc. Disinfection will then be accomplished by the adding of a chlorine solution while filling the main to obtain the initial 50 ppm of chlorine. The CONTRACTOR shall supply all equipment, labor,

etc., necessary for flushing and disinfecting the mains. The CONTRACTOR shall submit, in writing, to the Monticello Utility Commission, the method he proposes to use for adding the chlorine.

3. The placing of calcium hypochlorite granules or tablets in the end of each joint of pipe during construction shall not be allowed.

4. Disinfection shall be accomplished by filling the new and/or repaired portions of the system with water having a chlorine content of at least 50 parts per million and at the end of a 24 hour contact time a residual of at least 25 parts per million shall remain. At the end of the 24 hour contact period, all the sterilized surfaces and areas shall be thoroughly flushed from the water system. Chlorinated water shall be disposed of in accordance with 401 KAR 5:031 and 8:020, which state that the allowable in stream concentration of chlorine is 10 ug/l, which is equal to 0.01 mg/l. The CONTRACTOR shall submit, in writing to the Monticello Utility Commission, the method he proposes for dechlorinating. Recommended chemicals, as given in AWWA C651-05, are sulfur dioxide, sodium bisulfate, sodium sulfite, and sodium thiosulfate.

5. For tie-ins to an existing system such as tapping valves where keeping the main out of service would restrict service to existing customers, disinfection shall, at the Monticello Utility Commission's discretion, consist of thoroughly cleaning the new part with a solution containing not less than 200 mg/l (ppm) chlorine.

6. After initial disinfection and flushing, the Monticello Utility Commission will collect water samples for bacteriological testing. A core zone, which includes up to the first 2 mile, shall be established. Two samples shall be taken from the core zone. Additionally, 1 sample taken from each mile of new distribution main shall be submitted. A new or routine replacement main shall not be placed in service until negative laboratory results are obtained on the bacteriological analyses. Sample bottles shall be clearly identified as "special" construction tests. If any of the samples are found to be positive or contain confluent growth, the CONTRACTOR shall repeat the disinfection procedure until the required numbers of negative samples are obtained.

END OF SECTION

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SECTION 03301

CAST-IN PLACE CONCRETE (MINOR STRUCTURES)

PART 1 GENERAL

1.01 SUMMARY

A. This specification delineates the requirements for cast-in place concrete for minor structures including concrete kickers for pipe blocking, sidewalks, collars, manholes, manhole bottoms, pipe cradles, piers and other areas where small quantities of concrete are required. It shall not be used for major structures such as floor slabs, structure or basin walls, roof slabs, or other structural components.

1.02 SCOPE OF WORK

A. Provide all labor, material, equipment and services to complete all cast-in-place concrete work required by the Project as shown on the Drawings or specified herein.

1.03 REFERENCES

A. The publications listed below form a part of this specification to the extent referenced. The publications are referred to in the text by the basic designation only.

AMERICAN SOCIETY FOR TESTING AND MATERIALS (ASTM)

ASTM A 185 Specification for Steel, Welded Wire, Fabric, Plain, for Concrete Reinforcement

ASTM A 497 Specification for Welded Deformed Steel Wire Fabric for Concrete Reinforcement

ASTM A 615/A615M Specification for Deformed and Plain Billet-Steel Bars for Concrete Reinforcement

ASTM A 616/A616M Specification for Rail-Steel Deformed and Plain Bars for Concrete Reinforcement

ASTM A 617/A617M Specification for Axle-Steel Deformed and Plain End Bars for Concrete Reinforcement

ASTM A 706/A706M Specification for Low-Alloy Steel Deformed Bars for Concrete Reinforcement

ASTM C 33 Specification for Concrete Aggregates

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ASTM C 150 Specification for Portland Cement

ASTM C 260 Specification for Air-Entraining Admixtures for Concrete

ASTM C 494 Specification for Chemical Admixtures for Concrete

1.04 SUBMITTALS

A. Copies of all materials required to establish compliance with these Specifications shall be submitted in accordance with the provisions of the General Conditions.

1.05 QUALITY ASSURANCE

A. All work shall be performed to secure for the entire job homogeneous concrete having required strength, durability and weathering resistance, without planes of weakness and other structural defects and free of pronounced honeycombs, air pockets, voids, projections, offsets of plane and other defacements on exposed surfaces.

1.06 DELIVERY, STORAGE AND HANDLING

A. Do not deliver ready-mixed concrete to job site until ready for placement.

B. All materials used for on-site mixed concrete shall be kept clean and free from all foreign matter during transportation and handling and kept separate until measured and placed in the mixer.

C. Store concrete aggregates to prevent contamination or segregation. Store reinforcement of different sizes and shapes in separate piles or racks raised above the ground to avoid excessive rusting.

D. Protect from contaminants such as grease, oil and dirt. Provide for accurate identification after bundles have been broken and tags removed.

1.07 PROJECT/SITE CONDITIONS

A. Cold Weather

Provide and maintain 50 degrees F minimum concrete temperature. Do not place concrete when ambient temperature is below 40 degrees F. Cover concrete and provide with a source of heat sufficient to maintain 50 degrees F minimum while curing.

B. Hot Weather

1. Concrete temperature from initial mixing through final cure shall not exceed 90 degrees Fahrenheit. Cool ingredients before mixing, or substitute chip ice for part of required mixing water or use other suitable means to control concrete temperature to prevent rapid drying of newly

placed concrete. Shade the fresh concrete and start curing as soon as the surface is sufficiently hard to permit curing without damage.

PART 2 PRODUCTS

2.01 CONCRETE

A. Mix Design

The concrete mix shall conform to the requirements of the following table according to the class of concrete required. The number in the "Class" column refers to the 28-day compressive strength of the concrete in pounds per square inch (psi).

Class	Minimum Cement Content (Lbs./Cu. Yd.)	*Maximum Slump (Inches)
3000	470	3 to 4
3500	520	3 to 4
4000	550	3 to 4

* Maximum slump unless high range water reducing admixture is used.

B. Area of Application

1. Unless otherwise noted on the Drawings, concrete mixes shall be used as follows:

Class 3000 - kickers for pipe, fittings
Class 3500 - non-reinforced portions of manholes, pipe cradles
Class 4000 - reinforced portions of manholes, sidewalks, piers

2.02 MATERIALS

A. Cement

1. Portland cement for concrete and mortar shall conform to ASTM C 150, Type I or II.

B. Water

1. Water shall be potable.

C. Aggregates

1. Aggregates shall conform to ASTM C 33. Obtain aggregates from one source. Aggregates shall not contain any substance which may be deleteriously reactive with the alkalis in the cement.

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D. Admixtures

1. Admixtures for air-entrained concrete shall conform to ASTM C 260, for water reducing (Type A, D or E) accelerating (Type C) and retarding (Type B or D) ASTM C 494. Calcium chloride shall not be used as an admixture. Admixtures shall not be used without prior written approval of the Monticello Utility Commission.

E. Reinforcement

1. Reinforcing Bars

a. Reinforcing bars shall conform to ASTM A 615/A615M Grade 60, ASTM A 616/A616M Grade 60, ASTM A 617/A617M Grade 60 or ASTM A 706/A706M Grade 60 as applicable.

2. Welded Wire Fabric

a. Welded wire fabric shall conform to ASTM A 497 or ASTM A 185.

PART 3 EXECUTION

3.01 FORMS

A. Forms shall be used to confine concrete and shape it to the required dimensions. Set forms true to line and grade and make mortar tight. Chamfer above grade exposed joints, edges and external corners 3/4 inch, unless otherwise indicated. Earth cuts may be used as forms for footing vertical surfaces, if sides are sharp and true, and not exposed in finished structure.

3.02 PLACING REINFORCEMENT AND MISCELLANEOUS MATERIALS

A. Provide bars, wire fabric and other reinforcing materials, including wire ties, supports and other devices necessary to install and secure the reinforcement.

3.03 CONTROL AND CONSTRUCTION JOINTS

A. For sidewalks, provide control joints spaced at an interval equal to the width of the sidewalk, the minimum spacing of 5 feet. Cut joints 1 inch deep with a jointing tool after the surface has been finished. Provide 0.5 inch thick transverse expansion joints at changes in direction, where sidewalk abuts curb, steps, rigid pavement or other similar structures; space joints not more than 40 feet apart. Limit variation in cross section to 1/4 inch in 5 feet.

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3.04 CURING AND PROTECTION

A. Protect concrete from injurious action by sun, wind, rain, flowing water or mechanical injury. Do not allow concrete to dry out from time of placement until the expiration of the curing period. Forms may be removed 48 hours after concrete placement.

END OF SECTION

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SECTION 15102

VALVES

PART 1 GENERAL

1.01 SCOPE OF WORK

A. Furnish all materials, equipment, and incidentals required and install complete and ready for operation all valves and appurtenances as shown on the Drawings and specified herein.

B. The equipment shall include but not be limited to, the following:

1. Butterfly valves
2. Gate valves
3. Check valves
4. Tapping valves, sleeves and crosses
5. Fire hydrants

1.02 RELATED WORK

A. Excavation, backfill and grading is included in Division 2.

B. Piping is included in the respective sections of Division 2.

C. Valves and service accessories on all plumbing systems are included in this Division, Section 15100.

1.03 DESCRIPTIONS OF SYSTEMS

A. All of the equipment and materials specified herein is intended to be standard for use in controlling the flow of water.

1.04 QUALIFICATIONS

A. All of the types of valves and appurtenances shall be products of well established firms who are fully experienced, reputable and qualified in the manufacture of the particular equipment to be furnished. The equipment shall be designed, constructed and installed in accordance with the best practices and methods and shall comply with these specifications as applicable.

B. Acceptable Manufacturers

1. Butterfly Valves - Mueller or equal.
2. Gate Valves - Kennedy, Clow, Mueller or equal.
3. Check Valves - Mueller or equal.
4. Tapping Sleeves - Mueller or equal.
5. Fire Hydrants—Mueller Supercenturion.

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1.05 SUBMITTALS

A. Complete shop drawings of all valves and appurtenances shall be submitted to the Monticello Utility Commission.

B. The commission shall be furnished 2 certified copies of reports covering the required leakages, hydrostatic and proof-of-design tests on the valves.

C. Gate Valves

1. The Monticello Utility Commission shall be furnished 2 copies of affidavit of compliance stating that the valves and materials used in their construction conform to the applicable requirements of ANSI/AWWA C500-93, and that all tests specified therein have been made and that the test requirements have been met.

D. Check Valves

1. The Monticello Utility Commission shall be furnished 2 copies of affidavit of compliance stating that the valves and materials used in their construction conform to the applicable requirements of ANSI/AWWA C508-93, and that all tests specified therein have been made and that the test requirements have been met.

1.06 OPERATING INSTRUCTIONS

A. Manufacturer's operating and maintenance instructions shall be furnished to the Monticello Utility Commission.

PART 2 PRODUCTS

2.01 MATERIALS AND EQUIPMENT

A. General

1. All valves and appurtenances shall be of the size shown on the Drawings and as far as possible all equipment of the same type shall be from one manufacturer.

2. All valves and appurtenances shall have the name of the maker, flow-directional arrows, and the working pressure for which they are designed cast in raised letters on some appropriate part of the body.

3. All valves shall open left (counter clockwise).

4. All bolts and studs shall be in accordance with ASTM A-307 Grade B and nuts shall be in accordance with ASTM A-563. Bolts, studs and nuts shall be electrogalvanized according to ASTM B-633.

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5. All bolts, studs and nuts in contact with water, in any moist atmosphere or damp area such as occurs above water, or exposed to weather shall be stainless steel.

6. All bolts delivered to the job shall be free of rust and dirt and shall be stored in a manner to protect them from rust and dirt. All bolts shall be tightened to the proper torque. They shall be of the size recommended for the pipe and fittings they are to be used on and shall be in the recommended quantity. Tightening of bolts shall be alternated, so as to not produce undue stress on the valves and fittings.

2.02 BUTTERFLY VALVES

A. Rubber Seated Butterfly Valves

1. General

a. Unless otherwise noted in these Specifications or on the Drawings, all butterfly valves shall meet the requirements of ANSI/AWWA Specification C504-94. All future reference to section and paragraph numbers will be those of ANSI/AWWA C504-94.

b. Unless otherwise shown on the Drawings, the maximum nonshock shutoff pressure will not exceed those specified for the various valve classes.

c. Unless otherwise noted on the Drawings or called for in these Specifications, flow through the valves will be:

Normal:	Not more than 6 feet/second maximum
When Opening:	10 feet/second
When Closing:	16 feet/second

2. General Design

a. Valve Bodies

(1) Valve bodies shall be of cast iron or ductile iron. They shall be short body flanged ends, mechanical joint ends or nonstandard end. Wafer type valves are not acceptable.

b. Valve Shafts

(1) Valve shafts shall be in accordance with the requirements of Section 3, paragraph 3.3, and subparagraphs 3.3.1 thru 3.3.4, except that carbon steel shafts are not acceptable.

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c. Valve Discs

(1) Valve disc shall be in accordance with Section 3, paragraph 3.4, and subparagraphs 3.4.1 thru 3.4.4, except that cast steel and fabricated steel disc are not acceptable.

(2) The manufacturer shall furnish the Monticello Utility Commission dimensions of the clearance required for the valve disc.

d. Valve Seals

(1) Valve shaft seals shall be standard split V type packing, standard O-ring seals or for a pull down packing.

e. Valve Actuators

(1) General

(a) Valve actuators shall be of type as shown on the Drawings. They shall be equipped with adjustable mechanical stop-limiting devices to prevent over-travel of the valve disc in the open and closed positions. Actuator housings, supports, and connections to the valve shall be designed with a minimum safety factor of 5, based on the ultimate strength, or 3, based on the yield strength of the materials used.

(b) Valve actuators shall be in accordance with Section 3, paragraph 3.8, subparagraphs 3.8.1 thru 3.8.5.9.

(c) Certification for the proof of design test of the valve actuator shall be submitted in accordance with Sections 00820 and 01300.

(2) Buried Actuators

(a) Buried valve actuators shall be lubricated for life of the valve and be designed for satisfactory operation in groundwater conditions. (They shall be designed for operation of Class 150 B butterfly valves.) They shall also be nut and key type of 30 inch bury over top of pipe. All valves with nuts over 30 inches below top of valve box shall have extension stems to within 12 inches of top of boxes.

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f. Workmanship and Painting

(1) Workmanship and painting shall be in accordance with Section 4, paragraphs 4.1 and 4.2, and subparagraphs 4.2.1 thru 4.2.2, except that non-buried or submerged valves inside plants shall be prepared for and given a prime coat only.

2.03 GATE VALVES

A. Resilient-Seated Gate Valve (AWWA Type)

1. General

a. Resilient-seated gate valves shall conform in all respects to ANSI/AWWA C509-94 with non-rising or rising stems, in sizes 3, 4, 6, 8, 10, and 12 inch NPS except as otherwise noted below. They shall be designed for a working water pressure of 200 psi.

b. Valves shall have a clear unobstructed water way, without pockets or ridges in the seating area of the valve body. When fully open the water way shall be at least as large as the pipe diameter to which it is connected.

c. All future references to section and paragraph numbers shall be those of ANSI/AWWA C509-94.

2. Materials

a. Physical and Chemical Properties

(1) Physical and chemical characteristics of the valve components shall be in accordance with Section 2.2, except that carbon steel castings for valves are not acceptable. Paint shall be as hereinafter specified under "Valve Protection."

3. Detailed Design

a. Valve Ends

(1) General

(a) Valve ends shall be mechanical joint as shown on the Drawings and/or as listed in the resilient seat valve schedule.

(b) In resilient seated tapping valves, end connections may be a combination of flanged and mechanical joint.

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b. Stem Seal

(1) Stem seals shall be O-rings in accordance with Section 4.8, paragraph 4.8.2 and subparagraph 4.8.2.1, and materials shall be in accordance with paragraph 4.8.3.

c. Wrench Nuts and Handwheels

(1) Wrench nuts shall be in accordance with Section 4.11 and subparagraphs 4.11.1 through 4.11.5.

d. Gaskets

(1) Gaskets where used shall be in accordance with Section 4.15. O-rings of Buna-N or equal material.

(2) Within 200 feet of a petroleum product storage tank gaskets that are inert to product deterioration will be used.

e. Valve Seats

(1) Valve seats shall be in accordance with Section 4.16, except that seats applied to the valve body are not acceptable.

