EXHIBIT B

APPROVALS AND PERMITS
(Franchises, Plan Review and Permit Status, Easements, Right-of-Ways, Construction Start and In-Service Date, Plant Retirements)

Northern Kentucky Water District

Franchises required – None

Plan Review and Permit Status - The District has reviewed and approved the plans and specifications prepared by Verdantas titled "SUB-DISTRICT 'O' WATER MAIN EXTENSION | KENTON COUNTY, KENTUCKY" dated May 2, 2025 and July 16, 2025 respectively.

The District received approval from the Division of Water on September 7, 2024 (see attached letter).

Easements and Right-of-Way Status - Easements for the project (one) have been secured and all right-of-way statements have been submitted (permits attached).

Start date of construction – November 2025

Proposed date in service – August 2026

Plant retirements – There are no retirements as a result of this project.

2835 Crescent Springs Rd Erlanger, KY 41018 (859) 578-9898 Fax (859) 578-5456

Kentucky Division of Water Approval

Andy Beshear
GOVERNOR

ENERGY AND ENVIRONMENT CABINET
DEPARTMENT FOR ENVIRONMENTAL PROTECTION
300 Sower Boulevard
Frankfort, Kentucky 40601
Phone: (502) 564-2150
Fax: 502-564-4245

Rebecca W. Goodman
SECRETARY

Anthony R. Hatton
COMMISSIONER

September 7, 2024

Kyle Ryan, P.E.
Northern KY Water District
2835 Crescent Springs Rd
Erlanger, KY 41018

RE: Sub-District O Water Main Extension
Campbell County, KY
Northern KY Water District
AI #: 2485, APE20240011
PWSID #: 0590220-24-011

Dear Mr. Ryan:

We have reviewed the plans and specifications for the above referenced project. The plans include the construction of approximately 24,166 linear feet (LF) of 8-inch PVC and 16,973 LF of 8-inch DI waterline. This is to advise that plans and specifications for the above referenced project are APPROVED with respect to sanitary features of design, as of this date with the requirements contained in the attached construction permit.

If you have any questions concerning this project, please contact Cassie Campbell at 502-782-6909.

Sincerely,

Terry Humphries, P.E.
Supervisor, Engineering Section
Water Infrastructure Branch
Division of Water

TH:CC
Enclosures
c: CT Consultants Inc
Campbell County Health Department
Division of Plumbing

Distribution-Major Construction

Northern KY Water District

Facility Requirements

Activity ID No.:APE20240011

GACT0000000297 (Sub-District O Water Main Extension) 24,166 linear feet (LF) of 8-inch PVC, and 16,973 LF of 8-inch DI waterline:

Narrative Requirements:

Condition No.	Condition
T-1	Construction of this project shall not result in the water system's inability to supply consistent water service in compliance with 401 KAR 8:010 through 8:600. [401 KAR 8:100 Section 5]
T-2	The public water system shall not implement a change to the approved plans without the prior written approval of the cabinet. [401 KAR 8:100 Section 4(3)]
T-3	A proposed change to the approved plans affecting sanitary features of design shall be submitted to the cabinet for approval in accordance with Section 2 of this administrative regulation. [401 KAR 8:100 Section 4(2)]
T-4	During construction, a set of approved plans and specifications shall be available at the job site. Construction shall be performed in accordance with the approved plans and specifications. [401 KAR 8:100 Section 3(1)]
T-5	Unless construction begins within two (2) years from the date of approval of the final plans and specifications, the approval shall expire. [401 KAR 8:100 Section 3(3)]
T-6	Upon completion of construction, a professional engineer shall certify in writing that the project has been completed in accordance with the approved plans and specifications. [401 KAR 8:100 Section 4(1)]
T-7	The system shall be designed to maintain a minimum pressure of 20 psi at ground level at all points in the distribution system under all conditions of flow. [Recommended Standards for Water Works 8.2.1, Drinking Water General Design Criteria IV.1.a]
T-8	Water lines should be hydraulically capable of a flow velocity of 2.5 ft/s while maintaining a pressure of at least 20 psi. [Drinking Water General Design Criteria IV.1.b]
T-9	The normal working pressure in the distribution system at the service connection shall not be less than 30 psi under peak demand flow conditions. Peak demand is defined as the maximum customer water usage rate, expressed in gallons per minute (gpm), in the pressure zone of interest during a 24 hour (diurnal) time period. [Drinking Water General Design Criteria IV.1.d]
T-10	When static pressure exceeds 150 psi, pressure reducing devices shall be provided on mains or as part of the meter setting on individual service lines in the distribution system. [Drinking Water General Design Criteria IV.1.c]
T-11	The minimum size of water main in the distribution system where fire protection is not to be provided should be a minimum of three (3) inch diameter. Any departure from minimum requirements shall be justified by hydraulic analysis and future water use, and can be considered only in special circumstances. [Recommended Standards for Water Works 8.2.2, Drinking Water General Design Criteria IV.2.b]

GACT0000000297 (Sub-District O Water Main Extension) 24,166 linear feet (LF) of 8-inch PVC, and 16,973 LF of 8-inch DI waterline:

Narrative Requirements:

Condition No.	Condition
T-12	Water mains not designed to carry fire-flows shall not have fire hydrants connected to them. [Recommended Standards for Water Works 8.4.1.b]
T-13	Flushing devices should be sized to provide flows which will give a velocity of at least 2.5 feet per second in the water main being flushed. [Recommended Standards for Water Works 8.2.4.b, Recommended Standards for Water Works 8.4.1.b]
T-14	No flushing device shall be directly connected to any sewer. [Recommended Standards for Water Works 8.2.4.b, Recommended Standards for Water Works 8.4.1.b]
T-15	Pipe shall be constructed to a depth providing a minimum cover of 30 inches to top of pipe. [Drinking Water General Design Criteria IV.3.a]
T-16	Water mains shall be covered with sufficient earth or other insulation to prevent freezing. [Recommended Standards for Water Works 8.7]
T-17	A continuous and uniform bedding shall be provided in the trench for all buried pipe. Backfill material shall be tamped in layers around the pipe and to a sufficient height above the pipe to adequately support and protect the pipe. Stones found in the trench shall be removed for a depth of at least six inches below the bottom of the pipe. [Recommended Standards for Water Works 8.7]
T-18	Water line installation shall incorporate the provisions of the AWWA standards and/or manufacturer's recommended installation procedures. [Recommended Standards for Water Works 8.7]
T-19	All materials used for the rehabilitation of water mains shall meet ANSI/NSF standards. [Recommended Standards for Water Works 8.1]
T-20	Packing and jointing materials used in the joints of pipe shall meet the standards of AWWA and the reviewing authority. [Recommended Standards for Water Works 8.1]
T-21	All tees, bends, plugs and hydrants shall be provided with reaction blocking, tie rods or joints designed to prevent movement. [Recommended Standards for Water Works 8.7]
T-22	All materials including pipe, fittings, valves and fire hydrants shall conform to the latest standards issued by the ASTM, AWWA and ANSI/NSF, where such standards exist, and be acceptable to the Division of Water. [Recommended Standards for Water Works 8.1]
T-23	Water mains which have been used previously for conveying potable water may be reused provided they meet the above standards and have been restored practically to their original condition. [Recommended Standards for Water Works 8.1]

GACT0000000297 (Sub-District O Water Main Extension) 24,166 linear feet (LF) of 8-inch PVC, and 16,973 LF of 8-inch DI waterline:

Narrative Requirements:

Condition No.	Condition
T-24	Manufacturer approved transition joints shall be used between dissimilar piping materials. [Recommended Standards for Water Works 8.1]
T-25	The minimum size of water main which provides for fire protection and serving fire hydrants shall be six?inch diameter. [Recommended Standards for Water Works 8.2, Drinking Water General Design Criteria IV.2.a]
T-26	Pipes and pipe fittings containing more than 8% lead shall not be used. All products shall comply with ANSI/NSF standards. [Recommended Standards for Water Works 8.1]
T-27	Gaskets containing lead shall not be used. Repairs to lead?joint pipe shall be made using alternative methods. [Recommended Standards for Water Works 8.1]
T-28	Pipe materials shall be selected to protect against both internal and external pipe corrosion. [Recommended Standards for Water Works 8.1]
T-29	Dead end mains shall be equipped with a means to provide adequate flushing. [Recommended Standards for Water Works 8.2]
T-30	The hydrant lead shall be a minimum of six inches in diameter. Auxiliary valves shall be installed on all hydrant leads. [Recommended Standards for Water Works 8.4.3]
T-31	A sufficient number of valves shall be provided on water mains to minimize inconvenience and sanitary hazards during repairs. [Recommended Standards for Water Works 8.3]
T-32	Wherever possible, chambers, pits or manholes containing valves, blow?offs, meters, or other such appurtenances to a distribution system, shall not be located in areas subject to flooding or in areas of high groundwater. Such chambers or pits should drain to the ground surface, or to absorption pits underground. The chambers, pits and manholes shall not connect directly to any storm drain or sanitary sewer. Blow?offs shall not connect directly to any storm drain or sanitary sewer. [Recommended Standards for Water Works 8.6]
T-33	At high points in water mains where air can accumulate provisions shall be made to remove the air by means of air relief valves. [Recommended Standards for Water Works 8.5.1]
T-34	Automatic air relief valves shall not be used in situations where flooding of the manhole or chamber may occur. [Recommended Standards for Water Works 8.5.1]
T-35	The open end of an air relief pipe from automatic valves shall be extended to at least one foot above grade and provided with a screened, downward?facing elbow. [Recommended Standards for Water Works 8.5.2.c]

GACT0000000297 (Sub-District O Water Main Extension) 24,166 linear feet (LF) of 8-inch PVC, and 16,973 LF of 8-inch DI waterline:

Narrative Requirements:

Condition No.	Condition
T-36	Discharge piping from air relief valves shall not connect directly to any storm drain, storm sewer, or sanitary sewer. [Recommended Standards for Water Works 8.5.2.d]
T-37	Water pipe shall be constructed with a lateral separation of 10 feet or more from any gravity sanitary or combined sewer measured edge to edge where practical. If not practical a variance may be requested to allow the water pipe to be installed closer to the gravity sanitary or combined sewer provided the water pipe is laid in a separate trench or undisturbed shelf located on one side of the sewer with the bottom of the pipe at least 18 inches above the top of the gravity sanitary or combined sewer pipe. [Drinking Water General Design Criteria IV.3.b]
T-38	Water lines crossing sanitary, combined or storm sewers shall be laid to provide a minimum vertical distance of 18 inches between the outside of the water main and the outside of the sanitary, combined or storm sewer with preference to the water main located above the sanitary, combined or storm sewer. [Drinking Water General Design Criteria IV.3.c]
T-39	At crossings, one full length of water pipe shall be located so both joints will be as far from the sewer as possible. [Recommended Standards for Water Works 8.8.3.b]
T-40	There shall be no connection between the distribution system and any pipes, pumps, hydrants, or tanks whereby unsafe water or other contaminating materials may be discharged or drawn into the system. [Recommended Standards for Water Works 8.10.1]
T-41	Water utilities shall have a cross connection program conforming to 401 KAR 8. [Recommended Standards for Water Works 8.10.1]
T-42	Installed pipe shall be pressure tested and leakage tested in accordance with the appropriate AWWA Standards. [Recommended Standards for Water Works 8.7.6]
T-43	New, cleaned and repaired water mains shall be disinfected in accordance with AWWA Standard C651. The specifications shall include detailed procedures for the adequate flushing, disinfection, and microbiological testing of all water mains. In an emergency or unusual situation, the disinfection procedure shall be discussed with the Division of Water. [Recommended Standards for Water Works 8.7.7]
T-44	A minimum cover of five feet shall be provided over pipe crossing underwater. [Recommended Standards for Water Works 8.9.2]
T-45	Valves shall be provided at both ends of water crossings so that the section can be isolated for testing or repair; the valves shall be easily accessible, and not subject to flooding for pipes crossing underwater. [Recommended Standards for Water Works 8.9.2.b]
T-46	Permanent taps or other provisions to allow insertion of a small meter to determine leakage and obtain water samples on each side of the valve closest to the supply source for pipes crossing. [Recommended Standards for Water Works 8.9.2.c]

Easement

1848

KENTON COUNTY CLERK
10/04/2024 09:23:14 AM
EASEMENT
CHERYL RUST
KC 308 438-442 5

$50.00
214263
24100405900065

PIDN: 073-00-00-012.00

Group No: IND

Address: 11236 Mann Road, Covington, KY 41015

UTILITY EASEMENT

This PERMANENT UTILITY EASEMENT is made and executed this 28th day of August by and between **VINCENT W. POWELL & KATHLEEN POWELL**, husband and wife, ("Grantor") to the **NORTHERN KENTUCKY WATER DISTRICT** ("Grantee") (Whenever used herein, the terms "Grantor" and "Grantee" shall mean to include all the parties to this instrument and their respective heirs, assigns, successors and legal representatives).

RECITALS

WHEREAS, the Grantor is the owner of the real property situate, lying and being commonly located at 11236 Mann Road, Covington, KY 41015, being part of the same real estate conveyed to Grantor herein by deed recorded in Deed Book 1865, Page 216 of the Kenton County Clerk's records at Covington, Kentucky and is more particularly described in the attached and incorporated herein Exhibit A ("Subject Property");

WHEREAS, the Grantee specifically desires a perpetual, exclusive easement on the Subject Property for the construction, reconstruction, operation, use, maintenance, repair, replacement, enlargement and/or removal of a water main, water service lines and branches and other facilities and appurtenances necessary or appropriate from time to time for the furnishing of a water supply; and

WHEREAS, the Grantor is willing to grant a perpetual, exclusive easement on a portion of Subject Property, said portion is more particularly described and depicted in the attached and incorporated herein Exhibit B ("Easement Area") to the Grantee.

NOW THEREFORE, for and in consideration of **Eight Hundred Twenty-Two Dollars and 23/100 Cents ($822.23)**, mutual covenants made herein, and other good and valuable considerations, the Grantor does hereby grant unto the Grantee, its successors and assigns, subject to the terms herein, an easement, in perpetuity, in, on, over, under, and across the Easement Area.

1. Recitals Incorporated. The foregoing recitals are incorporated by reference and made a part of this Easement.

2. Grant of Easement. The Grantor hereby grants Grantee a perpetual, exclusive easement in, on, over, under, and across the Easement Area described in Exhibit B for the construction, reconstruction, operation, use, maintenance, repair, replacement, enlargement and/or removal of a water main, water service lines and

branches and other facilities and appurtenances necessary or appropriate from time to time for the furnishing of a water supply. This grant of easement shall not be construed as a dedication to the public of the underlying fee simple ownership of the Easement Area nor grant the District the right to construct any building or pump station on the Grantor's property. Grantor reserves the right to use the Easement Area for any purpose so long as such use does not interfere with the full and free use of the Easement Area by the Grantee. Without limitation of the foregoing, Grantor shall not (i) erect any building or other structure in the Easement Area or (ii) excavate or place fill in the Easement Area without Grantee's written consent.

3. License. In addition to the grant of easement herein, Grantor irrevocably grants in perpetuity the Grantee the right to traverse the Subject Property with vehicles and equipment for the purpose of travel between the Easement Area and the public right of way to the extent reasonably necessary for the Grantee to exercise the rights granted herein.

4. Title Warranties. Grantor warrants that Grantor has good and indefeasible fee simple title to and possession of the Easement Land and that it has good and lawful right to grant this Easement.

5. Covenants Running with the Land. All of the rights and obligations set forth herein shall be, and shall be deemed to be, covenants running with the land, and shall inure to the benefit of and be binding upon, as the case may be, Grantor and the Grantee and their respective heirs, executors, successors and assigns.

6. Restoration of Land. Grantee shall, after doing any work in connection with the construction, reconstruction, repair, replacement, or removal of said improvements, restore the surface of all easement areas to the condition in which the same were found before such work was undertaken.

7. Notification. Grantor shall promptly notify the Grantee of any maintenance or repair that it knows or suspects is required with respect to any water main, water service lines and branches and other facilities and appurtenances in the Easement Area.

8. Enforcement of Easement Rights. In addition to any remedies available to Grantee in law or equity, Grantor acknowledges and agrees that injunctive relief and specific performance are appropriate remedies in the event Grantor breaches the obligations herein.

9. Waiver. No consent to or waiver by either party of any breach or default of any provision of this grant of easement, whether express or implied, shall constitute or be interpreted as a consent to, waiver of or excuse any subsequent breach or default of the same or any other provision of this grant of easement.

10. Severability. In the event that any one or more of the provisions of this grant of easement, or any part of a provision, shall be judicially determined to be contrary to law or otherwise invalid or unenforceable in any respect, such invalidity, illegality or unenforceability shall not affect any other provision or part of a provision of this grant of easement; and such provision or part of a provision shall be reformed so that it would be legal, valid and enforceable or this Agreement shall be reformed, interpreted and construed as if such provision or part of a provision had never been included in this grant of easement.

11. Captions and Headings. The captions and headings of the paragraphs of this grant of easement have been inserted for convenience and reference only and shall in no way affect the interpretation of any of the terms and provisions of this Agreement.

12. Temporary Construction Easement. Grantor further grants to Grantee for its use and benefit during installation and construction of water main, water service lines and branches and other facilities and appurtenances necessary or appropriate from time to time for the furnishing of a water supply in the Easement Area, a temporary easement in the area described and/or depicted as the Temporary Construction Easement on Exhibit B attached hereto and incorporated herein. Said Temporary Construction Easement

shall terminate automatically and revert to Grantor upon completion of the installation and construction in the Easement Area.

IN WITNESS WHEREOF, the Grantor confirms receipt of the consideration above and has caused this Easement to be executed this Easement to be executed as of the date first written above.

GRANTOR(S):

By: _____
Name: VINCENT W. POWELL
Title: Owner

By: _____
Name: KATHLEEN POWELL
Title: Owner

COMMONWEALTH OF KENTUCKY :

: SS

COUNTY OF KENTON :

The foregoing instrument was subscribed and sworn by **VINCENT W. POWELL** before me this 28th day of August, 2024.

Stephen J. Broering
Notary Public, ID KYNP45820
State at Large, Kentucky
My Commission Expires on March 2, 2026

_____
Notary Public, Kentucky at Large
Notary ID Number: KYNP 45820
My Commission Expires: 3-2-2024

The foregoing instrument was subscribed and sworn by **KATHLEEN POWELL** before me this 28th day of August, 2024

Stephen J. Broering
Notary Public, ID KYNP45820
State at Large, Kentucky
My Commission Expires on March 2, 2026

_____
Notary Public, Kentucky at Large
Notary ID Number: KYNP 45820
My Commission Expires: 3-2-2024

PREPARED WITHOUT EXAMINATION OF TITLE BY:

_____
Tom Edge, Esq. (KBA #95534)
General Counsel
Manager of Legal, Compliance, and Regulatory Affairs
Northern Kentucky Water District
2835 Crescent Springs Rd.
Erlanger, Kentucky 41018
Phone: (859) 578-5457
Email: tedge@nkywater.org

Return Recorded Document to:
NKWD Engineering Dept
2835 Crescent Springs Road
Erlanger, Kentucky 41018

Legal Description
Water Line Easement
Vincent W. Powell

Situated in the City of Covington, County of Kenton, State of Kentucky and being on the West Right of Way of Mann Road, at the intersection with Steep Creek Road, and being part of the lands of Vincent W. Powell, as conveyed by Deed Book I-1865, Page 216, of the Kenton County Kentucky Deed Records, and being more particularly described as follows:

Beginning at the intersection of the West Right of Way of said Mann Road and the East Right of Way of said Steep Creek Road, and with said West Right of Way the following five (5) courses;

Thence South 48°51'55" East, 90.90 feet;

Thence with a curve to the left, having a radius of 325.00 feet, an arc length of 76.29 feet, and a chord that bears South 55°35'24" East, 76.12 feet'

Thence South 62°18'54" East, 29.17 feet;

Thence with a curve to the right, having a radius of 75.00 feet, an arc length of 53.28 feet, and a chord that bears South 41°57'49" East, 52.17 feet;

Thence South 21°36'43" East, 3.67 feet;

Thence departing said West Right of Way and through said Powell lands the following three (3) courses;

Thence North 59°19'37" West, 107.85 feet;

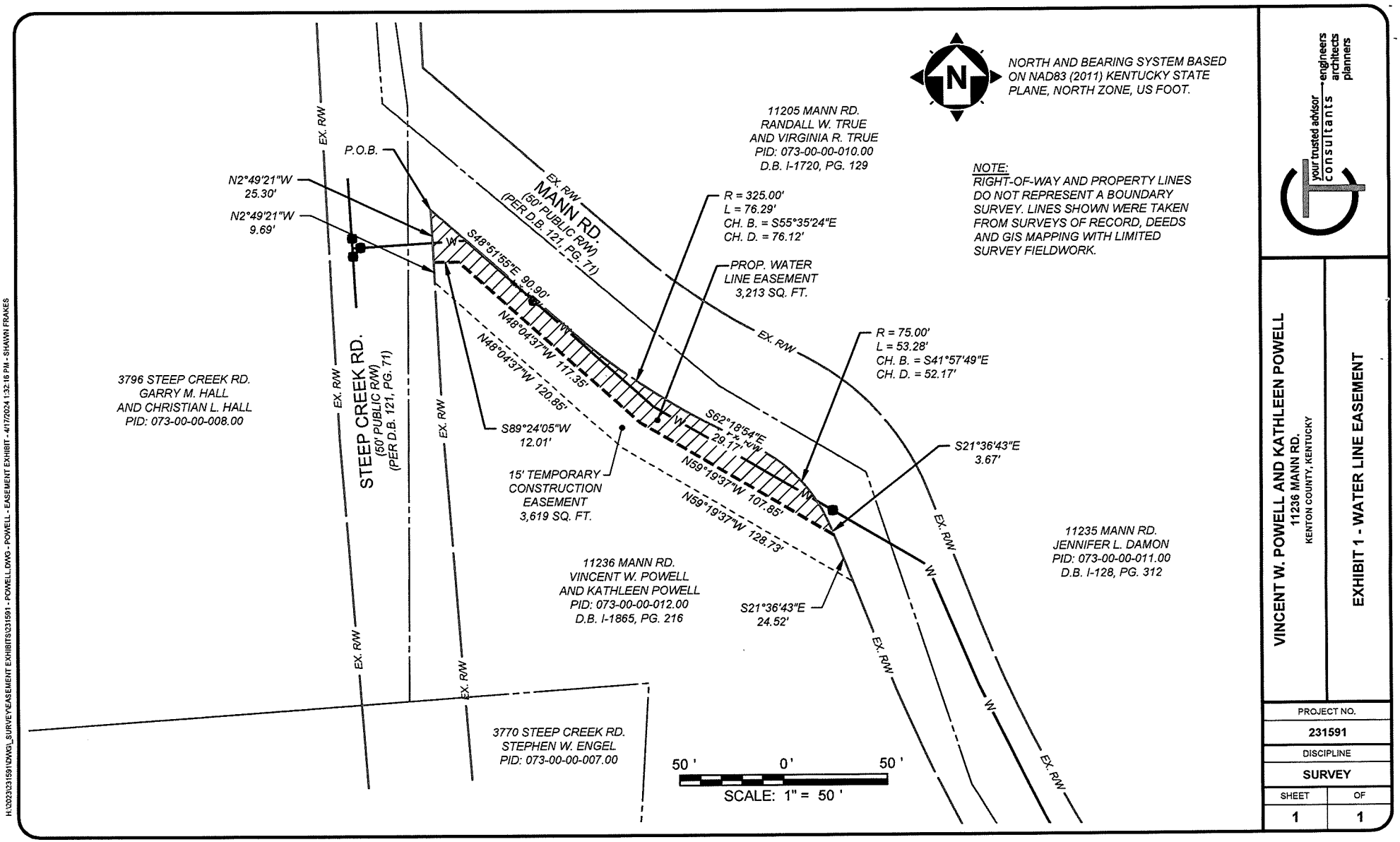
Thence North 48°04'37" West, 117.35 feet;

Thence South 89°24'05" West, 12.01 feet to a point on said East Right of Way of Steep Creek Road;

Thence with said East Right of Way, North 02°49'21" West, 25.30 feet to the point of beginning;

Containing or 3,213.0 square feet of land, more or less, and being subject to all rights-of-way, easements, restrictions, covenants and/or conditions of record.

Basis of Bearings: NAD83(2011), Kentucky State Plane Coordinates, North Zone.



H:\2023\231591\DWG_SURVEY\EASEMENT EXHIBITS\231591 - POWELL.DWG - POWELL - EASEMENT EXHIBIT - 4/17/2024 1:32:16 PM - SHAWN FRAKES

your trusted advisor
consultants
engineers
architects
planners

VINCENT W. POWELL AND KATHLEEN POWELL
11236 MANN RD.
KENTON COUNTY, KENTUCKY

EXHIBIT 1 - WATER LINE EASEMENT

PROJECT NO.	
231591	
DISCIPLINE	
SURVEY	
SHEET	OF
1	1

Kentucky Transportation Cabinet

Right-of-Way Encroachment Permits

NOTICE OF COMPLETION OF ENCROACHMENT PERMIT WORK

PERMITTEE

Name: Northern Kentucky Water District
Contact Person: Steve Broering
Address: 2835 Crescent Springs Road
City: Erlanger
State: Kentucky
Zip: 41018
Telephone: (859) 991-1652

PROJECT IDENTIFICATION

Permit Number: 06-2024-00696

I wish to notify the Department of Highways that the above mentioned permit work and any necessary right-of-way restoration have been completed and are ready for final inspection.

Permittee

Please return this form to the address below when work is completed and ready for final inspection.

Please Return to: Permit Engineer
Department of Highways, District 6 Office
421 Buttermilk Pike
Covington, Kentucky 41017
(859) 341-2700
www.transportation.ky.gov/

LOCATION(S)			
Description	**County - Route**	**Latitude**	**Longitude**
FISKBURG ROAD FROM GOSHORN ROAD TO ALEXANDER ROAD WATER MAIN INSTALL	Kenton - KY 2046	38.819728	-84.483648

APPROVED
MARCH 20, 2025
KENTUCKY TRANSPORTATION CABINET
06-2024-00696

Andy Beshear
Governor

COMMONWEALTH OF KENTUCKY
TRANSPORTATION CABINET
Department of Highways, District 6 Office
421 Buttermilk Pike
Covington, Kentucky 41017
(859) 341-2700
www.transportation.ky.gov/

Jim Gray
Secretary

March 20, 2025

Northern Kentucky Water District
Steve Broering
2835 Crescent Springs Road
Erlanger, Kentucky 41018

Subject: Permit #: 06-2024-00696
Permit Type: Utilities - Water
Approval

Dear Applicant:

Attached is your permit approval and documentation for the subject permit.

Be advised that all work must be done in conformity with permit and application conditions. If you have any questions, please contact the Permits Section at this office.

Sincerely,

Linzy Brefeld

Linzy Brefeld
D6 Permits Supervisor

Attachments

APPROVED
MARCH 20, 2025
KENTUCKY TRANSPORTATION CABINET
06-2024-00696

Kentucky Transportation Cabinet
Department of Highways
Division of Maintenance
Permits Branch

ENCROACHMENT PERMIT

KYTC KEPT #: 06-2024-00696

Permittee: Northern Kentucky Water District

Permit Type / Subtype: Utilities / Water

Work Completion Date: 7/23/2025

INDEMNITIES		
Type	**Amount Required**	**Tracking Number**
Performance Bond	$0.00	
Cash / Check	$0.00	
Self-Insured	$0.00	
Payment Bond	$0.00	
Liability Insurance	$0.00	

This permit has been: **APPROVED** [X] **DENIED** [ ]

Linzy Brefeld	D6 Permits Supervisor	3/20/2025
SIGNATURE	**TITLE**	**DATE**

The TC 99-1(B), including the application TC-99 1(A) and all related and accompanying documents and drawings make up the permit. It is not a permit unless both the TC 99-1(A) and TC 99-1(B) are both present.

LOCATION(S)			
Description	**County - Route**	**Latitude**	**Longitude**
FISKBURG ROAD FROM GOSHORN ROAD TO ALEXANDER ROAD WATER MAIN INSTALL	Kenton - KY 2046	38.819728	-84.483648

APPROVED
MARCH 20, 2025
TRANSPORTATION CABINET
06-2024-00696
KENTUCKY

Kentucky811 Know what's below. Call before you dig

To Submit a Locate Request
24 Hours a Day, Seven Days a Week:
Call 811 or 800-752-6007

TEAM KENTUCKY TRANSPORTATION CABINET

KENTUCKY TRANSPORTATION CABINET
Department of Highways
PERMITS BRANCH

TC 99-1A
Rev. 10/2020

APPLICATION FOR ENCROACHMENT PERMIT

KYTC KEPT #: 06-2024-00696

SECTION 1: APPLICANT CONTACT INFORMATION

APPLICANT	**ADDRESS**		
NORTHERN KY WATER DISTRICT	2835 CRESCENT SPRINGS PIKE		
EMAIL	**CITY**	**STATE**	**ZIP**
sbroering@nkywater.org	ERLANGER	KY	41018
CONTACT NAME 1	**EMAIL**	**PHONE #** 859-426-2728	
Steve Broering	sbroering@nkywater.org	**CELL #**	
CONTACT NAME 2 (*if applicable*)	**EMAIL**	**PHONE #**	
		CELL #	

SECTION 2: PROPOSED WORK LOCATION

ADDRESS	**CITY**		**STATE**	**ZIP**
	MORNING VIEW		Kentucky	41063
COUNTY	**ROUTE #**	**MILE POINT**	**LONGITUDE** (*X*)	**LATITUDE** (*Y*)
KENTON	2046	6.9 - 7.7	84D28'30"W	38D49'08"N

ADDITIONAL LOCATION INFORMATION:
FISKBURG ROAD FROM GOSHORN ROAD TO ALEXANDER ROAD

FOR KYTC USE ONLY

PERMIT TYPE: ☐ Air Right ☐ Entrance ☒ Utilities ☐ Vegetation Removal ☐ Other: _____

ACCESS: ☐ Full ☐ Partial ☒ by Permit **LOCATION:** ☐ Left ☐ Right ☐ Crossing

SECTION 3: GENERAL DESCRIPTION OF WORK

PROPOSED 8" WATER MAIN INSTALLATION ALONG FISKBURG ROAD THAT TIES INTO EXISTING 8" WM ON FISKBURG AND INCLUDES PROPOSED WATER MAIN TIE-INS ON GOSHORN, PFANSTIEL AND ALEXANDER ROADS

THE UNDERSIGNED APPLICANT(s), being duly authorized representative(s) or owner(s), DO AGREE TO ALL ORIGINAL UNEDITED TERMS AND CONDITIONS ON THE TC 99-1A, pages 1-4.

Steve Broering
SIGNATURE

7-15-2024
DATE

This is not a permit unless and until the applicant(s) receives an approved TC 99-1B from KYTC. This application shall become void if not approved by the cancellation date. The cancellation date shall be a minimum of one year from the date the applicant submits their application.

APPROVED
MARCH 20, 2025
KENTUCKY TRANSPORTATION CABINET
06-2024-00696

APPLICATION FOR ENCROACHMENT PERMIT

TERMS AND CONDITIONS

1. The permit, including this application and all related and accompanying documents and drawings making up the permit, remains in effect and is binding upon the Applicant/Permittee, its successors and assigns, as long as the encroachment(s) exists and also until the permittee is finally relieved by the Department of Highways from all its obligations.

2. Applicant shall meet all requirements of the Clean Water Act if the project will disturb one acre or more, the applicant shall obtain a KPDES KYR10 Permit from the Kentucky Division of Water. All disturbed areas shall meet the requirements of the Department of Highway's Standard Specifications, Sections 212 and 213, as amended.

3. **INDEMNITY:**
   - **A.** PERFORMANCE BOND: The permittee shall provide to the Department a performance bond according to the Permits Manual, Section PE-203 as a guarantee of conformance with the Department's Encroachment Permit requirements.
   - **B.** PAYMENT BOND: At the discretion of the department, a payment bond shall be required of the permittee to ensure payment of liquidated damages assessed to the permittee.
   - **C.** LIABILITY INSURANCE: Liability insurance shall be required of the permittee (in an amount approved by the department) to cover all liabilities associated with the encroachment.
   - **D.** It shall be the responsibility of the permittee, its successors and assigns, to maintain all indemnities in full force and effect until the permittee is authorized to release the indemnity by the Department.

4. A copy of this application and all related documents making up the approved permit shall be given to the applicant and shall be made readily available for review at the work site at all times.

5. Perpetual maintenance of the encroachment is the responsibility of the permittee, its successors and assigns, with the approval of the Department as required, unless otherwise stated.

6. Permittee, its successors and assigns, shall comply with and agree to be bound by the requirements and terms of (a) this application and all related documents making up the approved permit, (b) by the Department's Permits Manual, and (c) by the Manual on Uniform Traffic Control Devices, both manuals as revised to and in effect on the date of issuance of the permit, all of which documents are made a part thereof by this reference. Compliance by the permittee, its successors and assigns, with subsequent revisions to applicable provisions of either manual or other policy of the Department may be made a condition of allowing the encroachment to persist under the permit.

7. Permittee agrees that this and any encroachment may be ordered removed by the Department at any time, and for any reason, upon thirty days written notice to the last known address of the applicant or to the address at the location of the encroachment. The permittee agrees that the cost of removing and of restoring the associated right-of-way is the responsibility of the permittee, its successors and assigns.

8. Permittee, its successors and assigns, agree that if the Department determines that motor vehicular safety deficiencies develop as a result of the installation or use of the encroachment, the permittee, its successors and assigns, shall provide and bear the expenses to adjust, relocate, or reconstruct the facilities, add signs, auxiliary lanes, or other corrective measures reasonably deemed necessary by the Department within a reasonable time after receipt of a written notice of such deficiency. The period within which such adjustments, relocations, additions, modifications, or other corrective measures must be completed will be specified in the notice.

9. Where traffic signals are required as a condition of granting the requested permit or are thereafter required to correct motor vehicular safety deficiencies, as determined by the Department, the costs for signal equipment and installation(s) shall be borne by the permittee, its successors and assigns and the Department in its reasonable discretion and only in accordance with the Department's current policy set forth in the Traffic Operations Manual and Permits Manual. Any modifications to the permittee's entrance necessary to accommodate signalization (including necessary easement(s) on private property) shall be the responsibility of the permittee, its successors and assigns, at no expense to the Department.

APPROVED
MARCH 20, 2026
KENTUCKY TRANSPORTATION CABINET
06-202-F06026

APPLICATION FOR ENCROACHMENT PERMIT

10. The requested encroachment shall not infringe on the frontage rights of an abutting owner without their written consent as hereinafter described. Each abutting owner shall express their consent, which shall be binding on their successors and assigns, by the submission of a notarized statement as follows, "I (we), _____, hereby consent to the granting of the permit requested by the applicant along Route _____, which permit does affect frontage rights along my (our) adjacent real property." By signature(s) _____, subscribed and sworn by _____, on this date _____.

11. The permit, if approved, is subject to the agreement that it shall not interfere with any similar rights or permit(s) previously granted to any other party, except as otherwise provided by law.

12. Permittee shall include documentation which describes the facilities to be constructed. Permittee, its successors and assigns, agree as a condition of the granting of the permit to construct and maintain any and all permitted facilities or other encroachments in strict accordance with the submitted and approved permit documentation and the policies and procedures of the Department. Permittee, its successors and assigns, shall not use facilities authorized herein in any manner contrary to that prescribed by the approved permit. Only normal usage as contemplated by the parties and by this application and routine maintenance are authorized by the permit.

13. Permittee, its successors and assigns, at all times from the date permitted work is commenced until such time as all permitted facilities or other encroachments are removed from the right-of-way and the right-of-way restored, **shall defend, protect, indemnify and save harmless** the Department from any and all liability claims and demands arising out of the work, encroachment, maintenance, or other undertaking by the permittee, its successors and assigns, related or undertaken pursuant to the granted permit, due to any claimed act or omission by the permittee, its servants, agents, employees, or contractors. This provision shall not inure to the benefit of any third party nor operate to enlarge any liability of the Department beyond that existing at common law or otherwise if this right to indemnity did not exist.

14. Upon a violation of any provision of the permit, or otherwise in its reasonable discretion, the Department may require additional action by the permittee, its successors and assigns, up to and including the removal of the encroachment and restoration of the right-of-way. In the event additional actions required by the Department under the permit are not undertaken as ordered and within a reasonable time, the Department may in its discretion cause those or other additional corrective actions to be undertaken and the Department shall recover the reasonable costs of those corrective actions from the permittee, its successors and assigns.

15. Permittee, its successors and assigns, shall use the encroachment premises in compliance with all requirements of federal law and regulation, including those imposed pursuant to Title VI of the Civil Right Act of 1964 (42 U.S.C. § 2000d et seq.) and the related regulations of the U.S. Department of Transportation in Title 49 C.F.R. Part 21, all as amended.

16. Permittee, its successors and assigns, agree that if the Department determines it is necessary for the facilities or other encroachment authorized by the permit to be removed, relocated or reconstructed in connection with the reconstruction, relocation or improvement of a highway, the Department may revoke permission for the encroachment to remain under the permit and may order its removal, relocation or reconstruction by the permittee, its successors and assigns, at the expense of the permittee, except where the Department is required by law to pay any or all of those costs.

APPROVED
MARCH 20, 2025
KENTUCKY TRANSPORTATION CABINET
06-2024-00696

APPLICATION FOR ENCROACHMENT PERMIT

17. Permittee agrees that the authorized permit is personal to the permittee and shall remain in effect until such time as (a) the permittee's rights to the adjoining real property to have benefitted from the requested encroachment have been relinquished, (b) until all permit obligations have been assumed by appropriate successors and assigns, and (c) unless and until a written release from permit obligations has been granted by the Department. The permit and its requirements shall also bind the real property to have benefitted from the requested encroachment to the extent permitted by law. The permit and the related encroachment become the responsibility of the successors and assigns of the permittee and the successors and assigns of each property owner benefitting from the encroachment, or the encroachment may not otherwise permissibly continue to be maintained on the right-of-way. (Does not apply to utility encroachments serving the general public.)

18. If work authorized by the permit is within a highway construction project in the construction phase, it shall be the responsibility of the permittee to make personal contact with the Department's Engineer on the project in order to coordinate all permitted work with the Department's prime contractor on the project.

19. This permit is not intended to, nor shall it, affect, alter or alleviate any requirement imposed upon the permittee, its successors and assigns, by any other agency.

20. Permittee, its successors and assigns, agree to contain and maintain all dirt, mud, and other debris emanating from the encroachment away from the surrounding right-of-way and the travel way of the highway hereafter and at all times that its obligations under the permit remain in effect.

21. 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 the 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 Clerk to determine what utility companies have facilities in the area.

22. The undersigned Utility acknowledges ownership and control of the facilities proposed to be installed, modified, or extended by the Applicant/Permittee and agrees to be bound by the requirements and terms of this application and all related documents making up the approved permit, by the Department's Permits Guidance Manual, and by all applicable regulations and statutes in effect on the date of issuance of the permit. This information and application is certified correct to the best knowledge and belief of the undersigned Utility.

NORTHERN KENTUCKY WATER DISTRICT
UTILITY

Steve Broering	Engineering Technician
NAME (Utility Representative)	TITLE (Utility Representative)
Steve Broering	7-15-2024
SIGNATURE (Utility Representative)	DATE

APPROVED
MARCH 25, 2025
KENTUCKY TRANSPORTATION CABINET
06-2024-00096

Kentucky 811 Know what's below. Call before you dig.

To Submit a Locate Request
24 Hours a Day, Seven Days a Week:
Call 811 or 800-752-6007

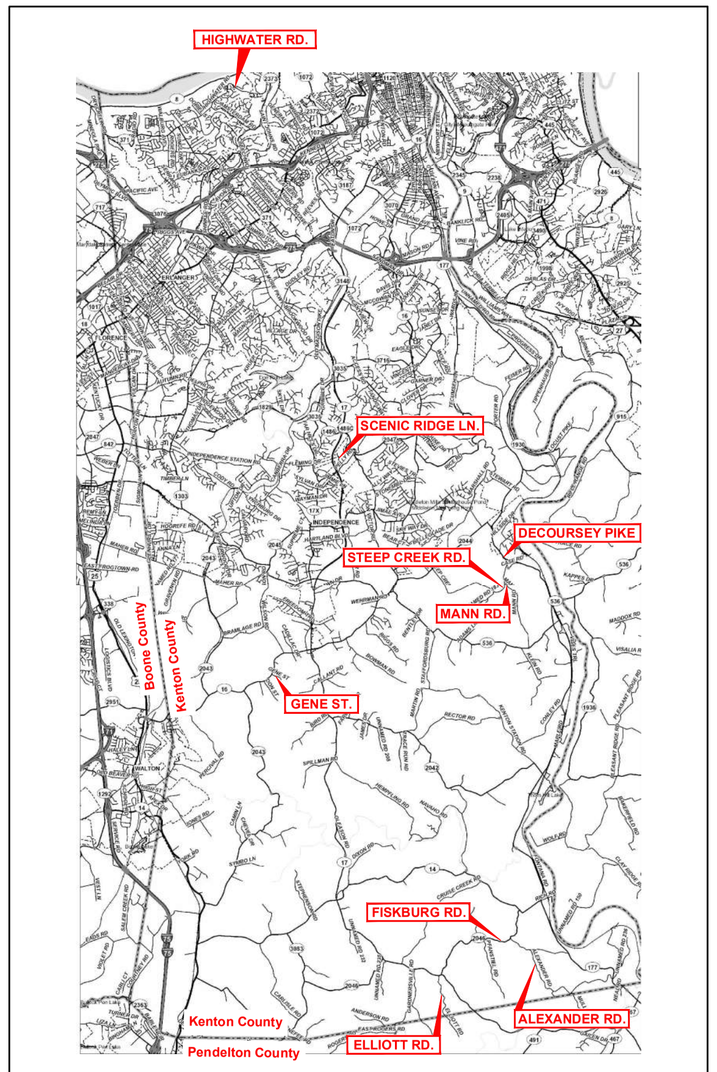
NORTHERN KENTUCKY WATER DISTRICT
SUB-DISTRICT 'O'
WATER MAIN EXTENSION
KENTON COUNTY, KENTUCKY
231591

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NORTHERN KENTUCKY WATER DISTRICT OFFICIALS

PRESIDENT / CEO
LINDSEY RECHTIN, CPA

COMMISSIONERS
FRED A. MACKE, JR. (Chair)
JODY R. LANGE (Vice-Chair)
DOUGLAS C. WAGNER (Secretary)
NICHOLAS E. WINNIKE (Treasurer)
GARY E. HOLLAND (Commissioner)
JOSEPH J. KOESTER (Commissioner)



VICINITY MAP

NORTHERN KENTUCKY WATER DISTRICT SPECIFICATIONS

THE LATEST STANDARD SPECIFICATIONS AND DRAWINGS OF THE NORTHERN KENTUCKY WATER DISTRICT FOR THE INSTALLATION OF WATER MAIN AND METER PITS SHALL GOVERN ALL WATER MAIN CONSTRUCTION ITEMS ON THIS PROJECT.

KENTUCKY TRANSPORTATION CABINET SPECIFICATIONS

THE LATEST STANDARD SPECIFICATIONS OF THE KENTUCKY TRANSPORTATION CABINET, INCLUDING CHANGES AND SUPPLEMENTAL SPECIFICATIONS THERETO AND KENTON COUNTY SUBDIVISION REGULATIONS SHALL GOVERN THIS IMPROVEMENT.

SOURCE OF OUNDARY AND TOPOGRAPHIC INFORMATION

THE TOPOGRAPHIC INFORMATION SHOWN ON THESE PLANS IS BASED UPON A SURVEY BY CT CONSULTANTS, INC.
THE BOUNDARY INFORMATION SHOWN ON THESE PLANS IS BASED ON PLANNING AND DEVELOPMENT SERVICES (P.D.S.) G.I.S. MAPPING.

JAMES M. SHUMATE *P.E. #18156*

STATE OF KENTUCKY
JAMES M. SHUMATE
18156
LICENSED PROFESSIONAL ENGINEER

your trusted advisor consultants engineers architects planners

NO	REVISION	DATE

ISSUED FOR: BID
ISSUE DATE: FEB 2025
SCALE: AS SHOWN
DESIGNED BY: JCOR
DRAWN BY: JCOR
CHECKED BY: JSHU

NORTHERN KENTUCKY WATER DISTRICT
SUBDISTRICT 'O'
-KENTON COUNTY -

TITLE SHEET

PROJECT NO.
231591
DISCIPLINE
CIVIL
SHEET NAME
TTL
SHEET
1
OF
28

APPROVED
MARCH 31, 2025
TRANSPORTATION CABINET
DISTRICT 6
KENTUCKY

tos ecu477_0aa1bdcb0c77da0c0d2 Buffalo that isn't exactly roadside.jpg

GENERAL NOTES

1. ALL CONSTRUCTION SHALL CONFORM TO THESE PLANS AND SPECIFICATIONS, THE LATEST EDITION OF THE NORTHERN KENTUCKY WATER DISTRICT STANDARD SPECIFICATIONS AND DRAWINGS AND THE KENTON COUNTY SUBDIVISION REGULATIONS AND THE KENTUCKY DEPARTMENT OF HIGHWAYS STANDARD SPECIFICATIONS FOR ROAD AND BRIDGE CONSTRUCTION.

2. ALL DISTURBED AREAS ARE TO BE RESTORED (SEEDED AND MULCHED) BY THE CONTRACTOR AND SHALL PROCEED WITH JOB PROGRESSION. THE CONTRACTOR SHALL ALSO BE RESPONSIBLE FOR REMOVING ANY EXCESS MATERIALS AT THE SITE AND MAINTAINING ALL SEEDED AND MULCHED AREAS UNTIL PROJECT COMPLETION AND FINAL INSPECTION PER KDOT SPEC. 212. A RESIDENTIAL YARD SHALL BE RESTORED WITHIN TWENTY-ONE (21) DAYS AFTER CONSTRUCTION.

3. ALL APPLICABLE RECOMMENDATIONS IN KENTUCKY'S BEST MANAGEMENT PRACTICES MANUAL SHALL BE FOLLOWED BY THE CONTRACTOR, INCLUDING SEEDING OF DISTURBED GROUND.

4. RIGHT-OF-WAY AND PROPERTY LINES SHOWN ARE PLOTTED FROM PLANNING AND DEVELOPMENT SERVICES (PDS) G.I.S. MAPPING AND ARE APPROXIMATE AND NOT THE RESULT OF A FIELD BOUNDARY SURVEY.

5. THE CONTRACTOR SHALL LIMIT THEIR WORK AREA TO THE EASEMENTS AND RIGHTS-OF-WAY SHOWN ON THESE PLANS UNLESS WRITTEN PERMISSION IS GIVEN BY THE PROPERTY OWNER AND APPROVED BY FORT N.K.W.D.

6. ALL OSHA, STATE AND LOCAL SAFETY REGULATIONS SHALL BE FOLLOWED DURING CONSTRUCTION.

7. NO CONSTRUCTION SHALL COMMENCE UNTIL ALL STATE, COUNTY AND LOCAL PERMITS HAVE BEEN ISSUED AS REQUIRED

8. THE CONTRACTOR SHALL COORDINATE ALL WORK WITHIN THE PUBLIC RIGHT OF WAY WITH THE KENTUCKY TRANSPORTATION CABINET AND KENTON COUNTY AND ANY LOCAL MUNICIPALITY. LOCAL TRAFFIC MUST BE MAINTAINED AT ALL TIMES DURING CONSTRUCTION UNLESS OTHERWISE NOTED IN THESE PLANS.

9. ADDITIONAL BMP'S AND EROSION AND SEDIMENT CONTROL MEASURES MAY BE REQUIRED AS DEEMED NECESSARY. ALL COST FOR ABOVE SHALL BE INCLUDED IN LUMP SUM BID FOR EROSION CONTROL AND WATER POLLUTION CONTROL.

10. ALL CONSTRUCTION WORK SHALL BE IN CONFORMANCE WITH THE RECOMMENDATIONS CONTAINED IN THE GEOTECHNICAL INVESTIGATION REPORT PREPARED BY G.A.I. CONSULTANTS DATED FEBRUARY 2024.

GENERAL TRENCH EXCAVATION NOTES

1. CONTRACTOR IS TO PROVIDE CONSTANT STABLE SUPPORT FOR THE WATER MAIN TRENCH EXCAVATION (ie SHEETING, SHORING, ETC.) TO PROTECT ALL ADJACENT EXISTING UTILITIES, STORM SEWER PIPE AND STRUCTURES AND THE EXISTING ROADWAY FROM ANY MOVEMENT. (NO ADDITIONAL PAYMENT WILL BE MADE FOR THIS WORK. ANY COSTS ASSOCIATED WITH TRENCH SUPPORT SHALL BE INCLUDED IN THE UNIT BID PRICE FOR THE ASSOCIATED WATER MAIN.

   TRENCH SUPPORT FAILURE RESULTING IN ADVERSE IMPACT TO EXISTING UTILITIES SHALL BE REPAIRED IMMEDIATELY AT THE CONTRACTOR'S EXPENSE.

2. TRENCH EXCAVATION AND OPEN, UNBACKFILLED LENGTH OF WATER MAIN TRENCH SHALL BE LIMITED AS NECESSARY ALONG THE ROADWAY IN ORDER TO PREVENT MOVEMENT OF, OR DAMAGE TO THE SURROUNDING GROUND SURFACE, NEARBY STRUCTURES/INFRASTRUCTURE AND THE EXISTING ROADWAY PAVEMENT.

   TRENCH EXCAVATION SHALL ALSO BE LIMITED TO THE CONTRACTOR'S ABILITY TO PROVIDE TRENCH BOXES FOR SUPPORT. UNDER NO CIRCUMSTANCES SHALL TRENCH EXCAVATION EXCEED LENGTH OF SUPPORT AVAILABLE.

UTILITY NOTES

1. THIS PLAN SHOWS THE APPROXIMATE LOCATION OF UNDERGROUND UTILITIES (GAS, WATER, STORM SEWER, SANITARY SEWER, TELEPHONE, ELECTRIC, ETC.). THE PREPARER DOES NOT GUARANTEE THEIR ACCURACY OR CORRECTNESS. THE INFORMATION PROVIDED SHALL BE FIELD VERIFIED PRIOR TO CONSTRUCTION. THE CONTRACTOR SHALL BE RESPONSIBLE FOR MAINTAINING THE UTILITY AS WELL AS THE SERVICE LATERALS AT ALL TIMES DURING CONSTRUCTION. THE CONTRACTOR SHALL PRACTICE CARE DURING THE GRADING AND TRENCH EXCAVATION AND SHALL BE RESPONSIBLE FOR REPLACING ANY SERVICES THAT ARE DAMAGED DURING CONSTRUCTION AT THEIR EXPENSE.

2. PRIOR TO ANY EXCAVATION OVER AN EXISTING UTILITY LINE OR SERVICE, CONTRACTOR SHALL HAND EXCAVATE TO EXPOSE THE UTILITY AND DETERMINE LOCATION AND DEPTH. NOTIFY ENGINEER IMMEDIATELY OF ANY CONFLICTS.

3. TOPS OF EXISTING AND PROPOSED CASTING ELEVATIONS ARE SUBJECT TO FINAL ADJUSTMENTS AS APPROVED BY THE ENGINEER AND REQUIREMENTS OF UTILITY OWNER. THIS WORK WILL BE INCIDENTAL TO THE CONTRACT.

4. FORTY-EIGHT (48) HOURS BEFORE EXCAVATION IS TO COMMENCE, THE CONTRACTOR SHALL NOTIFY THE FOLLOWING AGENCIES: THE KENTUCKY UTILITY PROTECTION SERVICE AND ALL OTHER UTILITIES THAT MAY HAVE UNDERGROUND UTILITIES INVOLVING THIS PROJECT AND ARE NON-MEMBERS OF KENTUCKY UNDERGROUND PROTECTION.

STORM & SANITARY NOTES

1. ALL STORM AND SANITARY ITEMS SHALL BE IN ACCORDANCE WITH THE LATEST SPECIFICATIONS AND DETAILS FROM SD1. METAL PIPE MATERIALS SHALL NOT BE USED UNLESS OTHERWISE SPECIFIED ON THESE PLANS.

2. CONTRACTOR SHALL BE REQUIRED TO MAINTAIN STORM AND SANITARY SEWER FLOW THROUGHOUT THE PROJECT, FOR THE DURATION OF CONSTRUCTION. ALL COST FOR THE ABOVE SHALL BE INCIDENTAL TO THE CONTRACT.

3. IF REQUIRED, CONTRACTOR SHALL BE RESPONSIBLE FOR CONTACTING AND SCHEDULING STORM AND SANITARY SEWER INSPECTIONS AS SET OUT IN THE PRECONSTRUCTION MEETING.

4. CONNECTIONS INTO EXISTING OR PROPOSED STORM OR SANITARY SEWER STRUCTURES OR PIPES SHALL BE COMPLETED BY A CERTIFIED TAPPER BY SD1.

WATER NOTES

1. ALL WORK RELATING TO WATER MAINS OR WATER SERVICE LINES SHALL BE COMPLETED IN ACCORDANCE WITH THE RULES AND REGULATIONS OF THE NORTHERN KENTUCKY WATER DISTRICT (NKWD).

2. CONTRACTOR MAY NOT USE WATER FROM FIRE HYDRANTS WITHOUT PRIOR PERMISSION FROM NKWD

GAS NOTES

1. ALL WORK RELATING TO GAS MAINS OR GAS SERVICE LINES SHALL BE COMPLETED IN ACCORDANCE WITH THE RULES AND REGULATIONS OF THE DUKE ENERGY

ELECTRIC NOTES

1. ALL WORK RELATING TO ELECTRIC LINES SHALL BE COMPLETED IN ACCORDANCE WITH THE RULES AND REGULATIONS OF THE DUKE ENERGY

WATER DISTRICT GENERAL NOTES

1. THE EXISTING WATER MAIN ELEVATION AND LOCATION AT THE CONNECTION POINT WITH THE PROPOSED MAIN WAS ASSUMED AND HAS NOT BEEN FIELD VERIFIED. PRIOR TO COMMENCEMENT OF ANY WATER MAIN WORK, THE CONTRACTOR SHALL DIG A TEST HOLE AT THE CONNECTION POINT TO LOCATE EXISTING WATER MAIN AS TO LOCATION AND ELEVATION. THE EXISTING WATER MAIN LOCATION MAY REQUIRE SOME FIELD ADJUSTMENT TO THE PROPOSED WATER MAIN INCLUDING ADJUSTING THE DEPTH OF THE PROPOSED WATER MAIN. COST OF DOING THE ABOVE SHALL BE INCIDENTAL TO THE PERTINENT WATER MAIN ITEM.

2. COST OF TRIMMING OR CLEARING ANY TREES, BUSHES, ETC. SHALL BE INCIDENTAL TO THE OVERALL CONTRACT PRICE AND SHALL BE APPROVED BY N.K.W.D. AND THE PROPERTY OWNER ALONG WITH COUNTY OR STATE WHEN REQUIRED.

3. THE UTILITY INFORMATION SHOWN ON THE PLANS IS BASED ON INFORMATION RECEIVED FROM OTHERS AND HAS NOT BEEN VERIFIED BY THE ENGINEER OR OWNER. IT SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR TO VERIFY THE LOCATION OF THE UTILITIES AND TO COORDINATE ANY IMPACT CAUSED BY THE PROPOSED WORK WITH ALL UTILITY OWNERS AND/OR THEIR CONTRACTORS. THE CONTRACTOR WILL BE REQUIRED TO DIG TEST HOLES AT ALL UTILITY CROSSINGS TO LOCATE THE UTILITY AS TO BOTH LOCATION AND ELEVATION AND WILL BE REQUIRED TO REALIGN AND ADJUST THE ELEVATION OF THE PROPOSED WATER MAIN TO AVOID THE UTILITY. COST OF ALL THE ABOVE SHALL BE INCIDENTAL TO THE OVERALL CONTRACT PRICE.

4. UNLESS SPECIFICALLY INSTRUCTED OTHERWISE, RETURN ALL REMOVED WATER EQUIPMENT INCLUDING, FIRE HYDRANTS, VALVES, AND WATER METERS TO NORTHERN KENTUCKY WATER DISTRICT (N.K.W.D).

5. WATERLINES CROSSING UNDER OR OVER SEWER LINES (DEFINED AS ANY SANITARY/COMBINED SEWER, SEPTIC TANK OR SUBSOIL TREATMENT SYSTEM) MUST MAINTAIN A MINIMUM VERTICAL CLEARANCE OF 18" AND ONE FULL LENGTH OF PIPE SHALL BE LOCATED SO BOTH JOINTS ARE AS FAR FROM THE SEWER AS POSSIBLE. SPECIAL STRUCTURAL SUPPORT FOR THE WATER AND SEWER PIPES MAY BE REQUIRED.

6. CONTRACTOR IS RESPONSIBLE FOR KEEPING FIELD NOTES THAT PROVIDE SUFFICIENT DATA FOR PREPARING "RECORD DRAWINGS" UPON COMPLETION OF CONSTRUCTION.

7. ALL WATER MAIN CONSTRUCTION SHALL CONFORM TO THE NORTHERN KENTUCKY WATER DISTRICT SPECIFICATIONS. CONTRACTOR IS RESPONSIBLE FOR OBTAINING A CURRENT COPY OF THE NORTHERN KENTUCKY WATER DISTRICT'S STANDARD DRAWINGS.

8. ALL MATERIAL FOR THE PROP. WATER MAIN INSTALLATION INCLUDING ALL FITTINGS, BLOCKING, ETC., SHALL BE INCLUDED IN THE CONTRACTOR'S UNIT PRICE FOR WATER MAIN.

9. COST OF ALL TRENCHING, PIPE, PIPE BEDDING, BACKFILL, YARD RESTORATION AND TEMPORARY PAVEMENT, DRIVEWAY AND SIDEWALK RESTORATION SHALL BE PART OF THE COST OF INSTALLING THE WATER MAIN. PERMANENT DRIVEWAY RESTORATION, SIDEWALK RESTORATION, CURB RESTORATION AND STREET RESTORATION WILL BE SEPARATE PAY ITEMS AND INCLUDE INCIDENTALS SUCH AS MAIL BOX, STREET SIGN, AND FENCE REMOVAL AND REPLACEMENT.

10. THE PROPOSED WATER MAIN SHALL BE CLASS 50 DUCTILE IRON PIPE OR D.R. 18 C900 PVC AS SHOWN ON THE PLANS. WITHIN STATE ROUTE R/W, PIPE MATERIAL SHALL BE CLASS 52 DUCTILE IRON.

11. PROPOSED WATER MAIN SHALL BE THOROUGHLY CLEANED, FLUSHED, AND DISINFECTED, AS PER NORTHERN KENTUCKY WATER DISTRICT'S SPECIFICATIONS.

12. PRESSURE TESTING SHALL BE DONE AS PER NORTHERN KENTUCKY WATER DISTRICT'S SPECIFICATIONS.

13. FOR THRUST BLOCKING REFER TO THE NORTHERN KENTUCKY WATER DISTRICT'S STANDARD DRAWING NUMBERS 104 AND 104A.

14. THE PROPOSED WATER MAIN SHALL HAVE A HORIZONTAL SEPARATION OF AT LEAST 3'-0" (MEASURED FROM OUTSIDE OF PIPE TO OUTSIDE OF PIPE) FROM ANY GAS MAIN.

15. A 10' MINIMUM LATERAL SEPARATION BETWEEN WATER MAINS AND SEWERS (DEFINED AS ANY SANITARY/COMBINED SEWER, SEPTIC TANK OR SUBSOIL TREATMENT SYSTEM) AND SEWER MANHOLES, MEASURED FROM THE OUTSIDE DIAMETER TO OUTSIDE, MUST BE MAINTAINED UNLESS A VARIANCE IS GRANTED FROM THE D.O.W.

16. ALL NEW WATER SERVICES SHALL BE 3/4" (OR MATCH EXISTING, AS INDICATED ON THE PLANS) TYPE K COPPER WITH 5/8" OR 2" WATER METERS (UNLESS OTHERWISE NOTED) MATERIAL PROVIDED BY THE NORTHERN KENTUCKY WATER DISTRICT. ALL RECONNECTED WATER SERVICES SHALL BE 3/4" OR 2" TYPE K COPPER.

17. THE CONTRACTOR SHALL COORDINATE ALL WORK WITHIN THE PUBLIC RIGHT-OF-WAY WITH KYTC, KENTON COUTY AND/OR ANY LOCAL MUNICIPALITY. TRAFFIC MUST BE MAINTAINED AT ALL TIMES DURING CONSTRUCTION. MAINTENANCE OF TRAFFIC SHALL CONFORM TO THE "MANUAL OF UNIFORM TRAFFIC CONTROL DEVICES" REQUIREMENTS. NO ADDITIONAL PAYMENT WILL BE MADE FOR THIS WORK AND SHALL BE CONSIDERED INCIDENTAL TO THE CONTRACT.

18. **CONNECT SERVICE LINE (3/4" THRU 2"), INCLUDES THE LABOR, EQUIPMENT, EXCAVATION, BEDDING, BACKFILL, ASPHALT PAVEMENT , CONCRETE PAVEMENT, CONCRETE CURB, CONCRETE WALK AND YARD RESTORATION TO INSTALL THE SERVICE LINE AT THE LOCATIONS SHOWN ON THE PLANS OR AS DIRECTED, IN ACCORDANCE WITH THE SPECIFICATIONS AND STANDARD DRAWINGS, COMPLETE AND READY FOR USE. LEAD SERVICE LINES ENCOUNTERED BY THE EXCAVATION SHALL BE REPLACED FROM THE MAIN TO AND INCLUDING THE METER VAULT AND METER SETTING. ALL SERVICE LINE MATERIAL WILL BE SUPPLIED BY NKWD. PAID EACH (EA).**

19. THE CONTRACTOR SHALL COORDINATE WITH THE NORTHERN KENTUCKY WATER DISTRICT FOR FIELD INSPECTIONS.

20. FORTY-EIGHT (48) HOURS BEFORE EXCAVATION IS TO COMMENCE, THE CONTRACTOR SHALL NOTIFY THE FOLLOWING AGENCIES: THE KENTUCKY UTILITY PROTECTION SERVICE AND ALL OTHER UTILITIES THAT MAY HAVE UNDERGROUND UTILITIES INVOLVING THIS PROJECT AND ARE NON-MEMBERS OF KENTUCKY UNDERGROUND PROTECTION.

21. NO CONSTRUCTION SHALL COMMENCE UNTIL ALL KYTC, COUNTY AND/OR LOCAL PERMITS HAVE BEEN ISSUED AS REQUIRED.

22. CONTRACTOR IS RESPONSIBLE FOR DEWATERING TRENCH DURING INSTALLATION OF THE WATER MAIN.

23. THE COST OF TESTING THE MAIN, TEMPORARY FLUSHING DEVICES, TEMPORARY PLUG AND BLOCKS, AND ABANDONING THE EXISTING MAIN SHALL BE INCIDENTAL TO THE PROJECT.

24. ALL PAVEMENT SHALL CONFORM TO THE LATEST EDITION OF THE KENTUCKY DEPARTMENT OF HIGHWAYS STANDARD SPECIFICATIONS FOR ROAD AND BRIDGE CONSTRUCTION AND KENTON COUNTY SUBDIVISION REGULATIONS.

MAINTENANCE OF TRAFFIC NOTES

1. ALL MAINTENANCE OF TRAFFIC PROCEDURES SHALL MEET THE REQUIREMENT OF THE MANUAL OF UNIFORM TRAFFIC CONTROL DEVICES AND SECTION 112 OF KTC STANDARD SPECIFICATIONS. THE CONTRACTOR SHALL MAINTAIN ACCESS TO LOCAL TRAFFIC (INCLUDING ACCESS TO RESIDENCES WITHIN CONSTRUCTION LIMITS) AT ALL TIMES UTILIZING KTC STANDARD DRAWING TTC-100-05 "SINGLE LANE CLOSURE ON TWO-LANE HIGHWAY". THE CONTRACTOR SHALL PROVIDE SUFFICIENT SIGN, WARNING LIGHTS, BARRICADES, OR OTHER NECESSARY DEVICES MAKE THE SITE SAFE TO THE TRAVELING PUBLIC. LENGTH OF SINGLE LANE CLOSURES WILL BE HELD TO DISTANCES NOT ADVERSELY AFFECTING VEHICLE SAFETY.

2. ALL UNBACKFILLED TRENCH EXCAVATION SHALL BE SECURELY PLATED AT THE END OF EACH WORK DAY AND DURING PERIODS OF INACTIVITY.

3. IT SHALL BE THE CONTRACTOR'S RESPONSIBILITY TO SUBMIT TO THE ENGINEER AND THE OWNER A TRAFFIC CONTROL PLAN FOR THIS PROJECT.

4. PRIOR TO ANY CONSTRUCTION, THE CONTRACTOR SHALL NOTIFY THE APPROPRIATE STATE, COUNTY AND/OR LOCAL POLICE DEPARTMENTS. AT ALL TIMES, EMERGENCY VEHICLES SHALL BE GIVEN ACCESS.

5. RESIDENTS OF THE PROJECT AREA SHALL BE ALLOWED ACCESS TO THEIR PROPERTY AT ALL TIMES.

6. EACH DRIVEWAY SHALL BE ACCESSIBLE WHENEVER POSSIBLE. WHEN PORTLAND CEMENT CONCRETE CONSTRUCTION AFFECTS A DRIVEWAY, THE CONTRACTOR SHALL NOTIFY THE AFFECTED OWNERS 24 HOURS IN ADVANCE AND ADVISE THEM TO FIND ALTERNATIVE PARKING FOR A PERIOD OF AT LEAST 10 CALENDAR DAYS AFTER THE POUR. ALTERNATIVE PARKING SHALL INCLUDE "ON STREET" PARKING WITH ACCESS TO THE PROPERTY. TEMPORARY SIDEWALKS, ETC. WILL BE NECESSARY TO PREVENT PERSONS FROM WALKING IN MUD IN ORDER TO ENTER THEIR PROPERTY. TEMPORARY BRIDGES, RAILINGS ETC. WILL BECOME NECESSARY IN ORDER TO CROSS FORMED CURB LINES, EXCAVATED AREAS BEHIND CURB LINES AND WALKWAYS, ETC.

EROSION CONTROL LEGEND

- (IP) INLET PROTECTION (SEE DETAIL)
- (SF) SILT FENCE (SEE DETAIL)

HATCH LEGEND

- 1-1/2" ASPHALT PAVEMENT MILL AND OVERLAY AREA - SEE DETAIL SHEET G-05
- TRENCH RESTORATION - ASPHALT PAVEMENT - SEE DETAIL SHEET G-05
- TRENCH RESTORATION - CONCRETE PAVEMENT - SEE DETAIL SHEET G-05
- TRENCH RESTORATION - 8" AGGREGATE PAVEMENT - SEE DETAIL SHEET G-05
- CONTROL DENSITY FILL - PAV'T TRENCH
- CONCRETE DRIVEWAY REPLACEMENT - SEE DETAIL SHEET G-05
- CONCRETE WALK REPLACEMENT - SEE DETAIL SHEET G-05
- ASPHALT DRIVEWAY REPLACEMENT - SEE DETAIL SHEET G-05
- GRAVEL DRIVEWAY REPLACEMENT - SEE DETAIL SHEET G-05
- CHANNEL LINING, CLASS II - SEE DETAIL SHEET G-05

SYMBOL LEGEND

G	EXISTING GAS LINE
GS	EXISTING GAS SERVICE
E-UG / E-OH	EXISTING ELECTRIC (UNDERGROUND / OVERHEAD)
C-UG / C-OH	EXISTING CABLE (UNDERGROUND / OVERHEAD)
T-UG / T-OH	EXISTING TELEPHONE (UNDERGROUND / OVERHEAD)
W	EXISTING WATER MAIN
WS	EXISTING WATER SERVICE
	EXISTING STORM SEWER
RD	EXISTING ROOF DRAIN
S	EXISTING SANITARY SEWER
FM	EXISTING SANITARY FORCE MAIN
FO	EXISTING FIBER OPTICS
X	EXISTING FENCE
650	EXISTING CONTOURS (MAJOR)
648	EXISTING CONTOURS (MINOR)
EX. R/W	EXISTING RIGHT OF WAY
	EXISTING PROPERTY LINE
	EXISTING EASEMENT
	EXISTING GUARDRAIL
	EXISTING TREE LINE
	EXISTING ROCK WALL
G	PROPOSED GAS LINE
GS	PROPOSED GAS SERVICE
E-UG / E-OH	EXISTING ELECTRIC (UNDERGROUND / OVERHEAD)
C-UG / C-OH	PROPOSED CABLE (UNDERGROUND / OVERHEAD)
T-UG / T-OH	PROPOSED TELEPHONE (UNDERGROUND / OVERHEAD)
W	PROPOSED WATER MAIN
WS	PROPOSED WATER SERVICE
	PROPOSED STORM SEWER
UD	PROPOSED UNDERDRAIN
UD/DSC	PROPOSED UNDERDRAIN / DOWNSPOUT COLLECTOR COMBO
S	PROPOSED SANITARY SEWER
FM	PROPOSED SANITARY FORCE MAIN
FO	PROPOSED FIBER OPTICS
X	PROPOSED FENCE
650	PROPOSED CONTOURS (MAJOR)
648	PROPOSED CONTOURS (MINOR)
	PROPOSED RIGHT OF WAY
	PROPOSED PROPERTY LINE
	PROPOSED EASEMENT
	PROPOSED GUARDRAIL
	PROPOSED TREE LINE / CLEARING LIMITS
	PROPOSED DISTURBED LIMITS

	EXISTING FLAGPOLE
MB	EXISTING MAILBOX
	EXISTING SIGN
CP	EXISTING CABLE PEDESTAL
EP	EXISTING ELECTRIC PEDESTAL
PB	EXISTING PULL BOX
	EXISTING GROUND LIGHT
	EXISTING LIGHT POLE
EM	EXISTING ELECTRIC METER
E	EXISTING ELECTRIC MANHOLE
GM	EXISTING GAS METER
GV	EXISTING GAS VALVE
GF	EXISTING GAS BOX
	EXISTING UTILITY POLE
	EXISTING GUY WIRE / ANCHOR
S	EXISTING SANITARY MANHOLE
SCO	EXISTING SANITARY CLEANOUT
	EXISTING STORM MANHOLE
	EXISTING SINGLE / DOUBLE CURB INLET
	EXISTING CATCH BASIN
DCO	EXISTING STORM CLEANOUT
T	EXISTING TELEPHONE MANHOLE
TP	EXISTING TELEPHONE PEDESTAL
	EXISTING FIRE HYDRANT
WM	EXISTING WATER METER
WV	EXISTING WATER VALVE
	EXISTING BUSHES / TREES
	EXISTING SURVEY BENCHMARK
TB	TEST BORING LOCATION

	PROPOSED FLAGPOLE
MB	PROPOSED MAILBOX
	PROPOSED SIGN
CP	PROPOSED CABLE PEDESTAL
EP	PROPOSED ELECTRIC PEDESTAL
PB	PROPOSED PULL BOX
	PROPOSED GROUND LIGHT
	PROPOSED LIGHT POLE
EM	PROPOSED ELECTRIC METER
E	PRPOSED ELECTRIC MANHOLE
GM	PROPOSED GAS METER
GV	PROPOSED GAS VALVE
GF	PROPOSED GAS BOX
	PROPOSED UTILITY POLE
	PROPOSED GUY WIRE / ANCHOR
S	PROPOSED SANITARY MANHOLE
SCO	PROPOSED SANITARY CLEANOUT
	PROPOSED STORM MANHOLE
	PROPOSED SINGLE / DOUBLE CURB INLET
	PROPOSED CATCH BASIN
DCO	PROPOSED STORM CLEANOUT
T	PROPOSED TELEPHONE MANHOLE
TP	PROPOSED TELEPHONE PEDESTAL
	PROPOSED FIRE HYDRANT
WM	PROPOSED WATER METER
WV	PROPOSED WATER VALVE
	REMOVE EXISTING BUSH / TREE
	PROPOSED SLOPE DIRECTION

your trusted advisor — engineers, architects, planners, consultants

NO	REVISION	DATE
	.	

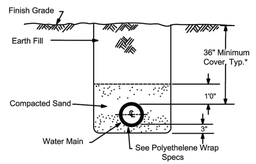
BID	
ISSUED FOR:	FEB 2025
ISSUE DATE:	AS SHOWN
SCALE:	JCOR
DESIGNED BY:	JCOR
DRAWN BY:	JSH
CHECKED BY:	

NORTHERN KENTUCKY WATER DISTRICT
SUBDISTRICT 'O'
-KENTON COUNTY -

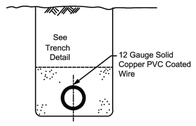
GENERAL NOTES AND LEGEND

PROJECT NO.
231591
DISCIPLINE
CIVIL
SHEET NAME
G101
SHEET 2 OF 28

APPROVED
MARCH 05, 2025
TRANSPORTATION CABINET
KENTUCKY

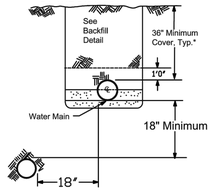


EARTH CUTS
TRENCH DETAIL



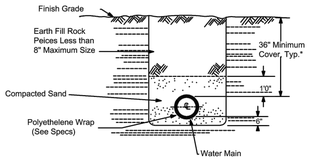
PVC PIPE

ALTERNATE TO BE USED ONLY ON APPROVAL BY THE DISTRICT



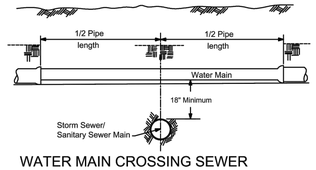
Water Main must be located a minimum of 10 feet lateral distance from anyexisting or future sewer lines or manholes, or as shown in the above alternate.

WATER MAIN PARALLELING
SEWER MAIN



ROCK CUTS
& UNSTABLE SUBGRADE

TRENCH DETAIL



WATER MAIN CROSSING SEWER

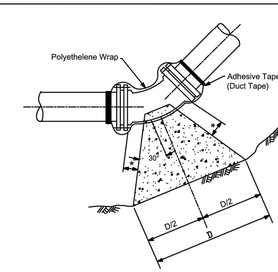
SUBDIVISION CONSTRUCTION

* Unless Otherwise Noted

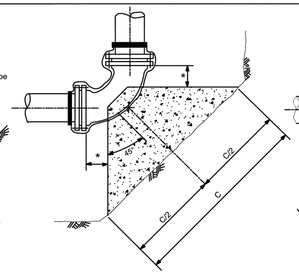
REVISION	BY	DATE
1 8" Min. Bell Hole	KPT	1/2/25

N. KY. WATER DISTRICT
TYPICAL PIPELINE TRENCH
DETAIL

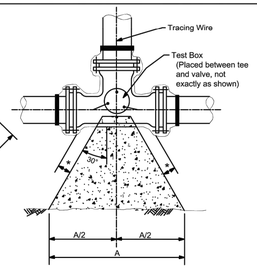
DRAWN BY: SAR
APPROVED: RH
DATE: 8/5/2014
STANDARD DRAWING NO: 103



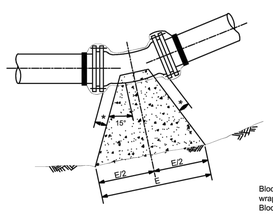
45° BEND



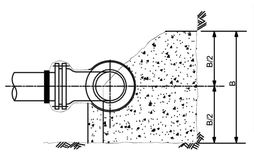
90° BEND



TEE (DEAD END OR FIRE HYDRANT SIMILAP



11 1/4° & 22 1/2° BEND



ELEVATION

Blocking shall be poured after blue polyethelene wrap is in place.
Blocking shall be inspected by the District prior to backfilling.

150 PSI/250 PSI

PIPE SIZE	A	B	C	D	E
6"	2'0"/2'6"	1'6"/1'6"	3'0"/3'6"	1'6"/2'0"	1'0"/1'0"
8"	2'6"/3'6"	2'0"/2'0"	3'6"/4'6"	2'0"/2'6"	1'0"/1'6"
10"	3'6"/4'0"	2'6"/2'6"	4'6"/5'6"	2'6"/3'0"	1'6"/1'6"
12"	4'0"/5'0"	3'0"/3'0"	5'6"/6'6"	3'0"/3'6"	1'6"/2'0"
16"	5'0"/6'0"	3'0"/4'0"	7'0"/8'6"	4'0"/4'6"	3'0"/3'0"
20"	6'0"/7'6"	5'0"/5'0"	7'0"/10'6"	4'0"/6'0"	3'0"/3'0"

* Distance to be 1/2" longer than entire length of the bolt used.

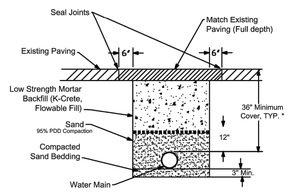
NOTES

1 DIP Fittings shall be per specifications.
2 Concrete to be 3500 psi.
3 All fittings to be Mechanical Joint.
4 Thrust blocks to be placed against undisturbed earth - use additional concrete as required for over excavation.
5 Blocking to be placed in a manner so that bolts can be removed without distrubing the block.