4. Valve Boxes

a. Valve boxes shall be provided for each buried valve.

5. Fabrication

a. Valve Protection (Painting and Coating)

(1) Exterior

(a) Exterior painting of the valve may be in accordance with section 2.2.7, or it may be the same as that specified for interior painting of the valves.

(2) Interior

(a) The interior of the valve shall be prepared for and painted in accordance with AWWA C550-90. The coating may be a fusion bonded epoxy, in 8 to 10 mil thickness or it may be a two-part thermosetting epoxy having the same mil thickness. After application the interior coating shall be visually examined and holiday tested in accordance with AWWA C550-90.

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2.04 TAPPING VALVES AND TAPPING SLEEVES AND CROSSES

A. Tapping Valves

1. Tapping valves for use with tapping sleeve and crosses shall be in accordance with the specifications for resilient seated gate valves, except that one end shall have a flanged connection and the other end a mechanical joint connection.

2. They shall be for 250 psi in sizes 2 inch thru 24 inch.

3. Valves shall open by turning counterclockwise.

4. Inlet flanges of valves shall meet ANSI B16.1, Class 125 standard.

B. Tapping Sleeves and Tapping Crosses

1. Tapping sleeves and tapping crosses shall have heavy cross sections to strengthen the existing water main at the point of installation.

2. Mainline end connections to existing pipeline shall be mechanical joint with large and small gaskets.

3. Mechanical joint tapping sleeves and crosses shall have a maximum working pressure of 250 psi.

4. Outlet end of tapping sleeves and crosses shall have ANSI B16.1, Class 125 flanges.

C. Quality Standard

1. All tapping valves, tapping sleeves and tapping crosses shall be in features and quality equal to those of American Valve and Hydrant Company, Mueller Company or Dresser Manufacturing Company.

D. Test and Certification

1. Tests on tapping valves shall be in accordance with these Specifications for resilient seated gate valve or in accordance with C-500-93 for double disc parallel seat gate valves.

E. Protection

1. Tapping Valves

a. Protection of tapping sleeves and valves shall be in accordance with these Specifications.

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2. Tapping Sleeves and Crosses

a. Protection for tapping sleeves and crosses shall be in accordance with these Specifications for ductile iron pipe fittings.

2.05 CHECK VALVES

A. General

1. Non-automatically operated check valves shall be of the swing type with outside lever and weight (OL&W). Complete catalogues, drawings, and other descriptive matter giving complete details and dimensions of the valves, to be furnished to the Monticello Utility Commission prior to shipment to the job site.

2. Valve bodies may be of cast iron, ductile iron or brass. Carbon steel bodies are not acceptable.

2.06 DRY-BARREL FIRE HYDRANTS

A. General

1. This standard covers post-type dry barrel fire hydrants with compression type valves, operating against pressure. They shall meet all requirements of ANSI/AWWA Specification C502-94.

2. They shall have two 2 1/2 inch hose connection nozzles and one 4 1/2 inch steamer connection nozzle, all with caps and drains and have national standard threads.

3. Main valve opening size shall be 5 1/4 inch which must remain closed when the above ground breakable safety section of the hydrant barrel is broken off.

4. All hydrants shall have 6 inch mechanical joint bell connection designed for 200 pounds working water pressure, in accordance with ANSI/AWWA C110/A21.10-93. Joint accessories are to be furnished with the hydrant.

5. Finish paint color of the hydrant barrel above ground line shall be red.

6. All hydrants shall have an automatic drain feature providing positive barrel drainage after hydrant use.

7. Hydrants shall be set such that the breakaway of the hydrant flange is at ground level. One standard hydrant wrench is to be provided. All hydrants shall open by turning counterclockwise.

8. Monticello Utility Commission will only accept Mueller-SuperCenturion fire hydrants.

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PART 3 EXECUTION

3.01 INSTALLATION

A. Exterior

1. Buried valves shall be installed with operating stems vertical, unless otherwise shown on the Drawings or called for in these Specifications. Tops of operating nuts shall be not more than 30 inches below ground surface. Where valve operating nuts are more than 30 inches below tops of valve boxes, stems shall be provided to bring the operating nut to within 12 to 24 inches of box tops.

2. Valve boxes shall be accurately centered over valve operating nuts and the backfill shall be mechanically tamped about them, to prevent subsequent movement. Tops of boxes shall be flush with ground surface, paving, walk, or road surface.

3. All valves shall be installed as shown on the Drawings. Any valve or stand found to be binding unduly shall be made to operate freely.

B. For butterfly valves, installation shall be in accordance with Appendix A, Sections A.1 through A.5 of ANSI/AWWA C504-94.

C. For gate valves, installation shall be in accordance with Appendix A, Sections A.5.1 through A.5.7 of ANSI/AWWA C509-94.

3.02 SHOP PAINTING

A. Interior surfaces of all valves, the exterior surfaces of buried valves and miscellaneous piping appurtenances shall be given a shop finish of an asphalt varnish conforming to Federal Specification TT-V51e for Varnish Asphalt.

3.03 INSPECTION AND TESTING

A. The various pipelines in which the valves and appurtenances are to be installed are specified to be field tested. During these tests any defective valve or appurtenance shall be adjusted, removed and replaced, or otherwise made acceptable to the Monticello Utility Commission.

B. Testing shall be done in accordance with Section 02610 "TESTING" with no visible leaks allowed on valves.

END OF SECTION

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GENERAL NOTES FOR WATER MAINS:

- MINIMUM COVER OVER WATER LINES TO BE 30 INCHES UNLESS OTHERWISE NOTED.
- MINIMUM COVER OVER WATER LINES ON STATE RIGHT-OF-WAY TO BE 42 INCHES.
- ALL BORES UNDER STATE HIGHWAYS RIGHT-OF-WAY: SHALL BE A MINIMUM OF 42 INCHES DEPTH UNDER BOTTOM OF DITCH LINE TO TOP OF PROPOSED BORE AND/OR CASING PIPE ON BOTH SIDES OF THE HIGHWAY.
- MINIMUM COVER OVER VALVE NUT TO BE 12 INCHES (NO PAYMENT FOR EXTRA DEPTH). MAXIMUM COVER OVER VALVE NUTS TO BE 30 INCHES (NO EXTRA PAYMENT FOR REQUIRED EXTENSIONS).
- CONCRETE BLOCKING OF FITTINGS REQUIRED AT NO EXTRA COST.
- THE CONTRACTOR SHALL HAVE THE OPTION OF USING FITTINGS OR EXTRA DEPTH TRENCHING AT ALL LOCATIONS WHERE VERTICAL BENDS ARE SHOWN. EITHER METHOD WILL BE AT NO EXTRA COST TO OWNER ABOVE THAT BID FOR FURNISHING, TRENCHING, LAYING AND BACKFILLING PIPE AND FITTINGS, AND SHALL BE APPROVED BY THE ENGINEER PRIOR TO INSTALLATION.
- LAY NEW LINES UNDER EXISTING WATER, GAS AND TELE. LINES, EXCEPT AS OTHERWISE NOTED OR DETERMINED IN THE FIELD.
- ALL PVC PIPE TO BE ASTM SDR-17 CLASS 250.
- ANY SALVAGED MATERIALS WHICH HAVE NOT BEEN SPECIFIED TO BE REUSED SHALL BE REMOVED FROM THE JOB SITE BY THE CONTRACTOR AND PLACED AT AN OWNER DESIGNATED AREA AT NO EXTRA COST TO OWNER.
- LOCATION, SIZE AND MATERIAL SHOWN FOR EXISTING UTILITIES ARE APPROXIMATE ONLY, EXACT LOCATION, SIZE AND MATERIAL MUST BE DETERMINED BY CONTRACTOR BEFORE EXCAVATING FOR NEW FACILITIES AT NO ADDITIONAL COST TO THE OWNER.
- LINE MARKERS TO BE LOCATED AT PROPERTY AND OR FENCE LINES AS DIRECTED BY THE ENGINEER.
- ALL TIE-IN LOCATIONS SHALL BE UNCOVERED PRIOR TO CONSTRUCTION TO MAINTAIN PROPER ALIGNMENT AND ELEVATION OF NEW CONNECTIONS.
- ALL WATER MAINS SHALL BE INSTALLED AT LEAST 5 FEET FROM EDGE OF PAVEMENT.
- INSTALLATION OF WATER MAINS SHALL BE IN SEPARATE TRENCH FROM THE PROPOSED ELECTRIC FACILITIES. IT MAY BE NECESSARY, FROM TIME TO TIME TO INSTALL THE WATER AND ELECTRIC IN THE SAME TRENCH. WHEN SAME TRENCH INSTALLATION IS NECESSARY, A MINIMUM OF 5 FEET HORIZONTAL CLEARANCE SHALL BE MAINTAINED.
- WHEN IT IS NECESSARY TO INSTALL WATER AND ELECTRIC IN THE SAME TRENCH, THE WATER MAIN SHALL BE INSTALLED ON THE SIDE OF THE PROPOSED RESIDENCE.
- DEVELOPER SHALL BE RESPONSIBLE FOR INSTALLATION OF 2 INCH SCHEDULE 80 OR SDR 21 PVC COVER PIPE TO SERVE EACH LOT. THE COVER PIPE SHALL BE LOCATED AT EACH PROPERTY LINE AND INSTALLED TO A POINT 5 FEET BEYOND THE ELECTRIC SERVICE. THE COVER PIPE SHALL INCLUDE TRACER WIRE AND BE CAPPED ON EACH END. MINIMUM COVER SHALL BE 30 INCHES.
- CONTRACTOR SHALL INVENTORY REQUIRED MATERIALS, TRENCH DEWATERING EQUIPMENT, AND ASSEMBLE IF NECESSARY ALL REQUIRED FITTINGS PRIOR TO CUT-INS OR TIE-INS TO INSURE MINIMUM "DOWN TIME" FOR CONNECTION.
- SURFACE DRAINAGE SHALL BE MAINTAINED ON A DAY-BY-DAY BASIS.
- THE OWNER SHALL BE NOTIFIED A MINIMUM OF 48 HOURS IN ADVANCE OF ANY SCHEDULED "DOWN-TIME" AS IT RELATES TO WATER SERVICE.
- METERS SHALL BE AS SHOWN ON PLAN SHEET.
- ALL FITTINGS FOR PVC PIPE SHALL BE D.I.M.J. AND SHALL BE CONSIDERED INCIDENTAL TO THE COST OF THE WATER LINE OR APPURTENANCES.
- ALL/ANY REMOVED WATER LINES AND APPURTENANCES SHALL BE DEEMED THE PROPERTY OF THE CITY OF MONTICELLO AND SHALL BE REMOVED, CLEANED AND RETURNED UPON REQUEST.
- THE CONTRACTOR SHALL PROFILE ALL ROAD CROSSINGS AND CREEK CROSSINGS AND SUBMIT GATHERED SURVEY DATA TO THE ENGR. FOR REVIEW AND APPROVAL PRIOR TO THE COMMENCEMENT OF ANY DRILLING, BORING OR OPEN CUTTING ACTIVITIES.
- CALL BUD BEFORE ANY CONSTRUCTION TO LOCATE EXISTING UTILITIES.
- CITY OF MONTICELLO: 606- 348-0167
- MONTICELLO UTILITY COMMISSION: 606- 348-8473

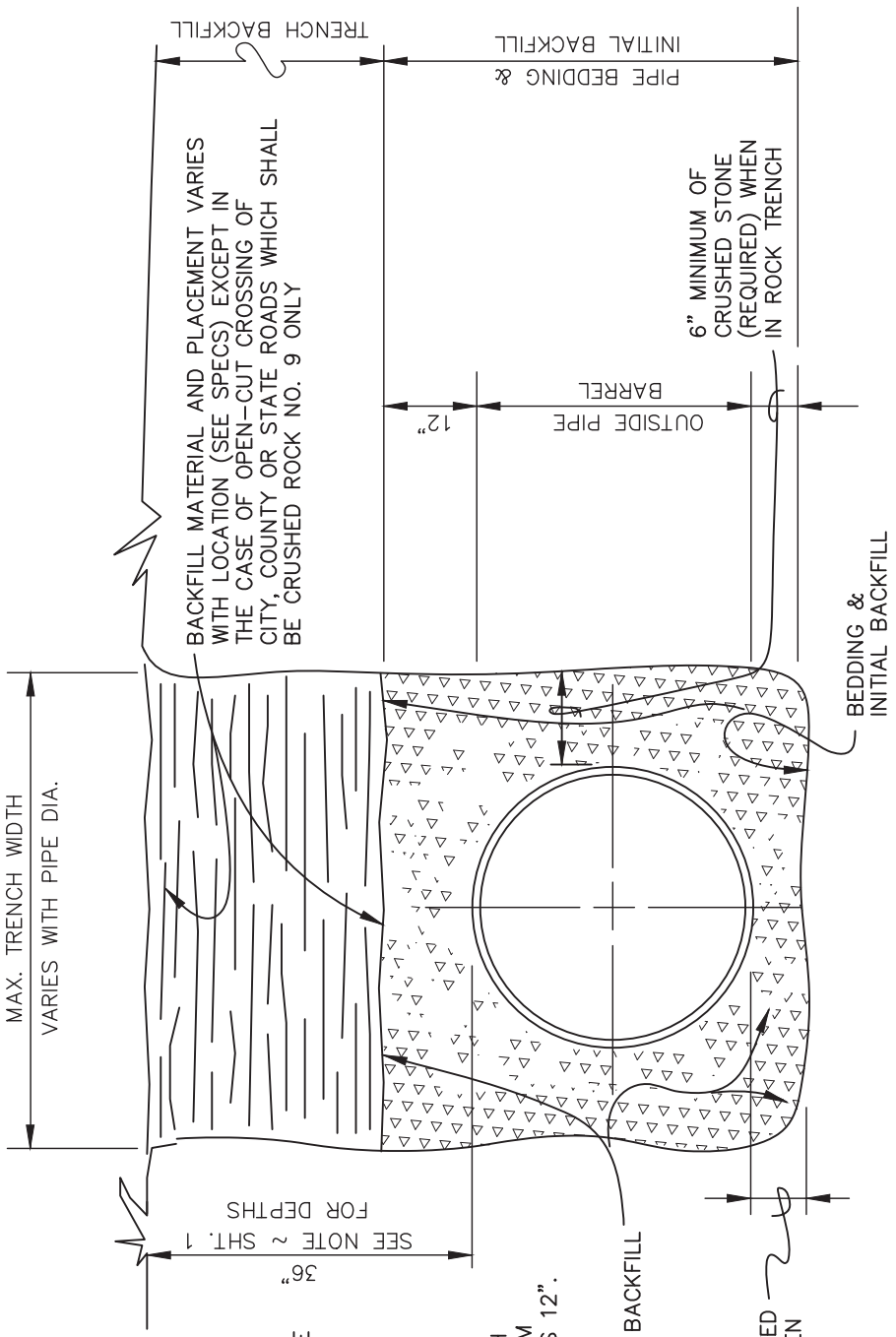
DATE	BY	REVISION

MONTICELLO
UTILITY COMMISSION
MONTICELLO, KENTUCKY

GENERAL NOTES
FOR
WATER MAINS

DWG. NO. W1

J:\MONTICELLO 568\water standards\568-W1 GEN NOTES.dwg, 5/29/2015 1:57:21 PM, Doug



DETAIL
BEDDING & BACKFILL
WATER MAIN INSTALLATION

N T S

DATE	BY	REVISION

MONTICELLO
UTILITY COMMISSION
MONTICELLO, KENTUCKY

WATER MAIN
BEDDING AND BACKFILL

DWG. NO. W2

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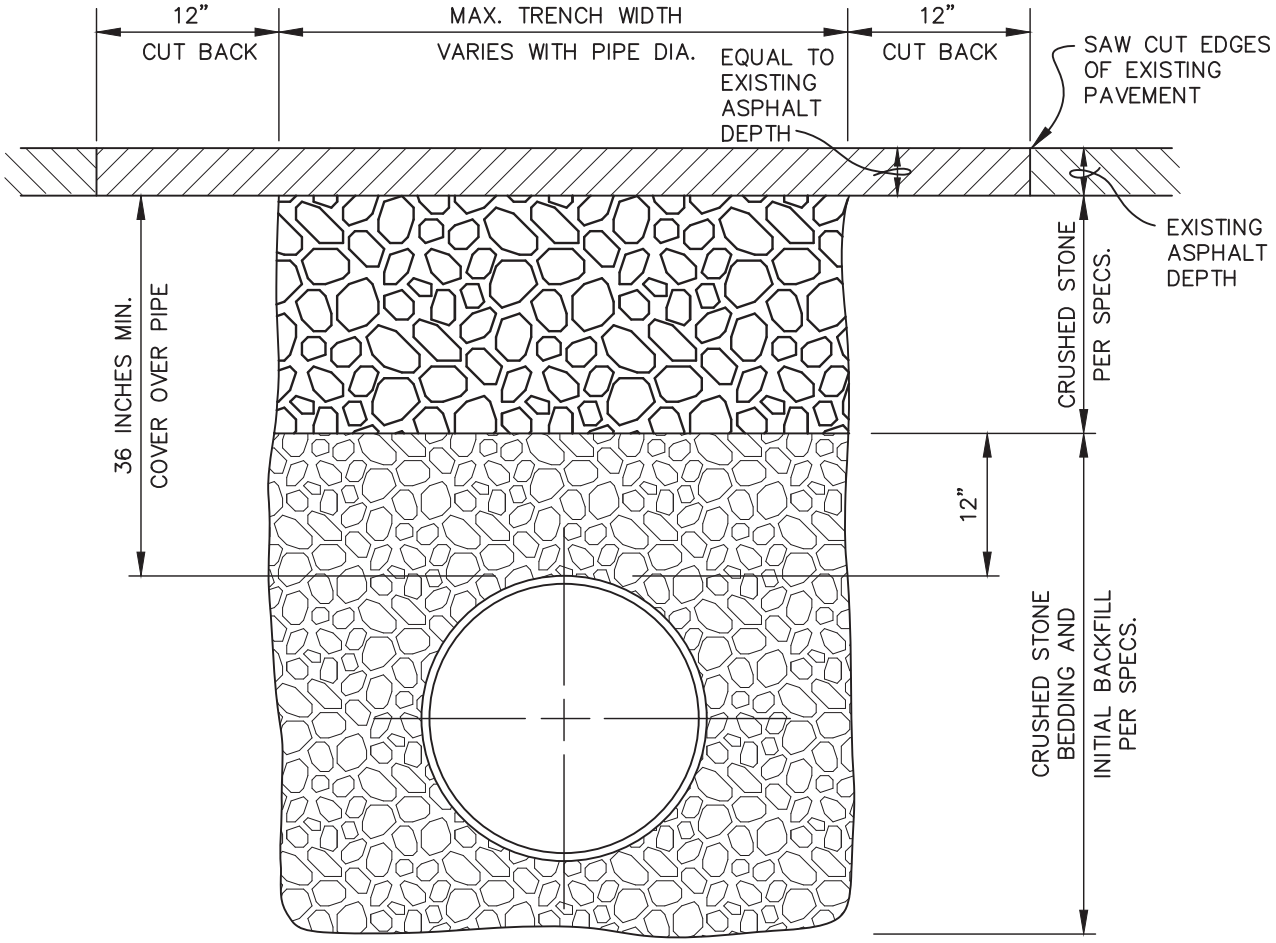


TRENCH DETAIL
TYPICAL OPEN CUT CROSSING OF COUNTY ROADS, STREETS AND ASPHALT PAVED DRIVES

NO SCALE

NOTE:
WHERE EXISTING ROAD/DRIVE SURFACE IS CONCRETE, INSTALL CONCRETE OF DEPTH EQUAL TO EXISTING CONCRETE DEPTH.

DATE	BY	REVISION

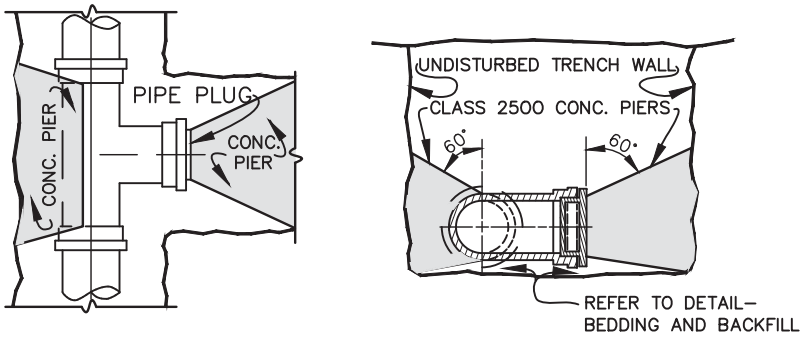
MONTICELLO
UTILITY COMMISSION
MONTICELLO, KENTUCKY

TRENCH DETAILS
OPEN–CUT CROSSING OF
COUNTY ROADS, STREETS
AND ASPHALT PAVED DRIVES

DWG. NO. W3

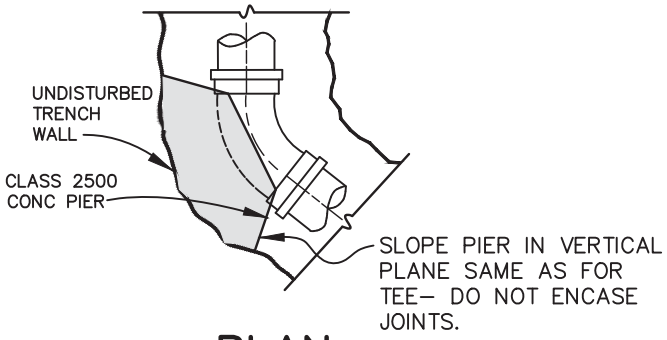
J:\MONTICELLO 568\water standards\568-W3 OPEN CUT.dwg, 5/29/2015 1:58:49 PM, Doug

NOTE:
IF MECHANICAL JOINT PLUG IS USED ON THE BRANCH, NO BLOCKING WILL BE REQUIRED ON THE PLUG. THE SIDE OF THE TEE SHALL BE BLOCKED IN ALL CASES.



PLAN SECTION

TYPICAL DETAIL OF CONCRETE BLOCKING AT TEES & PLUGS



PLAN

TYPICAL DETAIL OF CONCRETE BLOCKING AT BENDS VERTICAL AND HORIZONTAL

NOT TO SCALE

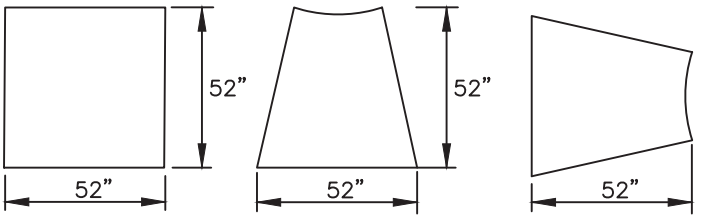
DATE	BY	REVISION

MONTICELLO
UTILITY COMMISSION
MONTICELLO, KENTUCKY

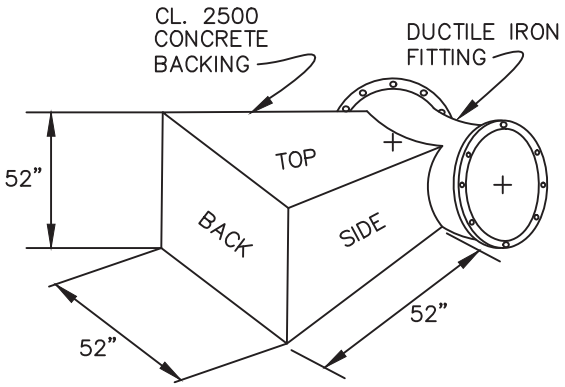
CONCRETE BLOCKING
AT TEES, BENDS AND PLUGS

DWG. NO. W5

J:\MONTICELLO 568\water standards\568-W5 CONCRETE BACKING AT TEES BENDS AND PLUGS.dwg, 5/29/2015 1:59:21 PM, Doug



BACK VIEW TOP VIEW SIDE VIEW



ISOMETRIC VIEW

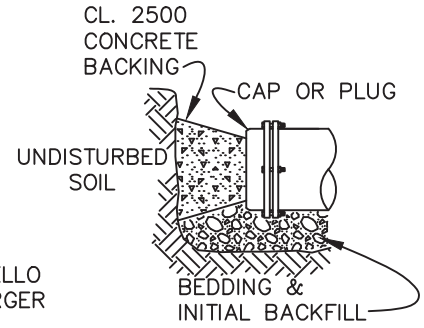
TABLE 1

TEST PRESSURE: 150 PSI ALL TYPES SOIL

PIPE DIA. INCHES	90°	PLUG/ TEE	45°	22 1/2°	11 1/4°
4	14	12	12	12	12
6	20	18	18	18	18
8	28	22	20	18	18
10	34	28	24	18	18
12	40	34	30	24	24

(1) TO OBTAIN THE NUMBER IN INCHES – MEASURE THE LENGTH, WIDTH AND DEPTH THE THRUST BLOCK TO BE INSTALLED SEE APPROPRIATE PRESSURE AND SOIL TYPE TO READ DOWN TO CORRECT PIPE DIAMETER AND ACROSS TABLE TO CORRECT FITTING.

(2) REINFORCEMENT STEEL RODS MAY BE NEEDED BY MONTICELLO UTILITY COMMISSION FOR LARGER THRUST BLOCK.



ELEVATION

TABLE 2

TEST PRESSURE: 350 PSI SANDY CLAY SOIL

PIPE DIA. INCHES	90°	PLUG/ TEE	45°	22 1/2°	11 1/4°
4	18	18	18	18	18
6	26	22	20	18	18
8	35	30	24	18	18
10	44	36	32	32	24
12	52	44	38	28	24
14	62	52	46	32	24
16	70	58	52	36	26
18	78	66	58	42	30
20	88	72	64	46	32
24	104	88	76	56	40

TABLE 3

TEST PRESSURE: 350 PSI HARD CLAY SOIL

PIPE DIA. INCHES	90°	PLUG/ TEE	45°	22 1/2°	11 1/4°
4	18	18	18	18	18
6	18	18	18	18	18
8	24	22	18	18	18
10	32	26	24	18	18
12	38	32	28	20	20
14	44	36	32	24	24
16	50	42	36	26	26
18	56	46	42	30	30
20	62	52	46	32	32
24	74	62	54	40	40

TABLE 4

TEST PRESSURE: 350 PSI SHALE SOIL

PIPE DIA. INCHES	90°	PLUG/ TEE	45°	22 1/2°	11 1/4°
4	18	18	18	18	18
6	18	18	18	18	18
8	18	18	18	18	18
10	22	18	18	18	18
12	26	22	20	18	18
14	30	26	24	18	18
16	36	30	21	18	18

TABLE 5

TEST PRESSURE: 130 PSI SOLID ROCK

PIPE DIA. INCHES	90°	PLUG/ TEE	45°	22 1/2°	11 1/4°
4	18	18	18	18	18
6	18	18	18	18	18
8	18	18	18	18	18
10	20	18	18	18	18
12	24	20	18	18	18
14	26	22	20	18	18

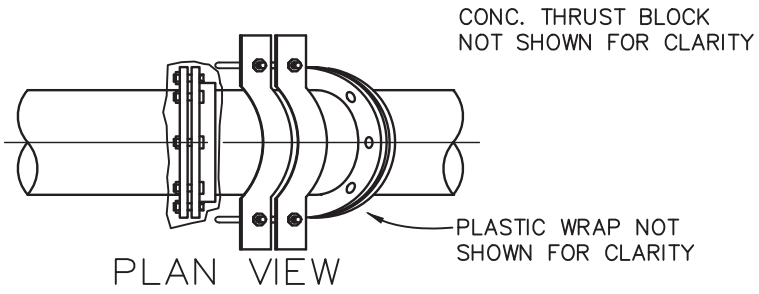
DATE	BY	REVISION

MONTICELLO
UTILITY COMMISSION
MONTICELLO, KENTUCKY

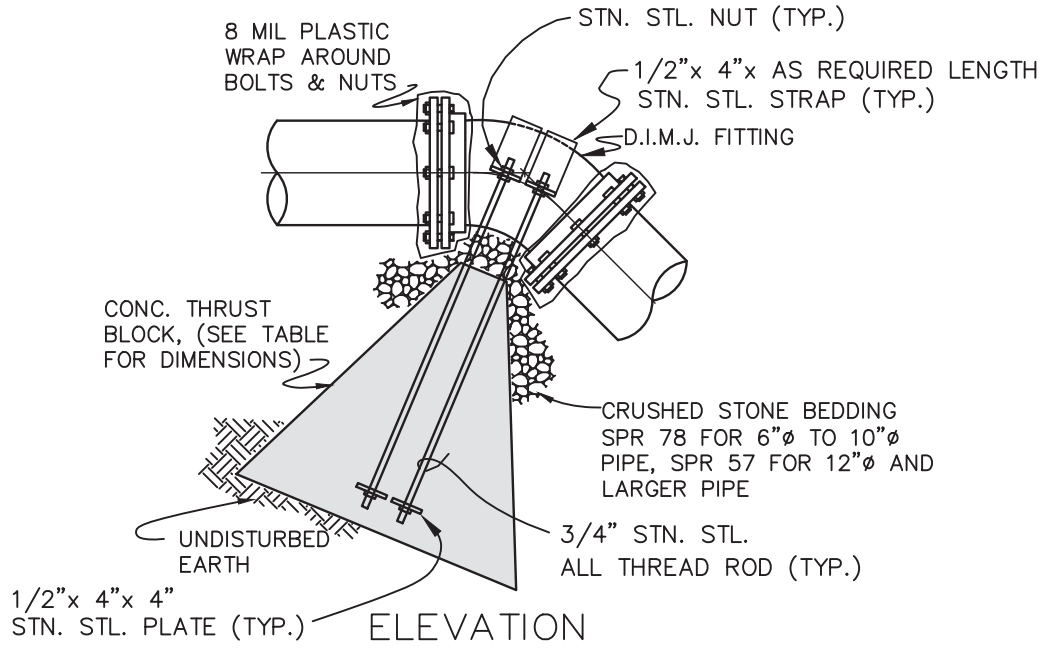
CONCRETE THRUST
BLOCK TABLES

DWG. NO. W6

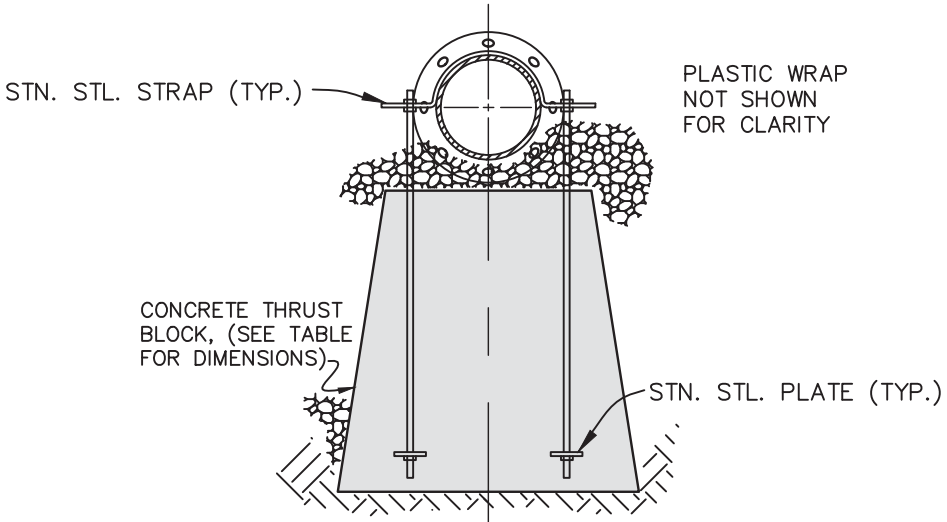
J:\MONTICELLO 568\water standards\568-W6 CONC BACKING TABLE.dwg, 5/29/2015 1:59:50 PM, Doug



PLAN VIEW



ELEVATION



END VIEW

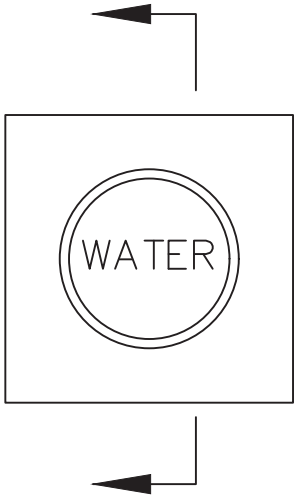
DATE	BY	REVISION

MONTICELLO
UTILITY COMMISSION
MONTICELLO, KENTUCKY

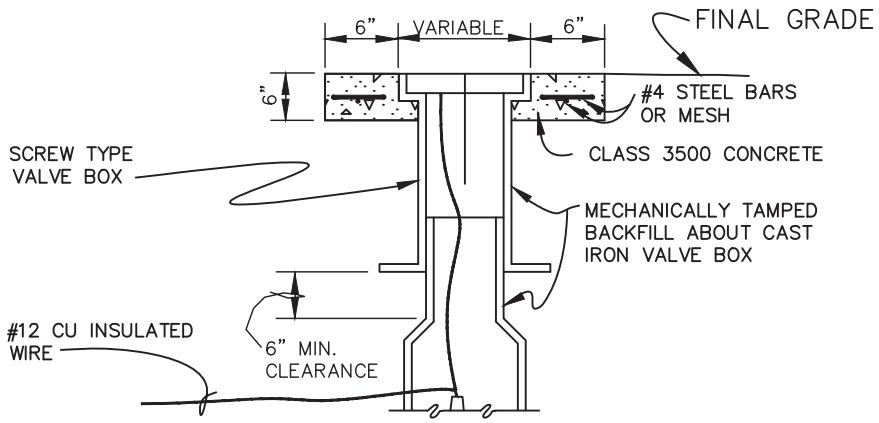
VERTICAL OVERBEND
AND THRUST BLOCK

DWG. NO. W7

J:\MONTICELLO 568\water standards\568-W7 VERTICAL OVERBEND.dwg, 5/29/2015 2:00:20 PM, Doug



PLAN



SECTION

VALVE BOX
CONCRETE COLLAR

(REQUIRED ON ALL VALVES)
NOT TO SCALE

NOTE:

* PRECAST CONCRETE COLLARS
  NOT ACCEPTABLE.