REVISION	BY	DATE
1 All sweets box caps mortar	SAH	1/9/2025

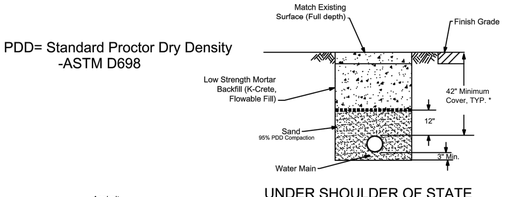
N. KY. WATER DISTRICT
CONCRETE THRUST BLOCK
DETAIL

DRAWN BY: SAR
APPROVED: RH
DATE: 8/5/2014
STANDARD DRAWING NO: 104

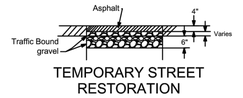


UNDER ASPHALT CONCRETE
PAVEMENT

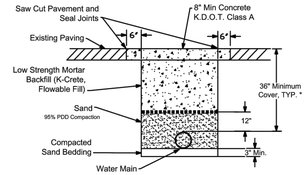
PDD= Standard Proctor Dry Density
-ASTM D698



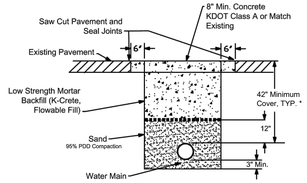
UNDER SHOULDER OF STATE
MAINTAINED STREET



TEMPORARY STREET
RESTORATION



UNDER CONCRETE PAVEMENT



UNDER STATE MAINTAINED STREET

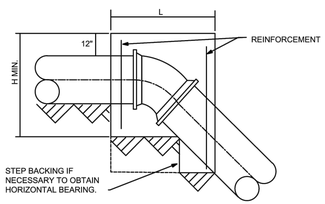
* 48" Maximum Cover

ALL CONSTRUCTION

REVISION	BY	DATE
1 All sweets box caps mortar	SAH	1/9/2025

N. KY. WATER DISTRICT
TYPICAL PIPELINE TRENCH
DETAIL

DRAWN BY: SAR
APPROVED: RH
DATE: 8/5/2014
STANDARD DRAWING NO: 103A



SECTION A-A

CONCRETE BACKING FOR VERTICAL BENDS

1. BACKING DESIGNED FOR 3000 POUNDS PER SQUARE FOOT SOIL BEARING AND 150 POUNDS PER SQUARE INCH INTERNAL PRESSURE.

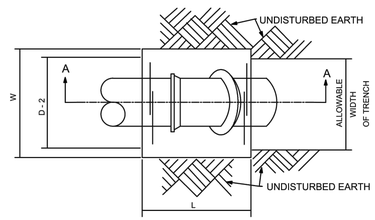
2. PROVIDE MINIMUM CONCRETE REINFORCEMENT OF 2 PAIR OF TWO 5" "U" BARS @ 12" C.

3. CENTER BACKING ON BEND.

BLOCKING FOR SIZES NOT SHOWN SHALL USE THE NEXT LARGER SIZE.

SIZE of PIPE	DEGREE OF BEND 11 1/4 L'	W"	H"	VOL.	22 1/2 L'	W"	H"	VOL.	45 L'	W"	H"	VOL.
4"	12	24	16	2.7	15	30	18	4.7	22	36	24	11.0
6"	12	43	18	5.4	16	48	34	15.1	30	55	24	22.9
8"	12	54	24	9.0	18	57	36	21.4	36	57	33	39.2
12"	20	63	36	26.3	37	62	37	49.2	48	62	51	88.0
16"	31	65	38	44.4	60	65	39	88.2	65	65	65	159.2
20"	45	70	40	73.0	56	70	60	136.4	72	76	78	247.5
24"	47	72	54	106.0	67	74	69	198.4	88	84	84	360.1

NOTE: VOLUMES GIVEN IN CUBIC FEET



PLAN

REVISION	BY	DATE
1		

N. KY. WATER DISTRICT
CONCRETE THRUST BLOCKING
FOR VERTICAL BENDS

DRAWN BY: SAR
APPROVED: RH
DATE: 8/5/2014
STANDARD DRAWING NO: 104A

your trusted advisor
consultants
engineers
architects
planners

NO	REVISION	DATE
-	-	-

ISSUED FOR:	BID
ISSUE DATE:	FEB 2025
SCALE:	AS SHOWN
DESIGNED BY:	JCOR
DRAWN BY:	JCOR
CHECKED BY:	JSHU

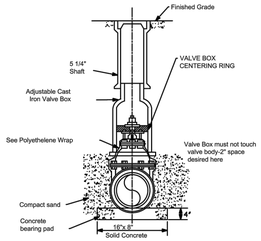
NORTHERN KENTUCKY WATER DISTRICT
SUBDISTRICT 'O'
-KENTON COUNTY -

DETAILS

PROJECT NO: 231591
DISCIPLINE: CIVIL
SHEET NAME: G-02
SHEET: 3 OF 28

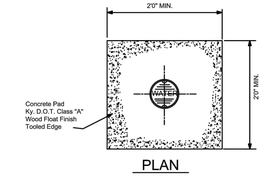
APPROVED
MARCH 31, 2025
TRANSPORTATION CABINET
Kentucky Transportation Cabinet

H:\2023\231591\DWG\SHEETS\C_231591 00_DETAIL SHEET.DWG - NKWD DTLS - 2/17/2025 1:49:39 PM - JAMES CORNELL

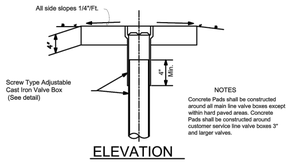


Detail Valve Box Installation

Note:Valve box shall not transmit shock or stress to the valve



PLAN



ELEVATION

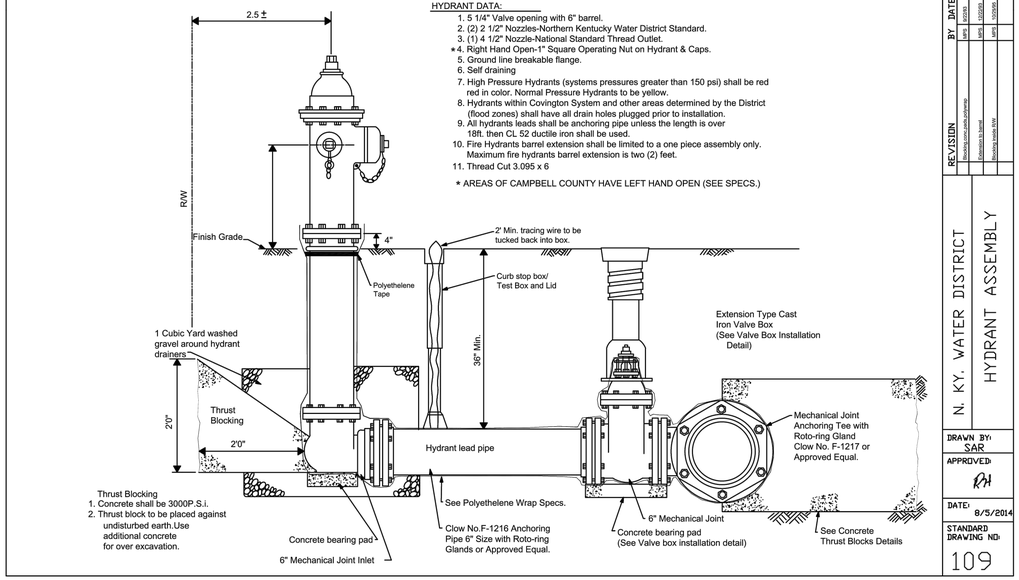
NOTES

Concrete Pads shall be constructed around all main line valve boxes except within hard paved areas. Concrete Pads shall be constructed around customer service line valve boxes 3" and larger valves.

REVISION	BY	DATE
1. 30" Concrete pad size 2. Valve Box Installation	MRS MRS	4/2013 4/2013

N. KY. WATER DISTRICT
VALVE BOX AND VALVE PAD DETAIL

DRAWN BY: SAR
APPROVED: RH
DATE: 8/5/2014
STANDARD DRAWING NO: 105



HYDRANT DATA:

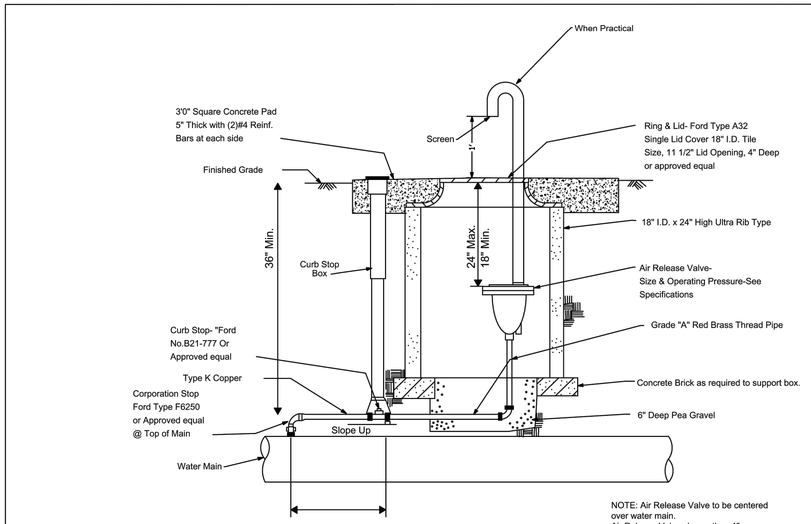
1. 5 1/4" Valve opening with 6" barrel.
2. (2) 2 1/2" Nozzles-Northern Kentucky Water District Standard.
3. (1) 4 1/2" Nozzle-National Standard Thread Outlet.
4. * Right Hand Open-1" Square Operating Nut on Hydrant & Caps.
5. Ground line breakable flange.
6. Self draining
7. High Pressure Hydrants (systems pressures greater than 150 psi) shall be red red in color. Normal Pressure Hydrants to be yellow.
8. Hydrants within Covington System and other areas determined by the District (flood zones) shall have all drain holes plugged prior to installation.
9. All hydrants leads shall be anchoring pipe unless the length is over 18ft. then CL 52 ductile iron shall be used.
10. Fire Hydrants barrel extension shall be limited to a one piece assembly only. Maximum fire hydrants barrel extension is two (2) feet.
11. Thread Cut 3.095 x 6

* AREAS OF CAMPBELL COUNTY HAVE LEFT HAND OPEN (SEE SPECS.)

REVISION	BY	DATE
Blocking note,valve,anchorage	MRS	4/2013
Extension to barrel	MRS	12/2/2020
Blocking needs WM	MRS	1/2/2020

N. KY. WATER DISTRICT
HYDRANT ASSEMBLY

DRAWN BY: SAR
APPROVED: RH
DATE: 8/5/2014
STANDARD DRAWING NO: 109

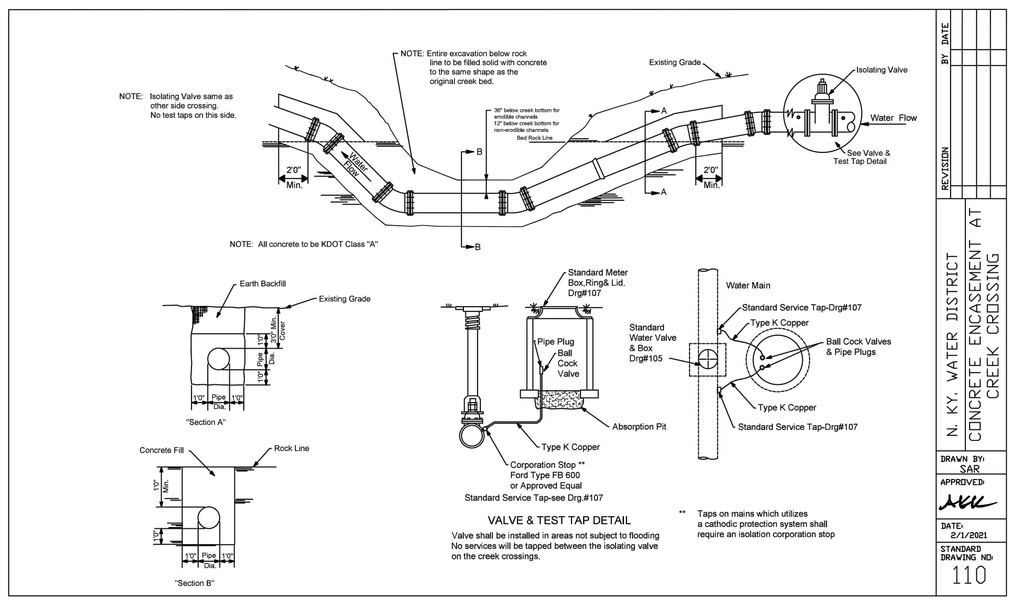


NOTE: Air Release Valve to be centered over water main.
Air Release Valves larger than 1" use:
vault size 24"x24"
lid Ford Type MC 24 &
Extension Ring Ext-2 or approved equal.

REVISION	BY	DATE

N. KY. WATER DISTRICT
N.KY WATER DISTRICT AIR RELEASE VALE

DRAWN BY: SAR
APPROVED: RH
DATE: 8/5/2014
STANDARD DRAWING NO: 106



VALVE & TEST TAP DETAIL

Valve shall be installed in areas not subject to flooding
No services will be tapped between the isolating valve on the creek crossings.

** Taps on mains which utilizes a cathodic protection system shall require an isolation corporation stop

REVISION	BY	DATE

N. KY. WATER DISTRICT
CONCRETE ENCASEMENT AT CREEK CROSSING

DRAWN BY: SAR
APPROVED: MKK
DATE: 2/1/2021
STANDARD DRAWING NO: 110

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engineers
consultants
architects
planners

NO	REVISION	DATE
-	-	

ISSUED FOR:	BID
ISSUE DATE:	FEB 2025
SCALE:	AS SHOWN
DESIGNED BY:	JCOR
DRAWN BY:	JCOR
CHECKED BY:	JSHU

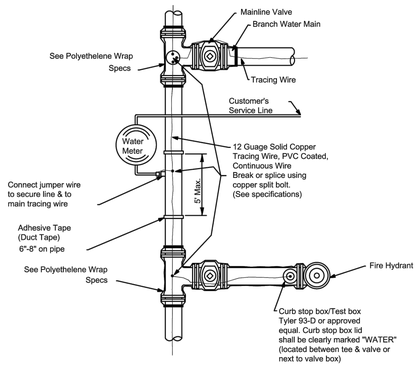
NORTHERN KENTUCKY WATER DISTRICT
SUBDISTRICT 'O'
-KENTON COUNTY -

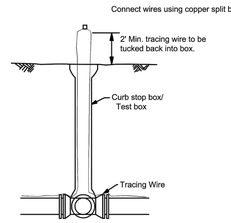
DETAILS

PROJECT NO.
231591
DISCIPLINE
CIVIL
SHEET NAME
G-03
SHEET
4
OF
28

APPROVED
MARCH 26, 2025
TRANSPORTATION CABINET
Kentucky Transportation Cabinet

H:\2023\231591\DWG\SHEETS\C_231591.00_DETAIL SHEET.DWG - NKWD DTLS (2) - 2/10/2025 5:10:40 PM - JAMES CORNELL





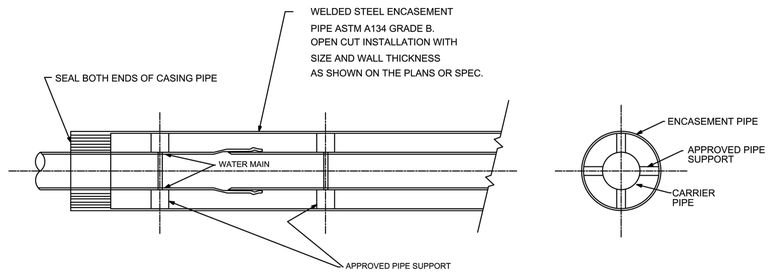
DUCTILE IRON AND PVC PIPE WITH DUCTILE IRON FITTINGS

Note: Curb stop box/test box shall not be installed in paved areas.

REVISION	BY	DATE

N. KY. WATER DISTRICT
TRACING WIRE INSTALLATION DETAIL

DRAWN BY: SAR
APPROVED:
DATE: 8/5/2014
STANDARD DRAWING NO: 111



1. All carrier pipe placed in steel casing pipe shall be minimum class 50 ductile iron pipe and conform to the latest edition of AWWA C151.
2. Carrier pipe gaskets shall develop a wedging action between pairs of high-strength stainless steel elements spaced around the gasket (FIELD LOK , FASTGRIP, or approved equal gaskets).

NOTE: CASING PIPE JOINTS SHALL BE SEAM WELDED SO THAT CASING IS WATER TIGHT FROM END TO END.

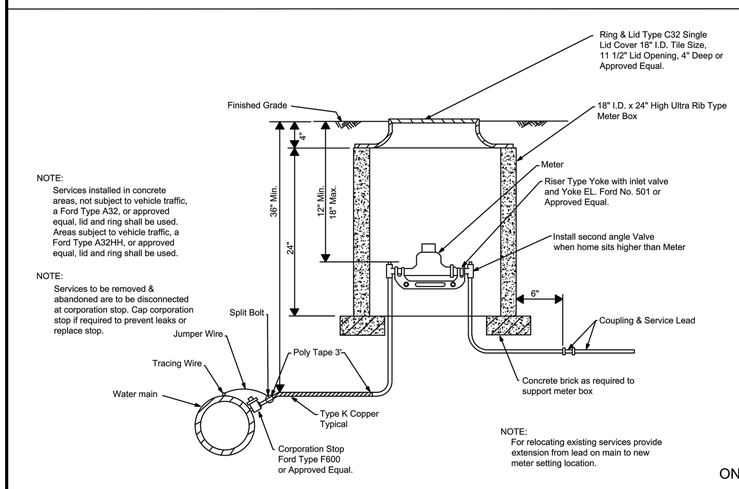
ENCASEMENT PIPE DETAIL

NO SCALE

REVISION	BY	DATE
1	JS	2/7/20

N. KY. WATER DISTRICT
ENCASEMENT PIPE DETAIL

DRAWN BY: SAR
APPROVED:
DATE: 8/5/2014
STANDARD DRAWING NO: 114



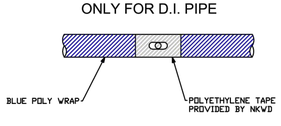
NOTE:
Services installed in concrete areas, not subject to vehicle traffic, a Ford Type A32, or approved equal, lid and ring shall be used. Areas subject to vehicle traffic, a Ford Type A32HH, or approved equal, lid and ring shall be used.

NOTE:
Services to be removed & abandoned are to be disconnected at corporation stop. Cap corporation stop if required to prevent leaks or replace stop.

NOTE:
For relocating existing services provide extension from lead on main to new meter setting location.

PVC Mains-Use single band brass saddle
Ford Type 101 BS or equal.

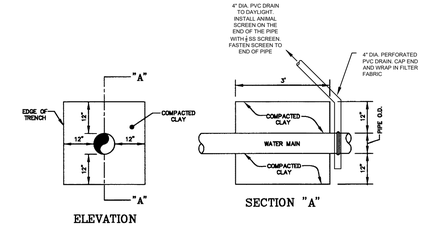
ONLY FOR D.I. PIPE



REVISION	BY	DATE

N. KY. WATER DISTRICT
5/8" & 1" METER SETTING COPPER

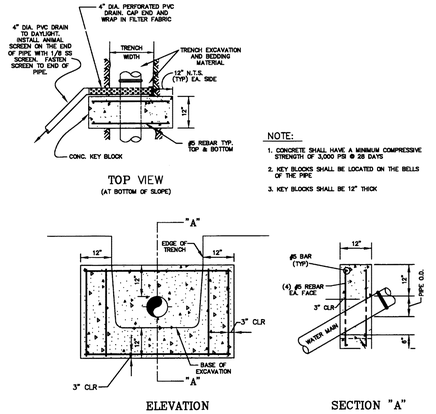
DRAWN BY: SAR
APPROVED:
DATE: 8/5/2014
STANDARD DRAWING NO: 107



ELEVATION SECTION "A"

CLAY BULKHEAD

N.T.S.



TOP VIEW (AT BOTTOM OF SLOPE)

ELEVATION SECTION "A"

CONCRETE KEY BLOCK

(IN BEDROCK)
N.T.S.

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NO	REVISION	DATE
.	.	.

ISSUED FOR:	BID
ISSUE DATE:	FEB 2025
SCALE:	AS SHOWN
DESIGNED BY:	JCOR
DRAWN BY:	JCOR
CHECKED BY:	JSHU

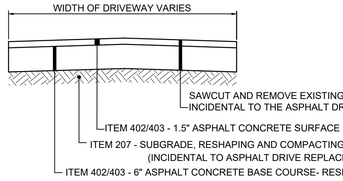
NORTHERN KENTUCKY WATER DISTRICT
SUBDISTRICT 'O'
-KENTON COUNTY -

DETAILS

PROJECT NO: 231591
DISCIPLINE: CIVIL
SHEET NAME: G-04
SHEET: 5 OF 28

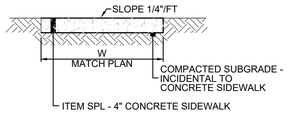
APPROVED
MARCH 26, 2025
TRANSPORTATION CABINET
KENTUCKY DEPARTMENT OF HIGHWAYS

H:\2023\231591\DWG\SHEETS\C_231591.00_DETAIL SHEET.DWG - NKWD DTLS (3) - 2/10/2025 5:10:40 PM - JAMES CORNELL



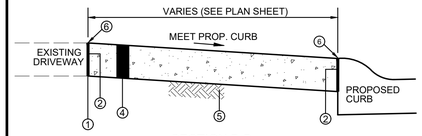
ASPHALT DRIVEWAY REPLACEMENT

N.T.S.



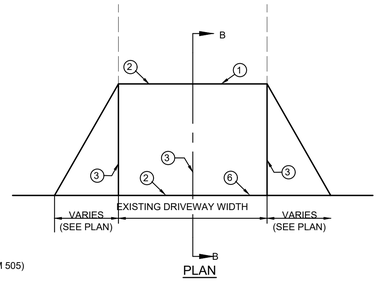
4" CONCRETE SIDEWALK REPLACEMENT DETAIL

(SAWCUTTING AND REMOVAL OF EXISTING CONCRETE SIDEWALK AND EXCAVATION TO PROPOSED SUBGRADE INCIDENTAL TO SIDEWALK REPLACEMENT)



SECTION B-B

1. SAWCUT AT NEAREST JOINT AND REMOVE EXISTING CONCRETE PAVEMENT (INCIDENTAL TO ITEM 505)
2. 1" PREFORMED EXPANSION JOINT MATERIAL (FLEXIBLE FOAM-CERAMAR BY W.R. MEADOWS OR APPROVED EQUAL)
3. TOOLED JOINT
4. ITEM 505 - 6" CONCRETE DRIVEWAY/APRON (OR MATCH EXISTING WHICHEVER IS GREATER)
5. COMPACTED SUBGRADE (INCIDENTAL TO ITEM 505 - 6" CONCRETE DRIVEWAY/APRON)
6. SEAL JOINT WITH GRAY SELF LEVELING SEALANT (SIKA FLEX OR APPROVED EQUAL)



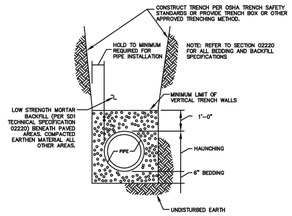
PLAN

NOTE:

1. ANY YARD AREA DISTURBED BY THE CONSTRUCTION OF THE DRIVEWAY APRON SHALL BE RESTORED WITH TOPSOIL, SEED AND MULCH (INCIDENTAL TO CONCRETE DRIVEWAY APRON REPLACEMENT).
2. ALL EXCAVATION REQUIRED FOR THE PLACEMENT OF THE PROPOSED DRIVEWAY SHALL BE INCIDENTAL TO CONCRETE DRIVEWAY REPLACEMENT BID ITEM.

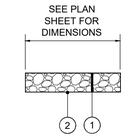
CONCRETE DRIVEWAY REPLACEMENT

N.T.S.



STORM TRENCH DETAIL

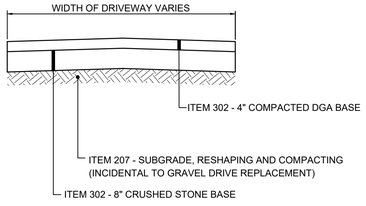
N.T.S.



ROCK CHANNEL PROTECTION

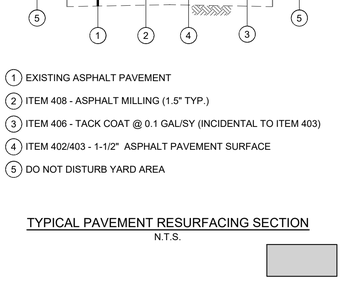
N.T.S.

1. ITEM 703 - 18" CHANNEL LINING, KYTC CLASS II
2. NON WOVEN GEOTEXTILE FILTER FABRIC



GRAVEL DRIVEWAY REPLACEMENT

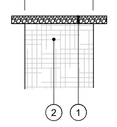
N.T.S.



1. EXISTING ASPHALT PAVEMENT
2. ITEM 408 - ASPHALT MILLING (1.5" TYP.)
3. ITEM 406 - TACK COAT @ 0.1 GAL/SY (INCIDENTAL TO ITEM 403)
4. ITEM 402/403 - 1-1/2" ASPHALT PAVEMENT SURFACE
5. DO NOT DISTURB YARD AREA

TYPICAL PAVEMENT RESURFACING SECTION

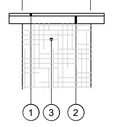
N.T.S.



AGGREGATE ROADWAY REPLACEMENT SECTION

N.T.S.

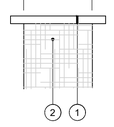
1. ITEM 302 - 4" DGA BASE OVER 8" CRUSHED STONE BASE, (LESS THAN 7% FINES) COMPACTED TO 100% (ASTM D698).
2. CONTROL DENSITY FILL PER NKWD SPECIFICATIONS (SEE DETAIL SHEET (G-02)



ASPHALT ROADWAY REPLACEMENT SECTION

N.T.S.

1. ITEM 402/403 - 1.5" ASPHALT CONCRETE SURFACE COURSE
2. ITEM 402/403 - 7.75" ASPHALT CONCRETE BASE (OR MATCH EXISTING)
3. CONTROL DENSITY FILL PER NKWD SPECIFICATIONS (SEE DETAIL SHEET (G-02)



CONCRETE ROADWAY REPLACEMENT SECTION

N.T.S.

1. ITEM SPL - 8" PORTLAND CEMENT CONCRETE PAVEMENT - PER KENTON COUNTY SUBDIVISION REGULATIONS (OR MATCH EXISTING WHICHEVER IS GREATER)
2. CONTROL DENSITY FILL PER NKWD SPECIFICATIONS (SEE DETAIL SHEET (G-02)

NOTE:
GENE STREET HAS AN ADDITIONAL 1.5" ASPHALT OVERLAY ON THE CONCRETE PAVEMENT

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NO	REVISION	DATE
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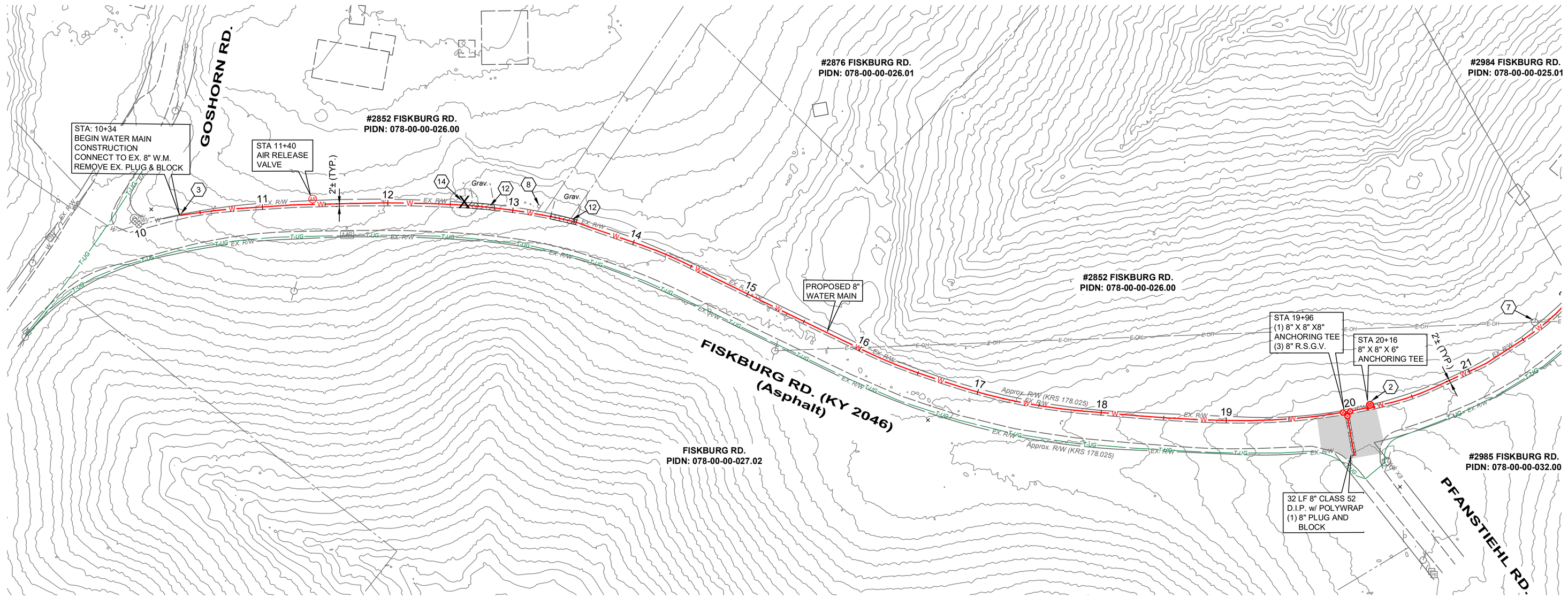
ISSUED FOR:	BID
ISSUE DATE:	FEB 2025
SCALE:	AS SHOWN
DESIGNED BY:	JCOR
DRAWN BY:	JCOR
CHECKED BY:	JSHU

NORTHERN KENTUCKY WATER DISTRICT
SUBDISTRICT 'O'
-KENTON COUNTY -

DETAILS

PROJECT NO
231591
DISCIPLINE
CIVIL
SHEET NAME
G-05
SHEET
6
OF
28

APPROVED
MARCH 26, 2025
TRANSPORTATION CABINET
KENTUCKY DEPARTMENT OF HIGHWAYS



0' 50' 100'

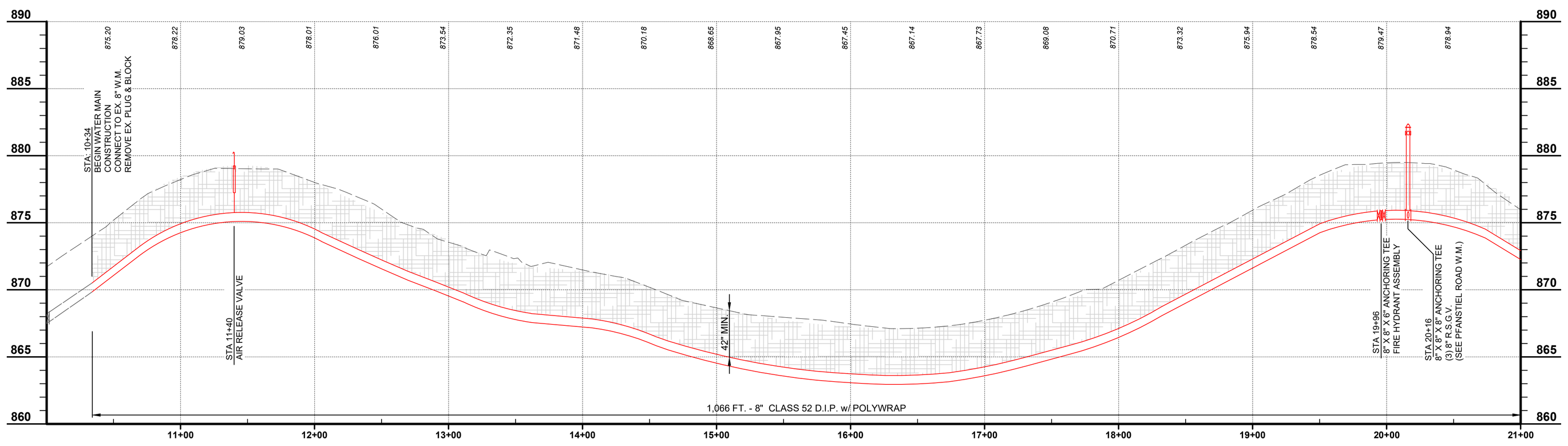
SCALE: 1" = 50

CONSTRUCTION NOTES

1. MAINTAIN MANAGEABLE VERTICAL CLEARANCE BETWEEN THE PROPOSED WATER MAIN AND THE EXISTING STORM SEWER, WATER MAIN, TELEPHONE DUCTS, AND GAS MAIN. CONSTRUCT ALL SANITARY SEWER CROSSINGS PER N.K.W.D. SPECIFICATIONS ITEM 1.14. MAINTAIN MINIMUM 18" BETWEEN THE PROPOSED WATER MAIN AND THE EXISTING SANITARY SEWER, ACTUAL ELEVATION UNKNOWN. CONTRACTOR TO EXCAVATE & VERIFY ACTUAL LOCATION, SIZE AND ELEVATION OF EXISTING UTILITY PRIOR TO BEGINNING WATER MAIN CONSTRUCTION. THE CONTRACTOR SHALL NOTIFY THE ENGINEER PRIOR TO CONSTRUCTION OF ANY POTENTIAL CONFLICT. NO ADDITIONAL PAYMENT WILL BE MADE FOR THIS WORK AND THE COST SHALL BE INCLUDED IN THE BID ITEM FOR WATER MAIN.
2. PROPOSED FIRE HYDRANT ASSEMBLY, VALVE AND BLOCKING AS PER N.K.W.D. STD. DRAWING NO. 109. COORDINATE LOCATION WITH N.K.W.D. INSPECTOR. ANCHOR VALVE TO TEE.
3. CONNECT TO EXISTING WATER MAIN (ACTUAL ELEVATION UNKNOWN). CONTRACTOR TO VERIFY DEPTH PRIOR TO CONSTRUCTION.
4. CHANNEL LINING, CLASS II (12") w/ NON-WOVEN GEOTEXTILE FILTER FABRIC
5. CONTRACTOR TO VERIFY LOCATION AND ELEVATION OF UTILITY PRIOR TO EXCAVATION ACTIVITY AND NOTIFY ENGINEER AND N.K.W.D. OF CONFLICTS.
6. DO NOT DISTURB
7. CONTRACTOR TO SUPPORT UTILITY POLE DURING PIPE INSTALLATION
8. REMOVE AND REPLACE SIGN
9. REMOVE AND REPLACE MAILBOX
10. INSTALL 5/8" METER SETTING PER NKWD STD. DWG. No. 107. INSTALL WATER SERVICE LINE (3/4" TYPE K COPPER) FROM THE PROPOSED WATER MAIN TO THE METER SETTING. MATERIAL WILL BE PROVIDED BY NKWD FOR THIS WORK. UNIT PRICE INCLUDES LABOR, EQUIPMENT, EXCAVATION, BEDDING, BACKFILL, ASPHALT, CONCRETE AND YARD RESTORATION TO INSTALL SERVICE LINE AS SHOWN ON PLANS OR DIRECTED BY NKWD IN ACCORDANCE WITH SPECS & STD. DWGS., COMPLETE.
11. REMOVE AND REPLACE EXISTING STORM STRUCTURE (CB,HW) AS NEEDED FOR WATER MAIN INSTALLATION
12. DRIVEWAY RESTORATION (SEE DETAILS)
13. CONSTRUCT CLAY BULKHEAD IN TRENCH WITH UNDERDRAIN. DAYLIGHT UNDERDRAIN TO DITCH OR DRAINAGE STRUCTURE
14. TREE TO BE REMOVED

HATCH LEGEND

- 1-1/2" ASPHALT PAVEMENT MILL AND OVERLAY AREA
- TRENCH RESTORATION - ASPHALT PAVEMENT - SEE DETAIL SHEET
- TRENCH RESTORATION - CONCRETE PAVEMENT - SEE DETAIL SHEET
- TRENCH RESTORATION - 8" AGGREGATE PAVEMENT
- CONTROL DENSITY FILL - PAV'T TRENCH
- CONCRETE DRIVEWAY REPLACEMENT - SEE DETAIL SHEET
- CONCRETE WALK REPLACEMENT - SEE DETAIL SHEET
- ASPHALT DRIVEWAY REPLACEMENT - SEE DETAIL SHEET
- GRAVEL DRIVEWAY REPLACEMENT - SEE DETAIL SHEET
- CHANNEL LINING, CLASS II - SEE DETAIL SHEET



SCALE:
H: 1" = 50'
V: 1" = 5'

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NO	REVISION	DATE
-	-	-

ISSUED FOR:	BID
ISSUE DATE:	FEB 2025
SCALE:	AS SHOWN
DESIGNED BY:	JCOR
DRAWN BY:	JCOR
CHECKED BY:	JSHU

NORTHERN KENTUCKY WATER DISTRICT
SUBDISTRICT 'O'
-KENTON COUNTY -

FISKBURG ROAD
STA. 10+00 TO STA. 21+00

PROJECT NO.	231591
DISCIPLINE	CIVIL
SHEET NAME	C-12
SHEET	19
OF	28

APPROVED
March 03, 2025
Transportation Cabinet
KENTUCKY TRANSPORTATION CABINET

H:\2023\231591\DWG\SHEETS\C_231591 PNP_13_FISKBURG.DWG - FISKBURG-1 - 2/18/2025 2:33:22 PM - JAMES CORNELL

APPROVED
FOR BID
PLANS ARE NOT
FOR CONSTRUCTION

NORTHERN KENTUCKY WATER DISTRICT
SUBDISTRICT 'O'
-KENTON COUNTY -

FISKBURG ROAD
STA. 21+00 TO STA. 32+00

PROJECT NO	231691
DISCIPLINE	CIVIL
SHEET NAME	C113
SHEET	20
OF	28

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NO	REVISION	DATE
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ISSUED FOR:	BID
ISSUE DATE:	FEB 2025
SCALE:	AS SHOWN
DESIGNED BY:	JCOR
DRAWN BY:	JCOR
CHECKED BY:	JHSP

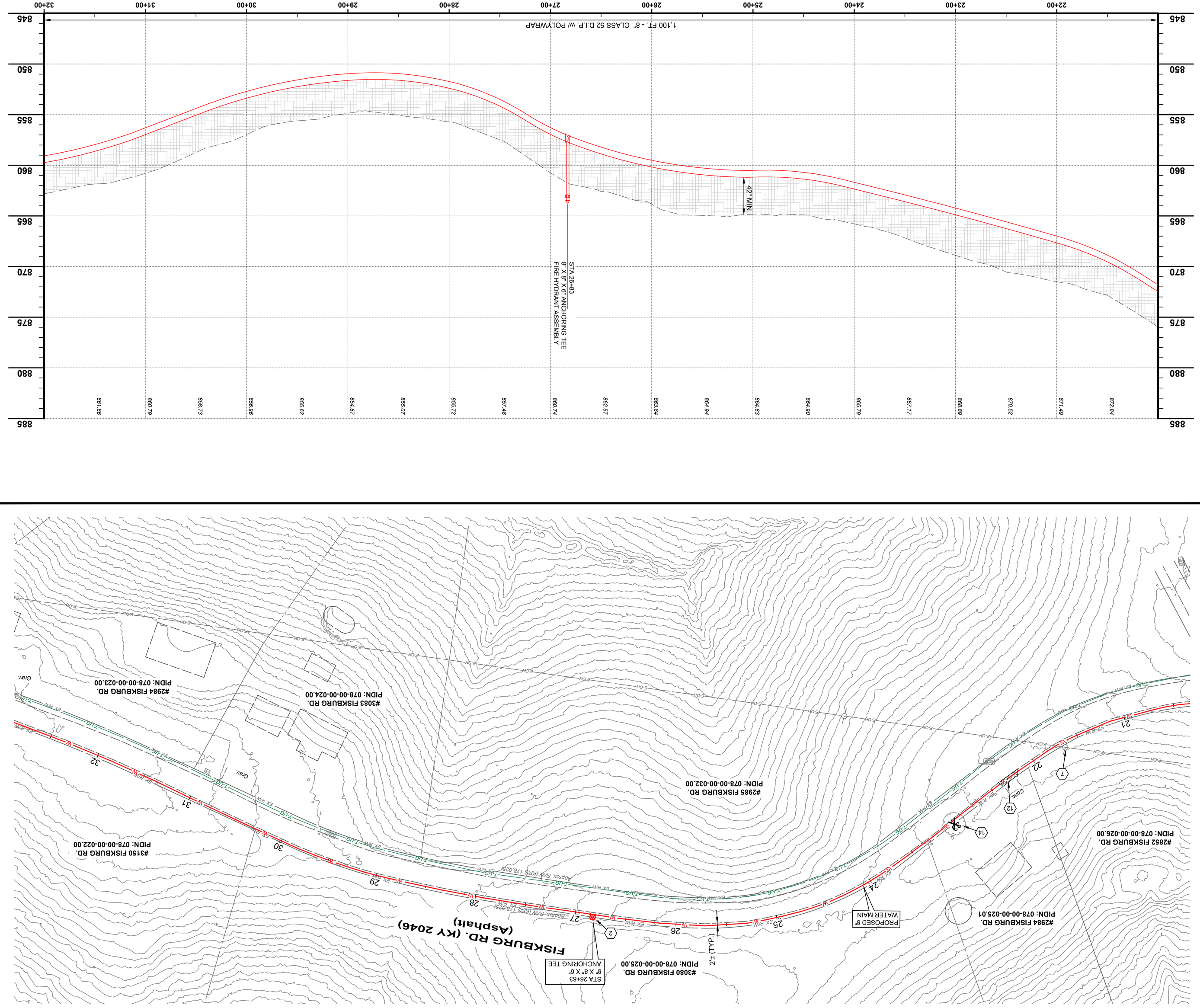
CONSTRUCTION NOTES

1. MAINTAIN MANAGEABLE VERTICAL CLEARANCE BETWEEN THE PROPOSED WATER MAIN AND THE EXISTING STORM SEWER, WATER MAIN, TELEPHONE DUCTS, AND GAS MAIN. CONSTRUCT ALL SANITARY SEWER CROSSINGS PER K.W.W.D. SPECIFICATIONS ITEM 1.14. MAINTAIN MINIMUM 18" BETWEEN THE PROPOSED WATER MAIN AND THE EXISTING SANITARY SEWER. ACTUAL ELEVATION UNKNOWN. CONTRACTOR TO EXCAVATE & VERIFY ACTUAL LOCATION, SIZE AND ELEVATION OF EXISTING UTILITY PRIOR TO BEGINNING WATER MAIN CONSTRUCTION. THE CONTRACTOR SHALL NOTIFY THE ENGINEER PRIOR TO CONSTRUCTION OF ANY POTENTIAL CONFLICT. NO ADDITIONAL PAYMENT WILL BE MADE FOR THIS WORK AND THE COST SHALL BE INCLUDED IN THE BID ITEM FOR WATER MAIN.
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6. DO NOT DISTURB
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- ASPHALT DRIVEWAY REPLACEMENT - SEE DETAIL SHEET
- GRAVEL DRIVEWAY REPLACEMENT - SEE DETAIL SHEET
- CHANNEL LINING, CLASS II - SEE DETAIL SHEET

SCALE: 1" = 50'





H:\2023\23191\DWG\SHEETS\C-23191 PMP-13_PSMUMU.DWG - PSMUMU-2 - 2/18/2025 2:33:23 PM - JAMES CONNELL

APPROVED
FOR CONSTRUCTION
Mar 04, 2026
TJR
CIVIL
Kentucky
Kentucky

NORTHERN KENTUCKY WATER DISTRICT
SUBDISTRICT 'O'
-KENTON COUNTY -

FISKBURG ROAD
STA. 32+00 TO STA. 43+00

PROJECT NO	23-1691
DESCRIPTION	CIVIL
SHEET NAME	C-14
SHEET	21 OF 28

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NO	REVISION	DATE
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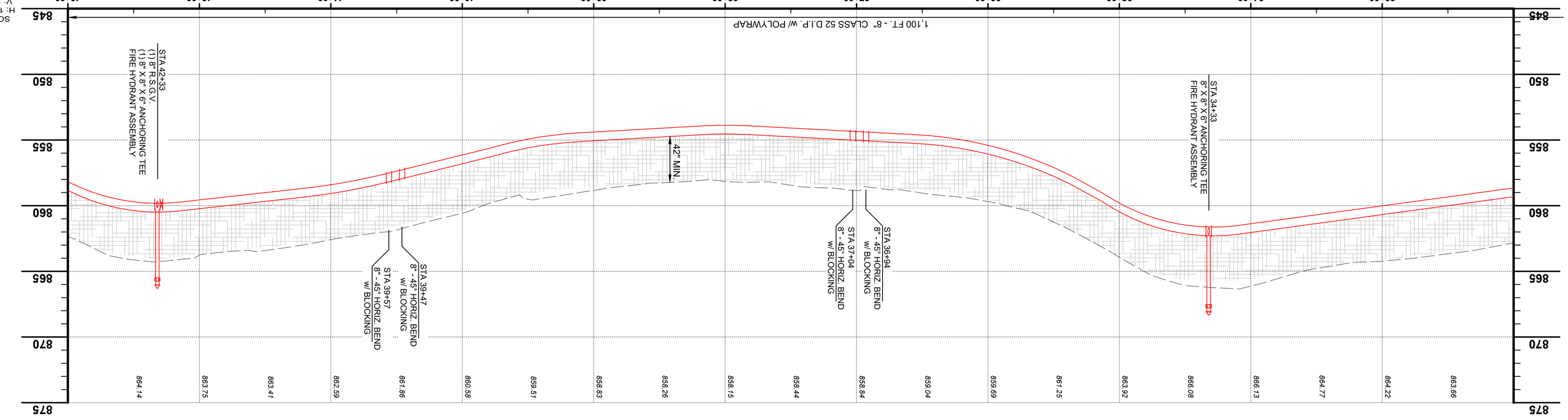
ISSUED FOR:	BID
ISSUE DATE:	FEB 2025
SCALE:	AS SHOWN
DESIGNED BY:	JCOR
DRAWN BY:	JCOR
CHECKED BY:	JSHU

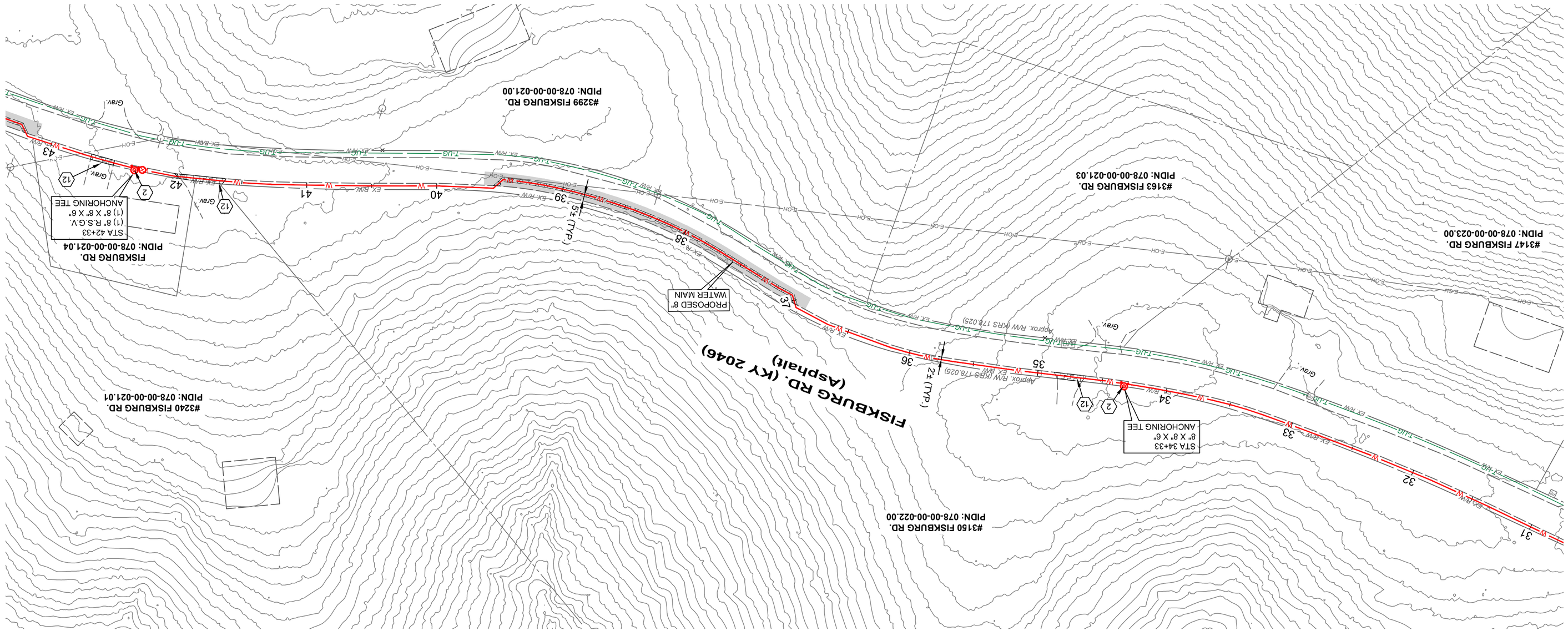
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3. CONNECT TO EXISTING WATER MAIN (ACTUAL ELEVATION UNKNOWN). CONTRACTOR TO VERIFY DEPTH PRIOR TO CONSTRUCTION.
4. CHANNEL LINING, CLASS II (12") W/ NON-WOVEN GEOTEXTILE FILTER FABRIC
5. CONTRACTOR TO VERIFY LOCATION AND ELEVATION OF UTILITY PRIOR TO EXCAVATION ACTIVITY AND NOTIFY ENGINEER AND K.W.W.D. OF CONFLICTS.
6. DO NOT DISTURB
7. CONTRACTOR TO SUPPORT UTILITY POLE DURING PIPE INSTALLATION
8. REMOVE AND REPLACE SIGN
9. REMOVE AND REPLACE MAILBOX
10. INSTALL 5/8" METER SETTING PER NKWD STD. DWG. No. 107. INSTALL WATER SERVICE LINE (3/4" TYPE K COPPER) FROM THE PROPOSED WATER MAIN TO THE METER SETTING. MATERIAL WILL BE PROVIDED BY NKWD FOR THIS WORK. UNIT PRICE INCLUDES LABOR, EQUIPMENT, EXCAVATION, BEDDING, BACKFILL, ASPHALT, CONCRETE AND YARD RESTORATION TO INSTALL SERVICE LINE AS SHOWN ON PLANS OR DIRECTED BY NKWD IN ACCORDANCE WITH SPECS & STD. DWGS., COMPLETE.
11. REMOVE AND REPLACE EXISTING STORM STRUCTURE (CB,HW) AS NEEDED FOR WATER MAIN INSTALLATION
12. DRIVEWAY RESTORATION (SEE DETAILS)
13. CONSTRUCT CLAY BULKHEAD IN TRENCH WITH UNDERDRAIN. DAYLIGHT UNDERDRAIN TO DITCH OR DRAINAGE STRUCTURE
14. TREE TO BE REMOVED

HATCH LEGEND

- 1-1/2" ASPHALT PAVEMENT MILL AND OVERLAY AREA
- TRENCH RESTORATION - ASPHALT PAVEMENT - SEE DETAIL SHEET
- TRENCH RESTORATION - CONCRETE PAVEMENT - SEE DETAIL SHEET
- TRENCH RESTORATION - 8" AGGREGATE PAVEMENT
- CONTROL DENSITY FILL - PAVT TRENCH
- CONCRETE DRIVEWAY REPLACEMENT - SEE DETAIL SHEET
- CONCRETE WALK REPLACEMENT - SEE DETAIL SHEET
- ASPHALT DRIVEWAY REPLACEMENT - SEE DETAIL SHEET
- GRAVEL DRIVEWAY REPLACEMENT - SEE DETAIL SHEET
- CHANNEL LINING, CLASS II - SEE DETAIL SHEET

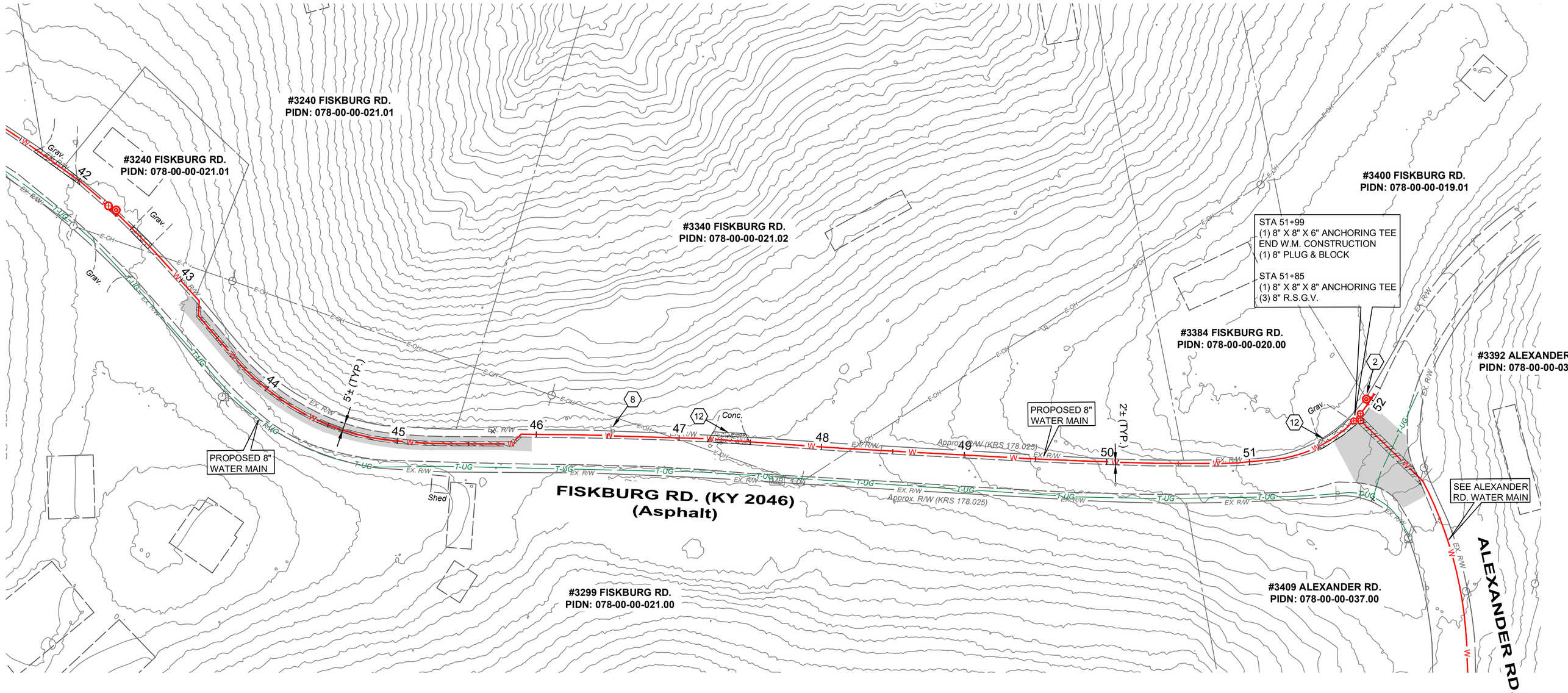




SCALE: 1" = 50'
0' 50' 100'

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0' 50'' 100'

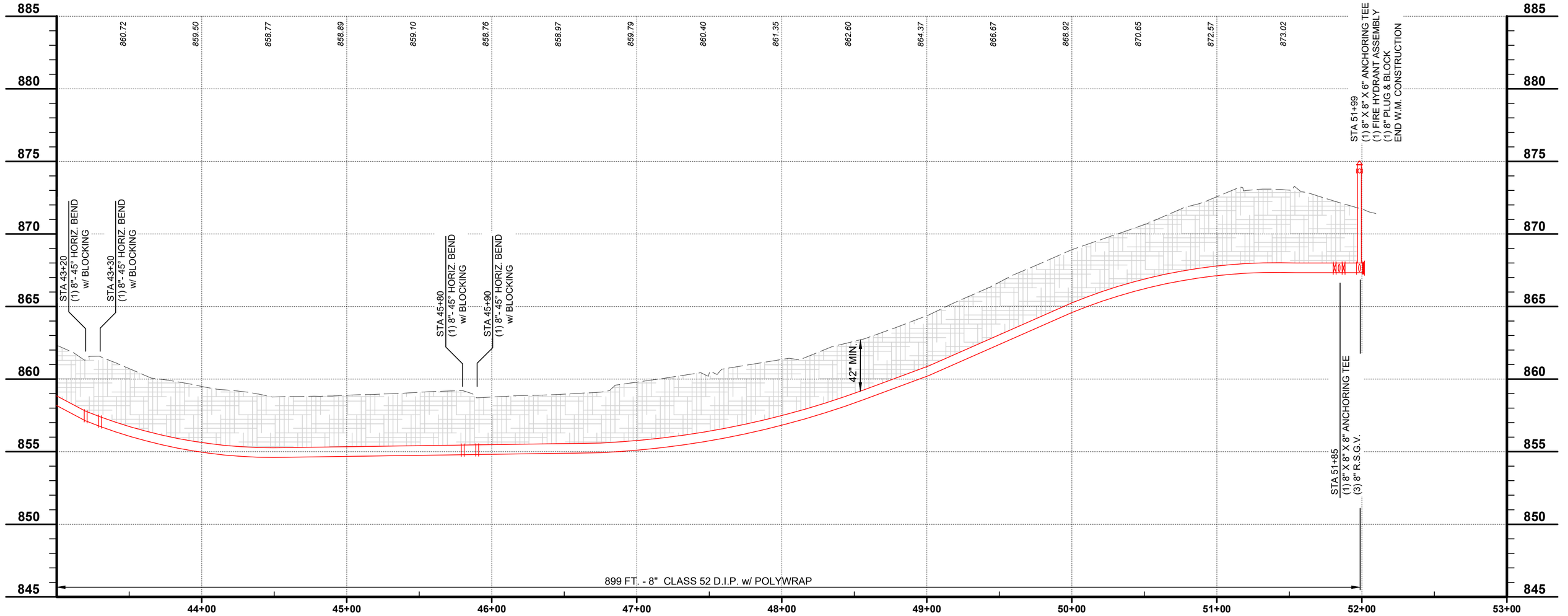
SCALE: 1" = 50

CONSTRUCTION NOTES

1. MAINTAIN MANAGEABLE VERTICAL CLEARANCE BETWEEN THE PROPOSED WATER MAIN AND THE EXISTING STORM SEWER, WATER MAIN, TELEPHONE DUCTS, AND GAS MAIN. CONSTRUCT ALL SANITARY SEWER CROSSINGS PER N.K.W.D. SPECIFICATIONS ITEM 1.14. MAINTAIN MINIMUM 18" BETWEEN THE PROPOSED WATER MAIN AND THE EXISTING SANITARY SEWER, ACTUAL ELEVATION UNKNOWN. CONTRACTOR TO EXCAVATE & VERIFY ACTUAL LOCATION, SIZE AND ELEVATION OF EXISTING UTILITY PRIOR TO BEGINNING WATER MAIN CONSTRUCTION. THE CONTRACTOR SHALL NOTIFY THE ENGINEER PRIOR TO CONSTRUCTION OF ANY POTENTIAL CONFLICT. NO ADDITIONAL PAYMENT WILL BE MADE FOR THIS WORK AND THE COST SHALL BE INCLUDED IN THE BID ITEM FOR WATER MAIN.
2. PROPOSED FIRE HYDRANT ASSEMBLY, VALVE AND BLOCKING AS PER N.K.W.D. STD. DRAWING NO. 109. COORDINATE LOCATION WITH N.K.W.D. INSPECTOR. ANCHOR VALVE TO TEE.
3. CONNECT TO EXISTING WATER MAIN (ACTUAL ELEVATION UNKNOWN). CONTRACTOR TO VERIFY DEPTH PRIOR TO CONSTRUCTION.
4. CHANNEL LINING, CLASS II (12") w/ NON-WOVEN GEOTEXTILE FILTER FABRIC
5. CONTRACTOR TO VERIFY LOCATION AND ELEVATION OF UTILITY PRIOR TO EXCAVATION ACTIVITY AND NOTIFY ENGINEER AND N.K.W.D. OF CONFLICTS.
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- CONCRETE DRIVEWAY REPLACEMENT - SEE DETAIL SHEET
- CONCRETE WALK REPLACEMENT - SEE DETAIL SHEET
- ASPHALT DRIVEWAY REPLACEMENT - SEE DETAIL SHEET
- GRAVEL DRIVEWAY REPLACEMENT - SEE DETAIL SHEET
- CHANNEL LINING, CLASS II - SEE DETAIL SHEET



SCALE:
H: 1" = 50'
V: 1" = 5'

your trusted advisor — engineers architects planners consultants

NO	REVISION	DATE
.	.	.

ISSUED FOR: BID
ISSUE DATE: FEB 2025
SCALE: AS SHOWN
DESIGNED BY: JCOR
DRAWN BY: JCOR
CHECKED BY: JSHU

NORTHERN KENTUCKY WATER DISTRICT
SUBDISTRICT 'O'
-KENTON COUNTY -

FISKBURG ROAD
STA. 43+00 TO STA. 52+27

PROJECT NO. 231591
DISCIPLINE CIVIL
SHEET NAME C-15
SHEET 22 OF 28

APPROVED
MARCH 21, 2025
KENTUCKY-AMERICAN WATER COMPANY

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KYTC Division of Maintenance

Permits Branch
District 6

ENCROACHMENT PERMIT GENERAL NOTES & SPECIFICATIONS

YOU MUST NOTIFY KYTC BEFORE BEGINNING ANY WORK IN THE RIGHT-OF-WAY. ***Failure to alert KYTC of working within the right of way may result in permit revocation.***

Two ways to notify KYTC of your construction start date:

By Email: KYTCD6PERMITS@KY.GOV

**must include permit number and county in subject line*

By Phone: 859-341-2700

**must know permit number and county when calling*

YOU MUST ALSO NOTIFY KYTC UPON COMPLETION OF WORK WITHIN RIGHT-OF-WAY. ***Failure to alert KYTC of completion of work may result in withholding release of any associated bonds.***

Kentucky UNBRIDLED SPIRIT™

APPROVED
March 20, 2024
Kentucky Transportation Cabinet
06-2024-00696

I. SAFETY

A. General Provisions

☑ All signs and control of traffic shall be in accordance with the Manual on Uniform Traffic Control Devices (MUTCD) for Streets and Highways, latest edition, Part VI, and safety requirements shall comply with the Permits Manual. Federal law requires that traffic control shall be implemented in accordance with MUTCD standards and KYTC's Standard Specifications for Road and Bridge Construction (KYTC SSRBC) under the supervision of a certified Work Zone Traffic Control Supervisor.

☑ All work necessary in shoulder or ditch line areas of a state highway shall be scheduled to be promptly completed so that hazards adjacent to the traveled way are kept to an absolute minimum.

☑ No more than one (1) traveled-lane shall be blocked or obstructed during normal working hours. All signs and flaggers during lane closure shall conform to the MUTCD. The traveled-way and shoulders shall be kept clear of mud and other construction debris at all times during construction of the permitted facility. No non-construction equipment or vehicles or office trailers shall be allowed on the right of way during working hours. The right of way shall be left free and clear of equipment, material, and vehicles during non-working hours.

☑ When necessary to block one (1) traveled-lane of a state highway, the normal working hours shall be as directed by the Department. No lanes shall be blocked or obstructed during adverse weather conditions (rain, snow, fog, etc.) without specific permission from the Department.

☑ Working hours shall be between **9:00 AM** and **3:00 PM**. Further date and time restrictions are as follows:

B. Explosives

☑ No explosive devices or explosive material shall be used within state right of way without proper license and approval of the Kentucky Department of Mines and Minerals, Explosive Division.

C. OSHA

☑ Kentucky Occupational Safety and Health Standards for the construction industry, which has the effect of law, states in part: (Page 52, 1926.651, Specific Excavation Requirements) "Prior to opening an excavation, effort shall be made to determine whether underground installations, (sewer, telephone, water, fuel, electric lines, etc.) will be encountered, and if so, where such underground installations are located. When the excavation approaches the estimated location of such an installation, the exact location shall be determined, and when it is uncovered, proper supports shall be provided for the existing installation. Utility companies shall be contacted and advised of proposed work prior to the start of actual excavation."

D. Archaeological

☑ Whenever materials of an archaeological nature are discovered during the course of construction work or maintenance operations, contact shall be made immediately with the Division of Environmental Analysis, which maintains an archaeologist on staff, or with the Office of the State Archaeologist located at the University of Kentucky. Following this consultation, further action shall be decided on a case-by-case basis by the State Highway Engineer or the Transportation Planning Engineer or their designated representative.

E. Environmental

☑ If the activity to which this permit related disturbs one acre of more of land, you must obtain KPDES KYR10 permit. Information can be found at http://water.ky.gov/permitting/Pages/GeneralPermits.aspx

F. Additional Notes

☑ The following additional notes apply to this permit:

24 hour notice is required prior to restoration of pavement, concrete or topsoil. Call Rick Shay at 859-307-5768

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II. UTILITIES

- [x] The permittee shall be responsible for any damage to existing utilities. Any utility modifications or relocations within state right of way necessary, as determined by the Department or by the owner of the utility, shall be at the expense of the permittee and subject to the approval of the Department. Operators of underground utilities in right of way shall be members of Kentucky 811.

- [ ] All existing manholes and valve boxes shall be adjusted to be flush with finished grade.

- [x] All pavement cuts shall be restored per Kentucky Transportation Cabinet standards and specifications.

- [x] Any excavation within 3' of edge of pavement will require flowable fill as backfill.

- [x] The clear zone requirement shall be met to the extent possible in accordance with the Roadside Design Guide.

- [ ] Encasement pipe shall conform to current standards for highway crossings in accordance with the Permits Manual. Pipe encasing shall not be required if the pipe crossing is 2" or less.

- [ ] Aerial crossing of utility lines shall have a minimum clearance from the high point of the roadway to the low point of the line of 24' on fully controlled access highways and 18' on non-fully controlled access highways

- [x] Minimum depth for underground Gas and Electric lines is 60" under roadways, ramps, and ditch lines and 42" in all other areas within state right of way. The minimum depth for all other utilities is 42" in all areas.

- [x] When steel plates are installed over an open excavation in the roadway, they must be anchored to the pavement and have asphalt applied to all exposed edges and an MUTCD approved sign noting "Road Plates Ahead." KYTC must be notified of the location, date, time, and permit number associated to BOTH the installation and removal of the plate. Failure to do so may result in permit revocation.

- [ ] Utility poles moved for replacement must be removed in their entirety and the hole left behind must be backfilled.

- [ ] No poles or anchors shall be installed in a roadside ditch.

- [ ] ***Utility notes specific to fully-controlled access highways ONLY:***
All work necessary within the right-of-way shall be performed behind a temporary fence erected prior to the start of work. The temporary woven wire fence shall be removed immediately upon completion of work on the right-of-way, and the control of access immediately restored to original condition, in accordance with applicable KYTC SSRBC. All vents, valves, manholes, etc., shall be located outside of the right-of-way. Encasement pipe shall extend from right-of-way line to right-of-way line and shall be one continuous run of pipe. The encasement pipe shall be welded at all joints. The boring pit and tail ditch shall extend past the existing toe of slope or bottom of ditch line and shall be a minimum of 42 inches deep. Work in interstate right-of-way requires approval from FHWA (Federal Highway Administration).

- [ ] Additional notes:

MINIMUM COVER MUST BE 60" IN THE ROW AND UNDER PAVEMENT

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III. DRAINAGE

☑ Negative impacts to existing drainage will be the applicant's responsibility to repair in accordance with KYTC SSRBC.

☐ All pipe shall be laid in a straight alignment, to proper grades, and with all materials and methods of installation including bedding and joint seating. Pipe shall not be covered until inspected by the Department and express permission obtained to make backfill. It is the applicant's responsibility to request inspection.

☐ All gutter lines at the base of new curbs shall be on continuous grades, and pockets of water along with curbs or in entrance areas or other paved areas within the right-of-way shall not be acceptable.

☐ All drainage structures and appurtenances (manholes, catch basins, curbing, inlet basins, etc.) shall conform to the Department specifications and shall be constructed in accordance with the KYTC's Standard Drawings.

☐ Additional notes:

IV. PAVING

☑ No bituminous pavement shall be installed within the right of way between November 15 and April 1, nor when the temperature is below 40 degrees Fahrenheit, without the express consent of the Department. No bituminous pavement shall be installed when the underlying course is wet.

☑ Paving within the right of way shall be as follows:

- Base (Type): **Match Existing**, (Thickness) **Match Existing**
- Surface Base (Type) **Match Existing** , (Thickness) **Match Existing**
- Finished Surface (Type) **Match Existing**, (Thickness) **Match Existing**

☑ All materials and methods of construction, including base and subgrade preparation, shall be in accordance with KYTC's Standard Specifications. At least 24 hours notice to the Department is required prior to beginning paving operations.

Phone: **859-307-5768** Name: **Rick Shay**

☑ Utility companies performing road cuts must restore the pavement to pre-existing condition. Pictures/videos are recommended to ensure proper placement of signs and lane markers that are temporarily removed for paving operations. In some cases, a pre-work inventory may be requested from the Department.

☑ Existing pavement and shoulder material shall be removed to accommodate the above paving specifications.

☑ The finished surface of all new pavement within the right of way shall be true to the required slope and grade, uniform in density and texture, free of irregularities, and equivalent in riding qualities to the adjacent highway pavement or as determined by KYTC.

☑ To ensure proper surface drainage, the new pavement shall be flush with the edge of existing highway pavement and shall slope away from the existing edge of the pavement as specified in drawings.

☑ Existing edge of pavement shall be saw-cut to provide a straight and uniform joint for new pavement, and an edge key will be installed in the overlap. An approved joint sealer, in accordance with Kentucky Department of Highways Standard Specifications (latest edition), shall be applied between new and existing pavements.

☐ Additional notes:

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V. ENTRANCES

☐ Encroachment permits issued by KYTC in no way supersede local planning/zoning requirements or subdivision regulations. KYTC has no authority with zoning changes.

☐ Commercial entrances must be paved to the right-of-way line. Any deviations must be approved by KYTC before installation.

☐ KTYC can dictate drainage improvement installation during construction or after entrance is at final grade. The permit release does not release the permit applicant from drainage maintenance.

☐ Signs (ground-mounted and span-mounted), stop bars, crosswalk, and proper lane markings must be in-place before entrance is open for traffic. Lane width modifications must be approved by the Department.

☐ Guardrail installation must be pre-approved by the Department and installed by a KYTC pre-qualified contractor. Any guardrail that is removed during construction must be returned to the local KTYC maintenance facility.

☐ Additional notes:

VI. TRAFFIC

☑ Any contractor performing work within the vicinity of KYTC roadway lighting or traffic signals, must request locates from the KYTC District 6 Traffic section at least one week before of starting work in the right-of-way.

☐ Applicant must maintain all KYTC Roadway signage that is impacted by the permitted work. In the event that any signs have to be moved, it is the applicant's responsibility to mark the sign's location before removal and to install the original or new sign per KYTC standards for sign installation.

☐ Any thermoplastic or striping damaged during the encroachment must be restored in a timely manner per KYTC standards. Stopbars, arrows, and crosswalks must be thermoplastic material, paint is not acceptable. This work must be performed by a KYTC pre-qualified contractor.

☐ Excavating near a signal, lighting pole, or anchoring facility must be done so that it does not impact the structural integrity of the pole. Any work that requires a temporary support or anchoring must receive prior approval.

☐ If the scope of the permit involves a signal build or rebuild, it is the applicant's responsibility to apply for power service (and pay monthly electrical bill) as well as request electrical inspection from the KYTC District 6 Traffic section. If the signal modifications require timing or phasing changes this must be requested at least two weeks in advance of the signal's turn-on date. KYTC will not take ownership of permitted signals until the electrical inspection is formally accepted and approved.

☐ Work which impacts traffic loops requires 48-hour notice to the KYTC District 6 Traffic section at 859-341-2700. Accidental damage of a traffic loop must be reported immediately to KYTC District 6's emergency line at 859-620-2738. Any disturbed traffic loops must be replaced in a timely manner. Traffic loops out of operation for more than five working days will subject the applicant to the cancellation of the permit. Loop repair must be performed by a KYTC pre-qualified contractor.

☐ Additional Notes:

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VII. SIDEWALK SPECIFICATIONS

☐ All sidewalk modifications, retrofitting, or installations must meet current ADA guidelines

A. New Sidewalks

☐ New sidewalk specifications, dimensions, and designs shall be in accordance with KYTC's latest edition of the Standard Specifications, or with the plans provided on the permit if approved by a KYTC D6 Construction or Permits Engineer.

☐ All materials and methods of construction, including curing, shall be in accordance with KYTC's latest edition of the Standard Specifications.

B. Existing Sidewalks

☐ Use of the sidewalk shall not be blocked or obstructed and a usable walkway shall be maintained across the construction area at all times per MUTCD . Sidewalk closures must be approved by the Department before implementation.

☐ The location of ADA ramps (truncated domes/tactile warnings/etc.) will need to be field verified by KYTC before installation.

☐ Any section of sidewalk that becomes damaged shall be entirely replaced to match existing sections.

☐ Additional notes:

VIII. RIGHT OF WAY RESTORATION

☑ All disturbed portions of the right of way shall be restored to grass as per Kentucky Department of Highways Standard Specifications for Road and Bridge Construction (latest edition). A satisfactory turf, as determined by the Department, shall be established by the permittee prior to release of indemnity. Sodding or seeding shall be as follows:

- ☑ Slopes 3:1 or Less: 90% Kentucky 31 Tall Fescue and 10% White Dutch Clover at 100 lbs/acre
- ☑ Slopes Greater than 3:1: 90% Kentucky 31 Tall Fescue and 10% Partridge Pea at 100 lbs/acre
- ☑ Urban or Residential Areas: 95% Turf Type Fall Fescue Blend and 5% White Dutch Clover at 275 lbs/acre

☑ Two tons of clean straw mulch per acre of seeding.

☑ Prior to seeding, the ground shall be prepared in accordance with Kentucky Department of Highways Standard Specifications for Road and Bridge Construction (latest edition).

☐ Substitutes for sod such as artificial turf, rocked mulch, or paved areas may be acceptable if they are aesthetically pleasing and receive prior approval from KYTC.

☐ All ditch-flow lines and all ditch-side slopes shall be sodded.

☐ Existing concrete right of way markers shall not be disturbed. If damaged in any way, they shall be entirely replaced by the permittee with new concrete markers to match the original markers, in accordance with Kentucky Department of Highways Standard Drawings. Markers that are entirely removed shall be re-established in the proper locations by the permittee and to the satisfaction of the Department.

☐ Additional notes:

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IX. RIGHT OF WAY FENCE RESTORATION

- ☐ The replacement fence shall be a height of at least 48 inches and shall be of sufficient density to protect against encroachment.
- ☐ The replacement fence shall be a minimum of 1 foot and a maximum of 2 feet outside the right-of-way line
- ☐ The fence materials and design shall meet accepted industry standards and be treated as paintable. Durable finish materials such as vinyl are acceptable.
- ☐ The permittee shall be required to construct and maintain the replacement fencing to an acceptable level of functionality and state of repair. All work on the fencing shall be performed by access from the private property. Access from the roadway is not allowed.
- ☐ The existing fence shall be removed by permittee and stored at the Department's maintenance storage yard for future reuse by the Department, or the Department shall be reimbursed the cost of fencing removed.
- ☐ Right of way monuments shall be installed regardless of if replacement fence is installed or not.
- ☐ The control of access shall not be diminished as a result of replacement of the fence.
- ☐ Additional notes:

X. MISCELLANEOUS NOTES

NOTICE TO PERMITTEE

THE PERMITTEE AGREES THAT ALL WORK WITHIN THE EXISTING RIGHT OF WAY SHALL BE DONE IN ACCORDANCE WITH THE CURRENT KYTC STANDARD SPECIFICATIONS AND THE PLANS AS APPROVED AND PERMITTED BY AN ENCROACHMENT PERMIT. ANY CHANGES OR VARIANCES MADE AT THE TIME OF CONSTRUCTION WITHOUT WRITTEN APPROVAL FROM THE DEPARTMENT OF HIGHWAYS SHALL BE REMOVED BY THE PERMITTEE AT NO EXPENSE TO THE DEPARTMENT OF HIGHWAYS AND SHALL BE REDONE BY THE PERMITTEE TO CONFORM WITH THE APPROVED PLANS.

APPROVED
KENTUCKY TRANSPORTATION CABINET
DATE: 12/2/2025

INTRODUCTION

The Northern Kentucky Water District is in the design phase for the installation of new 8” water mains within various unserved areas of Kenton County. One of these areas is along Fiskburg Road (KY 2046) from Goshorn Road to Alexander Road. It is understood that KYTC policy per the Utilities Chapter of their Permits Manual states that new or relocated utility facilities shall not be installed longitudinally under pavement. It also states that exceptions to this requirement can be permitted at the discretion of the State Highway Engineer. NKWD is requesting that an exception to this requirement be granted for the project due to several existing condition conflicts that prevent NKWD from meeting this requirement. This report outlines the existing conditions that create the conflicts that NKWD is facing. See applicable plan set sheets included with this submittal to reference to the written descriptions.

PROPOSED ALIGNMENT

The proposed water main alignment begins at the intersection of Fiskburg Road and Goshorn Road and will connect to the existing 8” water main at station 10+34. For the most part, the proposed water main will follow just outside of the northern pavement edge.

Station 37+00 to Station 39+50

The existing terrain in this area is characterized by a steep slope from the roadway edge. To continue the water main alignment outside of the pavement area could present unfavorable conditions for constructing a water main. NKWD is proposing shifting the alignment into the north lane for approximately 150 feet through the area of concern and then returning the alignment back outside of the roadway. The impact to traffic would be

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minimized with a single lane closure and the water main could be placed in more stable soil.

Station 43+25 to Station 46+00

Once again, the existing terrain in this area is characterized a steep slope from the roadway edge. To continue the water main alignment outside of the pavement area could present unfavorable conditions for constructing a water main. NKWD is proposing shifting the alignment into the north lane for approximately 150 feet through the area of concern and then returning the alignment back outside of the roadway. The impact to traffic would be minimized with a single lane closure and the water main could be place in more stable soil.

Road crossings at Station 19+96 and Station 51+99

These two locations are tie-in points for the Pfanstiehl Road (Sta. 19+96) and Alexander Road (Sta. 51+99) proposed water mains.

Additional Alignment Notes

As shown on the plans, the proposed Fiskburg water main will also feed the proposed water main on both Phanstiehl Road and Alexander Road. Originally the preliminary alignment was presented along the south edge of Fiskburg Road and was based off of the proposed water main being able to fit within the right-of-way alongside of an underground Alta Fiber line. After multiple requests, the UG line was field marked. The Alta Fiber line was determined to be in the middle of the limited space between the south edge of pavement and the south R/W line along the whole Fiskburg Road corridor. After discussing the situation with NKWD, it was determined that the available space along the buried cable would not be sufficient for common trenching methods. In

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architects
planners

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addition, the Kentucky Public Service Commissions guidelines recommend hand digging any excavation within 2 feet of a buried utility which would be impractical for this 4,200 feet corridor. Finally, the narrow right-of-way width (30' total per KRS 178.025) does not allow enough room to construct the new water main on the south side behind the underground Alta Fiber line while still remaining in the existing R/W.