DATE	BY	REVISION

MONTICELLO
UTILITY COMMISSION
MONTICELLO, KENTUCKY

VALVE BOX
CONCRETE COLLAR

DWG. NO. W10

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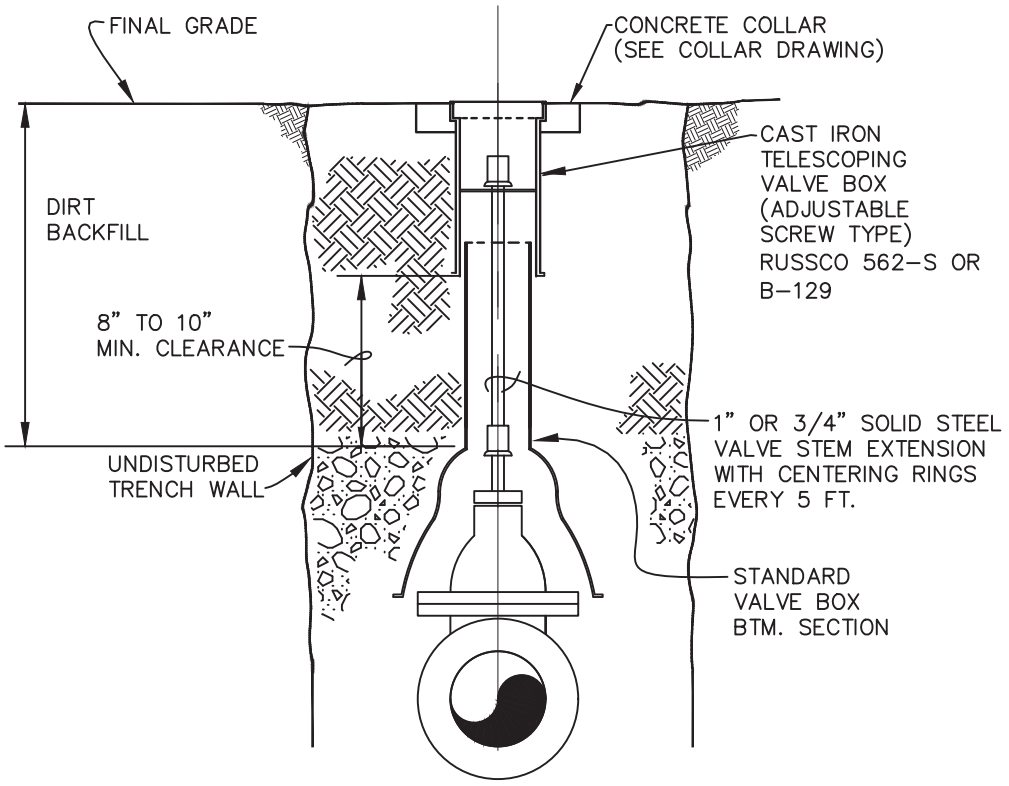

DATE	BY	REVISION

MONTICELLO
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MONTICELLO, KENTUCKY

VALVE BOX

DWG. NO. W11

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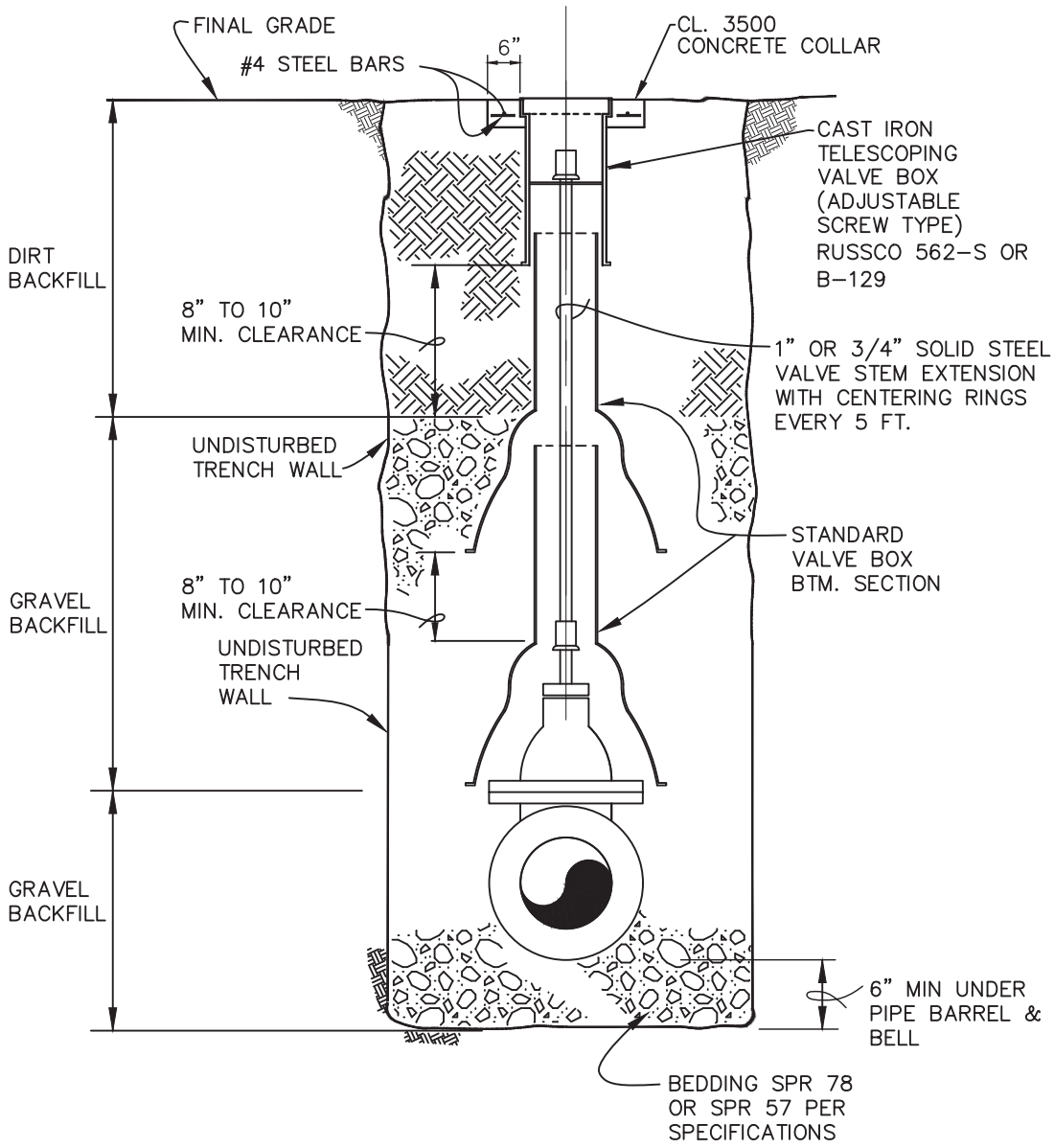

VALVE STEM EXTENSIONS AND VALVE BOX STACKING

NOT TO SCALE

DATE	BY	REVISION

MONTICELLO
UTILITY COMMISSION
MONTICELLO, KENTUCKY

VALVE STEM EXTENSIONS
AND
VALVE BOX STACKING

DWG. NO. W12

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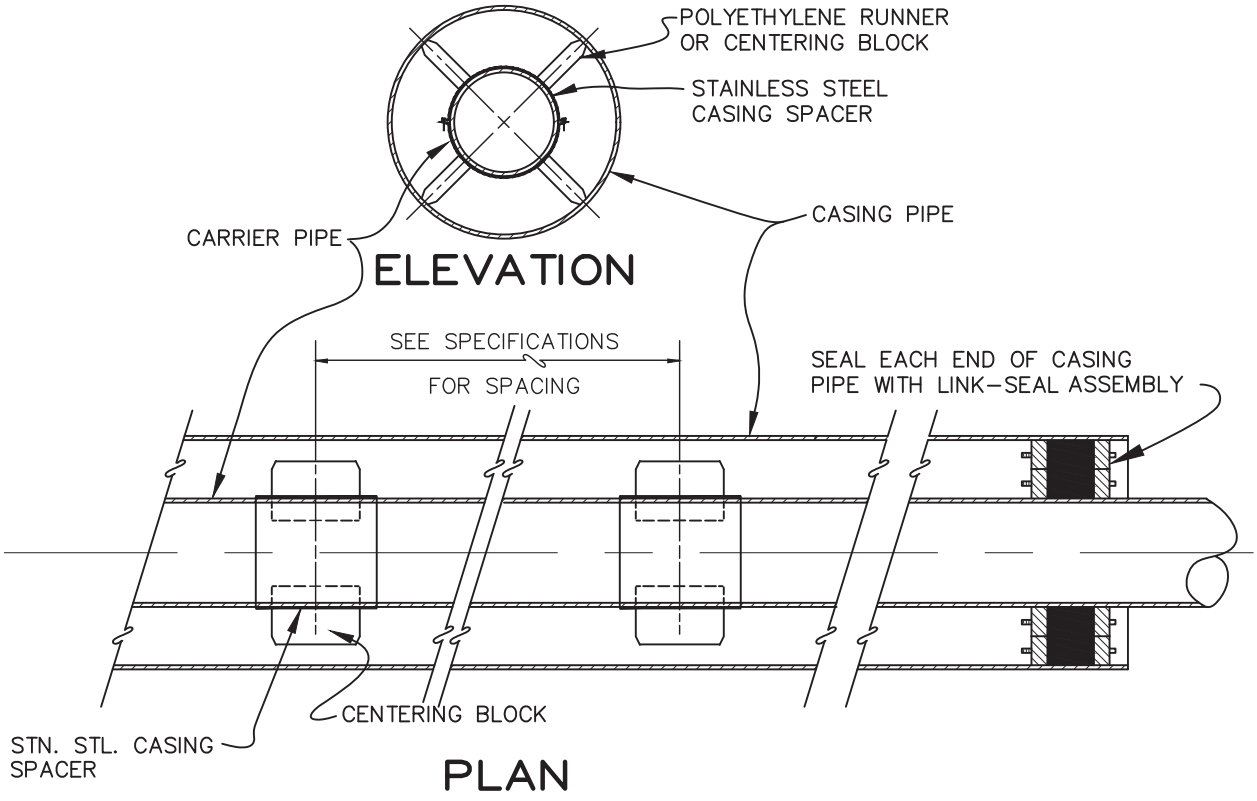

DETAIL
CARRIER PIPE POSITIONING IN CASING PIPE

NOT TO SCALE

DATE	BY	REVISION

MONTICELLO
UTILITY COMMISSION
MONTICELLO, KENTUCKY

CARRIER PIPE POSITIONING
IN CASING PIPE

DWG. NO. W14

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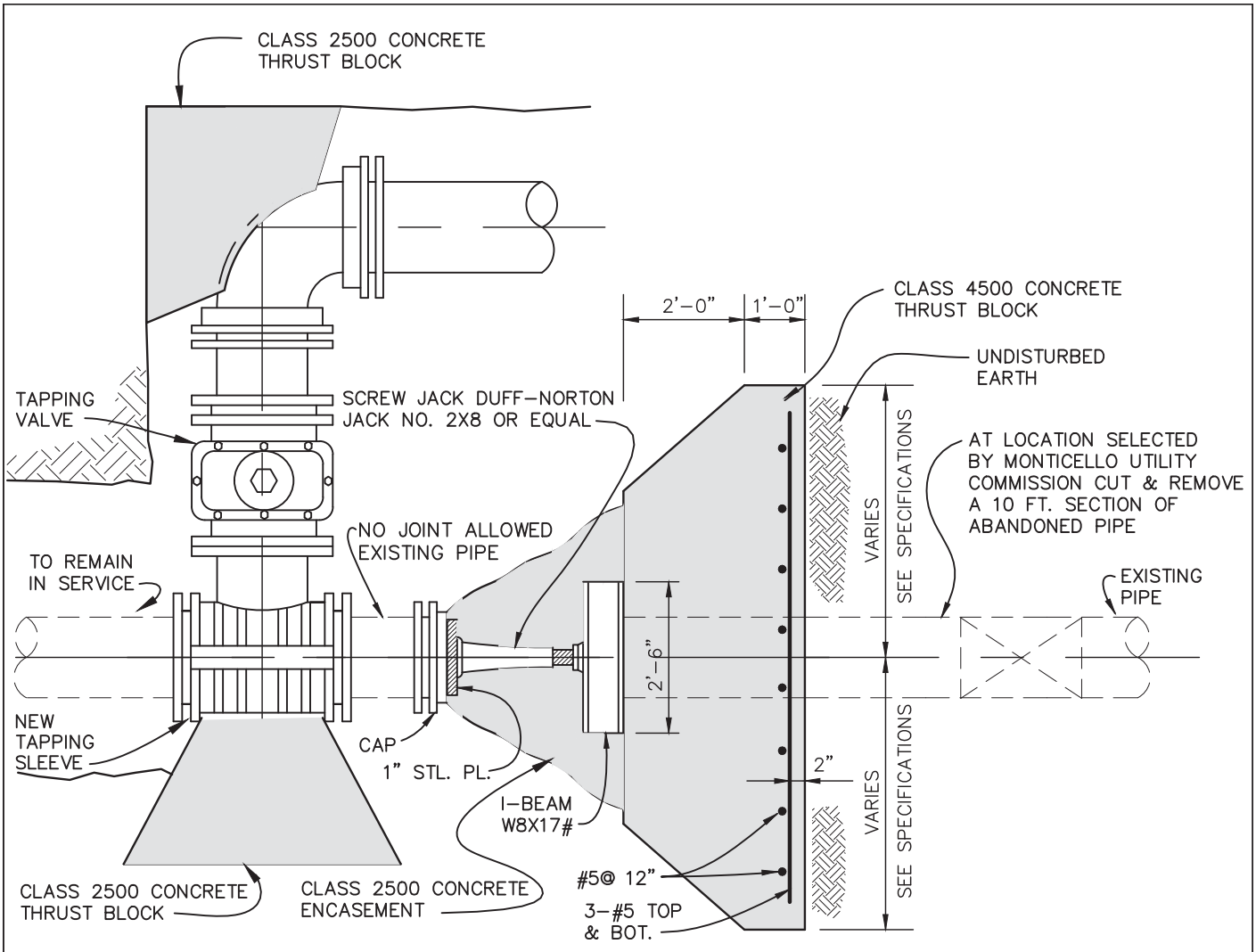


NOTES

* THRUST BLOCK SHALL BE 4'-0" HIGH & CENTERED ABOUT THE EXISTING PIPE.

* SCREW JACK CAPACITY OF 20 TONS FOR 16 INCH AND SMALLER PIPE

KILL MAIN LINE

NOT TO SCALE

DATE	BY	REVISION

MONTICELLO
UTILITY COMMISSION
MONTICELLO, KENTUCKY

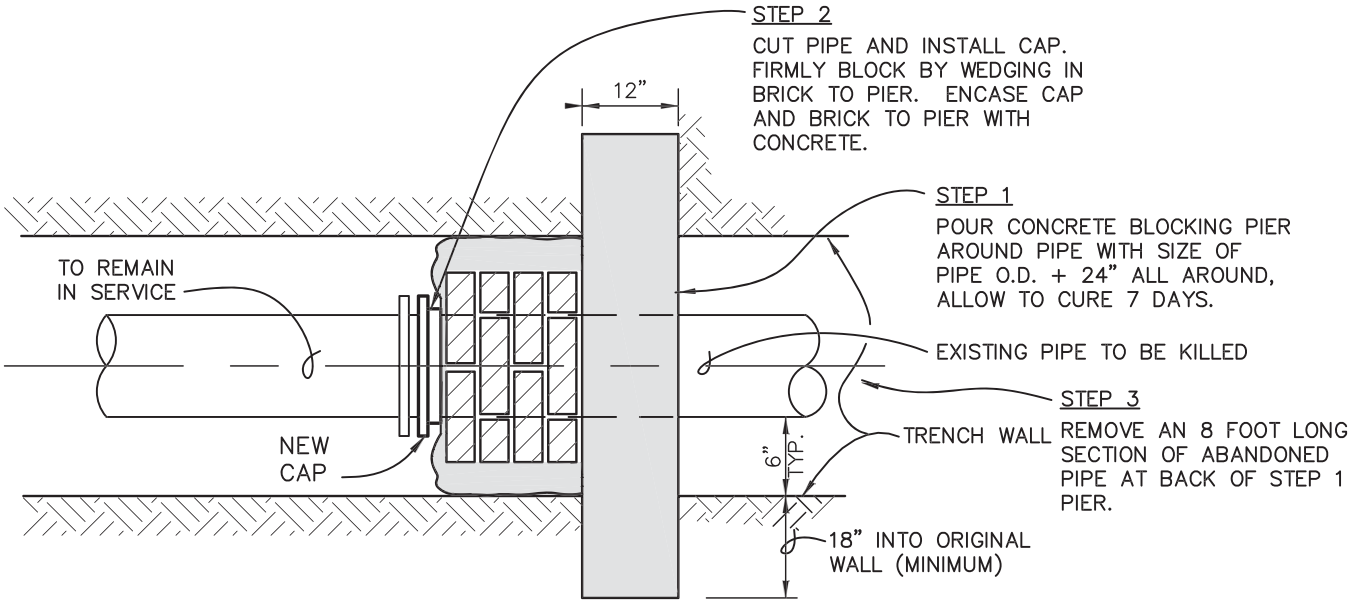
KILL MAIN LINE

DWG. NO. W16

J:\MONTICELLO 568\water standards\568-W16 KILL MAIN LINE.dwg, 5/29/2015 2:02:53 PM, Doug

NOTE:

ONLY DOWN TIME ALLOWED IS FOR CUTTING AND CAPPING PIPE



DETAIL – CUT & BLOCK

(FOR 12" & SMALLER LINES)
N T S

DATE	BY	REVISION

MONTICELLO
UTILITY COMMISSION
MONTICELLO, KENTUCKY

CUT AND BLOCK
12" AND SMALLER PIPE

DWG. NO. W17

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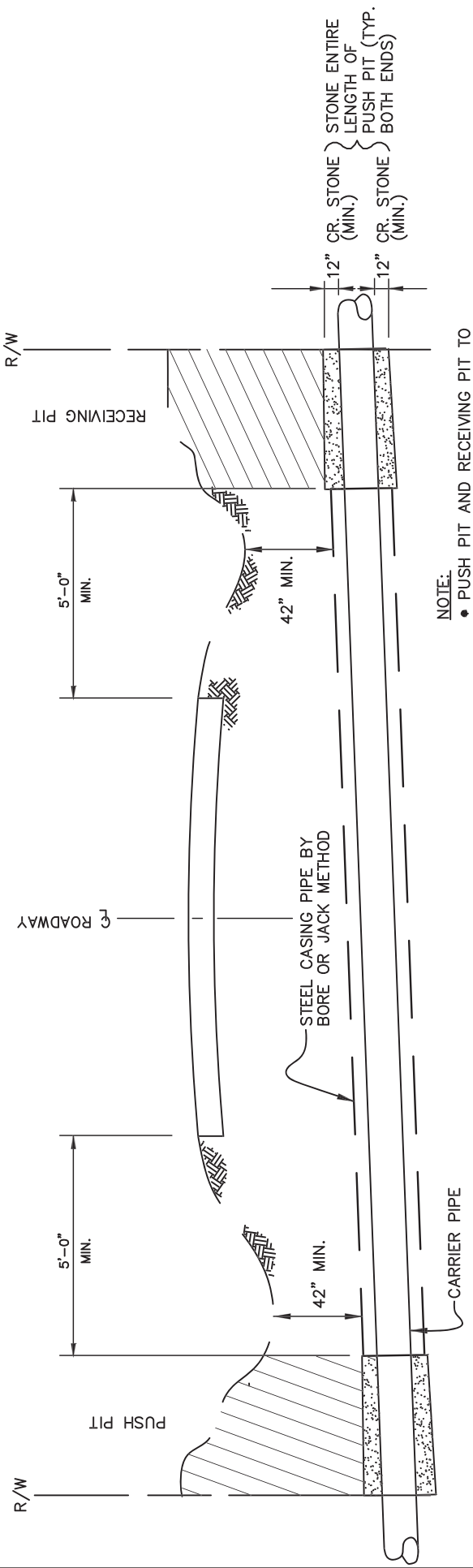

NOTE:
- PUSH PIT AND RECEIVING PIT TO BE BACKFILLED AND THOROUGHLY COMPACTED.
- ALL DITCH LINES TO BE LEFT OPEN.
- SEED AND STRAW ALL AREAS DISTURBED BY THIS WORK.

TYPICAL HIGHWAY BORING CROSSING DETAIL

NTS

DATE	BY	REVISION

MONTICELLO
UTILITY COMMISSION
MONTICELLO, KENTUCKY

HIGHWAY BORING
CROSSING

DWG. NO. W21

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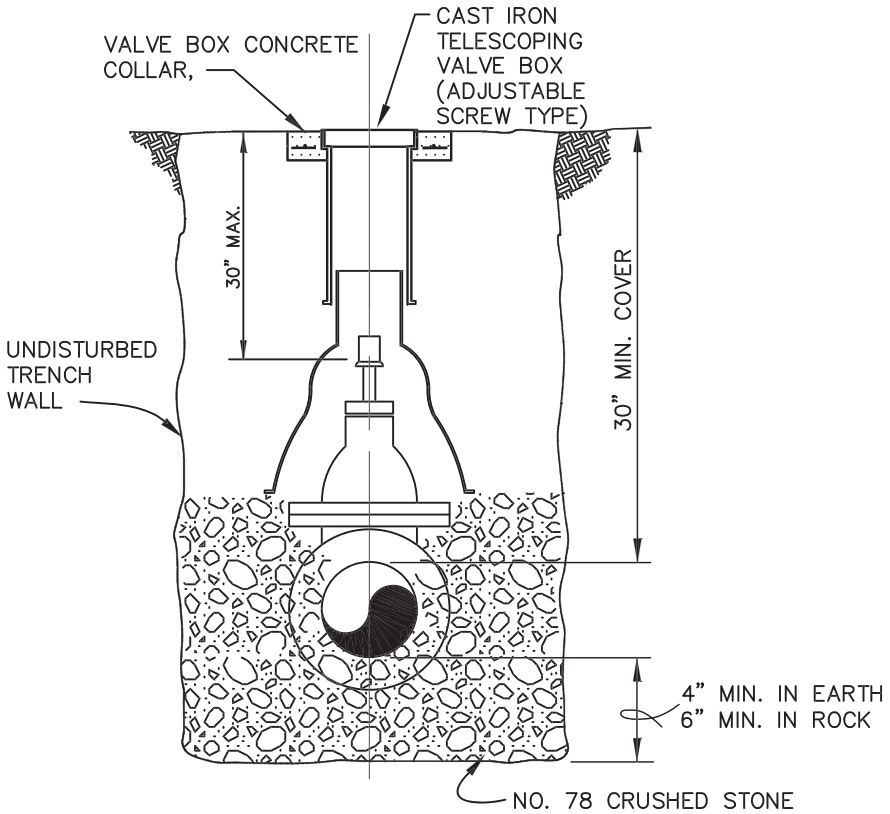

DETAIL
BURIED SERVICE GATE VALVE INSTALLATION

NOT TO SCALE

DATE	BY	REVISION

MONTICELLO
UTILITY COMMISSION
MONTICELLO, KENTUCKY

GATE VALVE
INSTALLATION

DWG. NO. W24

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Kentucky Transportation Cabinet

Highway District 8

And

_____(2), Construction

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

Groundwater protection plan

For Highway Construction Activities

For

TURN LANE CONSTRUCTION ON KY 90 NEAR MONTICELLO

Contract ID #

Six Year Plan No. 8-397.00

Revised
1-28-08

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

Project Information

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

1. Owner – Kentucky Transportation Cabinet, District 8
2. Resident Engineer: (2)
3. Contractor Name: (2)
   Address: (2)
   Phone number: (2)
   Contact: (2)
   Responsible Person: (3)
4. Contract ID Number: (2)
5. Route (Address): KY 90 (NEAR MONTICELLO)
6. *Latitude/Longitude (project mid-point): 36º51'02"N, 84º51'19"W*
7. County (project mid-point): WAYNE
8. Project start date (date work will begin): (2)
9. Projected completion date: (2)

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

1.0 SITE DESCRIPTION.

1) Nature of construction activity (from letting project description). INSTALL TURN LANES ON KY 90 IN THE VICINITY OF WAL-MART.
2) Order of major soil disturbing activities. (2) and (3)
3) Projected volume of material to be moved. 50,753 CU YDS
4) Estimate of total project area (acres). 18 ACRES
5) Estimate of area to be disturbed (acres). 18 ACRES
6) Post construction runoff coefficient will be included in the project drainage folder. Persons needing information pertaining to the runoff coefficient will contact the resident engineer to request this information. (1)
7) Data describing existing soil condition. (1) & (2)
8) Data describing existing discharge water quality (if any). (1) & (2)
9) Receiving water name.
10) TMDLs and Pollutants of Concern in Receiving Waters. (1 DEA)
11) Site Map. Project layout sheet plus the erosion control sheets in the project plans that depict Disturbed Drainage Areas (DDAs) and related information. These sheets depict the existing project conditions with areas delineated by DDA (drainage area bounded by watershed breaks and right of way limits), the storm water discharge locations (either as a point discharge or as overland flow) and the areas that drain to each discharge point. These plans define the limits of areas to be disturbed and the location of control measures. Controls will be either site specific as designated by the designer or will be annotated by the contractor and resident engineer before disturbance commences. The project layout sheet shows the surface waters and wetlands.
12) Potential sources of pollutants. The primary source of pollutants is solids that are mobilized during storm events. Other sources of pollutants include oil/fuel/grease from servicing and operating construction equipment, concrete washout water, sanitary wastes and trash/debris. (3)

2.0 SEDIMENT AND EROSION CONTROL MEASURES.

2.1 Erosion Control Sheets. Plans for highway construction projects will include erosion control sheets that depict Disturbed Drainage Areas (DDAs) and related information. These plan sheets will show the existing project conditions with areas delineated by DDA within the right of way limits, the discharge points and the areas that drain to each discharge point. Project managers and designers will analyze the DDAs and identify Best Management Practices (BMPs) that are site specific. The balance of the BMPs for the project will be listed in the bid documents for selection and use by the contractor on the project with approval by the resident engineer.

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

2.2 Annotations. Following award of the contract, the contractor and resident engineer will annotate the erosion control sheets showing location and type of BMPs for each of the DDAs that will be disturbed at the outset of the project. This annotation will be accompanied by

an order of work that reflects the order or sequence of major soil moving activities. The remaining DDAs are to be designated as "Do Not Disturb" until the contractor and resident engineer prepare the plan for BMPs to be employed. The initial BMPs shall be for the first phase (generally Clearing and Grubbing) and shall be modified as needed as the project changes phases. The BMP Plan will be modified to reflect disturbance in additional DDA's as the work progresses. All DDA's will have adequate BMPs in place before being disturbed.

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

A) Construction Access. This is the first land-disturbing activity. As soon as construction begins, bare areas will be stabilized with gravel and temporary mulch and/or vegetation.

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

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

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

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

1) Silt Traps Type B in ditches and/or drainways as they are completed.
2) Silt Traps Type C in front of pipes after they are placed.
3) Channel Lining
4) Erosion Control Blanket
5) Temporary Mulch and/or seeding for areas where construction activities will be ceased for 21 days or more.
6) Non-standard or innovative methods.

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

1) Silt Trap Type A, Brush and/or other barriers, Temporary Mulch, and any other BMP which had to be removed for final grading to take place.
2) Additional Silt Traps Type B and Type C to be placed as final drainage patterns are put in place.
3) Additional Channel Lining and/or Erosion Control Blanket.
4) Temporary Mulch for areas where Permanent Seeding and Protection cannot be done within 21 days.
5) Special BMPs such as Karst Policy.

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

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

G) Post Construction. BMPs including Storm Water Management Devices such as velocity dissipation devices and Karst policy BMPs to be installed during construction to control the pollutants in storm water discharges that will occur after construction has been completed are: (1)

3.0 OTHER CONTROL MEASURES.

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

Resident Engineer if there are any hazardous wastes being generated at the project site and how these wastes are being managed. Site personnel will be instructed with regard to proper storage and handling of hazardous wastes when required. The Transportation Cabinet will file for generator, registration when appropriate, with the Division of Waste Management and advise the contractor regarding waste management requirements.

4) Spill Prevention. The following material management practices will be used to reduce the risk of spills or other exposure of materials and substances to the weather and/or runoff.

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

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

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

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

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

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

The contractor shall prepare an Oil Pollution Spill Prevention Control and Countermeasure plan when the project that involves the storage of petroleum products in 55 gallon or larger containers with a total combined storage capacity of 1,320 gallons. This is a requirement of 40 CFR 112.

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

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

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

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

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

1) Manufacturers' recommended methods for spill cleanup will be clearly posted. All personnel will be made aware of procedures and the location of the information and cleanup supplies.
2) Materials and equipment necessary for spill cleanup will be kept in the material storage area. Equipment and materials will include as appropriate, brooms, dust pans, mops, rags, gloves, oil absorbents, sand, sawdust, and plastic and metal trash containers.
3) All spills will be cleaned up immediately after discovery.
4) The spill area will be kept well ventilated and personnel will wear appropriate protective clothing to prevent injury from contract with a hazardous substance.
5) Spills of toxic or hazardous material will be reported to the appropriate state/local agency as required by KRS 224 and applicable federal law.
6) The spill prevention plan will be adjusted as needed to prevent spills from reoccurring and improve spill response and cleanup.
7) Spills of products will be cleaned up promptly. Wastes from spill clean up will be disposed in accordance with appropriate regulations.

4.0 OTHER STATE AND LOCAL PLANS. This BMP plan shall include any requirements specified in sediment and erosion control plans, storm water management plans or permits that have been approved by other state or local officials. Upon submittal of the NOI, other requirements for surface water protection are incorporated by reference into and are enforceable under this permit (even if they are not specifically included in this BMP plan). This provision does not apply to master or comprehensive plans, non-enforceable guidelines or

technical guidance documents that are not identified in a specific plan or permit issued for the construction site by state or local officials. (1)

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

Maintenance of BMPs during construction shall be a result of weekly and post rain event inspections with action being taken by the contractor to correct deficiencies.