If an exception to the KYTC requirements cannot be granted for the Fiskburg Road water main project, NKWD will likely not be able to offer the planned water main extension for the Pfanstiel Road and Alexander Road projects.

SUMMARY

Given the location of the underground Alta Fiber cable and the surrounding terrain, the current proposed alignment is the only feasible alignment for the proposed work. The proposed alignment has met the KYTC requirements where possible. In the areas where it was not possible to meet those requirements, the alignment was laid out to try to minimize the impact on traffic and to minimize the length of water main installation longitudinally in the pavement that does not meet KYTC's standard requirements.

It is anticipated that conventional trench excavation will be utilized in the (4) areas noted where the water main installation encroaches into the pavement. Jack and bore installation for the longitudinal pavement cuts would not be feasible since the casing pipe could only be utilized between the horizontal bends requiring the launch and receiving pits to be in the pavement thus creating traffic safety concerns and still impacting traffic flow. For the two roadway crossings at Pfanstiehl Road and Alexander Road, again jack and bore installation would not be feasible largely due to the minimal 30 feet right-of-way width that would require the launch pits to also encroach into the pavement area creating the same safety and traffic concerns mentioned previously.

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In each of these 4 instances, the casing pipe ends would be in the pavement and any future water main repairs would disturb the pavement. In addition, utilizing casing pipe access for repairs would require pulling a new piece of pipe the length of the casing which would extend the repair time, traffic impact and impact to residential service since this main would be a one-way feed verses spot repair via open trench excavation. For these reasons, a non-encased 8” ductile iron water main installed by open cut methods is recommended at these four locations. Traffic would only be impacted during working hours with a single lane closure (per TT-100-05) having both lanes opened during non-working hours by the utilization of secured steel plating where the trench has not been backfilled per plans set Maintenance of Traffic notes.

NKWD request that KYTC grant an exception to the requirements for this specific case. If you have any questions about the proposed alignment, please contact Jim Shumate at jshumate@ctconsultants.com or at 859-534-9931.

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NOTICE OF COMPLETION OF ENCROACHMENT PERMIT WORK

PERMITTEE

Name: Northern Kentucky Water District
Contact Person: Steve Broering
Address: 2835 Crescent Springs Road
City: Ft. Wright
State: Kentucky
Zip: 41017
Telephone: (859) 991-1652

PROJECT IDENTIFICATION

Permit Number: 06-2024-00844

I wish to notify the Department of Highways that the above mentioned permit work and any necessary right-of-way restoration have been completed and are ready for final inspection.

Permittee

Please return this form to the address below when work is completed and ready for final inspection.

Please Return to: Permit Engineer
Department of Highways, District 6 Office
421 Buttermilk Pike
Covington, Kentucky 41017
(859) 341-2700
www.transportation.ky.gov/

LOCATION(S)			
Description	**County - Route**	**Latitude**	**Longitude**
PROPOSED 8" WATER MAIN INSTALLATION ON STEEP CREEK RD. THAT TIES INTO EXISTING 8" WM ON DECOURSEY PIKE	Kenton - KY 177	38.934462	-84.471393

APPROVED
AUGUST 27, 2024
KENTUCKY TRANSPORTATION CABINET
06-2024-00844

Andy Beshear
Governor

COMMONWEALTH OF KENTUCKY
TRANSPORTATION CABINET
Department of Highways, District 6 Office
421 Buttermilk Pike
Covington, Kentucky 41017
(859) 341-2700
www.transportation.ky.gov/

Jim Gray
Secretary

August 27, 2024

Northern Kentucky Water District
Steve Broering
2835 Crescent Springs Road
Ft. Wright, Kentucky 41017

Subject: Permit #: 06-2024-00844
Permit Type: Utilities - Water
Approval

Dear Applicant:

Attached is your permit approval and documentation for the subject permit.

Be advised that all work must be done in conformity with permit and application conditions. If you have any questions, please contact the Permits Section at this office.

Sincerely,

Linzy Brefeld

Linzy Brefeld
D6 Permits Supervisor

Attachments

APPROVED
AUGUST 27, 2024
KENTUCKY TRANSPORTATION CABINET
06-2024-00844

Kentucky Transportation Cabinet
Department of Highways
Division of Maintenance
Permits Branch

ENCROACHMENT PERMIT

KYTC KEPT #: 06-2024-00844

Permittee: Northern Kentucky Water District

Permit Type / Subtype: Utilities / Water

Work Completion Date: 8/27/2025

INDEMNITIES		
Type	**Amount Required**	**Tracking Number**
Performance Bond	$0.00	
Cash / Check	$0.00	
Self-Insured	$0.00	
Payment Bond	$0.00	
Liability Insurance	$0.00	

This permit has been: **APPROVED** [X] **DENIED** [ ]

Linzy Brefeld	D6 Permits Supervisor	8/27/2024
SIGNATURE	**TITLE**	**DATE**

The TC 99-1(B), including the application TC-99 1(A) and all related and accompanying documents and drawings make up the permit. It is not a permit unless both the TC 99-1(A) and TC 99-1(B) are both present.

LOCATION(S)			
Description	**County - Route**	**Latitude**	**Longitude**
PROPOSED 8" WATER MAIN INSTALLATION ON STEEP CREEK RD. THAT TIES INTO EXISTING 8" WM ON DECOURSEY PIKE	Kenton - KY 177	38.934462	-84.471393

APPROVED
AUGUST 27, 2024
TRANSPORTATION CABINET
06-2024-00844

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KENTUCKY TRANSPORTATION CABINET
Department of Highways
PERMITS BRANCH

APPLICATION FOR ENCROACHMENT PERMIT

KYTC KEPT #: 06-2024-00844

SECTION 1: APPLICANT CONTACT INFORMATION

APPLICANT NORTHERN KY WATER DISTRICT	**ADDRESS** 2835 CRESCENT SPRINGS PIKE		
EMAIL sbroering@nkywater.org	**CITY** ERLANGER	**STATE** KY	**ZIP** 41018
CONTACT NAME 1 Steve Broering	**EMAIL** sbroering@nkywater.org	**PHONE #** 859-426-2728 **CELL #**	
CONTACT NAME 2 (*if applicable*)	**EMAIL**	**PHONE #** **CELL #**	

SECTION 2: PROPOSED WORK LOCATION

ADDRESS	**CITY** LATONIA		**STATE** Kentucky	**ZIP** 41015
COUNTY KENTON	**ROUTE #** 177	**MILE POINT** 11.25	**LONGITUDE** (*X*) 84D28'17"W	**LATITUDE** (*Y*) 38D56'04"N

ADDITIONAL LOCATION INFORMATION:
DECOURSEY PIKE (KY 177) FROM RYLAN LAKES DRIVE TO STEEP CREEK ROAD

FOR KYTC USE ONLY

PERMIT TYPE: ☐ Air Right ☐ Entrance ☒ Utilities ☐ Vegetation Removal ☐ Other: _____

ACCESS: ☐ Full ☐ Partial ☒ by Permit **LOCATION:** ☐ Left ☐ Right ☐ Crossing

SECTION 3: GENERAL DESCRIPTION OF WORK

PROPOSED 8" WATER MAIN INSTALLATION ON STEEP CREEK RD. THAT TIES INTO EXISTING 8" WM ON DECOURSEY PIKE (KY 177)

THE UNDERSIGNED APPLICANT(s), being duly authorized representative(s) or owner(s), DO AGREE TO ALL ORIGINAL UNEDITED TERMS AND CONDITIONS ON THE TC 99-1A, pages 1-4.

Steve Broering
SIGNATURE

7-15-2024
DATE

This is not a permit unless and until the applicant(s) receives an approved TC 99-1B from KYTC. This application shall become void if not approved by the cancellation date. The cancellation date shall be a minimum of one year from the date the applicant submits their application.

APPROVED
AUGUST 27, 2024
KENTUCKY TRANSPORTATION CABINET
06-2024-00844

APPLICATION FOR ENCROACHMENT PERMIT

TERMS AND CONDITIONS

1. The permit, including this application and all related and accompanying documents and drawings making up the permit, remains in effect and is binding upon the Applicant/Permittee, its successors and assigns, as long as the encroachment(s) exists and also until the permittee is finally relieved by the Department of Highways from all its obligations.

2. Applicant shall meet all requirements of the Clean Water Act if the project will disturb one acre or more, the applicant shall obtain a KPDES KYR10 Permit from the Kentucky Division of Water. All disturbed areas shall meet the requirements of the Department of Highway's Standard Specifications, Sections 212 and 213, as amended.

3. **INDEMNITY:**

- **A.** PERFORMANCE BOND: The permittee shall provide to the Department a performance bond according to the Permits Manual, Section PE-203 as a guarantee of conformance with the Department's Encroachment Permit requirements.
- **B.** PAYMENT BOND: At the discretion of the department, a payment bond shall be required of the permittee to ensure payment of liquidated damages assessed to the permittee.
- **C.** LIABILITY INSURANCE: Liability insurance shall be required of the permittee (in an amount approved by the department) to cover all liabilities associated with the encroachment.
- **D.** It shall be the responsibility of the permittee, its successors and assigns, to maintain all indemnities in full force and effect until the permittee is authorized to release the indemnity by the Department.

4. A copy of this application and all related documents making up the approved permit shall be given to the applicant and shall be made readily available for review at the work site at all times.

5. Perpetual maintenance of the encroachment is the responsibility of the permittee, its successors and assigns, with the approval of the Department as required, unless otherwise stated.

6. Permittee, its successors and assigns, shall comply with and agree to be bound by the requirements and terms of (a) this application and all related documents making up the approved permit, (b) by the Department's Permits Manual, and (c) by the Manual on Uniform Traffic Control Devices, both manuals as revised to and in effect on the date of issuance of the permit, all of which documents are made a part thereof by this reference. Compliance by the permittee, its successors and assigns, with subsequent revisions to applicable provisions of either manual or other policy of the Department may be made a condition of allowing the encroachment to persist under the permit.

7. Permittee agrees that this and any encroachment may be ordered removed by the Department at any time, and for any reason, upon thirty days written notice to the last known address of the applicant or to the address at the location of the encroachment. The permittee agrees that the cost of removing and of restoring the associated right-of-way is the responsibility of the permittee, its successors and assigns.

8. Permittee, its successors and assigns, agree that if the Department determines that motor vehicular safety deficiencies develop as a result of the installation or use of the encroachment, the permittee, its successors and assigns, shall provide and bear the expenses to adjust, relocate, or reconstruct the facilities, add signs, auxiliary lanes, or other corrective measures reasonably deemed necessary by the Department within a reasonable time after receipt of a written notice of such deficiency. The period within which such adjustments, relocations, additions, modifications, or other corrective measures must be completed will be specified in the notice.

9. Where traffic signals are required as a condition of granting the requested permit or are thereafter required to correct motor vehicular safety deficiencies, as determined by the Department, the costs for signal equipment and installation(s) shall be borne by the permittee, its successors and assigns and the Department in its reasonable discretion and only in accordance with the Department's current policy set forth in the Traffic Operations Manual and Permits Manual. Any modifications to the permittee's entrance necessary to accommodate signalization (including necessary easement(s) on private property) shall be the responsibility of the permittee, its successors and assigns, at no expense to the Department.

APPROVED
KENTUCKY TRANSPORTATION CABINET
06-20-2024

APPLICATION FOR ENCROACHMENT PERMIT

10. The requested encroachment shall not infringe on the frontage rights of an abutting owner without their written consent as hereinafter described. Each abutting owner shall express their consent, which shall be binding on their successors and assigns, by the submission of a notarized statement as follows, "I (we), _____, hereby consent to the granting of the permit requested by the applicant along Route _____, which permit does affect frontage rights along my (our) adjacent real property." By signature(s) _____, subscribed and sworn by _____, on this date _____.

11. The permit, if approved, is subject to the agreement that it shall not interfere with any similar rights or permit(s) previously granted to any other party, except as otherwise provided by law.

12. Permittee shall include documentation which describes the facilities to be constructed. Permittee, its successors and assigns, agree as a condition of the granting of the permit to construct and maintain any and all permitted facilities or other encroachments in strict accordance with the submitted and approved permit documentation and the policies and procedures of the Department. Permittee, its successors and assigns, shall not use facilities authorized herein in any manner contrary to that prescribed by the approved permit. Only normal usage as contemplated by the parties and by this application and routine maintenance are authorized by the permit.

13. Permittee, its successors and assigns, at all times from the date permitted work is commenced until such time as all permitted facilities or other encroachments are removed from the right-of-way and the right-of-way restored, **shall defend, protect, indemnify and save harmless** the Department from any and all liability claims and demands arising out of the work, encroachment, maintenance, or other undertaking by the permittee, its successors and assigns, related or undertaken pursuant to the granted permit, due to any claimed act or omission by the permittee, its servants, agents, employees, or contractors. This provision shall not inure to the benefit of any third party nor operate to enlarge any liability of the Department beyond that existing at common law or otherwise if this right to indemnity did not exist.

14. Upon a violation of any provision of the permit, or otherwise in its reasonable discretion, the Department may require additional action by the permittee, its successors and assigns, up to and including the removal of the encroachment and restoration of the right-of-way. In the event additional actions required by the Department under the permit are not undertaken as ordered and within a reasonable time, the Department may in its discretion cause those or other additional corrective actions to be undertaken and the Department shall recover the reasonable costs of those corrective actions from the permittee, its successors and assigns.

15. Permittee, its successors and assigns, shall use the encroachment premises in compliance with all requirements of federal law and regulation, including those imposed pursuant to Title VI of the Civil Right Act of 1964 (42 U.S.C. § 2000d et seq.) and the related regulations of the U.S. Department of Transportation in Title 49 C.F.R. Part 21, all as amended.

16. Permittee, its successors and assigns, agree that if the Department determines it is necessary for the facilities or other encroachment authorized by the permit to be removed, relocated or reconstructed in connection with the reconstruction, relocation or improvement of a highway, the Department may revoke permission for the encroachment to remain under the permit and may order its removal, relocation or reconstruction by the permittee, its successors and assigns, at the expense of the permittee, except where the Department is required by law to pay any or all of those costs.

APPROVED
AUGUST 27, 2024
KENTUCKY TRANSPORTATION CABINET
06-2024-00814

APPLICATION FOR ENCROACHMENT PERMIT

17. Permittee agrees that the authorized permit is personal to the permittee and shall remain in effect until such time as (a) the permittee's rights to the adjoining real property to have benefitted from the requested encroachment have been relinquished, (b) until all permit obligations have been assumed by appropriate successors and assigns, and (c) unless and until a written release from permit obligations has been granted by the Department. The permit and its requirements shall also bind the real property to have benefitted from the requested encroachment to the extent permitted by law. The permit and the related encroachment become the responsibility of the successors and assigns of the permittee and the successors and assigns of each property owner benefitting from the encroachment, or the encroachment may not otherwise permissibly continue to be maintained on the right-of-way. (Does not apply to utility encroachments serving the general public.)

18. If work authorized by the permit is within a highway construction project in the construction phase, it shall be the responsibility of the permittee to make personal contact with the Department's Engineer on the project in order to coordinate all permitted work with the Department's prime contractor on the project.

19. This permit is not intended to, nor shall it, affect, alter or alleviate any requirement imposed upon the permittee, its successors and assigns, by any other agency.

20. Permittee, its successors and assigns, agree to contain and maintain all dirt, mud, and other debris emanating from the encroachment away from the surrounding right-of-way and the travel way of the highway hereafter and at all times that its obligations under the permit remain in effect.

21. 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 the 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 Clerk to determine what utility companies have facilities in the area.

22. The undersigned Utility acknowledges ownership and control of the facilities proposed to be installed, modified, or extended by the Applicant/Permittee and agrees to be bound by the requirements and terms of this application and all related documents making up the approved permit, by the Department's Permits Guidance Manual, and by all applicable regulations and statutes in effect on the date of issuance of the permit. This information and application is certified correct to the best knowledge and belief of the undersigned Utility.

NORTHERN KENTUCKY WATER DISTRICT
UTILITY

Steve Broering	Engineering Technician
NAME (Utility Representative)	TITLE (Utility Representative)
Steve Broering	7-15-2024
SIGNATURE (Utility Representative)	DATE

APPROVED
AUGUST 27, 2024
KENTUCKY TRANSPORTATION CABINET
06-2024-00814-1

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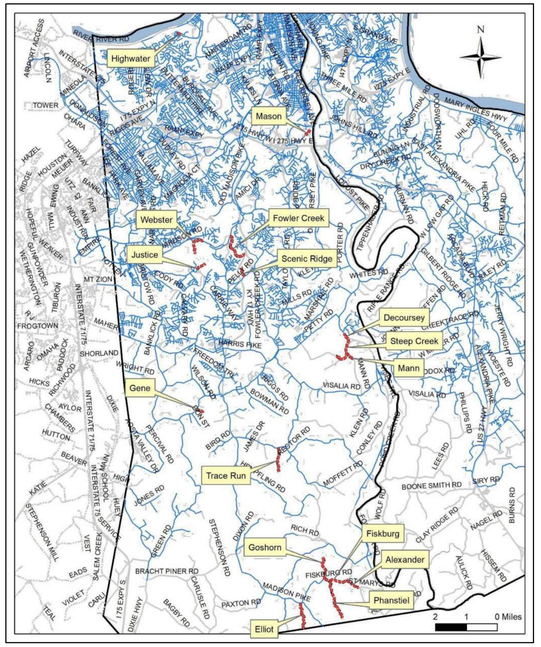
NORTHERN KENTUCKY WATER DISTRICT
SUB-DISTRICT 'O'
WATER MAIN EXTENSION
KENTON COUNTY, KENTUCKY
231591

INDEX OF SHEETS		
NO.	DWG NAME	SHEET NAME
1	TTL	TITLE
2	G-01	GENERAL NOTES & LEGEND
3	G-02	DETAILS
4	G-03	DETAILS
5	G-04	DETAILS
6	G-05	EROSION CONTROL DETAILS
7	C-01	HIGHWATER ROAD
8-9	C-02 to C-03	MASON ROAD
10-13	C-04 to C-07	WEBSTER ROAD
14-15	C-08 to C-09	JUSTICE ROAD
16-17	C-10 to C-11	SCENIC RIDGE DRIVE
18-22	C-12 to C-16	STEEP CREEK ROAD
23	C-17	STEEP CREEK / DECOURSEY
24	C-18	MANN ROAD
25	C-19	GENE STREET
26-29	C-20 to C-23	TRACE RUN ROAD
30-33	C-24 to C-27	GOSHORN ROAD
34-37	C-28 to C-31	FISKBURG ROAD
38-43	C-32 to C-37	PFANSTIEL ROAD
44-45	C-38 to C-39	ALEXANDER ROAD
46-49	C-40 to C43	ELLIOT ROAD

NORTHERN KENTUCKY WATER DISTRICT OFFICIALS

PRESIDENT / CEO
LINDSEY RECHTIN, CPA

COMMISSIONERS
FRED A. MACKE, JR. (Chair)
JODY R. LANGE (Vice-Chair)
DOUGLAS C. WAGNER (Secretary)
NICHOLAS E. WINNIKE (Treasurer)
GARY E. HOLLAND (Commissioner)
JOSEPH J. KOESTER (Commissioner)



VICINITY MAP

NORTHERN KENTUCKY WATER DISTRICT SPECIFICATIONS

THE LATEST STANDARD SPECIFICATIONS AND DRAWINGS OF THE NORTHERN KENTUCKY WATER DISTRICT FOR THE INSTALLATION OF WATER MAIN AND METER PITS SHALL GOVERN ALL WATER MAIN CONSTRUCTION ITEMS ON THIS PROJECT.

KENTUCKY TRANSPORTATION CABINET SPECIFICATIONS

THE LATEST STANDARD SPECIFICATIONS OF THE KENTUCKY TRANSPORTATION CABINET, INCLUDING CHANGES AND SUPPLEMENTAL SPECIFICATIONS THERETO AND KENTON COUNTY SUBDIVISION REGULATIONS SHALL GOVERN THIS IMPROVEMENT.

SOURCE OF OUNDARY AND TOPOGRAPHIC INFORMATION

THE TOPOGRAPHIC INFORMATION SHOWN ON THESE PLANS IS BASED UPON A SURVEY BY CT CONSULTANTS, INC.
THE BOUNDARY INFORMATION SHOWN ON THESE PLANS IS BASED ON PLANNING AND DEVELOPMENT SERVICES (P.D.S.) G.I.S. MAPPING.

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JAMES M. SHUMATE *P.E. #18156*

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NO	REVISION	DATE

ISSUED FOR: 90% DESIGN
ISSUE DATE: MAY 2024
SCALE: AS SHOWN
DESIGNED BY: JCOR
DRAWN BY: JCOR
CHECKED BY: JSHU

NORTHERN KENTUCKY WATER DISTRICT
SUBDISTRICT 'O'
-KENTON COUNTY -

TITLE SHEET

PROJECT NO.
231591
DISCIPLINE
CIVIL
SHEET NAME
TTL
SHEET 1 OF 48

APPROVED FOR CONSTRUCTION
AUGUST 2024
TRANSPORTATION CABINET
KENTUCKY

H:\2023\231591\DWG\SHEETS\C_231591 00_TITLE SHEET.DWG - TITLE - 5/28/2024 10:23:19 AM - JAMES CORNELL

GENERAL NOTES

1. ALL CONSTRUCTION SHALL CONFORM TO THESE PLANS AND SPECIFICATIONS, THE LATEST EDITION OF THE NORTHERN KENTUCKY WATER DISTRICT STANDARD SPECIFICATIONS AND DRAWINGS AND THE KENTON COUNTY SUBDIVISION REGULATIONS AND THE KENTUCKY DEPARTMENT OF HIGHWAYS STANDARD SPECIFICATIONS FOR ROAD AND BRIDGE CONSTRUCTION.

2. ALL DISTURBED AREAS ARE TO BE RESTORED (SEEDED AND MULCHED) BY THE CONTRACTOR AND SHALL PROCEED WITH JOB PROGRESSION. THE CONTRACTOR SHALL ALSO BE RESPONSIBLE FOR REMOVING ANY EXCESS MATERIALS AT THE SITE AND MAINTAINING ALL SEEDED AND MULCHED AREAS UNTIL PROJECT COMPLETION AND FINAL INSPECTION PER KDOT SPEC. 212. A RESIDENTIAL YARD SHALL BE RESTORED WITHIN TWENTY-ONE (21) DAYS AFTER CONSTRUCTION.

3. ALL APPLICABLE RECOMMENDATIONS IN KENTUCKY'S BEST MANAGEMENT PRACTICES MANUAL SHALL BE FOLLOWED BY THE CONTRACTOR, INCLUDING SEEDING OF DISTURBED GROUND.

4. RIGHT-OF-WAY AND PROPERTY LINES SHOWN ARE PLOTTED FROM PLANNING AND DEVELOPMENT SERVICES (PDS) G.I.S. MAPPING AND ARE APPROXIMATE AND NOT THE RESULT OF A FIELD BOUNDARY SURVEY.

5. THE CONTRACTOR SHALL LIMIT THEIR WORK AREA TO THE EASEMENTS AND RIGHTS-OF-WAY SHOWN ON THESE PLANS UNLESS WRITTEN PERMISSION IS GIVEN BY THE PROPERTY OWNER AND APPROVED BY FORT N.K.W.D.

6. ALL OSHA, STATE AND LOCAL SAFETY REGULATIONS SHALL BE FOLLOWED DURING CONSTRUCTION.

7. NO CONSTRUCTION SHALL COMMENCE UNTIL ALL STATE, COUNTY AND LOCAL PERMITS HAVE BEEN ISSUED AS REQUIRED

8. THE CONTRACTOR SHALL COORDINATE ALL WORK WITHIN THE PUBLIC RIGHT OF WAY WITH THE KENTUCKY TRANSPORTATION CABINET AND KENTON COUNTY AND ANY LOCAL MUNICIPALITY. LOCAL TRAFFIC MUST BE MAINTAINED AT ALL TIMES DURING CONSTRUCTION UNLESS OTHERWISE NOTED IN THESE PLANS.

9. ADDITIONAL BMP'S AND EROSION AND SEDIMENT CONTROL MEASURES MAY BE REQUIRED AS DEEMED NECESSARY. ALL COST FOR ABOVE SHALL BE INCLUDED IN LUMP SUM BID FOR EROSION CONTROL AND WATER POLLUTION CONTROL.

10. ALL CONSTRUCTION WORK SHALL BE IN CONFORMANCE WITH THE RECOMMENDATIONS CONTAINED IN THE GEOTECHNICAL INVESTIGATION REPORT PREPARED BY G.A.I. CONSULTANTS DATED FEBRUARY 2024.

GENERAL TRENCH EXCAVATION NOTES

1. CONTRACTOR IS TO PROVIDE CONSTANT STABLE SUPPORT FOR THE WATER MAIN TRENCH EXCAVATION (ie SHEETING, SHORING, ETC.) TO PROTECT ALL ADJACENT EXISTING UTILITIES, STORM SEWER PIPE AND STRUCTURES AND THE EXISTING ROADWAY FROM ANY MOVEMENT. (NO ADDITIONAL PAYMENT WILL BE MADE FOR THIS WORK. ANY COSTS ASSOCIATED WITH TRENCH SUPPORT SHALL BE INCLUDED IN THE UNIT BID PRICE FOR THE ASSOCIATED WATER MAIN.

   TRENCH SUPPORT FAILURE RESULTING IN ADVERSE IMPACT TO EXISTING UTILITIES SHALL BE REPAIRED IMMEDIATELY AT THE CONTRACTOR'S EXPENSE.

2. TRENCH EXCAVATION AND OPEN, UNBACKFILLED LENGTH OF WATER MAIN TRENCH SHALL BE LIMITED AS NECESSARY ALONG THE ROADWAY IN ORDER TO PREVENT MOVEMENT OF, OR DAMAGE TO THE SURROUNDING GROUND SURFACE, NEARBY STRUCTURES/INFRASTRUCTURE AND THE EXISTING ROADWAY PAVEMENT.

   TRENCH EXCAVATION SHALL ALSO BE LIMITED TO THE CONTRACTOR'S ABILITY TO PROVIDE TRENCH BOXES FOR SUPPORT. UNDER NO CIRCUMSTANCES SHALL TRENCH EXCAVATION EXCEED LENGTH OF SUPPORT AVAILABLE.

UTILITY NOTES

1. THIS PLAN SHOWS THE APPROXIMATE LOCATION OF UNDERGROUND UTILITIES (GAS, WATER, STORM SEWER, SANITARY SEWER, TELEPHONE, ELECTRIC, ETC.). THE PREPARER DOES NOT GUARANTEE THEIR ACCURACY OR CORRECTNESS. THE INFORMATION PROVIDED SHALL BE FIELD VERIFIED PRIOR TO CONSTRUCTION. THE CONTRACTOR SHALL BE RESPONSIBLE FOR MAINTAINING THE UTILITY AS WELL AS THE SERVICE LATERALS AT ALL TIMES DURING CONSTRUCTION. THE CONTRACTOR SHALL PRACTICE CARE DURING THE GRADING AND TRENCH EXCAVATION AND SHALL BE RESPONSIBLE FOR REPLACING ANY SERVICES THAT ARE DAMAGED DURING CONSTRUCTION AT THEIR EXPENSE.

2. PRIOR TO ANY EXCAVATION OVER AN EXISTING UTILITY LINE OR SERVICE, CONTRACTOR SHALL HAND EXCAVATE TO EXPOSE THE UTILITY AND DETERMINE LOCATION AND DEPTH. NOTIFY ENGINEER IMMEDIATELY OF ANY CONFLICTS.

3. TOPS OF EXISTING AND PROPOSED CASTING ELEVATIONS ARE SUBJECT TO FINAL ADJUSTMENTS AS APPROVED BY THE ENGINEER AND REQUIREMENTS OF UTILITY OWNER. THIS WORK WILL BE INCIDENTAL TO THE CONTRACT.

4. FORTY-EIGHT (48) HOURS BEFORE EXCAVATION IS TO COMMENCE, THE CONTRACTOR SHALL NOTIFY THE FOLLOWING AGENCIES: THE KENTUCKY UTILITY PROTECTION SERVICE AND ALL OTHER UTILITIES THAT MAY HAVE UNDERGROUND UTILITIES INVOLVING THIS PROJECT AND ARE NON-MEMBERS OF KENTUCKY UNDERGROUND PROTECTION.

STORM & SANITARY NOTES

1. ALL STORM AND SANITARY ITEMS SHALL BE IN ACCORDANCE WITH THE LATEST SPECIFICATIONS AND DETAILS FROM SD1. METAL PIPE MATERIALS SHALL NOT BE USED UNLESS OTHERWISE SPECIFIED ON THESE PLANS.

2. CONTRACTOR SHALL BE REQUIRED TO MAINTAIN STORM AND SANITARY SEWER FLOW THROUGHOUT THE PROJECT, FOR THE DURATION OF CONSTRUCTION. ALL COST FOR THE ABOVE SHALL BE INCIDENTAL TO THE CONTRACT.

3. IF REQUIRED, CONTRACTOR SHALL BE RESPONSIBLE FOR CONTACTING AND SCHEDULING STORM AND SANITARY SEWER INSPECTIONS AS SET OUT IN THE PRECONSTRUCTION MEETING.

4. CONNECTIONS INTO EXISTING OR PROPOSED STORM OR SANITARY SEWER STRUCTURES OR PIPES SHALL BE COMPLETED BY A CERTIFIED TAPPER BY SD1.

WATER NOTES

1. ALL WORK RELATING TO WATER MAINS OR WATER SERVICE LINES SHALL BE COMPLETED IN ACCORDANCE WITH THE RULES AND REGULATIONS OF THE NORTHERN KENTUCKY WATER DISTRICT (NKWD).

2. CONTRACTOR MAY NOT USE WATER FROM FIRE HYDRANTS WITHOUT PRIOR PERMISSION FROM NKWD

GAS NOTES

1. ALL WORK RELATING TO GAS MAINS OR GAS SERVICE LINES SHALL BE COMPLETED IN ACCORDANCE WITH THE RULES AND REGULATIONS OF THE DUKE ENERGY

ELECTRIC NOTES

1. ALL WORK RELATING TO ELECTRIC LINES SHALL BE COMPLETED IN ACCORDANCE WITH THE RULES AND REGULATIONS OF THE DUKE ENERGY

WATER DISTRICT GENERAL NOTES

1. THE EXISTING WATER MAIN ELEVATION AND LOCATION AT THE CONNECTION POINT WITH THE PROPOSED MAIN WAS ASSUMED AND HAS NOT BEEN FIELD VERIFIED. PRIOR TO COMMENCEMENT OF ANY WATER MAIN WORK, THE CONTRACTOR SHALL DIG A TEST HOLE AT THE CONNECTION POINT TO LOCATE EXISTING WATER MAIN AS TO LOCATION AND ELEVATION. THE EXISTING WATER MAIN LOCATION MAY REQUIRE SOME FIELD ADJUSTMENT TO THE PROPOSED WATER MAIN INCLUDING ADJUSTING THE DEPTH OF THE PROPOSED WATER MAIN. COST OF DOING THE ABOVE SHALL BE INCIDENTAL TO THE PERTINENT WATER MAIN ITEM.

2. COST OF TRIMMING OR CLEARING ANY TREES, BUSHES, ETC. SHALL BE INCIDENTAL TO THE OVERALL CONTRACT PRICE AND SHALL BE APPROVED BY N.K.W.D. AND THE PROPERTY OWNER ALONG WITH COUNTY OR STATE WHEN REQUIRED.

3. THE UTILITY INFORMATION SHOWN ON THE PLANS IS BASED ON INFORMATION RECEIVED FROM OTHERS AND HAS NOT BEEN VERIFIED BY THE ENGINEER OR OWNER. IT SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR TO VERIFY THE LOCATION OF THE UTILITIES AND TO COORDINATE ANY IMPACT CAUSED BY THE PROPOSED WORK WITH ALL UTILITY OWNERS AND/OR THEIR CONTRACTORS. THE CONTRACTOR WILL BE REQUIRED TO DIG TEST HOLES AT ALL UTILITY CROSSINGS TO LOCATE THE UTILITY AS TO BOTH LOCATION AND ELEVATION AND WILL BE REQUIRED TO REALIGN AND ADJUST THE ELEVATION OF THE PROPOSED WATER MAIN TO AVOID THE UTILITY. COST OF ALL THE ABOVE SHALL BE INCIDENTAL TO THE OVERALL CONTRACT PRICE.

4. UNLESS SPECIFICALLY INSTRUCTED OTHERWISE, RETURN ALL REMOVED WATER EQUIPMENT INCLUDING, FIRE HYDRANTS, VALVES, AND WATER METERS TO NORTHERN KENTUCKY WATER DISTRICT (N.K.W.D).

5. WATERLINES CROSSING UNDER OR OVER SEWER LINES (DEFINED AS ANY SANITARY/COMBINED SEWER, SEPTIC TANK OR SUBSOIL TREATMENT SYSTEM) MUST MAINTAIN A MINIMUM VERTICAL CLEARANCE OF 18" AND ONE FULL LENGTH OF PIPE SHALL BE LOCATED SO BOTH JOINTS ARE AS FAR FROM THE SEWER AS POSSIBLE. SPECIAL STRUCTURAL SUPPORT FOR THE WATER AND SEWER PIPES MAY BE REQUIRED.

6. CONTRACTOR IS RESPONSIBLE FOR KEEPING FIELD NOTES THAT PROVIDE SUFFICIENT DATA FOR PREPARING "RECORD DRAWINGS" UPON COMPLETION OF CONSTRUCTION.

7. ALL WATER MAIN CONSTRUCTION SHALL CONFORM TO THE NORTHERN KENTUCKY WATER DISTRICT SPECIFICATIONS. CONTRACTOR IS RESPONSIBLE FOR OBTAINING A CURRENT COPY OF THE NORTHERN KENTUCKY WATER DISTRICT'S STANDARD DRAWINGS.

8. ALL MATERIAL FOR THE PROP. WATER MAIN INSTALLATION INCLUDING ALL FITTINGS, BLOCKING, ETC., SHALL BE INCLUDED IN THE CONTRACTOR'S UNIT PRICE FOR WATER MAIN.

9. COST OF ALL TRENCHING, PIPE, PIPE BEDDING, BACKFILL, YARD RESTORATION AND TEMPORARY PAVEMENT, DRIVEWAY AND SIDEWALK RESTORATION SHALL BE PART OF THE COST OF INSTALLING THE WATER MAIN. PERMANENT DRIVEWAY RESTORATION, SIDEWALK RESTORATION, CURB RESTORATION AND STREET RESTORATION WILL BE SEPARATE PAY ITEMS AND INCLUDE INCIDENTALS SUCH AS MAIL BOX, STREET SIGN, AND FENCE REMOVAL AND REPLACEMENT.

10. THE PROPOSED WATER MAIN SHALL BE CLASS 50 DUCTILE IRON PIPE OR D.R. 18 C900 PVC AS SHOWN ON THE PLANS. WITHIN STATE ROUTE R/W, PIPE MATERIAL SHALL BE CLASS 52 DUCTILE IRON.

11. PROPOSED WATER MAIN SHALL BE THOROUGHLY CLEANED, FLUSHED, AND DISINFECTED, AS PER NORTHERN KENTUCKY WATER DISTRICT'S SPECIFICATIONS.

12. PRESSURE TESTING SHALL BE DONE AS PER NORTHERN KENTUCKY WATER DISTRICT'S SPECIFICATIONS.

13. FOR THRUST BLOCKING REFER TO THE NORTHERN KENTUCKY WATER DISTRICT'S STANDARD DRAWING NUMBERS 104 AND 104A.

14. THE PROPOSED WATER MAIN SHALL HAVE A HORIZONTAL SEPARATION OF AT LEAST 3'-0" (MEASURED FROM OUTSIDE OF PIPE TO OUTSIDE OF PIPE) FROM ANY GAS MAIN.

15. A 10' MINIMUM LATERAL SEPARATION BETWEEN WATER MAINS AND SEWERS (DEFINED AS ANY SANITARY/COMBINED SEWER, SEPTIC TANK OR SUBSOIL TREATMENT SYSTEM) AND SEWER MANHOLES, MEASURED FROM THE OUTSIDE DIAMETER TO OUTSIDE, MUST BE MAINTAINED UNLESS A VARIANCE IS GRANTED FROM THE D.O.W.

16. ALL NEW WATER SERVICES SHALL BE 3/4" (OR MATCH EXISTING, AS INDICATED ON THE PLANS) TYPE K COPPER WITH 5/8" OR 2" WATER METERS (UNLESS OTHERWISE NOTED) MATERIAL PROVIDED BY THE NORTHERN KENTUCKY WATER DISTRICT. ALL RECONNECTED WATER SERVICES SHALL BE 3/4" OR 2" TYPE K COPPER.

17. THE CONTRACTOR SHALL COORDINATE ALL WORK WITHIN THE PUBLIC RIGHT-OF-WAY WITH KYTC, KENTON COUTY AND/OR ANY LOCAL MUNICIPALITY. TRAFFIC MUST BE MAINTAINED AT ALL TIMES DURING CONSTRUCTION. MAINTENANCE OF TRAFFIC SHALL CONFORM TO THE "MANUAL OF UNIFORM TRAFFIC CONTROL DEVICES" REQUIREMENTS. NO ADDITIONAL PAYMENT WILL BE MADE FOR THIS WORK AND SHALL BE CONSIDERED INCIDENTAL TO THE CONTRACT.

18. **CONNECT SERVICE LINE (3/4" THRU 2"), INCLUDES THE LABOR, EQUIPMENT, EXCAVATION, BEDDING, BACKFILL, ASPHALT PAVEMENT , CONCRETE PAVEMENT, CONCRETE CURB, CONCRETE WALK AND YARD RESTORATION TO INSTALL THE SERVICE LINE AT THE LOCATIONS SHOWN ON THE PLANS OR AS DIRECTED, IN ACCORDANCE WITH THE SPECIFICATIONS AND STANDARD DRAWINGS, COMPLETE AND READY FOR USE. LEAD SERVICE LINES ENCOUNTERED BY THE EXCAVATION SHALL BE REPLACED FROM THE MAIN TO AND INCLUDING THE METER VAULT AND METER SETTING. ALL SERVICE LINE MATERIAL WILL BE SUPPLIED BY NKWD. PAID EACH (EA).**

19. THE CONTRACTOR SHALL COORDINATE WITH THE NORTHERN KENTUCKY WATER DISTRICT FOR FIELD INSPECTIONS.

20. FORTY-EIGHT (48) HOURS BEFORE EXCAVATION IS TO COMMENCE, THE CONTRACTOR SHALL NOTIFY THE FOLLOWING AGENCIES: THE KENTUCKY UTILITY PROTECTION SERVICE AND ALL OTHER UTILITIES THAT MAY HAVE UNDERGROUND UTILITIES INVOLVING THIS PROJECT AND ARE NON-MEMBERS OF KENTUCKY UNDERGROUND PROTECTION.

21. NO CONSTRUCTION SHALL COMMENCE UNTIL ALL KYTC, COUNTY AND/OR LOCAL PERMITS HAVE BEEN ISSUED AS REQUIRED.

22. CONTRACTOR IS RESPONSIBLE FOR DEWATERING TRENCH DURING INSTALLATION OF THE WATER MAIN.

23. THE COST OF TESTING THE MAIN, TEMPORARY FLUSHING DEVICES, TEMPORARY PLUG AND BLOCKS, AND ABANDONING THE EXISTING MAIN SHALL BE INCIDENTAL TO THE PROJECT.

24. ALL PAVEMENT SHALL CONFORM TO THE LATEST EDITION OF THE KENTUCKY DEPARTMENT OF HIGHWAYS STANDARD SPECIFICATIONS FOR ROAD AND BRIDGE CONSTRUCTION AND KENTON COUNTY SUBDIVISION REGULATIONS.

MAINTENANCE OF TRAFFIC NOTES

1. ALL MAINTENANCE OF TRAFFIC PROCEDURES SHALL MEET THE REQUIREMENT OF THE MANUAL OF UNIFORM TRAFFIC CONTROL DEVICES AND SECTION 112 OF KTC STANDARD SPECIFICATIONS. THE CONTRACTOR SHALL MAINTAIN ACCESS TO LOCAL TRAFFIC (ACCESS TO RESIDENCES WITHIN CONSTRUCTION LIMITS) AT ALL TIMES. THE CONTRACTOR SHALL PROVIDE SUFFICIENT SIGN, WARNING LIGHTS, BARRICADES, OR OTHER NECESSARY DEVICES MAKE THE SITE SAFE TO THE TRAVELING PUBLIC.

2. IT SHALL BE THE CONTRACTOR'S RESPONSIBILITY TO SUBMIT TO THE ENGINEER AND THE OWNER A TRAFFIC CONTROL PLAN FOR THIS PROJECT.

3. PRIOR TO ANY CONSTRUCTION, THE CONTRACTOR SHALL NOTIFY THE APPROPRIATE STATE, COUNTY AND/OR LOCAL POLICE DEPARTMENTS. AT ALL TIMES, EMERGENCY VEHICLES SHALL BE GIVEN ACCESS.

4. RESIDENTS OF THE PROJECT AREA SHALL BE ALLOWED ACCESS TO THEIR PROPERTY AT ALL TIMES.

5. EACH DRIVEWAY SHALL BE ACCESSIBLE WHENEVER POSSIBLE. WHEN PORTLAND CEMENT CONCRETE CONSTRUCTION AFFECTS A DRIVEWAY, THE CONTRACTOR SHALL NOTIFY THE AFFECTED OWNERS 24 HOURS IN ADVANCE AND ADVISE THEM TO FIND ALTERNATIVE PARKING FOR A PERIOD OF AT LEAST 10 CALENDAR DAYS AFTER THE POUR. ALTERNATIVE PARKING SHALL INCLUDE "ON STREET" PARKING WITH ACCESS TO THE PROPERTY. TEMPORARY SIDEWALKS, ETC. WILL BE NECESSARY TO PREVENT PERSONS FROM WALKING IN MUD IN ORDER TO ENTER THEIR PROPERTY. TEMPORARY BRIDGES, RAILINGS ETC. WILL BECOME NECESSARY IN ORDER TO CROSS FORMED CURB LINES, EXCAVATED AREAS BEHIND CURB LINES AND WALKWAYS, ETC.

EROSION CONTROL LEGEND

- IP — INLET PROTECTION (SEE DETAIL)
- SF — SILT FENCE (SEE DETAIL)

HATCH LEGEND

- 1-1/2" ASPHALT PAVEMENT MILL AND OVERLAY AREA
- TRENCH RESTORATION - ASPHALT PAVEMENT - SEE DETAIL SHEET
- TRENCH RESTORATION - CONCRETE PAVEMENT - SEE DETAIL SHEET
- TRENCH RESTORATION - 8" AGGREGATE PAVEMENT
- CONTROL DENSITY FILL - PAV'T TRENCH
- CONCRETE DRIVEWAY REPLACEMENT - SEE DETAIL SHEET
- CONCRETE WALK REPLACEMENT - SEE DETAIL SHEET
- ASPHALT DRIVEWAY REPLACEMENT - SEE DETAIL SHEET
- GRAVEL DRIVEWAY REPLACEMENT - SEE DETAIL SHEET
- CHANNEL LINING, CLASS II - SEE DETAIL SHEET

SYMBOL LEGEND

- EXISTING GAS LINE
- EXISTING GAS SERVICE
- EXISTING ELECTRIC (UNDERGROUND / OVERHEAD)
- EXISTING CABLE (UNDERGROUND / OVERHEAD)
- EXISTING TELEPHONE (UNDERGROUND / OVERHEAD)
- EXISTING WATER MAIN
- EXISTING WATER SERVICE
- EXISTING STORM SEWER
- EXISTING ROOF DRAIN
- EXISTING SANITARY SEWER
- EXISTING SANITARY FORCE MAIN
- EXISTING FIBER OPTICS
- EXISTING FENCE
- EXISTING CONTOURS (MAJOR)
- EXISTING CONTOURS (MINOR)
- EXISTING RIGHT OF WAY
- EXISTING PROPERTY LINE
- EXISTING EASEMENT
- EXISTING GUARDRAIL
- EXISTING TREE LINE
- EXISTING ROCK WALL

- PROPOSED GAS LINE
- PROPOSED GAS SERVICE
- EXISTING ELECTRIC (UNDERGROUND / OVERHEAD)
- PROPOSED CABLE (UNDERGROUND / OVERHEAD)
- PROPOSED TELEPHONE (UNDERGROUND / OVERHEAD)
- PROPOSED WATER MAIN
- PROPOSED WATER SERVICE
- PROPOSED STORM SEWER
- PROPOSED UNDERDRAIN
- PROPOSED UNDERDRAIN / DOWNSPOUT COLLECTOR COMBO
- PROPOSED SANITARY SEWER
- PROPOSED SANITARY FORCE MAIN
- PROPOSED FIBER OPTICS
- PROPOSED FENCE
- PROPOSED CONTOURS (MAJOR)
- PROPOSED CONTOURS (MINOR)
- PROPOSED RIGHT OF WAY
- PROPOSED PROPERTY LINE
- PROPOSED EASEMENT
- PROPOSED GUARDRAIL
- PROPOSED TREE LINE / CLEARING LIMITS
- PROPOSED DISTURBED LIMITS

- EXISTING FLAGPOLE
- EXISTING MAILBOX
- EXISTING SIGN
- EXISTING CABLE PEDESTAL
- EXISTING ELECTRIC PEDESTAL
- EXISTING PULL BOX
- EXISTING GROUND LIGHT
- EXISTING LIGHT POLE
- EXISTING ELECTRIC METER
- EXISTING ELECTRIC MANHOLE
- EXISTING GAS METER
- EXISTING GAS VALVE
- EXISTING GAS BOX
- EXISTING UTILITY POLE
- EXISTING GUY WIRE / ANCHOR
- EXISTING SANITARY MANHOLE
- EXISTING SANITARY CLEANOUT
- EXISTING STORM MANHOLE
- EXISTING SINGLE / DOUBLE CURB INLET
- EXISTING CATCH BASIN
- EXISTING STORM CLEANOUT
- EXISTING TELEPHONE MANHOLE
- EXISTING TELEPHONE PEDESTAL
- EXISTING FIRE HYDRANT
- EXISTING WATER METER
- EXISTING WATER VALVE
- EXISTING BUSHES / TREES
- EXISTING SURVEY BENCHMARK
- TEST BORING LOCATION

- PROPOSED FLAGPOLE
- PROPOSED MAILBOX
- PROPOSED SIGN
- PROPOSED CABLE PEDESTAL
- PROPOSED ELECTRIC PEDESTAL
- PROPOSED PULL BOX
- PROPOSED GROUND LIGHT
- PROPOSED LIGHT POLE
- PROPOSED ELECTRIC METER
- PROPOSED ELECTRIC MANHOLE
- PROPOSED GAS METER
- PROPOSED GAS VALVE
- PROPOSED GAS BOX
- PROPOSED UTILITY POLE
- PROPOSED GUY WIRE / ANCHOR
- PROPOSED SANITARY MANHOLE
- PROPOSED SANITARY CLEANOUT
- PROPOSED STORM MANHOLE
- PROPOSED SINGLE / DOUBLE CURB INLET
- PROPOSED CATCH BASIN
- PROPOSED STORM CLEANOUT
- PROPOSED TELEPHONE MANHOLE
- PROPOSED TELEPHONE PEDESTAL
- PROPOSED FIRE HYDRANT
- PROPOSED WATER METER
- PROPOSED WATER VALVE
- REMOVE EXISTING BUSH / TREE
- PROPOSED SLOPE DIRECTION

90% REVIEW

your trusted advisor — engineers architects planners consultants

NO	REVISION	DATE
.	.	.

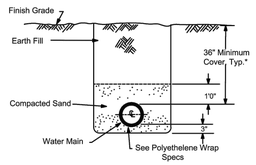
ISSUED FOR:	90% DESIGN
ISSUE DATE:	MAY 2024
SCALE:	AS SHOWN
DESIGNED BY:	JCOR
DRAWN BY:	JCOR
CHECKED BY:	JSHU

NORTHERN KENTUCKY WATER DISTRICT
SUBDISTRICT 'O'
-KENTON COUNTY -

GENERAL NOTES AND LEGEND

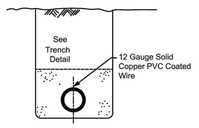
PROJECT NO.: 231591
DISCIPLINE: CIVIL
SHEET NAME: G-01
SHEET: 2 OF: 49

APPROVED FOR CONSTRUCTION
AUGUST 01, 2024
TRANSPORTATION CABINET
KENTUCKY DEPARTMENT OF HIGHWAYS



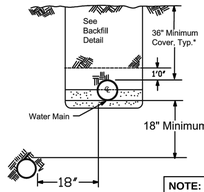
EARTH CUTS
TRENCH DETAIL

NOTE:
42" Minimum Cover, TYP. within State R/W



PVC PIPE

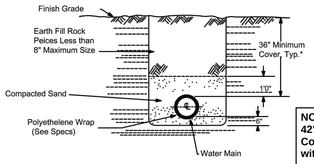
ALTERNATE TO BE USED ONLY ON APPROVAL BY THE DISTRICT



Water Main must be located a minimum of 10 feet lateral distance from anyexisting or future sewer lines or manholes, or as shown in the above alternate.

WATER MAIN PARALLELING
SEWER MAIN

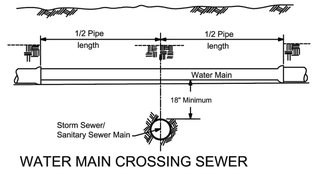
NOTE:
42" Minimum Cover, TYP. within State R/W



ROCK CUTS
& UNSTABLE SUBGRADE

TRENCH DETAIL

NOTE:
42" Minimum Cover, TYP. within State R/W



WATER MAIN CROSSING SEWER

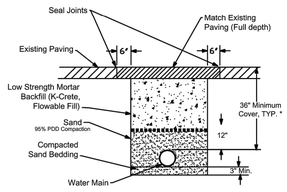
SUBDIVISION CONSTRUCTION

* Unless Otherwise Noted

REVISION	BY	DATE
1 8" Min. Rock Size	KPT	1/2020

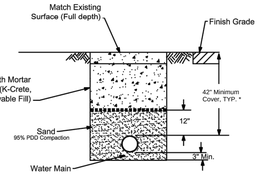
N. KY. WATER DISTRICT
TYPICAL PIPELINE TRENCH DETAIL

DRAWN BY: SAR
APPROVED: RH
DATE: 8/5/2014
STANDARD DRAWING NO: 103

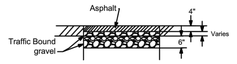


UNDER ASPHALT CONCRETE
PAVEMENT

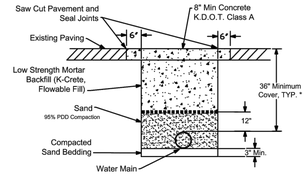
PDD= Standard Proctor Dry Density
-ASTM D698



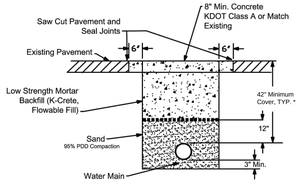
UNDER SHOULDER OF STATE
MAINTAINED STREET



TEMPORARY STREET
RESTORATION



UNDER CONCRETE PAVEMENT



UNDER STATE MAINTAINED STREET

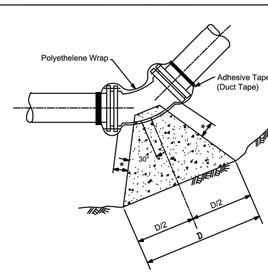
* 48" Maximum Cover

ALL CONSTRUCTION

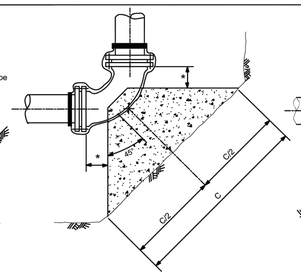
REVISION	BY	DATE
1 All streets but I-64/ I-65	SAH	1/2020

N. KY. WATER DISTRICT
TYPICAL PIPELINE TRENCH DETAIL

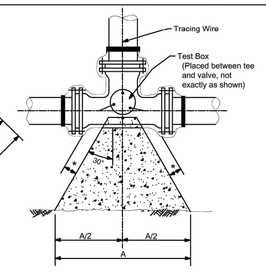
DRAWN BY: SAR
APPROVED: RH
DATE: 8/5/2014
STANDARD DRAWING NO: 103A



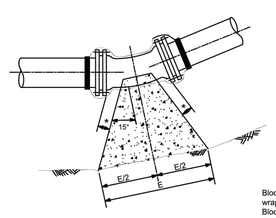
45° BEND



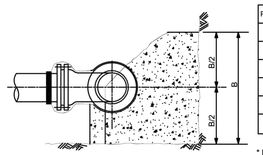
90° BEND



TEE (DEAD END OR FIRE HYDRANT SIMILAR)



11 1/4° & 22 1/2° BEND



ELEVATION

Blocking shall be poured after blue polyethelene wrap is in place.
Blocking shall be inspected by the District prior to backfilling.

150 PSI/250 PSI

PIPE SIZE	A	B	C	D	E
6"	2'0"/2'6"	1'6"/1'6"	3'0"/3'6"	1'6"/2'0"	1'0"/1'0"
8"	2'6"/3'6"	2'0"/2'0"	3'6"/4'6"	2'0"/2'6"	1'0"/1'6"
10"	3'6"/4'0"	2'6"/2'6"	4'6"/5'6"	2'6"/3'0"	1'6"/1'6"
12"	4'0"/5'0"	3'0"/3'0"	5'6"/6'6"	3'0"/3'6"	1'6"/2'0"
16"	5'0"/6'0"	3'0"/4'0"	7'0"/8'6"	4'0"/4'6"	3'0"/3'0"
20"	6'0"/7'6"	5'0"/5'0"	7'0"/10'6"	4'0"/6'0"	3'0"/3'0"

* Distance to be 1/2" longer than entire length of the bolt used.

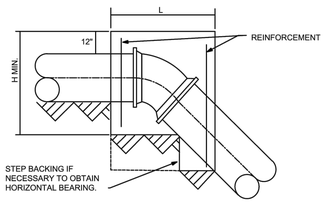
NOTES

1 DIP Fittings shall be per specifications.
2 Concrete to be 3500 psi.
3 All fittings to be Mechanical Joint.
4 Thrust blocks to be placed against undisturbed earth - use additional concrete as required for over excavation.
5 Blocking to be placed in a manner so that bolts can be removed without distrubing the block.

REVISION	BY	DATE

N. KY. WATER DISTRICT
CONCRETE THRUST BLOCK DETAIL

DRAWN BY: SAR
APPROVED: RH
DATE: 8/5/2014
STANDARD DRAWING NO: 104



SECTION A-A

CONCRETE BACKING FOR VERTICAL BENDS

1. BACKING DESIGNED FOR 3000 POUNDS PER SQUARE FOOT SOIL BEARING AND 150 POUNDS PER SQUARE INCH INTERNAL PRESSURE.

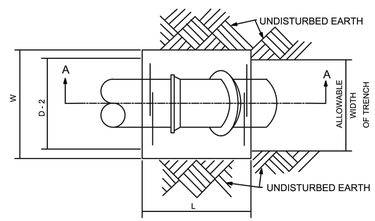
2. PROVIDE MINIMUM CONCRETE REINFORCEMENT OF 2 PAIR OF TWO 5" "U" BARS @ 12" C.

3. CENTER BACKING ON BEND.

BLOCKING FOR SIZES NOT SHOWN SHALL USE THE NEXT LARGER SIZE.

SIZE of PIPE	DEGREE OF BEND											
	11 1/4				22 1/2				45			
	L*	W*	H*	VOL.	L*	W*	H*	VOL.	L*	W*	H*	VOL.
4"	12	24	16	2.7	15	30	18	4.7	22	36	24	11.0
6"	12	43	18	5.4	16	48	34	15.1	30	55	24	22.9
8"	12	54	24	9.0	18	57	36	21.4	36	57	33	39.2
12"	20	63	36	26.3	37	62	37	49.2	48	62	51	88.0
16"	31	65	38	44.4	60	65	39	88.2	65	65	65	159.2
20"	45	70	40	73.0	56	70	60	136.4	72	76	78	247.5
24"	47	72	54	106.0	67	74	69	198.4	88	84	84	360.1

NOTE: VOLUMES GIVEN IN CUBIC FEET



PLAN

REVISION	BY	DATE

N. KY. WATER DISTRICT
CONCRETE THRUST BLOCKING FOR VERTICAL BENDS

DRAWN BY: SAR
APPROVED: RH
DATE: 8/5/2014
STANDARD DRAWING NO: 104A

90% REVIEW

your trusted advisor
consultants
engineers
architects
planners

NO	REVISION	DATE
-	-	-

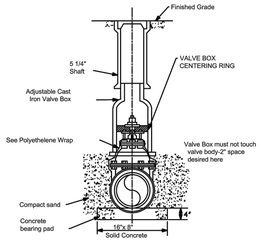
ISSUED FOR: 90% DESIGN
ISSUE DATE: MAY 2024
SCALE: AS SHOWN
DESIGNED BY: JCOR
DRAWN BY: JCOR
CHECKED BY: JSHU

NORTHERN KENTUCKY WATER DISTRICT
SUBDISTRICT 'O'
-KENTON COUNTY -

DETAILS

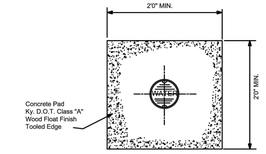
PROJECT NO.
231591
DISCIPLINE
CIVIL
SHEET NAME
G-02
SHEET
3
OF
49

APPROVED
ACCEPTED FOR CONSTRUCTION
TRANSFER OF OWNERSHIP
Kentucky American Water

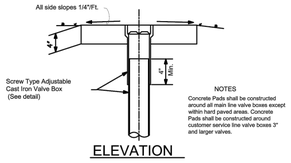


Detail Valve Box Installation

Note:Valve box shall not transmit shock or stress to the valve



PLAN



NOTES

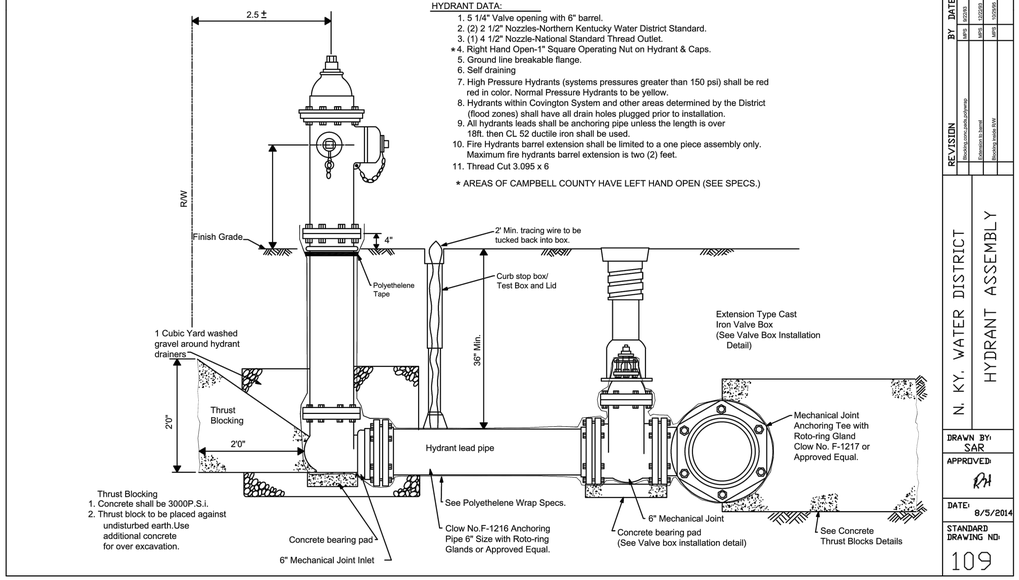
Concrete Pads shall be constructed around all main line valve boxes except within hard paved areas. Concrete Pads shall be constructed around customer service line valve boxes 3" and larger valves.

ELEVATION

REVISION	BY	DATE
1. 12" Concrete pad size 2. Valve Box Installation	MPS	6/2013
	MPS	6/2013

N. KY. WATER DISTRICT
VALVE BOX AND VALVE PAD DETAIL

DRAWN BY: SAR
APPROVED: RH
DATE: 8/5/2014
STANDARD DRAWING NO: 105



HYDRANT DATA:

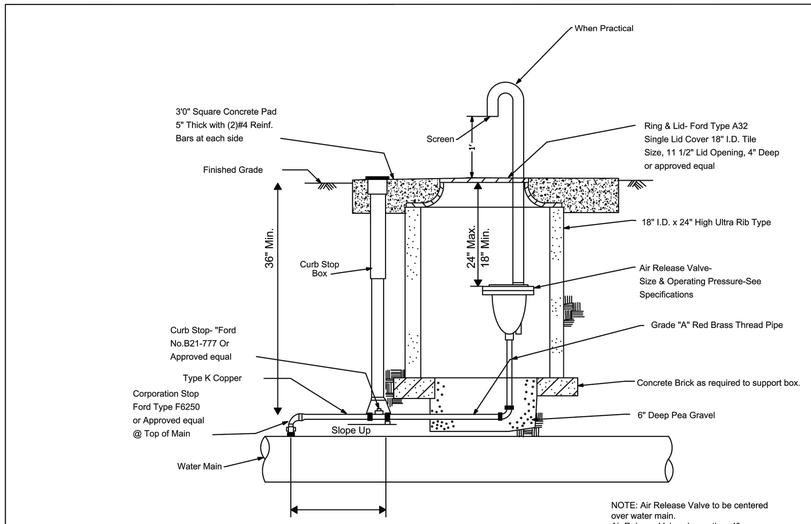
1. 5 1/4" Valve opening with 6" barrel.
2. (2) 2 1/2" Nozzles-Northern Kentucky Water District Standard.
3. (1) 4 1/2" Nozzle-National Standard Thread Outlet.
4. * Right Hand Open-1" Square Operating Nut on Hydrant & Caps.
5. Ground line breakable flange.
6. Self draining
7. High Pressure Hydrants (systems pressures greater than 150 psi) shall be red red in color. Normal Pressure Hydrants to be yellow.
8. Hydrants within Covington System and other areas determined by the District (flood zones) shall have all drain holes plugged prior to installation.
9. All hydrants leads shall be anchoring pipe unless the length is over 18ft. then CL 52 ductile iron shall be used.
10. Fire Hydrants barrel extension shall be limited to a one piece assembly only. Maximum fire hydrants barrel extension is two (2) feet.
11. Thread Cut 3.095 x 6

* AREAS OF CAMPBELL COUNTY HAVE LEFT HAND OPEN (SEE SPECS.)

REVISION	BY	DATE
Blocking note,valve,anchoring	MPS	6/2013
Extension is optional	MPS	12/2/2020
Removed reader WM	MPS	12/2/2020

N. KY. WATER DISTRICT
HYDRANT ASSEMBLY

DRAWN BY: SAR
APPROVED: RH
DATE: 8/5/2014
STANDARD DRAWING NO: 109

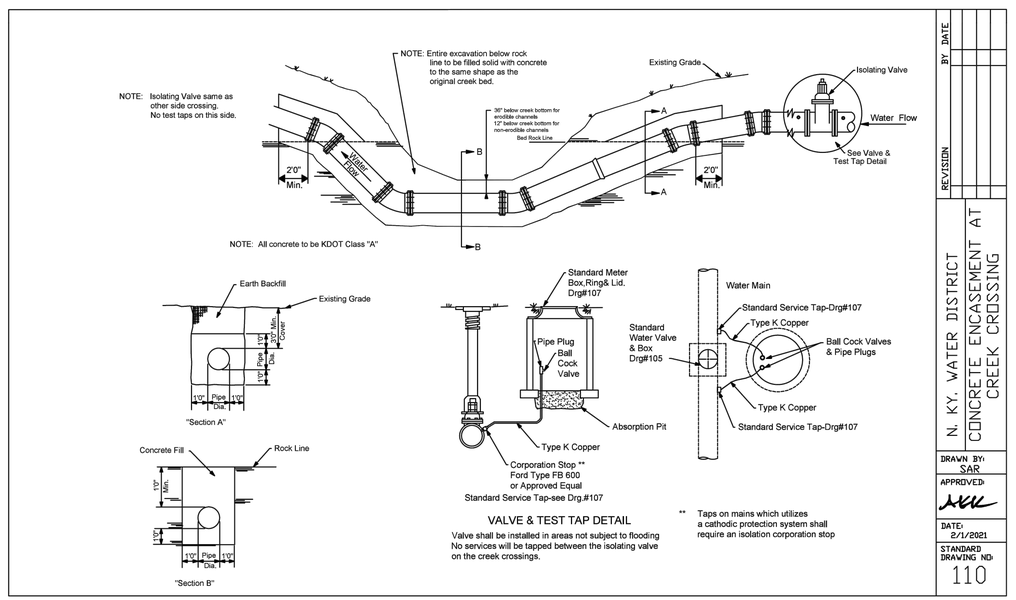


NOTE: Air Release Valve to be centered over water main.
Air Release Valves larger than 1" use:
vault size 24"x24"
lid Ford Type MC 24 &
Extension Ring Ext-2 or approved equal.

REVISION	BY	DATE

N. KY. WATER DISTRICT
N.KY WATER DISTRICT AIR RELEASE VALE

DRAWN BY: SAR
APPROVED: RH
DATE: 8/5/2014
STANDARD DRAWING NO: 106



VALVE & TEST TAP DETAIL

Valve shall be installed in areas not subject to flooding No services will be tapped between the isolating valve on the creek crossings.

** Taps on mains which utilizes a cathodic protection system shall require an isolation corporation stop

REVISION	BY	DATE

N. KY. WATER DISTRICT
CONCRETE ENCASEMENT AT CREEK CROSSING

DRAWN BY: SAR
APPROVED: MKK
DATE: 2/1/2021
STANDARD DRAWING NO: 110

90% REVIEW

your trusted advisor
consultants
engineers
architects
planners

NO	REVISION	DATE
-	-	

ISSUED FOR:	90% DESIGN
ISSUE DATE:	MAY 2024
SCALE:	AS SHOWN
DESIGNED BY:	JCOR
DRAWN BY:	JCOR
CHECKED BY:	JSHU

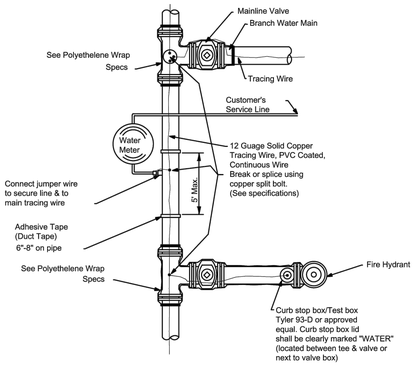
NORTHERN KENTUCKY WATER DISTRICT
SUBDISTRICT 'O'
-KENTON COUNTY -

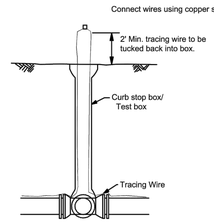
DETAILS

PROJECT NO.: 231591
DISCIPLINE: CIVIL
SHEET NAME: G-03
SHEET: 4 OF 49

APPROVED
ACCEPTED
TRANSFERRED
Kentucky American Water Company

1\CTC.LOCAL\CT_DATA\PROJECTS\2023\231591\DWG\SHEETS\C_231591-00_DETAIL SHEET.DWG - NKWD DTLS (2) - 5/28/2024 2:43:27 PM - JAMES CORNELL





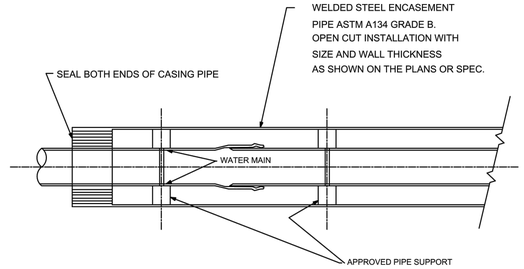
DUCTILE IRON AND PVC PIPE WITH DUCTILE IRON FITTINGS

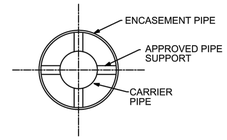
Note: Curb stop box/test box shall not be installed in paved areas.

REVISION	BY	DATE

N. KY. WATER DISTRICT
TRACING WIRE INSTALLATION DETAIL

DRAWN BY: SAR
APPROVED: DH
DATE: 8/5/2014
STANDARD DRAWING NO: 111





1. All carrier pipe placed in steel casing pipe shall be minimum class 50 ductile iron pipe and conform to the latest edition of AWWA C151.
2. Carrier pipe gaskets shall develop a wedging action between pairs of high-strength stainless steel elements spaced around the gasket (FIELD LOK , FASTGRIP, or approved equal gaskets).

NOTE: CASING PIPE JOINTS SHALL BE SEAM WELDED SO THAT CASING IS WATER TIGHT FROM END TO END.

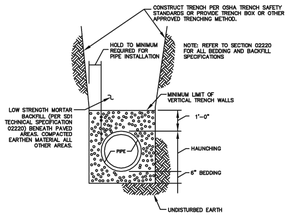
ENCASEMENT PIPE DETAIL

NO SCALE

REVISION	BY	DATE
1 Remove Detail #3	JS	2/7/20

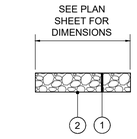
N. KY. WATER DISTRICT
ENCASEMENT PIPE DETAIL

DRAWN BY: SAR
APPROVED: DH
DATE: 8/5/2014
STANDARD DRAWING NO: 114



STORM TRENCH DETAIL

N.T.S.



ROCK CHANNEL PROTECTION

N.T.S.

1. ITEM 703 - 12" CHANNEL LINING, CLASS II
2. NON WOVEN GEOTEXTILE FILTER FABRIC

90% REVIEW

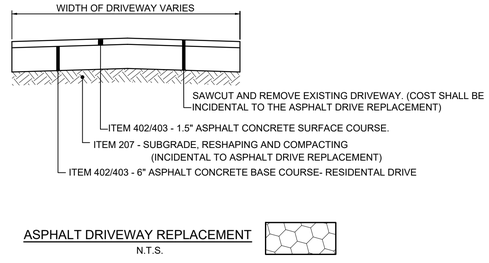
your trusted advisor consultants engineers architects planners

NO	REVISION	DATE
	.	

ISSUED FOR:	90% DESIGN
ISSUE DATE:	MAY 2024
SCALE:	AS SHOWN
DESIGNED BY:	JCOR
DRAWN BY:	JCOR
CHECKED BY:	JSHU

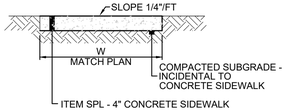
NORTHERN KENTUCKY WATER DISTRICT
SUBDISTRICT 'O'
-KENTON COUNTY -

DETAILS



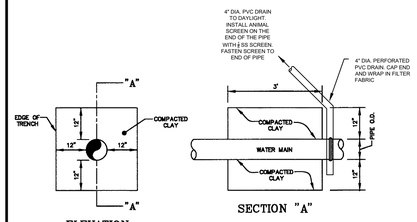
ASPHALT DRIVEWAY REPLACEMENT

N.T.S.



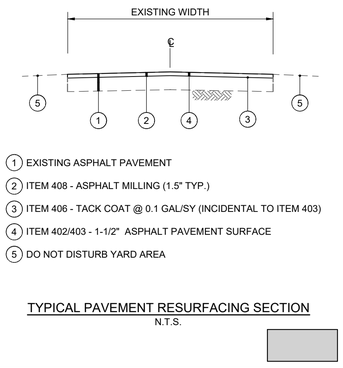
4" CONCRETE SIDEWALK REPLACEMENT DETAIL

(SAWCUTTING AND REMOVAL OF EXISTING CONCRETE SIDEWALK AND EXCAVATION TO PROPOSED SUBGRADE INCIDENTAL TO SIDEWALK REPLACEMENT)



CLAY BULKHEAD

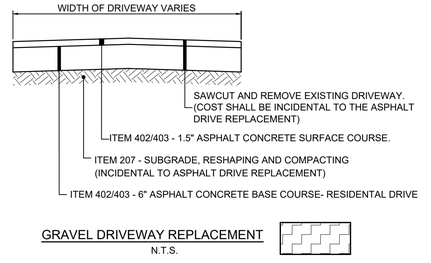
N.T.S.



1. EXISTING ASPHALT PAVEMENT
2. ITEM 408 - ASPHALT MILLING (1.5" TYP.)
3. ITEM 406 - TACK COAT @ 0.1 GAL/SY (INCIDENTAL TO ITEM 403)
4. ITEM 402/403 - 1-1/2" ASPHALT PAVEMENT SURFACE
5. DO NOT DISTURB YARD AREA

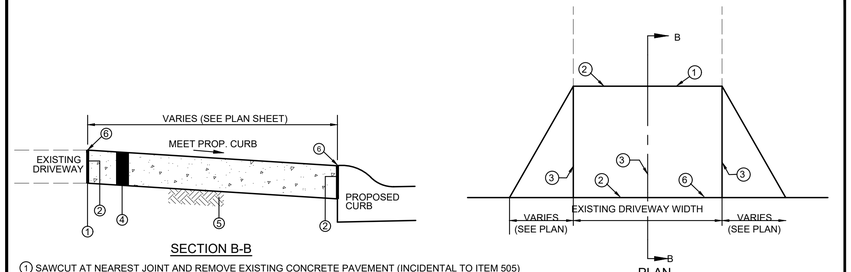
TYPICAL PAVEMENT RESURFACING SECTION

N.T.S.



GRAVEL DRIVEWAY REPLACEMENT

N.T.S.



SECTION B-B

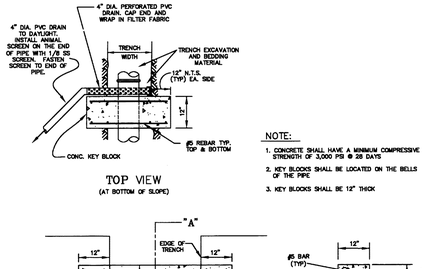
1. SAWCUT AT NEAREST JOINT AND REMOVE EXISTING CONCRETE PAVEMENT (INCIDENTAL TO ITEM 505)
2. 1" PREFORMED EXPANSION JOINT MATERIAL (FLEXIBLE FOAM-CERAMAR BY W.R. MEADOWS OR APPROVED EQUAL)
3. TOOLED JOINT
4. ITEM 505 - 6" CONCRETE DRIVEWAY/APRON (OR MATCH EXISTING WHICHEVER IS GREATER)
5. COMPACTED SUBGRADE (INCIDENTAL TO ITEM 505 - 6" CONCRETE DRIVEWAY/APRON)
6. SEAL JOINT WITH GRAY SELF LEVELING SEALANT (SIKA FLEX OR APPROVED EQUAL)

NOTE:

1. ANY YARD AREA DISTURBED BY THE CONSTRUCTION OF THE DRIVEWAY APRON SHALL BE RESTORED WITH TOPSOIL, SEED AND MULCH (INCIDENTAL TO CONCRETE DRIVEWAY APRON REPLACEMENT).
2. ALL EXCAVATION REQUIRED FOR THE PLACEMENT OF THE PROPOSED DRIVEWAY SHALL BE INCIDENTAL TO CONCRETE DRIVEWAY REPLACEMENT BID ITEM.

CONCRETE DRIVEWAY REPLACEMENT

N.T.S.

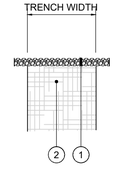


NOTE:

1. CONCRETE SHALL HAVE A MINIMUM COMPRESSIVE STRENGTH OF 3,000 PSI @ 28 DAYS
2. KEY BLOCKS SHALL BE LOCATED ON THE BELLS OF THE PIPE
3. KEY BLOCKS SHALL BE 12" THICK

CONCRETE KEY BLOCK

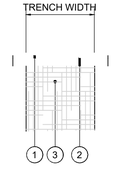
(IN BEDROOCK)
N.T.S.



AGGREGATE ROADWAY REPLACEMENT SECTION

N.T.S.

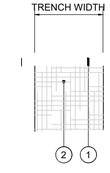
1. ITEM 302 - 8" CRUSHED STONE BASE, (LESS THAN 7% FINES) COMPACTED TO 100% (ASTM D698).
2. CONTROL DENSITY FILL PER NKWD SPECIFICATIONS (SEE DETAIL SHEET (G-02)



ASPHALT ROADWAY REPLACEMENT SECTION

N.T.S.

1. ITEM 402/403 - 1.5" ASPHALT CONCRETE SURFACE COURSE
2. ITEM 402/403 - 7.75" ASPHALT CONCRETE BASE (OR MATCH EXISTING)
3. CONTROL DENSITY FILL PER NKWD SPECIFICATIONS (SEE DETAIL SHEET (G-02)



CONCRETE ROADWAY REPLACEMENT SECTION

N.T.S.

1. ITEM SPL - 8" PORTLAND CEMENT CONCRETE PAVEMENT - PER KENTON COUNTY SUBDIVISION REGULATIONS (OR MATCH EXISTING)
2. CONTROL DENSITY FILL PER NKWD SPECIFICATIONS (SEE DETAIL SHEET (G-02)

NOTE:
GENE STREET HAS AN ADDITIONAL 1.5" ASPHALT OVERLAY ON THE CONCRETE PAVEMENT

PROJECT NO.	
231591	
DISCIPLINE:	
CIVIL	
SHEET NAME	
G-04	
SHEET	OF
5	49

APPROVED
Kentucky Transportation Cabinet
Highway Construction Branch

SEDIMENT BASINS

DEFINITION
A TEMPORARY BARRIER OR DAM CONSTRUCTED ACROSS A WATERCOURSE OR AT OTHER SUITABLE LOCATION TO RETAIN SEDIMENT AND OTHER WATERBORNE DEBRIS.