Post Construction maintenance will be a function of normal highway maintenance operations. Following final project acceptance by the cabinet, district highway crews will be responsible for identification and correction of deficiencies regarding ground cover and cleaning of storm water BMPs. The project manager shall identify any BMPs that will be for the purpose of post construction storm water management with specific guidance for any non-routine maintenance. (1)

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

1) All erosion prevention and sediment control measures will be inspected by the contractor at least once each week and following any rain of one-half inch or more.
2) Inspections will be conducted by individuals that have received KYTC Grade Level II training or other qualification as prescribed by the cabinet that includes instruction concerning sediment and erosion control.
3) Inspection reports will be written, signed, dated, and kept on file.
4) Areas at final grade will be seeded and mulched within 14 days.
5) Areas that are not at final grade where construction has ceased for a period of 21 days or longer and soil stock piles shall receive temporary mulch no later than 14 days from the last construction activity in that area.
6) All measures will be maintained in good working order; if a repair is necessary, it will be initiated within 24 hours of being reported and completed within 5 days.
7) Built-up sediment will be removed from behind the silt fence before it has reached halfway up the height of the fence.
8) Silt fences will be inspected for bypassing, overtopping, undercutting, depth of sediment, tears, and to ensure attachment to secure posts.
9) Sediment basins will be inspected for depth of sediment, and built-up sediment will be removed when it reaches 70 percent of the design capacity and at the end of the job.
10) Diversion dikes and berms will be inspected and any breaches promptly repaired. Areas that are eroding or scouring will be repaired and re-seeded / mulched as needed.
11) Temporary and permanent seeding and mulching will be inspected for bare spots, washouts, and healthy growth. Bare or eroded areas will be repaired as needed.
12) All material storage and equipment servicing areas that involve the management of bulk liquids, fuels, and bulk solids will be inspected weekly for conditions that represent a release or possible release of pollutants to the environment.

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

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

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

8.0 GROUNDWATER PROTECTION PLAN.

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

Contractor's statement: (3)

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

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

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

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

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

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

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

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

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

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

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

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

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

Contractor and Resident Engineer Plan Certification

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

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

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

Contractor and Resident Engineer Certification:

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

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

1. *Contractors Note: to be signed by a person who is the owner, a responsible corporate officer, a general partner or the proprietor or a person designated to have the authority to sign reports by such a person in accordance with 401 KAR 5:060 Section 9. This delegation shall be in writing to: Manager, KPDES Branch, Division of Water, 14 Reilly Road, Frankfort Kentucky 40601. Reference the Contract ID number and KPDES number when one has been issued.*

2. *KYTC Note: to be signed by the Chief District Engineer or a person designated to have the authority to sign reports by such a person (usually the resident engineer) in accordance with 401 KAR 5:060 Section 9. This delegation shall be in writing to: Manager, KPDES Branch, Division of Water, 14 Reilly Road, Frankfort Kentucky 40601 Reference the Contract ID number and KPDES number when one has been issued.*

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

Sub-Contractor Certification

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

Subcontractor Name:

Address:

Phone:

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

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

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

1. *Sub Contractor Note: To be signed by a person who is the owner, a responsible corporate officer, a general partner or the proprietor or a person designated to have the authority to sign reports by such a person in accordance with 401 KAR 5:060 Section 9. This delegation shall be in writing to: Manager, KPDES Branch, Division of Water, 14 Reilly Road, Frankfort Kentucky 40601. Reference the Contract ID number and KPDES number when one has been issued.*

Special Note For:
Erosion Prevention and Sediment Control
Item No. 08 – 397.00 – Wayne County

The Contractor shall be responsible for filing the Kentucky Pollution Discharge Elimination System (KPDES) KYR10 permit Notice of Intent (NOI) with the Kentucky Division of Water (DOW) and any KPDES local Municipal Separate Storm Sewer System (MS4) program that has jurisdiction. The NOI shall name the contractor as the Facility Operator and include the KYTC Contract ID Number (CID) for reference.

The Contractor shall perform all temporary erosion/sediment control functions including: providing a Best Management Practice (BMP) Plan, conducting required inspections, modifying the BMP plan documents as construction progresses and documenting the installation and maintenance of BMPs in conformance with the KPDES KYR10 permit effective on August 1, 2009 or a permit re-issued to replace that KYR10 permit. This work shall be conducted in conformance with the requirements of Section 213 of KYTC 2008 Department of Highways, Standard Specifications for Road and Bridge Construction.

Contrary to Section 213.03.03, paragraph 2, the Engineer shall conduct inspections as needed to verify compliance with Section 213 of KYTC 2008 Department of Highways, Standard Specifications for Road and Bridge Construction. The Engineer's inspections shall be performed a minimum of once per month and within seven days after a storm of ½ inch or greater. Copies of the Engineer's inspections shall not be provided to the contractor unless improvements to the BMP's are required. The contractor shall initiate corrective action within 24 hours of any reported deficiency and complete the work within 5 days. The Engineer shall use Form TC 63-61 A for this report. Inspections performed by the Engineer do not relieve the Contractor of any responsibility for compliance with the KPDES permit.

Contrary to Section 213.05, bid items for temporary BMPs will not be listed and will be replaced with one lump sum item for the services. Payment will be pro-rated based on the Project Schedule as submitted by the Contractor and as agreed to by the Engineer.

The contractor shall be responsible for applying "good engineering practices" as required by the KPDES permit. The contractor may use any temporary BMPs with the approval of the KYTC Engineer.

The contractor shall provide the Engineer copies of all documents required by the KPDES permit at the time they are prepared.

The contractor shall be responsible for the examination of the soils to be encountered and make his own independent determination of the temporary BMPs that will be required to accomplish effective erosion prevention and sediment control.

The Contractor shall be responsible for filing the KPDES permit Notice of Termination (NOT) with the Kentucky DOW and any local MS4 program that has jurisdiction. The NOT shall be filed after the Engineer agrees that the project is stabilized or the project has been formally accepted.

KPDES FORM NOI-SW

Kentucky Pollutant Discharge Elimination System (KPDES)

Notice of Intent (NOI)
for Storm Water Discharges
Associated with Industrial Activity Under the KPDES General Permit

Submission of this Notice of Intent constitutes notice that the party identified in Section I of this form intends to be authorized by a KPDES permit issued for storm water discharges associated with industrial activity. Becoming a permittee obligates such discharger to comply with the terms and conditions of the permit.

ALL NECESSARY INFORMATION MUST BE PROVIDED ON THIS FORM (See Instructions on back)

I. Facility Operator Information

Name:	KYTC DISTRICT 8	**Phone:**	(606) 677-4017
Address:	P.O. BOX 780	**Status of Owner/Operator:**	S
City, State, Zip Code:	SOMERSET, KY 42502		

II. Facility/Site Location Information

Name:	TURN LANE CONSTRUCTION ON KY 90 NEAR MONTICELLO ITEM NO. 8-397.00		
Address:	KY 90 NEAR MONTICELLO		
City, State, Zip Code:	MONTICELLO, KY 42633		
County:	WAYNE		
Site Latitude: (degrees/minutes/seconds)	36º51’02”N	**Site Longitude: (degrees/minutes/seconds)**	84º51’19”W

III. Site Activity Information

MS4 Operator Name:							
Receiving Water Body:							
Are there existing quantitative data?	**Yes** ☐ **If Yes, submit with this form.** **No** ☒						
SIC or Designated Activity Code Primary	1611	**2nd**		**3rd**		**4th**	
If this facility is a member of a Group Application, enter Group Application Number:							
If you have other existing KPDES Permits, enter Permit Numbers:							

IV. Additional Information Required FOR CONSTRUCTION ACTIVITIES ONLY

Project Start Date:		**Completion Date:**	
Estimated Area to be disturbed (in acres): 18 ACRES		2	
Is the Storm Water Pollution Prevention Plan in Compliance with State and/or Local Sediment and Erosion Plans?		**Yes** ☒ **No** ☐	

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

Printed or Typed Name:	**BRIAN DUNBAR**

Signature:	**Date:**	

Kentucky Pollutant Discharge Elimination System (KPDES)
Instructions
Notice of Intent (NOI) for Storm Water Discharges Associated with Industrial Activity
To Be Covered Under The KPDES General Permit

WHO MUST FILE A NOTICE OF INTENT (NOI) FORM

Federal law at 40 CFR Part 122 prohibits point source discharges of stormwater associated with industrial activity to a water body of the Commonwealth of Kentucky without a Kentucky Pollutant Discharge Elimination System (KPDES) permit. The operator of an industrial activity that has such a storm water discharge must submit a NOI to obtain coverage under the KPDES Storm Water General Permit. If you have questions about whether you need a permit under the KPDES Storm Water program, or if you need information as to whether a particular program is administered by the state agency, call the Storm Water Contact, Industrial Section, Kentucky Division of Water at (502) 564-3410.

WHERE TO FILE NOI FORM

NOIs must be sent to the following address:

Section Supervisor
Inventory & Data Management Section
KPDES Branch, Division of Water
Frankfort Office Park
14 Reilly Road
Frankfort, KY 40601

COMPLETING THE FORM

Type or print legibly in the appropriate areas only. If you have any questions regarding the completion of this form call the Storm Water Contact, Industrial Section, at (502) 564-3410.

SECTION I - FACILITY OPERATOR INFORMATION

Give the legal name of the person, firm, public organization, or any other entity that operates the facility or site described in this application. The name of the operator may or may not be the same as the name of the facility. The responsible party is the legal entity that controls the facility's operation, rather than the plant or site manager. Do not use a colloquial name. Enter the complete address and telephone number of the operator.

Enter the appropriate letter to indicate the legal status of the operator of the facility.

F = Federal M = Public (other than federal or state)
S = State P = Private

SECTION II - FACILITY/SITE LOCATION INFORMATION

Enter the facility's or site's official or legal name and complete street address, including city, state, and ZIP code.

SECTION III - SITE ACTIVITY INFORMATION

If the storm water discharges to a municipal separate storm sewer system (MS4), enter the name of the operator of the MS4 (e.g., municipality name, county name) and the receiving water of the discharge from the MS4. (A MS4 is defined as a conveyance or system of conveyances (including roads with drainage systems, municipal streets, catch basins, curbs, gutters, ditches, man-made channels, or storm drains) that is owned or operated by a state, city, town, borough, county, parish, district, association, or other public body which is designed or used for collecting or conveying storm water.)

If the facility discharges storm water directly to receiving water(s), enter the name of the receiving water.

Indicate whether or not the owner or operator of the facility has existing quantitative data that represent the characteristics and concentration of pollutants in storm water discharges. If data is available submit with this form.

List, in descending order of significance, up to four 4-digit standard industrial classification (SIC) codes that best describe the principal products or services provided at the facility or site identified in Section II of this application.

If the facility listed in Section II has participated in Part 1 of an approved storm water group application and a group number has been assigned, enter the group application number in the space provided.

If there are other KPDES permits presently issued for the facility or site listed in Section II, list the permit numbers.

SECTION IV - ADDITIONAL INFORMATION REQUIRED FOR CONSTRUCTION ACTIVITIES ONLY

Construction activities must complete Section IV in addition of Sections I through III. Only construction activities need to complete Section IV.

Enter the project start date and the estimated completion date for the entire development plan.

Provide an estimate of the total number of acres of the site on which soil will be disturbed (round to the nearest acre).

Indicate whether the storm water pollution prevention plan for the site is in compliance with approved state and/or local sediment and erosion plans, permits, or storm water management plans.

SECTION V - CERTIFICATION

Federal statutes provide for severe penalties for submitting false information on this application form. Federal regulations require this application to be signed as follows:

For a corporation: by a responsible corporate officer, which means: (i) president, secretary, treasurer, or vice-president of the corporation in charge of a principal business function, or any other person who performs similar policy or decision making functions, or (ii) the manager of one or more manufacturing, production, or operating facilities employing more than 250 persons or having gross annual sales or expenditures exceeding $25 million (in second-quarter 1980 dollars), if authroity to sign documents has been assigned or delegated to the manager in accordance with corporate procedures;

For a partnership or sole proprietorship: by a general partner or the proprietor; or

For a municipality, state, Federal, or other public facility: by either a principal executive officer or ranking elected official.

GUARDRAIL DELIVERY VERIFICATION SHEET

Contract Id: _____ **Contractor: _____**

Section Engineer: _____ **District & County: _____**

DESCRIPTION	UNIT	QTY LEAVING PROJECT	QTY RECEIVED@BB YARD
GUARDRAIL (Includes End treatments & crash cushions)	LF	_____	_____
STEEL POSTS	EACH	_____	_____
STEEL BLOCKS	EACH	_____	_____
WOOD OFFSET BLOCKS	EACH	_____	_____
BACK UP PLATES	EACH	_____	_____
CRASH CUSHION	EACH	_____	_____
NUTS, BOLTS, WASHERS	BAG/BCKT	_____	_____
DAMAGED RAIL TO MAINT. FACILITY	LF	_____	_____
DAMAGED POSTS TO MAINT. FACILITY	EACH	_____	_____

****Required Signatures before Leaving Project Site***

Printed Section Engineer's Representative_____ & Date_____

Signature Section Engineer's Representative_____& Date_____

Printed Contractor's Representative_____& Date_____

Signature Contractor's Representative_____& Date_____

****Required Signatures after Arrival at Bailey Bridge Yard (All material on truck must be counted & the quantity received column completed before signatures)***

Printed Bailey Bridge Yard Representative_____ & Date_____

Signature Bailey Bridge Yard Representative_____& Date_____

Printed Contractor's Representative_____& Date_____

Signature Contractor's Representative_____& Date_____

**Payment for the bid item remove guardrail will be based upon the quantities shown in the Bailey Bridge Yard received column. Payment will not be made for guardrail removal until the guardrail verification sheets are electronically submitted to the Section Engineer by the Bailey Bridge Yard Representative.

Completed Form Submitted to Section Engineer Date: _____ By: _____

PART II

SPECIFICATIONS AND STANDARD DRAWINGS

SPECIFICATIONS REFERENCE

Any reference in the plans or proposal to previous editions of the *Standard Specifications for Road and Bridge Construction* and *Standard Drawings* are superseded by *Standard Specifications for Road and Bridge Construction, Edition of 2012* and *Standard Drawings, Edition of 2012 with the 2012 Revision.*

Supplemental Specifications to the Standard Specifications for Road and Bridge Construction, 2012 Edition Effective with the July 31, 2015 Letting

Subsection:	102.15 Process Agent.
Revision:	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:	105.13 Claims Resolution Process.
Revision:	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:	108.03 Preconstruction Conference.
Revision:	Replace 8) Staking with the following: 8) Staking (designated by a Professional Engineer or Land Surveyor licensed in the Commonwealth of Kentucky.
Subsection:	109.07.02 Fuel.
Revision:	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:	110.02 Demobilization.
Revision:	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:	112.03.12 Project Traffic Coordinator (PTC).
Revision:	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.
Subsection:	112.04.18 Diversions (By-Pass Detours).
Revision:	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:	201.03.01 Contractor Staking.
Revision:	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.

Supplemental Specifications to the Standard Specifications for Road and Bridge Construction, 2012 Edition Effective with the July 31, 2015 Letting

Subsection:	201.04.01 Contractor Staking.
Revision:	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:	206.04.01 Embankment-in-Place.
Revision:	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:	208.02.01 Cement.
Revision:	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:	208.03.06 Curing and Protection.
Revision:	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:	208.03.06 Curing and Protection.
Revision:	Replace paragraph eight with the following: At no expense to the Department, repair any damage to the subgrade caused by freezing.
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.

Supplemental Specifications to the
Standard Specifications for Road and Bridge Construction, 2012 Edition
Effective with the July 31, 2015 Letting

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.
Subsection:	212.04.04 Agricultural Limestone.
Revision:	Replace the entire section with the following: The Department will measure the quantity of agricultural limestone in tons.
Subsection:	212.04.05 Fertilizer.
Revision:	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.

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Subsection:	212.05 PAYMENT.
Revision:	Delete the following item code:

Code	Pay Item	Pay Unit
05966	Topdressing Fertilizer	Ton

Subsection:	212.05 PAYMENT.
Revision:	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:	213.03.02 Progress Requirements.
Revision:	Replace the last sentence of the third paragraph with the following: Additionally, the Department will apply a penalty equal to the liquidated damages when all aspects of work are not coordinated in an acceptable manner within 7 calendar days after written notification.
Subsection:	213.03.05 Temporary Control Measures.
Part:	E) Temporary Seeding and Protection.
Revision:	Delete the second sentence of the first paragraph.
Subsection:	304.02.01 Physical Properties.
Table:	Required Geogrid Properties
Revision:	Replace all references to Test Method "GRI-GG2-87" with ASTM D 7737.
Subsection:	402.03.02 Contractor Quality Control and Department Acceptance.
Part:	B) Sampling.
Revision:	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.
Subsection:	402.03.02 Contractor Quality Control and Department Acceptance.
Part:	D) Testing Responsibilities.
Number:	3) VMA.
Revision:	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:	402.03.02 Contractor Quality Control and Department Acceptance.
Part:	D) Testing Responsibilities.
Number:	4) Density.
Revision:	Replace the second sentence of the Option A paragraph with the following: Perform coring by the end of the following work day.