SCOPE
THIS STANDARD ESTABLISHES MINIMUM ACCEPTABLE QUALITY FOR THE DESIGN AND CONSTRUCTION OF TEMPORARY SEDIMENT BASINS FORMED BY AN EMBANKMENT, EXCAVATION OR A COMBINATION OF EMBANKMENT AND EXCAVATION. THE STANDARD IS LIMITED TO SITES WHERE:

1. FAILURE OF THE STRUCTURE WOULD NOT RESULT IN LOSS OF LIFE; DAMAGE TO HOMES; COMMERCIAL OR INDUSTRIAL BUILDINGS; DAMAGE TO HIGHWAYS OR RAILROADS OR INTERRUPTION OF USE OR SERVICE OF PRIVATE UTILITIES.
2. THE HEIGHT OF DAM IS 25 FEET OR LESS, AS MEASURED FROM THE NATURAL STREAMBED AT THE CENTERLINE OF DAM TO THE TOP OF DAM.
3. THE TOTAL VOLUME OF STORAGE IS 150 ACRE-FEET OR LESS.
4. THE DRAINAGE AREA IS 100 ACRES OR LESS.
5. THE BASIN WILL BE REMOVED WITHIN A THREE-YEAR PERIOD AFTER CONSTRUCTION.

PURPOSE
TEMPORARY SEDIMENT BASINS ARE USED AS A MEANS OF TRAPPING AND STORING SEDIMENT FROM ERODING AREAS IN ORDER TO PROTECT DOWNSTREAM AREAS FROM DAMAGE RESULTING FROM SEDIMENTATION AND WATERBORNE DEBRIS.

CONDITIONS WHERE PRACTICE APPLIES
TEMPORARY SEDIMENT BASINS APPLY WHERE PHYSICAL SITE CONDITIONS OR OTHER RESTRICTIONS PRECLUDE THE INSTALLATION OF EROSION CONTROL MEASURES TO ADEQUATELY CONTROL EROSION AND SEDIMENTATION. IT MAY BE USED DOWNSLOPE FROM CONSTRUCTION OPERATIONS WHICH EXPOSE AREAS TO EROSION. TEMPORARY SEDIMENT BASINS WILL BE REMOVED AFTER THE EXPOSED AREAS ARE ADEQUATELY PROTECTED AGAINST EROSION BY VEGETATIVE OR MECHANICAL MEANS.

COMPLIANCE WITH LAWS AND REGULATIONS
DESIGN AND CONSTRUCTION SHALL COMPLY WITH ALL LOCAL LAWS, ORDINANCES, RULES AND REGULATIONS.

LOCATION
TO IMPROVE THE EFFECTIVENESS OF THE BASIN, IT SHOULD BE LOCATED SO AS TO INTERCEPT THE LARGEST POSSIBLE AMOUNT OF RUNOFF FROM THE DISTURBED AREA. THE BEST LOCATIONS ARE GENERALLY LOW AREAS AND NATURAL DRAINAGEWAYS BELOW DISTURBED AREAS. DRAINAGE INTO THE BASIN CAN BE IMPROVED BY THE USE OF DIVERSION DIKES AND DITCHES. THE BASIN MUST NOT BE LOCATED IN A LIVE STREAM BUT SHOULD BE LOCATED TO TRAP SEDIMENT-LADEN RUNOFF BEFORE IT ENTERS THE STREAM. THE BASIN SHOULD NOT BE LOCATED WHERE ITS FAILURE WOULD RESULT IN THE LOSS OF LIFE OR IN INTERRUPTION OF THE USE OR SERVICE OF PUBLIC UTILITIES OR ROADS.

MULTIPLE USE
SEDIMENT BASINS MAY BE DESIGNED AS PERMANENT STRUCTURES TO REMAIN IN PLACE AFTER CONSTRUCTION IS COMPLETED. SITE CONDITIONS MAY MAKE THE USE OF THESE STRUCTURES DESIRABLE FOR STORMWATER DETENTION PURPOSES. WHEREVER THESE STRUCTURES ARE TO BECOME PERMANENT, OR IF THEY EXCEED THE SIZE LIMITATIONS OF THE DESIGN CRITERIA, THEY MUST BE DESIGNED AS PERMANENT PONDS BY A QUALIFIED PROFESSIONAL ENGINEER. PERPMANENT PONDS ARE BEYOND THE SCOPE OF THESE STANDARDS AND SPECIFICATIONS. THE PERMANENT STRUCTURES MUST BE SUBMITTED WITH CONSTRUCTION DRAWINGS FOR REVIEW AND ACCEPTANCE BY THE CITY ENGINEER.

MAINTENANCE BASINS SHALL BE CHECKED WEEKLY AND CLEANED WHEN NO LONGER EFFECTIVE.

STORM DRAIN INLET PROTECTION
DEFINITION
A SEDIMENT FILTER INSTALLED AROUND A STORM DRAIN INLET OR CURB INLET TO REDUCE SEDIMENT DISCHARGE.

PURPOSE
TO PREVENT SEDIMENT FROM ENTERING THE STORM DISCHARGE SYSTEMS PRIOR TO PERMANENT STABILIZATION OF THE DISTURBED DRAINAGE AREA. DIFFERENT TYPES OF STRUCTURES ARE APPLICABLE TO DIFFERENT CONDITIONS.

STORM WATER POLLUTION PREVENTION NOTES

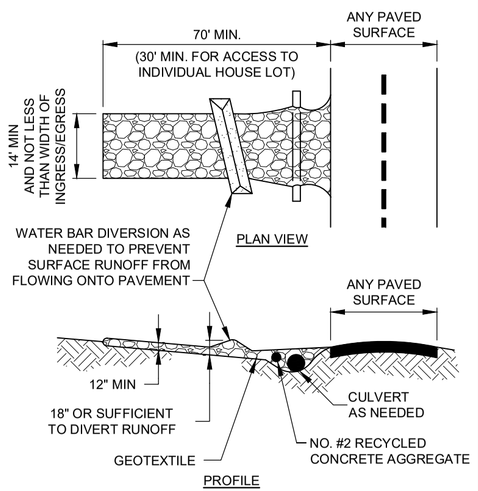
1. SANITATION DISTRICT NO. 1 IS TO BE CONTACTED 72 HOURS PRIOR TO ANY CONSTRUCTION ACTIVITY AT 859-578-6892
2. ALL EROSION AND SEDIMENTATION CONTROL SHALL BE PERFORMED AS SHOWN ON THE PLANS, AND SHALL BE IN COMPLIANCE WITH THE LATEST CONSTRUCTION ACTIVITY " NATIONAL POLLUTANT DISCHARGE ELIMINATION SYSTEM" RULES AND REGULATIONS.
3. A COPY OF THE STORM WATER POLLUTION PREVENTION PLAN (SWPPP) AND A COPY OF THE "NOTICE OF INTENT" (NOI) SHALL BE KEPT ON SITE.
4. AN AMENDMENT OF THE SWPPP IS REQUIRED WHENEVER A CHANGE IN DESIGN, CONSTRUCTION, AND OPERATION OR MAINTENANCE HAS A SIGNIFICANT EFFECT ON THE POTENTIAL FOR THE DISCHARGE OF POLLUTANTS, OR IF THE SWPPP PROVES TO BE INEFFECTIVE IN ACHIEVING THE GENERAL OBJECTIVES OF THE SWPPP.
5. THE CONTRACTOR SHALL ALSO MAINTAIN THE FOLLOWING RECORDS ON SITE:
   A. GENERAL CONTRACTOR AND/OR SUBCONTRACTOR SWPPP CERTIFICATIONS
   B. THE DATE, TIME, AND EXACT LOCATION OF THE INSPECTION, AND THE NAME OF THE INSPECTOR
   C. AN ASSESSMENT OF THE CONDITION OF THE EROSION CONTROLS
   D. A DESCRIPTION OF ANY EROSION CONTROL IMPLEMENTATION AND MAINTENANCE PERFORMED
   E. A DESCRIPTION OF THE PRESENT PHASE OF CONSTRUCTION AT THE SITE
6. CONSTRUCTION SEQUENCE
   - ALL PERIMETER SILT FENCE, INLET PROTECTION AND OTHER EROSION CONTROLS SHALL BE IN PLACE BEFORE ANY OTHER EARTH MOVING ACTIVITIES BEGIN.
   - THE CONTRACTOR SHALL CLEAR AND GRUB ONLY THE AREAS PLANNED FOR EARTH MOVING.
   - REMOVE TOPSOIL, STOCKPILE IT, AND INSTALL SILT FENCE AROUND PERIMETER.
   - SEED SOIL STOCKPILE WITH PERENNIAL RYE GRASS AND MULCH WITH STRAW IF NO TO BE DISTURBED FOR MORE THAN 21 DAYS.
   - CONSTRUCT DETENTION BASIN AND CONTROL STRUCTURE. DETENTION BASIN SHALL BE USED AS A SEDIMENT BASIN UNTIL THE SITE IS STABILIZED.
   - INSTALL STORM SEWER SYSTEM AND SURFACE STORM INLET AND MANHOLE PROTECTION.
   - ESTABLISH A TEMPORARY SEEDING ON ALL BARE AREAS THAT ARE TO REMAIN UNDISTURBED FOR MORE THAN 21 DAYS. SEED WITH PERENNIAL RYE GRASS MULCH WITH STRAW.
   - IMMEDIATE AFTER TOPSOIL HAS BEEN PLACED, STABILIZE THE SAME SURFACE AREA WITH FINAL SEED AND MULCH 7 DAYS AFTER REACHING FINAL GRADE.
   - AFTER THE VEGETATION HAS BECOME WELL ESTABLISHED, REMOVE TEMPORARY EROSION OR SEDIMENT CONTROL PRACTICES.
7. EROSION CONTROLS MUST BE INSPECTED ONCE EVERY 7 DAYS AND WITHIN 24 HOURS OF 0.5" OR GREATER RAINFALL. REMOVE ACCUMULATED SEDIMENT FROM EROSION CONTROLS.
8. TEMPORARY SEEDING SHALL BE PERENNIAL RYE GRASS (40 LB / ACRED) AND MULCH AT 3 BALES OF STRAW PER 1000 S.F.
9. CONTRACTOR IS RESPONSIBLE FOR OBTAINING BORROW MATERIAL ONSITE AND / OR DISPOSING OF EXCESS MATERIAL OFF SITE AS REQUIRED TO MEET INDICATED DESIGN ELEVATIONS.
10. DEBRIS SHALL BE COLLECTED WITHIN PROPERTY LIMITS WEEKLY OR AS NEEDED FOR PUBLIC SAFETY. SURROUNDING STREETS AFFECTED BY THE CONSTRUCTION SHALL BE CLEANED DAILY OR AS NEEDED FOR PUBLIC SAFETY. SEE CONSTRUCTION ENTRANCE DETAIL IN SWPPP DETAILS SHEET.
11. THE CONSTRUCTION OF BMPs SHALL BE REVISED OR ADDED IF DEEMED NECESSARY PER SECTION 1000 OF THE SANITATION DISTRICT 1 REGULATIONS.
12. CONTACT SANITATION DISTRICT NO. 1 72 HOURS PRIOR TO INSTALLATION OF THE WATER QUALITY FEATURE.

NOTES:
1) SUBSOILING SHALL OCCUR WHEN SOIL MOISTURE IS LOW ENOUGH TO ALLOW THE SOIL TO CRACK OR FRACTURE. SUBSOILING IS NOT PERMITTED ON SLIP-PRONE AREAS.
2) THE SITE SHALL BE GRADED TO PERMIT THE USE OF CONVENTIONAL EQUIPMENT FOR SEEDBED PREPARATION AND SEEDING.
3) TOPSOIL SHALL BE APPLIED WHERE NEEDED TO ESTABLISH VEGETATION.
4) THE SEEDBED SHALL BE PREPARED BY APPLYING AGRICULTURAL GROUND LIMESTONE OR FERTILIZER AS RECOMMENDED BY A SOIL TEST. IN LIEU OF A SOIL TEST, APPLY LIME AT 2 TONS/AC. OR FERTILIZER AT 500 LB/AC. OF 10-10-10 OR 12-12-12 ANALYSIS. LIME AND FERTILIZER SHALL BE WORKED INTO THE SOIL TO A DEPTH OF 3".
5) APPLY SEED UNIFORMLY ON FIRM, MOIST SEED BED.
6) SEEDING SHOULD BE APPLIED FROM MARCH 1 TO MAY 31 OR AUGUST 1 TO SEPTEMBER 30. IF SEEDING OCCURS OUTSIDE OF THESE DATES, ADDITIONAL MULCH AND IRRIGATION MAY BE REQUIRED TO ENSURE A MINIMUM OF 80% GERMINATION. TILLAGE FOR SEEDBED PREPARATION SHALL OCCUR WHEN THE SOIL IS DRY ENOUGH TO CRUMBLE AND NOT FORM RIBBONS WHEN COMPRESSED BY HAND.
7) SEEDING SHOULD NOT BE APPLIED FROM OCTOBER 1 TO NOVEMBER 20 BECAUSE SEEDS MAY GERMINATE, BUT WILL NOT SURVIVE THE WINTER. USE THE FOLLOWING METHODS FOR DORMANT SEEDING:
   - FROM OCTOBER 1 TO NOVEMBER 20, INCREASE THE SEEDING RATE BY 50%, PREPARE THE SEED BED, ADD LIME AND FERTILIZER, MULCH AND ANCHOR.
   - FROM NOVEMBER 20 TO MARCH 15, ONLY IF SOIL CONDITIONS PERMIT, INCREASE THE SEEDING RATE BY 50%, PREPARE THE SEED BED, ADD LIME AND FERTILIZER, APPLY THE SEED MIXTURE, MULCH AND ANCHOR.
8) APPLY MULCH MATERIAL IMMEDIATELY AFTER SEEDING.
9) PERMANENT SEEDING SHALL INCLUDE IRRIGATION TO ESTABLISH VEGETATION DURING DRY OR HOT WEATHER OR ON ADVERSE SITE CONDITIONS AS NEEDED. AVOID EXCESSIVE IRRIGATION AND MONITOR TO PREVENT EROSION AND DAMAGE FROM RUNOFF.
10) PERMANENT SEEDING SHALL NOT BE CONSIDERED ESTABLISHED FOR AT LEAST 1 FULL YEAR FROM THE TIME OF PLANTING. DURING THIS PERIOD, INSPECT FOR SOIL EROSION OR PLANT LOSS AND REPAIR BARE OR SPARSE AREAS, FILL GULLIES, RE-FERTILIZE, RE-SEED OR RE-MULCH AS NEEDED.
11) A MINIMUM OF 70% GROWTH DENSITY, BASED ON A VISUAL INSPECTION, MUST EXIST FOR AN ADEQUATE PERMANENT VEGETATIVE PLANTING.

PERMANENT SEEDING FERTILIZATION AND MOWING CHART				
MIXTURE	FORMULA	LB/ AC.	TIME	MOW
CREEPING RED FESCUE DOMESTIC RYEGRASS KENTUCKY BLUEGRASS	10-10-10	500	FALL, YEARLY, OR AS NEEDED	≥3"
TALL FESCUE	10-10-10	500		≥4"
TURF-TYPE FESCUE	10-10-10	500		
CROWN VETCH FESCUE	0-20-20	400	SPRING, AND YEARLY AFTER ESTABLISHED	DO NOT MOW
FLAT PEA FESCUE	0-20-20	400		

PERMANENT SEEDING SPECIES SELECTION		
SEED MIX	SEED RATE LB/AC.	NOTES:
GENERAL USE		
CREEPING RED FESCUE DOMESTIC RYEGRASS KENTUCKY BLUEGRASS	20 - 40 10 - 20 20 - 40	FOR CLOSE MOWING AND WATERWAYS WITH ≤2.0 FT./SEC. VELOCITY
TALL FESCUE	40 - 50	
TURF-TYPE FESCUE	90	
STEEP BANKS OR CUT SLOPES		
TALL FESCUE	40 - 50	
CROWN VETCH TALL FESCUE	10 - 20 20 - 30	DO NOT SEED LATER THAN AUGUST
FLAT PEA TALL FESCUE	20 - 25 20 - 30	DO NOT SEED LATER THAN AUGUST
ROAD DITCHES AND SWALES		
TALL FESCUE	40 - 50	
TURF-TYPE FESCUE KENTUCKY BLUEGRASS	90 5	
LAWN		
KENTUCKY BLUEGRASS PERENNIAL RYEGRASS	100 - 120 100 - 120	
KENTUCKY BLUEGRASS CREEPING RED FESCUE	100 - 120 100 - 120	FOR SHADED AREAS

PERMANENT SEEDING DETAIL
SCALE: NONE



NOTES:
1. PLACE GEOTEXTILE OVER THE ENTIRE AREA PRIOR TO PLACING STONE MEETING THE MIN. SPECIFICATIONS:

A.	TENSILE STRENGTH	= 200 LBS.
B.	PUNCTURE STRENGTH	= 80 PSI
C.	TEAR STRENGTH	= 50 LBS.
D.	BURST STRENGTH	= 320 PSI
E.	ELONGATION	= 20%
F.	EQUIVALENT OPENING SIZE	≤ 0.6 MM
G.	PERMITTIVITY	= 0.001 CM/SEC

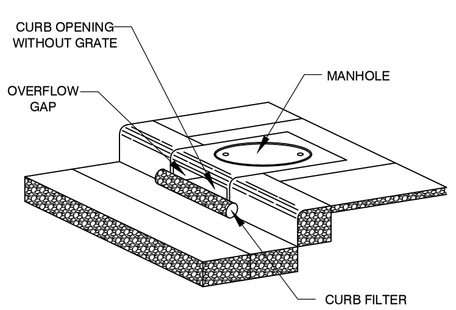
2. APPLY ADDITIONAL STONE AS CONDITIONS DEMAND AND REPLENISH STONE WHEN THE DEPTH IS LESS THAN 6". REMOVE AND REPLACE IF STONES BECOMES MUD-LADEN.
3. IMMEDIATELY REMOVE MUD DROPPED, WASHED OR TRACKED ONTO ROADS OR ANY SURFACE WHERE RUNOFF IS NOT CHECKED BY SEDIMENT CONTROLS BY SCRAPING OR SWEEPING.
4. CONSTRUCTION ENTRANCES SHALL NOT BE RELIED UPON TO REMOVE MUD FROM VEHICLES OR TO PREVENT OFF-SITE TRACKING. VEHICLES THAT ENTER AND LEAVE THE CONSTRUCTION SITE SHALL BE RESTRICTED FROM MUDDY AREAS.

CE **CONSTRUCTION ENTRANCE**
SCALE: NONE

NOTES:
1) THE SEED BED SHALL BE PULVERIZED AND LOOSE TO ENSURE THE SUCCESS OF ESTABLISHING VEGETATION.
2) SOIL AMENDMENTS MAY BE REQUIRED TO ESTABLISH ADEQUATE VEGETATION. PERFORM SOIL TESTS ON THE SITE TO PREDICT THE NEED FOR LIME AND FERTILIZER.
3) APPLY SEED UNIFORMLY. COVER BROADCASTED SEED BY RAKING OR DRAGGING AND THEN LIGHTLY TAMPING INTO PLACE.
4) APPLY MULCHING IMMEDIATELY AFTER SEEDING.
5) SEEDING SHALL BE INSPECTED FOR BARE SPOTS AND WASHOUTS, AND RESEEDED AS NECESSARY.

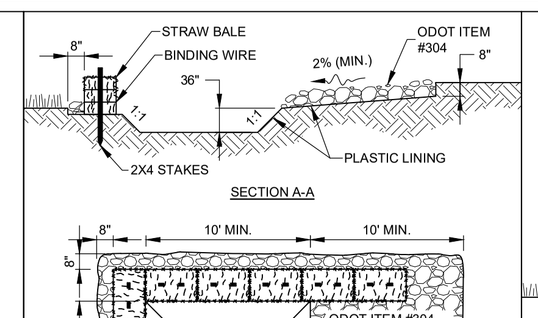
TEMPORARY SEEDING SPECIES SELECTION			
DATES	SPECIES	LB/1,000 SF	LB/AC.
MARCH 1 TO AUGUST 15	OATS	3	128
	TALL FESCUE	1	40
	PERENNIAL RYEGRASS	1	40
	PERENNIAL RYEGRASS	2	40
	TALL FESCUE	1	40
AUGUST 16 TO NOVEMBER 1	RYE	3	112
	TALL FESCUE	1	40
	PERENNIAL RYEGRASS	1	40
	WHEAT	3	120
	TALL FESCUE	1	40
	PERENNIAL RYEGRASS	1	40
	PERENNIAL RYEGRASS	2	40
	TALL FESCUE	1	40
NOVEMBER 1 TO SPRING	ONLY MULCH OR DORMANT SEEDING.		

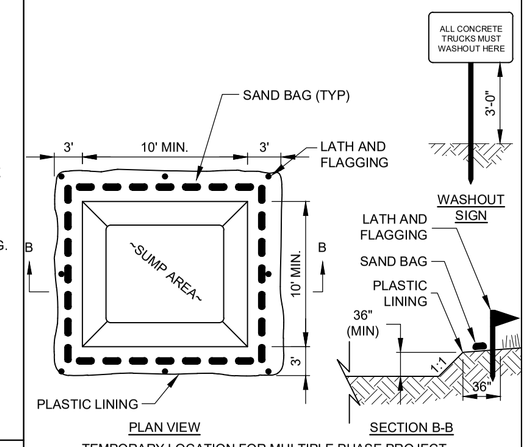
TEMPORARY SEEDING DETAIL
SCALE: NONE



DETAIL OF CURB INLET SEDIMENT CONTROL DEVICE WITH CURB FILTER

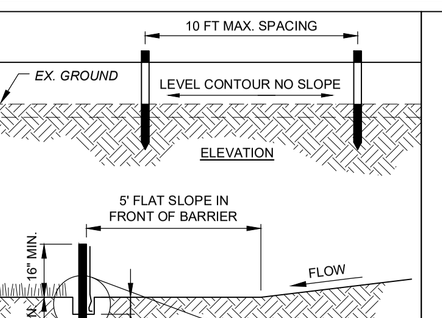
IP **DANDY CURB**
SCALE: NONE





NOTES:
1. WASHOUT PIT SHALL BE LOCATED 100' MINIMUM FROM INLETS, STREAMS, WETLANDS AND ANY OTHER SURFACE WATERS.
2. ALL EXCESS CONCRETE AND CONCRETE WASHOUT, INCLUDING FROM HAND MIXERS AND LIGHT EQUIPMENT, SHALL BE DISPOSED OF IN THE CONCRETE WASHOUT AREA. DISPOSAL OF EXCESS CONCRETE OR CONCRETE WASHOUT ON THE GROUND, OR IN STORM DRAINS, DITCHES OR WATER BODIES, IS PROHIBITED.
3. CONCRETE WASHOUT AREA SHALL BE SUFFICIENT SIZE TO CONTAIN CONCRETE WASTE GENERATED. FOR LARGER SITES, MULTIPLE CONCRETE WASHOUT AREAS MAY BE REQUIRED.
4. IF CONCRETE WASHOUT AREA IS LOCATED AWAY FROM A PAVED SURFACE, CONSTRUCT A GRAVEL ACCESS ROUTE EQUAL IN COMPOSITION TO THE CONSTRUCTION ENTRANCE.
5. PLASTIC LINING SHALL BE DOUBLE-LINED, CONTINUOUS 10-MIL POLYETHYLENE SHEETING FREE OF HOLES, TEARS OR OTHER DEFECTS, AND INSTALLED ON A SMOOTH, LEVEL SURFACE, FREE OF ROCKS OR DEBRIS.
6. CONCRETE WASHOUT SIGNAGE SHALL BE CLEARLY VISIBLE AND LOCATED WITHIN 30 FEET OF EACH WASHOUT AREA.
7. CONCRETE WASHOUT AREAS SHALL BE COVERED DURING INCLEMENT WEATHER TO PREVENT OVERFLOWS.
8. PREFABRICATED, PORTABLE AND RE-USABLE CONCRETE WASHOUT CONTAINERS ARE ACCEPTABLE, BUT MUST BE SPECIFICALLY DESIGNED FOR CONCRETE WASHOUT USE.
9. CONCRETE WASHOUT AREA SHALL BE INSPECTED DAILY TO CHECK FOR DAMAGE AND TO DETERMINE IF IT NEEDS CLEANED OR REPLACED. ANY DAMAGE TO THE SIDEWALLS OR POLYETHYLENE SHEETING SHALL BE REPAIRED IMMEDIATELY. THE CONCRETE WASHOUT AREA SHALL BE CLEANED OR REPLACED WHEN IT IS 75% FULL. THE POLYETHYLENE SHEETING SHALL BE REPLACED AFTER EACH CLEANING.
10. SAW CUT CONCRETE, RESIDUE FROM SAW CUT, AND GRINDINGS SHALL BE DISPOSED OF IN THE WASHOUT PIT.

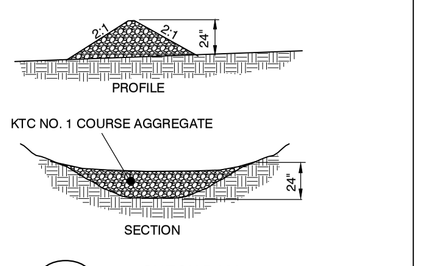
WA **CONCRETE WASHOUT DETAIL**
SCALE: NONE



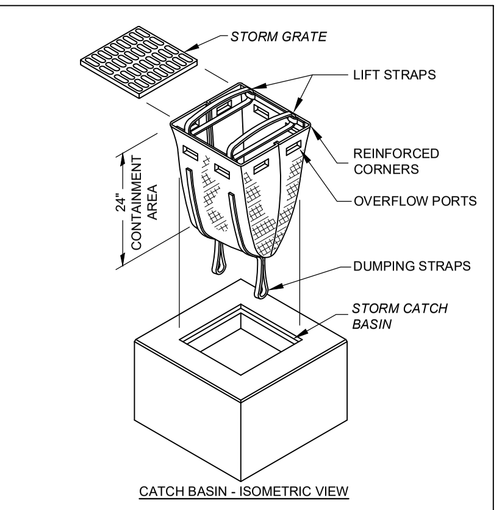
NOTES:
1. PRESERVE VEGETATION FOR 5 FEET, OR AS MUCH AS POSSIBLE, UPSLOPE FROM THE SILT FENCE. IF VEGETATION IS REMOVED, IT SHALL BE RE-ESTABLISHED WITHIN 7 DAYS FROM SILT FENCE INSTALLATION.
2. SILT FENCE SHALL ALLOW RUNOFF TO PASS ONLY AS DIFFUSE FLOW THROUGH THE GEOTEXTILE. PERFORM ONE OF THE FOLLOWING IF RUNOFF OVERTOPS THE SILT FENCE, FLOWS UNDER OR AROUND THE ENDS, OR IN ANY OTHER WAY BECOMES A CONCENTRATED FLOW:
   - CHANGE THE LAYOUT OF THE SILT FENCE.
   - REMOVE ACCUMULATED SEDIMENT.
   - INSTALL OTHER PRACTICES.

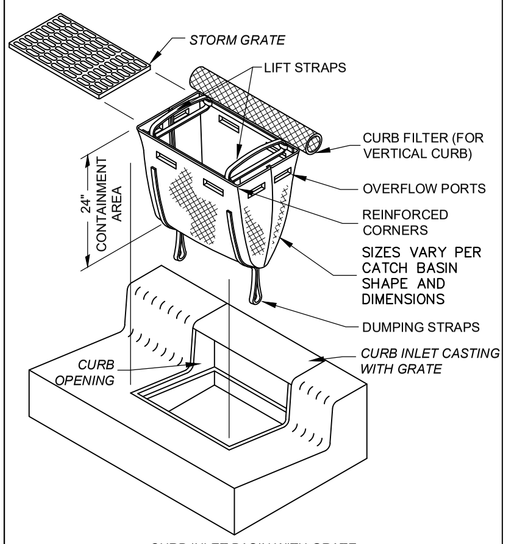
FABRIC PROPERTIES	VALUES	TEST METHOD
GRAB TENSILE STRENGTH	90 LB. MIN	ASTM D-1682
MULLEN BURST STRENGTH	190 PSI MIN	ASTM D-3786
SLURRY FLOW RATE	0.3 GAL./MIN./S.F. MAX.	
EQUIVALENT OPENING SIZE	40-80	US STD. SIEVE CW-02215
ULTRAVIOLET RADIATION STABILITY	90% MIN	ASTM-G-26

SF **SILT FENCE**
SCALE: NONE

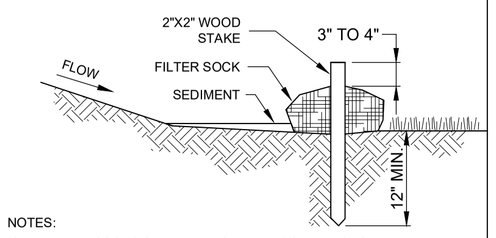


CD **CHECK DAM**
N.T.S.





IP **STORM DRAIN INLET PROTECTION DETAIL**
SCALE: NONE



NOTES:
1) FILTER SOCKS SHALL BE 3 OR 5 MIL CONTINUOUS, TUBULAR, HDPE 3/8" KNITTED MESH NETTING MATERIAL, FILLED WITH COMPOST.
2) COMPOST SHALL BE WEED, PATHOGEN AND INSECT FREE, FREE OF ANY REFUSE, CONTAMINANTS OR OTHER MATERIALS TOXIC TO PLANT GROWTH, BE DERIVED FROM A WELL-DECOMPOSED SOURCE OF ORGANIC MATTER, AND CONSIST OF PARTICLES RANGING FROM 3/8" TO 2".
3) FILTER SOCKS SHALL BE PLACED ON A LEVEL LINE ACROSS SLOPES PARALLEL TO THE BASE OF THE SLOPE.
4) FILTER SOCKS SHALL BE PLACED AT LEAST 5' FROM THE TOE OF SLOPE FOR SEDIMENT DEPOSIT.
5) BUILT UP SEDIMENT SHALL BE REMOVED WHEN IT HAS REACHED 1/3 THE FILTER SOCK HEIGHT.
6) WHEN A FILTER SOCK IS NO LONGER REQUIRED, IT SHALL BE DISPERSED ON-SITE.
7) THE MAXIMUM DRAINAGE AREA PER 100 FEET OF FILTER SOCK IS 1/2 ACRE AND IS DEPENDENT ON THE SLOPE:

MAX. SLOPE LENGTH ABOVE FILTER SOCK					
SLOPE	RATIO (H:V)	8"	12"	18"	24"
0% - 2%	0 - 50:1	125'	250'	300'	350'
2% - 10%	50:1 - 10:1	100'	125'	200'	250'
10% - 20%	10:1 - 5:1	75'	100'	150'	200'

FILTER SOCK DETAIL
SCALE: NONE

90% REVIEW

your trusted advisor engineers architects consultants planners

NO	REVISION	DATE

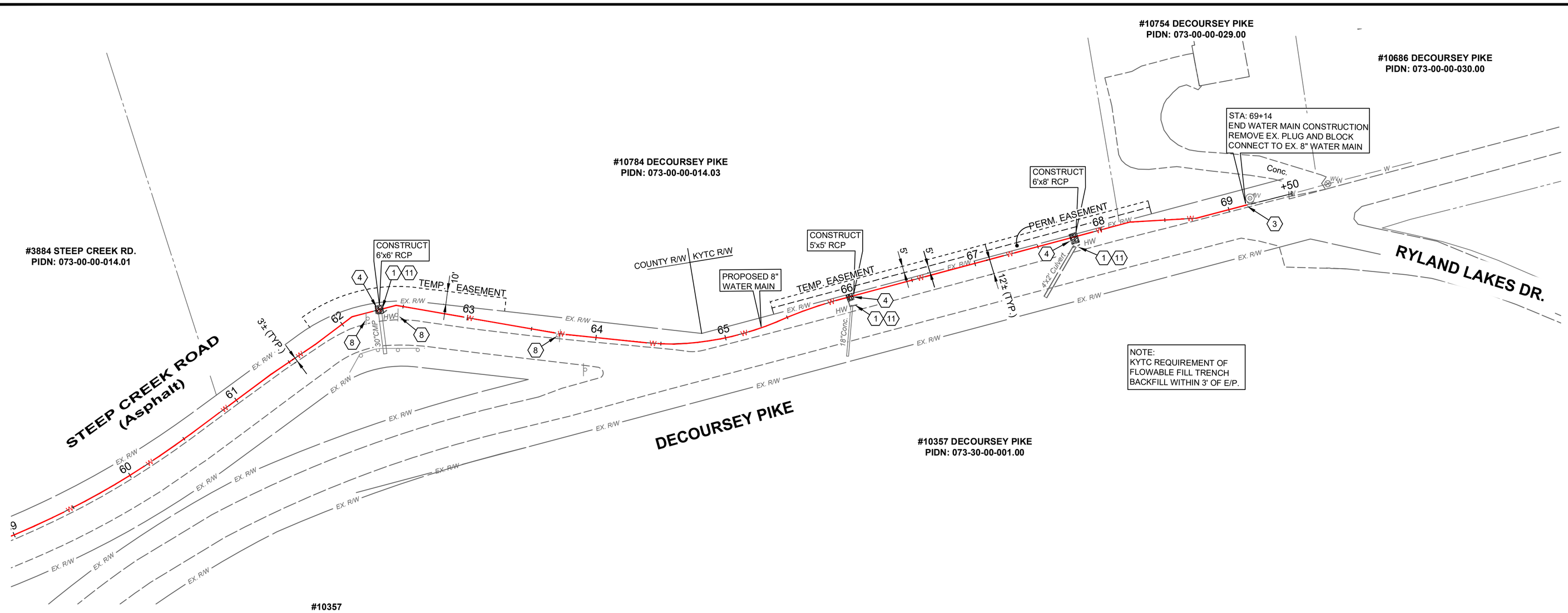
ISSUED FOR:	90% DESIGN
ISSUE DATE:	MAY 2024
SCALE:	AS SHOWN
DESIGNED BY:	JCOR
DRAWN BY:	JCOR
CHECKED BY:	JSHU

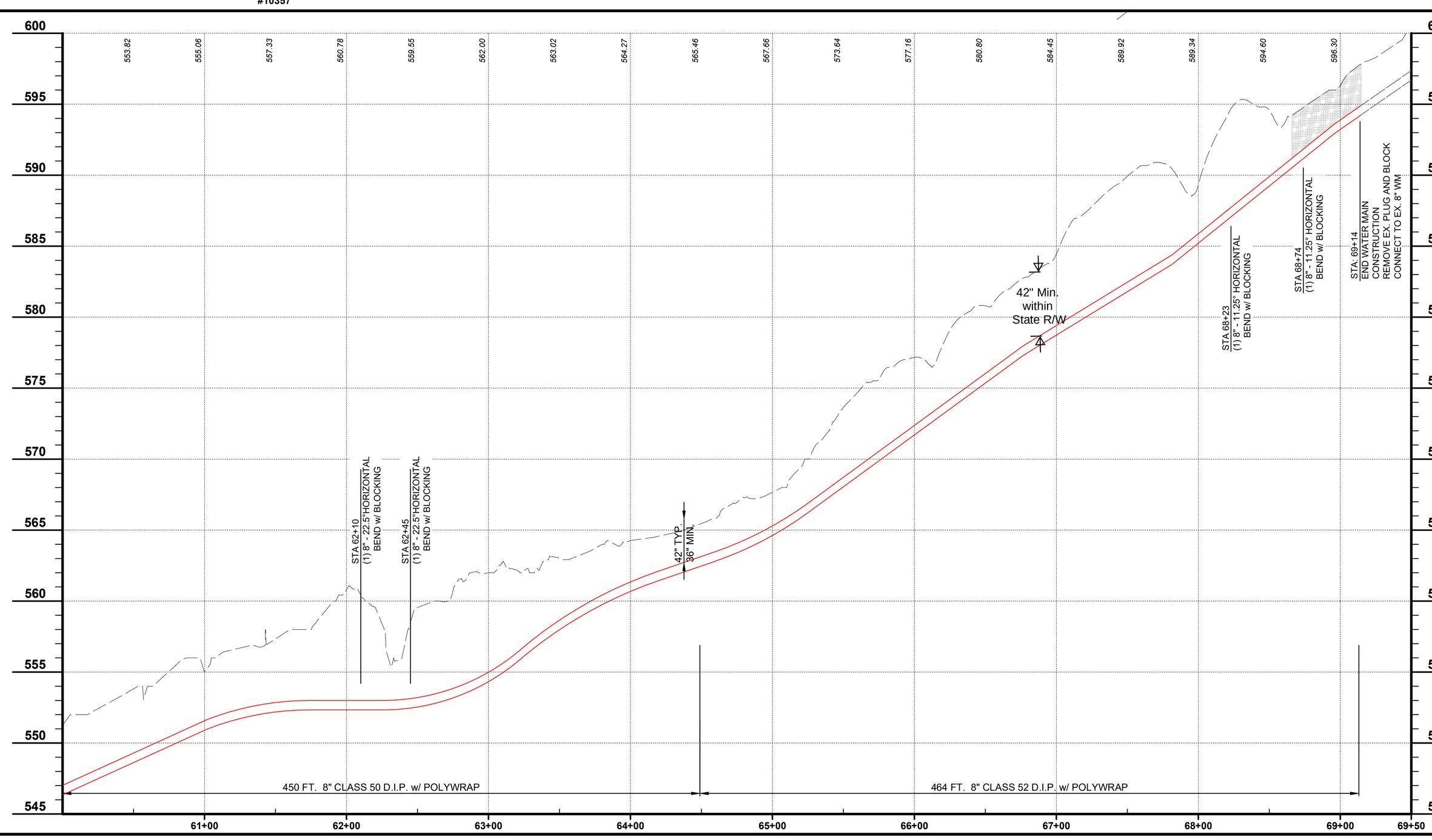
NORTHERN KENTUCKY WATER DISTRICT
SUBDISTRICT 'O'
-KENTON COUNTY -

EROSION CONTROL DETAILS

PROJECT NO.
231591
DISCIPLINE
CIVIL
SHEET NAME
G-05
SHEET 6 OF 49

APPROVED FOR CONSTRUCTION
AUGUST 2024
TRANSPORTATION CABINET
KENTUCKY DEPARTMENT OF HIGHWAYS





SCALE:
H: 1" = 50'
V: 1" = 5'

0' 50' 100'
SCALE: 1" = 50'

CONSTRUCTION NOTES

1. MAINTAIN MANAGEABLE VERTICAL CLEARANCE BETWEEN THE PROPOSED WATER MAIN AND THE EXISTING STORM SEWER, WATER MAIN, TELEPHONE DUCTS, AND GAS MAIN. CONSTRUCT ALL SANITARY SEWER CROSSINGS PER N.K.W.D. SPECIFICATIONS ITEM 1.14. MAINTAIN MINIMUM 18" BETWEEN THE PROPOSED WATER MAIN AND THE EXISTING SANITARY SEWER, ACTUAL ELEVATION UNKNOWN. CONTRACTOR TO EXCAVATE & VERIFY ACTUAL LOCATION, SIZE AND ELEVATION OF EXISTING UTILITY PRIOR TO BEGINNING WATER MAIN CONSTRUCTION. THE CONTRACTOR SHALL NOTIFY THE ENGINEER PRIOR TO CONSTRUCTION OF ANY POTENTIAL CONFLICT. NO ADDITIONAL PAYMENT WILL BE MADE FOR THIS WORK AND THE COST SHALL BE INCLUDED IN THE BID ITEM FOR WATER MAIN.
2. PROPOSED FIRE HYDRANT ASSEMBLY, VALVE AND BLOCKING AS PER N.K.W.D. STD. DRAWING NO. 109. COORDINATE LOCATION WITH N.K.W.D. INSPECTOR. ANCHOR VALVE TO TEE.
3. CONNECT TO EXISTING WATER MAIN (ACTUAL ELEVATION UNKNOWN). CONTRACTOR TO VERIFY DEPTH PRIOR TO CONSTRUCTION.
4. CHANNEL LINING, CLASS II (12") w/ NON-WOVEN GEOTEXTILE FILTER FABRIC
5. CONTRACTOR TO VERIFY LOCATION AND ELEVATION OF UTILITY PRIOR TO EXCAVATION ACTIVITY AND NOTIFY ENGINEER AND N.K.W.D. OF CONFLICTS.
6. DO NOT DISTURB
7. CONTRACTOR TO SUPPORT UTILITY POLE DURING PIPE INSTALLATION
8. REMOVE AND REPLACE SIGN
9. REMOVE AND REPLACE MAILBOX
10. NOT USED
11. REMOVE AND REPLACE EXISTING STORM STRUCTURE (CB,HW) AS NEEDED FOR WATER MAIN INSTALLATION
12. DRIVEWAY RESTORATION (SEE DETAILS)
13. CONSTRUCT CLAY BULKHEAD IN TRENCH WITH UNDERDRAIN. DAYLIGHT UNDERDRAIN TO DITCH OR DRAINAGE STRUCTURE

HATCH LEGEND

- 1-1/2" ASPHALT PAVEMENT MILL AND OVERLAY AREA
- TRENCH RESTORATION - ASPHALT PAVEMENT - SEE DETAIL SHEET
- TRENCH RESTORATION - CONCRETE PAVEMENT - SEE DETAIL SHEET
- TRENCH RESTORATION - 8" AGGREGATE PAVEMENT
- CONTROL DENSITY FILL - PAV'T TRENCH
- CONCRETE DRIVEWAY REPLACEMENT - SEE DETAIL SHEET
- CONCRETE WALK REPLACEMENT - SEE DETAIL SHEET
- ASPHALT DRIVEWAY REPLACEMENT - SEE DETAIL SHEET
- GRAVEL DRIVEWAY REPLACEMENT - SEE DETAIL SHEET
- CHANNEL LINING, CLASS II - SEE DETAIL SHEET

90% REVIEW

your trusted advisor — engineers architects planners consultants

NO	REVISION	DATE
.	.	.

ISSUED FOR:	FINAL
ISSUE DATE:	JUNE 2024
SCALE:	AS SHOWN
DESIGNED BY:	JCOR
DRAWN BY:	JCOR
CHECKED BY:	JSHU

NORTHERN KENTUCKY WATER DISTRICT
SUBDISTRICT 'O'
-KENTON COUNTY -

STEEP CREEK ROAD / DECOURSEY PIKE
STA. 60+00 TO STA. 68+80

PROJECT NO.: 231591
DISCIPLINE: CIVIL
SHEET NAME: C-17
SHEET: 23 OF 49

APPROVED
Kentucky Transportation Cabinet
August 30, 2024
Traffic Engineering Branch

H:\2023\231591\DWG\SHEETS\C_231591 PNP_08_STEEP CREEK.DWG - DECOURSEY - 7/26/2024 6:00:34 PM - JAMES CORNELL

KYTC Division of Maintenance

Permits Branch
District 6

ENCROACHMENT PERMIT GENERAL NOTES & SPECIFICATIONS

YOU MUST NOTIFY KYTC BEFORE BEGINNING ANY WORK IN THE RIGHT-OF-WAY. ***Failure to alert KYTC of working within the right of way may result in permit revocation.***

Two ways to notify KYTC of your construction start date:

By Email: KYTCD6PERMITS@KY.GOV

**must include permit number and county in subject line*

By Phone: 859-341-2700

**must know permit number and county when calling*

YOU MUST ALSO NOTIFY KYTC UPON COMPLETION OF WORK WITHIN RIGHT-OF-WAY. ***Failure to alert KYTC of completion of work may result in withholding release of any associated bonds.***

Kentucky UNBRIDLED SPIRIT™

APPROVED
August 27, 2024
Kentucky Transportation Cabinet
06-2024-0081-1

I. SAFETY

A. General Provisions

☑ All signs and control of traffic shall be in accordance with the Manual on Uniform Traffic Control Devices (MUTCD) for Streets and Highways, latest edition, Part VI, and safety requirements shall comply with the Permits Manual. Federal law requires that traffic control shall be implemented in accordance with MUTCD standards and KYTC's Standard Specifications for Road and Bridge Construction (KYTC SSRBC) under the supervision of a certified Work Zone Traffic Control Supervisor.

☑ All work necessary in shoulder or ditch line areas of a state highway shall be scheduled to be promptly completed so that hazards adjacent to the traveled way are kept to an absolute minimum.

☑ No more than one (1) traveled-lane shall be blocked or obstructed during normal working hours. All signs and flaggers during lane closure shall conform to the MUTCD. The traveled-way and shoulders shall be kept clear of mud and other construction debris at all times during construction of the permitted facility. No non-construction equipment or vehicles or office trailers shall be allowed on the right of way during working hours. The right of way shall be left free and clear of equipment, material, and vehicles during non-working hours.

☑ When necessary to block one (1) traveled-lane of a state highway, the normal working hours shall be as directed by the Department. No lanes shall be blocked or obstructed during adverse weather conditions (rain, snow, fog, etc.) without specific permission from the Department.

☑ Working hours shall be between **9:00 AM** and **3:00 PM**. Further date and time restrictions are as follows:

B. Explosives

☑ No explosive devices or explosive material shall be used within state right of way without proper license and approval of the Kentucky Department of Mines and Minerals, Explosive Division.

C. OSHA

☑ Kentucky Occupational Safety and Health Standards for the construction industry, which has the effect of law, states in part: (Page 52, 1926.651, Specific Excavation Requirements) "Prior to opening an excavation, effort shall be made to determine whether underground installations, (sewer, telephone, water, fuel, electric lines, etc.) will be encountered, and if so, where such underground installations are located. When the excavation approaches the estimated location of such an installation, the exact location shall be determined, and when it is uncovered, proper supports shall be provided for the existing installation. Utility companies shall be contacted and advised of proposed work prior to the start of actual excavation."

D. Archaeological

☑ Whenever materials of an archaeological nature are discovered during the course of construction work or maintenance operations, contact shall be made immediately with the Division of Environmental Analysis, which maintains an archaeologist on staff, or with the Office of the State Archaeologist located at the University of Kentucky. Following this consultation, further action shall be decided on a case-by-case basis by the State Highway Engineer or the Transportation Planning Engineer or their designated representative.

E. Environmental

☑ If the activity to which this permit related disturbs one acre of more of land, you must obtain KPDES KYR10 permit. Information can be found at http://water.ky.gov/permitting/Pages/GeneralPermits.aspx

F. Additional Notes

☑ The following additional notes apply to this permit:

24 hour notice is required prior to restoration of pavement, concrete or topsoil. Call Rick Shay at 859-307-5768

APPROVED
AUGUST 27, 2024
KENTUCKY TRANSPORTATION CABINET
06-2024-00844

II. UTILITIES

- [x] The permittee shall be responsible for any damage to existing utilities. Any utility modifications or relocations within state right of way necessary, as determined by the Department or by the owner of the utility, shall be at the expense of the permittee and subject to the approval of the Department. Operators of underground utilities in right of way shall be members of Kentucky 811.

- [ ] All existing manholes and valve boxes shall be adjusted to be flush with finished grade.

- [x] All pavement cuts shall be restored per Kentucky Transportation Cabinet standards and specifications.

- [x] Any excavation within 3' of edge of pavement will require flowable fill as backfill.

- [x] The clear zone requirement shall be met to the extent possible in accordance with the Roadside Design Guide.

- [ ] Encasement pipe shall conform to current standards for highway crossings in accordance with the Permits Manual. Pipe encasing shall not be required if the pipe crossing is 2" or less.

- [ ] Aerial crossing of utility lines shall have a minimum clearance from the high point of the roadway to the low point of the line of 24' on fully controlled access highways and 18' on non-fully controlled access highways

- [x] Minimum depth for underground Gas and Electric lines is 60" under roadways, ramps, and ditch lines and 42" in all other areas within state right of way. The minimum depth for all other utilities is 42" in all areas.

- [x] When steel plates are installed over an open excavation in the roadway, they must be anchored to the pavement and have asphalt applied to all exposed edges and an MUTCD approved sign noting "Road Plates Ahead." KYTC must be notified of the location, date, time, and permit number associated to BOTH the installation and removal of the plate. Failure to do so may result in permit revocation.

- [ ] Utility poles moved for replacement must be removed in their entirety and the hole left behind must be backfilled.

- [ ] No poles or anchors shall be installed in a roadside ditch.

- [ ] ***Utility notes specific to fully-controlled access highways ONLY:***
All work necessary within the right-of-way shall be performed behind a temporary fence erected prior to the start of work. The temporary woven wire fence shall be removed immediately upon completion of work on the right-of-way, and the control of access immediately restored to original condition, in accordance with applicable KYTC SSRBC. All vents, valves, manholes, etc., shall be located outside of the right-of-way. Encasement pipe shall extend from right-of-way line to right-of-way line and shall be one continuous run of pipe. The encasement pipe shall be welded at all joints. The boring pit and tail ditch shall extend past the existing toe of slope or bottom of ditch line and shall be a minimum of 42 inches deep. Work in interstate right-of-way requires approval from FHWA (Federal Highway Administration).

- [ ] Additional notes:

MINIMUM COVER MUST BE 60" IN THE ROW AND UNDER PAVEMENT

APPROVED
AUGUST 27, 2024
KENTUCKY TRANSPORTATION CABINET
06-2024-00844

III. DRAINAGE

☑ Negative impacts to existing drainage will be the applicant's responsibility to repair in accordance with KYTC SSRBC.

☐ All pipe shall be laid in a straight alignment, to proper grades, and with all materials and methods of installation including bedding and joint seating. Pipe shall not be covered until inspected by the Department and express permission obtained to make backfill. It is the applicant's responsibility to request inspection.

☐ All gutter lines at the base of new curbs shall be on continuous grades, and pockets of water along with curbs or in entrance areas or other paved areas within the right-of-way shall not be acceptable.

☐ All drainage structures and appurtenances (manholes, catch basins, curbing, inlet basins, etc.) shall conform to the Department specifications and shall be constructed in accordance with the KYTC's Standard Drawings.

☐ Additional notes:

IV. PAVING

☑ No bituminous pavement shall be installed within the right of way between November 15 and April 1, nor when the temperature is below 40 degrees Fahrenheit, without the express consent of the Department. No bituminous pavement shall be installed when the underlying course is wet.

☑ Paving within the right of way shall be as follows:

- Base (Type): **Match Existing**, (Thickness) **Match Existing**
- Surface Base (Type) **Match Existing** , (Thickness) **Match Existing**
- Finished Surface (Type) **Match Existing**, (Thickness) **Match Existing**

☑ All materials and methods of construction, including base and subgrade preparation, shall be in accordance with KYTC's Standard Specifications. At least 24 hours notice to the Department is required prior to beginning paving operations.

Phone: **859-307-5768** Name: **Rick Shay**

☑ Utility companies performing road cuts must restore the pavement to pre-existing condition. Pictures/videos are recommended to ensure proper placement of signs and lane markers that are temporarily removed for paving operations. In some cases, a pre-work inventory may be requested from the Department.

☑ Existing pavement and shoulder material shall be removed to accommodate the above paving specifications.

☑ The finished surface of all new pavement within the right of way shall be true to the required slope and grade, uniform in density and texture, free of irregularities, and equivalent in riding qualities to the adjacent highway pavement or as determined by KYTC.

☑ To ensure proper surface drainage, the new pavement shall be flush with the edge of existing highway pavement and shall slope away from the existing edge of the pavement as specified in drawings.

☑ Existing edge of pavement shall be saw-cut to provide a straight and uniform joint for new pavement, and an edge key will be installed in the overlap. An approved joint sealer, in accordance with Kentucky Department of Highways Standard Specifications (latest edition), shall be applied between new and existing pavements.

☐ Additional notes:

APPROVED
AUGUST 27, 2024
KENTUCKY TRANSPORTATION CABINET
06-2024-00844

V. ENTRANCES

- ☐ Encroachment permits issued by KYTC in no way supersede local planning/zoning requirements or subdivision regulations. KYTC has no authority with zoning changes.
- ☐ Commercial entrances must be paved to the right-of-way line. Any deviations must be approved by KYTC before installation.
- ☐ KTYC can dictate drainage improvement installation during construction or after entrance is at final grade. The permit release does not release the permit applicant from drainage maintenance.
- ☐ Signs (ground-mounted and span-mounted), stop bars, crosswalk, and proper lane markings must be in-place before entrance is open for traffic. Lane width modifications must be approved by the Department.
- ☐ Guardrail installation must be pre-approved by the Department and installed by a KYTC pre-qualified contractor. Any guardrail that is removed during construction must be returned to the local KTYC maintenance facility.
- ☐ Additional notes:

VI. TRAFFIC

- ☑ Any contractor performing work within the vicinity of KYTC roadway lighting or traffic signals, must request locates from the KYTC District 6 Traffic section at least one week before of starting work in the right-of-way.
- ☐ Applicant must maintain all KYTC Roadway signage that is impacted by the permitted work. In the event that any signs have to be moved, it is the applicant's responsibility to mark the sign's location before removal and to install the original or new sign per KYTC standards for sign installation.
- ☐ Any thermoplastic or striping damaged during the encroachment must be restored in a timely manner per KYTC standards. Stopbars, arrows, and crosswalks must be thermoplastic material, paint is not acceptable. This work must be performed by a KYTC pre-qualified contractor.
- ☐ Excavating near a signal, lighting pole, or anchoring facility must be done so that it does not impact the structural integrity of the pole. Any work that requires a temporary support or anchoring must receive prior approval.
- ☐ If the scope of the permit involves a signal build or rebuild, it is the applicant's responsibility to apply for power service (and pay monthly electrical bill) as well as request electrical inspection from the KYTC District 6 Traffic section. If the signal modifications require timing or phasing changes this must be requested at least two weeks in advance of the signal's turn-on date. KYTC will not take ownership of permitted signals until the electrical inspection is formally accepted and approved.
- ☐ Work which impacts traffic loops requires 48-hour notice to the KYTC District 6 Traffic section at 859-341-2700. Accidental damage of a traffic loop must be reported immediately to KYTC District 6's emergency line at 859-620-2738. Any disturbed traffic loops must be replaced in a timely manner. Traffic loops out of operation for more than five working days will subject the applicant to the cancellation of the permit. Loop repair must be performed by a KYTC pre-qualified contractor.
- ☐ Additional Notes:

APPROVED
AUGUST 27, 2024
KENTUCKY TRANSPORTATION CABINET
06-2024-00844-1-1

VII. SIDEWALK SPECIFICATIONS

☐ All sidewalk modifications, retrofitting, or installations must meet current ADA guidelines

A. New Sidewalks

☐ New sidewalk specifications, dimensions, and designs shall be in accordance with KYTC's latest edition of the Standard Specifications, or with the plans provided on the permit if approved by a KYTC D6 Construction or Permits Engineer.

☐ All materials and methods of construction, including curing, shall be in accordance with KYTC's latest edition of the Standard Specifications.

B. Existing Sidewalks

☐ Use of the sidewalk shall not be blocked or obstructed and a usable walkway shall be maintained across the construction area at all times per MUTCD . Sidewalk closures must be approved by the Department before implementation.

☐ The location of ADA ramps (truncated domes/tactile warnings/etc.) will need to be field verified by KYTC before installation.

☐ Any section of sidewalk that becomes damaged shall be entirely replaced to match existing sections.

☐ Additional notes:

VIII. RIGHT OF WAY RESTORATION

☑ All disturbed portions of the right of way shall be restored to grass as per Kentucky Department of Highways Standard Specifications for Road and Bridge Construction (latest edition). A satisfactory turf, as determined by the Department, shall be established by the permittee prior to release of indemnity. Sodding or seeding shall be as follows:

- ☑ Slopes 3:1 or Less: 90% Kentucky 31 Tall Fescue and 10% White Dutch Clover at 100 lbs/acre
- ☑ Slopes Greater than 3:1: 90% Kentucky 31 Tall Fescue and 10% Partridge Pea at 100 lbs/acre
- ☑ Urban or Residential Areas: 95% Turf Type Fall Fescue Blend and 5% White Dutch Clover at 275 lbs/acre

☑ Two tons of clean straw mulch per acre of seeding.

☑ Prior to seeding, the ground shall be prepared in accordance with Kentucky Department of Highways Standard Specifications for Road and Bridge Construction (latest edition).

☐ Substitutes for sod such as artificial turf, rocked mulch, or paved areas may be acceptable if they are aesthetically pleasing and receive prior approval from KYTC.

☐ All ditch-flow lines and all ditch-side slopes shall be sodded.

☐ Existing concrete right of way markers shall not be disturbed. If damaged in any way, they shall be entirely replaced by the permittee with new concrete markers to match the original markers, in accordance with Kentucky Department of Highways Standard Drawings. Markers that are entirely removed shall be re-established in the proper locations by the permittee and to the satisfaction of the Department.

☐ Additional notes:

APPROVED
AUGUST 27, 2024
KENTUCKY TRANSPORTATION CABINET
06-2024-00844

IX. RIGHT OF WAY FENCE RESTORATION

- ☐ The replacement fence shall be a height of at least 48 inches and shall be of sufficient density to protect against encroachment.
- ☐ The replacement fence shall be a minimum of 1 foot and a maximum of 2 feet outside the right-of-way line
- ☐ The fence materials and design shall meet accepted industry standards and be treated as paintable. Durable finish materials such as vinyl are acceptable.
- ☐ The permittee shall be required to construct and maintain the replacement fencing to an acceptable level of functionality and state of repair. All work on the fencing shall be performed by access from the private property. Access from the roadway is not allowed.
- ☐ The existing fence shall be removed by permittee and stored at the Department's maintenance storage yard for future reuse by the Department, or the Department shall be reimbursed the cost of fencing removed.
- ☐ Right of way monuments shall be installed regardless of if replacement fence is installed or not.
- ☐ The control of access shall not be diminished as a result of replacement of the fence.
- ☐ Additional notes:

X. MISCELLANEOUS NOTES

NOTICE TO PERMITTEE

THE PERMITTEE AGREES THAT ALL WORK WITHIN THE EXISTING RIGHT OF WAY SHALL BE DONE IN ACCORDANCE WITH THE CURRENT KYTC STANDARD SPECIFICATIONS AND THE PLANS AS APPROVED AND PERMITTED BY AN ENCROACHMENT PERMIT. ANY CHANGES OR VARIANCES MADE AT THE TIME OF CONSTRUCTION WITHOUT WRITTEN APPROVAL FROM THE DEPARTMENT OF HIGHWAYS SHALL BE REMOVED BY THE PERMITTEE AT NO EXPENSE TO THE DEPARTMENT OF HIGHWAYS AND SHALL BE REDONE BY THE PERMITTEE TO CONFORM WITH THE APPROVED PLANS.

APPROVED
Highway District
Date: 7-11-2024
By: [illegible]
Kentucky Transportation Cabinet

NOTICE OF COMPLETION OF ENCROACHMENT PERMIT WORK

PERMITTEE

Name: Northern Kentucky Water District
Contact Person: Steve Broering
Address: 2835 Crescent Springs Road
City: Ft. Wright
State: Kentucky
Zip: 41017
Telephone: (859) 991-1652

PROJECT IDENTIFICATION

Permit Number: 06-2024-00840

I wish to notify the Department of Highways that the above mentioned permit work and any necessary right-of-way restoration have been completed and are ready for final inspection.

Permittee

Please return this form to the address below when work is completed and ready for final inspection.

Please Return to: Permit Engineer
Department of Highways, District 6 Office
421 Buttermilk Pike
Covington, Kentucky 41017
(859) 341-2700
www.transportation.ky.gov/

LOCATION(S)			
Description	**County - Route**	**Latitude**	**Longitude**
PROPOSED 8" WATER MAIN INSTALLATION ALONG ELLIOTT ROAD THAT TIES INTO EXISTING 16" WM ON MADISON PIKE	Kenton - KY 17	38.808592	-84.497293

APPROVED
AUGUST 27, 2024
KENTUCKY TRANSPORTATION CABINET
06-2024-00840

Andy Beshear
Governor

COMMONWEALTH OF KENTUCKY
TRANSPORTATION CABINET
Department of Highways, District 6 Office
421 Buttermilk Pike
Covington, Kentucky 41017
(859) 341-2700
www.transportation.ky.gov/

Jim Gray
Secretary

August 27, 2024

Northern Kentucky Water District
Steve Broering
2835 Crescent Springs Road
Ft. Wright, Kentucky 41017

Subject: Permit #: 06-2024-00840
Permit Type: Utilities - Water
Approval

Dear Applicant:

Attached is your permit approval and documentation for the subject permit.

Be advised that all work must be done in conformity with permit and application conditions. If you have any questions, please contact the Permits Section at this office.

Sincerely,

Linzy Brefeld

Linzy Brefeld
D6 Permits Supervisor

Attachments

APPROVED
AUGUST 27, 2024
KENTUCKY TRANSPORTATION CABINET
06-2024-00840

Kentucky Transportation Cabinet
Department of Highways
Division of Maintenance
Permits Branch

ENCROACHMENT PERMIT

KYTC KEPT #: 06-2024-00840

Permittee: Northern Kentucky Water District

Permit Type / Subtype: Utilities / Water

Work Completion Date: 8/26/2025

INDEMNITIES		
Type	**Amount Required**	**Tracking Number**
Performance Bond	$0.00	
Cash / Check	$0.00	
Self-Insured	$0.00	
Payment Bond	$0.00	
Liability Insurance	$0.00	

This permit has been: **APPROVED** [X] **DENIED** [ ]

Linzy Brefeld	D6 Permits Supervisor	8/26/2024
SIGNATURE	**TITLE**	**DATE**

The TC 99-1(B), including the application TC-99 1(A) and all related and accompanying documents and drawings make up the permit. It is not a permit unless both the TC 99-1(A) and TC 99-1(B) are both present.

LOCATION(S)			
Description	**County - Route**	**Latitude**	**Longitude**
PROPOSED 8" WATER MAIN INSTALLATION ALONG ELLIOTT ROAD THAT TIES INTO EXISTING 16" WM ON MADISON PIKE	Kenton - KY 17	38.808592	-84.497293

APPROVED
AUGUST 27, 2024
TRANSPORTATION CABINET
06-2024-00840
KENTUCKY

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TEAM KENTUCKY TRANSPORTATION CABINET

KENTUCKY TRANSPORTATION CABINET
Department of Highways
PERMITS BRANCH

APPLICATION FOR ENCROACHMENT PERMIT

KYTC KEPT #: 06-2024-00840

SECTION 1: APPLICANT CONTACT INFORMATION

APPLICANT NORTHERN KY WATER DISTRICT	**ADDRESS** 2835 CRESCENT SPRINGS PIKE		
EMAIL sbroering@nkywater.org	**CITY** ERLANGER	**STATE** KY	**ZIP** 41018
CONTACT NAME 1 Steve Broering	**EMAIL** sbroering@nkywater.org	**PHONE #** 859-426-2728 **CELL #**	
CONTACT NAME 2 (*if applicable*)	**EMAIL**	**PHONE #** **CELL #**	

SECTION 2: PROPOSED WORK LOCATION

ADDRESS	**CITY** DEMOSSVILLE		**STATE** Kentucky	**ZIP** 41033
COUNTY KENTON	**ROUTE #** 17	**MILE POINT** 1.1	**LONGITUDE** (*X*) 84D28'30"W	**LATITUDE** (*Y*) 38D49'08"N

ADDITIONAL LOCATION INFORMATION:
MADISON PIKE (KY 17) AT ELLIOTT ROAD

FOR KYTC USE ONLY

PERMIT TYPE: ☐ Air Right ☐ Entrance ☒ Utilities ☐ Vegetation Removal ☐ Other: _____

ACCESS: ☐ Full ☐ Partial ☒ by Permit **LOCATION:** ☐ Left ☐ Right ☐ Crossing

SECTION 3: GENERAL DESCRIPTION OF WORK

PROPOSED 8" WATER MAIN INSTALLATION ALONG ELLIOTT ROAD THAT TIES INTO EXISTING 16" WM ON MADISON PIKE

THE UNDERSIGNED APPLICANT(s), being duly authorized representative(s) or owner(s), DO AGREE TO ALL ORIGINAL UNEDITED TERMS AND CONDITIONS ON THE TC 99-1A, pages 1-4.

Steve Broering
SIGNATURE

7-15-2024
DATE

This is not a permit unless and until the applicant(s) receives an approved TC 99-1B from KYTC. This application shall become void if not approved by the cancellation date. The cancellation date shall be a minimum of one year from the date the applicant submits their application.

APPROVED
AUGUST 27, 2024
KENTUCKY TRANSPORTATION CABINET
06-2024-00840

APPLICATION FOR ENCROACHMENT PERMIT

TERMS AND CONDITIONS

1. The permit, including this application and all related and accompanying documents and drawings making up the permit, remains in effect and is binding upon the Applicant/Permittee, its successors and assigns, as long as the encroachment(s) exists and also until the permittee is finally relieved by the Department of Highways from all its obligations.

2. Applicant shall meet all requirements of the Clean Water Act if the project will disturb one acre or more, the applicant shall obtain a KPDES KYR10 Permit from the Kentucky Division of Water. All disturbed areas shall meet the requirements of the Department of Highway's Standard Specifications, Sections 212 and 213, as amended.

3. **INDEMNITY:**

- **A.** PERFORMANCE BOND: The permittee shall provide to the Department a performance bond according to the Permits Manual, Section PE-203 as a guarantee of conformance with the Department's Encroachment Permit requirements.
- **B.** PAYMENT BOND: At the discretion of the department, a payment bond shall be required of the permittee to ensure payment of liquidated damages assessed to the permittee.
- **C.** LIABILITY INSURANCE: Liability insurance shall be required of the permittee (in an amount approved by the department) to cover all liabilities associated with the encroachment.
- **D.** It shall be the responsibility of the permittee, its successors and assigns, to maintain all indemnities in full force and effect until the permittee is authorized to release the indemnity by the Department.

4. A copy of this application and all related documents making up the approved permit shall be given to the applicant and shall be made readily available for review at the work site at all times.

5. Perpetual maintenance of the encroachment is the responsibility of the permittee, its successors and assigns, with the approval of the Department as required, unless otherwise stated.

6. Permittee, its successors and assigns, shall comply with and agree to be bound by the requirements and terms of (a) this application and all related documents making up the approved permit, (b) by the Department's Permits Manual, and (c) by the Manual on Uniform Traffic Control Devices, both manuals as revised to and in effect on the date of issuance of the permit, all of which documents are made a part thereof by this reference. Compliance by the permittee, its successors and assigns, with subsequent revisions to applicable provisions of either manual or other policy of the Department may be made a condition of allowing the encroachment to persist under the permit.

7. Permittee agrees that this and any encroachment may be ordered removed by the Department at any time, and for any reason, upon thirty days written notice to the last known address of the applicant or to the address at the location of the encroachment. The permittee agrees that the cost of removing and of restoring the associated right-of-way is the responsibility of the permittee, its successors and assigns.

8. Permittee, its successors and assigns, agree that if the Department determines that motor vehicular safety deficiencies develop as a result of the installation or use of the encroachment, the permittee, its successors and assigns, shall provide and bear the expenses to adjust, relocate, or reconstruct the facilities, add signs, auxiliary lanes, or other corrective measures reasonably deemed necessary by the Department within a reasonable time after receipt of a written notice of such deficiency. The period within which such adjustments, relocations, additions, modifications, or other corrective measures must be completed will be specified in the notice.

9. Where traffic signals are required as a condition of granting the requested permit or are thereafter required to correct motor vehicular safety deficiencies, as determined by the Department, the costs for signal equipment and installation(s) shall be borne by the permittee, its successors and assigns and the Department in its reasonable discretion and only in accordance with the Department's current policy set forth in the Traffic Operations Manual and Permits Manual. Any modifications to the permittee's entrance necessary to accommodate signalization (including necessary easement(s) on private property) shall be the responsibility of the permittee, its successors and assigns, at no expense to the Department.

APPROVED
KENTUCKY TRANSPORTATION CABINET
06-23-2021

APPLICATION FOR ENCROACHMENT PERMIT

10. The requested encroachment shall not infringe on the frontage rights of an abutting owner without their written consent as hereinafter described. Each abutting owner shall express their consent, which shall be binding on their successors and assigns, by the submission of a notarized statement as follows, "I (we), _____, hereby consent to the granting of the permit requested by the applicant along Route _____, which permit does affect frontage rights along my (our) adjacent real property." By signature(s) _____, subscribed and sworn by _____, on this date _____.

11. The permit, if approved, is subject to the agreement that it shall not interfere with any similar rights or permit(s) previously granted to any other party, except as otherwise provided by law.

12. Permittee shall include documentation which describes the facilities to be constructed. Permittee, its successors and assigns, agree as a condition of the granting of the permit to construct and maintain any and all permitted facilities or other encroachments in strict accordance with the submitted and approved permit documentation and the policies and procedures of the Department. Permittee, its successors and assigns, shall not use facilities authorized herein in any manner contrary to that prescribed by the approved permit. Only normal usage as contemplated by the parties and by this application and routine maintenance are authorized by the permit.

13. Permittee, its successors and assigns, at all times from the date permitted work is commenced until such time as all permitted facilities or other encroachments are removed from the right-of-way and the right-of-way restored, **shall defend, protect, indemnify and save harmless** the Department from any and all liability claims and demands arising out of the work, encroachment, maintenance, or other undertaking by the permittee, its successors and assigns, related or undertaken pursuant to the granted permit, due to any claimed act or omission by the permittee, its servants, agents, employees, or contractors. This provision shall not inure to the benefit of any third party nor operate to enlarge any liability of the Department beyond that existing at common law or otherwise if this right to indemnity did not exist.

14. Upon a violation of any provision of the permit, or otherwise in its reasonable discretion, the Department may require additional action by the permittee, its successors and assigns, up to and including the removal of the encroachment and restoration of the right-of-way. In the event additional actions required by the Department under the permit are not undertaken as ordered and within a reasonable time, the Department may in its discretion cause those or other additional corrective actions to be undertaken and the Department shall recover the reasonable costs of those corrective actions from the permittee, its successors and assigns.

15. Permittee, its successors and assigns, shall use the encroachment premises in compliance with all requirements of federal law and regulation, including those imposed pursuant to Title VI of the Civil Right Act of 1964 (42 U.S.C. § 2000d et seq.) and the related regulations of the U.S. Department of Transportation in Title 49 C.F.R. Part 21, all as amended.

16. Permittee, its successors and assigns, agree that if the Department determines it is necessary for the facilities or other encroachment authorized by the permit to be removed, relocated or reconstructed in connection with the reconstruction, relocation or improvement of a highway, the Department may revoke permission for the encroachment to remain under the permit and may order its removal, relocation or reconstruction by the permittee, its successors and assigns, at the expense of the permittee, except where the Department is required by law to pay any or all of those costs.

APPROVED
AUGUST 27, 2024
KENTUCKY TRANSPORTATION CABINET
06-2024-00040

APPLICATION FOR ENCROACHMENT PERMIT

17. Permittee agrees that the authorized permit is personal to the permittee and shall remain in effect until such time as (a) the permittee's rights to the adjoining real property to have benefitted from the requested encroachment have been relinquished, (b) until all permit obligations have been assumed by appropriate successors and assigns, and (c) unless and until a written release from permit obligations has been granted by the Department. The permit and its requirements shall also bind the real property to have benefitted from the requested encroachment to the extent permitted by law. The permit and the related encroachment become the responsibility of the successors and assigns of the permittee and the successors and assigns of each property owner benefitting from the encroachment, or the encroachment may not otherwise permissibly continue to be maintained on the right-of-way. (Does not apply to utility encroachments serving the general public.)

18. If work authorized by the permit is within a highway construction project in the construction phase, it shall be the responsibility of the permittee to make personal contact with the Department's Engineer on the project in order to coordinate all permitted work with the Department's prime contractor on the project.

19. This permit is not intended to, nor shall it, affect, alter or alleviate any requirement imposed upon the permittee, its successors and assigns, by any other agency.

20. Permittee, its successors and assigns, agree to contain and maintain all dirt, mud, and other debris emanating from the encroachment away from the surrounding right-of-way and the travel way of the highway hereafter and at all times that its obligations under the permit remain in effect.

21. 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 the 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 Clerk to determine what utility companies have facilities in the area.

22. The undersigned Utility acknowledges ownership and control of the facilities proposed to be installed, modified, or extended by the Applicant/Permittee and agrees to be bound by the requirements and terms of this application and all related documents making up the approved permit, by the Department's Permits Guidance Manual, and by all applicable regulations and statutes in effect on the date of issuance of the permit. This information and application is certified correct to the best knowledge and belief of the undersigned Utility.

NORTHERN KENTUCKY WATER DISTRICT
UTILITY

Steve Broering	Engineering Technician
NAME (Utility Representative)	TITLE (Utility Representative)
Steve Broering	7-15-2024
SIGNATURE (Utility Representative)	DATE

APPROVED
AUGUST 27, 2024
KENTUCKY TRANSPORTATION CABINET
06-2024-00840

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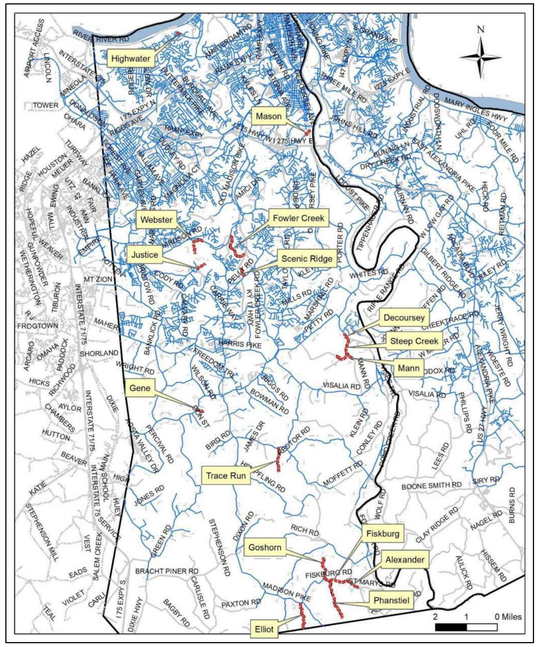
NORTHERN KENTUCKY WATER DISTRICT
SUB-DISTRICT 'O'
WATER MAIN EXTENSION
KENTON COUNTY, KENTUCKY
231591

INDEX OF SHEETS		
NO.	DWG NAME	SHEET NAME
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3	G-02	DETAILS
4	G-03	DETAILS
5	G-04	DETAILS
6	G-05	EROSION CONTROL DETAILS
7	C-01	HIGHWATER ROAD
8-9	C-02 to C-03	MASON ROAD
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46-49	C-40 to C43	ELLIOT ROAD

NORTHERN KENTUCKY WATER DISTRICT OFFICIALS

PRESIDENT / CEO
LINDSEY RECHTIN, CPA

COMMISSIONERS
FRED A. MACKE, JR. (Chair)
JODY R. LANGE (Vice-Chair)
DOUGLAS C. WAGNER (Secretary)
NICHOLAS E. WINNIKE (Treasurer)
GARY E. HOLLAND (Commissioner)
JOSEPH J. KOESTER (Commissioner)



VICINITY MAP

NORTHERN KENTUCKY WATER DISTRICT SPECIFICATIONS

THE LATEST STANDARD SPECIFICATIONS AND DRAWINGS OF THE NORTHERN KENTUCKY WATER DISTRICT FOR THE INSTALLATION OF WATER MAIN AND METER PITS SHALL GOVERN ALL WATER MAIN CONSTRUCTION ITEMS ON THIS PROJECT.

KENTUCKY TRANSPORTATION CABINET SPECIFICATIONS

THE LATEST STANDARD SPECIFICATIONS OF THE KENTUCKY TRANSPORTATION CABINET, INCLUDING CHANGES AND SUPPLEMENTAL SPECIFICATIONS THERETO AND KENTON COUNTY SUBDIVISION REGULATIONS SHALL GOVERN THIS IMPROVEMENT.

SOURCE OF OUNDARY AND TOPOGRAPHIC INFORMATION

THE TOPOGRAPHIC INFORMATION SHOWN ON THESE PLANS IS BASED UPON A SURVEY BY CT CONSULTANTS, INC.
THE BOUNDARY INFORMATION SHOWN ON THESE PLANS IS BASED ON PLANNING AND DEVELOPMENT SERVICES (P.D.S.) G.I.S. MAPPING.

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JAMES M. SHUMATE *P.E. #18156*

90% REVIEW

your trusted advisor consultants engineers architects planners

NO	REVISION	DATE

ISSUED FOR: 90% DESIGN
ISSUE DATE: MAY 2024
SCALE: AS SHOWN
DESIGNED BY: JCOR
DRAWN BY: JCOR
CHECKED BY: JSHU

NORTHERN KENTUCKY WATER DISTRICT
SUBDISTRICT 'O'
-KENTON COUNTY -

TITLE SHEET

PROJECT NO.
231591
DISCIPLINE
CIVIL
SHEET NAME
TTL
SHEET 1 OF 48

APPROVED
AUGUST 1, 2024
TRANSPORTATION CABINET
KENTUCKY

H:\2023\231591\DWG\SHEETS\C_231591 00_TITLE SHEET.DWG - TITLE - 5/28/2024 10:23:19 AM - JAMES CORNELL

GENERAL NOTES

1. ALL CONSTRUCTION SHALL CONFORM TO THESE PLANS AND SPECIFICATIONS, THE LATEST EDITION OF THE NORTHERN KENTUCKY WATER DISTRICT STANDARD SPECIFICATIONS AND DRAWINGS AND THE KENTON COUNTY SUBDIVISION REGULATIONS AND THE KENTUCKY DEPARTMENT OF HIGHWAYS STANDARD SPECIFICATIONS FOR ROAD AND BRIDGE CONSTRUCTION.

2. ALL DISTURBED AREAS ARE TO BE RESTORED (SEEDED AND MULCHED) BY THE CONTRACTOR AND SHALL PROCEED WITH JOB PROGRESSION. THE CONTRACTOR SHALL ALSO BE RESPONSIBLE FOR REMOVING ANY EXCESS MATERIALS AT THE SITE AND MAINTAINING ALL SEEDED AND MULCHED AREAS UNTIL PROJECT COMPLETION AND FINAL INSPECTION PER KDOT SPEC. 212. A RESIDENTIAL YARD SHALL BE RESTORED WITHIN TWENTY-ONE (21) DAYS AFTER CONSTRUCTION.

3. ALL APPLICABLE RECOMMENDATIONS IN KENTUCKY'S BEST MANAGEMENT PRACTICES MANUAL SHALL BE FOLLOWED BY THE CONTRACTOR, INCLUDING SEEDING OF DISTURBED GROUND.

4. RIGHT-OF-WAY AND PROPERTY LINES SHOWN ARE PLOTTED FROM PLANNING AND DEVELOPMENT SERVICES (PDS) G.I.S. MAPPING AND ARE APPROXIMATE AND NOT THE RESULT OF A FIELD BOUNDARY SURVEY.

5. THE CONTRACTOR SHALL LIMIT THEIR WORK AREA TO THE EASEMENTS AND RIGHTS-OF-WAY SHOWN ON THESE PLANS UNLESS WRITTEN PERMISSION IS GIVEN BY THE PROPERTY OWNER AND APPROVED BY FORT N.K.W.D.

6. ALL OSHA, STATE AND LOCAL SAFETY REGULATIONS SHALL BE FOLLOWED DURING CONSTRUCTION.

7. NO CONSTRUCTION SHALL COMMENCE UNTIL ALL STATE, COUNTY AND LOCAL PERMITS HAVE BEEN ISSUED AS REQUIRED

8. THE CONTRACTOR SHALL COORDINATE ALL WORK WITHIN THE PUBLIC RIGHT OF WAY WITH THE KENTUCKY TRANSPORTATION CABINET AND KENTON COUNTY AND ANY LOCAL MUNICIPALITY. LOCAL TRAFFIC MUST BE MAINTAINED AT ALL TIMES DURING CONSTRUCTION UNLESS OTHERWISE NOTED IN THESE PLANS.

9. ADDITIONAL BMP'S AND EROSION AND SEDIMENT CONTROL MEASURES MAY BE REQUIRED AS DEEMED NECESSARY. ALL COST FOR ABOVE SHALL BE INCLUDED IN LUMP SUM BID FOR EROSION CONTROL AND WATER POLLUTION CONTROL.

10. ALL CONSTRUCTION WORK SHALL BE IN CONFORMANCE WITH THE RECOMMENDATIONS CONTAINED IN THE GEOTECHNICAL INVESTIGATION REPORT PREPARED BY G.A.I. CONSULTANTS DATED FEBRUARY 2024.

GENERAL TRENCH EXCAVATION NOTES

1. CONTRACTOR IS TO PROVIDE CONSTANT STABLE SUPPORT FOR THE WATER MAIN TRENCH EXCAVATION (ie SHEETING, SHORING, ETC.) TO PROTECT ALL ADJACENT EXISTING UTILITIES, STORM SEWER PIPE AND STRUCTURES AND THE EXISTING ROADWAY FROM ANY MOVEMENT. (NO ADDITIONAL PAYMENT WILL BE MADE FOR THIS WORK. ANY COSTS ASSOCIATED WITH TRENCH SUPPORT SHALL BE INCLUDED IN THE UNIT BID PRICE FOR THE ASSOCIATED WATER MAIN.

   TRENCH SUPPORT FAILURE RESULTING IN ADVERSE IMPACT TO EXISTING UTILITIES SHALL BE REPAIRED IMMEDIATELY AT THE CONTRACTOR'S EXPENSE.

2. TRENCH EXCAVATION AND OPEN, UNBACKFILLED LENGTH OF WATER MAIN TRENCH SHALL BE LIMITED AS NECESSARY ALONG THE ROADWAY IN ORDER TO PREVENT MOVEMENT OF, OR DAMAGE TO THE SURROUNDING GROUND SURFACE, NEARBY STRUCTURES/INFRASTRUCTURE AND THE EXISTING ROADWAY PAVEMENT.

   TRENCH EXCAVATION SHALL ALSO BE LIMITED TO THE CONTRACTOR'S ABILITY TO PROVIDE TRENCH BOXES FOR SUPPORT. UNDER NO CIRCUMSTANCES SHALL TRENCH EXCAVATION EXCEED LENGTH OF SUPPORT AVAILABLE.

UTILITY NOTES

1. THIS PLAN SHOWS THE APPROXIMATE LOCATION OF UNDERGROUND UTILITIES (GAS, WATER, STORM SEWER, SANITARY SEWER, TELEPHONE, ELECTRIC, ETC.). THE PREPARER DOES NOT GUARANTEE THEIR ACCURACY OR CORRECTNESS. THE INFORMATION PROVIDED SHALL BE FIELD VERIFIED PRIOR TO CONSTRUCTION. THE CONTRACTOR SHALL BE RESPONSIBLE FOR MAINTAINING THE UTILITY AS WELL AS THE SERVICE LATERALS AT ALL TIMES DURING CONSTRUCTION. THE CONTRACTOR SHALL PRACTICE CARE DURING THE GRADING AND TRENCH EXCAVATION AND SHALL BE RESPONSIBLE FOR REPLACING ANY SERVICES THAT ARE DAMAGED DURING CONSTRUCTION AT THEIR EXPENSE.

2. PRIOR TO ANY EXCAVATION OVER AN EXISTING UTILITY LINE OR SERVICE, CONTRACTOR SHALL HAND EXCAVATE TO EXPOSE THE UTILITY AND DETERMINE LOCATION AND DEPTH. NOTIFY ENGINEER IMMEDIATELY OF ANY CONFLICTS.

3. TOPS OF EXISTING AND PROPOSED CASTING ELEVATIONS ARE SUBJECT TO FINAL ADJUSTMENTS AS APPROVED BY THE ENGINEER AND REQUIREMENTS OF UTILITY OWNER. THIS WORK WILL BE INCIDENTAL TO THE CONTRACT.

4. FORTY-EIGHT (48) HOURS BEFORE EXCAVATION IS TO COMMENCE, THE CONTRACTOR SHALL NOTIFY THE FOLLOWING AGENCIES: THE KENTUCKY UTILITY PROTECTION SERVICE AND ALL OTHER UTILITIES THAT MAY HAVE UNDERGROUND UTILITIES INVOLVING THIS PROJECT AND ARE NON-MEMBERS OF KENTUCKY UNDERGROUND PROTECTION.

STORM & SANITARY NOTES

1. ALL STORM AND SANITARY ITEMS SHALL BE IN ACCORDANCE WITH THE LATEST SPECIFICATIONS AND DETAILS FROM SD1. METAL PIPE MATERIALS SHALL NOT BE USED UNLESS OTHERWISE SPECIFIED ON THESE PLANS.

2. CONTRACTOR SHALL BE REQUIRED TO MAINTAIN STORM AND SANITARY SEWER FLOW THROUGHOUT THE PROJECT, FOR THE DURATION OF CONSTRUCTION. ALL COST FOR THE ABOVE SHALL BE INCIDENTAL TO THE CONTRACT.

3. IF REQUIRED, CONTRACTOR SHALL BE RESPONSIBLE FOR CONTACTING AND SCHEDULING STORM AND SANITARY SEWER INSPECTIONS AS SET OUT IN THE PRECONSTRUCTION MEETING.

4. CONNECTIONS INTO EXISTING OR PROPOSED STORM OR SANITARY SEWER STRUCTURES OR PIPES SHALL BE COMPLETED BY A CERTIFIED TAPPER BY SD1.

WATER NOTES

1. ALL WORK RELATING TO WATER MAINS OR WATER SERVICE LINES SHALL BE COMPLETED IN ACCORDANCE WITH THE RULES AND REGULATIONS OF THE NORTHERN KENTUCKY WATER DISTRICT (NKWD).

2. CONTRACTOR MAY NOT USE WATER FROM FIRE HYDRANTS WITHOUT PRIOR PERMISSION FROM NKWD

GAS NOTES

1. ALL WORK RELATING TO GAS MAINS OR GAS SERVICE LINES SHALL BE COMPLETED IN ACCORDANCE WITH THE RULES AND REGULATIONS OF THE DUKE ENERGY

ELECTRIC NOTES

1. ALL WORK RELATING TO ELECTRIC LINES SHALL BE COMPLETED IN ACCORDANCE WITH THE RULES AND REGULATIONS OF THE DUKE ENERGY

WATER DISTRICT GENERAL NOTES

1. THE EXISTING WATER MAIN ELEVATION AND LOCATION AT THE CONNECTION POINT WITH THE PROPOSED MAIN WAS ASSUMED AND HAS NOT BEEN FIELD VERIFIED. PRIOR TO COMMENCEMENT OF ANY WATER MAIN WORK, THE CONTRACTOR SHALL DIG A TEST HOLE AT THE CONNECTION POINT TO LOCATE EXISTING WATER MAIN AS TO LOCATION AND ELEVATION. THE EXISTING WATER MAIN LOCATION MAY REQUIRE SOME FIELD ADJUSTMENT TO THE PROPOSED WATER MAIN INCLUDING ADJUSTING THE DEPTH OF THE PROPOSED WATER MAIN. COST OF DOING THE ABOVE SHALL BE INCIDENTAL TO THE PERTINENT WATER MAIN ITEM.

2. COST OF TRIMMING OR CLEARING ANY TREES, BUSHES, ETC. SHALL BE INCIDENTAL TO THE OVERALL CONTRACT PRICE AND SHALL BE APPROVED BY N.K.W.D. AND THE PROPERTY OWNER ALONG WITH COUNTY OR STATE WHEN REQUIRED.

3. THE UTILITY INFORMATION SHOWN ON THE PLANS IS BASED ON INFORMATION RECEIVED FROM OTHERS AND HAS NOT BEEN VERIFIED BY THE ENGINEER OR OWNER. IT SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR TO VERIFY THE LOCATION OF THE UTILITIES AND TO COORDINATE ANY IMPACT CAUSED BY THE PROPOSED WORK WITH ALL UTILITY OWNERS AND/OR THEIR CONTRACTORS. THE CONTRACTOR WILL BE REQUIRED TO DIG TEST HOLES AT ALL UTILITY CROSSINGS TO LOCATE THE UTILITY AS TO BOTH LOCATION AND ELEVATION AND WILL BE REQUIRED TO REALIGN AND ADJUST THE ELEVATION OF THE PROPOSED WATER MAIN TO AVOID THE UTILITY. COST OF ALL THE ABOVE SHALL BE INCIDENTAL TO THE OVERALL CONTRACT PRICE.

4. UNLESS SPECIFICALLY INSTRUCTED OTHERWISE, RETURN ALL REMOVED WATER EQUIPMENT INCLUDING, FIRE HYDRANTS, VALVES, AND WATER METERS TO NORTHERN KENTUCKY WATER DISTRICT (N.K.W.D).

5. WATERLINES CROSSING UNDER OR OVER SEWER LINES (DEFINED AS ANY SANITARY/COMBINED SEWER, SEPTIC TANK OR SUBSOIL TREATMENT SYSTEM) MUST MAINTAIN A MINIMUM VERTICAL CLEARANCE OF 18" AND ONE FULL LENGTH OF PIPE SHALL BE LOCATED SO BOTH JOINTS ARE AS FAR FROM THE SEWER AS POSSIBLE. SPECIAL STRUCTURAL SUPPORT FOR THE WATER AND SEWER PIPES MAY BE REQUIRED.

6. CONTRACTOR IS RESPONSIBLE FOR KEEPING FIELD NOTES THAT PROVIDE SUFFICIENT DATA FOR PREPARING "RECORD DRAWINGS" UPON COMPLETION OF CONSTRUCTION.

7. ALL WATER MAIN CONSTRUCTION SHALL CONFORM TO THE NORTHERN KENTUCKY WATER DISTRICT SPECIFICATIONS. CONTRACTOR IS RESPONSIBLE FOR OBTAINING A CURRENT COPY OF THE NORTHERN KENTUCKY WATER DISTRICT'S STANDARD DRAWINGS.

8. ALL MATERIAL FOR THE PROP. WATER MAIN INSTALLATION INCLUDING ALL FITTINGS, BLOCKING, ETC., SHALL BE INCLUDED IN THE CONTRACTOR'S UNIT PRICE FOR WATER MAIN.

9. COST OF ALL TRENCHING, PIPE, PIPE BEDDING, BACKFILL, YARD RESTORATION AND TEMPORARY PAVEMENT, DRIVEWAY AND SIDEWALK RESTORATION SHALL BE PART OF THE COST OF INSTALLING THE WATER MAIN. PERMANENT DRIVEWAY RESTORATION, SIDEWALK RESTORATION, CURB RESTORATION AND STREET RESTORATION WILL BE SEPARATE PAY ITEMS AND INCLUDE INCIDENTALS SUCH AS MAIL BOX, STREET SIGN, AND FENCE REMOVAL AND REPLACEMENT.

10. THE PROPOSED WATER MAIN SHALL BE CLASS 50 DUCTILE IRON PIPE OR D.R. 18 C900 PVC AS SHOWN ON THE PLANS. WITHIN STATE ROUTE R/W, PIPE MATERIAL SHALL BE CLASS 52 DUCTILE IRON.

11. PROPOSED WATER MAIN SHALL BE THOROUGHLY CLEANED, FLUSHED, AND DISINFECTED, AS PER NORTHERN KENTUCKY WATER DISTRICT'S SPECIFICATIONS.

12. PRESSURE TESTING SHALL BE DONE AS PER NORTHERN KENTUCKY WATER DISTRICT'S SPECIFICATIONS.

13. FOR THRUST BLOCKING REFER TO THE NORTHERN KENTUCKY WATER DISTRICT'S STANDARD DRAWING NUMBERS 104 AND 104A.

14. THE PROPOSED WATER MAIN SHALL HAVE A HORIZONTAL SEPARATION OF AT LEAST 3'-0" (MEASURED FROM OUTSIDE OF PIPE TO OUTSIDE OF PIPE) FROM ANY GAS MAIN.

15. A 10' MINIMUM LATERAL SEPARATION BETWEEN WATER MAINS AND SEWERS (DEFINED AS ANY SANITARY/COMBINED SEWER, SEPTIC TANK OR SUBSOIL TREATMENT SYSTEM) AND SEWER MANHOLES, MEASURED FROM THE OUTSIDE DIAMETER TO OUTSIDE, MUST BE MAINTAINED UNLESS A VARIANCE IS GRANTED FROM THE D.O.W.

16. ALL NEW WATER SERVICES SHALL BE 3/4" (OR MATCH EXISTING, AS INDICATED ON THE PLANS) TYPE K COPPER WITH 5/8" OR 2" WATER METERS (UNLESS OTHERWISE NOTED) MATERIAL PROVIDED BY THE NORTHERN KENTUCKY WATER DISTRICT. ALL RECONNECTED WATER SERVICES SHALL BE 3/4" OR 2" TYPE K COPPER.

17. THE CONTRACTOR SHALL COORDINATE ALL WORK WITHIN THE PUBLIC RIGHT-OF-WAY WITH KYTC, KENTON COUTY AND/OR ANY LOCAL MUNICIPALITY. TRAFFIC MUST BE MAINTAINED AT ALL TIMES DURING CONSTRUCTION. MAINTENANCE OF TRAFFIC SHALL CONFORM TO THE "MANUAL OF UNIFORM TRAFFIC CONTROL DEVICES" REQUIREMENTS. NO ADDITIONAL PAYMENT WILL BE MADE FOR THIS WORK AND SHALL BE CONSIDERED INCIDENTAL TO THE CONTRACT.

18. **CONNECT SERVICE LINE (3/4" THRU 2"), INCLUDES THE LABOR, EQUIPMENT, EXCAVATION, BEDDING, BACKFILL, ASPHALT PAVEMENT , CONCRETE PAVEMENT, CONCRETE CURB, CONCRETE WALK AND YARD RESTORATION TO INSTALL THE SERVICE LINE AT THE LOCATIONS SHOWN ON THE PLANS OR AS DIRECTED, IN ACCORDANCE WITH THE SPECIFICATIONS AND STANDARD DRAWINGS, COMPLETE AND READY FOR USE. LEAD SERVICE LINES ENCOUNTERED BY THE EXCAVATION SHALL BE REPLACED FROM THE MAIN TO AND INCLUDING THE METER VAULT AND METER SETTING. ALL SERVICE LINE MATERIAL WILL BE SUPPLIED BY NKWD. PAID EACH (EA).**

19. THE CONTRACTOR SHALL COORDINATE WITH THE NORTHERN KENTUCKY WATER DISTRICT FOR FIELD INSPECTIONS.

20. FORTY-EIGHT (48) HOURS BEFORE EXCAVATION IS TO COMMENCE, THE CONTRACTOR SHALL NOTIFY THE FOLLOWING AGENCIES: THE KENTUCKY UTILITY PROTECTION SERVICE AND ALL OTHER UTILITIES THAT MAY HAVE UNDERGROUND UTILITIES INVOLVING THIS PROJECT AND ARE NON-MEMBERS OF KENTUCKY UNDERGROUND PROTECTION.

21. NO CONSTRUCTION SHALL COMMENCE UNTIL ALL KYTC, COUNTY AND/OR LOCAL PERMITS HAVE BEEN ISSUED AS REQUIRED.

22. CONTRACTOR IS RESPONSIBLE FOR DEWATERING TRENCH DURING INSTALLATION OF THE WATER MAIN.

23. THE COST OF TESTING THE MAIN, TEMPORARY FLUSHING DEVICES, TEMPORARY PLUG AND BLOCKS, AND ABANDONING THE EXISTING MAIN SHALL BE INCIDENTAL TO THE PROJECT.

24. ALL PAVEMENT SHALL CONFORM TO THE LATEST EDITION OF THE KENTUCKY DEPARTMENT OF HIGHWAYS STANDARD SPECIFICATIONS FOR ROAD AND BRIDGE CONSTRUCTION AND KENTON COUNTY SUBDIVISION REGULATIONS.

MAINTENANCE OF TRAFFIC NOTES

1. ALL MAINTENANCE OF TRAFFIC PROCEDURES SHALL MEET THE REQUIREMENT OF THE MANUAL OF UNIFORM TRAFFIC CONTROL DEVICES AND SECTION 112 OF KTC STANDARD SPECIFICATIONS. THE CONTRACTOR SHALL MAINTAIN ACCESS TO LOCAL TRAFFIC (ACCESS TO RESIDENCES WITHIN CONSTRUCTION LIMITS) AT ALL TIMES. THE CONTRACTOR SHALL PROVIDE SUFFICIENT SIGN, WARNING LIGHTS, BARRICADES, OR OTHER NECESSARY DEVICES MAKE THE SITE SAFE TO THE TRAVELING PUBLIC.

2. IT SHALL BE THE CONTRACTOR'S RESPONSIBILITY TO SUBMIT TO THE ENGINEER AND THE OWNER A TRAFFIC CONTROL PLAN FOR THIS PROJECT.

3. PRIOR TO ANY CONSTRUCTION, THE CONTRACTOR SHALL NOTIFY THE APPROPRIATE STATE, COUNTY AND/OR LOCAL POLICE DEPARTMENTS. AT ALL TIMES, EMERGENCY VEHICLES SHALL BE GIVEN ACCESS.

4. RESIDENTS OF THE PROJECT AREA SHALL BE ALLOWED ACCESS TO THEIR PROPERTY AT ALL TIMES.

5. EACH DRIVEWAY SHALL BE ACCESSIBLE WHENEVER POSSIBLE. WHEN PORTLAND CEMENT CONCRETE CONSTRUCTION AFFECTS A DRIVEWAY, THE CONTRACTOR SHALL NOTIFY THE AFFECTED OWNERS 24 HOURS IN ADVANCE AND ADVISE THEM TO FIND ALTERNATIVE PARKING FOR A PERIOD OF AT LEAST 10 CALENDAR DAYS AFTER THE POUR. ALTERNATIVE PARKING SHALL INCLUDE "ON STREET" PARKING WITH ACCESS TO THE PROPERTY. TEMPORARY SIDEWALKS, ETC. WILL BE NECESSARY TO PREVENT PERSONS FROM WALKING IN MUD IN ORDER TO ENTER THEIR PROPERTY. TEMPORARY BRIDGES, RAILINGS ETC. WILL BECOME NECESSARY IN ORDER TO CROSS FORMED CURB LINES, EXCAVATED AREAS BEHIND CURB LINES AND WALKWAYS, ETC.

EROSION CONTROL LEGEND

- IP — INLET PROTECTION (SEE DETAIL)
- SF — SILT FENCE (SEE DETAIL)

HATCH LEGEND

- 1-1/2" ASPHALT PAVEMENT MILL AND OVERLAY AREA
- TRENCH RESTORATION - ASPHALT PAVEMENT - SEE DETAIL SHEET
- TRENCH RESTORATION - CONCRETE PAVEMENT - SEE DETAIL SHEET
- TRENCH RESTORATION - 8" AGGREGATE PAVEMENT
- CONTROL DENSITY FILL - PAV'T TRENCH
- CONCRETE DRIVEWAY REPLACEMENT - SEE DETAIL SHEET
- CONCRETE WALK REPLACEMENT - SEE DETAIL SHEET
- ASPHALT DRIVEWAY REPLACEMENT - SEE DETAIL SHEET
- GRAVEL DRIVEWAY REPLACEMENT - SEE DETAIL SHEET
- CHANNEL LINING, CLASS II - SEE DETAIL SHEET

SYMBOL LEGEND

- EXISTING GAS LINE
- EXISTING GAS SERVICE
- EXISTING ELECTRIC (UNDERGROUND / OVERHEAD)
- EXISTING CABLE (UNDERGROUND / OVERHEAD)
- EXISTING TELEPHONE (UNDERGROUND / OVERHEAD)
- EXISTING WATER MAIN
- EXISTING WATER SERVICE
- EXISTING STORM SEWER
- EXISTING ROOF DRAIN
- EXISTING SANITARY SEWER
- EXISTING SANITARY FORCE MAIN
- EXISTING FIBER OPTICS
- EXISTING FENCE
- EXISTING CONTOURS (MAJOR)
- EXISTING CONTOURS (MINOR)
- EXISTING RIGHT OF WAY
- EXISTING PROPERTY LINE
- EXISTING EASEMENT
- EXISTING GUARDRAIL
- EXISTING TREE LINE
- EXISTING ROCK WALL

- PROPOSED GAS LINE
- PROPOSED GAS SERVICE
- EXISTING ELECTRIC (UNDERGROUND / OVERHEAD)
- PROPOSED CABLE (UNDERGROUND / OVERHEAD)
- PROPOSED TELEPHONE (UNDERGROUND / OVERHEAD)
- PROPOSED WATER MAIN
- PROPOSED WATER SERVICE
- PROPOSED STORM SEWER
- PROPOSED UNDERDRAIN
- PROPOSED UNDERDRAIN / DOWNSPOUT COLLECTOR COMBO
- PROPOSED SANITARY SEWER
- PROPOSED SANITARY FORCE MAIN
- PROPOSED FIBER OPTICS
- PROPOSED FENCE
- PROPOSED CONTOURS (MAJOR)
- PROPOSED CONTOURS (MINOR)
- PROPOSED RIGHT OF WAY
- PROPOSED PROPERTY LINE
- PROPOSED EASEMENT
- PROPOSED GUARDRAIL
- PROPOSED TREE LINE / CLEARING LIMITS
- PROPOSED DISTURBED LIMITS

- EXISTING FLAGPOLE
- EXISTING MAILBOX
- EXISTING SIGN
- EXISTING CABLE PEDESTAL
- EXISTING ELECTRIC PEDESTAL
- EXISTING PULL BOX
- EXISTING GROUND LIGHT
- EXISTING LIGHT POLE
- EXISTING ELECTRIC METER
- EXISTING ELECTRIC MANHOLE
- EXISTING GAS METER
- EXISTING GAS VALVE
- EXISTING GAS BOX
- EXISTING UTILITY POLE
- EXISTING GUY WIRE / ANCHOR
- EXISTING SANITARY MANHOLE
- EXISTING SANITARY CLEANOUT
- EXISTING STORM MANHOLE
- EXISTING SINGLE / DOUBLE CURB INLET
- EXISTING CATCH BASIN
- EXISTING STORM CLEANOUT
- EXISTING TELEPHONE MANHOLE
- EXISTING TELEPHONE PEDESTAL
- EXISTING FIRE HYDRANT
- EXISTING WATER METER
- EXISTING WATER VALVE
- EXISTING BUSHES / TREES
- EXISTING SURVEY BENCHMARK
- TEST BORING LOCATION

- PROPOSED FLAGPOLE
- PROPOSED MAILBOX
- PROPOSED SIGN
- PROPOSED CABLE PEDESTAL
- PROPOSED ELECTRIC PEDESTAL
- PROPOSED PULL BOX
- PROPOSED GROUND LIGHT
- PROPOSED LIGHT POLE
- PROPOSED ELECTRIC METER
- PROPOSED ELECTRIC MANHOLE
- PROPOSED GAS METER
- PROPOSED GAS VALVE
- PROPOSED GAS BOX
- PROPOSED UTILITY POLE
- PROPOSED GUY WIRE / ANCHOR
- PROPOSED SANITARY MANHOLE
- PROPOSED SANITARY CLEANOUT
- PROPOSED STORM MANHOLE
- PROPOSED SINGLE / DOUBLE CURB INLET
- PROPOSED CATCH BASIN
- PROPOSED STORM CLEANOUT
- PROPOSED TELEPHONE MANHOLE
- PROPOSED TELEPHONE PEDESTAL
- PROPOSED FIRE HYDRANT
- PROPOSED WATER METER
- PROPOSED WATER VALVE
- REMOVE EXISTING BUSH / TREE
- PROPOSED SLOPE DIRECTION

90% REVIEW

your trusted advisor — engineers, architects, planners, consultants

NO	REVISION	DATE
.	.	.

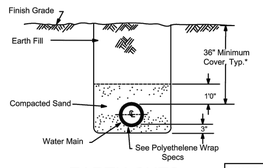
ISSUED FOR:	90% DESIGN
ISSUE DATE:	MAY 2024
SCALE:	AS SHOWN
DESIGNED BY:	JCOR
DRAWN BY:	JCOR
CHECKED BY:	JSHU

NORTHERN KENTUCKY WATER DISTRICT
SUBDISTRICT "O"
-KENTON COUNTY -

GENERAL NOTES AND LEGEND

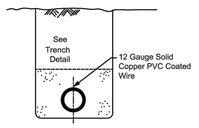
PROJECT NO.: 231591
DISCIPLINE: CIVIL
SHEET NAME: G-01
SHEET: 2 OF: 49

APPROVED FOR CONSTRUCTION
AUGUST 01, 2024
TRANSPORTATION CABINET
KENTUCKY DEPARTMENT OF HIGHWAYS



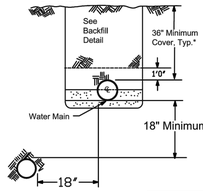
EARTH CUTS
TRENCH DETAIL

NOTE: 42" Minimum Cover, TYP. within State R/W



PVC PIPE

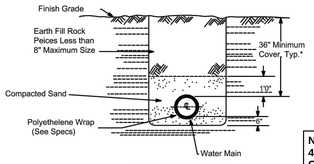
ALTERNATE TO BE USED ONLY ON APPROVAL BY THE DISTRICT



Water Main must be located a minimum of 10 feet lateral distance from anyexisting or future sewer lines or manholes, or as shown in the above alternate.

WATER MAIN PARALLELING
SEWER MAIN

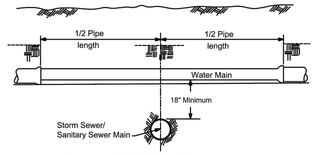
NOTE: 42" Minimum Cover, TYP. within State R/W



ROCK CUTS
& UNSTABLE SUBGRADE

TRENCH DETAIL

NOTE: 42" Minimum Cover, TYP. within State R/W



WATER MAIN CROSSING SEWER

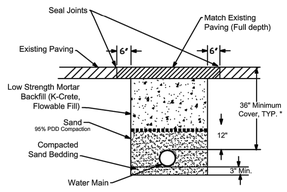
SUBDIVISION CONSTRUCTION

* Unless Otherwise Noted

REVISION	BY	DATE
1 8" Min. Bed. Mat.	KPT	1/2020

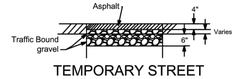
N. KY. WATER DISTRICT
TYPICAL PIPELINE TRENCH DETAIL

DRAWN BY: SAR
APPROVED: RH
DATE: 8/5/2014
STANDARD DRAWING NO: 103

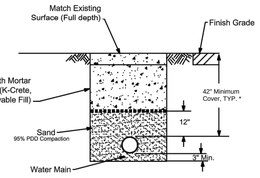


UNDER ASPHALT CONCRETE
PAVEMENT

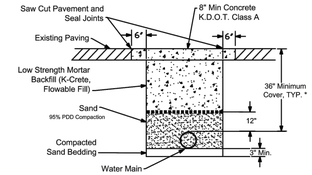
PDD= Standard Proctor Dry Density
-ASTM D698



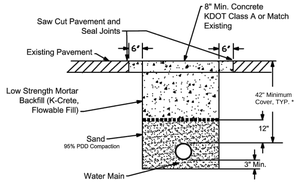
TEMPORARY STREET
RESTORATION



UNDER SHOULDER OF STATE
MAINTAINED STREET



UNDER CONCRETE PAVEMENT



UNDER STATE MAINTAINED STREET

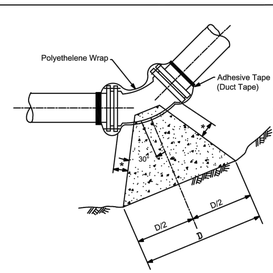
* 48" Maximum Cover

ALL CONSTRUCTION

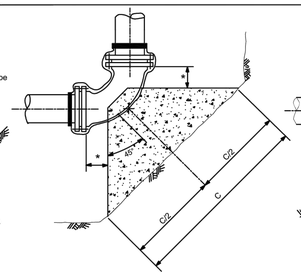
REVISION	BY	DATE
1 All streets but I-64/ Hopkinsville Rd.	SAR	1/2020

N. KY. WATER DISTRICT
TYPICAL PIPELINE TRENCH DETAIL

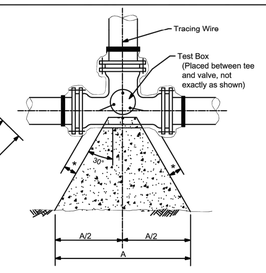
DRAWN BY: SAR
APPROVED: RH
DATE: 8/5/2014
STANDARD DRAWING NO: 103A



45° BEND



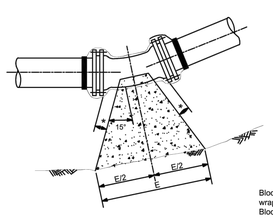
90° BEND



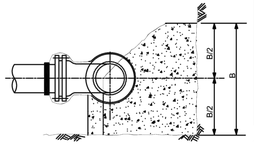
TEE (DEAD END OR FIRE HYDRANT SIMILAP

150 PSI/250 PSI

PIPE SIZE	A	B	C	D	E
6"	2'0"/2'6"	1'6"/1'6"	3'0"/3'6"	1'6"/2'0"	1'0"/1'0"
8"	2'6"/3'6"	2'0"/2'0"	3'6"/4'6"	2'0"/2'6"	1'0"/1'6"
10"	3'6"/4'0"	2'6"/2'6"	4'6"/5'6"	2'6"/3'0"	1'6"/1'6"
12"	4'0"/5'0"	3'0"/3'0"	5'6"/6'6"	3'0"/3'6"	1'6"/2'0"
16"	5'0"/6'0"	3'0"/4'0"	7'0"/8'6"	4'0"/4'6"	3'0"/3'0"
20"	6'0"/7'6"	5'0"/5'0"	7'0"/10'6"	4'0"/6'0"	3'0"/3'0"



11 1/4° & 22 1/2° BEND



ELEVATION

Blocking shall be poured after blue polyethelene wrap is in place.
Blocking shall be inspected by the District prior to backfilling.

* Distance to be 1/2" longer than entire length of the bolt used.

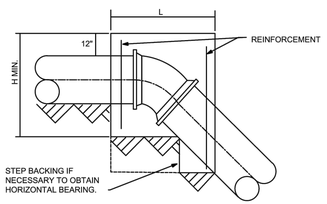
NOTES

1 DIP Fittings shall be per specifications.
2 Concrete to be 3500 psi.
3 All fittings to be Mechanical Joint.
4 Thrust blocks to be placed against undisturbed earth - use additional concrete as required for over excavation.
5 Blocking to be placed in a manner so that bolts can be removed without distrubing the block.

REVISION	BY	DATE

N. KY. WATER DISTRICT
CONCRETE THRUST BLOCK DETAIL

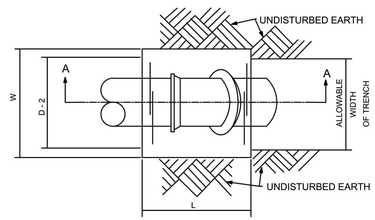
DRAWN BY: SAR
APPROVED: RH
DATE: 8/5/2014
STANDARD DRAWING NO: 104



SECTION A-A

SIZE of PIPE	DEGREE OF BEND 11 1/4 L'	W"	H"	VOL.	22 1/2 L'	W"	H"	VOL.	45 L'	W"	H"	VOL.
4"	12	24	16	2.7	15	30	18	4.7	22	36	24	11.0
6"	12	43	18	5.4	16	48	34	15.1	30	55	24	22.9
8"	12	54	24	9.0	18	57	36	21.4	36	57	33	39.2
12"	20	63	36	26.3	37	62	37	49.2	48	62	51	88.0
16"	31	65	38	44.4	60	65	39	88.2	65	65	65	159.2
20"	45	70	40	73.0	56	70	60	136.4	72	76	78	247.5
24"	47	72	54	106.0	67	74	69	198.4	88	84	84	360.1

NOTE: VOLUMES GIVEN IN CUBIC FEET



PLAN

CONCRETE BACKING FOR VERTICAL BENDS

1. BACKING DESIGNED FOR 3000 POUNDS PER SQUARE FOOT SOIL BEARING AND 150 POUNDS PER SQUARE INCH INTERNAL PRESSURE.
2. PROVIDE MINIMUM CONCRETE REINFORCEMENT OF 2 PAIR OF TWO 5" "U" BARS @ 12" C.
3. CENTER BACKING ON BEND.

BLOCKING FOR SIZES NOT SHOWN SHALL USE THE NEXT LARGER SIZE.

REVISION	BY	DATE

N. KY. WATER DISTRICT
CONCRETE THRUST BLOCKING FOR VERTICAL BENDS

DRAWN BY: SAR
APPROVED: RH
DATE: 8/5/2014
STANDARD DRAWING NO: 104A

90% REVIEW

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consultants
engineers
architects
planners

NO	REVISION	DATE
-	-	-

ISSUED FOR: 90% DESIGN
ISSUE DATE: MAY 2024
SCALE: AS SHOWN
DESIGNED BY: JCOR
DRAWN BY: JCOR
CHECKED BY: JSHU

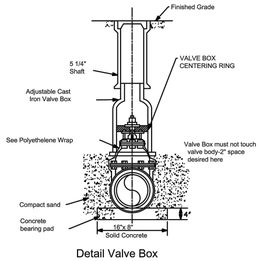
NORTHERN KENTUCKY WATER DISTRICT
SUBDISTRICT 'O'
-KENTON COUNTY -

DETAILS

PROJECT NO.: 231591
DISCIPLINE: CIVIL
SHEET NAME: G-02
SHEET: 3 OF 49

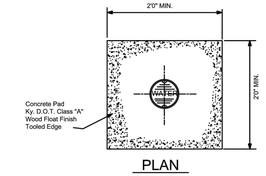
APPROVED FOR CONSTRUCTION
AUGUST 2024
TRANSPORTATION CABINET
KENTUCKY

I:\CTC.LOCAL\CT_DATA\PROJECTS\2023\231591\DWG\SHEETS\C_231591 00_DETAIL SHEET.DWG - NKWD DTLS - 5/28/2024 2:45:27 PM - JAMES CORNELL

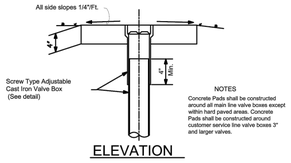


Detail Valve Box Installation

Note:Valve box shall not transmit shock or stress to the valve



PLAN



ELEVATION

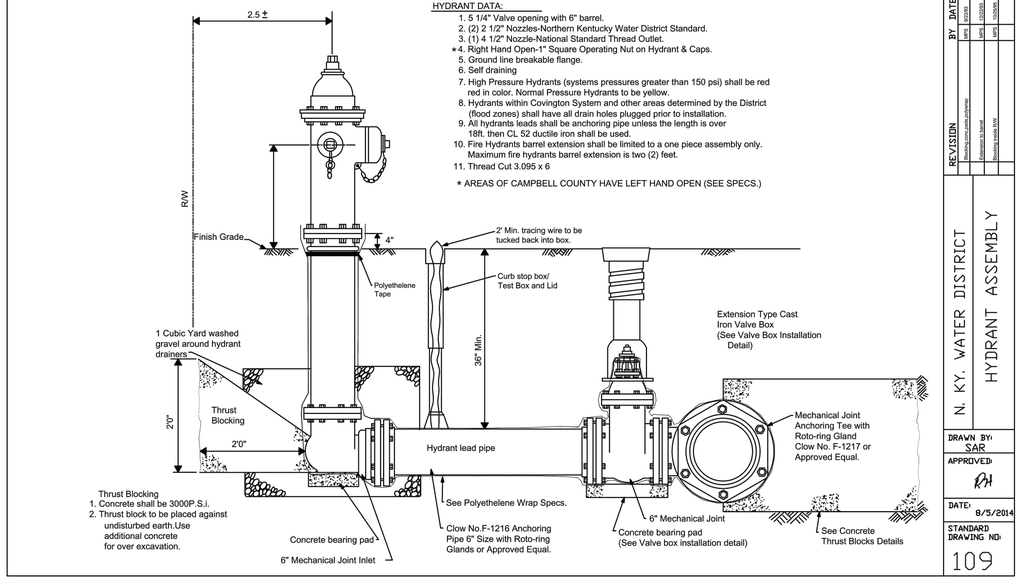
NOTES

Concrete Pads shall be constructed around all main line valve boxes except within hard paved areas. Concrete Pads shall be constructed around customer service line valve boxes 3" and larger valves.

REVISION	BY	DATE
* 22" Concrete pad size changed to 24" Square Box Installation	MPS	4/2023
	MPS	4/2023

N. KY. WATER DISTRICT
VALVE BOX AND VALVE PAD DETAIL

DRAWN BY: SAR
APPROVED: RH
DATE: 8/5/2014
STANDARD DRAWING NO: 105



HYDRANT DATA:

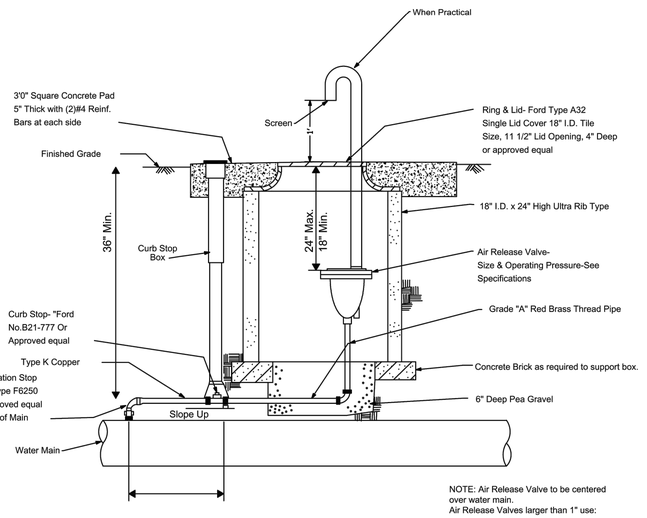
1. 5 1/4" Valve opening with 6" barrel.
2. (2) 2 1/2" Nozzles-Northern Kentucky Water District Standard.
3. (1) 4 1/2" Nozzle-National Standard Thread Outlet.
4. * Right Hand Open-1" Square Operating Nut on Hydrant & Caps.
5. Ground line breakable flange.
6. Self draining
7. High Pressure Hydrants (systems pressures greater than 150 psi) shall be red red in color. Normal Pressure Hydrants to be yellow.
8. Hydrants within Covington System and other areas determined by the District (flood zones) shall have all drain holes plugged prior to installation.
9. All hydrants leads shall be anchoring pipe unless the length is over 18ft. then CL 52 ductile iron shall be used.
10. Fire Hydrants barrel extension shall be limited to a one piece assembly only. Maximum fire hydrants barrel extension is two (2) feet.
11. Thread Cut 3.095 x 6

* AREAS OF CAMPBELL COUNTY HAVE LEFT HAND OPEN (SEE SPECS.)

REVISION	BY	DATE
Blocking specs.corrected	MPS	4/2023
Extension is 6 inch	MPS	12/2020
Blocking details WW	MPS	12/2020

N. KY. WATER DISTRICT
HYDRANT ASSEMBLY

DRAWN BY: SAR
APPROVED: RH
DATE: 8/5/2014
STANDARD DRAWING NO: 109

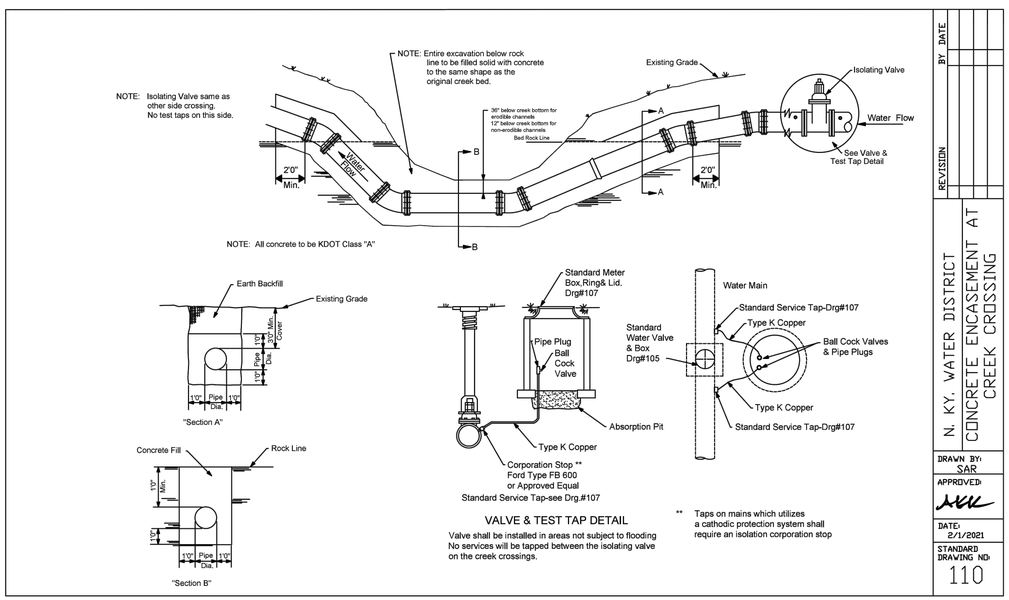


NOTE: Air Release Valve to be centered over water main.
Air Release Valves larger than 1" use:
vault size 24"x24"
lid Ford Type MC 24 &
Extension Ring Ext-2 or approved equal.

REVISION	BY	DATE

N. KY. WATER DISTRICT
N.KY WATER DISTRICT AIR RELEASE VALE

DRAWN BY: SAR
APPROVED: RH
DATE: 8/5/2014
STANDARD DRAWING NO: 106



VALVE & TEST TAP DETAIL

Valve shall be installed in areas not subject to flooding
No services will be tapped between the isolating valve on the creek crossings.

** Taps on mains which utilizes a cathodic protection system shall require an isolation corporation stop

REVISION	BY	DATE

N. KY. WATER DISTRICT
CONCRETE ENCASEMENT AT CREEK CROSSING

DRAWN BY: SAR
APPROVED: MKK
DATE: 2/1/2021
STANDARD DRAWING NO: 110

90% REVIEW

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NO	REVISION	DATE
.	.	.

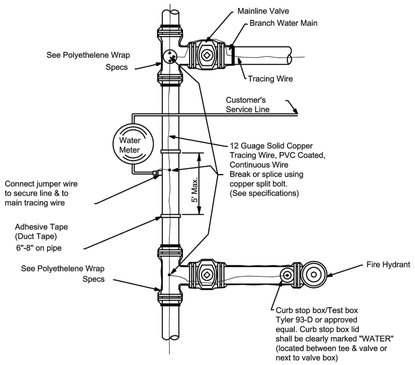
ISSUED FOR: 90% DESIGN
ISSUE DATE: MAY 2024
SCALE: AS SHOWN
DESIGNED BY: JCOR
DRAWN BY: JCOR
CHECKED BY: JSHU

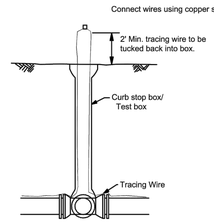
NORTHERN KENTUCKY WATER DISTRICT
SUBDISTRICT 'O'
-KENTON COUNTY -

DETAILS

PROJECT NO.: 231591
DISCIPLINE: CIVIL
SHEET NAME: G-03
SHEET: 4 OF 49

APPROVED FOR CONSTRUCTION
ADJUSTMENTS MAY BE REQUIRED DURING CONSTRUCTION
Kentucky Transportation Cabinet





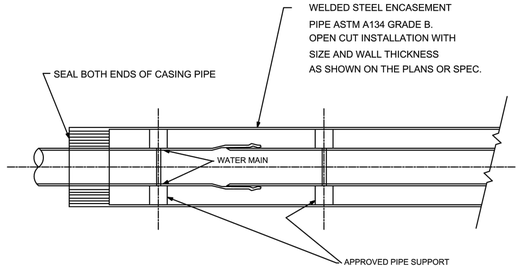
DUCTILE IRON AND PVC PIPE WITH DUCTILE IRON FITTINGS

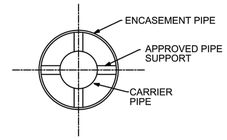
Note: Curb stop box/test box shall not be installed in paved areas.

REVISION	BY	DATE

N. KY. WATER DISTRICT
TRACING WIRE INSTALLATION DETAIL

DRAWN BY: SAR
APPROVED: DH
DATE: 8/5/2014
STANDARD DRAWING NO: 111





1. All carrier pipe placed in steel casing pipe shall be minimum class 50 ductile iron pipe and conform to the latest edition of AWWA C151.
2. Carrier pipe gaskets shall develop a wedging action between pairs of high-strength stainless steel elements spaced around the gasket (FIELD LOK , FASTGRIP, or approved equal gaskets).

NOTE: CASING PIPE JOINTS SHALL BE SEAM WELDED SO THAT CASING IS WATER TIGHT FROM END TO END.

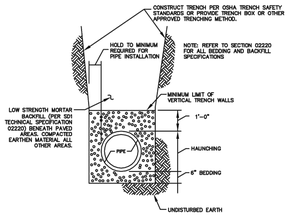
ENCASEMENT PIPE DETAIL

NO SCALE

REVISION	BY	DATE
1	Remove Detail #3	2/7/20

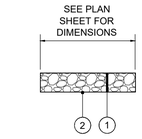
N. KY. WATER DISTRICT
ENCASEMENT PIPE DETAIL

DRAWN BY: SAR
APPROVED: DH
DATE: 8/5/2014
STANDARD DRAWING NO: 114



STORM TRENCH DETAIL

N.T.S.



ROCK CHANNEL PROTECTION

N.T.S.



1. ITEM 703 - 12" CHANNEL LINING, CLASS II
2. NON WOVEN GEOTEXTILE FILTER FABRIC

90% REVIEW

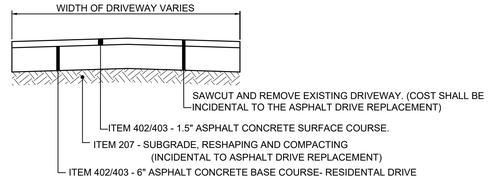
your trusted advisor consultants engineers architects planners

NO	REVISION	DATE
	.	

ISSUED FOR:	90% DESIGN
ISSUE DATE:	MAY 2024
SCALE:	AS SHOWN
DESIGNED BY:	JCOR
DRAWN BY:	JCOR
CHECKED BY:	JSHU

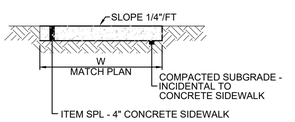
NORTHERN KENTUCKY WATER DISTRICT
SUBDISTRICT 'O'
-KENTON COUNTY -

DETAILS



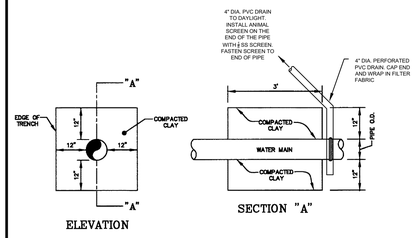
ASPHALT DRIVEWAY REPLACEMENT

N.T.S.



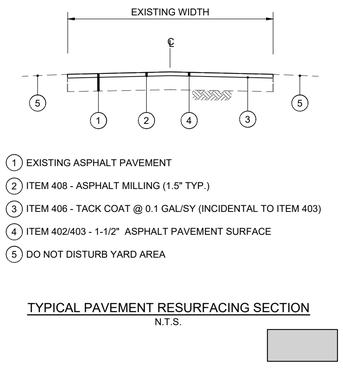
4" CONCRETE SIDEWALK REPLACEMENT DETAIL

(SAWCUTTING AND REMOVAL OF EXISTING CONCRETE SIDEWALK AND EXCAVATION TO PROPOSED SUBGRADE INCIDENTAL TO SIDEWALK REPLACEMENT)



CLAY BULKHEAD

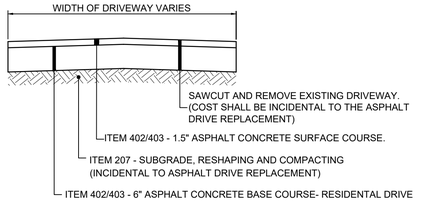
N.T.S.



1. EXISTING ASPHALT PAVEMENT
2. ITEM 408 - ASPHALT MILLING (1.5" TYP.)
3. ITEM 406 - TACK COAT @ 0.1 GAL/SY (INCIDENTAL TO ITEM 403)
4. ITEM 402/403 - 1-1/2" ASPHALT PAVEMENT SURFACE
5. DO NOT DISTURB YARD AREA

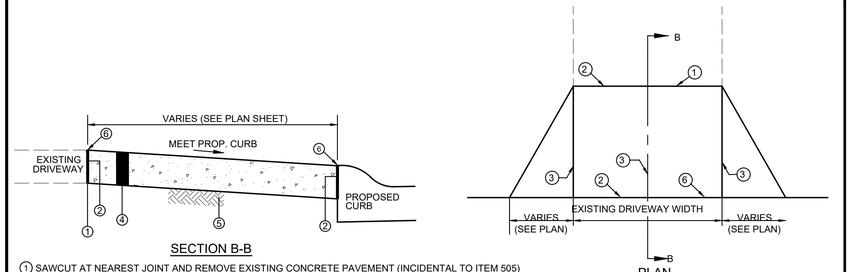
TYPICAL PAVEMENT RESURFACING SECTION

N.T.S.



GRAVEL DRIVEWAY REPLACEMENT

N.T.S.



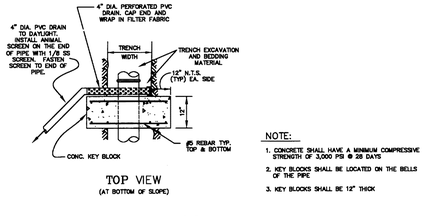
1. SAWCUT AT NEAREST JOINT AND REMOVE EXISTING CONCRETE PAVEMENT (INCIDENTAL TO ITEM 505)
2. 1" PREFORMED EXPANSION JOINT MATERIAL (FLEXIBLE FOAM-CERAMAR BY W.R. MEADOWS OR APPROVED EQUAL)
3. TOOLED JOINT
4. ITEM 505 - 6" CONCRETE DRIVEWAY/APRON (OR MATCH EXISTING WHICHEVER IS GREATER)
5. COMPACTED SUBGRADE (INCIDENTAL TO ITEM 505 - 6" CONCRETE DRIVEWAY/APRON)
6. SEAL JOINT WITH GRAY SELF LEVELING SEALANT (SIKA FLEX OR APPROVED EQUAL)

NOTE:

1. ANY YARD AREA DISTURBED BY THE CONSTRUCTION OF THE DRIVEWAY APRON SHALL BE RESTORED WITH TOPSOIL, SEED AND MULCH (INCIDENTAL TO CONCRETE DRIVEWAY APRON REPLACEMENT).
2. ALL EXCAVATION REQUIRED FOR THE PLACEMENT OF THE PROPOSED DRIVEWAY SHALL BE INCIDENTAL TO CONCRETE DRIVEWAY REPLACEMENT BID ITEM.

CONCRETE DRIVEWAY REPLACEMENT

N.T.S.

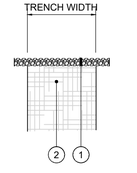


NOTE:

1. CONCRETE SHALL HAVE A MINIMUM COMPRESSIVE STRENGTH OF 3,000 PSI @ 28 DAYS
2. KEY BLOCKS SHALL BE LOCATED ON THE BELLS OF THE PIPE
3. KEY BLOCKS SHALL BE 12" THICK

CONCRETE KEY BLOCK

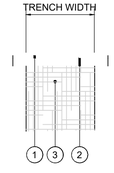
(IN BEDROOCK)
N.T.S.



AGGREGATE ROADWAY REPLACEMENT SECTION

N.T.S.

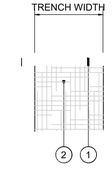
1. ITEM 302 - 8" CRUSHED STONE BASE, (LESS THAN 7% FINES) COMPACTED TO 100% (ASTM D698).
2. CONTROL DENSITY FILL PER NKWD SPECIFICATIONS (SEE DETAIL SHEET (G-02)



ASPHALT ROADWAY REPLACEMENT SECTION

N.T.S.

1. ITEM 402/403 - 1.5" ASPHALT CONCRETE SURFACE COURSE
2. ITEM 402/403 - 7.75" ASPHALT CONCRETE BASE (OR MATCH EXISTING)
3. CONTROL DENSITY FILL PER NKWD SPECIFICATIONS (SEE DETAIL SHEET (G-02)



CONCRETE ROADWAY REPLACEMENT SECTION

N.T.S.

1. ITEM SPL - 8" PORTLAND CEMENT CONCRETE PAVEMENT - PER KENTON COUNTY SUBDIVISION REGULATIONS (OR MATCH EXISTING)
2. CONTROL DENSITY FILL PER NKWD SPECIFICATIONS (SEE DETAIL SHEET (G-02)

NOTE:
GENE STREET HAS AN ADDITIONAL 1.5" ASPHALT OVERLAY ON THE CONCRETE PAVEMENT

PROJECT NO.	231591
DISCIPLINE:	CIVIL
SHEET NAME	G-04
SHEET	5
OF	49

APPROVED
Addressing Comments
Transportation Cabinet
Highway Engineering Branch

\CTC\LOCAL\CT_DATA\PROJECTS\2023\231591\DWG\SHEETS\C_231591-00_DETAIL SHEET.DWG - NKWD DTLS (3) - 5/28/2024 2:43:27 PM - JAMES CORNELL

SEDIMENT BASINS

DEFINITION
A TEMPORARY BARRIER OR DAM CONSTRUCTED ACROSS A WATERCOURSE OR AT OTHER SUITABLE LOCATION TO RETAIN SEDIMENT AND OTHER WATERBORNE DEBRIS.

SCOPE
THIS STANDARD ESTABLISHES MINIMUM ACCEPTABLE QUALITY FOR THE DESIGN AND CONSTRUCTION OF TEMPORARY SEDIMENT BASINS FORMED BY AN EMBANKMENT, EXCAVATION OR A COMBINATION OF EMBANKMENT AND EXCAVATION. THE STANDARD IS LIMITED TO SITES WHERE:

1. FAILURE OF THE STRUCTURE WOULD NOT RESULT IN LOSS OF LIFE; DAMAGE TO HOMES; COMMERCIAL OR INDUSTRIAL BUILDINGS; DAMAGE TO HIGHWAYS OR RAILROADS OR INTERRUPTION OF USE OR SERVICE OF PRIVATE UTILITIES.
2. THE HEIGHT OF DAM IS 25 FEET OR LESS, AS MEASURED FROM THE NATURAL STREAMBED AT THE CENTERLINE OF DAM TO THE TOP OF DAM.
3. THE TOTAL VOLUME OF STORAGE IS 150 ACRE-FEET OR LESS.
4. THE DRAINAGE AREA IS 100 ACRES OR LESS.
5. THE BASIN WILL BE REMOVED WITHIN A THREE-YEAR PERIOD AFTER CONSTRUCTION.

PURPOSE
TEMPORARY SEDIMENT BASINS ARE USED AS A MEANS OF TRAPPING AND STORING SEDIMENT FROM ERODING AREAS IN ORDER TO PROTECT DOWNSTREAM AREAS FROM DAMAGE RESULTING FROM SEDIMENTATION AND WATERBORNE DEBRIS.

CONDITIONS WHERE PRACTICE APPLIES
TEMPORARY SEDIMENT BASINS APPLY WHERE PHYSICAL SITE CONDITIONS OR OTHER RESTRICTIONS PRECLUDE THE INSTALLATION OF EROSION CONTROL MEASURES TO ADEQUATELY CONTROL EROSION AND SEDIMENTATION. IT MAY BE USED DOWNSLOPE FROM CONSTRUCTION OPERATIONS WHICH EXPOSE AREAS TO EROSION. TEMPORARY SEDIMENT BASINS WILL BE REMOVED AFTER THE EXPOSED AREAS ARE ADEQUATELY PROTECTED AGAINST EROSION BY VEGETATIVE OR MECHANICAL MEANS.

COMPLIANCE WITH LAWS AND REGULATIONS
DESIGN AND CONSTRUCTION SHALL COMPLY WITH ALL LOCAL LAWS, ORDINANCES, RULES AND REGULATIONS.

LOCATION
TO IMPROVE THE EFFECTIVENESS OF THE BASIN, IT SHOULD BE LOCATED SO AS TO INTERCEPT THE LARGEST POSSIBLE AMOUNT OF RUNOFF FROM THE DISTURBED AREA. THE BEST LOCATIONS ARE GENERALLY LOW AREAS AND NATURAL DRAINAGEWAYS BELOW DISTURBED AREAS. DRAINAGE INTO THE BASIN CAN BE IMPROVED BY THE USE OF DIVERSION DIKES AND DITCHES. THE BASIN MUST NOT BE LOCATED IN A LIVE STREAM BUT SHOULD BE LOCATED TO TRAP SEDIMENT-LADEN RUNOFF BEFORE IT ENTERS THE STREAM. THE BASIN SHOULD NOT BE LOCATED WHERE ITS FAILURE WOULD RESULT IN THE LOSS OF LIFE OR IN INTERRUPTION OF THE USE OR SERVICE OF PUBLIC UTILITIES OR ROADS.

MULTIPLE USE
SEDIMENT BASINS MAY BE DESIGNED AS PERMANENT STRUCTURES TO REMAIN IN PLACE AFTER CONSTRUCTION IS COMPLETED. SITE CONDITIONS MAY MAKE THE USE OF THESE STRUCTURES DESIRABLE FOR STORMWATER DETENTION PURPOSES. WHEREVER THESE STRUCTURES ARE TO BECOME PERMANENT, OR IF THEY EXCEED THE SIZE LIMITATIONS OF THE DESIGN CRITERIA, THEY MUST BE DESIGNED AS PERMANENT PONDS BY A QUALIFIED PROFESSIONAL ENGINEER. PERPMANENT PONDS ARE BEYOND THE SCOPE OF THESE STANDARDS AND SPECIFICATIONS. THE PERMANENT STRUCTURES MUST BE SUBMITTED WITH CONSTRUCTION DRAWINGS FOR REVIEW AND ACCEPTANCE BY THE CITY ENGINEER.

MAINTENANCE BASINS SHALL BE CHECKED WEEKLY AND CLEANED WHEN NO LONGER EFFECTIVE.

STORM DRAIN INLET PROTECTION
DEFINITION
A SEDIMENT FILTER INSTALLED AROUND A STORM DRAIN INLET OR CURB INLET TO REDUCE SEDIMENT DISCHARGE.

PURPOSE
TO PREVENT SEDIMENT FROM ENTERING THE STORM DISCHARGE SYSTEMS PRIOR TO PERMANENT STABILIZATION OF THE DISTURBED DRAINAGE AREA. DIFFERENT TYPES OF STRUCTURES ARE APPLICABLE TO DIFFERENT CONDITIONS.

STORM WATER POLLUTION PREVENTION NOTES

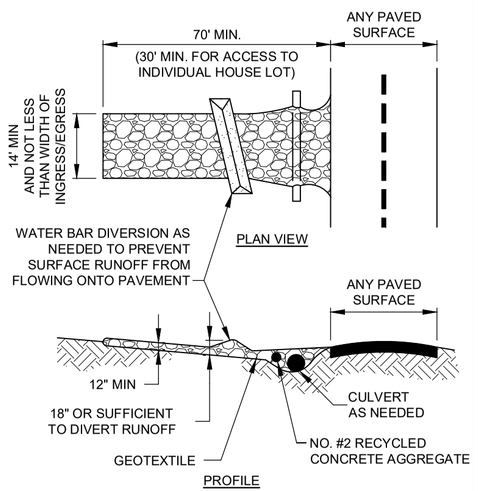
1. SANITATION DISTRICT NO. 1 IS TO BE CONTACTED 72 HOURS PRIOR TO ANY CONSTRUCTION ACTIVITY AT 859-578-6892
2. ALL EROSION AND SEDIMENTATION CONTROL SHALL BE PERFORMED AS SHOWN ON THE PLANS, AND SHALL BE IN COMPLIANCE WITH THE LATEST CONSTRUCTION ACTIVITY " NATIONAL POLLUTANT DISCHARGE ELIMINATION SYSTEM" RULES AND REGULATIONS.
3. A COPY OF THE STORM WATER POLLUTION PREVENTION PLAN (SWPPP) AND A COPY OF THE "NOTICE OF INTENT" (NOI) SHALL BE KEPT ON SITE.
4. AN AMENDMENT OF THE SWPPP IS REQUIRED WHENEVER A CHANGE IN DESIGN, CONSTRUCTION, AND OPERATION OR MAINTENANCE HAS A SIGNIFICANT EFFECT ON THE POTENTIAL FOR THE DISCHARGE OF POLLUTANTS, OR IF THE SWPPP PROVES TO BE INEFFECTIVE IN ACHIEVING THE GENERAL OBJECTIVES OF THE SWPPP.
5. THE CONTRACTOR SHALL ALSO MAINTAIN THE FOLLOWING RECORDS ON SITE:
   A. GENERAL CONTRACTOR AND/OR SUBCONTRACTOR SWPPP CERTIFICATIONS
   B. THE DATE, TIME, AND EXACT LOCATION OF THE INSPECTION, AND THE NAME OF THE INSPECTOR
   C. AN ASSESSMENT OF THE CONDITION OF THE EROSION CONTROLS
   D. A DESCRIPTION OF ANY EROSION CONTROL IMPLEMENTATION AND MAINTENANCE PERFORMED
   E. A DESCRIPTION OF THE PRESENT PHASE OF CONSTRUCTION AT THE SITE
6. CONSTRUCTION SEQUENCE
   - ALL PERIMETER SILT FENCE, INLET PROTECTION AND OTHER EROSION CONTROLS SHALL BE IN PLACE BEFORE ANY OTHER EARTH MOVING ACTIVITIES BEGIN.
   - THE CONTRACTOR SHALL CLEAR AND GRUB ONLY THE AREAS PLANNED FOR EARTH MOVING.
   - REMOVE TOPSOIL, STOCKPILE IT, AND INSTALL SILT FENCE AROUND PERIMETER.
   - SEED SOIL STOCKPILE WITH PERENNIAL RYE GRASS AND MULCH WITH STRAW IF NO TO BE DISTURBED FOR MORE THAN 21 DAYS.
   - CONSTRUCT DETENTION BASIN AND CONTROL STRUCTURE. DETENTION BASIN SHALL BE USED AS A SEDIMENT BASIN UNTIL THE SITE IS STABILIZED.
   - INSTALL STORM SEWER SYSTEM AND SURFACE STORM INLET AND MANHOLE PROTECTION.
   - ESTABLISH A TEMPORARY SEEDING ON ALL BARE AREAS THAT ARE TO REMAIN UNDISTURBED FOR MORE THAN 21 DAYS. SEED WITH PERENNIAL RYE GRASS MULCH WITH STRAW.
   - IMMEDIATE AFTER TOPSOIL HAS BEEN PLACED, STABILIZE THE SAME SURFACE AREA WITH FINAL SEED AND MULCH 7 DAYS AFTER REACHING FINAL GRADE.
   - AFTER THE VEGETATION HAS BECOME WELL ESTABLISHED, REMOVE TEMPORARY EROSION OR SEDIMENT CONTROL PRACTICES.
7. EROSION CONTROLS MUST BE INSPECTED ONCE EVERY 7 DAYS AND WITHIN 24 HOURS OF 0.5" OR GREATER RAINFALL. REMOVE ACCUMULATED SEDIMENT FROM EROSION CONTROLS.
8. TEMPORARY SEEDING SHALL BE PERENNIAL RYE GRASS (40 LB / ACRED) AND MULCH AT 3 BALES OF STRAW PER 1000 S.F.
9. CONTRACTOR IS RESPONSIBLE FOR OBTAINING BORROW MATERIAL ONSITE AND / OR DISPOSING OF EXCESS MATERIAL OFF SITE AS REQUIRED TO MEET INDICATED DESIGN ELEVATIONS.
10. DEBRIS SHALL BE COLLECTED WITHIN PROPERTY LIMITS WEEKLY OR AS NEEDED FOR PUBLIC SAFETY. SURROUNDING STREETS AFFECTED BY THE CONSTRUCTION SHALL BE CLEANED DAILY OR AS NEEDED FOR PUBLIC SAFETY. SEE CONSTRUCTION ENTRANCE DETAIL IN SWPPP DETAILS SHEET.
11. THE CONSTRUCTION OF BMPs SHALL BE REVISED OR ADDED IF DEEMED NECESSARY PER SECTION 1000 OF THE SANITATION DISTRICT 1 REGULATIONS.
12. CONTACT SANITATION DISTRICT NO. 1 72 HOURS PRIOR TO INSTALLATION OF THE WATER QUALITY FEATURE.

NOTES:
1) SUBSOILING SHALL OCCUR WHEN SOIL MOISTURE IS LOW ENOUGH TO ALLOW THE SOIL TO CRACK OR FRACTURE. SUBSOILING IS NOT PERMITTED ON SLIP-PRONE AREAS.
2) THE SITE SHALL BE GRADED TO PERMIT THE USE OF CONVENTIONAL EQUIPMENT FOR SEEDBED PREPARATION AND SEEDING.
3) TOPSOIL SHALL BE APPLIED WHERE NEEDED TO ESTABLISH VEGETATION.
4) THE SEEDBED SHALL BE PREPARED BY APPLYING AGRICULTURAL GROUND LIMESTONE OR FERTILIZER AS RECOMMENDED BY A SOIL TEST. IN LIEU OF A SOIL TEST, APPLY LIME AT 2 TONS/AC. OR FERTILIZER AT 500 LB/AC. OF 10-10-10 OR 12-12-12 ANALYSIS. LIME AND FERTILIZER SHALL BE WORKED INTO THE SOIL TO A DEPTH OF 3".
5) APPLY SEED UNIFORMLY ON FIRM, MOIST SEED BED.
6) SEEDING SHOULD BE APPLIED FROM MARCH 1 TO MAY 31 OR AUGUST 1 TO SEPTEMBER 30. IF SEEDING OCCURS OUTSIDE OF THESE DATES, ADDITIONAL MULCH AND IRRIGATION MAY BE REQUIRED TO ENSURE A MINIMUM OF 80% GERMINATION. TILLAGE FOR SEEDBED PREPARATION SHALL OCCUR WHEN THE SOIL IS DRY ENOUGH TO CRUMBLE AND NOT FORM RIBBONS WHEN COMPRESSED BY HAND.
7) SEEDING SHOULD NOT BE APPLIED FROM OCTOBER 1 TO NOVEMBER 20 BECAUSE SEEDS MAY GERMINATE, BUT WILL NOT SURVIVE THE WINTER. USE THE FOLLOWING METHODS FOR DORMANT SEEDING:
   - FROM OCTOBER 1 TO NOVEMBER 20, INCREASE THE SEEDING RATE BY 50%, PREPARE THE SEED BED, ADD LIME AND FERTILIZER, MULCH AND ANCHOR.
   - FROM NOVEMBER 20 TO MARCH 15, ONLY IF SOIL CONDITIONS PERMIT, INCREASE THE SEEDING RATE BY 50%, PREPARE THE SEED BED, ADD LIME AND FERTILIZER, APPLY THE SEED MIXTURE, MULCH AND ANCHOR.
8) APPLY MULCH MATERIAL IMMEDIATELY AFTER SEEDING.
9) PERMANENT SEEDING SHALL INCLUDE IRRIGATION TO ESTABLISH VEGETATION DURING DRY OR HOT WEATHER OR ON ADVERSE SITE CONDITIONS AS NEEDED. AVOID EXCESSIVE IRRIGATION AND MONITOR TO PREVENT EROSION AND DAMAGE FROM RUNOFF.
10) PERMANENT SEEDING SHALL NOT BE CONSIDERED ESTABLISHED FOR AT LEAST 1 FULL YEAR FROM THE TIME OF PLANTING. DURING THIS PERIOD, INSPECT FOR SOIL EROSION OR PLANT LOSS AND REPAIR BARE OR SPARSE AREAS, FILL GULLIES, RE-FERTILIZE, RE-SEED OR RE-MULCH AS NEEDED.
11) A MINIMUM OF 70% GROWTH DENSITY, BASED ON A VISUAL INSPECTION, MUST EXIST FOR AN ADEQUATE PERMANENT VEGETATIVE PLANTING.

PERMANENT SEEDING FERTILIZATION AND MOWING CHART				
MIXTURE	FORMULA	LB/ AC.	TIME	MOW
CREEPING RED FESCUE DOMESTIC RYEGRASS KENTUCKY BLUEGRASS	10-10-10	500	FALL, YEARLY, OR AS NEEDED	≥3"
TALL FESCUE	10-10-10	500		≥4"
TURF-TYPE FESCUE	10-10-10	500		
CROWN VETCH FESCUE	0-20-20	400	SPRING, AND YEARLY AFTER ESTABLISHED	DO NOT MOW
FLAT PEA FESCUE	0-20-20	400		

PERMANENT SEEDING SPECIES SELECTION		
SEED MIX	SEED RATE LB/AC.	NOTES:
GENERAL USE		
CREEPING RED FESCUE DOMESTIC RYEGRASS KENTUCKY BLUEGRASS	20 - 40 10 - 20 20 - 40	FOR CLOSE MOWING AND WATERWAYS WITH ≤2.0 FT./SEC. VELOCITY
TALL FESCUE	40 - 50	
TURF-TYPE FESCUE	90	
STEEP BANKS OR CUT SLOPES		
TALL FESCUE	40 - 50	
CROWN VETCH TALL FESCUE	10 - 20 20 - 30	DO NOT SEED LATER THAN AUGUST
FLAT PEA TALL FESCUE	20 - 25 20 - 30	DO NOT SEED LATER THAN AUGUST
ROAD DITCHES AND SWALES		
TALL FESCUE	40 - 50	
TURF-TYPE FESCUE KENTUCKY BLUEGRASS	90 5	
LAWN		
KENTUCKY BLUEGRASS PERENNIAL RYEGRASS	100 - 120 100 - 120	
KENTUCKY BLUEGRASS CREEPING RED FESCUE	100 - 120 100 - 120	FOR SHADED AREAS

PERMANENT SEEDING DETAIL
SCALE: NONE



NOTES:
1. PLACE GEOTEXTILE OVER THE ENTIRE AREA PRIOR TO PLACING STONE MEETING THE MIN. SPECIFICATIONS:

A.	TENSILE STRENGTH	= 200 LBS.
B.	PUNCTURE STRENGTH	= 80 PSI
C.	TEAR STRENGTH	= 50 LBS.
D.	BURST STRENGTH	= 320 PSI
E.	ELONGATION	= 20%
F.	EQUIVALENT OPENING SIZE	≤ 0.6 MM
G.	PERMITTIVITY	= 0.001 CM/SEC

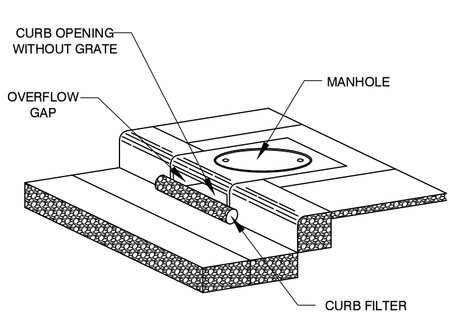
2. APPLY ADDITIONAL STONE AS CONDITIONS DEMAND AND REPLENISH STONE WHEN THE DEPTH IS LESS THAN 6". REMOVE AND REPLACE IF STONES BECOMES MUD-LADEN.
3. IMMEDIATELY REMOVE MUD DROPPED, WASHED OR TRACKED ONTO ROADS OR ANY SURFACE WHERE RUNOFF IS NOT CHECKED BY SEDIMENT CONTROLS BY SCRAPING OR SWEEPING.
4. CONSTRUCTION ENTRANCES SHALL NOT BE RELIED UPON TO REMOVE MUD FROM VEHICLES OR TO PREVENT OFF-SITE TRACKING. VEHICLES THAT ENTER AND LEAVE THE CONSTRUCTION SITE SHALL BE RESTRICTED FROM MUDDY AREAS.

CE **CONSTRUCTION ENTRANCE**
SCALE: NONE

NOTES:
1) THE SEED BED SHALL BE PULVERIZED AND LOOSE TO ENSURE THE SUCCESS OF ESTABLISHING VEGETATION.
2) SOIL AMENDMENTS MAY BE REQUIRED TO ESTABLISH ADEQUATE VEGETATION. PERFORM SOIL TESTS ON THE SITE TO PREDICT THE NEED FOR LIME AND FERTILIZER.
3) APPLY SEED UNIFORMLY. COVER BROADCASTED SEED BY RAKING OR DRAGGING AND THEN LIGHTLY TAMPING INTO PLACE.
4) APPLY MULCHING IMMEDIATELY AFTER SEEDING.
5) SEEDING SHALL BE INSPECTED FOR BARE SPOTS AND WASHOUTS, AND RESEEDED AS NECESSARY.

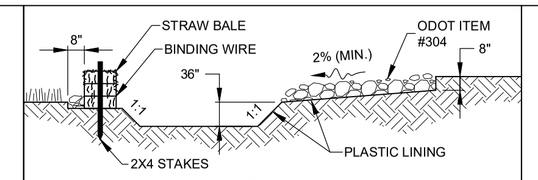
TEMPORARY SEEDING SPECIES SELECTION			
DATES	SPECIES	LB/1,000 SF	LB/AC.
MARCH 1 TO AUGUST 15	OATS	3	128
	TALL FESCUE	1	40
	PERENNIAL RYEGRASS	1	40
	PERENNIAL RYEGRASS	2	40
	TALL FESCUE	1	40
AUGUST 16 TO NOVEMBER 1	RYE	3	112
	TALL FESCUE	1	40
	PERENNIAL RYEGRASS	1	40
	WHEAT	3	120
	TALL FESCUE	1	40
	PERENNIAL RYEGRASS	1	40
	PERENNIAL RYEGRASS	2	40
	TALL FESCUE	1	40
NOVEMBER 1 TO SPRING	ONLY MULCH OR DORMANT SEEDING.		

TEMPORARY SEEDING DETAIL
SCALE: NONE

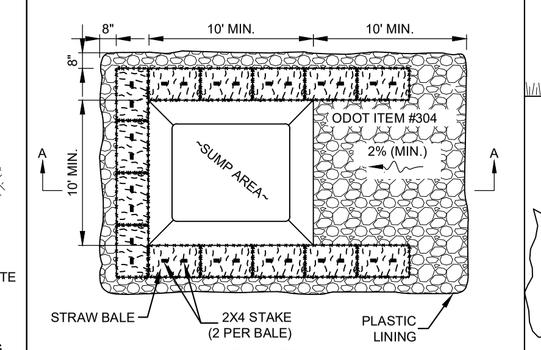


DETAIL OF CURB INLET SEDIMENT CONTROL DEVICE WITH CURB FILTER

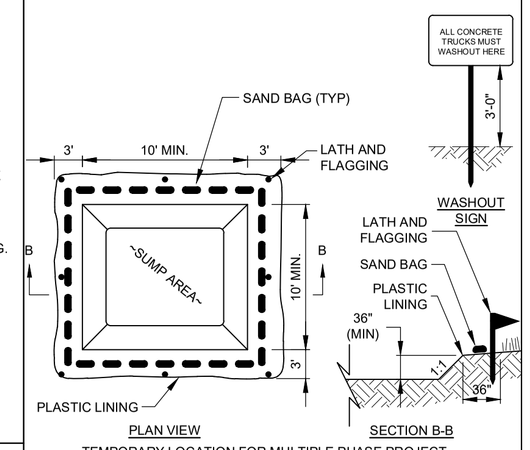
IP **DANDY CURB**
SCALE: NONE



SECTION A-A



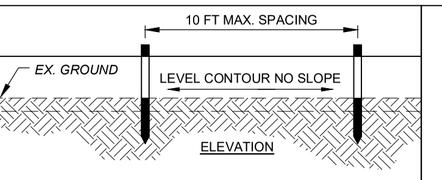
PLAN VIEW
SINGLE LOCATION FOR ENTIRE PROJECT

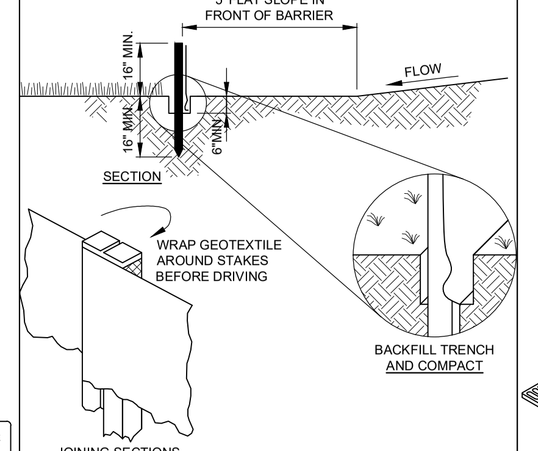


PLAN VIEW SECTION B-B
TEMPORARY LOCATION FOR MULTIPLE PHASE PROJECT

NOTES:
1. WASHOUT PIT SHALL BE LOCATED 100' MINIMUM FROM INLETS, STREAMS, WETLANDS AND ANY OTHER SURFACE WATERS.
2. ALL EXCESS CONCRETE AND CONCRETE WASHOUT, INCLUDING FROM HAND MIXERS AND LIGHT EQUIPMENT, SHALL BE DISPOSED OF IN THE CONCRETE WASHOUT AREA. DISPOSAL OF EXCESS CONCRETE OR CONCRETE WASHOUT ON THE GROUND, OR IN STORM DRAINS, DITCHES OR WATER BODIES, IS PROHIBITED.
3. CONCRETE WASHOUT AREA SHALL BE SUFFICIENT SIZE TO CONTAIN CONCRETE WASTE GENERATED. FOR LARGER SITES, MULTIPLE CONCRETE WASHOUT AREAS MAY BE REQUIRED.
4. IF CONCRETE WASHOUT AREA IS LOCATED AWAY FROM A PAVED SURFACE, CONSTRUCT A GRAVEL ACCESS ROUTE EQUAL IN COMPOSITION TO THE CONSTRUCTION ENTRANCE.
5. PLASTIC LINING SHALL BE DOUBLE-LINED, CONTINUOUS 10-MIL POLYETHYLENE SHEETING FREE OF HOLES, TEARS OR OTHER DEFECTS, AND INSTALLED ON A SMOOTH, LEVEL SURFACE, FREE OF ROCKS OR DEBRIS.
6. CONCRETE WASHOUT SIGNAGE SHALL BE CLEARLY VISIBLE AND LOCATED WITHIN 30 FEET OF EACH WASHOUT AREA.
7. CONCRETE WASHOUT AREAS SHALL BE COVERED DURING INCLEMENT WEATHER TO PREVENT OVERFLOWS.
8. PREFABRICATED, PORTABLE AND RE-USABLE CONCRETE WASHOUT CONTAINERS ARE ACCEPTABLE, BUT MUST BE SPECIFICALLY DESIGNED FOR CONCRETE WASHOUT USE.
9. CONCRETE WASHOUT AREA SHALL BE INSPECTED DAILY TO CHECK FOR DAMAGE AND TO DETERMINE IF IT NEEDS CLEANED OR REPLACED. ANY DAMAGE TO THE SIDEWALLS OR POLYETHYLENE SHEETING SHALL BE REPAIRED IMMEDIATELY. THE CONCRETE WASHOUT AREA SHALL BE CLEANED OR REPLACED WHEN IT IS 75% FULL. THE POLYETHYLENE SHEETING SHALL BE REPLACED AFTER EACH CLEANING.
10. SAW CUT CONCRETE, RESIDUE FROM SAW CUT, AND GRINDINGS SHALL BE DISPOSED OF IN THE WASHOUT PIT.