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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.
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.

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Subsection:	402.03.03 Verification.
Part:	B) Evaluation of Sublots Not Verified by Department.
Revision:	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:	402.03.03 Verification.
Part:	C) Test Data Patterns.
Revision:	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:	402.03 CONSTRUCTION.
Revision:	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:	402.03.04 Dispute Resolution.
Revision:	Change the subsection number to 402.03.05.
Subsection:	402.05 PAYMENT.
Part:	Lot Pay Adjustment Schedule Compaction Option A Base and Binder Mixtures
Table:	AC
Revision:	Replace the Deviation from JMF(%) that corresponds to a Pay Value of 0.95 to ±0.6.
Subsection:	403.02.10 Material Transfer Vehicle (MTV).
Revision:	Replace the first sentence with the following: In addition to the equipment specified above, provide a MTV with the following minimum characteristics:
Subsection:	412.02.09 Material Transfer Vehicle (MTV).
Revision:	Replace the paragraph with the following: Provide and utilize a MTV with the minimum characteristics outlined in section 403.02.10.

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Subsection:	412.03.07 Placement and Compaction.
Revision:	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:	412.04 MEASUREMENT.
Revision:	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:	501.03.05 Weather Limitations and Protection.
Revision:	Replace the reference to Subsection 501.03.19 in Paragraph 5, with Subsection 501.03.20.
Subsection:	501.03.19 Surface Tolerances and Testing Surface.
Part:	B) Ride Quality.
Revision:	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:	603.03.06 Cofferdams.
Revision:	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:	605.03.04 Tack Welding.
Revision:	Insert the subsection and the following: 605.03.04 Tack Welding. The Department does not allow tack welding.
Subsection:	606.03.17 Special Requirements for Latex Concrete Overlays.
Part:	A) Existing Bridges and New Structures.
Number:	1) Prewetting and Grout-Bond Coat.
Revision:	Add the following sentence to the last paragraph: Do not apply a grout-bond coat on bridge decks prepared by hydrodemolition.
Subsection:	609.03 Construction.
Revision:	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:	615.08.01 Type of Test Specimen.
Revision:	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:	615.08.02 Compression Testing.
Revision:	Delete the second sentence.
Subsection:	615.08.04 Acceptability of Core Tests.
Revision:	Delete the entire subsection.
Subsection:	615.12 Inspection.
Revision:	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:	701.04.16 Deduction for Pipe Deflection.
Revision:	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:	716.02.02 Paint.
Revision:	Replace sentence with the following: Conform to Section 821.
Subsection:	716.03 CONSTRUCTION.
Revision:	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:	716.03.02 Lighting Standard Installation.
Revision:	Replace the second sentence 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.
Subsection:	716.03.02 Lighting Standard Installation.
Part:	A) Conventional Installation.
Revision:	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:	716.03.02 Lighting Standard Installation.
Part:	A) Conventional Installation.
Number:	1) Breakaway Installation and Requirements.
Revision:	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.
Subsection:	716.03.02 Lighting Standard Installation.
Part:	B) High Mast Installation
Revision:	Replace the first sentence with the following: Install each high mast pole as noted on plans.

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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

(1): Shaft length is 22' for cohesive soil only. For cohesionless soil, contact geotechnical branch for design.
(2): Do not construct high mast drilled shafts on ground slopes steeper than 1.5:1 without the approval of the Division of Traffic.

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 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 accordingly.

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 are encountered.

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.

Subsection: 716.03.03 Trenching.
Part: A) Trenching of Conduit for Highmast Ducted Cables.
Revision: 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.

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Subsection:	716.03.03 Trenching.
Part:	B) Trenching of Conduit for Non-Highmast Cables.
Revision:	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. No payment for additional junction boxes for greater depths will be allowed.
Subsection:	716.03.10 Junction Boxes.
Revision:	Replace subsection title with the following: Electrical Junction Box.
Subsection:	716.04.07 Pole with Secondary Control Equipment.
Revision:	Replace the paragraph with the following: The Department will measure the quantity as each individual unit furnished and installed. The Department will not measure mounting the cabinet to the pole, backfilling, restoration, any necessary hardware to anchor pole, or electrical inspection fees, 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, and ground wires and will consider them incidental to this item of work.
Subsection:	716.04.08 Lighting Control Equipment.
Revision:	Replace the paragraph with the following: The Department will measure the quantity as each individual unit furnished and installed. The Department will not measure constructing the concrete base, excavation, backfilling, restoration, any necessary anchors, or electrical inspection fees, 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, and ground wires and will consider them incidental to this item of work.
Subsection:	716.04.09 Luminaire.
Revision:	Replace the first sentence with the following: The Department will measure the quantity as each individual unit furnished and installed.
Subsection:	716.04.10 Fused Connector Kits.
Revision:	Replace the first sentence with the following: The Department will measure the quantity as each individual unit furnished and installed.
Subsection:	716.04.13 Junction Box.
Revision:	Replace the subsection title with the following: Electrical Junction Box Type Various.
Subsection:	716.04.13 Junction Box.
Part:	A) Junction Electrical.
Revision:	Rename A) Junction Electrical to the following: A) Electrical Junction Box.
Subsection:	716.04.14 Trenching and Backfilling.
Revision:	Replace the second sentence with the following: The Department will not measure excavation, backfilling, underground utility warning tape (if required), the restoration of disturbed areas to original condition, and will consider them incidental to this item of work.

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Subsection: 716.04.18 Remove Lighting.
Revision: Replace the paragraph with the following:
The Department will measure the quantity as a lump sum for the removal of lighting equipment. The Department will not measure the disposal of all equipment and materials off the project by the contractor. The Department also will not measure the transportation of the materials and will consider them incidental to this item of work.

Subsection: 716.04.20 Bore and Jack Conduit.
Revision: 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. Construction methods shall be in accordance with Sections 706.03.02, paragraphs 1, 2, and 4.

Subsection: 716.05 PAYMENT.
Revision: Replace items 04810-04811, 20391NS835 and, 20392NS835 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

Subsection: 723.02.02 Paint.
Revision: Replace sentence with the following: Conform to Section 821.

Subsection: 723.03 CONSTRUCTION.
Revision: 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: 723.03.02 Poles and Bases Installation.
Revision: Replace the first sentence 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.

Subsection: 723.03.02 Poles and Bases Installation.
Part: A) Steel Strain and Mastarm Poles Installation
Revision: Replace the second paragraph with the following: For concrete base installation, see Section 716.03.02, B), 2), Paragraphs 2-7. 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: 723.03.02 Poles and Bases Installation.
Part: B) Pedestal or Pedestal Post Installation.
Revision: 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.

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Subsection: **Part:** **Revision:**	723.03.03 Trenching. A) Under Roadway. Add the following after the second sentence: If depths greater than 24 inches are necessary, obtain the Engineer's approval and maintain ether required conduit depths coming into the junction boxes. No payment for additional junction boxes for greater depths will be allowed.
Subsection: **Revision:**	723.03.11 Wiring Installation. 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: **Revision:**	723.03.12 Loop Installation. 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: **Revision:**	723.04.02 Junction Box. Replace subsection title with the following: Electrical Junction Box Type Various.
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 (if required), the restoration of disturbed areas to original condition, and will consider them incidental to this item of work.
Subsection: **Revision:**	723.04.10 Signal Pedestal. Replace the second sentence with the following: The Department will not measure excavation, concrete, reinforcing steel, specified conduits, fittings, ground rod, ground wire, backfilling, restoring disturbed areas, or other necessary hardware and will consider them incidental to this item of work.
Subsection: **Revision:**	723.04.15 Loop Saw Slot and Fill. Replace the second sentence with the following: The Department will not measure sawing, cleaning and filling induction loop saw slot, loop sealant, backer rod, and grout and will consider them incidental to this item of work.
Subsection: **Revision:**	723.04.16 Pedestrian Detector. Replace the paragraph 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 (with arrow) sign, furnishing and installing mounting hardware for sign and will consider them incidental to this item of work.
Subsection: **Revision:**	723.04.18 Signal Controller- Type 170. Replace the second sentence with the following: The Department will not measure constructing the concrete base or mounting the cabinet to the pole, connecting the signal and detectors, excavation, backfilling, restoration, any necessary pole mounting hardware, electric service, or electrical inspection fees 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; furnishing and installing electrical service conductors, specified conduits, anchors, meter base, fused cutout, fuses, ground rods, ground wires and will consider them incidental to this item of work.

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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 constructing the concrete base or mounting the cabinet to the pole, connecting the signal and detectors, and excavation, backfilling, restoration, any necessary pole mounting hardware, electric service, or electrical inspection fees 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; furnishing and installing electrical service conductors, specified conduits, anchors, meter base, fused cutout, fuses, ground rods, ground wires and will consider them incidental to this item of work.
Subsection:	723.04.22 Remove Signal Equipment.
Revision:	Replace the paragraph with the following: The Department will measure the quantity as a lump sum removal of signal equipment. The Department will not measure the return of control equipment and signal heads to the Department of Highways as directed by the District Traffic Engineer. The Department also will not measure the transportation of materials of the disposal of all other equipment and materials off the project by the contractor and will consider them incidental to this item of work.
Subsection:	723.04.28 Install Pedestrian Detector Audible.
Revision:	Replace the second sentence with the following: The Department will not measure installing sign R10-3e (with arrow) and will consider it incidental to this item of work.
Subsection:	723.04.29 Audible Pedestrian Detector.
Revision:	Replace the second sentence with the following: The Department will not measure furnishing and installing the sign R10-3e (with arrow) and will consider it incidental to this item of work.
Subsection:	723.04.30 Bore and Jack Conduit.
Revision:	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. Construction methods shall be in accordance with Sections 706.03.02, paragraphs 1, 2, and 4.
Subsection:	723.04.31 Install Pedestrian Detector.
Revision:	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 sign R 10-3e (with arrow) and will consider it incidental to this item of work.
Subsection:	723.04.32 Install Mast Arm Pole.
Revision:	Replace the second sentence with the following: The Department will not measure arms, signal mounting brackets, anchor bolts, or any other necessary hardware and will consider them incidental to this item of work.
Subsection:	723.04.33 Pedestal Post.
Revision:	Replace the second sentence with the following: The Department will not measure excavation, concrete, reinforcing steel, anchor bolts, conduit, fittings, ground rod, ground wire, backfilling, restoration, or any other necessary hardware and will consider them incidental to this item of work.

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Subsection: 723.04.36 Traffic Signal Pole Base.
Revision: Replace the second sentence with the following: The Department will not measure excavation, reinforcing steel, anchor bolts, specified conduits, ground rods, ground wires, backfilling, or restoration and will consider them incidental to this item of work.

Subsection: 723.04.37 Install Signal Pedestal.
Revision: Replace the second sentence with the following: The Department will not measure excavation, concrete, reinforcing steel, anchor bolts, specified conduits, fittings, ground rod, ground wire, backfilling, restoration, or any other necessary hardware and will consider them incidental to this item of work.

Subsection: 723.04.38 Install Pedestal Post.
Revision: Replace the second sentence with the following: The Department will not measure excavation, concrete, reinforcing steel, anchor bolts, specified conduits, fittings, ground rod, ground wire, backfilling, restoration, or any other necessary hardware and will consider them incidental to this item of work.

Subsection: 723.05 PAYMENT.
Revision: Replace items 04810-04811, 20391NS835 and, 20392NS835 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

Subsection: 804.01.02 Crushed Sand.
Revision: Delete last sentence of the section.

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} (nonrecoverable creep compliance) between 0.1 and 0.5, when tested according to AASHTO TP 70.

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Subsection: **Table:** **Revision:**	806.03.01 General Requirements. PG Binder Requirements and Price Adjustment Schedule 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: **Table:** **Superscript:** **Revision:**	806.03.01 General Requirements. PG Binder Requirements and Price Adjustment Schedule (3) Replace [3] with the following: Perform testing at 64°C.
Subsection: **Revision:**	813.04 Gray Iron Castings. Replace the reference to "AASHTO M105" with "ASTM A48".
Subsection: **Number:** **Revision:**	813.09.02 High Strength Steel Bolts, Nuts, and Washers. A) Bolts. 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.
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".

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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.
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.

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Subsection:	834.17.01 Conventional.
Revision:	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:	834.21.01 Waterproof Enclosures.
Revision:	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.
Subsection:	835.07 Traffic Poles.
Revision:	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:	835.07 Traffic Poles.
Revision:	*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:	835.07 Traffic Poles.
Revision:	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:	835.07 Traffic Poles.
Revision:	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.

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Subsection:	835.07 Traffic Poles.
Revision:	*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:	835.07.01 Steel Strain Poles.
Revision:	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:	835.07.01 Steel Strain Poles.
Revision:	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:	835.07.02 Mast Arm Poles.
Revision:	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.
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

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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

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.

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SPECIAL NOTE FOR PORTABLE CHANGEABLE MESSAGE SIGNS

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

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

2.0 MATERIALS.

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

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

2.2 Sign and Controls. All signs must:

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

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

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

*Insert numerals as directed by the Engineer.
Add other messages during the project when required by the Engineer.

2.3 Power.

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

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

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

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

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

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

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

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

Code	Pay Item	Pay Unit
02671	Portable Changeable Message Sign	Each

Effective June 15, 2012

PART III

EMPLOYMENT, WAGE AND RECORD REQUIREMENTS

TRANSPORTATION CABINET
DEPARTMENT OF HIGHWAYS

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

I. APPLICATION

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

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

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

II. NONDISCRIMINATION OF EMPLOYEES

AN ACT OF THE KENTUCKY
GENERAL ASSEMBLY TO PREVENT
DISCRIMINATION IN EMPLOYMENT
KRS CHAPTER 344
EFFECTIVE JUNE 16, 1972

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

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

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

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

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

III. PAYMENT OF PREDETERMINED MINIMUM WAGES

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

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

IV. STATEMENTS AND PAYROLLS

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

11. No contractor or subcontractor contracting for any part of the contract work which may require or involve the employment of laborers or mechanics shall require or permit any laborer or mechanic in any work-week in which he is employed on such work, to work in excess of eight hours in any calendar day or in excess of forty hours in such work-week unless such laborer or mechanic receives compensation at a rate not less than one and one half times his basic rate of pay for all hours worked in excess of eight hours in any calendar day or in excess of forty hours in such work-week. A laborer, workman or mechanic and an employer may enter into a written agreement or a collective bargaining agreement to work more than eight (8) hours a calendar day but not more than ten (10) hours a calendar day for the straight time hourly rate. This agreement shall be in writing and shall be executed prior to the employee working in excess of eight (8) hours, but not more than ten (10) hours, in any one (1) calendar day.

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

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

Revised 2-16-95

EXECUTIVE BRANCH CODE OF ETHICS

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

KRS 11A.040 (6) provides:

No present or former public servant shall, within six (6) months of following termination of his office or employment, accept employment, compensation or other economic benefit from any person or business that contracts or does business with the state in matters in which he was directly involved during his tenure. This provision shall not prohibit an individual from returning to the same business, firm, occupation, or profession in which he was involved prior to taking office or beginning his term of employment, provided that, for a period of six (6) months, he personally refrains from working on any matter in which he was directly involved in state government. This subsection shall not prohibit the performance of ministerial functions, including, but not limited to, filing tax returns, filing applications for permits or licenses, or filing incorporation papers.

KRS 11A.040 (8) states:

A former public servant shall not represent a person in a matter before a state agency in which the former public servant was directly involved, for a period of one (1) year after the latter of:

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

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

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

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

In case of doubt, the law permits you to request an advisory opinion from the Executive Branch Ethics Commission, Room 136, Capitol Building, 700 Capitol Avenue, Frankfort, Kentucky 40601; telephone (502) 564-7954.