WA **CONCRETE WASHOUT DETAIL**
SCALE: NONE

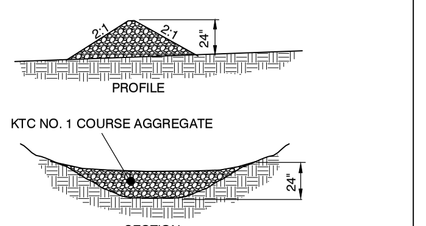




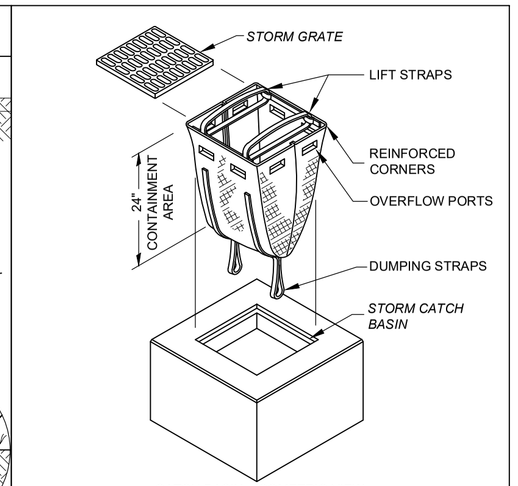
NOTES:
1. PRESERVE VEGETATION FOR 5 FEET, OR AS MUCH AS POSSIBLE, UPSLOPE FROM THE SILT FENCE. IF VEGETATION IS REMOVED, IT SHALL BE RE-ESTABLISHED WITHIN 7 DAYS FROM SILT FENCE INSTALLATION.
2. SILT FENCE SHALL ALLOW RUNOFF TO PASS ONLY AS DIFFUSE FLOW THROUGH THE GEOTEXTILE. PERFORM ONE OF THE FOLLOWING IF RUNOFF OVERTOPS THE SILT FENCE, FLOWS UNDER OR AROUND THE ENDS, OR IN ANY OTHER WAY BECOMES A CONCENTRATED FLOW:
   - CHANGE THE LAYOUT OF THE SILT FENCE.
   - REMOVE ACCUMULATED SEDIMENT.
   - INSTALL OTHER PRACTICES.

FABRIC PROPERTIES	VALUES	TEST METHOD
GRAB TENSILE STRENGTH	90 LB. MIN	ASTM D-1682
MULLEN BURST STRENGTH	190 PSI MIN	ASTM D-3786
SLURRY FLOW RATE	0.3 GAL./MIN./S.F. MAX.	
EQUIVALENT OPENING SIZE	40-80	US STD. SIEVE CW-02215
ULTRAVIOLET RADIATION STABILITY	90% MIN	ASTM-G-26

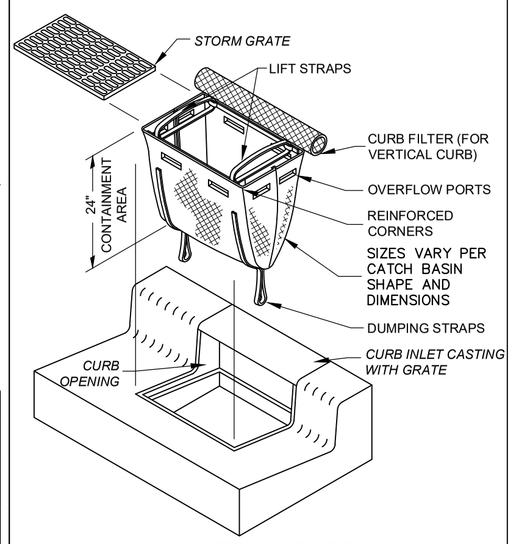
SF **SILT FENCE**
SCALE: NONE



CD **CHECK DAM**
N.T.S.

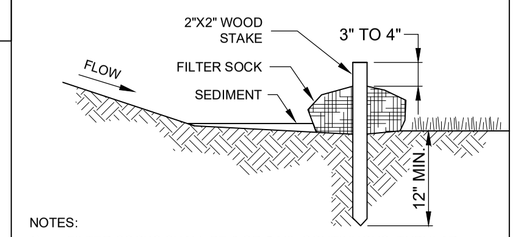


CATCH BASIN - ISOMETRIC VIEW



CURB INLET BASIN WITH GRATE

IP **STORM DRAIN INLET PROTECTION DETAIL**
SCALE: NONE



NOTES:
1) FILTER SOCKS SHALL BE 3 OR 5 MIL CONTINUOUS, TUBULAR, HDPE 3/8" KNITTED MESH NETTING MATERIAL, FILLED WITH COMPOST.
2) COMPOST SHALL BE WEED, PATHOGEN AND INSECT FREE, FREE OF ANY REFUSE, CONTAMINANTS OR OTHER MATERIALS TOXIC TO PLANT GROWTH, BE DERIVED FROM A WELL-DECOMPOSED SOURCE OF ORGANIC MATTER, AND CONSIST OF PARTICLES RANGING FROM 3/8" TO 2".
3) FILTER SOCKS SHALL BE PLACED ON A LEVEL LINE ACROSS SLOPES PARALLEL TO THE BASE OF THE SLOPE.
4) FILTER SOCKS SHALL BE PLACED AT LEAST 5' FROM THE TOE OF SLOPE FOR SEDIMENT DEPOSIT.
5) BUILT UP SEDIMENT SHALL BE REMOVED WHEN IT HAS REACHED 1/3 THE FILTER SOCK HEIGHT.
6) WHEN A FILTER SOCK IS NO LONGER REQUIRED, IT SHALL BE DISPERSED ON-SITE.
7) THE MAXIMUM DRAINAGE AREA PER 100 FEET OF FILTER SOCK IS 1/2 ACRE AND IS DEPENDENT ON THE SLOPE:

MAX. SLOPE LENGTH ABOVE FILTER SOCK					
SLOPE	RATIO (H:V)	8"	12"	18"	24"
0% - 2%	0 - 50:1	125'	250'	300'	350'
2% - 10%	50:1 - 10:1	100'	125'	200'	250'
10% - 20%	10:1 - 5:1	75'	100'	150'	200'

FILTER SOCK DETAIL
SCALE: NONE

90% REVIEW

your trusted advisor engineers architects consultants planners

NO	REVISION	DATE

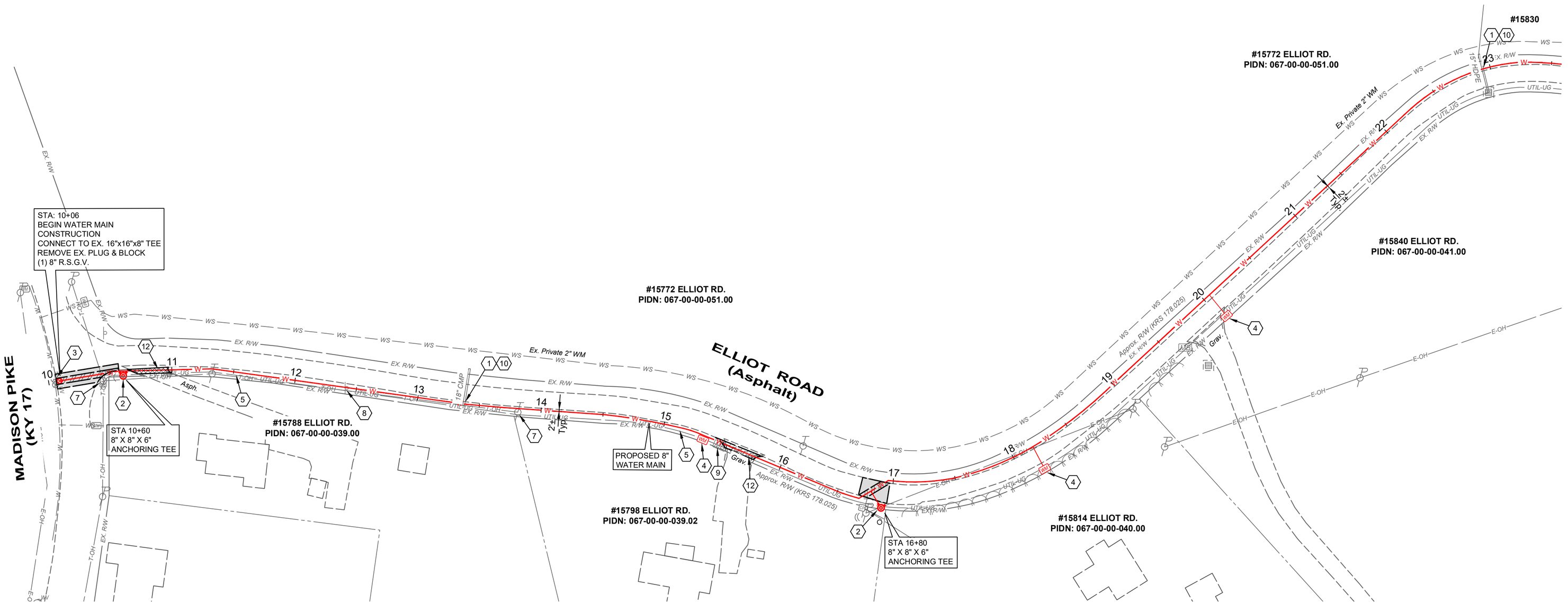
ISSUED FOR:	90% DESIGN
ISSUE DATE:	MAY 2024
SCALE:	AS SHOWN
DESIGNED BY:	JCOR
DRAWN BY:	JCOR
CHECKED BY:	JSHU

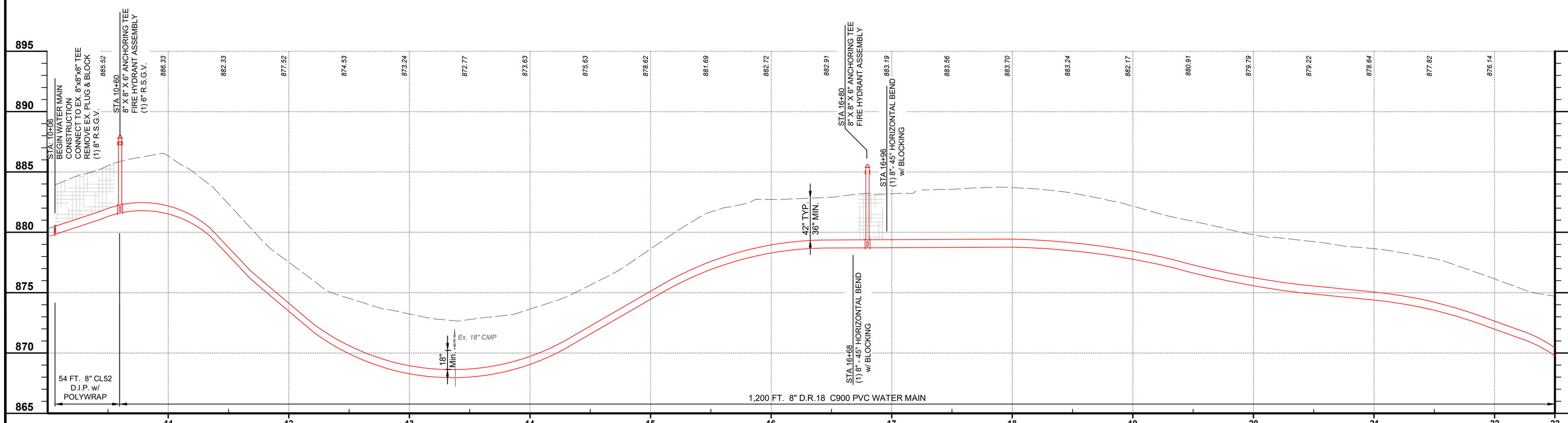
NORTHERN KENTUCKY WATER DISTRICT
SUBDISTRICT 'O'
-KENTON COUNTY -

EROSION CONTROL DETAILS

PROJECT NO.
231591
DISCIPLINE
CIVIL
SHEET NAME
G-05
SHEET 6 OF 49

APPROVED FOR CONSTRUCTION
AUGUST 2024
TRANSACTION NO. CA24E0
KENTUCKY DIVISION OF WATER





0' 50'' 100'

SCALE: 1" = 50

CONSTRUCTION NOTES

1. MAINTAIN MANAGEABLE VERTICAL CLEARANCE BETWEEN THE PROPOSED WATER MAIN AND THE EXISTING STORM SEWER, WATER MAIN, TELEPHONE DUCTS, AND GAS MAIN. CONSTRUCT ALL SANITARY SEWER CROSSINGS PER N.K.W.D. SPECIFICATIONS ITEM 1.14. MAINTAIN MINIMUM 18" BETWEEN THE PROPOSED WATER MAIN AND THE EXISTING SANITARY SEWER, ACTUAL ELEVATION UNKNOWN. CONTRACTOR TO EXCAVATE & VERIFY ACTUAL LOCATION, SIZE AND ELEVATION OF EXISTING UTILITY PRIOR TO BEGINNING WATER MAIN CONSTRUCTION. THE CONTRACTOR SHALL NOTIFY THE ENGINEER PRIOR TO CONSTRUCTION OF ANY POTENTIAL CONFLICT. NO ADDITIONAL PAYMENT WILL BE MADE FOR THIS WORK AND THE COST SHALL BE INCLUDED IN THE BID ITEM FOR WATER MAIN.
2. PROPOSED FIRE HYDRANT ASSEMBLY, VALVE AND BLOCKING AS PER N.K.W.D. STD. DRAWING NO. 109. COORDINATE LOCATION WITH N.K.W.D. INSPECTOR. ANCHOR VALVE TO TEE.
3. CONNECT TO EXISTING WATER MAIN (ACTUAL ELEVATION UNKNOWN). CONTRACTOR TO VERIFY DEPTH PRIOR TO CONSTRUCTION.
4. CHANNEL LINING, CLASS II (12") w/ NON-WOVEN GEOTEXTILE FILTER FABRIC
5. CONTRACTOR TO VERIFY LOCATION AND ELEVATION OF UTILITY PRIOR TO EXCAVATION ACTIVITY AND NOTIFY ENGINEER AND N.K.W.D. OF CONFLICTS.
6. DO NOT DISTURB
7. CONTRACTOR TO SUPPORT UTILITY POLE DURING PIPE INSTALLATION
8. REMOVE AND REPLACE SIGN
9. REMOVE AND REPLACE MAILBOX
10. NOT USED
11. REMOVE AND REPLACE EXISTING STORM STRUCTURE (CB,HW) AS NEEDED FOR WATER MAIN INSTALLATION
12. DRIVEWAY RESTORATION (SEE DETAILS)
13. CONSTRUCT CLAY BULKHEAD IN TRENCH WITH UNDERDRAIN. DAYLIGHT UNDERDRAIN TO DITCH OR DRAINAGE STRUCTURE

HATCH LEGEND

- 1-1/2" ASPHALT PAVEMENT MILL AND OVERLAY AREA
- TRENCH RESTORATION - ASPHALT PAVEMENT - SEE DETAIL SHEET
- TRENCH RESTORATION - CONCRETE PAVEMENT - SEE DETAIL SHEET
- TRENCH RESTORATION - 8" AGGREGATE PAVEMENT
- CONTROL DENSITY FILL - PAV'T TRENCH
- CONCRETE DRIVEWAY REPLACEMENT - SEE DETAIL SHEET
- CONCRETE WALK REPLACEMENT - SEE DETAIL SHEET
- ASPHALT DRIVEWAY REPLACEMENT - SEE DETAIL SHEET
- GRAVEL DRIVEWAY REPLACEMENT - SEE DETAIL SHEET
- CHANNEL LINING, CLASS II - SEE DETAIL SHEET

90% REVIEW

your trusted advisor — engineers architects planners consultants

NO	REVISION	DATE
.	.	.

ISSUED FOR: 90% DESIGN
ISSUE DATE: MAY 2024
SCALE: AS SHOWN
DESIGNED BY: JCOR
DRAWN BY: JCOR
CHECKED BY: JSHU

NORTHERN KENTUCKY WATER DISTRICT
SUBDISTRICT 'O'
-KENTON COUNTY -

ELLIOT ROAD
STA. 10+00 TO STA. 22+50

PROJECT NO.: 231591
DISCIPLINE: CIVIL
SHEET NAME: C-40
SHEET: 46 OF 49

APPROVED
Kentucky Transportation Cabinet
Highway Design Branch

1:\CTC.LOCAL\CT_DATA\PROJECTS\2023\231591\DWG\SHEETS\C_231591 PNP_16_ELLIOT.DWG - ELLIOT-1 - 6/6/2024 12:31:51 PM - JAMES.CORNELL

KYTC Division of Maintenance

Permits Branch
District 6

ENCROACHMENT PERMIT GENERAL NOTES & SPECIFICATIONS

YOU MUST NOTIFY KYTC BEFORE BEGINNING ANY WORK IN THE RIGHT-OF-WAY. ***Failure to alert KYTC of working within the right of way may result in permit revocation.***

Two ways to notify KYTC of your construction start date:

By Email: KYTCD6PERMITS@KY.GOV

**must include permit number and county in subject line*

By Phone: 859-341-2700

**must know permit number and county when calling*

YOU MUST ALSO NOTIFY KYTC UPON COMPLETION OF WORK WITHIN RIGHT-OF-WAY. ***Failure to alert KYTC of completion of work may result in withholding release of any associated bonds.***

Kentucky UNBRIDLED SPIRIT™

APPROVED
August 27, 2024
Kentucky Transportation Cabinet
06-2024-00810

I. SAFETY

A. General Provisions

☑ All signs and control of traffic shall be in accordance with the Manual on Uniform Traffic Control Devices (MUTCD) for Streets and Highways, latest edition, Part VI, and safety requirements shall comply with the Permits Manual. Federal law requires that traffic control shall be implemented in accordance with MUTCD standards and KYTC's Standard Specifications for Road and Bridge Construction (KYTC SSRBC) under the supervision of a certified Work Zone Traffic Control Supervisor.

☑ All work necessary in shoulder or ditch line areas of a state highway shall be scheduled to be promptly completed so that hazards adjacent to the traveled way are kept to an absolute minimum.

☑ No more than one (1) traveled-lane shall be blocked or obstructed during normal working hours. All signs and flaggers during lane closure shall conform to the MUTCD. The traveled-way and shoulders shall be kept clear of mud and other construction debris at all times during construction of the permitted facility. No non-construction equipment or vehicles or office trailers shall be allowed on the right of way during working hours. The right of way shall be left free and clear of equipment, material, and vehicles during non-working hours.

☑ When necessary to block one (1) traveled-lane of a state highway, the normal working hours shall be as directed by the Department. No lanes shall be blocked or obstructed during adverse weather conditions (rain, snow, fog, etc.) without specific permission from the Department.

☑ Working hours shall be between **9:00 AM** and **3:00 PM**. Further date and time restrictions are as follows:

B. Explosives

☑ No explosive devices or explosive material shall be used within state right of way without proper license and approval of the Kentucky Department of Mines and Minerals, Explosive Division.

C. OSHA

☑ Kentucky Occupational Safety and Health Standards for the construction industry, which has the effect of law, states in part: (Page 52, 1926.651, Specific Excavation Requirements) "Prior to opening an excavation, effort shall be made to determine whether underground installations, (sewer, telephone, water, fuel, electric lines, etc.) will be encountered, and if so, where such underground installations are located. When the excavation approaches the estimated location of such an installation, the exact location shall be determined, and when it is uncovered, proper supports shall be provided for the existing installation. Utility companies shall be contacted and advised of proposed work prior to the start of actual excavation."

D. Archaeological

☑ Whenever materials of an archaeological nature are discovered during the course of construction work or maintenance operations, contact shall be made immediately with the Division of Environmental Analysis, which maintains an archaeologist on staff, or with the Office of the State Archaeologist located at the University of Kentucky. Following this consultation, further action shall be decided on a case-by-case basis by the State Highway Engineer or the Transportation Planning Engineer or their designated representative.

E. Environmental

☑ If the activity to which this permit related disturbs one acre of more of land, you must obtain KPDES KYR10 permit. Information can be found at http://water.ky.gov/permitting/Pages/GeneralPermits.aspx

F. Additional Notes

☑ The following additional notes apply to this permit:

24 hour notice is required prior to restoration of pavement, concrete or topsoil. Call Rick Shay at 859-307-5768

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AUGUST 27, 2024
KENTUCKY TRANSPORTATION CABINET
06-2024-00844

II. UTILITIES

- [x] The permittee shall be responsible for any damage to existing utilities. Any utility modifications or relocations within state right of way necessary, as determined by the Department or by the owner of the utility, shall be at the expense of the permittee and subject to the approval of the Department. Operators of underground utilities in right of way shall be members of Kentucky 811.

- [ ] All existing manholes and valve boxes shall be adjusted to be flush with finished grade.

- [x] All pavement cuts shall be restored per Kentucky Transportation Cabinet standards and specifications.

- [x] Any excavation within 3' of edge of pavement will require flowable fill as backfill.

- [x] The clear zone requirement shall be met to the extent possible in accordance with the Roadside Design Guide.

- [ ] Encasement pipe shall conform to current standards for highway crossings in accordance with the Permits Manual. Pipe encasing shall not be required if the pipe crossing is 2" or less.

- [ ] Aerial crossing of utility lines shall have a minimum clearance from the high point of the roadway to the low point of the line of 24' on fully controlled access highways and 18' on non-fully controlled access highways

- [x] Minimum depth for underground Gas and Electric lines is 60" under roadways, ramps, and ditch lines and 42" in all other areas within state right of way. The minimum depth for all other utilities is 42" in all areas.

- [x] When steel plates are installed over an open excavation in the roadway, they must be anchored to the pavement and have asphalt applied to all exposed edges and an MUTCD approved sign noting "Road Plates Ahead." KYTC must be notified of the location, date, time, and permit number associated to BOTH the installation and removal of the plate. Failure to do so may result in permit revocation.

- [ ] Utility poles moved for replacement must be removed in their entirety and the hole left behind must be backfilled.

- [ ] No poles or anchors shall be installed in a roadside ditch.

- [ ] ***Utility notes specific to fully-controlled access highways ONLY:***
All work necessary within the right-of-way shall be performed behind a temporary fence erected prior to the start of work. The temporary woven wire fence shall be removed immediately upon completion of work on the right-of-way, and the control of access immediately restored to original condition, in accordance with applicable KYTC SSRBC. All vents, valves, manholes, etc., shall be located outside of the right-of-way. Encasement pipe shall extend from right-of-way line to right-of-way line and shall be one continuous run of pipe. The encasement pipe shall be welded at all joints. The boring pit and tail ditch shall extend past the existing toe of slope or bottom of ditch line and shall be a minimum of 42 inches deep. Work in interstate right-of-way requires approval from FHWA (Federal Highway Administration).

- [ ] Additional notes:

MINIMUM COVER MUST BE 60" IN THE ROW AND UNDER PAVEMENT

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KENTUCKY TRANSPORTATION CABINET
06-2024-00844

III. DRAINAGE

☑ Negative impacts to existing drainage will be the applicant's responsibility to repair in accordance with KYTC SSRBC.

☐ All pipe shall be laid in a straight alignment, to proper grades, and with all materials and methods of installation including bedding and joint seating. Pipe shall not be covered until inspected by the Department and express permission obtained to make backfill. It is the applicant's responsibility to request inspection.

☐ All gutter lines at the base of new curbs shall be on continuous grades, and pockets of water along with curbs or in entrance areas or other paved areas within the right-of-way shall not be acceptable.

☐ All drainage structures and appurtenances (manholes, catch basins, curbing, inlet basins, etc.) shall conform to the Department specifications and shall be constructed in accordance with the KYTC's Standard Drawings.

☐ Additional notes:

IV. PAVING

☑ No bituminous pavement shall be installed within the right of way between November 15 and April 1, nor when the temperature is below 40 degrees Fahrenheit, without the express consent of the Department. No bituminous pavement shall be installed when the underlying course is wet.

☑ Paving within the right of way shall be as follows:

- Base (Type): **Match Existing**, (Thickness) **Match Existing**
- Surface Base (Type) **Match Existing** , (Thickness) **Match Existing**
- Finished Surface (Type) **Match Existing**, (Thickness) **Match Existing**

☑ All materials and methods of construction, including base and subgrade preparation, shall be in accordance with KYTC's Standard Specifications. At least 24 hours notice to the Department is required prior to beginning paving operations.

Phone: **859-307-5768** Name: **Rick Shay**

☑ Utility companies performing road cuts must restore the pavement to pre-existing condition. Pictures/videos are recommended to ensure proper placement of signs and lane markers that are temporarily removed for paving operations. In some cases, a pre-work inventory may be requested from the Department.

☑ Existing pavement and shoulder material shall be removed to accommodate the above paving specifications.

☑ The finished surface of all new pavement within the right of way shall be true to the required slope and grade, uniform in density and texture, free of irregularities, and equivalent in riding qualities to the adjacent highway pavement or as determined by KYTC.

☑ To ensure proper surface drainage, the new pavement shall be flush with the edge of existing highway pavement and shall slope away from the existing edge of the pavement as specified in drawings.

☑ Existing edge of pavement shall be saw-cut to provide a straight and uniform joint for new pavement, and an edge key will be installed in the overlap. An approved joint sealer, in accordance with Kentucky Department of Highways Standard Specifications (latest edition), shall be applied between new and existing pavements.

☐ Additional notes:

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AUGUST 27, 2024
KENTUCKY TRANSPORTATION CABINET
06-2024-00844

V. ENTRANCES

☐ Encroachment permits issued by KYTC in no way supersede local planning/zoning requirements or subdivision regulations. KYTC has no authority with zoning changes.

☐ Commercial entrances must be paved to the right-of-way line. Any deviations must be approved by KYTC before installation.

☐ KTYC can dictate drainage improvement installation during construction or after entrance is at final grade. The permit release does not release the permit applicant from drainage maintenance.

☐ Signs (ground-mounted and span-mounted), stop bars, crosswalk, and proper lane markings must be in-place before entrance is open for traffic. Lane width modifications must be approved by the Department.

☐ Guardrail installation must be pre-approved by the Department and installed by a KYTC pre-qualified contractor. Any guardrail that is removed during construction must be returned to the local KTYC maintenance facility.

☐ Additional notes:

VI. TRAFFIC

☑ Any contractor performing work within the vicinity of KYTC roadway lighting or traffic signals, must request locates from the KYTC District 6 Traffic section at least one week before of starting work in the right-of-way.

☐ Applicant must maintain all KYTC Roadway signage that is impacted by the permitted work. In the event that any signs have to be moved, it is the applicant's responsibility to mark the sign's location before removal and to install the original or new sign per KYTC standards for sign installation.

☐ Any thermoplastic or striping damaged during the encroachment must be restored in a timely manner per KYTC standards. Stopbars, arrows, and crosswalks must be thermoplastic material, paint is not acceptable. This work must be performed by a KYTC pre-qualified contractor.

☐ Excavating near a signal, lighting pole, or anchoring facility must be done so that it does not impact the structural integrity of the pole. Any work that requires a temporary support or anchoring must receive prior approval.

☐ If the scope of the permit involves a signal build or rebuild, it is the applicant's responsibility to apply for power service (and pay monthly electrical bill) as well as request electrical inspection from the KYTC District 6 Traffic section. If the signal modifications require timing or phasing changes this must be requested at least two weeks in advance of the signal's turn-on date. KYTC will not take ownership of permitted signals until the electrical inspection is formally accepted and approved.

☐ Work which impacts traffic loops requires 48-hour notice to the KYTC District 6 Traffic section at 859-341-2700. Accidental damage of a traffic loop must be reported immediately to KYTC District 6's emergency line at 859-620-2738. Any disturbed traffic loops must be replaced in a timely manner. Traffic loops out of operation for more than five working days will subject the applicant to the cancellation of the permit. Loop repair must be performed by a KYTC pre-qualified contractor.

☐ Additional Notes:

APPROVED
AUGUST 27, 2024
KENTUCKY TRANSPORTATION CABINET
06-2024-00844

VII. SIDEWALK SPECIFICATIONS

☐ All sidewalk modifications, retrofitting, or installations must meet current ADA guidelines

A. New Sidewalks

☐ New sidewalk specifications, dimensions, and designs shall be in accordance with KYTC's latest edition of the Standard Specifications, or with the plans provided on the permit if approved by a KYTC D6 Construction or Permits Engineer.

☐ All materials and methods of construction, including curing, shall be in accordance with KYTC's latest edition of the Standard Specifications.

B. Existing Sidewalks

☐ Use of the sidewalk shall not be blocked or obstructed and a usable walkway shall be maintained across the construction area at all times per MUTCD . Sidewalk closures must be approved by the Department before implementation.

☐ The location of ADA ramps (truncated domes/tactile warnings/etc.) will need to be field verified by KYTC before installation.

☐ Any section of sidewalk that becomes damaged shall be entirely replaced to match existing sections.

☐ Additional notes:

VIII. RIGHT OF WAY RESTORATION

☑ All disturbed portions of the right of way shall be restored to grass as per Kentucky Department of Highways Standard Specifications for Road and Bridge Construction (latest edition). A satisfactory turf, as determined by the Department, shall be established by the permittee prior to release of indemnity. Sodding or seeding shall be as follows:

- ☑ Slopes 3:1 or Less: 90% Kentucky 31 Tall Fescue and 10% White Dutch Clover at 100 lbs/acre
- ☑ Slopes Greater than 3:1: 90% Kentucky 31 Tall Fescue and 10% Partridge Pea at 100 lbs/acre
- ☑ Urban or Residential Areas: 95% Turf Type Fall Fescue Blend and 5% White Dutch Clover at 275 lbs/acre

☑ Two tons of clean straw mulch per acre of seeding.

☑ Prior to seeding, the ground shall be prepared in accordance with Kentucky Department of Highways Standard Specifications for Road and Bridge Construction (latest edition).

☐ Substitutes for sod such as artificial turf, rocked mulch, or paved areas may be acceptable if they are aesthetically pleasing and receive prior approval from KYTC.

☐ All ditch-flow lines and all ditch-side slopes shall be sodded.

☐ Existing concrete right of way markers shall not be disturbed. If damaged in any way, they shall be entirely replaced by the permittee with new concrete markers to match the original markers, in accordance with Kentucky Department of Highways Standard Drawings. Markers that are entirely removed shall be re-established in the proper locations by the permittee and to the satisfaction of the Department.

☐ Additional notes:

APPROVED
AUGUST 27, 2024
KENTUCKY TRANSPORTATION CABINET
06-2024-00844

IX. RIGHT OF WAY FENCE RESTORATION

- ☐ The replacement fence shall be a height of at least 48 inches and shall be of sufficient density to protect against encroachment.
- ☐ The replacement fence shall be a minimum of 1 foot and a maximum of 2 feet outside the right-of-way line
- ☐ The fence materials and design shall meet accepted industry standards and be treated as paintable. Durable finish materials such as vinyl are acceptable.
- ☐ The permittee shall be required to construct and maintain the replacement fencing to an acceptable level of functionality and state of repair. All work on the fencing shall be performed by access from the private property. Access from the roadway is not allowed.
- ☐ The existing fence shall be removed by permittee and stored at the Department's maintenance storage yard for future reuse by the Department, or the Department shall be reimbursed the cost of fencing removed.
- ☐ Right of way monuments shall be installed regardless of if replacement fence is installed or not.
- ☐ The control of access shall not be diminished as a result of replacement of the fence.
- ☐ Additional notes:

X. MISCELLANEOUS NOTES

NOTICE TO PERMITTEE

THE PERMITTEE AGREES THAT ALL WORK WITHIN THE EXISTING RIGHT OF WAY SHALL BE DONE IN ACCORDANCE WITH THE CURRENT KYTC STANDARD SPECIFICATIONS AND THE PLANS AS APPROVED AND PERMITTED BY AN ENCROACHMENT PERMIT. ANY CHANGES OR VARIANCES MADE AT THE TIME OF CONSTRUCTION WITHOUT WRITTEN APPROVAL FROM THE DEPARTMENT OF HIGHWAYS SHALL BE REMOVED BY THE PERMITTEE AT NO EXPENSE TO THE DEPARTMENT OF HIGHWAYS AND SHALL BE REDONE BY THE PERMITTEE TO CONFORM WITH THE APPROVED PLANS.

APPROVED
Highway District
Date 7-11-2024
Kentucky Transportation Cabinet

NOTICE OF COMPLETION OF ENCROACHMENT PERMIT WORK

PERMITTEE

Name: Northern Kentucky Water District
Contact Person: Steve Broering
Address: 2835 Crescent Springs Road
City: Ft. Wright
State: Kentucky
Zip: 41017
Telephone: (859) 991-1652

PROJECT IDENTIFICATION

Permit Number: 06-2024-00838

I wish to notify the Department of Highways that the above mentioned permit work and any necessary right-of-way restoration have been completed and are ready for final inspection.

Permittee

Please return this form to the address below when work is completed and ready for final inspection.

Please Return to: Permit Engineer
Department of Highways, District 6 Office
421 Buttermilk Pike
Covington, Kentucky 41017
(859) 341-2700
www.transportation.ky.gov/

LOCATION(S)			
Description	**County - Route**	**Latitude**	**Longitude**
PROPOSED 8" WATER MAIN INSTALLATION ON GENE STREET THAT TIES INTO EXISTING 8" WM ON WALTONNICHOLSON PIKE (KY 16) THE	Kenton - KY 16	38.899193	-84.559854

APPROVED
AUGUST 27, 2024
KENTUCKY TRANSPORTATION CABINET
06-2024-00838

Andy Beshear
Governor

COMMONWEALTH OF KENTUCKY
TRANSPORTATION CABINET
Department of Highways, District 6 Office
421 Buttermilk Pike
Covington, Kentucky 41017
(859) 341-2700
www.transportation.ky.gov/

Jim Gray
Secretary

August 27, 2024

Northern Kentucky Water District
Steve Broering
2835 Crescent Springs Road
Ft. Wright, Kentucky 41017

Subject: Permit #: 06-2024-00838
Permit Type: Utilities - Water
Approval

Dear Applicant:

Attached is your permit approval and documentation for the subject permit.

Be advised that all work must be done in conformity with permit and application conditions. If you have any questions, please contact the Permits Section at this office.

Sincerely,

Linzy Brefeld

Linzy Brefeld
D6 Permits Supervisor

Attachments

APPROVED
AUGUST 27, 2024
KENTUCKY TRANSPORTATION CABINET
06-2024-00838

Kentucky Transportation Cabinet
Department of Highways
Division of Maintenance
Permits Branch

ENCROACHMENT PERMIT

KYTC KEPT #: 06-2024-00838

Permittee: Northern Kentucky Water District

Permit Type / Subtype: Utilities / Water

Work Completion Date: 8/26/2025

INDEMNITIES		
Type	**Amount Required**	**Tracking Number**
Performance Bond	$0.00	
Cash / Check	$0.00	
Self-Insured	$0.00	
Payment Bond	$0.00	
Liability Insurance	$0.00	

This permit has been: **APPROVED** [X] **DENIED** [ ]

Linzy Brefeld	D6 Permits Supervisor	8/26/2024
SIGNATURE	**TITLE**	**DATE**

The TC 99-1(B), including the application TC-99 1(A) and all related and accompanying documents and drawings make up the permit. It is not a permit unless both the TC 99-1(A) and TC 99-1(B) are both present.

LOCATION(S)			
Description	**County - Route**	**Latitude**	**Longitude**
PROPOSED 8" WATER MAIN INSTALLATION ON GENE STREET THAT TIES INTO EXISTING 8" WM ON WALTONNICHOLSON PIKE (KY 16) THE	Kenton - KY 16	38.899193	-84.559854

APPROVED
AUGUST 27, 2024
TRANSPORTATION CABINET
KENTUCKY DEPT. OF HIGHWAYS
06-2024-00838

Kentucky811 Know what's below. Call before you dig

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24 Hours a Day, Seven Days a Week:
Call 811 or 800-752-6007

TEAM KENTUCKY TRANSPORTATION CABINET

KENTUCKY TRANSPORTATION CABINET
Department of Highways
PERMITS BRANCH

APPLICATION FOR ENCROACHMENT PERMIT

KYTC KEPT #: 06-2024-00838

SECTION 1: APPLICANT CONTACT INFORMATION

APPLICANT NORTHERN KY WATER DISTRICT	**ADDRESS** 2835 CRESCENT SPRINGS PIKE		
EMAIL sbroering@nkywater.org	**CITY** ERLANGER	**STATE** KY	**ZIP** 41018
CONTACT NAME 1 Steve Broering	**EMAIL** sbroering@nkywater.org	**PHONE #** 859-426-2728 **CELL #**	
CONTACT NAME 2 (*if applicable*)	**EMAIL**	**PHONE #** **CELL #**	

SECTION 2: PROPOSED WORK LOCATION

ADDRESS	**CITY** WALTON		**STATE** Kentucky	**ZIP** 41094
COUNTY KENTON	**ROUTE #** 16	**MILE POINT** 2.5	**LONGITUDE** (*X*) 84D33'35"W	**LATITUDE** (*Y*) 38D53'57"N

ADDITIONAL LOCATION INFORMATION:
WALTON - NICHOLSON PIKE AT GENE STREET

FOR KYTC USE ONLY

PERMIT TYPE: ☐ Air Right ☐ Entrance ☒ Utilities ☐ Vegetation Removal ☐ Other: _____

ACCESS: ☐ Full ☐ Partial ☒ by Permit **LOCATION:** ☐ Left ☐ Right ☐ Crossing

SECTION 3: GENERAL DESCRIPTION OF WORK

PROPOSED 8" WATER MAIN INSTALLATION ON GENE STREET THAT TIES INTO EXISTING 8" WM ON WALTON-NICHOLSON PIKE (KY 16)

THE UNDERSIGNED APPLICANT(s), being duly authorized representative(s) or owner(s), DO AGREE TO ALL ORIGINAL UNEDITED TERMS AND CONDITIONS ON THE TC 99-1A, pages 1-4.

Steve Broering
SIGNATURE

7-15-2024
DATE

This is not a permit unless and until the applicant(s) receives an approved TC 99-1B from KYTC. This application shall become void if not approved by the cancellation date. The cancellation date shall be a minimum of one year from the date the applicant submits their application.

APPROVED
AUGUST 27, 2024
KENTUCKY TRANSPORTATION CABINET
06-2024-00838

APPLICATION FOR ENCROACHMENT PERMIT

TERMS AND CONDITIONS

1. The permit, including this application and all related and accompanying documents and drawings making up the permit, remains in effect and is binding upon the Applicant/Permittee, its successors and assigns, as long as the encroachment(s) exists and also until the permittee is finally relieved by the Department of Highways from all its obligations.

2. Applicant shall meet all requirements of the Clean Water Act if the project will disturb one acre or more, the applicant shall obtain a KPDES KYR10 Permit from the Kentucky Division of Water. All disturbed areas shall meet the requirements of the Department of Highway's Standard Specifications, Sections 212 and 213, as amended.

3. **INDEMNITY:**
   - **A.** PERFORMANCE BOND: The permittee shall provide to the Department a performance bond according to the Permits Manual, Section PE-203 as a guarantee of conformance with the Department's Encroachment Permit requirements.
   - **B.** PAYMENT BOND: At the discretion of the department, a payment bond shall be required of the permittee to ensure payment of liquidated damages assessed to the permittee.
   - **C.** LIABILITY INSURANCE: Liability insurance shall be required of the permittee (in an amount approved by the department) to cover all liabilities associated with the encroachment.
   - **D.** It shall be the responsibility of the permittee, its successors and assigns, to maintain all indemnities in full force and effect until the permittee is authorized to release the indemnity by the Department.

4. A copy of this application and all related documents making up the approved permit shall be given to the applicant and shall be made readily available for review at the work site at all times.

5. Perpetual maintenance of the encroachment is the responsibility of the permittee, its successors and assigns, with the approval of the Department as required, unless otherwise stated.

6. Permittee, its successors and assigns, shall comply with and agree to be bound by the requirements and terms of (a) this application and all related documents making up the approved permit, (b) by the Department's Permits Manual, and (c) by the Manual on Uniform Traffic Control Devices, both manuals as revised to and in effect on the date of issuance of the permit, all of which documents are made a part thereof by this reference. Compliance by the permittee, its successors and assigns, with subsequent revisions to applicable provisions of either manual or other policy of the Department may be made a condition of allowing the encroachment to persist under the permit.

7. Permittee agrees that this and any encroachment may be ordered removed by the Department at any time, and for any reason, upon thirty days written notice to the last known address of the applicant or to the address at the location of the encroachment. The permittee agrees that the cost of removing and of restoring the associated right-of-way is the responsibility of the permittee, its successors and assigns.

8. Permittee, its successors and assigns, agree that if the Department determines that motor vehicular safety deficiencies develop as a result of the installation or use of the encroachment, the permittee, its successors and assigns, shall provide and bear the expenses to adjust, relocate, or reconstruct the facilities, add signs, auxiliary lanes, or other corrective measures reasonably deemed necessary by the Department within a reasonable time after receipt of a written notice of such deficiency. The period within which such adjustments, relocations, additions, modifications, or other corrective measures must be completed will be specified in the notice.

9. Where traffic signals are required as a condition of granting the requested permit or are thereafter required to correct motor vehicular safety deficiencies, as determined by the Department, the costs for signal equipment and installation(s) shall be borne by the permittee, its successors and assigns and the Department in its reasonable discretion and only in accordance with the Department's current policy set forth in the Traffic Operations Manual and Permits Manual. Any modifications to the permittee's entrance necessary to accommodate signalization (including necessary easement(s) on private property) shall be the responsibility of the permittee, its successors and assigns, at no expense to the Department.

APPROVED
KENTUCKY TRANSPORTATION CABINET
06-29-2021

APPLICATION FOR ENCROACHMENT PERMIT

10. The requested encroachment shall not infringe on the frontage rights of an abutting owner without their written consent as hereinafter described. Each abutting owner shall express their consent, which shall be binding on their successors and assigns, by the submission of a notarized statement as follows, "I (we), _____, hereby consent to the granting of the permit requested by the applicant along Route _____, which permit does affect frontage rights along my (our) adjacent real property." By signature(s) _____, subscribed and sworn by _____, on this date _____.

11. The permit, if approved, is subject to the agreement that it shall not interfere with any similar rights or permit(s) previously granted to any other party, except as otherwise provided by law.

12. Permittee shall include documentation which describes the facilities to be constructed. Permittee, its successors and assigns, agree as a condition of the granting of the permit to construct and maintain any and all permitted facilities or other encroachments in strict accordance with the submitted and approved permit documentation and the policies and procedures of the Department. Permittee, its successors and assigns, shall not use facilities authorized herein in any manner contrary to that prescribed by the approved permit. Only normal usage as contemplated by the parties and by this application and routine maintenance are authorized by the permit.

13. Permittee, its successors and assigns, at all times from the date permitted work is commenced until such time as all permitted facilities or other encroachments are removed from the right-of-way and the right-of-way restored, **shall defend, protect, indemnify and save harmless** the Department from any and all liability claims and demands arising out of the work, encroachment, maintenance, or other undertaking by the permittee, its successors and assigns, related or undertaken pursuant to the granted permit, due to any claimed act or omission by the permittee, its servants, agents, employees, or contractors. This provision shall not inure to the benefit of any third party nor operate to enlarge any liability of the Department beyond that existing at common law or otherwise if this right to indemnity did not exist.

14. Upon a violation of any provision of the permit, or otherwise in its reasonable discretion, the Department may require additional action by the permittee, its successors and assigns, up to and including the removal of the encroachment and restoration of the right-of-way. In the event additional actions required by the Department under the permit are not undertaken as ordered and within a reasonable time, the Department may in its discretion cause those or other additional corrective actions to be undertaken and the Department shall recover the reasonable costs of those corrective actions from the permittee, its successors and assigns.

15. Permittee, its successors and assigns, shall use the encroachment premises in compliance with all requirements of federal law and regulation, including those imposed pursuant to Title VI of the Civil Right Act of 1964 (42 U.S.C. § 2000d et seq.) and the related regulations of the U.S. Department of Transportation in Title 49 C.F.R. Part 21, all as amended.

16. Permittee, its successors and assigns, agree that if the Department determines it is necessary for the facilities or other encroachment authorized by the permit to be removed, relocated or reconstructed in connection with the reconstruction, relocation or improvement of a highway, the Department may revoke permission for the encroachment to remain under the permit and may order its removal, relocation or reconstruction by the permittee, its successors and assigns, at the expense of the permittee, except where the Department is required by law to pay any or all of those costs.

APPROVED
AUGUST 27, 2024
KENTUCKY TRANSPORTATION CABINET
06-2024-00038

APPLICATION FOR ENCROACHMENT PERMIT

17. Permittee agrees that the authorized permit is personal to the permittee and shall remain in effect until such time as (a) the permittee's rights to the adjoining real property to have benefitted from the requested encroachment have been relinquished, (b) until all permit obligations have been assumed by appropriate successors and assigns, and (c) unless and until a written release from permit obligations has been granted by the Department. The permit and its requirements shall also bind the real property to have benefitted from the requested encroachment to the extent permitted by law. The permit and the related encroachment become the responsibility of the successors and assigns of the permittee and the successors and assigns of each property owner benefitting from the encroachment, or the encroachment may not otherwise permissibly continue to be maintained on the right-of-way. (Does not apply to utility encroachments serving the general public.)

18. If work authorized by the permit is within a highway construction project in the construction phase, it shall be the responsibility of the permittee to make personal contact with the Department's Engineer on the project in order to coordinate all permitted work with the Department's prime contractor on the project.

19. This permit is not intended to, nor shall it, affect, alter or alleviate any requirement imposed upon the permittee, its successors and assigns, by any other agency.

20. Permittee, its successors and assigns, agree to contain and maintain all dirt, mud, and other debris emanating from the encroachment away from the surrounding right-of-way and the travel way of the highway hereafter and at all times that its obligations under the permit remain in effect.

21. 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 the 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 Clerk to determine what utility companies have facilities in the area.

22. The undersigned Utility acknowledges ownership and control of the facilities proposed to be installed, modified, or extended by the Applicant/Permittee and agrees to be bound by the requirements and terms of this application and all related documents making up the approved permit, by the Department's Permits Guidance Manual, and by all applicable regulations and statutes in effect on the date of issuance of the permit. This information and application is certified correct to the best knowledge and belief of the undersigned Utility.

NORTHERN KENTUCKY WATER DISTRICT
UTILITY

Steve Broering	Engineering Technician
NAME (Utility Representative)	TITLE (Utility Representative)
Steve Broering	7-15-2024
SIGNATURE (Utility Representative)	DATE

APPROVED
AUG 27, 2024
KENTUCKY TRANSPORTATION CABINET
06-2024-00338

Kentucky 811 Know what's below. Call before you dig.

To Submit a Locate Request
24 Hours a Day, Seven Days a Week:
Call 811 or 800-752-6007

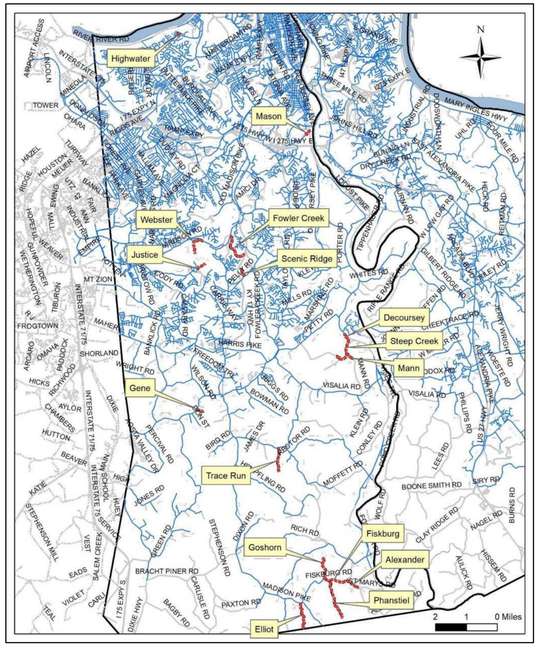
NORTHERN KENTUCKY WATER DISTRICT
SUB-DISTRICT 'O'
WATER MAIN EXTENSION
KENTON COUNTY, KENTUCKY
231591

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NORTHERN KENTUCKY WATER DISTRICT OFFICIALS

PRESIDENT / CEO
LINDSEY RECHTIN, CPA

COMMISSIONERS
FRED A. MACKE, JR. (Chair)
JODY R. LANGE (Vice-Chair)
DOUGLAS C. WAGNER (Secretary)
NICHOLAS E. WINNIKE (Treasurer)
GARY E. HOLLAND (Commissioner)
JOSEPH J. KOESTER (Commissioner)



VICINITY MAP

NORTHERN KENTUCKY WATER DISTRICT SPECIFICATIONS

THE LATEST STANDARD SPECIFICATIONS AND DRAWINGS OF THE NORTHERN KENTUCKY WATER DISTRICT FOR THE INSTALLATION OF WATER MAIN AND METER PITS SHALL GOVERN ALL WATER MAIN CONSTRUCTION ITEMS ON THIS PROJECT.

KENTUCKY TRANSPORTATION CABINET SPECIFICATIONS

THE LATEST STANDARD SPECIFICATIONS OF THE KENTUCKY TRANSPORTATION CABINET, INCLUDING CHANGES AND SUPPLEMENTAL SPECIFICATIONS THERETO AND KENTON COUNTY SUBDIVISION REGULATIONS SHALL GOVERN THIS IMPROVEMENT.

SOURCE OF OUNDARY AND TOPOGRAPHIC INFORMATION

THE TOPOGRAPHIC INFORMATION SHOWN ON THESE PLANS IS BASED UPON A SURVEY BY CT CONSULTANTS, INC.
THE BOUNDARY INFORMATION SHOWN ON THESE PLANS IS BASED ON PLANNING AND DEVELOPMENT SERVICES (P.D.S.) G.I.S. MAPPING.

2 Business Days Before You Dig
Kentucky 811
Always Call 811
or 1-800-752-6007
Before you Dig
www.kentucky811.org

JAMES M. SHUMATE *P.E. #18156*

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ISSUE DATE: MAY 2024
SCALE: AS SHOWN
DESIGNED BY: JCOR
DRAWN BY: JCOR
CHECKED BY: JSHU

NORTHERN KENTUCKY WATER DISTRICT
SUBDISTRICT 'O'
-KENTON COUNTY -

TITLE SHEET

PROJECT NO.
231591
DISCIPLINE
CIVIL
SHEET NAME
TTL
SHEET 1 OF 48

APPROVED FOR CONSTRUCTION
AUGUST 31, 2024
TRANSPORTATION CABINET
KENTUCKY TRANSPORTATION CABINET

H:\2023\231591\DWG\SHEETS\C_231591 00_TITLE SHEET.DWG - TITLE - 5/28/2024 10:23:19 AM - JAMES CORNELL

GENERAL NOTES

1. ALL CONSTRUCTION SHALL CONFORM TO THESE PLANS AND SPECIFICATIONS, THE LATEST EDITION OF THE NORTHERN KENTUCKY WATER DISTRICT STANDARD SPECIFICATIONS AND DRAWINGS AND THE KENTON COUNTY SUBDIVISION REGULATIONS AND THE KENTUCKY DEPARTMENT OF HIGHWAYS STANDARD SPECIFICATIONS FOR ROAD AND BRIDGE CONSTRUCTION.

2. ALL DISTURBED AREAS ARE TO BE RESTORED (SEEDED AND MULCHED) BY THE CONTRACTOR AND SHALL PROCEED WITH JOB PROGRESSION. THE CONTRACTOR SHALL ALSO BE RESPONSIBLE FOR REMOVING ANY EXCESS MATERIALS AT THE SITE AND MAINTAINING ALL SEEDED AND MULCHED AREAS UNTIL PROJECT COMPLETION AND FINAL INSPECTION PER KDOT SPEC. 212. A RESIDENTIAL YARD SHALL BE RESTORED WITHIN TWENTY-ONE (21) DAYS AFTER CONSTRUCTION.

3. ALL APPLICABLE RECOMMENDATIONS IN KENTUCKY'S BEST MANAGEMENT PRACTICES MANUAL SHALL BE FOLLOWED BY THE CONTRACTOR, INCLUDING SEEDING OF DISTURBED GROUND.

4. RIGHT-OF-WAY AND PROPERTY LINES SHOWN ARE PLOTTED FROM PLANNING AND DEVELOPMENT SERVICES (PDS) G.I.S. MAPPING AND ARE APPROXIMATE AND NOT THE RESULT OF A FIELD BOUNDARY SURVEY.

5. THE CONTRACTOR SHALL LIMIT THEIR WORK AREA TO THE EASEMENTS AND RIGHTS-OF-WAY SHOWN ON THESE PLANS UNLESS WRITTEN PERMISSION IS GIVEN BY THE PROPERTY OWNER AND APPROVED BY FORT N.K.W.D.

6. ALL OSHA, STATE AND LOCAL SAFETY REGULATIONS SHALL BE FOLLOWED DURING CONSTRUCTION.

7. NO CONSTRUCTION SHALL COMMENCE UNTIL ALL STATE, COUNTY AND LOCAL PERMITS HAVE BEEN ISSUED AS REQUIRED

8. THE CONTRACTOR SHALL COORDINATE ALL WORK WITHIN THE PUBLIC RIGHT OF WAY WITH THE KENTUCKY TRANSPORTATION CABINET AND KENTON COUNTY AND ANY LOCAL MUNICIPALITY. LOCAL TRAFFIC MUST BE MAINTAINED AT ALL TIMES DURING CONSTRUCTION UNLESS OTHERWISE NOTED IN THESE PLANS.

9. ADDITIONAL BMP'S AND EROSION AND SEDIMENT CONTROL MEASURES MAY BE REQUIRED AS DEEMED NECESSARY. ALL COST FOR ABOVE SHALL BE INCLUDED IN LUMP SUM BID FOR EROSION CONTROL AND WATER POLLUTION CONTROL.

10. ALL CONSTRUCTION WORK SHALL BE IN CONFORMANCE WITH THE RECOMMENDATIONS CONTAINED IN THE GEOTECHNICAL INVESTIGATION REPORT PREPARED BY G.A.I. CONSULTANTS DATED FEBRUARY 2024.

GENERAL TRENCH EXCAVATION NOTES

1. CONTRACTOR IS TO PROVIDE CONSTANT STABLE SUPPORT FOR THE WATER MAIN TRENCH EXCAVATION (ie SHEETING, SHORING, ETC.) TO PROTECT ALL ADJACENT EXISTING UTILITIES, STORM SEWER PIPE AND STRUCTURES AND THE EXISTING ROADWAY FROM ANY MOVEMENT. (NO ADDITIONAL PAYMENT WILL BE MADE FOR THIS WORK. ANY COSTS ASSOCIATED WITH TRENCH SUPPORT SHALL BE INCLUDED IN THE UNIT BID PRICE FOR THE ASSOCIATED WATER MAIN.

   TRENCH SUPPORT FAILURE RESULTING IN ADVERSE IMPACT TO EXISTING UTILITIES SHALL BE REPAIRED IMMEDIATELY AT THE CONTRACTOR'S EXPENSE.

2. TRENCH EXCAVATION AND OPEN, UNBACKFILLED LENGTH OF WATER MAIN TRENCH SHALL BE LIMITED AS NECESSARY ALONG THE ROADWAY IN ORDER TO PREVENT MOVEMENT OF, OR DAMAGE TO THE SURROUNDING GROUND SURFACE, NEARBY STRUCTURES/INFRASTRUCTURE AND THE EXISTING ROADWAY PAVEMENT.

   TRENCH EXCAVATION SHALL ALSO BE LIMITED TO THE CONTRACTOR'S ABILITY TO PROVIDE TRENCH BOXES FOR SUPPORT. UNDER NO CIRCUMSTANCES SHALL TRENCH EXCAVATION EXCEED LENGTH OF SUPPORT AVAILABLE.

UTILITY NOTES

1. THIS PLAN SHOWS THE APPROXIMATE LOCATION OF UNDERGROUND UTILITIES (GAS, WATER, STORM SEWER, SANITARY SEWER, TELEPHONE, ELECTRIC, ETC.). THE PREPARER DOES NOT GUARANTEE THEIR ACCURACY OR CORRECTNESS. THE INFORMATION PROVIDED SHALL BE FIELD VERIFIED PRIOR TO CONSTRUCTION. THE CONTRACTOR SHALL BE RESPONSIBLE FOR MAINTAINING THE UTILITY AS WELL AS THE SERVICE LATERALS AT ALL TIMES DURING CONSTRUCTION. THE CONTRACTOR SHALL PRACTICE CARE DURING THE GRADING AND TRENCH EXCAVATION AND SHALL BE RESPONSIBLE FOR REPLACING ANY SERVICES THAT ARE DAMAGED DURING CONSTRUCTION AT THEIR EXPENSE.

2. PRIOR TO ANY EXCAVATION OVER AN EXISTING UTILITY LINE OR SERVICE, CONTRACTOR SHALL HAND EXCAVATE TO EXPOSE THE UTILITY AND DETERMINE LOCATION AND DEPTH. NOTIFY ENGINEER IMMEDIATELY OF ANY CONFLICTS.

3. TOPS OF EXISTING AND PROPOSED CASTING ELEVATIONS ARE SUBJECT TO FINAL ADJUSTMENTS AS APPROVED BY THE ENGINEER AND REQUIREMENTS OF UTILITY OWNER. THIS WORK WILL BE INCIDENTAL TO THE CONTRACT.

4. FORTY-EIGHT (48) HOURS BEFORE EXCAVATION IS TO COMMENCE, THE CONTRACTOR SHALL NOTIFY THE FOLLOWING AGENCIES: THE KENTUCKY UTILITY PROTECTION SERVICE AND ALL OTHER UTILITIES THAT MAY HAVE UNDERGROUND UTILITIES INVOLVING THIS PROJECT AND ARE NON-MEMBERS OF KENTUCKY UNDERGROUND PROTECTION.

STORM & SANITARY NOTES

1. ALL STORM AND SANITARY ITEMS SHALL BE IN ACCORDANCE WITH THE LATEST SPECIFICATIONS AND DETAILS FROM SD1. METAL PIPE MATERIALS SHALL NOT BE USED UNLESS OTHERWISE SPECIFIED ON THESE PLANS.

2. CONTRACTOR SHALL BE REQUIRED TO MAINTAIN STORM AND SANITARY SEWER FLOW THROUGHOUT THE PROJECT, FOR THE DURATION OF CONSTRUCTION. ALL COST FOR THE ABOVE SHALL BE INCIDENTAL TO THE CONTRACT.

3. IF REQUIRED, CONTRACTOR SHALL BE RESPONSIBLE FOR CONTACTING AND SCHEDULING STORM AND SANITARY SEWER INSPECTIONS AS SET OUT IN THE PRECONSTRUCTION MEETING.

4. CONNECTIONS INTO EXISTING OR PROPOSED STORM OR SANITARY SEWER STRUCTURES OR PIPES SHALL BE COMPLETED BY A CERTIFIED TAPPER BY SD1.

WATER NOTES

1. ALL WORK RELATING TO WATER MAINS OR WATER SERVICE LINES SHALL BE COMPLETED IN ACCORDANCE WITH THE RULES AND REGULATIONS OF THE NORTHERN KENTUCKY WATER DISTRICT (NKWD).

2. CONTRACTOR MAY NOT USE WATER FROM FIRE HYDRANTS WITHOUT PRIOR PERMISSION FROM NKWD

GAS NOTES

1. ALL WORK RELATING TO GAS MAINS OR GAS SERVICE LINES SHALL BE COMPLETED IN ACCORDANCE WITH THE RULES AND REGULATIONS OF THE DUKE ENERGY

ELECTRIC NOTES

1. ALL WORK RELATING TO ELECTRIC LINES SHALL BE COMPLETED IN ACCORDANCE WITH THE RULES AND REGULATIONS OF THE DUKE ENERGY

WATER DISTRICT GENERAL NOTES

1. THE EXISTING WATER MAIN ELEVATION AND LOCATION AT THE CONNECTION POINT WITH THE PROPOSED MAIN WAS ASSUMED AND HAS NOT BEEN FIELD VERIFIED. PRIOR TO COMMENCEMENT OF ANY WATER MAIN WORK, THE CONTRACTOR SHALL DIG A TEST HOLE AT THE CONNECTION POINT TO LOCATE EXISTING WATER MAIN AS TO LOCATION AND ELEVATION. THE EXISTING WATER MAIN LOCATION MAY REQUIRE SOME FIELD ADJUSTMENT TO THE PROPOSED WATER MAIN INCLUDING ADJUSTING THE DEPTH OF THE PROPOSED WATER MAIN. COST OF DOING THE ABOVE SHALL BE INCIDENTAL TO THE PERTINENT WATER MAIN ITEM.

2. COST OF TRIMMING OR CLEARING ANY TREES, BUSHES, ETC. SHALL BE INCIDENTAL TO THE OVERALL CONTRACT PRICE AND SHALL BE APPROVED BY N.K.W.D. AND THE PROPERTY OWNER ALONG WITH COUNTY OR STATE WHEN REQUIRED.

3. THE UTILITY INFORMATION SHOWN ON THE PLANS IS BASED ON INFORMATION RECEIVED FROM OTHERS AND HAS NOT BEEN VERIFIED BY THE ENGINEER OR OWNER. IT SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR TO VERIFY THE LOCATION OF THE UTILITIES AND TO COORDINATE ANY IMPACT CAUSED BY THE PROPOSED WORK WITH ALL UTILITY OWNERS AND/OR THEIR CONTRACTORS. THE CONTRACTOR WILL BE REQUIRED TO DIG TEST HOLES AT ALL UTILITY CROSSINGS TO LOCATE THE UTILITY AS TO BOTH LOCATION AND ELEVATION AND WILL BE REQUIRED TO REALIGN AND ADJUST THE ELEVATION OF THE PROPOSED WATER MAIN TO AVOID THE UTILITY. COST OF ALL THE ABOVE SHALL BE INCIDENTAL TO THE OVERALL CONTRACT PRICE.

4. UNLESS SPECIFICALLY INSTRUCTED OTHERWISE, RETURN ALL REMOVED WATER EQUIPMENT INCLUDING, FIRE HYDRANTS, VALVES, AND WATER METERS TO NORTHERN KENTUCKY WATER DISTRICT (N.K.W.D).

5. WATERLINES CROSSING UNDER OR OVER SEWER LINES (DEFINED AS ANY SANITARY/COMBINED SEWER, SEPTIC TANK OR SUBSOIL TREATMENT SYSTEM) MUST MAINTAIN A MINIMUM VERTICAL CLEARANCE OF 18" AND ONE FULL LENGTH OF PIPE SHALL BE LOCATED SO BOTH JOINTS ARE AS FAR FROM THE SEWER AS POSSIBLE. SPECIAL STRUCTURAL SUPPORT FOR THE WATER AND SEWER PIPES MAY BE REQUIRED.

6. CONTRACTOR IS RESPONSIBLE FOR KEEPING FIELD NOTES THAT PROVIDE SUFFICIENT DATA FOR PREPARING "RECORD DRAWINGS" UPON COMPLETION OF CONSTRUCTION.

7. ALL WATER MAIN CONSTRUCTION SHALL CONFORM TO THE NORTHERN KENTUCKY WATER DISTRICT SPECIFICATIONS. CONTRACTOR IS RESPONSIBLE FOR OBTAINING A CURRENT COPY OF THE NORTHERN KENTUCKY WATER DISTRICT'S STANDARD DRAWINGS.

8. ALL MATERIAL FOR THE PROP. WATER MAIN INSTALLATION INCLUDING ALL FITTINGS, BLOCKING, ETC., SHALL BE INCLUDED IN THE CONTRACTOR'S UNIT PRICE FOR WATER MAIN.

9. COST OF ALL TRENCHING, PIPE, PIPE BEDDING, BACKFILL, YARD RESTORATION AND TEMPORARY PAVEMENT, DRIVEWAY AND SIDEWALK RESTORATION SHALL BE PART OF THE COST OF INSTALLING THE WATER MAIN. PERMANENT DRIVEWAY RESTORATION, SIDEWALK RESTORATION, CURB RESTORATION AND STREET RESTORATION WILL BE SEPARATE PAY ITEMS AND INCLUDE INCIDENTALS SUCH AS MAIL BOX, STREET SIGN, AND FENCE REMOVAL AND REPLACEMENT.

10. THE PROPOSED WATER MAIN SHALL BE CLASS 50 DUCTILE IRON PIPE OR D.R. 18 C900 PVC AS SHOWN ON THE PLANS. WITHIN STATE ROUTE R/W, PIPE MATERIAL SHALL BE CLASS 52 DUCTILE IRON.

11. PROPOSED WATER MAIN SHALL BE THOROUGHLY CLEANED, FLUSHED, AND DISINFECTED, AS PER NORTHERN KENTUCKY WATER DISTRICT'S SPECIFICATIONS.

12. PRESSURE TESTING SHALL BE DONE AS PER NORTHERN KENTUCKY WATER DISTRICT'S SPECIFICATIONS.

13. FOR THRUST BLOCKING REFER TO THE NORTHERN KENTUCKY WATER DISTRICT'S STANDARD DRAWING NUMBERS 104 AND 104A.

14. THE PROPOSED WATER MAIN SHALL HAVE A HORIZONTAL SEPARATION OF AT LEAST 3'-0" (MEASURED FROM OUTSIDE OF PIPE TO OUTSIDE OF PIPE) FROM ANY GAS MAIN.

15. A 10' MINIMUM LATERAL SEPARATION BETWEEN WATER MAINS AND SEWERS (DEFINED AS ANY SANITARY/COMBINED SEWER, SEPTIC TANK OR SUBSOIL TREATMENT SYSTEM) AND SEWER MANHOLES, MEASURED FROM THE OUTSIDE DIAMETER TO OUTSIDE, MUST BE MAINTAINED UNLESS A VARIANCE IS GRANTED FROM THE D.O.W.

16. ALL NEW WATER SERVICES SHALL BE 3/4" (OR MATCH EXISTING, AS INDICATED ON THE PLANS) TYPE K COPPER WITH 5/8" OR 2" WATER METERS (UNLESS OTHERWISE NOTED) MATERIAL PROVIDED BY THE NORTHERN KENTUCKY WATER DISTRICT. ALL RECONNECTED WATER SERVICES SHALL BE 3/4" OR 2" TYPE K COPPER.

17. THE CONTRACTOR SHALL COORDINATE ALL WORK WITHIN THE PUBLIC RIGHT-OF-WAY WITH KYTC, KENTON COUTY AND/OR ANY LOCAL MUNICIPALITY. TRAFFIC MUST BE MAINTAINED AT ALL TIMES DURING CONSTRUCTION. MAINTENANCE OF TRAFFIC SHALL CONFORM TO THE "MANUAL OF UNIFORM TRAFFIC CONTROL DEVICES" REQUIREMENTS. NO ADDITIONAL PAYMENT WILL BE MADE FOR THIS WORK AND SHALL BE CONSIDERED INCIDENTAL TO THE CONTRACT.

18. **CONNECT SERVICE LINE (3/4" THRU 2"), INCLUDES THE LABOR, EQUIPMENT, EXCAVATION, BEDDING, BACKFILL, ASPHALT PAVEMENT , CONCRETE PAVEMENT, CONCRETE CURB, CONCRETE WALK AND YARD RESTORATION TO INSTALL THE SERVICE LINE AT THE LOCATIONS SHOWN ON THE PLANS OR AS DIRECTED, IN ACCORDANCE WITH THE SPECIFICATIONS AND STANDARD DRAWINGS, COMPLETE AND READY FOR USE. LEAD SERVICE LINES ENCOUNTERED BY THE EXCAVATION SHALL BE REPLACED FROM THE MAIN TO AND INCLUDING THE METER VAULT AND METER SETTING. ALL SERVICE LINE MATERIAL WILL BE SUPPLIED BY NKWD. PAID EACH (EA).**

19. THE CONTRACTOR SHALL COORDINATE WITH THE NORTHERN KENTUCKY WATER DISTRICT FOR FIELD INSPECTIONS.

20. FORTY-EIGHT (48) HOURS BEFORE EXCAVATION IS TO COMMENCE, THE CONTRACTOR SHALL NOTIFY THE FOLLOWING AGENCIES: THE KENTUCKY UTILITY PROTECTION SERVICE AND ALL OTHER UTILITIES THAT MAY HAVE UNDERGROUND UTILITIES INVOLVING THIS PROJECT AND ARE NON-MEMBERS OF KENTUCKY UNDERGROUND PROTECTION.

21. NO CONSTRUCTION SHALL COMMENCE UNTIL ALL KYTC, COUNTY AND/OR LOCAL PERMITS HAVE BEEN ISSUED AS REQUIRED.

22. CONTRACTOR IS RESPONSIBLE FOR DEWATERING TRENCH DURING INSTALLATION OF THE WATER MAIN.

23. THE COST OF TESTING THE MAIN, TEMPORARY FLUSHING DEVICES, TEMPORARY PLUG AND BLOCKS, AND ABANDONING THE EXISTING MAIN SHALL BE INCIDENTAL TO THE PROJECT.

24. ALL PAVEMENT SHALL CONFORM TO THE LATEST EDITION OF THE KENTUCKY DEPARTMENT OF HIGHWAYS STANDARD SPECIFICATIONS FOR ROAD AND BRIDGE CONSTRUCTION AND KENTON COUNTY SUBDIVISION REGULATIONS.

MAINTENANCE OF TRAFFIC NOTES

1. ALL MAINTENANCE OF TRAFFIC PROCEDURES SHALL MEET THE REQUIREMENT OF THE MANUAL OF UNIFORM TRAFFIC CONTROL DEVICES AND SECTION 112 OF KTC STANDARD SPECIFICATIONS. THE CONTRACTOR SHALL MAINTAIN ACCESS TO LOCAL TRAFFIC (ACCESS TO RESIDENCES WITHIN CONSTRUCTION LIMITS) AT ALL TIMES. THE CONTRACTOR SHALL PROVIDE SUFFICIENT SIGN, WARNING LIGHTS, BARRICADES, OR OTHER NECESSARY DEVICES MAKE THE SITE SAFE TO THE TRAVELING PUBLIC.

2. IT SHALL BE THE CONTRACTOR'S RESPONSIBILITY TO SUBMIT TO THE ENGINEER AND THE OWNER A TRAFFIC CONTROL PLAN FOR THIS PROJECT.

3. PRIOR TO ANY CONSTRUCTION, THE CONTRACTOR SHALL NOTIFY THE APPROPRIATE STATE, COUNTY AND/OR LOCAL POLICE DEPARTMENTS. AT ALL TIMES, EMERGENCY VEHICLES SHALL BE GIVEN ACCESS.

4. RESIDENTS OF THE PROJECT AREA SHALL BE ALLOWED ACCESS TO THEIR PROPERTY AT ALL TIMES.

5. EACH DRIVEWAY SHALL BE ACCESSIBLE WHENEVER POSSIBLE. WHEN PORTLAND CEMENT CONCRETE CONSTRUCTION AFFECTS A DRIVEWAY, THE CONTRACTOR SHALL NOTIFY THE AFFECTED OWNERS 24 HOURS IN ADVANCE AND ADVISE THEM TO FIND ALTERNATIVE PARKING FOR A PERIOD OF AT LEAST 10 CALENDAR DAYS AFTER THE POUR. ALTERNATIVE PARKING SHALL INCLUDE "ON STREET" PARKING WITH ACCESS TO THE PROPERTY. TEMPORARY SIDEWALKS, ETC. WILL BE NECESSARY TO PREVENT PERSONS FROM WALKING IN MUD IN ORDER TO ENTER THEIR PROPERTY. TEMPORARY BRIDGES, RAILINGS ETC. WILL BECOME NECESSARY IN ORDER TO CROSS FORMED CURB LINES, EXCAVATED AREAS BEHIND CURB LINES AND WALKWAYS, ETC.

EROSION CONTROL LEGEND

- IP — INLET PROTECTION (SEE DETAIL)
- SF — SILT FENCE (SEE DETAIL)

HATCH LEGEND

- 1-1/2" ASPHALT PAVEMENT MILL AND OVERLAY AREA
- TRENCH RESTORATION - ASPHALT PAVEMENT - SEE DETAIL SHEET
- TRENCH RESTORATION - CONCRETE PAVEMENT - SEE DETAIL SHEET
- TRENCH RESTORATION - 8" AGGREGATE PAVEMENT
- CONTROL DENSITY FILL - PAV'T TRENCH
- CONCRETE DRIVEWAY REPLACEMENT - SEE DETAIL SHEET
- CONCRETE WALK REPLACEMENT - SEE DETAIL SHEET
- ASPHALT DRIVEWAY REPLACEMENT - SEE DETAIL SHEET
- GRAVEL DRIVEWAY REPLACEMENT - SEE DETAIL SHEET
- CHANNEL LINING, CLASS II - SEE DETAIL SHEET

SYMBOL LEGEND

- EXISTING GAS LINE
- EXISTING GAS SERVICE
- EXISTING ELECTRIC (UNDERGROUND / OVERHEAD)
- EXISTING CABLE (UNDERGROUND / OVERHEAD)
- EXISTING TELEPHONE (UNDERGROUND / OVERHEAD)
- EXISTING WATER MAIN
- EXISTING WATER SERVICE
- EXISTING STORM SEWER
- EXISTING ROOF DRAIN
- EXISTING SANITARY SEWER
- EXISTING SANITARY FORCE MAIN
- EXISTING FIBER OPTICS
- EXISTING FENCE
- EXISTING CONTOURS (MAJOR)
- EXISTING CONTOURS (MINOR)
- EXISTING RIGHT OF WAY
- EXISTING PROPERTY LINE
- EXISTING EASEMENT
- EXISTING GUARDRAIL
- EXISTING TREE LINE
- EXISTING ROCK WALL

- PROPOSED GAS LINE
- PROPOSED GAS SERVICE
- EXISTING ELECTRIC (UNDERGROUND / OVERHEAD)
- PROPOSED CABLE (UNDERGROUND / OVERHEAD)
- PROPOSED TELEPHONE (UNDERGROUND / OVERHEAD)
- PROPOSED WATER MAIN
- PROPOSED WATER SERVICE
- PROPOSED STORM SEWER
- PROPOSED UNDERDRAIN
- PROPOSED UNDERDRAIN / DOWNSPOUT COLLECTOR COMBO
- PROPOSED SANITARY SEWER
- PROPOSED SANITARY FORCE MAIN
- PROPOSED FIBER OPTICS
- PROPOSED FENCE
- PROPOSED CONTOURS (MAJOR)
- PROPOSED CONTOURS (MINOR)
- PROPOSED RIGHT OF WAY
- PROPOSED PROPERTY LINE
- PROPOSED EASEMENT
- PROPOSED GUARDRAIL
- PROPOSED TREE LINE / CLEARING LIMITS
- PROPOSED DISTURBED LIMITS

- EXISTING FLAGPOLE
- EXISTING MAILBOX
- EXISTING SIGN
- EXISTING CABLE PEDESTAL
- EXISTING ELECTRIC PEDESTAL
- EXISTING PULL BOX
- EXISTING GROUND LIGHT
- EXISTING LIGHT POLE
- EXISTING ELECTRIC METER
- EXISTING ELECTRIC MANHOLE
- EXISTING GAS METER
- EXISTING GAS VALVE
- EXISTING GAS BOX
- EXISTING UTILITY POLE
- EXISTING GUY WIRE / ANCHOR
- EXISTING SANITARY MANHOLE
- EXISTING SANITARY CLEANOUT
- EXISTING STORM MANHOLE
- EXISTING SINGLE / DOUBLE CURB INLET
- EXISTING CATCH BASIN
- EXISTING STORM CLEANOUT
- EXISTING TELEPHONE MANHOLE
- EXISTING TELEPHONE PEDESTAL
- EXISTING FIRE HYDRANT
- EXISTING WATER METER
- EXISTING WATER VALVE
- EXISTING BUSHES / TREES
- EXISTING SURVEY BENCHMARK
- TEST BORING LOCATION

- PROPOSED FLAGPOLE
- PROPOSED MAILBOX
- PROPOSED SIGN
- PROPOSED CABLE PEDESTAL
- PROPOSED ELECTRIC PEDESTAL
- PROPOSED PULL BOX
- PROPOSED GROUND LIGHT
- PROPOSED LIGHT POLE
- PROPOSED ELECTRIC METER
- PROPOSED ELECTRIC MANHOLE
- PROPOSED GAS METER
- PROPOSED GAS VALVE
- PROPOSED GAS BOX
- PROPOSED UTILITY POLE
- PROPOSED GUY WIRE / ANCHOR
- PROPOSED SANITARY MANHOLE
- PROPOSED SANITARY CLEANOUT
- PROPOSED STORM MANHOLE
- PROPOSED SINGLE / DOUBLE CURB INLET
- PROPOSED CATCH BASIN
- PROPOSED STORM CLEANOUT
- PROPOSED TELEPHONE MANHOLE
- PROPOSED TELEPHONE PEDESTAL
- PROPOSED FIRE HYDRANT
- PROPOSED WATER METER
- PROPOSED WATER VALVE
- REMOVE EXISTING BUSH / TREE
- PROPOSED SLOPE DIRECTION

90% REVIEW

your trusted advisor — engineers architects planners consultants

NO	REVISION	DATE
.	.	.