Kentucky Equal Employment Opportunity Act of 1978

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

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

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

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

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

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

Determination No. CR-14-II-HWY

Project No.
Highway

Date of Determination: July 14, 2014

This schedule of the prevailing rate of wages for Locality No. II including the counties of ADAIR, BARREN, BELL, BREATHITT, CASEY, CLAY, CLINTON, CUMBERLAND, ESTILL, FLOYD, GARRARD, GREEN, HARLAN, HART, JACKSON, JOHNSON, KNOTT, KNOX, LAUREL, LAWRENCE, LEE, LESLIE, LETCHER, LINCOLN, MCCREARY, MAGOFFIN, MARTIN, MENIFEE, METCALFE, MONROE, MORGAN, OWSLEY, PERRY, PIKE, POWELL, PULASKI, ROCKCASTLE, RUSSELL, TAYLOR, WAYNE, WHITLEY, and WOLFE has been determined in accordance with the provisions of KRS 337.505 to 337.550. This determination shall be referred to as Prevailing Wage Determination No. CR-14-II-HWY.

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

Apprentices or trainees shall be permitted to work in accordance with Administrative Regulations. Copies of these regulations will be furnished upon request to any interested person.

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

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

Anthony Russell, Commissioner
Department of Workplace Standards

CLASSIFICATIONS	RATE AND FRINGE BENEFITS	
BOILERMAKERS:	BASE RATE	$24.65
	FRINGE BENEFIT	12.94
BRICKLAYERS:		
Bricklayers:	BASE RATE	$22.90
	FRINGE BENEFITS	8.50
Stone Mason:	BASE RATE	$21.50
	FRINGE BENEFITS	8.50
CARPENTERS:		
Carpenters:	BASE RATE	$24.90
	FRINGE BENEFITS	14.50
Piledrivers:	BASE RATE	$24.55
	FRINGE BENEFITS	14.50
CEMENT MASONS:	BASE RATE	$21.25
	FRINGE BENEFITS	8.50
ELECTRICIANS:	*BASE RATE	$29.36
	FRINGE BENEFITS	10.55

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

LINEMAN:	*BASE RATE	$30.09
	FRINGE BENEFITS	10.94
EQUIPMENT OPERATOR:	*BASE RATE	$26.90
	FRINGE BENEFITS	10.31
GROUNDSMAN:	*BASE RATE	$17.79
	FRINGE BENEFITS	8.51
IRONWORKERS:	BASE RATE	$ 26.97
	FRINGE BENEFITS	20.01

CLASSIFICATIONS RATE AND FRINGE BENEFITS

LABORERS:

GROUP 1: Aging and curing of concrete (any mode or method), asbestos abatement worker, asphalt plant laborers, asphalt laborers; batch truck dumpers; carpenter tenders, cement mason tenders, cleaning of machines, concrete laborers, demolition laborers, dredging laborers, drill helper, environmental laborer - nuclear, radiation, toxic and hazardous waste – Level D, flagmen, grade checkers, all hand digging and hand back filling, highway marker placers, landscaping laborers, mesh handlers and placers, puddler, railroad laborers, rip-rap and grouters, right of way laborers, sign, guard rail and fence installers (all types), signalmen, sound barrier installer, storm and sanitary sewer laborers, swampers, truck spotters and dumpers, wrecking of concrete forms, general cleanup:

HEAVY & HIGHWAY	BASE RATE	$21.80
	FRINGE BENEFITS	12.36

GROUP 2: Batter board men (sanitary and storm sewer), brickmason tenders, mortar mixer operator, scaffold builders, burner and welder, bushammers, chain saw operator, concrete saw operators, deckhand scow man, dry cement handlers, environmental laborers – nuclear, radiation, toxic and hazardous waste – Level C, forklift operators for masonry, form setters, green concrete cutting, hand operated grouter and grinder machine operator, jack hammers, lead paint abatement, pavement breakers, paving joint machine, pipe layers – laser operators (non-metallic), plastic pipe fusion, power driven Georgia buggy and wheel barrow, power post hole diggers, precast manhole setters, walk-behind tampers, walk-behind trenchers, sand blasters, concrete chippers, surface grinders, vibrator operators, wagon drillers:

HEAVY & HIGHWAY	BASE RATE	$22.05
	FRINGE BENEFITS	12.36

GROUP 3: Air track driller (all types), asphalt luteman and rakersm gunnite nozzleman, gunnite operators and mixers, grout pump operator, powderman and blaster, side rail setters, rail paved ditches, screw operators, tunnel laborers (free air), and water blasters:

HEAVY & HIGHWAY	BASE RATE	$22.10
	FRINGE BENEFITS	12.36

GROUP 4: Caisson workers (free air), cement finishers, environmental laborer – nuclear, radiation, toxic and hazardous waste – Level A and B, miners and drillers (free air), tunnel blasters, and tunnel mockers (free air), directional and horizontal boring, air track drillers (all types), powder man and blasters, troxler and concrete tester if laborer is utilized:

HEAVY & HIGHWAY	BASE RATE	$22.70
	FRINGE BENEFITS	12.36

OPERATING ENGINEERS:

Group A-1:
NCCCO or OECP Certified; Crane, dragline, hoist (1 drum when used for stack or chimney construction or repair), hoisting engineer (2 or more drums), orangepeel, overhead crane, piledriver, truck crane, tower crane, hydraulic crane:

BASE RATE	$29.95
FRINGE BENEFITS	14.15

CLASSIFICATIONS — RATE AND FRINGE BENEFITS

OPERATING ENGINEERS (CONTINUED):

Group A:

Auto patrol, batcher plant, bituminous paver, cable-way, clamshell, concrete mixer (21 cu. ft. or over), concrete pump, crane, crusher plant, derrick, derrick boat, ditching and trenching machine, dragline, dredge engineer, elevator (regardless of ownership when used for hoisting any building material), elevating grader and all types of loaders, hoe-type machine, hoisting engine, locomotive, LeTourneau or carry-all scoop, bulldozer, mechanic, orangepeel bucket, piledriver, power blade, roller (bituminous), roller (earth), roller (rock), scarifier, shovel, tractor shovel, truck crane, well points, winch truck, push dozer, grout pump, high lift, fork lift (regardless of lift height), all types of boom cats, multiple operator, core drill, tow or push boat, A-Frame winch truck, concrete paver, gradeall, hoist, hyster, material pump, pumpcrete, ross carrier,sheepfoot, sideboom, throttle-valve man, rotary drill, power generator, mucking machine, rock spreader attached to equipment, scoopmobile, KeCal loader, tower cranes (French, German and other types), hydrocrane, tugger, backfiller gurries, self-propelled compactor, self-contained hydraulic percussion drill:

BASE RATE $28.85
FRINGE BENEFITS 14.15

Group B:

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

BASE RATE $26.24
FRINGE BENEFITS 14.15

Group B2:

Greaser on grease facilities servicing heavy equipment:

BASE RATE $26.65
FRINGE BENEFITS 14.15

Group C:

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

BASE RATE $25.95
FRINGE BENEFITS 14.15

PAINTERS:

All Excluding Bridges:

BASE RATE $19.92
FRINGE BENEFITS 9.57

Bridges:

BASE RATE $23.92
FRINGE BENEFITS 10.07

CLASSIFICATIONS	RATE AND FRINGE BENEFITS	
PLUMBERS:	BASE RATE	$22.52
	FRINGE BENEFITS	7.80
SHEET METAL:	BASE RATE	$20.40
	FRINGE BENEFITS	7.80
TRUCK DRIVERS:		
Truck helper and warehouseman:	BASE RATE	$23.20
	FRINGE BENEFITS	14.50
Driver, winch truck and A-Frame when used in transporting materials:	BASE RATE	$23.30
	FRINGE BENEFITS	14.50
Driver, (semi-trailer or pole trailer), driver (dump truck, tandem axle), driver of distributor:	BASE RATE	$23.40
	FRINGE BENEFITS	14.50
Driver on mixer trucks (all types):	BASE RATE	$23.45
	FRINGE BENEFITS	14.50
Truck mechanic:	BASE RATE	$23.50
	FRINGE BENEFITS	14.50
Driver (3 tons and under), tire changer and truck mechanic helper:	BASE RATE	$23.53
	FRINGE BENEFITS	14.50
Driver on pavement breakers:	BASE RATE	$23.55
	FRINGE BENEFITS	14.50
Driver (over 3 tons), driver (truck mounted rotary drill):	BASE RATE	$23.74
	FRINGE BENEFITS	14.50
Driver, Euclid and other heavy earth moving equipment and Low Boy:	BASE RATE	$24.31
	FRINGE BENEFITS	14.50
Greaser on greasing facilities:	BASE RATE	$24.40
	FRINGE BENEFITS	14.50

Kentucky Determination No. CR-14-II-HWY dated July 14, 2014

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

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

These rates are listed pursuant to the Kentucky Determination No. CR-14-II-HWY dated July 14, 2014. Apprentices or trainees shall be permitted to work as such subject to Administrative Regulations adopted by the Commissioner of Workplace Standards. Copies of these regulations will be furnished upon request from any interested person.

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

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

TO: EMPLOYERS/EMPLOYEES

PREVAILING WAGE SCHEDULE:

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

OVERTIME:

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

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

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

151240

PROPOSAL BID ITEMS

Report Date 7/20/15

Section: 0001 - PAVING

LINE	BID CODE	ALT	DESCRIPTION	QUANTITY	UNIT	UNIT PRIC	FP	AMOUNT
0010	00003		CRUSHED STONE BASE	60,001.00	TON		$	
0020	00100		ASPHALT SEAL AGGREGATE	202.00	TON		$	
0030	00103		ASPHALT SEAL COAT	30.00	TON		$	
0040	00190		LEVELING & WEDGING PG64-22	2,939.00	TON		$	
0050	00214		CL3 ASPH BASE 1.00D PG64-22	11,005.00	TON		$	
0060	00388		CL3 ASPH SURF 0.38B PG64-22	6,456.00	TON		$	
0070	02676		MOBILIZATION FOR MILL & TEXT	1.00	LS		$	
0080	02677		ASPHALT PAVE MILLING & TEXTURING	683.00	TON		$	

Section: 0002 - ROADWAY

LINE	BID CODE	ALT	DESCRIPTION	QUANTITY	UNIT	UNIT PRIC	FP	AMOUNT
0090	01310		REMOVE PIPE	594.00	LF		$	
0100	01891		ISLAND HEADER CURB TYPE 2	488.00	LF		$	
0110	01949		MOUNTABLE MEDIAN TYPE 6A	150.00	SQYD		$	
0120	01987		DELINEATOR FOR GUARDRAIL BI DIRECTIONAL WHITE	39.00	EACH		$	
0130	02014		BARRICADE-TYPE III	4.00	EACH		$	
0140	02200		ROADWAY EXCAVATION	50,753.00	CUYD		$	
0150	02351		GUARDRAIL-STEEL W BEAM-S FACE	3,425.00	LF		$	
0160	02360		GUARDRAIL TERMINAL SECTION NO 1	9.00	EACH		$	
0170	02367		GUARDRAIL END TREATMENT TYPE 1	4.00	EACH		$	
0180	02381		REMOVE GUARDRAIL	3,110.00	LF		$	
0190	02483		CHANNEL LINING CLASS II	128.00	TON		$	
0200	02562		TEMPORARY SIGNS	350.00	SQFT		$	
0210	02600		FABRIC GEOTEXTILE TY IV FOR PIPE	132.00	SQYD	$2.00	$	$264.00
0220	02650		MAINTAIN & CONTROL TRAFFIC	1.00	LS		$	
0230	02671		PORTABLE CHANGEABLE MESSAGE SIGN	2.00	EACH		$	
0240	02690		SAFELOADING	19.00	CUYD		$	
0250	02696		SHOULDER RUMBLE STRIPS-SAWED	23,500.00	LF		$	
0260	02726		STAKING	1.00	LS		$	
0270	05950		EROSION CONTROL BLANKET	16,878.00	SQYD		$	
0280	05963		INITIAL FERTILIZER	3.00	TON		$	
0290	05964		20-10-10 FERTILIZER	6.00	TON		$	
0300	05985		SEEDING AND PROTECTION	87,421.00	SQYD		$	
0310	05992		AGRICULTURAL LIMESTONE	27.00	TON		$	
0320	06510		PAVE STRIPING-TEMP PAINT-4 IN	80,670.00	LF		$	
0330	06514		PAVE STRIPING-PERM PAINT-4 IN	59,975.00	LF		$	
0340	06568		PAVE MARKING-THERMO STOP BAR-24IN	496.00	LF		$	
0350	06569		PAVE MARKING-THERMO CROSS-HATCH	5,715.00	SQFT		$	
0360	06574		PAVE MARKING-THERMO CURV ARROW	153.00	EACH		$	
0370	06589		PAVEMENT MARKER TYPE V-MW	247.00	EACH		$	
0380	06591		PAVEMENT MARKER TYPE V-BY	437.00	EACH		$	
0390	06600		REMOVE PAVEMENT MARKER TYPE V	380.00	EACH		$	
0400	10020NS		FUEL ADJUSTMENT	65,000.00	DOLL	$1.00	$	$65,000.00
0410	10030NS		ASPHALT ADJUSTMENT	80,000.00	DOLL	$1.00	$	$80,000.00
0420	20997ED		REMOVE TRAFFIC ISLAND	825.00	SQYD		$	

PROPOSAL BID ITEMS

151240

Page 2 of 2

Report Date 7/20/15

LINE	BID CODE	ALT	DESCRIPTION	QUANTITY	UNIT	UNIT PRIC	FP	AMOUNT
0430	22664EN		WATER BLASTING EXISTING STRIPE	53,000.00	LF		$	
0440	23143ED		KPDES PERMIT AND TEMP EROSION CONTROL	1.00	LS		$	
0450	23623EC		REMOVE MOUNTABLE MEDIAN	5,061.00	SQYD		$	
0460	24664EC		CONCRETE TESTING EQUIPMENT (MOISTURE CABINET) (REVISED: 6-23-15)	1.00	LS		$	

Section: 0003 - DRAINAGE

LINE	BID CODE	ALT	DESCRIPTION	QUANTITY	UNIT	UNIT PRIC	FP	AMOUNT
0470	00441		ENTRANCE PIPE-18 IN	643.00	LF		$	
0480	00462		CULVERT PIPE-18 IN	26.00	LF		$	
0490	00464		CULVERT PIPE-24 IN	50.00	LF		$	
0500	00466		CULVERT PIPE-30 IN	20.00	LF		$	
0510	00521		STORM SEWER PIPE-15 IN	103.00	LF		$	
0520	01204		PIPE CULVERT HEADWALL-18 IN	1.00	EACH		$	
0530	01208		PIPE CULVERT HEADWALL-24 IN	2.00	EACH		$	
0540	01210		PIPE CULVERT HEADWALL-30 IN	2.00	EACH		$	
0550	01432		SLOPED BOX OUTLET TYPE 1-15 IN	2.00	EACH		$	
0560	01450		S & F BOX INLET-OUTLET-18 IN	4.00	EACH		$	
0570	01451		S & F BOX INLET-OUTLET-24 IN	3.00	EACH		$	
0580	01452		S & F BOX INLET-OUTLET-30 IN	1.00	EACH		$	
0590	01456		CURB BOX INLET TYPE A	2.00	EACH		$	

Section: 0004 - WATERLINE

LINE	BID CODE	ALT	DESCRIPTION	QUANTITY	UNIT	UNIT PRIC	FP	AMOUNT
0600	03558		BEND 45 DEG 16 IN (DIMJ)	4.00	EACH		$	
0610	14503		W CAP EXISTING MAIN INST (16" DIP)	2.00	EACH		$	
0620	14509		W ENCASEMENT STEEL OPEN CUT RANGE 6 INST (30" X 0.500")	30.00	LF		$	
0630	14511		W FLUSH HYDRANT ASSEMBLY INST	1.00	EACH		$	
0640	14527		W PIPE DUCTILE IRON 16 INCH INST	175.00	LF		$	
0650	14574		W TAPPING SLEEVE AND VALVE SIZE 2 INST (16' X 16")	2.00	EACH		$	
0660	24445EC		STONE FILL NO. 9 (BEDDING & BACKFILL)	50.00	TON		$	

Section: 0005 - DEMOBILIZATION &/OR MOBILIZATION

LINE	BID CODE	ALT	DESCRIPTION	QUANTITY	UNIT	UNIT PRIC	FP	AMOUNT
0670	02568		MOBILIZATION	1.00	LS		$	
0680	02569		DEMOBILIZATION	1.00	LS		$	