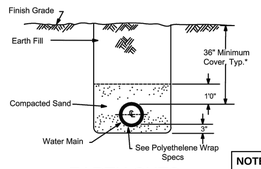
ISSUED FOR:	90% DESIGN
ISSUE DATE:	MAY 2024
SCALE:	AS SHOWN
DESIGNED BY:	JCOR
DRAWN BY:	JCOR
CHECKED BY:	JSHU

NORTHERN KENTUCKY WATER DISTRICT
SUBDISTRICT 'O'
-KENTON COUNTY -

GENERAL NOTES AND LEGEND

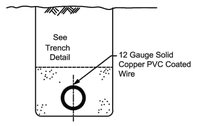
PROJECT NO.: 231591
DISCIPLINE: CIVIL
SHEET NAME: G-01
SHEET: 2 OF: 49

APPROVED FOR CONSTRUCTION
AUGUST 01, 2024
TRANSPORTATION CABINET
KENTUCKY DEPARTMENT OF HIGHWAYS



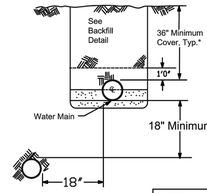
EARTH CUTS
TRENCH DETAIL

NOTE: 42" Minimum Cover, TYP. within State R/W



PVC PIPE

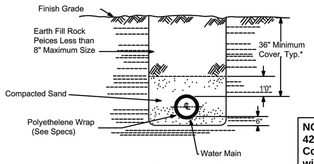
ALTERNATE TO BE USED ONLY ON APPROVAL BY THE DISTRICT



Water Main must be located a minimum of 10 feet lateral distance from anyexisting or future sewer lines or manholes, or as shown in the above alternate.

WATER MAIN PARALLELING
SEWER MAIN

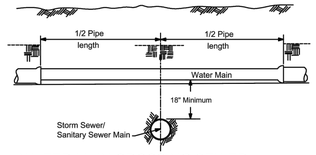
NOTE: 42" Minimum Cover, TYP. within State R/W



ROCK CUTS
& UNSTABLE SUBGRADE

TRENCH DETAIL

NOTE: 42" Minimum Cover, TYP. within State R/W



WATER MAIN CROSSING SEWER

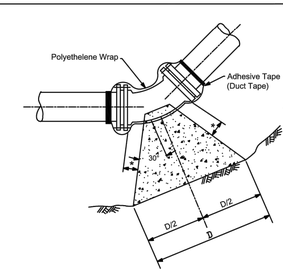
SUBDIVISION CONSTRUCTION

* Unless Otherwise Noted

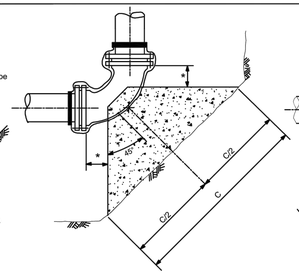
REVISION	BY	DATE
1 8" Min. Bed. Mat.	MPC	1/2/20

N. KY. WATER DISTRICT
TYPICAL PIPELINE TRENCH DETAIL

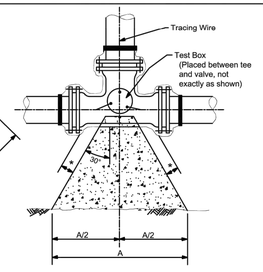
DRAWN BY: SAR
APPROVED: RH
DATE: 8/5/2014
STANDARD DRAWING NO: 103



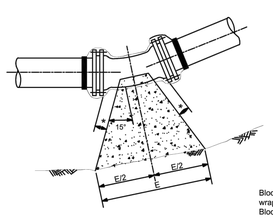
45° BEND



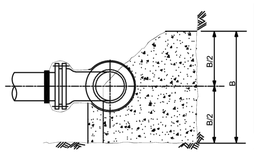
90° BEND



TEE (DEAD END OR FIRE HYDRANT SIMILAP



11 1/4° & 22 1/2° BEND



ELEVATION

Blocking shall be poured after blue polyethelene wrap is in place.
Blocking shall be inspected by the District prior to backfilling.

150 PSI/250 PSI

PIPE SIZE	A	B	C	D	E
6"	2'0"/2'6"	1'6"/1'6"	3'0"/3'6"	1'6"/2'0"	1'0"/1'0"
8"	2'6"/3'6"	2'0"/2'0"	3'6"/4'6"	2'0"/2'6"	1'0"/1'6"
10"	3'6"/4'0"	2'6"/2'6"	4'6"/5'6"	2'6"/3'0"	1'6"/1'6"
12"	4'0"/5'0"	3'0"/3'0"	5'6"/6'6"	3'0"/3'6"	1'6"/2'0"
16"	5'0"/6'0"	3'0"/4'0"	7'0"/8'6"	4'0"/4'6"	3'0"/3'0"
20"	6'0"/7'6"	5'0"/5'0"	7'0"/10'6"	4'0"/6'0"	3'0"/3'0"

* Distance to be 1/2" longer than entire length of the bolt used.

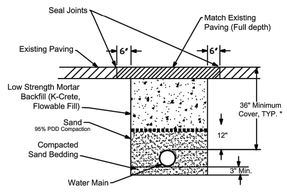
NOTES

1 DIP Fittings shall be per specifications.
2 Concrete to be 3500 psi.
3 All fittings to be Mechanical Joint.
4 Thrust blocks to be placed against undisturbed earth - use additional concrete as required for over excavation.
5 Blocking to be placed in a manner so that bolts can be removed without distrubing the block.

REVISION	BY	DATE
1 8" Min. Bed. Mat.	MPC	1/2/20

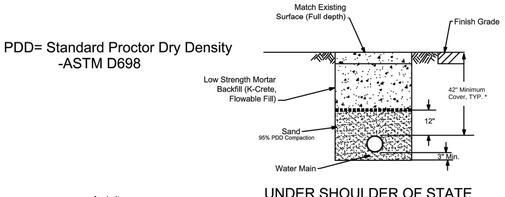
N. KY. WATER DISTRICT
CONCRETE THRUST BLOCK DETAIL

DRAWN BY: SAR
APPROVED: RH
DATE: 8/5/2014
STANDARD DRAWING NO: 104

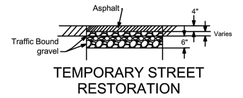


UNDER ASPHALT CONCRETE
PAVEMENT

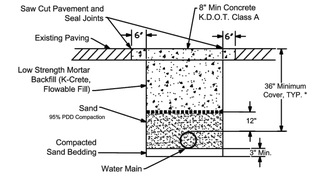
PDD= Standard Proctor Dry Density
-ASTM D698



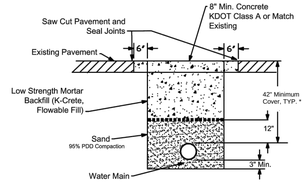
UNDER SHOULDER OF STATE
MAINTAINED STREET



TEMPORARY STREET
RESTORATION



UNDER CONCRETE PAVEMENT



UNDER STATE MAINTAINED STREET

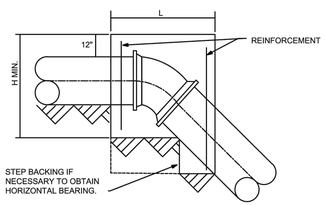
* 48" Maximum Cover

ALL CONSTRUCTION

REVISION	BY	DATE
1 All streets but state routes	SAH	1/9/2020

N. KY. WATER DISTRICT
TYPICAL PIPELINE TRENCH DETAIL

DRAWN BY: SAR
APPROVED: RH
DATE: 8/5/2014
STANDARD DRAWING NO: 103A



SECTION A-A

CONCRETE BACKING FOR VERTICAL BENDS

1. BACKING DESIGNED FOR 3000 POUNDS PER SQUARE FOOT SOIL BEARING AND 150 POUNDS PER SQUARE INCH INTERNAL PRESSURE.

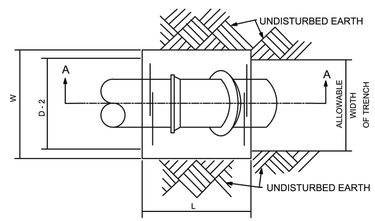
2. PROVIDE MINIMUM CONCRETE REINFORCEMENT OF 2 PAIR OF TWO 5" "U" BARS @ 12" C.

3. CENTER BACKING ON BEND.

BLOCKING FOR SIZES NOT SHOWN SHALL USE THE NEXT LARGER SIZE.

SIZE of PIPE	DEGREE OF BEND 11 1/4 L'	W"	H"	VOL.	22 1/2 L'	W"	H"	VOL.	45 L'	W"	H"	VOL.
4"	12	24	16	2.7	15	30	18	4.7	22	36	24	11.0
6"	12	43	18	5.4	16	48	34	15.1	30	55	24	22.9
8"	12	54	24	9.0	18	57	36	21.4	36	57	33	39.2
12"	20	63	36	26.3	37	62	37	49.2	48	62	51	88.0
16"	31	65	38	44.4	60	65	39	88.2	65	65	65	159.2
20"	45	70	40	73.0	56	70	60	136.4	72	76	78	247.5
24"	47	72	54	106.0	67	74	69	198.4	88	84	84	360.1

NOTE: VOLUMES GIVEN IN CUBIC FEET



PLAN

REVISION	BY	DATE
1 8" Min. Bed. Mat.	MPC	1/2/20

N. KY. WATER DISTRICT
CONCRETE THRUST BLOCKING FOR VERTICAL BENDS

DRAWN BY: SAR
APPROVED: RH
DATE: 8/5/2014
STANDARD DRAWING NO: 104A

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architects
planners

NO	REVISION	DATE
-	-	-

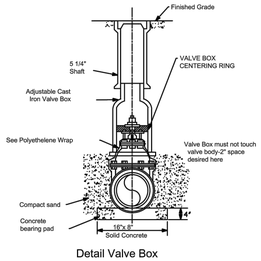
ISSUED FOR: 90% DESIGN
ISSUE DATE: MAY 2024
SCALE: AS SHOWN
DESIGNED BY: JCOR
DRAWN BY: JCOR
CHECKED BY: JSHU

NORTHERN KENTUCKY WATER DISTRICT
SUBDISTRICT 'O'
-KENTON COUNTY -

DETAILS

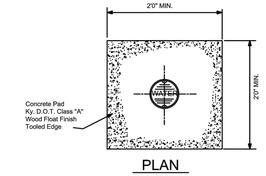
PROJECT NO.: 231591
DISCIPLINE: CIVIL
SHEET NAME: G-02
SHEET: 3 OF: 49

APPROVED
AUGUST 13, 2024
TRANSPORTATION CABINET
KENTUCKY

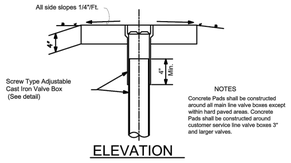


Detail Valve Box Installation

Note:Valve box shall not transmit shock or stress to the valve



PLAN



ELEVATION

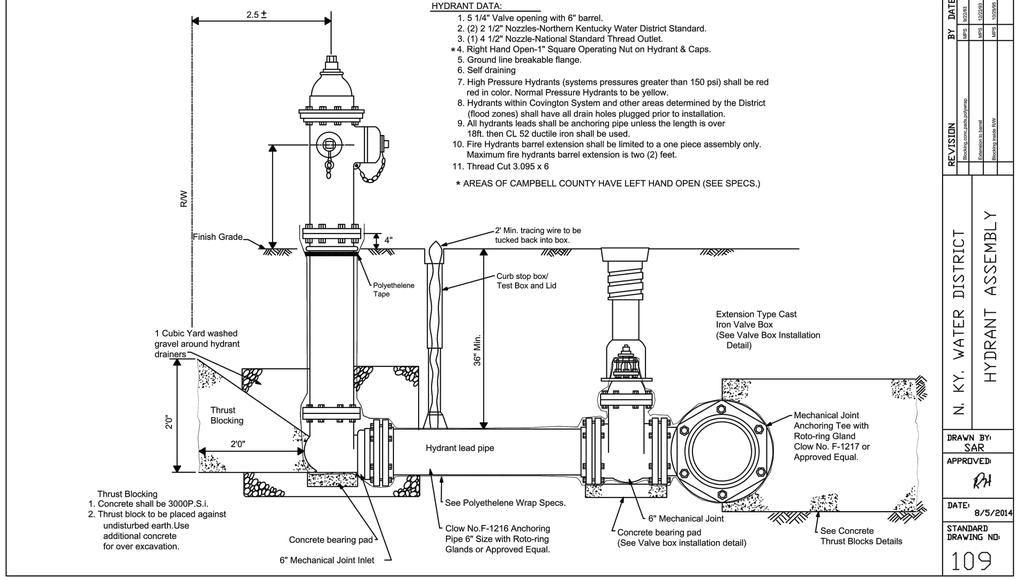
NOTES

Concrete Pads shall be constructed around all main line valve boxes except within hard paved areas. Concrete Pads shall be constructed around customer service line valve boxes 3" and larger valves.

REVISION	BY	DATE
1. 30" Concrete pad size 2. Valve Box Installation	MPS MPS	4/2003 4/2003

N. KY. WATER DISTRICT
VALVE BOX AND VALVE PAD DETAIL

DRAWN BY: SAR
APPROVED: RH
DATE: 8/5/2014
STANDARD DRAWING NO: 105



HYDRANT DATA:

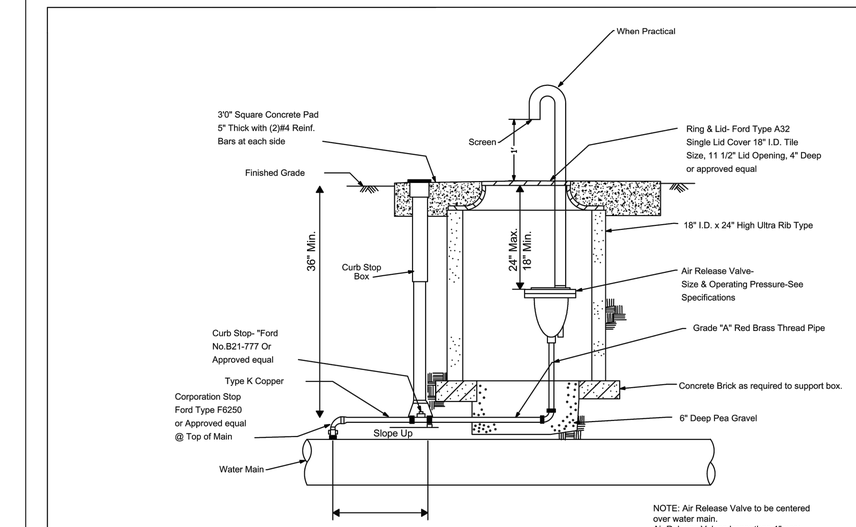
1. 5 1/4" Valve opening with 6" barrel.
2. (2) 2 1/2" Nozzles-Northern Kentucky Water District Standard.
3. (1) 4 1/2" Nozzle-National Standard Thread Outlet.
4. * Right Hand Open-1" Square Operating Nut on Hydrant & Caps.
5. Ground line breakable flange.
6. Self draining
7. High Pressure Hydrants (systems pressures greater than 150 psi) shall be red red in color. Normal Pressure Hydrants to be yellow.
8. Hydrants within Covington System and other areas determined by the District (flood zones) shall have all drain holes plugged prior to installation.
9. All hydrants leads shall be anchoring pipe unless the length is over 18ft. then CL 52 ductile iron shall be used.
10. Fire Hydrants barrel extension shall be limited to a one piece assembly only. Maximum fire hydrants barrel extension is two (2) feet.
11. Thread Cut 3.095 x 6

* AREAS OF CAMPBELL COUNTY HAVE LEFT HAND OPEN (SEE SPECS.)

REVISION	BY	DATE
Blocking note,valve,pressure	MPS	4/2003
Dimension is typical	MPS	12/2005
Blocking needs WM	MPS	12/2006

N. KY. WATER DISTRICT
HYDRANT ASSEMBLY

DRAWN BY: SAR
APPROVED: RH
DATE: 8/5/2014
STANDARD DRAWING NO: 109

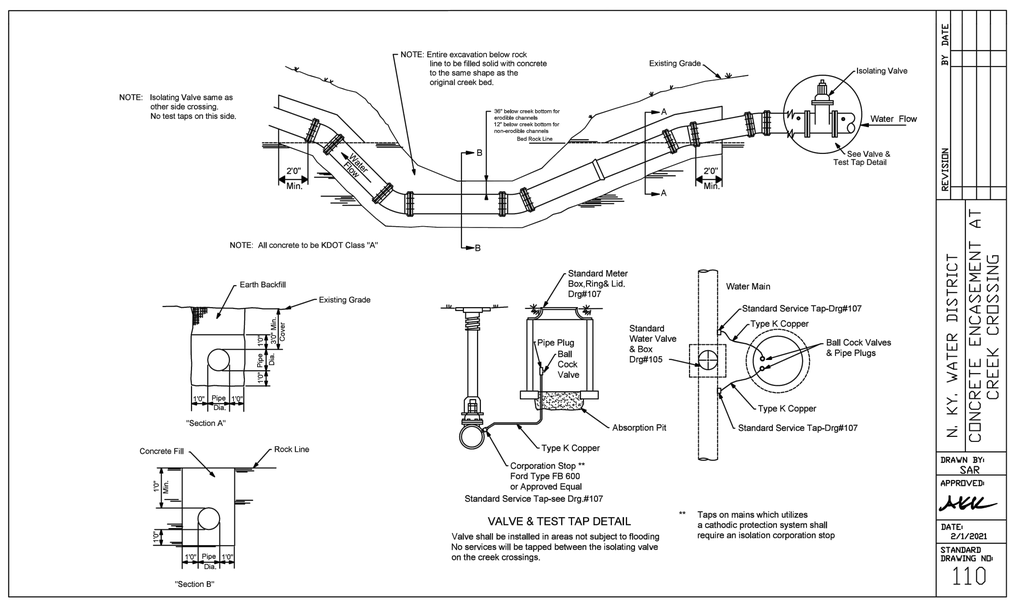


NOTE: Air Release Valve to be centered over water main.
Air Release Valves larger than 1" use:
vault size 24"x24"
lid Ford Type MC 24 &
Extension Ring Ext-2 or approved equal.

REVISION	BY	DATE

N. KY. WATER DISTRICT
N.KY WATER DISTRICT AIR RELEASE VALE

DRAWN BY: SAR
APPROVED: RH
DATE: 8/5/2014
STANDARD DRAWING NO: 106



VALVE & TEST TAP DETAIL

Valve shall be installed in areas not subject to flooding No services will be tapped between the isolating valve on the creek crossings.

** Taps on mains which utilizes a cathodic protection system shall require an isolation corporation stop

REVISION	BY	DATE

N. KY. WATER DISTRICT
CONCRETE ENCASEMENT AT CREEK CROSSING

DRAWN BY: SAR
APPROVED: MKK
DATE: 2/1/2021
STANDARD DRAWING NO: 110

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NO	REVISION	DATE
.	.	.

ISSUED FOR: 90% DESIGN
ISSUE DATE: MAY 2024
SCALE: AS SHOWN
DESIGNED BY: JCOR
DRAWN BY: JCOR
CHECKED BY: JSHU

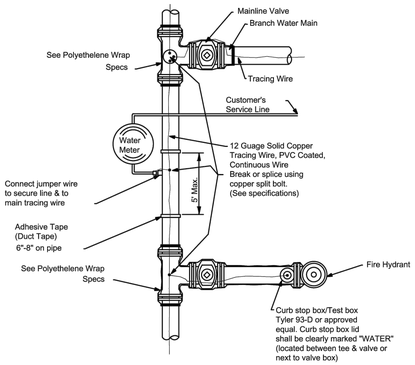
NORTHERN KENTUCKY WATER DISTRICT
SUBDISTRICT 'O'
-KENTON COUNTY -

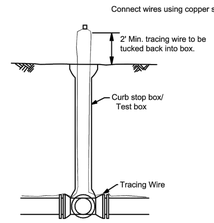
DETAILS

PROJECT NO. 231591
DISCIPLINE: CIVIL
SHEET NAME: G-03
SHEET: 4 OF 49

APPROVED FOR CONSTRUCTION
AUGUST 19, 2024
TRANSPORTATION CABINET
KENTUCKY

\\CTC.LOCAL\CT_DATA\PROJECTS\2023\231591\DWG\SHEETS\C_231591-00_DETAIL SHEET.DWG - NKWD DTLS (2) - 5/28/2024 2:43:27 PM - JAMES CORNELL





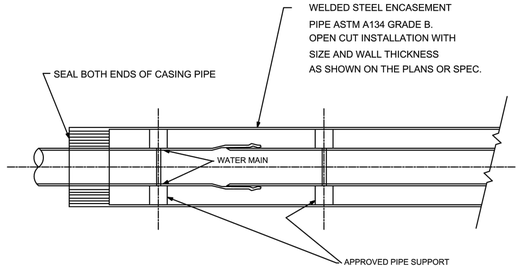
DUCTILE IRON AND PVC PIPE WITH DUCTILE IRON FITTINGS

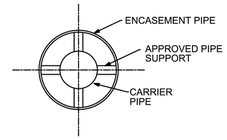
Note: Curb stop box/test box shall not be installed in paved areas.

REVISION	BY	DATE

N. KY. WATER DISTRICT
TRACING WIRE INSTALLATION DETAIL

DRAWN BY: SAR
APPROVED: DH
DATE: 8/5/2014
STANDARD DRAWING NO: 111





1. All carrier pipe placed in steel casing pipe shall be minimum class 50 ductile iron pipe and conform to the latest edition of AWWA C151.
2. Carrier pipe gaskets shall develop a wedging action between pairs of high-strength stainless steel elements spaced around the gasket (FIELD LOK , FASTGRIP, or approved equal gaskets).

NOTE: CASING PIPE JOINTS SHALL BE SEAM WELDED SO THAT CASING IS WATER TIGHT FROM END TO END.

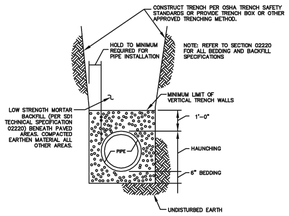
ENCASEMENT PIPE DETAIL

NO SCALE

REVISION	BY	DATE
1	Remove Detail #3	2/7/20

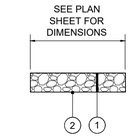
N. KY. WATER DISTRICT
ENCASEMENT PIPE DETAIL

DRAWN BY: SAR
APPROVED: DH
DATE: 8/5/2014
STANDARD DRAWING NO: 114



STORM TRENCH DETAIL

N.T.S.



ROCK CHANNEL PROTECTION

N.T.S.

1. ITEM 703 - 12" CHANNEL LINING, CLASS II
2. NON WOVEN GEOTEXTILE FILTER FABRIC

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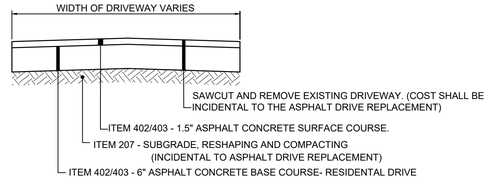
NO	REVISION	DATE
	.	

ISSUED FOR:	90% DESIGN
ISSUE DATE:	MAY 2024
SCALE:	AS SHOWN
DESIGNED BY:	JCOR
DRAWN BY:	JCOR
CHECKED BY:	JSHU

NORTHERN KENTUCKY WATER DISTRICT
SUBDISTRICT 'O'
-KENTON COUNTY -

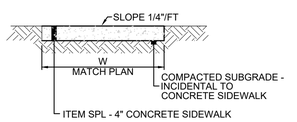
DETAILS

PROJECT NO.: 231591
DISCIPLINE: CIVIL
SHEET NAME: G-04
SHEET: 5 OF: 49



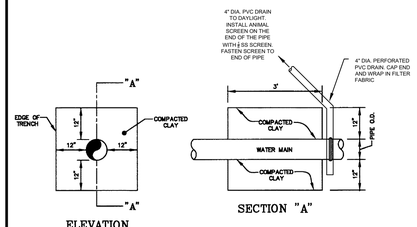
ASPHALT DRIVEWAY REPLACEMENT

N.T.S.



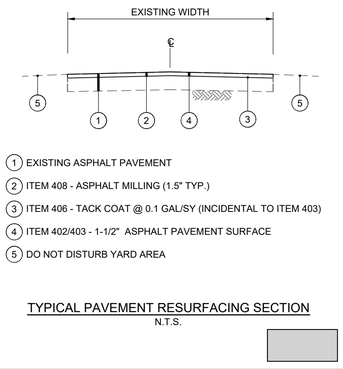
4" CONCRETE SIDEWALK REPLACEMENT DETAIL

(SAWCUTTING AND REMOVAL OF EXISTING CONCRETE SIDEWALK AND EXCAVATION TO PROPOSED SUBGRADE INCIDENTAL TO SIDEWALK REPLACEMENT)



CLAY BULKHEAD

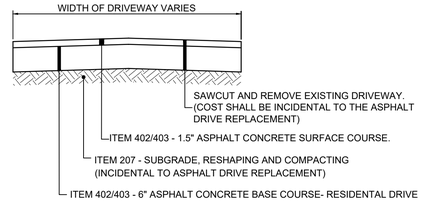
N.T.S.



1. EXISTING ASPHALT PAVEMENT
2. ITEM 408 - ASPHALT MILLING (1.5" TYP.)
3. ITEM 406 - TACK COAT @ 0.1 GAL/SY (INCIDENTAL TO ITEM 403)
4. ITEM 402/403 - 1-1/2" ASPHALT PAVEMENT SURFACE
5. DO NOT DISTURB YARD AREA

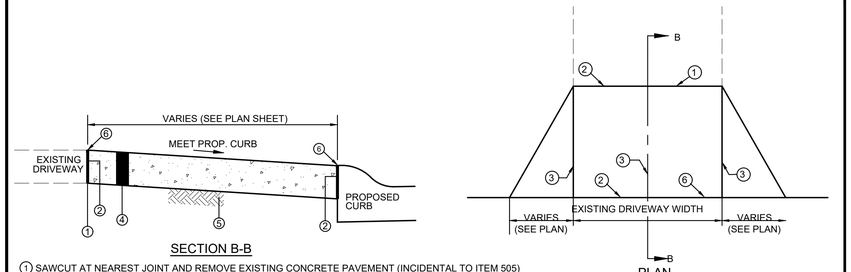
TYPICAL PAVEMENT RESURFACING SECTION

N.T.S.



GRAVEL DRIVEWAY REPLACEMENT

N.T.S.



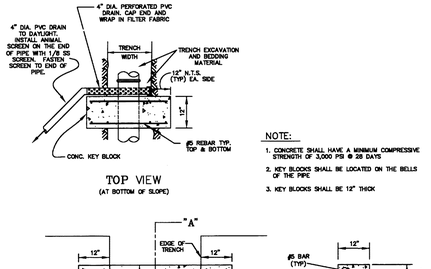
1. SAWCUT AT NEAREST JOINT AND REMOVE EXISTING CONCRETE PAVEMENT (INCIDENTAL TO ITEM 505)
2. 1" PREFORMED EXPANSION JOINT MATERIAL (FLEXIBLE FOAM-CERAMAR BY W.R. MEADOWS OR APPROVED EQUAL)
3. TOOLED JOINT
4. ITEM 505 - 6" CONCRETE DRIVEWAY/APRON (OR MATCH EXISTING WHICHEVER IS GREATER)
5. COMPACTED SUBGRADE (INCIDENTAL TO ITEM 505 - 6" CONCRETE DRIVEWAY/APRON)
6. SEAL JOINT WITH GRAY SELF LEVELING SEALANT (SIKA FLEX OR APPROVED EQUAL)

NOTE:

1. ANY YARD AREA DISTURBED BY THE CONSTRUCTION OF THE DRIVEWAY APRON SHALL BE RESTORED WITH TOPSOIL, SEED AND MULCH (INCIDENTAL TO CONCRETE DRIVEWAY APRON REPLACEMENT).
2. ALL EXCAVATION REQUIRED FOR THE PLACEMENT OF THE PROPOSED DRIVEWAY SHALL BE INCIDENTAL TO CONCRETE DRIVEWAY REPLACEMENT BID ITEM.

CONCRETE DRIVEWAY REPLACEMENT

N.T.S.

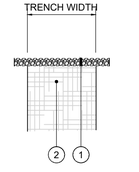


NOTE:

1. CONCRETE SHALL HAVE A MINIMUM COMPRESSIVE STRENGTH OF 3,000 PSI @ 28 DAYS
2. KEY BLOCKS SHALL BE LOCATED ON THE BELLS OF THE PIPE
3. KEY BLOCKS SHALL BE 12" THICK

CONCRETE KEY BLOCK

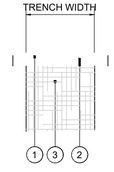
(IN BEDROOCK)
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AGGREGATE ROADWAY REPLACEMENT SECTION

N.T.S.

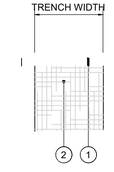
1. ITEM 302 - 8" CRUSHED STONE BASE, (LESS THAN 7% FINES) COMPACTED TO 100% (ASTM D698).
2. CONTROL DENSITY FILL PER NKWD SPECIFICATIONS (SEE DETAIL SHEET (G-02)



ASPHALT ROADWAY REPLACEMENT SECTION

N.T.S.

1. ITEM 402/403 - 1.5" ASPHALT CONCRETE SURFACE COURSE
2. ITEM 402/403 - 7.75" ASPHALT CONCRETE BASE (OR MATCH EXISTING)
3. CONTROL DENSITY FILL PER NKWD SPECIFICATIONS (SEE DETAIL SHEET (G-02)



CONCRETE ROADWAY REPLACEMENT SECTION

N.T.S.

1. ITEM SPL - 8" PORTLAND CEMENT CONCRETE PAVEMENT - PER KENTON COUNTY SUBDIVISION REGULATIONS (OR MATCH EXISTING)
2. CONTROL DENSITY FILL PER NKWD SPECIFICATIONS (SEE DETAIL SHEET (G-02)

NOTE:
GENE STREET HAS AN ADDITIONAL 1.5" ASPHALT OVERLAY ON THE CONCRETE PAVEMENT

APPROVED
Awaiting Construction Contract
Kentucky Transportation Cabinet
Highway Construction Division 6

SEDIMENT BASINS

DEFINITION
A TEMPORARY BARRIER OR DAM CONSTRUCTED ACROSS A WATERCOURSE OR AT OTHER SUITABLE LOCATION TO RETAIN SEDIMENT AND OTHER WATERBORNE DEBRIS.

SCOPE
THIS STANDARD ESTABLISHES MINIMUM ACCEPTABLE QUALITY FOR THE DESIGN AND CONSTRUCTION OF TEMPORARY SEDIMENT BASINS FORMED BY AN EMBANKMENT, EXCAVATION OR A COMBINATION OF EMBANKMENT AND EXCAVATION. THE STANDARD IS LIMITED TO SITES WHERE:

1. FAILURE OF THE STRUCTURE WOULD NOT RESULT IN LOSS OF LIFE; DAMAGE TO HOMES; COMMERCIAL OR INDUSTRIAL BUILDINGS; DAMAGE TO HIGHWAYS OR RAILROADS OR INTERRUPTION OF USE OR SERVICE OF PRIVATE UTILITIES.
2. THE HEIGHT OF DAM IS 25 FEET OR LESS, AS MEASURED FROM THE NATURAL STREAMBED AT THE CENTERLINE OF DAM TO THE TOP OF DAM.
3. THE TOTAL VOLUME OF STORAGE IS 150 ACRE-FEET OR LESS.
4. THE DRAINAGE AREA IS 100 ACRES OR LESS.
5. THE BASIN WILL BE REMOVED WITHIN A THREE-YEAR PERIOD AFTER CONSTRUCTION.

PURPOSE
TEMPORARY SEDIMENT BASINS ARE USED AS A MEANS OF TRAPPING AND STORING SEDIMENT FROM ERODING AREAS IN ORDER TO PROTECT DOWNSTREAM AREAS FROM DAMAGE RESULTING FROM SEDIMENTATION AND WATERBORNE DEBRIS.

CONDITIONS WHERE PRACTICE APPLIES
TEMPORARY SEDIMENT BASINS APPLY WHERE PHYSICAL SITE CONDITIONS OR OTHER RESTRICTIONS PRECLUDE THE INSTALLATION OF EROSION CONTROL MEASURES TO ADEQUATELY CONTROL EROSION AND SEDIMENTATION. IT MAY BE USED DOWNSLOPE FROM CONSTRUCTION OPERATIONS WHICH EXPOSE AREAS TO EROSION. TEMPORARY SEDIMENT BASINS WILL BE REMOVED AFTER THE EXPOSED AREAS ARE ADEQUATELY PROTECTED AGAINST EROSION BY VEGETATIVE OR MECHANICAL MEANS.

COMPLIANCE WITH LAWS AND REGULATIONS
DESIGN AND CONSTRUCTION SHALL COMPLY WITH ALL LOCAL LAWS, ORDINANCES, RULES AND REGULATIONS.

LOCATION
TO IMPROVE THE EFFECTIVENESS OF THE BASIN, IT SHOULD BE LOCATED SO AS TO INTERCEPT THE LARGEST POSSIBLE AMOUNT OF RUNOFF FROM THE DISTURBED AREA. THE BEST LOCATIONS ARE GENERALLY LOW AREAS AND NATURAL DRAINAGEWAYS BELOW DISTURBED AREAS. DRAINAGE INTO THE BASIN CAN BE IMPROVED BY THE USE OF DIVERSION DIKES AND DITCHES. THE BASIN MUST NOT BE LOCATED IN A LIVE STREAM BUT SHOULD BE LOCATED TO TRAP SEDIMENT-LADEN RUNOFF BEFORE IT ENTERS THE STREAM. THE BASIN SHOULD NOT BE LOCATED WHERE ITS FAILURE WOULD RESULT IN THE LOSS OF LIFE OR IN INTERRUPTION OF THE USE OR SERVICE OF PUBLIC UTILITIES OR ROADS.

MULTIPLE USE
SEDIMENT BASINS MAY BE DESIGNED AS PERMANENT STRUCTURES TO REMAIN IN PLACE AFTER CONSTRUCTION IS COMPLETED. SITE CONDITIONS MAY MAKE THE USE OF THESE STRUCTURES DESIRABLE FOR STORMWATER DETENTION PURPOSES. WHEREVER THESE STRUCTURES ARE TO BECOME PERMANENT, OR IF THEY EXCEED THE SIZE LIMITATIONS OF THE DESIGN CRITERIA, THEY MUST BE DESIGNED AS PERMANENT PONDS BY A QUALIFIED PROFESSIONAL ENGINEER. PERPMANENT PONDS ARE BEYOND THE SCOPE OF THESE STANDARDS AND SPECIFICATIONS. THE PERMANENT STRUCTURES MUST BE SUBMITTED WITH CONSTRUCTION DRAWINGS FOR REVIEW AND ACCEPTANCE BY THE CITY ENGINEER.

MAINTENANCE BASINS SHALL BE CHECKED WEEKLY AND CLEANED WHEN NO LONGER EFFECTIVE.

STORM DRAIN INLET PROTECTION
DEFINITION
A SEDIMENT FILTER INSTALLED AROUND A STORM DRAIN INLET OR CURB INLET TO REDUCE SEDIMENT DISCHARGE.

PURPOSE
TO PREVENT SEDIMENT FROM ENTERING THE STORM DISCHARGE SYSTEMS PRIOR TO PERMANENT STABILIZATION OF THE DISTURBED DRAINAGE AREA. DIFFERENT TYPES OF STRUCTURES ARE APPLICABLE TO DIFFERENT CONDITIONS.

STORM WATER POLLUTION PREVENTION NOTES

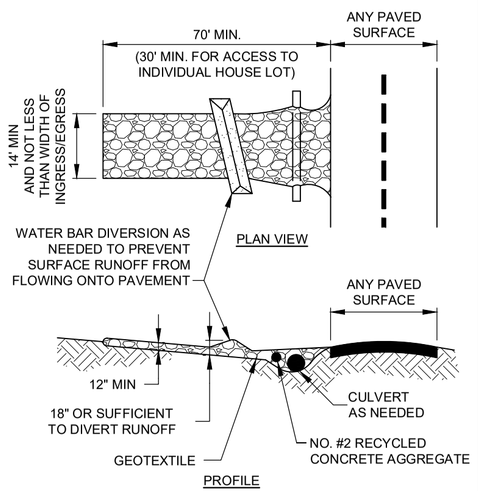
1. SANITATION DISTRICT NO. 1 IS TO BE CONTACTED 72 HOURS PRIOR TO ANY CONSTRUCTION ACTIVITY AT 859-578-6892
2. ALL EROSION AND SEDIMENTATION CONTROL SHALL BE PERFORMED AS SHOWN ON THE PLANS, AND SHALL BE IN COMPLIANCE WITH THE LATEST CONSTRUCTION ACTIVITY " NATIONAL POLLUTANT DISCHARGE ELIMINATION SYSTEM" RULES AND REGULATIONS.
3. A COPY OF THE STORM WATER POLLUTION PREVENTION PLAN (SWPPP) AND A COPY OF THE "NOTICE OF INTENT" (NOI) SHALL BE KEPT ON SITE.
4. AN AMENDMENT OF THE SWPPP IS REQUIRED WHENEVER A CHANGE IN DESIGN, CONSTRUCTION, AND OPERATION OR MAINTENANCE HAS A SIGNIFICANT EFFECT ON THE POTENTIAL FOR THE DISCHARGE OF POLLUTANTS, OR IF THE SWPPP PROVES TO BE INEFFECTIVE IN ACHIEVING THE GENERAL OBJECTIVES OF THE SWPPP.
5. THE CONTRACTOR SHALL ALSO MAINTAIN THE FOLLOWING RECORDS ON SITE:
   A. GENERAL CONTRACTOR AND/OR SUBCONTRACTOR SWPPP CERTIFICATIONS
   B. THE DATE, TIME, AND EXACT LOCATION OF THE INSPECTION, AND THE NAME OF THE INSPECTOR
   C. AN ASSESSMENT OF THE CONDITION OF THE EROSION CONTROLS
   D. A DESCRIPTION OF ANY EROSION CONTROL IMPLEMENTATION AND MAINTENANCE PERFORMED
   E. A DESCRIPTION OF THE PRESENT PHASE OF CONSTRUCTION AT THE SITE
6. CONSTRUCTION SEQUENCE
   - ALL PERIMETER SILT FENCE, INLET PROTECTION AND OTHER EROSION CONTROLS SHALL BE IN PLACE BEFORE ANY OTHER EARTH MOVING ACTIVITIES BEGIN.
   - THE CONTRACTOR SHALL CLEAR AND GRUB ONLY THE AREAS PLANNED FOR EARTH MOVING.
   - REMOVE TOPSOIL, STOCKPILE IT, AND INSTALL SILT FENCE AROUND PERIMETER.
   - SEED SOIL STOCKPILE WITH PERENNIAL RYE GRASS AND MULCH WITH STRAW IF NO TO BE DISTURBED FOR MORE THAN 21 DAYS.
   - CONSTRUCT DETENTION BASIN AND CONTROL STRUCTURE. DETENTION BASIN SHALL BE USED AS A SEDIMENT BASIN UNTIL THE SITE IS STABILIZED.
   - INSTALL STORM SEWER SYSTEM AND SURFACE STORM INLET AND MANHOLE PROTECTION.
   - ESTABLISH A TEMPORARY SEEDING ON ALL BARE AREAS THAT ARE TO REMAIN UNDISTURBED FOR MORE THAN 21 DAYS. SEED WITH PERENNIAL RYE GRASS MULCH WITH STRAW.
   - IMMEDIATE AFTER TOPSOIL HAS BEEN PLACED, STABILIZE THE SAME SURFACE AREA WITH FINAL SEED AND MULCH 7 DAYS AFTER REACHING FINAL GRADE.
   - AFTER THE VEGETATION HAS BECOME WELL ESTABLISHED, REMOVE TEMPORARY EROSION OR SEDIMENT CONTROL PRACTICES.
7. EROSION CONTROLS MUST BE INSPECTED ONCE EVERY 7 DAYS AND WITHIN 24 HOURS OF 0.5" OR GREATER RAINFALL. REMOVE ACCUMULATED SEDIMENT FROM EROSION CONTROLS.
8. TEMPORARY SEEDING SHALL BE PERENNIAL RYE GRASS (40 LB / ACRED) AND MULCH AT 3 BALES OF STRAW PER 1000 S.F.
9. CONTRACTOR IS RESPONSIBLE FOR OBTAINING BORROW MATERIAL ONSITE AND / OR DISPOSING OF EXCESS MATERIAL OFF SITE AS REQUIRED TO MEET INDICATED DESIGN ELEVATIONS.
10. DEBRIS SHALL BE COLLECTED WITHIN PROPERTY LIMITS WEEKLY OR AS NEEDED FOR PUBLIC SAFETY. SURROUNDING STREETS AFFECTED BY THE CONSTRUCTION SHALL BE CLEANED DAILY OR AS NEEDED FOR PUBLIC SAFETY. SEE CONSTRUCTION ENTRANCE DETAIL IN SWPPP DETAILS SHEET.
11. THE CONSTRUCTION OF BMPs SHALL BE REVISED OR ADDED IF DEEMED NECESSARY PER SECTION 1000 OF THE SANITATION DISTRICT 1 REGULATIONS.
12. CONTACT SANITATION DISTRICT NO. 1 72 HOURS PRIOR TO INSTALLATION OF THE WATER QUALITY FEATURE.

NOTES:
1) SUBSOILING SHALL OCCUR WHEN SOIL MOISTURE IS LOW ENOUGH TO ALLOW THE SOIL TO CRACK OR FRACTURE. SUBSOILING IS NOT PERMITTED ON SLIP-PRONE AREAS.
2) THE SITE SHALL BE GRADED TO PERMIT THE USE OF CONVENTIONAL EQUIPMENT FOR SEEDBED PREPARATION AND SEEDING.
3) TOPSOIL SHALL BE APPLIED WHERE NEEDED TO ESTABLISH VEGETATION.
4) THE SEEDBED SHALL BE PREPARED BY APPLYING AGRICULTURAL GROUND LIMESTONE OR FERTILIZER AS RECOMMENDED BY A SOIL TEST. IN LIEU OF A SOIL TEST, APPLY LIME AT 2 TONS/AC. OR FERTILIZER AT 500 LB/AC. OF 10-10-10 OR 12-12-12 ANALYSIS. LIME AND FERTILIZER SHALL BE WORKED INTO THE SOIL TO A DEPTH OF 3".
5) APPLY SEED UNIFORMLY ON FIRM, MOIST SEED BED.
6) SEEDING SHOULD BE APPLIED FROM MARCH 1 TO MAY 31 OR AUGUST 1 TO SEPTEMBER 30. IF SEEDING OCCURS OUTSIDE OF THESE DATES, ADDITIONAL MULCH AND IRRIGATION MAY BE REQUIRED TO ENSURE A MINIMUM OF 80% GERMINATION. TILLAGE FOR SEEDBED PREPARATION SHALL OCCUR WHEN THE SOIL IS DRY ENOUGH TO CRUMBLE AND NOT FORM RIBBONS WHEN COMPRESSED BY HAND.
7) SEEDING SHOULD NOT BE APPLIED FROM OCTOBER 1 TO NOVEMBER 20 BECAUSE SEEDS MAY GERMINATE, BUT WILL NOT SURVIVE THE WINTER. USE THE FOLLOWING METHODS FOR DORMANT SEEDING:
   - FROM OCTOBER 1 TO NOVEMBER 20, INCREASE THE SEEDING RATE BY 50%, PREPARE THE SEED BED, ADD LIME AND FERTILIZER, MULCH AND ANCHOR.
   - FROM NOVEMBER 20 TO MARCH 15, ONLY IF SOIL CONDITIONS PERMIT, INCREASE THE SEEDING RATE BY 50%, PREPARE THE SEED BED, ADD LIME AND FERTILIZER, APPLY THE SEED MIXTURE, MULCH AND ANCHOR.
8) APPLY MULCH MATERIAL IMMEDIATELY AFTER SEEDING.
9) PERMANENT SEEDING SHALL INCLUDE IRRIGATION TO ESTABLISH VEGETATION DURING DRY OR HOT WEATHER OR ON ADVERSE SITE CONDITIONS AS NEEDED. AVOID EXCESSIVE IRRIGATION AND MONITOR TO PREVENT EROSION AND DAMAGE FROM RUNOFF.
10) PERMANENT SEEDING SHALL NOT BE CONSIDERED ESTABLISHED FOR AT LEAST 1 FULL YEAR FROM THE TIME OF PLANTING. DURING THIS PERIOD, INSPECT FOR SOIL EROSION OR PLANT LOSS AND REPAIR BARE OR SPARSE AREAS, FILL GULLIES, RE-FERTILIZE, RE-SEED OR RE-MULCH AS NEEDED.
11) A MINIMUM OF 70% GROWTH DENSITY, BASED ON A VISUAL INSPECTION, MUST EXIST FOR AN ADEQUATE PERMANENT VEGETATIVE PLANTING.

PERMANENT SEEDING FERTILIZATION AND MOWING CHART				
MIXTURE	FORMULA	LB/ AC.	TIME	MOW
CREEPING RED FESCUE DOMESTIC RYEGRASS KENTUCKY BLUEGRASS	10-10-10	500	FALL, YEARLY, OR AS NEEDED	≥3"
TALL FESCUE	10-10-10	500		≥4"
TURF-TYPE FESCUE	10-10-10	500		
CROWN VETCH FESCUE	0-20-20	400	SPRING, AND YEARLY AFTER ESTABLISHED	DO NOT MOW
FLAT PEA FESCUE	0-20-20	400		

PERMANENT SEEDING SPECIES SELECTION		
SEED MIX	SEED RATE LB/AC.	NOTES:
GENERAL USE		
CREEPING RED FESCUE DOMESTIC RYEGRASS KENTUCKY BLUEGRASS	20 - 40 10 - 20 20 - 40	FOR CLOSE MOWING AND WATERWAYS WITH ≤2.0 FT./SEC. VELOCITY
TALL FESCUE	40 - 50	
TURF-TYPE FESCUE	90	
STEEP BANKS OR CUT SLOPES		
TALL FESCUE	40 - 50	
CROWN VETCH TALL FESCUE	10 - 20 20 - 30	DO NOT SEED LATER THAN AUGUST
FLAT PEA TALL FESCUE	20 - 25 20 - 30	DO NOT SEED LATER THAN AUGUST
ROAD DITCHES AND SWALES		
TALL FESCUE	40 - 50	
TURF-TYPE FESCUE KENTUCKY BLUEGRASS	90 5	
LAWN		
KENTUCKY BLUEGRASS PERENNIAL RYEGRASS	100 - 120 100 - 120	
KENTUCKY BLUEGRASS CREEPING RED FESCUE	100 - 120 100 - 120	FOR SHADED AREAS

PERMANENT SEEDING DETAIL
SCALE: NONE



NOTES:
1. PLACE GEOTEXTILE OVER THE ENTIRE AREA PRIOR TO PLACING STONE MEETING THE MIN. SPECIFICATIONS:

A.	TENSILE STRENGTH	= 200 LBS.
B.	PUNCTURE STRENGTH	= 80 PSI
C.	TEAR STRENGTH	= 50 LBS.
D.	BURST STRENGTH	= 320 PSI
E.	ELONGATION	= 20%
F.	EQUIVALENT OPENING SIZE	≤ 0.6 MM
G.	PERMITTIVITY	= 0.001 CM/SEC

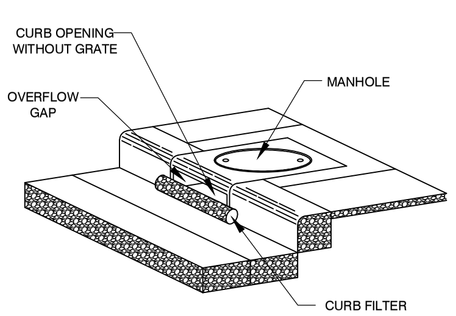
2. APPLY ADDITIONAL STONE AS CONDITIONS DEMAND AND REPLENISH STONE WHEN THE DEPTH IS LESS THAN 6". REMOVE AND REPLACE IF STONES BECOMES MUD-LADEN.
3. IMMEDIATELY REMOVE MUD DROPPED, WASHED OR TRACKED ONTO ROADS OR ANY SURFACE WHERE RUNOFF IS NOT CHECKED BY SEDIMENT CONTROLS BY SCRAPING OR SWEEPING.
4. CONSTRUCTION ENTRANCES SHALL NOT BE RELIED UPON TO REMOVE MUD FROM VEHICLES OR TO PREVENT OFF-SITE TRACKING. VEHICLES THAT ENTER AND LEAVE THE CONSTRUCTION SITE SHALL BE RESTRICTED FROM MUDDY AREAS.

CE **CONSTRUCTION ENTRANCE**
SCALE: NONE

NOTES:
1) THE SEED BED SHALL BE PULVERIZED AND LOOSE TO ENSURE THE SUCCESS OF ESTABLISHING VEGETATION.
2) SOIL AMENDMENTS MAY BE REQUIRED TO ESTABLISH ADEQUATE VEGETATION. PERFORM SOIL TESTS ON THE SITE TO PREDICT THE NEED FOR LIME AND FERTILIZER.
3) APPLY SEED UNIFORMLY. COVER BROADCASTED SEED BY RAKING OR DRAGGING AND THEN LIGHTLY TAMPING INTO PLACE.
4) APPLY MULCHING IMMEDIATELY AFTER SEEDING.
5) SEEDING SHALL BE INSPECTED FOR BARE SPOTS AND WASHOUTS, AND RESEEDED AS NECESSARY.

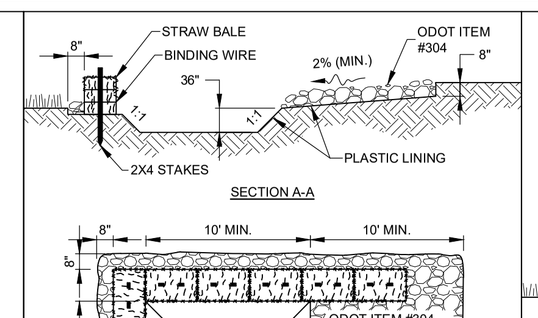
TEMPORARY SEEDING SPECIES SELECTION			
DATES	SPECIES	LB/1,000 SF	LB/AC.
MARCH 1 TO AUGUST 15	OATS	3	128
	TALL FESCUE	1	40
	PERENNIAL RYEGRASS	1	40
	PERENNIAL RYEGRASS	2	40
	TALL FESCUE	1	40
AUGUST 16 TO NOVEMBER 1	RYE	3	112
	TALL FESCUE	1	40
	PERENNIAL RYEGRASS	1	40
	WHEAT	3	120
	TALL FESCUE	1	40
	PERENNIAL RYEGRASS	1	40
	PERENNIAL RYEGRASS	2	40
	TALL FESCUE	1	40
NOVEMBER 1 TO SPRING	ONLY MULCH OR DORMANT SEEDING.		

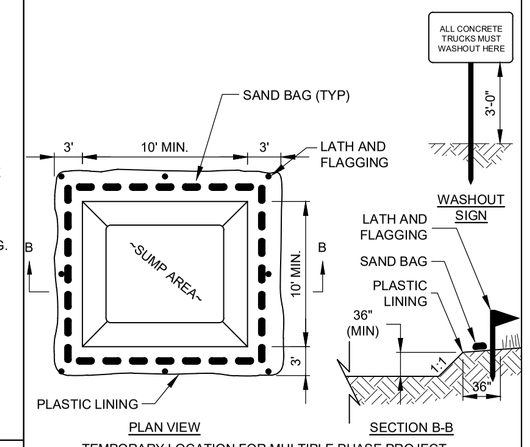
TEMPORARY SEEDING DETAIL
SCALE: NONE



DETAIL OF CURB INLET SEDIMENT CONTROL DEVICE WITH CURB FILTER

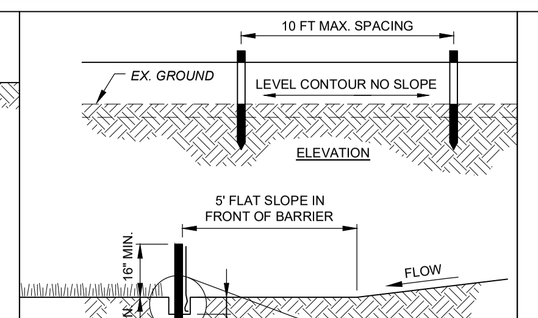
IP **DANDY CURB**
SCALE: NONE





NOTES:
1. WASHOUT PIT SHALL BE LOCATED 100' MINIMUM FROM INLETS, STREAMS, WETLANDS AND ANY OTHER SURFACE WATERS.
2. ALL EXCESS CONCRETE AND CONCRETE WASHOUT, INCLUDING FROM HAND MIXERS AND LIGHT EQUIPMENT, SHALL BE DISPOSED OF IN THE CONCRETE WASHOUT AREA. DISPOSAL OF EXCESS CONCRETE OR CONCRETE WASHOUT ON THE GROUND, OR IN STORM DRAINS, DITCHES OR WATER BODIES, IS PROHIBITED.
3. CONCRETE WASHOUT AREA SHALL BE SUFFICIENT SIZE TO CONTAIN CONCRETE WASTE GENERATED. FOR LARGER SITES, MULTIPLE CONCRETE WASHOUT AREAS MAY BE REQUIRED.
4. IF CONCRETE WASHOUT AREA IS LOCATED AWAY FROM A PAVED SURFACE, CONSTRUCT A GRAVEL ACCESS ROUTE EQUAL IN COMPOSITION TO THE CONSTRUCTION ENTRANCE.
5. PLASTIC LINING SHALL BE DOUBLE-LINED, CONTINUOUS 10-MIL POLYETHYLENE SHEETING FREE OF HOLES, TEARS OR OTHER DEFECTS, AND INSTALLED ON A SMOOTH, LEVEL SURFACE, FREE OF ROCKS OR DEBRIS.
6. CONCRETE WASHOUT SIGNAGE SHALL BE CLEARLY VISIBLE AND LOCATED WITHIN 30 FEET OF EACH WASHOUT AREA.
7. CONCRETE WASHOUT AREAS SHALL BE COVERED DURING INCLEMENT WEATHER TO PREVENT OVERFLOWS.
8. PREFABRICATED, PORTABLE AND RE-USABLE CONCRETE WASHOUT CONTAINERS ARE ACCEPTABLE, BUT MUST BE SPECIFICALLY DESIGNED FOR CONCRETE WASHOUT USE.
9. CONCRETE WASHOUT AREA SHALL BE INSPECTED DAILY TO CHECK FOR DAMAGE AND TO DETERMINE IF IT NEEDS CLEANED OR REPLACED. ANY DAMAGE TO THE SIDEWALLS OR POLYETHYLENE SHEETING SHALL BE REPAIRED IMMEDIATELY. THE CONCRETE WASHOUT AREA SHALL BE CLEANED OR REPLACED WHEN IT IS 75% FULL. THE POLYETHYLENE SHEETING SHALL BE REPLACED AFTER EACH CLEANING.
10. SAW CUT CONCRETE, RESIDUE FROM SAW CUT, AND GRINDINGS SHALL BE DISPOSED OF IN THE WASHOUT PIT.

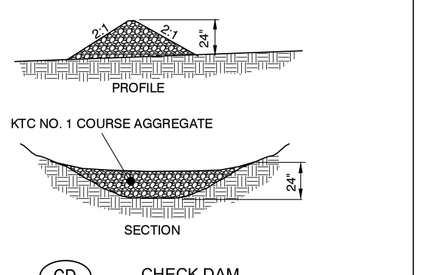
WA **CONCRETE WASHOUT DETAIL**
SCALE: NONE



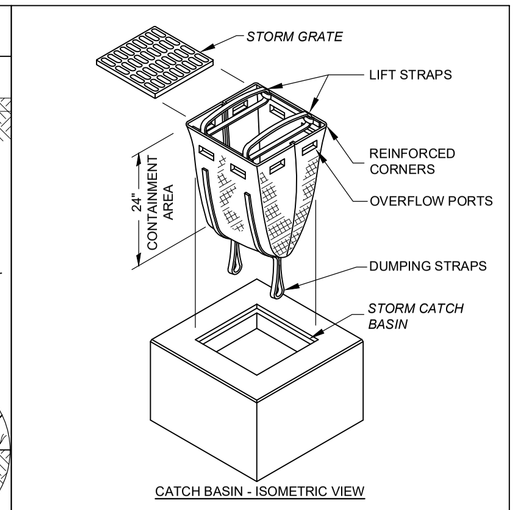
NOTES:
1. PRESERVE VEGETATION FOR 5 FEET, OR AS MUCH AS POSSIBLE, UPSLOPE FROM THE SILT FENCE. IF VEGETATION IS REMOVED, IT SHALL BE RE-ESTABLISHED WITHIN 7 DAYS FROM SILT FENCE INSTALLATION.
2. SILT FENCE SHALL ALLOW RUNOFF TO PASS ONLY AS DIFFUSE FLOW THROUGH THE GEOTEXTILE. PERFORM ONE OF THE FOLLOWING IF RUNOFF OVERTOPS THE SILT FENCE, FLOWS UNDER OR AROUND THE ENDS, OR IN ANY OTHER WAY BECOMES A CONCENTRATED FLOW:
   - CHANGE THE LAYOUT OF THE SILT FENCE.
   - REMOVE ACCUMULATED SEDIMENT.
   - INSTALL OTHER PRACTICES.

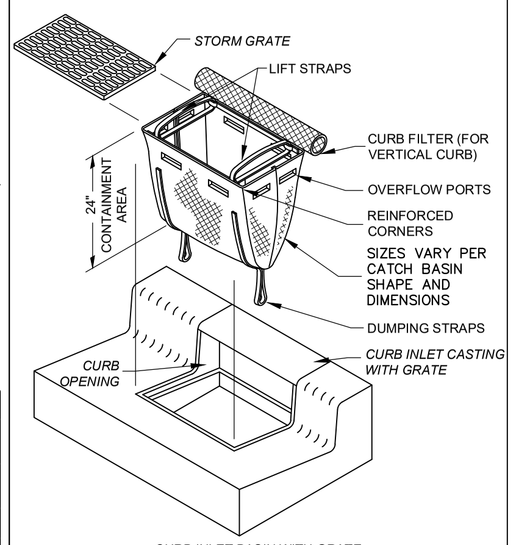
FABRIC PROPERTIES	VALUES	TEST METHOD
GRAB TENSILE STRENGTH	90 LB. MIN	ASTM D-1682
MULLEN BURST STRENGTH	190 PSI MIN	ASTM D-3786
SLURRY FLOW RATE	0.3 GAL./MIN./S.F. MAX.	
EQUIVALENT OPENING SIZE	40-80	US STD. SIEVE CW-02215
ULTRAVIOLET RADIATION STABILITY	90% MIN	ASTM-G-26

SF **SILT FENCE**
SCALE: NONE

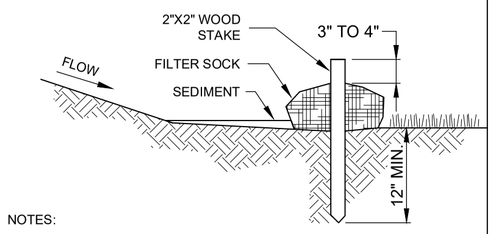


CD **CHECK DAM**
N.T.S.





IP **STORM DRAIN INLET PROTECTION DETAIL**
SCALE: NONE



NOTES:
1) FILTER SOCKS SHALL BE 3 OR 5 MIL CONTINUOUS, TUBULAR, HDPE 3/8" KNITTED MESH NETTING MATERIAL, FILLED WITH COMPOST.
2) COMPOST SHALL BE WEED, PATHOGEN AND INSECT FREE, FREE OF ANY REFUSE, CONTAMINANTS OR OTHER MATERIALS TOXIC TO PLANT GROWTH, BE DERIVED FROM A WELL-DECOMPOSED SOURCE OF ORGANIC MATTER, AND CONSIST OF PARTICLES RANGING FROM 3/8" TO 2".
3) FILTER SOCKS SHALL BE PLACED ON A LEVEL LINE ACROSS SLOPES PARALLEL TO THE BASE OF THE SLOPE.
4) FILTER SOCKS SHALL BE PLACED AT LEAST 5' FROM THE TOE OF SLOPE FOR SEDIMENT DEPOSIT.
5) BUILT UP SEDIMENT SHALL BE REMOVED WHEN IT HAS REACHED 1/3 THE FILTER SOCK HEIGHT.
6) WHEN A FILTER SOCK IS NO LONGER REQUIRED, IT SHALL BE DISPERSED ON-SITE.
7) THE MAXIMUM DRAINAGE AREA PER 100 FEET OF FILTER SOCK IS 1/2 ACRE AND IS DEPENDENT ON THE SLOPE:

MAX. SLOPE LENGTH ABOVE FILTER SOCK					
SLOPE	RATIO (H:V)	8"	12"	18"	24"
0% - 2%	0 - 50:1	125'	250'	300'	350'
2% - 10%	50:1 - 10:1	100'	125'	200'	250'
10% - 20%	10:1 - 5:1	75'	100'	150'	200'

FILTER SOCK DETAIL
SCALE: NONE

90% REVIEW

your trusted advisor engineers architects consultants planners

NO	REVISION	DATE

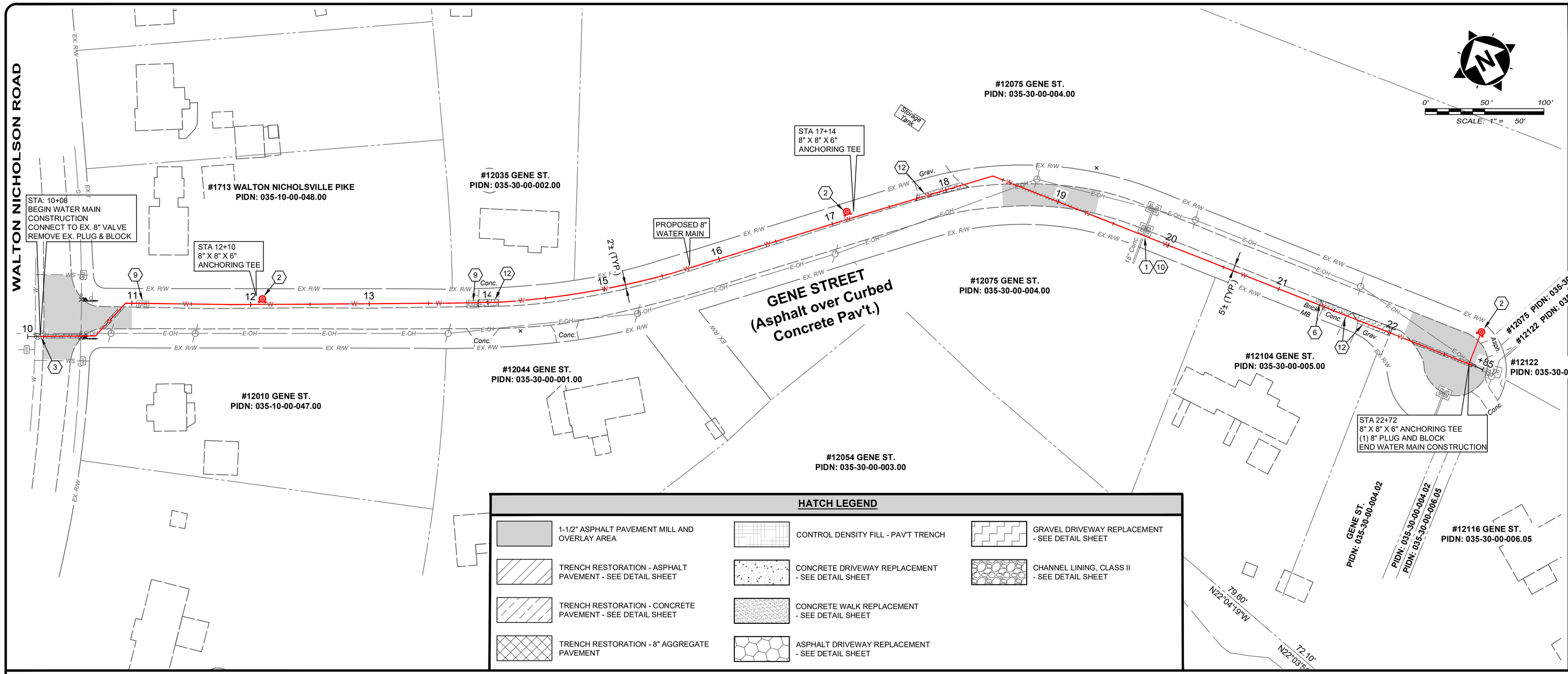
ISSUED FOR:	90% DESIGN
ISSUE DATE:	MAY 2024
SCALE:	AS SHOWN
DESIGNED BY:	JCOR
DRAWN BY:	JCOR
CHECKED BY:	JSHU

NORTHERN KENTUCKY WATER DISTRICT
SUBDISTRICT 'O'
-KENTON COUNTY -

EROSION CONTROL DETAILS

PROJECT NO.
231591
DISCIPLINE
CIVIL
SHEET NAME
G-05
SHEET 6 OF 49

APPROVED FOR CONSTRUCTION
AUGUST 2024
TRANSPORTATION CABINET
KENTUCKY TRANSPORTATION CABINET

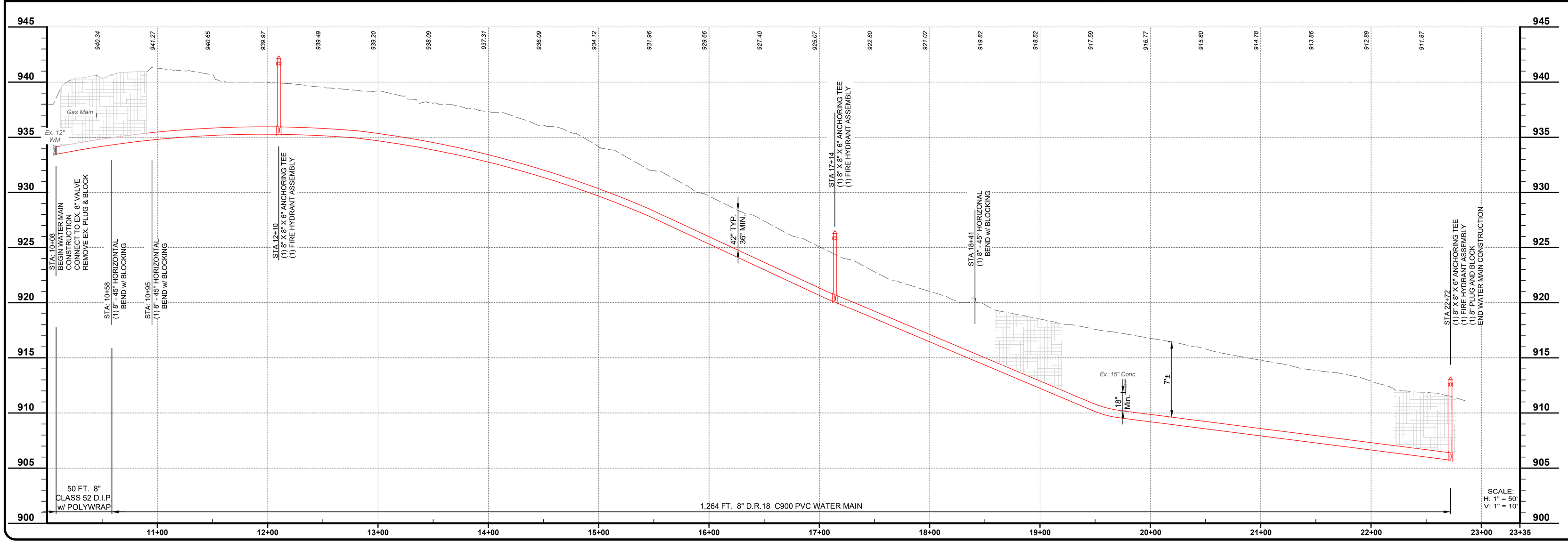


HATCH LEGEND

- 1-1/2" ASPHALT PAVEMENT MILL AND OVERLAY AREA
- TRENCH RESTORATION - ASPHALT PAVEMENT - SEE DETAIL SHEET
- TRENCH RESTORATION - CONCRETE PAVEMENT - SEE DETAIL SHEET
- TRENCH RESTORATION - 8" AGGREGATE PAVEMENT
- CONTROL DENSITY FILL - PAV'T TRENCH
- CONCRETE DRIVEWAY REPLACEMENT - SEE DETAIL SHEET
- CONCRETE WALK REPLACEMENT - SEE DETAIL SHEET
- ASPHALT DRIVEWAY REPLACEMENT - SEE DETAIL SHEET
- GRAVEL DRIVEWAY REPLACEMENT - SEE DETAIL SHEET
- CHANNEL LINING, CLASS II - SEE DETAIL SHEET

CONSTRUCTION NOTES

1. MAINTAIN MANAGEABLE VERTICAL CLEARANCE BETWEEN THE PROPOSED WATER MAIN AND THE EXISTING STORM SEWER, WATER MAIN, TELEPHONE DUCTS, AND GAS MAIN. CONSTRUCT ALL SANITARY SEWER CROSSINGS PER N.K.W.D. SPECIFICATIONS ITEM 1.14. MAINTAIN MINIMUM 18" BETWEEN THE PROPOSED WATER MAIN AND THE EXISTING SANITARY SEWER, ACTUAL ELEVATION UNKNOWN. CONTRACTOR TO EXCAVATE & VERIFY ACTUAL LOCATION, SIZE AND ELEVATION OF EXISTING UTILITY PRIOR TO BEGINNING WATER MAIN CONSTRUCTION. THE CONTRACTOR SHALL NOTIFY THE ENGINEER PRIOR TO CONSTRUCTION OF ANY POTENTIAL CONFLICT. NO ADDITIONAL PAYMENT WILL BE MADE FOR THIS WORK AND THE COST SHALL BE INCLUDED IN THE BID ITEM FOR WATER MAIN.
2. PROPOSED FIRE HYDRANT ASSEMBLY, VALVE AND BLOCKING AS PER N.K.W.D. STD. DRAWING NO. 109. COORDINATE LOCATION WITH N.K.W.D. INSPECTOR. ANCHOR VALVE TO TEE.
3. CONNECT TO EXISTING WATER MAIN (ACTUAL ELEVATION UNKNOWN). CONTRACTOR TO VERIFY DEPTH PRIOR TO CONSTRUCTION.
4. CHANNEL LINING, CLASS II (12") w/ NON-WOVEN GEOTEXTILE FILTER FABRIC
5. CONTRACTOR TO VERIFY LOCATION AND ELEVATION OF UTILITY PRIOR TO EXCAVATION ACTIVITY AND NOTIFY ENGINEER AND N.K.W.D. OF CONFLICTS.
6. DO NOT DISTURB
7. CONTRACTOR TO SUPPORT UTILITY POLE DURING PIPE INSTALLATION
8. REMOVE AND REPLACE SIGN
9. REMOVE AND REPLACE MAILBOX
10. NOT USED
11. REMOVE AND REPLACE EXISTING STORM STRUCTURE (CB,HW) AS NEEDED FOR WATER MAIN INSTALLATION
12. DRIVEWAY RESTORATION (SEE DETAILS)
13. CONSTRUCT CLAY BULKHEAD IN TRENCH WITH UNDERDRAIN. DAYLIGHT UNDERDRAIN TO DITCH OR DRAINAGE STRUCTURE



90% REVIEW

your trusted advisor — engineers, architects, consultants, planners

NO	REVISION	DATE

ISSUED FOR:	FINAL
ISSUE DATE:	JUNE 2024
SCALE:	AS SHOWN
DESIGNED BY:	JCOR
DRAWN BY:	JCOR
CHECKED BY:	JSHU

NORTHERN KENTUCKY WATER DISTRICT
SUBDISTRICT 'O'
-KENTON COUNTY -

GENE STREET

PROJECT NO.: 231591
DISCIPLINE: CIVIL
SHEET NAME: C-19
SHEET: 25
OF: 49

APPROVED
Kentucky Transportation Cabinet

H:\2023\231591\DWG\SHEETS\C_231591 PNP_10_GENE.DWG - GENE - 7/10/2024 4:18:23 PM - JAMES CORNELL

KYTC Division of Maintenance
Permits Branch
District 6

ENCROACHMENT PERMIT GENERAL NOTES & SPECIFICATIONS

YOU MUST NOTIFY KYTC BEFORE BEGINNING ANY WORK IN THE RIGHT-OF-WAY. ***Failure to alert KYTC of working within the right of way may result in permit revocation.***

Two ways to notify KYTC of your construction start date:

By Email: KYTCD6PERMITS@KY.GOV

**must include permit number and county in subject line*

By Phone: 859-341-2700

**must know permit number and county when calling*

YOU MUST ALSO NOTIFY KYTC UPON COMPLETION OF WORK WITHIN RIGHT-OF-WAY. ***Failure to alert KYTC of completion of work may result in withholding release of any associated bonds.***

Kentucky UNBRIDLED SPIRIT™

APPROVED
AUGUST 27, 2024
KENTUCKY TRANSPORTATION CABINET
06-2024-00838

I. SAFETY

A. General Provisions

☑ All signs and control of traffic shall be in accordance with the Manual on Uniform Traffic Control Devices (MUTCD) for Streets and Highways, latest edition, Part VI, and safety requirements shall comply with the Permits Manual. Federal law requires that traffic control shall be implemented in accordance with MUTCD standards and KYTC's Standard Specifications for Road and Bridge Construction (KYTC SSRBC) under the supervision of a certified Work Zone Traffic Control Supervisor.

☑ All work necessary in shoulder or ditch line areas of a state highway shall be scheduled to be promptly completed so that hazards adjacent to the traveled way are kept to an absolute minimum.

☑ No more than one (1) traveled-lane shall be blocked or obstructed during normal working hours. All signs and flaggers during lane closure shall conform to the MUTCD. The traveled-way and shoulders shall be kept clear of mud and other construction debris at all times during construction of the permitted facility. No non-construction equipment or vehicles or office trailers shall be allowed on the right of way during working hours. The right of way shall be left free and clear of equipment, material, and vehicles during non-working hours.

☑ When necessary to block one (1) traveled-lane of a state highway, the normal working hours shall be as directed by the Department. No lanes shall be blocked or obstructed during adverse weather conditions (rain, snow, fog, etc.) without specific permission from the Department.

☑ Working hours shall be between **9:00 AM** and **3:00 PM**. Further date and time restrictions are as follows:

B. Explosives

☑ No explosive devices or explosive material shall be used within state right of way without proper license and approval of the Kentucky Department of Mines and Minerals, Explosive Division.

C. OSHA

☑ Kentucky Occupational Safety and Health Standards for the construction industry, which has the effect of law, states in part: (Page 52, 1926.651, Specific Excavation Requirements) "Prior to opening an excavation, effort shall be made to determine whether underground installations, (sewer, telephone, water, fuel, electric lines, etc.) will be encountered, and if so, where such underground installations are located. When the excavation approaches the estimated location of such an installation, the exact location shall be determined, and when it is uncovered, proper supports shall be provided for the existing installation. Utility companies shall be contacted and advised of proposed work prior to the start of actual excavation."

D. Archaeological

☑ Whenever materials of an archaeological nature are discovered during the course of construction work or maintenance operations, contact shall be made immediately with the Division of Environmental Analysis, which maintains an archaeologist on staff, or with the Office of the State Archaeologist located at the University of Kentucky. Following this consultation, further action shall be decided on a case-by-case basis by the State Highway Engineer or the Transportation Planning Engineer or their designated representative.

E. Environmental

☑ If the activity to which this permit related disturbs one acre of more of land, you must obtain KPDES KYR10 permit. Information can be found at http://water.ky.gov/permitting/Pages/GeneralPermits.aspx

F. Additional Notes

☑ The following additional notes apply to this permit:

24 hour notice is required prior to restoration of pavement, concrete or topsoil. Call Rick Shay at 859-307-5768

APPROVED
AUGUST 27, 2024
KENTUCKY TRANSPORTATION CABINET
06-2024-00844

II. UTILITIES

- [x] The permittee shall be responsible for any damage to existing utilities. Any utility modifications or relocations within state right of way necessary, as determined by the Department or by the owner of the utility, shall be at the expense of the permittee and subject to the approval of the Department. Operators of underground utilities in right of way shall be members of Kentucky 811.

- [ ] All existing manholes and valve boxes shall be adjusted to be flush with finished grade.

- [x] All pavement cuts shall be restored per Kentucky Transportation Cabinet standards and specifications.

- [x] Any excavation within 3' of edge of pavement will require flowable fill as backfill.

- [x] The clear zone requirement shall be met to the extent possible in accordance with the Roadside Design Guide.

- [ ] Encasement pipe shall conform to current standards for highway crossings in accordance with the Permits Manual. Pipe encasing shall not be required if the pipe crossing is 2" or less.

- [ ] Aerial crossing of utility lines shall have a minimum clearance from the high point of the roadway to the low point of the line of 24' on fully controlled access highways and 18' on non-fully controlled access highways

- [x] Minimum depth for underground Gas and Electric lines is 60" under roadways, ramps, and ditch lines and 42" in all other areas within state right of way. The minimum depth for all other utilities is 42" in all areas.

- [x] When steel plates are installed over an open excavation in the roadway, they must be anchored to the pavement and have asphalt applied to all exposed edges and an MUTCD approved sign noting "Road Plates Ahead." KYTC must be notified of the location, date, time, and permit number associated to BOTH the installation and removal of the plate. Failure to do so may result in permit revocation.

- [ ] Utility poles moved for replacement must be removed in their entirety and the hole left behind must be backfilled.

- [ ] No poles or anchors shall be installed in a roadside ditch.

- [ ] ***Utility notes specific to fully-controlled access highways ONLY:***
All work necessary within the right-of-way shall be performed behind a temporary fence erected prior to the start of work. The temporary woven wire fence shall be removed immediately upon completion of work on the right-of-way, and the control of access immediately restored to original condition, in accordance with applicable KYTC SSRBC. All vents, valves, manholes, etc., shall be located outside of the right-of-way. Encasement pipe shall extend from right-of-way line to right-of-way line and shall be one continuous run of pipe. The encasement pipe shall be welded at all joints. The boring pit and tail ditch shall extend past the existing toe of slope or bottom of ditch line and shall be a minimum of 42 inches deep. Work in interstate right-of-way requires approval from FHWA (Federal Highway Administration).

- [ ] Additional notes:

MINIMUM COVER MUST BE 60" IN THE ROW AND UNDER PAVEMENT

APPROVED
AUGUST 27, 2024
KENTUCKY TRANSPORTATION CABINET
06-2024-00844

III. DRAINAGE

☑ Negative impacts to existing drainage will be the applicant's responsibility to repair in accordance with KYTC SSRBC.

☐ All pipe shall be laid in a straight alignment, to proper grades, and with all materials and methods of installation including bedding and joint seating. Pipe shall not be covered until inspected by the Department and express permission obtained to make backfill. It is the applicant's responsibility to request inspection.

☐ All gutter lines at the base of new curbs shall be on continuous grades, and pockets of water along with curbs or in entrance areas or other paved areas within the right-of-way shall not be acceptable.

☐ All drainage structures and appurtenances (manholes, catch basins, curbing, inlet basins, etc.) shall conform to the Department specifications and shall be constructed in accordance with the KYTC's Standard Drawings.

☐ Additional notes:

IV. PAVING

☑ No bituminous pavement shall be installed within the right of way between November 15 and April 1, nor when the temperature is below 40 degrees Fahrenheit, without the express consent of the Department. No bituminous pavement shall be installed when the underlying course is wet.

☑ Paving within the right of way shall be as follows:

- Base (Type): **Match Existing**, (Thickness) **Match Existing**
- Surface Base (Type) **Match Existing** , (Thickness) **Match Existing**
- Finished Surface (Type) **Match Existing**, (Thickness) **Match Existing**

☑ All materials and methods of construction, including base and subgrade preparation, shall be in accordance with KYTC's Standard Specifications. At least 24 hours notice to the Department is required prior to beginning paving operations.

Phone: **859-307-5768** Name: **Rick Shay**

☑ Utility companies performing road cuts must restore the pavement to pre-existing condition. Pictures/videos are recommended to ensure proper placement of signs and lane markers that are temporarily removed for paving operations. In some cases, a pre-work inventory may be requested from the Department.

☑ Existing pavement and shoulder material shall be removed to accommodate the above paving specifications.

☑ The finished surface of all new pavement within the right of way shall be true to the required slope and grade, uniform in density and texture, free of irregularities, and equivalent in riding qualities to the adjacent highway pavement or as determined by KYTC.

☑ To ensure proper surface drainage, the new pavement shall be flush with the edge of existing highway pavement and shall slope away from the existing edge of the pavement as specified in drawings.

☑ Existing edge of pavement shall be saw-cut to provide a straight and uniform joint for new pavement, and an edge key will be installed in the overlap. An approved joint sealer, in accordance with Kentucky Department of Highways Standard Specifications (latest edition), shall be applied between new and existing pavements.

☐ Additional notes:

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AUGUST 27, 2024
KENTUCKY TRANSPORTATION CABINET
06-2024-00844

V. ENTRANCES

☐ Encroachment permits issued by KYTC in no way supersede local planning/zoning requirements or subdivision regulations. KYTC has no authority with zoning changes.

☐ Commercial entrances must be paved to the right-of-way line. Any deviations must be approved by KYTC before installation.

☐ KTYC can dictate drainage improvement installation during construction or after entrance is at final grade. The permit release does not release the permit applicant from drainage maintenance.

☐ Signs (ground-mounted and span-mounted), stop bars, crosswalk, and proper lane markings must be in-place before entrance is open for traffic. Lane width modifications must be approved by the Department.

☐ Guardrail installation must be pre-approved by the Department and installed by a KYTC pre-qualified contractor. Any guardrail that is removed during construction must be returned to the local KTYC maintenance facility.

☐ Additional notes:

VI. TRAFFIC

☑ Any contractor performing work within the vicinity of KYTC roadway lighting or traffic signals, must request locates from the KYTC District 6 Traffic section at least one week before of starting work in the right-of-way.

☐ Applicant must maintain all KYTC Roadway signage that is impacted by the permitted work. In the event that any signs have to be moved, it is the applicant's responsibility to mark the sign's location before removal and to install the original or new sign per KYTC standards for sign installation.

☐ Any thermoplastic or striping damaged during the encroachment must be restored in a timely manner per KYTC standards. Stopbars, arrows, and crosswalks must be thermoplastic material, paint is not acceptable. This work must be performed by a KYTC pre-qualified contractor.

☐ Excavating near a signal, lighting pole, or anchoring facility must be done so that it does not impact the structural integrity of the pole. Any work that requires a temporary support or anchoring must receive prior approval.

☐ If the scope of the permit involves a signal build or rebuild, it is the applicant's responsibility to apply for power service (and pay monthly electrical bill) as well as request electrical inspection from the KYTC District 6 Traffic section. If the signal modifications require timing or phasing changes this must be requested at least two weeks in advance of the signal's turn-on date. KYTC will not take ownership of permitted signals until the electrical inspection is formally accepted and approved.

☐ Work which impacts traffic loops requires 48-hour notice to the KYTC District 6 Traffic section at 859-341-2700. Accidental damage of a traffic loop must be reported immediately to KYTC District 6's emergency line at 859-620-2738. Any disturbed traffic loops must be replaced in a timely manner. Traffic loops out of operation for more than five working days will subject the applicant to the cancellation of the permit. Loop repair must be performed by a KYTC pre-qualified contractor.

☐ Additional Notes:

APPROVED
AUGUST 27, 2024
KENTUCKY TRANSPORTATION CABINET
06-2024-00844

VII. SIDEWALK SPECIFICATIONS

☐ All sidewalk modifications, retrofitting, or installations must meet current ADA guidelines

A. New Sidewalks

☐ New sidewalk specifications, dimensions, and designs shall be in accordance with KYTC's latest edition of the Standard Specifications, or with the plans provided on the permit if approved by a KYTC D6 Construction or Permits Engineer.

☐ All materials and methods of construction, including curing, shall be in accordance with KYTC's latest edition of the Standard Specifications.

B. Existing Sidewalks

☐ Use of the sidewalk shall not be blocked or obstructed and a usable walkway shall be maintained across the construction area at all times per MUTCD . Sidewalk closures must be approved by the Department before implementation.

☐ The location of ADA ramps (truncated domes/tactile warnings/etc.) will need to be field verified by KYTC before installation.

☐ Any section of sidewalk that becomes damaged shall be entirely replaced to match existing sections.

☐ Additional notes:

VIII. RIGHT OF WAY RESTORATION

☑ All disturbed portions of the right of way shall be restored to grass as per Kentucky Department of Highways Standard Specifications for Road and Bridge Construction (latest edition). A satisfactory turf, as determined by the Department, shall be established by the permittee prior to release of indemnity. Sodding or seeding shall be as follows:

- ☑ Slopes 3:1 or Less: 90% Kentucky 31 Tall Fescue and 10% White Dutch Clover at 100 lbs/acre
- ☑ Slopes Greater than 3:1: 90% Kentucky 31 Tall Fescue and 10% Partridge Pea at 100 lbs/acre
- ☑ Urban or Residential Areas: 95% Turf Type Fall Fescue Blend and 5% White Dutch Clover at 275 lbs/acre

☑ Two tons of clean straw mulch per acre of seeding.

☑ Prior to seeding, the ground shall be prepared in accordance with Kentucky Department of Highways Standard Specifications for Road and Bridge Construction (latest edition).

☐ Substitutes for sod such as artificial turf, rocked mulch, or paved areas may be acceptable if they are aesthetically pleasing and receive prior approval from KYTC.

☐ All ditch-flow lines and all ditch-side slopes shall be sodded.

☐ Existing concrete right of way markers shall not be disturbed. If damaged in any way, they shall be entirely replaced by the permittee with new concrete markers to match the original markers, in accordance with Kentucky Department of Highways Standard Drawings. Markers that are entirely removed shall be re-established in the proper locations by the permittee and to the satisfaction of the Department.

☐ Additional notes:

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AUGUST 27, 2024
KENTUCKY TRANSPORTATION CABINET
06-2024-00844

IX. RIGHT OF WAY FENCE RESTORATION

- ☐ The replacement fence shall be a height of at least 48 inches and shall be of sufficient density to protect against encroachment.
- ☐ The replacement fence shall be a minimum of 1 foot and a maximum of 2 feet outside the right-of-way line
- ☐ The fence materials and design shall meet accepted industry standards and be treated as paintable. Durable finish materials such as vinyl are acceptable.
- ☐ The permittee shall be required to construct and maintain the replacement fencing to an acceptable level of functionality and state of repair. All work on the fencing shall be performed by access from the private property. Access from the roadway is not allowed.
- ☐ The existing fence shall be removed by permittee and stored at the Department's maintenance storage yard for future reuse by the Department, or the Department shall be reimbursed the cost of fencing removed.
- ☐ Right of way monuments shall be installed regardless of if replacement fence is installed or not.
- ☐ The control of access shall not be diminished as a result of replacement of the fence.
- ☐ Additional notes:

X. MISCELLANEOUS NOTES

NOTICE TO PERMITTEE

THE PERMITTEE AGREES THAT ALL WORK WITHIN THE EXISTING RIGHT OF WAY SHALL BE DONE IN ACCORDANCE WITH THE CURRENT KYTC STANDARD SPECIFICATIONS AND THE PLANS AS APPROVED AND PERMITTED BY AN ENCROACHMENT PERMIT. ANY CHANGES OR VARIANCES MADE AT THE TIME OF CONSTRUCTION WITHOUT WRITTEN APPROVAL FROM THE DEPARTMENT OF HIGHWAYS SHALL BE REMOVED BY THE PERMITTEE AT NO EXPENSE TO THE DEPARTMENT OF HIGHWAYS AND SHALL BE REDONE BY THE PERMITTEE TO CONFORM WITH THE APPROVED PLANS.

APPROVED
Highway District
KENTUCKY TRANSPORTATION CABINET

Kenton County Encroachment Permit

KENTON COUNTY
PUBLIC WORKS

LEADING FROM THE FRONTIER TO THE FUTURE

August 26, 2024

Northern Kentucky Water District
Kyle Ryan
2835 Crescent Springs Road
Erlanger, KY 41018

RE: NKWD Sub-District 'O' Water Main Extension;
Project # 231591
Location: Alexander Rd, Gene St, Elliott Rd, Highwater Rd, Pfanstiel Rd, Mann Rd, Steep Creek Rd, Trace Run Rd, Goshorn Rd, Kenton County

This letter should serve to provide your company permission to perform the work as requested in the attached documents. A permit is granted from Kenton County Public Works contingent upon all work being performed in accordance with the following parameters:

- Kenton County Public Works shall be notified 72 hours before work is scheduled to begin. Individual notice shall be provided for work on each route.
- Maintenance of Traffic for all installations will be in accordance with the MUTCD
- The permit holder shall be responsible for any damage to the ditch line or roadway that occurs from construction activities.
- Construction shall be in conformance the plans and specifications attached to this permit.
- If necessary, the roadway shall be saw cut and the pavement structure shall be restored in kind to match existing field conditions.
- Asphalt patches for restoration work in the roadway shall be extended to the full width of the road.
- See attached for Special Notes for repair.
- Best Management Practices with regard to erosion and sediment control shall be used on all locations.
- The roadway must be kept clean during construction.
- Final grading, seeding, and restoration shall be performed to the satisfaction of the Kenton County Engineer.
- The contractor is advised to contact the B.U.D. one-call system, however, the permit holder should be aware that the underground facilities are not required to be member of the B.U.D. one-call system. It is the responsibility of the

contractor to appropriately coordinate with all potentially impacted utility owners.

Our office will hold this permit for a period of 180 days following formal notice from you of project completion. Upon notice of completion, we will perform an inspection of the project area and notify you of any corrective work.

If you have any questions, please feel free to contact me at 859-392-1920.

Regards,

Scott Hansman
Engineering Services

SPECIAL NOTE FOR ROADWAY REPAIR

The Engineer will determine actual repair locations and dimensions at the time of construction. Place in equal lifts not to exceed 4" of Class 2 Asphalt Base 1.00D PG64-22 to meet existing field conditions. Compact the asphalt base to the compaction required in Section 403.03.10. Perform repair in such a manner that removal and replacement are completed on the same day. Do this work as one of the Contractor's first operations in order to allow further compaction by traffic. Do not mill or place new asphalt surface over repaired asphalt base areas until a minimum of 7 calendar days have elapsed after placement of the asphalt base. After a minimum of 7 calendar days and when the Engineer determines the asphalt base repair areas have sufficiently stabilized, begin milling and/or resurfacing operations.

Mill out area determined by Engineer to a depth of 1" and replace with Class 2 Asphalt Surface 0.38D PG 64-22. Compact the asphalt surface to the compaction required in Section 403.03.10
Perform repair in such a manner that removal and replacement are completed on the same day.

Independence Encroachment Permit

CITY OF INDEPENDENCE
5409 MADISON PIKE • INDEPENDENCE, KY 41051
859-356-5302 • FAX: 859-356-6843

CERTIFICATE OF ENCROACHMENT APPLICATION

Private Entrance

To Be Completed By Applicant

(Please Type or Print)

1. Name: CT Consultants, Inc on behalf of Northern Kentucky Water District

   Address: 2835 Crescent Springs Pike

   City: Erlanger

   State: Kentucky

   Zip Code: 41018

   Phone Number: 859-426-2713 (Kyle Ryan) (jcornell@ctconsultants.com)

2. Address of Proposed Encroachment: Scenic Ridge Drive - Pelly Road to north end

3. ☐N ☐S ☒E ☐W side of Scenic Ridge Drive

   Approximately _____ feet ☐N ☐S ☐E ☐W of See attached plans

4. Is Location of Encroachment on a: ☒City Road
5. Additional Information: proposed installation of 8" water main

For Official Use Only

Approved: ☒Yes ☐No

Conditions: Heads up when you start

Ken - 859-743-3218

Inspected By: _____ : Date: _____

Approved By: _____ : Date: 10/8/24

Kentucky UNBRIDLED SPIRIT

Independence Vision Statement:
"To become one of America's most livable cities, relentless in the pursuit of an outstanding quality of life for our citizens."

Villa Hills Encroachment Permit

CITY OF VILLA HILLS

ENCROACHMENT PERMIT APPLICATION

Application Date 10-14-2024

Applicant Name Northern Kentucky Water District **Occupational License #**

Applicant Address

2835 Crescent Springs Pike

City Erlanger **State** Ky **ZIP** 41018

Contact Person Steve Broering **Phone** 859-426-2728

Type of Encroachment ☒ Street ☐ Sidewalk ☐ Other:

Location of Obstruction

Highwater Road from River Heights Lane to #1873

Brief Description of the Work

Extension of an existing 8" water main

Accurate and Complete Description of Encroachment

Construction of 367 ft of 8" water main along Highwater Road from the current water main terminus across from River Heights Lane to #1873 Highwater Road

Explanation of Need for Encroachment

Due to topography along the roadway in this area and the close proximity of an existing gas main, the proposed water main alignment needs to be constructed in the pavement area.

Date & Time Activity to Commence TBD **To be Completed** TBD

Cellular Equipment Only Has the proposed work been reviewed and approved by the Kenton County Municipal Planning and Zoning Commission? ☐ Yes ☐ No

The following must be included:

☐ A scaled plot plan showing the location, dimensions, and details of the proposed encroachment.

☐ $100.00 application fee.

The undersigned hereby agrees to indemnify and hold harmless the City of Villa Hills and its agents for any and all injuries or losses resulting from the proposed activity related to this encroachment permit. Approval does not relieve the applicant from obligations and responsibilities to protect traffic and personnel. Other permits may be necessary and it is the Applicant's responsibility to obtain any and all necessary permits related to the activity. The undersigned hereby agrees to comply with the City of Villa Hills Code of Ordinances Chapter 51 (Encroachments).

APPLICANT

STATE OF Kentucky :SS

COUNTY OF Kenton

Acknowledged, subscribed and sworn to before me this the 14 day of Oct, 2024.

Notary Public KYNP24206

My Commission Expires: 2/24/25

APPROVED: D.C Yelton **PERMIT NO.** 2024-ENC-059

1430500.1
225415-74698

EXHIBIT C

BID INFORMATION AND BOARD APPROVAL

EXHIBIT C-1

BID TABULATION

Sub-District O Water Main Extension, Kenton County, Kentucky

07/03/2025 02:00 PM EDT

Base Bid - Highwater Road, Scenic Ridge Drive, Decoursey Pike, Steep Creek Road, Mann Road, Gene Street, Fiskburg Road, Alexander Road, & Elliot Road

			Howell Contractors, inc.		Jack Gemmer & Sons Inc		Rector Excavating		Lonkard Construction Co.	
Item Description	**UofM**	**Quantity**	**Unit Price**	**Extension**	**Unit Price**	**Extension**	**Unit Price**	**Extension**	**Unit Price**	**Extension**
Highwater Road				**$108,540.15**		**$94,210.00**		**$103,585.00**		**$101,339.50**
6.01 CLASS 50 or 52 DUCTILE IRON PIPE (8"). (Detail 103, 103a, 104, 104a, 110)	LF	367	$175.45	$64,390.15	$155.00	$56,885.00	$155.00	$56,885.00	$171.50	$62,940.50
7.01 CONNECT TO EXISTING MAIN/TIE-IN (8")	EA	1	$3,500.00	$3,500.00	$1,800.00	$1,800.00	$2,000.00	$2,000.00	$5,000.00	$5,000.00
8.01 INSTALL FIRE HYDRANT ASSEMBLY	EA	1	$6,500.00	$6,500.00	$6,950.00	$6,950.00	$7,600.00	$7,600.00	$7,974.00	$7,974.00
9.01 DUCTILE IRON RESILIENT SEATED GATE VALVE (8")	EA	2	$1,500.00	$3,000.00	$2,000.00	$4,000.00	$2,400.00	$4,800.00	$2,400.00	$4,800.00
10.02 INSTALL SERVICE LINE AND WATER METER SETTING (3/4") (Service line materials provided by NKWD)	EA	1	$2,500.00	$2,500.00	$1,600.00	$1,600.00	$1,800.00	$1,800.00	$2,000.00	$2,000.00
11.04 PLUG AND BLOCK (8")	EA	1	$250.00	$250.00	$400.00	$400.00	$450.00	$450.00	$500.00	$500.00
11.06 ANCHORING TEE AND BLOCK (8"x8"x6")	EA	1	$700.00	$700.00	$600.00	$600.00	$500.00	$500.00	$500.00	$500.00
12.05 ASPHALTIC CONCRETE MILLING AND PAVING	SY	460	$15.00	$6,900.00	$20.00	$9,200.00	$38.00	$17,480.00	$17.50	$8,050.00
12.06 ASPHALTIC CONCRETE (8" min or match existing (whichever is greater)	SY	165	$120.00	$19,800.00	$75.00	$12,375.00	$68.00	$11,220.00	$55.00	$9,075.00
12.14 BEST MANAGEMENT PRACTICE	LS	1	$1,000.00	$1,000.00	$400.00	$400.00	$850.00	$850.00	$500.00	$500.00
Section B - Scenic Ridge Drive				**$322,058.15**		**$320,095.00**		**$334,751.00**		**$325,991.50**
6.03 C-900, C-909 Poly Vinyl Chloride (PVC) (8") (Detail 103, 103a, 104, 104a, 110)	LF	1527	$123.45	$188,508.15	$135.00	$206,145.00	$138.00	$210,726.00	$141.50	$216,070.50
7.01 CONNECT TO EXISTING MAIN/TIE-IN (8")	EA	1	$3,500.00	$3,500.00	$1,000.00	$1,000.00	$1,000.00	$1,000.00	$5,000.00	$5,000.00
8.01 INSTALL FIRE HYDRANT ASSEMBLY	EA	4	$6,500.00	$26,000.00	$6,950.00	$27,800.00	$7,500.00	$30,000.00	$7,974.00	$31,896.00
9.01 DUCTILE IRON RESILIENT SEATED GATE VALVE (8")	EA	1	$1,500.00	$1,500.00	$2,000.00	$2,000.00	$2,400.00	$2,400.00	$2,400.00	$2,400.00
10.02 INSTALL SERVICE LINE AND WATER METER SETTING (3/4") (Service line materials provided by NKWD)	EA	6	$2,000.00	$12,000.00	$1,600.00	$9,600.00	$1,800.00	$10,800.00	$2,000.00	$12,000.00
11.04 PLUG AND BLOCK (8")	EA	1	$250.00	$250.00	$400.00	$400.00	$425.00	$425.00	$500.00	$500.00
11.06 ANCHORING TEE AND BLOCK (8"x8"x6")	EA	4	$700.00	$2,800.00	$600.00	$2,400.00	$475.00	$1,900.00	$500.00	$2,000.00
12.05 ASPHALTIC CONCRETE MILLING AND PAVING	SY	1500	$15.00	$22,500.00	$20.00	$30,000.00	$25.00	$37,500.00	$17.50	$26,250.00
12.06 ASPHALTIC CONCRETE (8" min or match existing (whichever is greater)	SY	500	$120.00	$60,000.00	$75.00	$37,500.00	$68.00	$34,000.00	$55.00	$27,500.00
12.07 ASPHALTIC CONCRETE - DRIVEWAY	SY	25	$160.00	$4,000.00	$70.00	$1,750.00	$120.00	$3,000.00	$75.00	$1,875.00
12.14 BEST MANAGEMENT PRACTICE	LS	1	$1,000.00	$1,000.00	$1,500.00	$1,500.00	$3,000.00	$3,000.00	$500.00	$500.00
Section C - Decoursey Pike				**$83,532.80**		**$74,520.00**		**$76,420.00**		**$83,556.00**
6.01 CLASS 50 or 52 DUCTILE IRON PIPE (8"). (Detail 103, 103a, 104, 104a, 110)	LF	464	$166.45	$77,232.80	$155.00	$71,920.00	$155.00	$71,920.00	$166.50	$77,256.00
7.01 CONNECT TO EXISTING MAIN/TIE-IN (8")	EA	1	$3,500.00	$3,500.00	$1,800.00	$1,800.00	$1,400.00	$1,400.00	$5,000.00	$5,000.00
12.14 BEST MANAGEMENT PRACTICE	LS	1	$1,000.00	$1,000.00	$400.00	$400.00	$1,500.00	$1,500.00	$500.00	$500.00
12.15 ROCK CHANNEL PROTECTION	SY	8	$225.00	$1,800.00	$50.00	$400.00	$200.00	$1,600.00	$100.00	$800.00
Section D - Steep Creek Road				**$896,196.50**		**$968,254.00**		**$923,425.00**		**$996,109.00**
6.01 CLASS 50 or 52 DUCTILE IRON PIPE (8"). (Detail 103, 103a, 104, 104a, 110)	LF	5370	$139.45	$748,846.50	$155.00	$832,350.00	$144.50	$775,965.00	$161.50	$867,255.00
8.01 INSTALL FIRE HYDRANT ASSEMBLY	EA	6	$6,500.00	$39,000.00	$6,950.00	$41,700.00	$7,500.00	$45,000.00	$7,974.00	$47,844.00
9.01 DUCTILE IRON RESILIENT SEATED GATE VALVE (8")	EA	5	$1,500.00	$7,500.00	$2,000.00	$10,000.00	$2,400.00	$12,000.00	$2,400.00	$12,000.00
10.02 INSTALL SERVICE LINE AND WATER METER SETTING (3/4") (Service line materials provided by NKWD)	EA	4	$2,000.00	$8,000.00	$1,600.00	$6,400.00	$1,900.00	$7,600.00	$2,000.00	$8,000.00
11.04 PLUG AND BLOCK (8")	EA	1	$250.00	$250.00	$400.00	$400.00	$450.00	$450.00	$500.00	$500.00
11.06 ANCHORING TEE AND BLOCK (8"x8"x6")	EA	6	$700.00	$4,200.00	$600.00	$3,600.00	$475.00	$2,850.00	$500.00	$3,000.00
11.06 ANCHORING TEE AND BLOCK (8"x8"x8")	EA	1	$800.00	$800.00	$850.00	$850.00	$500.00	$500.00	$500.00	$500.00

12.05 ASPHALTIC CONCRETE MILLING AND PAVING	SY	1320	$15.00	$19,800.00	$20.00	$26,400.00	$25.00	$33,000.00	$17.50	$23,100.00
12.06 ASPHALTIC CONCRETE (8" min or match existing (whichever is greater)	SY	510	$120.00	$61,200.00	$75.00	$38,250.00	$68.00	$34,680.00	$55.00	$28,050.00
12.13 GRAVEL DRIVEWAY/PARKING AREA	SY	24	$25.00	$600.00	$21.00	$504.00	$120.00	$2,880.00	$15.00	$360.00
12.14 BEST MANAGEMENT PRACTICE	LS	1	$1,000.00	$1,000.00	$5,300.00	$5,300.00	$3,500.00	$3,500.00	$500.00	$500.00
12.15 ROCK CHANNEL PROTECTION	SY	50	$100.00	$5,000.00	$50.00	$2,500.00	$100.00	$5,000.00	$100.00	$5,000.00

Section E - Mann Road				**$194,156.95**		**$128,926.00**		**$140,545.00**		**$138,936.00**
6.01 CLASS 50 or 52 DUCTILE IRON PIPE (8"). (Detail 103, 103a, 104, 104a, 110)	LF	303	$241.45	$73,159.35	$155.00	$46,965.00	$155.00	$46,965.00	$166.50	$50,449.50
6.02 CLASS 50 or 52 DUCTILE IRON PIPE (8") - INTERNAL RESTRAINED JOINT.	LF	288	$311.45	$89,697.60	$160.00	$46,080.00	$165.00	$47,520.00	$195.00	$56,160.00
8.01 INSTALL FIRE HYDRANT ASSEMBLY	EA	1	$6,500.00	$6,500.00	$6,950.00	$6,950.00	$7,500.00	$7,500.00	$7,974.00	$7,974.00
9.01 DUCTILE IRON RESILIENT SEATED GATE VALVE (8")	EA	2	$1,500.00	$3,000.00	$2,000.00	$4,000.00	$2,360.00	$4,720.00	$2,400.00	$4,800.00
10.02 INSTALL SERVICE LINE AND WATER METER SETTING (3/4") (Service line materials provided by NKWD)	EA	3	$2,000.00	$6,000.00	$1,600.00	$4,800.00	$1,900.00	$5,700.00	$2,000.00	$6,000.00
11.01 CONCRETE ENCASEMENT	LF	88	$100.00	$8,800.00	$150.00	$13,200.00	$150.00	$13,200.00	$75.00	$6,600.00
11.04 PLUG AND BLOCK (8")	EA	1	$250.00	$250.00	$400.00	$400.00	$425.00	$425.00	$500.00	$500.00
11.06 ANCHORING TEE AND BLOCK (8"x8"x6")	EA	1	$700.00	$700.00	$600.00	$600.00	$475.00	$475.00	$500.00	$500.00
11.11 TEST TAP	EA	1	$500.00	$500.00	$1,200.00	$1,200.00	$1,500.00	$1,500.00	$2,000.00	$2,000.00
12.05 ASPHALTIC CONCRETE MILLING AND PAVING	SY	125	$15.00	$1,875.00	$20.00	$2,500.00	$60.00	$7,500.00	$17.50	$2,187.50
12.06 ASPHALTIC CONCRETE (8" min or match existing (whichever is greater)	SY	20	$120.00	$2,400.00	$75.00	$1,500.00	$80.00	$1,600.00	$55.00	$1,100.00
12.13 GRAVEL DRIVEWAY/PARKING AREA	SY	11	$25.00	$275.00	$21.00	$231.00	$40.00	$440.00	$15.00	$165.00
12.14 BEST MANAGEMENT PRACTICE	LS	1	$1,000.00	$1,000.00	$500.00	$500.00	$3,000.00	$3,000.00	$500.00	$500.00

Section F - Gene Street				**$213,963.80**		**$231,987.00**		**$242,550.00**		**$245,533.00**
6.01 CLASS 50 or 52 DUCTILE IRON PIPE (8"). (Detail 103, 103a, 104, 104a, 110)	LF	50	$286.45	$14,322.50	$155.00	$7,750.00	$145.00	$7,250.00	$210.00	$10,500.00
6.03 C-900, C-909 Poly Vinyl Chloride (PVC) (8") (Detail 103, 103a, 104, 104a, 110)	LF	1214	$110.45	$134,086.30	$135.00	$163,890.00	$138.00	$167,532.00	$141.50	$171,781.00
7.01 CONNECT TO EXISTING MAIN/TIE-IN (8")	EA	1	$3,500.00	$3,500.00	$2,000.00	$2,000.00	$2,750.00	$2,750.00	$5,000.00	$5,000.00
8.01 INSTALL FIRE HYDRANT ASSEMBLY	EA	3	$6,500.00	$19,500.00	$6,950.00	$20,850.00	$7,500.00	$22,500.00	$7,974.00	$23,922.00
10.02 INSTALL SERVICE LINE AND WATER METER SETTING (3/4") (Service line materials provided by NKWD)	EA	4	$2,000.00	$8,000.00	$1,400.00	$5,600.00	$1,900.00	$7,600.00	$2,000.00	$8,000.00
11.04 PLUG AND BLOCK (8")	EA	1	$250.00	$250.00	$400.00	$400.00	$485.00	$485.00	$500.00	$500.00
11.06 ANCHORING TEE AND BLOCK (8"x8"x6")	EA	3	$700.00	$2,100.00	$600.00	$1,800.00	$500.00	$1,500.00	$500.00	$1,500.00
12.05 ASPHALTIC CONCRETE MILLING AND PAVING	SY	830	$15.00	$12,450.00	$20.00	$16,600.00	$21.00	$17,430.00	$17.50	$14,525.00
12.09 CONCRETE PAVEMENT (8" min or match existing (whichever is greater)	SY	100	$120.00	$12,000.00	$75.00	$7,500.00	$70.00	$7,000.00	$55.00	$5,500.00
12.10 CONCRETE DRIVEWAY	SY	31	$180.00	$5,580.00	$110.00	$3,410.00	$125.00	$3,875.00	$100.00	$3,100.00
12.13 GRAVEL DRIVEWAY/PARKING AREA	SY	47	$25.00	$1,175.00	$21.00	$987.00	$24.00	$1,128.00	$15.00	$705.00
12.14 BEST MANAGEMENT PRACTICE	LS	1	$1,000.00	$1,000.00	$1,200.00	$1,200.00	$3,500.00	$3,500.00	$500.00	$500.00

Section G - Fiskburg Road				**$856,020.65**		**$836,260.00**		**$805,061.00**		**$813,595.50**
6.01 CLASS 50 or 52 DUCTILE IRON PIPE (8"). (Detail 103, 103a, 104, 104a, 110)	LF	4197	$176.45	$740,560.65	$155.00	$650,535.00	$163.00	$684,111.00	$166.50	$698,800.50
7.01 CONNECT TO EXISTING MAIN/TIE-IN (8")	EA	1	$3,500.00	$3,500.00	$1,800.00	$1,800.00	$1,500.00	$1,500.00	$5,000.00	$5,000.00
8.01 INSTALL FIRE HYDRANT ASSEMBLY	EA	5	$6,500.00	$32,500.00	$6,950.00	$34,750.00	$7,500.00	$37,500.00	$7,974.00	$39,870.00
9.01 DUCTILE IRON RESILIENT SEATED GATE VALVE (8")	EA	7	$1,500.00	$10,500.00	$2,000.00	$14,000.00	$2,400.00	$16,800.00	$2,400.00	$16,800.00
10.02 INSTALL SERVICE LINE AND WATER METER SETTING (3/4") (Service line materials provided by NKWD)	EA	5	$2,000.00	$10,000.00	$16,000.00	$80,000.00	$1,900.00	$9,500.00	$2,000.00	$10,000.00
11.04 PLUG AND BLOCK (8")	EA	2	$250.00	$500.00	$400.00	$800.00	$450.00	$900.00	$500.00	$1,000.00
11.05 AIR RELEASE VALVE (ARV and service line materials provided by NKWD)	EA	1	$500.00	$500.00	$1,200.00	$1,200.00	$2,000.00	$2,000.00	$2,000.00	$2,000.00
11.06 ANCHORING TEE AND BLOCK (8"x8"x6")	EA	5	$700.00	$3,500.00	$600.00	$3,000.00	$500.00	$2,500.00	$500.00	$2,500.00
11.06 ANCHORING TEE AND BLOCK (8"x8"x8")	EA	2	$800.00	$1,600.00	$850.00	$1,700.00	$525.00	$1,050.00	$500.00	$1,000.00
12.05 ASPHALTIC CONCRETE MILLING AND PAVING	SY	1100	$15.00	$16,500.00	$20.00	$22,000.00	$22.00	$24,200.00	$17.50	$19,250.00

12.06 ASPHALTIC CONCRETE (8" min or match existing (whichever is greater)	SY	245	$120.00	$29,400.00	$75.00	$18,375.00	$70.00	$17,150.00	$55.00	$13,475.00
12.10 CONCRETE DRIVEWAY	SY	22	$180.00	$3,960.00	$110.00	$2,420.00	$125.00	$2,750.00	$100.00	$2,200.00
12.13 GRAVEL DRIVEWAY/PARKING AREA	SY	80	$25.00	$2,000.00	$21.00	$1,680.00	$20.00	$1,600.00	$15.00	$1,200.00
12.14 BEST MANAGEMENT PRACTICE	LS	1	$1,000.00	$1,000.00	$4,000.00	$4,000.00	$3,500.00	$3,500.00	$500.00	$500.00

Section H - Alexander Road				**$528,902.30**		**$527,105.00**		**$541,525.00**		**$529,148.50**
6.01 CLASS 50 or 52 DUCTILE IRON PIPE (8"). (Detail 103, 103a, 104, 104a, 110)	LF	65	$321.45	$20,894.25	$145.00	$9,425.00	$150.00	$9,750.00	$210.00	$13,650.00
6.03 C-900, C-909 Poly Vinyl Chloride (PVC) (8") (Detail 103, 103a, 104, 104a, 110)	LF	2569	$123.45	$317,143.05	$135.00	$346,815.00	$140.00	$359,660.00	$141.50	$363,513.50
8.01 INSTALL FIRE HYDRANT ASSEMBLY	EA	5	$6,500.00	$32,500.00	$6,950.00	$34,750.00	$7,800.00	$39,000.00	$7,974.00	$39,870.00
9.01 DUCTILE IRON RESILIENT SEATED GATE VALVE (8")	EA	1	$1,500.00	$1,500.00	$2,000.00	$2,000.00	$2,400.00	$2,400.00	$2,400.00	$2,400.00
10.02 INSTALL SERVICE LINE AND WATER METER SETTING (3/4") (Service line materials provided by NKWD)	EA	4	$2,000.00	$8,000.00	$1,600.00	$6,400.00	$1,950.00	$7,800.00	$2,000.00	$8,000.00
11.04 PLUG AND BLOCK (8")	EA	1	$250.00	$250.00	$400.00	$400.00	$450.00	$450.00	$500.00	$500.00
11.06 ANCHORING TEE AND BLOCK (8"x8"x6")	EA	5	$700.00	$3,500.00	$600.00	$3,000.00	$500.00	$2,500.00	$500.00	$2,500.00
12.05 ASPHALTIC CONCRETE MILLING AND PAVING	SY	3000	$15.00	$45,000.00	$20.00	$60,000.00	$20.00	$60,000.00	$17.50	$52,500.00
12.06 ASPHALTIC CONCRETE (8" min or match existing (whichever is greater)	SY	800	$120.00	$96,000.00	$75.00	$60,000.00	$68.00	$54,400.00	$55.00	$44,000.00
12.07 ASPHALTIC CONCRETE - DRIVEWAY	SY	14	$160.00	$2,240.00	$70.00	$980.00	$85.00	$1,190.00	$85.00	$1,190.00
12.13 GRAVEL DRIVEWAY/PARKING AREA	SY	35	$25.00	$875.00	$21.00	$735.00	$25.00	$875.00	$15.00	$525.00
12.14 BEST MANAGEMENT PRACTICE	LS	1	$1,000.00	$1,000.00	$2,600.00	$2,600.00	$3,500.00	$3,500.00	$500.00	$500.00

Section I - Elliot Road				**$931,509.35**		**$985,805.00**		**$1,023,285.00**		**$977,926.50**
6.01 CLASS 50 or 52 DUCTILE IRON PIPE (8"). (Detail 103, 103a, 104, 104a, 110)	LF	54	$271.45	$14,658.30	$155.00	$8,370.00	$160.00	$8,640.00	$210.00	$11,340.00
6.03 C-900, C-909 Poly Vinyl Chloride (PVC) (8") (Detail 103, 103a, 104, 104a, 110)	LF	4829	$112.45	$543,021.05	$135.00	$651,915.00	$145.00	$700,205.00	$141.50	$683,303.50
7.01 CONNECT TO EXISTING MAIN/TIE-IN (8")	EA	1	$3,500.00	$3,500.00	$7,000.00	$7,000.00	$1,400.00	$1,400.00	$5,000.00	$5,000.00
8.01 INSTALL FIRE HYDRANT ASSEMBLY	EA	7	$6,500.00	$45,500.00	$6,950.00	$48,650.00	$7,500.00	$52,500.00	$7,974.00	$55,818.00
9.01 DUCTILE IRON RESILIENT SEATED GATE VALVE (8")	EA	3	$1,500.00	$4,500.00	$2,000.00	$6,000.00	$2,400.00	$7,200.00	$2,400.00	$7,200.00
10.02 INSTALL SERVICE LINE AND WATER METER SETTING (3/4") (Service line materials provided by NKWD)	EA	6	$2,000.00	$12,000.00	$1,600.00	$9,600.00	$1,750.00	$10,500.00	$2,000.00	$12,000.00
11.04 PLUG AND BLOCK (8")	EA	1	$250.00	$250.00	$400.00	$400.00	$450.00	$450.00	$500.00	$500.00
11.06 ANCHORING TEE AND BLOCK (8"x8"x6")	EA	7	$700.00	$4,900.00	$600.00	$4,200.00	$500.00	$3,500.00	$500.00	$3,500.00
12.05 ASPHALTIC CONCRETE MILLING AND PAVING	SY	5500	$15.00	$82,500.00	$20.00	$110,000.00	$20.00	$110,000.00	$17.50	$96,250.00
12.06 ASPHALTIC CONCRETE (8" min or match existing (whichever is greater)	SY	1650	$120.00	$198,000.00	$75.00	$123,750.00	$68.00	$112,200.00	$55.00	$90,750.00
12.07 ASPHALTIC CONCRETE - DRIVEWAY	SY	89	$160.00	$14,240.00	$70.00	$6,230.00	$85.00	$7,565.00	$85.00	$7,565.00
12.10 CONCRETE DRIVEWAY	SY	33	$180.00	$5,940.00	$110.00	$3,630.00	$125.00	$4,125.00	$100.00	$3,300.00
12.13 GRAVEL DRIVEWAY/PARKING AREA	SY	60	$25.00	$1,500.00	$21.00	$1,260.00	$25.00	$1,500.00	$15.00	$900.00
12.14 BEST MANAGEMENT PRACTICE	LS	1	$1,000.00	$1,000.00	$4,800.00	$4,800.00	$3,500.00	$3,500.00	$500.00	$500.00

Base Bid Total:	**$4,134,880.65**	**$4,167,162.00**	**$4,191,147.00**	**$4,212,135.50**



EXHIBIT C-2

ENGINEER'S RECOMMENDATION OF AWARD

2161 Chamber Center Drive
Fort Mithcell, Kentucky 41017

July 16, 2025

Mr. Kyle Ryan
Northern Kentucky Water District
2835 Crescent Springs Road
Erlanger, Kentucky 41018

RE: SUB-DISTRICT 'O' WATER MAIN EXTENSION, KENTON COUNTY, KENTUCKY
NORTHERN KENTUCKY WATER DISTRICT
#231591

Dear Mr. Ryan:

On Thursday, July 3, 2025, Bid Proposals were opened for the above-referenced project. There were four (4) Bid Proposals received; the results were as follows:

BIDDER	BASE BID
Howell Contractors	$4,134.880.65
Jack Gemmer& Sons, Inc.	$4,167,162.00
Rector Excavating	$4,191,147.00
Lonkard Construction Co.	$4,212,135.50

Based upon our review, and knowledge of the contractors, it is our recommendation that the project be awarded to Howell Contractors for the bid proposal of $4,134,880.65.

If you have any questions concerning the figures or specific items, please feel free to contact me at your convenience at 859.534.9931 or jshumate@verdantas.com.

Sincerely,

James Shumate, P.E., P.S.
Project Manager

Attachment

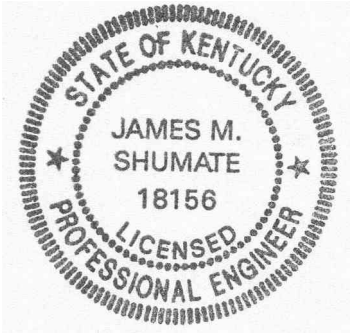


EXHIBIT C-3

BOARD MEETING MINUTES

Northern Kentucky Water District
Board of Commissioners
Regular Meeting
July 17, 2025

A regular meeting of the Board of Commissioners of the Northern Kentucky Water District was held on July 17, 2025 at the District's facility located at 2835 Crescent Springs Road in Erlanger, Kentucky and via video teleconference in accordance with KRS 61.826. All Commissioners were present. Also present were Lindsey Rechtin, Stacey Kampsen, John Moor, Richard Harrison, Tom Edge, Chris Bryant, Canaan Harrison, and Cassandra Zoda.

Commissioner Lange called the meeting to order at 12:02 p.m., and Commissioner Lange led the pledge of allegiance.

The Commissioners reviewed correspondence received and articles published since the last regular Board meeting on May 29, 2025.

On motion of Commissioner Koester, seconded by Commissioner Macke, the Board unanimously approved the minutes for the regular Board meeting held on May 29, 2025.

The Board was provided a copy of the District's check registers, which included the check number, check date, payee, check amount and description of the reason for each payment, detailing the District's expenditures for the period May 1, 2025, through June 30, 2025. On motion of Commissioner Wagner, seconded by Commissioner Winnike, and after discussion, the Board unanimously approved the expenditures of the District for the months of May and June 2025.

President/CEO Lindsey Rechtin updated the Board on progress made toward meeting the goals of the new Strategic Plan.

On motion of Commissioner Wagner, seconded by Commissioner Koester, the Board unanimously accepted the bid of $496,308.00 from Lonkard Construction, awarded a contract for the Dayton Pike Water Main Replacement project with a total project budget of $610,000, and authorized staff to execute the applicable contract documents.

On motion of Commissioner Wagner, seconded by Commissioner Macke, the Board unanimously accepted the bid of $4,134,880.65 from Howell Contractors, Inc., awarded a contract for the Subdistrict O Water Main Extension project with a total project budget of $4,826,785, and authorized staff to execute the applicable contract documents.

On motion of Commissioner Winnike, seconded by Commissioner Wagner, the Board unanimously authorized the purchase of Office 365 licenses from SHI through the cooperative purchasing contract with the Commonwealth of Kentucky for software, for a one-year term with the option to extend the contract at the staff's discretion for additional terms not exceeding 12-months each, and authorized the President/CEO or their designee to execute such documents.

The Board reviewed the District's financial reports and Department reports.

Vice President of Finance & Support Services Stacey Kampsen updated the Board on revenues and expenses and on 2026 budget work.

Vice President of Water Quality & Production John Moor reviewed current water production quantities and an update on lab test fees.

Vice President of Engineering & Distribution Richard Harrison reviewed with the Board the status of on-going projects within the 2025 5-Year Capital Budget, including highlighting 3 change orders and expenses incurred to date and provided updates on main breaks, regional water status, and the Newport Town Hall meeting held on July 8, 2025 to discuss the Newport Water Main Replacement Project.

General Counsel, Director of Compliance, Communications and Regulatory Affairs Tom Edge provided the Board an update on PSC Case 2025-00238 – Carl Knochelmann v NKWD, and PSC Case 2025-00239 – Charles Downton v. NKWD.

Director of Technology, Innovation and Business Intelligence Chris Bryant provided the Board an update on cybersecurity.

Other matters of a general nature were discussed.

Commissioner Lange adjourned the meeting at 1:18 p.m.

CHAIRMAN SECRETARY

EXHIBIT D

PROJECT FINANCE INFORMATION

Northern Kentucky
Water District

Customers Added and Revenue Effect: There is the potential for 61 new customers to be added. To date, 33 (54.1%) of these potential customers have requested service. The projected revenue for 33 new services is $19,786.83 a year as a result of the Subdistrict O Water Main Extension project (assumed each customer uses 4,000 gallons a month | projected revenue does not include the sub-district surcharge or taxes).

Debt Issuance and Source of Debt: The project will be funded by $1,100,000 in Cleaner Water Program (CWP) grant funds; and 2) $2,400,000 in Kenton County ARPA funds. The remaining $1,326,785 will be paid from a future Bond Anticipation Note as part of the District's Five-Year Capital Budget, PSC No. 291 "Kenton County Subdistrict O" which includes a customer contribution of $297,000.00. The customer contribution will be paid back through a monthly surcharge of $30.00 on the customer's water bill over 25 years.

The total project budget is $4,826,785 which includes construction cost, engineering, materials, and contingencies. A summary of the project costs is provided below:

o Engineering	$ 468,036.00
o Contractor's Bid	$ 4,134,880.65
o Misc. & Contingencies	$ 223,868.35
Total Project Cost	$ 4,826,785.00

USoA Accounts: The anticipated amounts for the project cost of $4,826,785 will fall under the following Uniform System of Accounts Codes:

Code 331 "Transmission & Distribution Mains"	$ 4,552,285
Code 334 "Meter & Meter Installation "	$ 66,500
Code 335 "Hydrants"	$ 208,000

Additional Costs and O&M: No additional operating and maintenance costs are anticipated from the project.

Depreciation and Debt Service: Annual depreciation and debt service after construction are as follows:

Depreciation: $72,836.56/year over 62.5 years for Code 331 "Transmission & Distribution Mains", $1,564.71/year over 42.5 years for Code 334 "Meter & Meter Installation" and $4,160/year over 50 years for Code 335 "Hydrants"

Debt Service: $84,930.11 over 25 years (conventional 4.0% loan).

07/23/2025

CWP GRANT COMPLIANCE FORMS & EXHIBITS CHECKLIST

Grantee Northern Kentucky Water District

Grant # 21CWW285 Sup **PNum** WX21117303

- [x] CCL Sent to Grantee
- [ ] Grantee Signed CCL
- [x] Attachment B – Project Budget
- [x] Exhibit 1 Completed Review / Update of Project Profile
- [ ] Exhibit 2 Grantee Vendor Number
- [ ] Exhibit 3 Transparency Act Reporting Information Form (with UEI #)
- [x] Unsigned GAA to Grantee
- [x] Exhibit 4 A) Grantee Resolution
  B) Certificate of Recording Officer
- [x] Exhibit 5 Opinion of Legal Counsel Relating to the Grantee Resolution
- [x] Signed GAA Returned by Grantee
- [x] Exhibit 6 A) Copy of the Engineering Services Contract; and
  B) Grantee & Engineer Fee Confirmation
- [x] 100% P&D (Project) Or [x] 50% P&D (Construction Project)
- [x] Exhibit 7 eClearinghouse Endorsement Letter with Comments.
- [x] Exhibit 8 DOW Plans & Specs Approval Letter
- [x] GAA Signed by Executive Director & Attorney with Draw Work Book sent to Grantee
- [ ] Exhibit 9 Project Bid Package:
  (A) Engineer,
  (B1) Authorized Official, and (If applicable)
  (B2) Title Attorney.
- [x] Exhibit 10 Certification Regarding Utility Accounting
  And Cost-Based Rates and Auditing.
- [x] Exhibit 11 Certificate of Project Completion.

Notes: A) If Project does not require Engineering Services, mark checkbox as NA.
B) 5% of total award amount to be retained until Exhibits 8, 9, 10 and 11 are received.

AMENDED AND RESTATED SUPPLEMENTAL GRANT ASSISTANCE AGREEMENT

This AMENDED AND RESTATED SUPPLEMENTAL Grant Assistance Agreement (the "Agreement") is made and entered into by and between the Kentucky Infrastructure Authority (the "Authority"), a body corporate and politic, constituting a public corporation and governmental agency and instrumentality of the Commonwealth of Kentucky, and the Northern Kentucky Water District (the "Grantee"), acting herein through its Authorized Official, each a party to this Agreement, which shall be effective upon the date of signing by the Executive Director of the Authority,

W I T N E S S E T H:

WHEREAS, the General Assembly of the Commonwealth of Kentucky, being the duly and legally constituted legislature of Kentucky at its 1988 Regular Session, enacted House Bill 217 amending Chapter 224A of the Kentucky Revised Statutes (the "Act"), creating the "Kentucky Infrastructure Authority" to serve the public purposes identified in the Act; and

WHEREAS, the Authority, attached to the Governor's Office, is charged pursuant to Section 224A.300 of the Act with coordinating the funding and implementation of infrastructure projects and to this end maintains the Water Resource Information System (the "WRIS") a comprehensive database of community water and wastewater projects across Kentucky; and

WHEREAS, Senate Bill 36 of the 2021 Regular Session of the Kentucky General Assembly approved a $250,000,000 allocation in Federal Funds for Fiscal Year 2021 from the American Rescue Plan Act of 2021/Coronavirus State Fiscal Recovery Fund to the Authority for the Drinking Water and Wastewater Grant Program, known as the Kentucky Cleaner Water Program (the "CWP"), and House Bill 1 of the 2022 Regular Session of the Kentucky General Assembly approved another $250,000,000 allocation in Federal Funds for Fiscal Year 2022 from the American Rescue Plan Act of 2021/Coronavirus State Fiscal Recovery Fund to the Authority for the CWP, a portion of which funds are the subject of this Agreement; and

WHEREAS, the Grantee is acquiring and constructing a project as described in the Grantee's Project Profile in the WRIS (the "Project") and the Authority has determined that the Project meets the guidelines of the Cleaner Water Program and the directives of the General Assembly;

WHEREAS, the Grantee and the Authority previously entered into that certain Grant Assistance Agreement dated July 23, 2024 (the "Original Agreement"); and now wish to amend and restate the Original Agreement in its entirety by their adoption of this Agreement for the purpose of increasing the amount of the Grant (as defined below); and

WHEREAS, the Grantee and the Authority desire to enter into this Agreement which sets forth and revises their respective duties, rights, covenants, and obligations

with respect to the acquisition and construction of the Project and the application of the proceeds of a grant, as increased hereunder, from the Cleaner Water Program as administered by the Authority.

NOW THEREFORE, in consideration of the mutual covenants and conditions contained herein, the grant hereby effected, and for other good and valuable consideration, the receipt, mutuality and sufficiency of which is hereby acknowledged by the parties hereto, the Authority and the Grantee each agree as follows:

SECTION 1 – DEFINITIONS

All terms utilized herein shall have the same definitions and meaning as ascribed to them in the Act, which Act is hereby incorporated in this Agreement by reference, the same as if set forth herein verbatim; provided, however, that those definitions utilized in the Act having general application are hereby modified in certain instances to apply specifically to the Grantee and its Project.

Act shall mean Chapter 224A of the Kentucky Revised Statutes, as amended (the "KRS").

Agreement shall mean this Amended and Restated Supplemental Grant Assistance Agreement made and entered into by and between the Grantee and the Authority, as authorized by the Act, providing for a Grant to be made to the Grantee or its approved agent, subject to approval by the Authority.

Area Water Management Council shall mean the entity designated as the regional planning body for the respective counties within an Area Development District in Kentucky, which shall prepare and maintain an Area Water Management Plan, listing and prioritizing Project Profiles for water and wastewater projects within that region.

Engineer(s) shall mean the professional engineer or firm of professional engineers properly procured in accord with KRS Chapter 45A and 2 CFR 200.317 through 2 CFR 200.327 (where applicable), as amended, by the Grantee in connection with the Project, as identified in the WRIS Cleaner Water Program Database.

Exhibit shall refer to a specific document, or to the completion of a process or procedure to be accomplished as a prerequisite to release of funds to the Grantee by the Authority.

Grant shall mean that portion of the Kentucky CWP funds made available to the Commonwealth by the American Recovery Program Act and allocated by the Kentucky General Assembly in its 2021 and 2022 Regular Sessions, which shall be incrementally transferred under this Agreement from the Commonwealth to the Grantee through Grant Number 21CWW285 in the principal amount of $1,100,000 for the purpose of defraying the costs incidental to the Project.

Grantee shall mean any unit of local government, or its designated agent, as approved by the Authority, or any special purpose governmental entity within the Commonwealth eligible for funds under the CWP in accordance with the Act, now having been or hereafter being granted the funds for the Project; and for the purposes of this Agreement shall mean the Grantee identified on the front page of this Agreement.

Project shall mean, when used generally, a water, wastewater or other infrastructure project authorized pursuant to the Act, and when used in specific reference to the Grantee's Project funded by the Authority through the CWP, it shall refer to that project as described in the Grantee's Project Profile in the WRIS, which has an 8 digit number following the designation WX or SX.

Project Administrator shall mean that individual designated in the Project Profile by that title, who has the capacity and responsibility of supervising the Project and coordinating the preparation of all related documentation on behalf of the Grantee with respect to the Project.

Project Budget shall mean a list of Project expenses and funding sources, in the form set forth in the current Project Profile as set forth in the WRIS.

Project Profile shall mean those specific details of the Project, presented by the Grantee to the respective Area Water Management Council for review and incorporation into the Area Water Management Plan and the WRIS.

System shall mean the utility system owned and operated by the Grantee or the agent of the Grantee, as approved by the Authority, to which the Project shall become a part, and any revenues generated by the Project, which are used to operate and maintain the utility system in the typical manner of a local public utility in Kentucky.

SECTION 2 - OBLIGATIONS OF THE AUTHORITY

The Authority covenants and agrees, conditioned upon the timely performance by the Grantee of its respective obligations, to undertake the following obligations:

A. The Authority shall review and approve Project related documentation provided by the Grantee. Once the Project is under construction, the Authority shall review requests for payment submitted for payment of costs of the Project. Any deficiencies found in said requests will be reported immediately to the Grantee. If there are no deficiencies in said requests or deficiencies have been resolved satisfactorily by the Grantee, the Authority will approve the requests and disburse grant funds to the Grantee in an amount not to exceed, cumulatively, the approved grant amount for the Project.

B. The Authority will communicate and cooperate with the Grantee to best assist the Grantee in meeting its obligations set out in this Agreement.

SECTION 3 - OBLIGATIONS OF THE GRANTEE

The Grantee covenants and agrees to undertake the following obligations:

A. The Grantee shall complete and submit executed copies of all required Exhibits to the Authority, in accordance with the Conditional Commitment Letter and Supplemental Conditional Commitment Letter instructions.

B. The Grantee may consider utilizing the option for partial funding set out in Section 6, below. Over the course of the acquisition and construction of the Project, the Grantee shall provide such status reports as may be requested by the Authority, and once the Project is under construction submit periodic requests for payment to the Authority accompanied by copies of invoices for costs incurred in accordance with the Authority's standard draw-down request format.

C. The Grantee shall perform and/or cause to be performed all necessary acts consistent with all federal and state labor and procurement laws in connection with the planning, design, acquisition and construction of the Project, including: the proper procurement of land, easements and rights of way; professional services, including but not limited to architectural and engineering services; construction contractor(s) services; and the acquisition of necessary equipment and/or materials.

D. The Grantee shall obtain and keep on file all required permits, licenses and approvals from the appropriate federal, state, and/or local governmental agencies prior to starting construction of the Project.

E. The Grantee shall comply with all applicable federal and state statutes, executive orders, regulatory requirements, and policies relating to the planning and construction of the Project.

F. The Grantee shall cooperate fully with the Authority and provide any documentation requested by the Authority in order to facilitate completing the obligations set out in this Agreement.

G. The Grantee will proceed expeditiously to complete the Project in accordance with the approved final engineering plans and specifications or amendments thereto, prepared by the Project Engineer for the Grantee, if required and as approved by the Authority and other state and federal agencies, as appropriate.

H. The Grantee agrees that throughout the reasonable life of the infrastructure facilities developed under the Project it will retain ownership of, operate, and maintain these facilities, and all appurtenances thereto, keeping them in good and sound repair and good operating condition at its own expense so that the completed Project will continue to provide the services for which it was designed.

Change of ownership or disposal of the Project facilities during their useful life may occur only with written approval of the Authority.

I. If the Grantee is a local unit of government, city or county, and determines that it is in the best interest of its citizens, it may enter into a memorandum of agreement with a Kentucky corporation to serve as its agent for the implementation and long term operation and management of the Project, subject to the Agreement. The form and content of such a memorandum of agreement is subject to the prior approval of the Authority.

J. General Compliance with all Duties. The Grantee shall faithfully and punctually perform all duties with reference to the System required by the American Rescue Plan Act of 2021, and by the terms and provisions of the Act, and this Assistance Agreement.

K. Further Covenants under the American Rescue Plan Act of 2021. The Grantee shall comply with all further requirements or conditions which may arise from time to time in order to assure compliance with the American Rescue Plan Act of 2021, including but not limited to the following:

1. Records Retention. The Grantee shall provide to the Authority access to all records related to the Project for review in determining compliance with this Agreement and all applicable laws and regulations, including the American Rescue Plan Act of 2021/Coronavirus State Fiscal Recovery Fund. The Grantee shall retain all records, including all invoices, relating to the Project for five (5) years after full execution of the Certificate of Completion.

2. Single Audit Requirements. Grantees that expend more than $750,000 in Federal awards during their fiscal year will be subject to an audit under the Single Audit Act and its implementing regulation at 2 CFR Part 200, Subpart F regarding audit requirements. Grantees may also refer to the Office of Management and Budget (OMB) Compliance Supplements for audits of federal funds and related guidance and the Federal Audit Clearinghouse to see examples and single audit submissions.

3. Civil Rights Compliance. The Grantee is required to meet legal requirements relating to nondiscrimination and nondiscriminatory use of Federal funds. Those requirements include ensuring that entities receiving Federal financial assistance from the U.S. Department of the Treasury do not deny benefits or services, or otherwise discriminate on the basis of race, color, national origin (including limited English proficiency), disability, age, or sex (including sexual orientation and gender identity), in accordance with the following authorities: Title VI of the Civil Rights Act of 1964 (Title VI) Public Law 88-352, 42 U.S.C. 2000d-1 et seq., and the Department's implementing regulations, 31 CFR part 22; Section 504 of the Rehabilitation Act of 1973 (Section 504), Public Law 93-112, as amended by Public Law 93-516, 29 U.S.C. 794; Title IX of the Education Amendments of 1972 (Title IX), 20 U.S.C. 1681 et seq., and the

Department's implementing regulations, 31 CFR part 28; Age Discrimination Act of 1975, Public Law 94-135, 42 U.S.C. 6101 et seq., and the Department implementing regulations at 31 CFR part 23.

L. General. The Grantee shall do and perform or cause to be done and performed all acts and things required to be done or performed by or on behalf of the Grantee under the provisions of the American Rescue Plan Act of 2021 and this Assistance Agreement in accordance with the terms of such provisions.

SECTION 4 - MUTUALITY OF OBLIGATIONS

A. The parties agree that the funds granted by the Commonwealth to the Grantee are to be used solely for the purposes of the acquisition and construction of the Project. Further, the parties agree that the obligations imposed upon them are for their respective benefit and the timely fulfillment of the obligations set herein are necessary for the Project.

B. Except as may otherwise be provided herein, the parties to this Agreement shall be solely responsible for any incidental costs incurred in fulfilling their respective obligations under this Agreement and neither party shall have any claim against the other party for reimbursement of incidental costs whether or not a party is in default.

SECTION 5 - TERMS OF AGREEMENT

A. This Agreement shall be valid only after both parties have duly signed and provided the executed document to the other.

B. This Agreement may be terminated by either party at any time for cause and may be terminated by either party without cause upon 30 days written notice to the other party. Termination of this Agreement shall not diminish or in any other manner affect any other remedy that may be available to the parties for any breach of the Agreement that occurs prior to the termination.

C. If, after execution of this Agreement, additional financial assistance is found to be required for the acquisition and construction of the Project and the required additional assistance does or does not become available to the Grantee from any source, the Project may be modified so long as any change in scope and budget is mutually agreed to by the parties to this Agreement, and clearly documented in a revision of the Project Budget within the Project Profile.

SECTION 6 - ADVANCE FUNDING FOR PROJECT PLANNING AND DESIGN

A. The Grantee may request, in writing, that a portion of the grant funds be disbursed prior to Project bidding to pay up to 50% of the budgeted engineering fee for Project planning and design to the Project Engineer to expedite submission of the Project plans and specifications for review by the Kentucky Division of Water. The balance of the budgeted engineering fee for project planning and design may be paid only after approval of the plans by the Kentucky Division of Water.

B. It is specifically understood and agreed by the Grantee in the event that the Project has not been advertised for bids within twenty-four (24) months from the date of signing of the Original Agreement, for whatever reason, any funds disbursed for Project planning and design are subject to full and immediate repayment by the Grantee to the Authority.

C. No funds shall be released under this Section until the requirements of Exhibits 1 through 7 of this Agreement have been completed.

SECTION 7. - EVENTS OF DEFAULT AND REMEDIES.

Section 7.1. Events of Default Defined.

The following will be “Events of Default” under this Agreement and the term “Event of Default” or “Default” will mean, whenever it is used in this Agreement, any one or more of the following events:

A. Any unauthorized or improper expenditure of funds by the Grantee, or expenditure of funds by the Grantee other than in accordance with the terms of this Agreement.

B. Failure by the Grantee to observe or perform any covenant, condition or agreement on its part to be observed or performed, other than as referred to in subsection (A) of this Section, for a period of thirty (30) days after written notice specifying such failure and requesting that it be remedied will have been given to the Grantee by the Authority unless the Authority agrees in writing to an extension of such time prior to its expiration; provided, however, if the failure stated in the notice cannot be corrected within the applicable period, the Authority will not unreasonably withhold its consent to an extension of such time if corrective action is instituted by the Grantee within the applicable period and diligently pursued until such failure is corrected.

C. The dissolution or liquidation of the Grantee, or the voluntary initiation by the Grantee of any proceeding under any federal or Kentucky law relating to bankruptcy, insolvency, arrangement, reorganization, readjustment of debt or any other form of debtor relief, or the initiation against the Grantee of any such

proceeding which remain undismissed for sixty (60) days, or the entry by the Grantee into an agreement of composition with creditors or the failure generally by the Grantee to pay its debts as they become due.

D. A default by the Grantee under the provisions of any agreements relating to its debt obligations.

Section 7.2. Remedies on Default.

Whenever any Event of Default referred to in Section 7.1 has occurred and is continuing, the Authority may, without any further demand or notice, take one or any combination of the following remedial steps:

A. Declare this Agreement void from the beginning without further obligation to the Grantee and may commence appropriate legal action to enforce its rights under this Agreement including action for recovery of funds expended hereunder.

B. Terminate any remaining grant payments to the Grantee.

C. Exercise all the rights and remedies of the Authority set forth in the Act.

D. Take whatever action at law or in equity may appear necessary or desirable to enforce its rights under this Agreement.

E. Submit a formal referral to the appropriate federal agency.

Section 7.3. No Remedy Exclusive.

No remedy herein conferred upon or reserved to the Authority is intended to be exclusive, and every such remedy will be cumulative and will be in addition to every other remedy given hereunder and every remedy now or hereafter existing at law or in equity. No delay or omission to exercise any right or power accruing upon any default will impair any such right or power and any such right and power may be exercised from time to time and as often as may be deemed expedient.

Section 7.4. Consent to Powers of Authority Under Act.

The Grantee hereby acknowledges to the Authority its understanding of the provisions of the Act, vesting in the Authority certain powers, rights and privileges in respect of the Project upon the occurrence of an Event of Default, and the Grantee hereby covenants and agrees that if the Authority should in the future have recourse to said rights and powers, the Grantee shall take no action of any nature whatsoever calculated to inhibit,

nullify, void, delay or render nugatory such actions of the Authority in the due and prompt implementation of this Agreement.

Section 7.5. Waivers.

In the event that any agreement contained herein should be breached by either party and thereafter waived by the other party, such waiver will be limited to the particular breach so waived and will not be deemed to waive any other breach hereunder.

Section 7.6. Agreement to Pay Attorneys' Fees and Expenses.

In the event that either party hereto defaults under any of the provisions hereof and the non-defaulting party employs attorneys or incurs other expenses for the enforcement of performance or observance of any obligation or agreement on the part of the defaulting party herein contained, the defaulting party agrees that it will pay on demand therefor to the non-defaulting party the fees of such attorneys and such other expenses so incurred by the non-defaulting party.

SECTION 8 - MISCELLANEOUS PROVISIONS

A. The Grantee may sign this Agreement electronically via a program subject to the approval by the Authority, or manually on a paper copy that is scanned to the portable document format (.pdf) and emailed to the Authority. Transmittal of all other correspondence or documentation, including the required Exhibits identified in the Attachment shall be scanned and attached as a file to email. The Authority and the Grantee, working through the Project Administrator, shall assist each other in securing and maintaining a complete, current Project document file for reference, records, and audit purposes.

B. The headings set forth in this Agreement are for convenience and the terms contained therein shall in no way be held to explain, modify, amplify or aid in the interpretation, construction or meaning of the provisions of this Agreement.

C. The terms and conditions of this Agreement shall be binding upon and shall inure to the benefit of the successor and assigns, respectively, of the parties. Except for the limited use of a memorandum of agreement (as provided in Section 3 herein), this provision shall not be construed to permit an assignment by any party of any of its rights and duties under this Agreement which assignment shall be prohibited except with the prior written consent of the parties hereto.

D. This Agreement sets forth the entire understanding of the parties with respect to the subject matter hereof and may be modified only by a written instrument duly executed by each of the parties hereto.

E. Timely and accurate performance of all actions by the respective parties are mutually recognized by the parties of this Agreement to be of importance to the citizens of the Commonwealth generally, and particularly to those citizens directly affected by the Project.

F. This Agreement will be governed by and construed in accordance with the laws of the Commonwealth of Kentucky.

G. The Authority may audit or review all documentation and records of the Grantee relating to this Project pursuant to the provisions of Section 45A.150 of the KRS or any other applicable federal or state law.

H. The Grantee agrees that the Authority, 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 documentation or evidence, which are directly pertinent to this Agreement for the purpose of financial audit or program review. Furthermore, any books, documents, papers records, or other evidence provided to the Commonwealth, the Finance and Administration Cabinet, the Auditor of Public Accounts, or the Legislative Research Commission, which are directly pertinent to this Agreement, shall be subject to public disclosure regardless of the proprietary nature of the information, unless specific information is identified and exempted and agreed to by the Secretary of the Finance and Administration Cabinet as meeting the provisions of KRS 61.878(1)(c) prior to the execution of this Agreement. The Secretary of the Finance and Administration Cabinet shall not restrict the public release of any information which would otherwise be subject to public release if a state government agency was providing the services.

I. This Agreement amends, supplements, and replaces the Original Agreement in its entirety effective as of the date of execution by the Executive Director of the Authority on the signature page hereof. The Original Agreement shall continue to govern the relationship of the parties hereto with respect to the Grant and other matters set out herein and in the Original Agreement for the period beginning from the effective date of the Original Agreement to, but excluding, the effective date of this Agreement.

J. During the performance of this contract, the Grantee agrees to the following Appendix II to 2 CFR Part 200 contract provisions, as amended:

Equal Employment Opportunity

1. The Grantee will not discriminate against any employee or applicant for employment because of race, color, religion, sex, sexual orientation, gender identity, or national origin. The Grantee will take affirmative action to ensure that applicants are employed and that employees are treated during employment without regard to their race, color, religion, sex, sexual orientation, gender identity, or national origin. Such action shall include, but not be limited to the following:

    a. Employment, upgrading, demotion, or transfer; recruitment or recruitment advertising; layoff or termination; rates of pay or other forms of compensation; and selection for training, including apprenticeship. 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.

b. The Grantee will, in all solicitations or advertisements for employees placed by or on behalf of the contractor, state that all qualified applicants will receive consideration for employment without regard to race, color, religion, sex, sexual orientation, gender identity, or national origin.
c. The Grantee will not discharge or in any other manner discriminate against any employee or applicant for employment because such employee or applicant has inquired about, discussed, or disclosed the compensation of the employee or applicant or another employee or applicant. This provision shall not apply to instances in which an employee who has access to the compensation information of other employees or applicants as a part of such employee's essential job functions discloses the compensation of such other employees or applicants to individuals who do not otherwise have access to such information, unless such disclosure is in response to a formal complaint or charge, in furtherance of an investigation, proceeding, hearing, or action, including an investigation conducted by the employer, or is consistent with the contractor's legal duty to furnish information.
d. The Grantee 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' representatives 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.
e. The Grantee will comply with all provisions of Executive Order 11246 of September 24, 1965, and of the rules, regulations, and relevant orders of the Secretary of Labor.
f. The Grantee will furnish all information and reports required by Executive Order 11246 of September 24, 1965, and by rules, regulations, and orders of the Secretary of Labor, or pursuant thereto, and will permit access to his books, records, and accounts by the administering agency and the Secretary of Labor for purposes of investigation to ascertain compliance with such rules, regulations, and orders.
g. In the event of the Grantee's noncompliance with the nondiscrimination clauses of this contract or with any of the said rules, regulations, or orders, this contract may be canceled, terminated, or suspended in whole or in part, and the contractor may be declared ineligible for further government contracts or federally assisted construction contracts in accordance with procedures authorized in Executive Order 11246 of September 24, 1965, and such other sanctions may be imposed and remedies invoked as provided in Executive Order 11246 of September 24, 1965, or by rule, regulation, or order of the Secretary of Labor, or as otherwise provided by law.
h. The Grantee will include the portion of the sentence immediately preceding paragraph (1) and the provisions of paragraphs (1) through (8) in every

subcontract or purchase order unless exempted by rules, regulations, or orders of the Secretary of Labor issued pursuant to section 204 of Executive Order 11246 of September 24, 1965, so that such provisions will be binding upon each subcontractor or vendor. The contractor will take such action with respect to any subcontract or purchase order as the administering agency may direct as a means of enforcing such provisions, including sanctions for noncompliance: Provided, however, that in the event a Grantee becomes involved in or is threatened with litigation with a subcontractor or vendor as a result of such direction by the administering agency, the contractor may request the United States to enter into such litigation to protect the interests of the United States.

Contract Work Hours and Safety Standards Act

All contracts that are in excess of $100,000 and involve the employment of mechanics or laborers must include provisions requiring compliance with the Contract Work Hours and Safety Standards Act as follows:

1. Overtime requirements: No contractor or subcontractor contracting for any part of the Agreement work which may require or involve the employment of laborers or mechanics shall require or permit any such laborer or mechanic in any workweek in which he or she is employed on such work to work in excess of forty hours in such a workweek unless such laborer or mechanic receives compensation at a rate not less than one and one-half times the basic rate of pay for all hours worked in excess of forty hours in such a workweek.
2. Violation: liability for unpaid wages; liquidated damages. In the event of any violation of the clause set forth in paragraph (1) of this section, the contractor and any subcontractor responsible therefor shall be liable for the unpaid wages. In addition, such contractor and subcontractor shall be liable to the United States (in the case of work done under contract for the District of Columbia or a territory, to such District or to such territory) for liquidated damages. Such liquidated damages shall be computed with respect to each individual laborer or mechanic, including watchmen and guards, employed in violation of the clause set forth in paragraph (1) of this section, in the sum of $10 for each calendar day on which such individual was required or permitted to work in excess of the standard workweek of forty hours without payment of the overtime wages required by the clause set forth in paragraph (1) of this section.
3. Withholding for unpaid wages and liquidated damages. The Grantee shall upon its own action or upon written request of an authorized representative of the Department of Labor withhold or cause to be withheld, from any moneys payable on account of work performed by the contractor or subcontractor under any such contract or any other federal contract with the same prime contractor, or any other federally-assisted contract subject to the Contract Work Hours and Safety Standards Act, which is held by the same prime contractor, such sums

as may be determined to be necessary to satisfy any liabilities of such contractor or subcontractor for unpaid wages and liquidated damages as provided in the clause set forth in paragraph (2) of this section.

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

Clean Air Act

1. The Grantee agrees to comply with all applicable standards, orders, or regulations issued pursuant to the Clean Air Act, as amended, 42 U.S.C. § 7401 et seq.
2. The Grantee agrees to report each violation to the Authority and understands and agrees that the Authority will, in turn, report each violation as required to assure notification to the Treasury Department and the appropriate Environmental Protection Agency Regional Office.
3. The Grantee agrees to include these requirements in each subcontract exceeding $100,000 financed in whole or in part with American Rescue Plan Act funding.

Federal Water Pollution Control Act

1. The Grantee agrees to comply with all applicable standards, orders, or regulations issued pursuant to the Federal Water Pollution Control Act, as amended, 33 U.S.C. 1251 et seq.
2. The Grantee agrees to report each violation to the Authority and understands and agrees that the Authority will, in turn, report each violation as required to assure notification to the Treasury Department and the appropriate Environmental Protection Agency Regional Office.
3. The Grantee agrees to include these requirements in each subcontract exceeding $100,000 financed in whole or in part with American Rescue Plan Act funds.

Debarment and Suspension

Contracts shall not be awarded to parties listed on the governmentwide exclusions in the System for Award Management (SAM) listed at www.sam.gov.

Byrd Anti-Lobbying Amendment

Contractors who apply or bid for an award of $100,000 or more shall file the required certification. Each tier certifies to the tier above that it will not and has not

used federal appropriated funds to pay any person or organization for influencing or attempting to influence an officer or employee of any agency, a member of Congress, officer or employee of Congress, or an employee of a member of Congress in connection with obtaining any federal contract, grant, or any other award covered by 31 U.S.C. § 1352. Each tier shall also disclose any lobbying with non-federal funds that takes place in connection with obtaining any federal award. Such disclosures are forwarded from tier to tier, up to the recipient.

[Signature Page Follows]

IN WITNESS WHEREOF, the parties have caused this Agreement to be executed by their respective duly authorized officials as of the day and year above written.

KENTUCKY INFRASTRUCTURE AUTHORITY

By: _____ For Sandy Williams
Sandy Williams, Executive Director

Date: 10/23/2024

NORTHERN KENTUCKY WATER DISTRICT

By: _____
Authorized Official

Print Name: Stacey Kampsen

THIS AGREEMENT HAS BEEN EXAMINED BY:

By: _____
LEGAL COUNSEL TO THE KENTUCKY INFRASTRUCTURE AUTHORITY

CWP GRANT CONDITIONS – COMPLIANCE FORMS & EXHIBITS

Note A: Exhibits 1 through 3 must be completed, scanned, and emailed to the Authority on or before the date the Grantee signs the Conditional Commitment Letter. The Conditional Commitment Letter may be signed electronically or manually, then scanned and emailed to the Authority.

Exhibit 1 Notification to the Authority of completed Review / Update of Project Profile

Exhibit 2 Confirmation of Grantee Vendor Number – via KY Finance Cabinet Application

Exhibit 3 Copy of the Transparency Act Reporting Information Form

Note B: Upon receipt of the signed Conditional Commitment Letter and the Authority's verification of Exhibits 1-3, the Authority will forward to the Grantee the Grant Assistance Agreement. The Grantee should proceed to complete Exhibits 4 through 7, scan and send each Exhibit to the Authority by email; and then the Authorized Official may sign the Assistance Agreement, either electronically or by scanning and send attached to email.

Exhibit 4 A) Grantee Resolution (Accepting Grant, Approving Agreement, Amending Budget, Designating an Authorized Official)
B) Certificate of Recording Officer

Exhibit 5 Opinion of Legal Counsel Relating to the Grantee Resolution

Exhibit 6 A) Copy of the Engineering Services Contract; and
B) Grantee & Engineer Fee Confirmation

Note C: The Grantee may request 50% of the engineering design fee (as budgeted in the Project Profile) at this point and may request the balance of the engineering design fee once Exhibit 8 has been sent to the Authority.

Exhibit 7 Copy of the Kentucky eClearinghouse Endorsement Letter with Comments.

Exhibit 8 Copy of the DOW Approval Letter of Project Engineering Plans & Specifications.

Exhibit 9 Copy of the bid package signed by (A) Engineer, (B1) Authorized Official, and (B2) Title Attorney, as appropriate.

Exhibit 10 Certification Regarding Utility Accounting, Cost-Based Rates and Auditing.

Exhibit 11 Certificate of Project Completion.

CWP SUPPLEMENTAL GRANT CONDITIONS – COMPLIANCE FORMS & EXHIBITS

Note A: Exhibit 1S must be completed, scanned, and emailed to the Authority on or before the date the Grantee signs the Supplemental Conditional Commitment Letter. The Supplemental Conditional Commitment Letter may be signed electronically or manually, then scanned and emailed to the Authority.

Exhibit 1S Notification to the Authority of completed Review / Update of Project Profile (as increased)

Note B: Upon receipt of the signed Supplemental Conditional Commitment Letter and the Authority's verification of Exhibit 1S, the Authority will forward to the Grantee the Amended and Restated Supplemental Grant Assistance Agreement. The Grantee should proceed to complete Exhibits 4S and 5S, scan and send each Exhibit to the Authority by email; and then the Authorized Official may sign the Assistance Agreement, either electronically or by scanning and send attached to email.

Exhibit 4S A) Grantee Supplemental Resolution (Accepting Increased Grant, Approving Agreement, Amending Budget, Designating an Authorized Official)
B) Certificate of Recording Officer

Exhibit 5S Opinion of Legal Counsel Relating to the Grantee Supplemental Resolution

EXHIBIT E

MORTGAGES, BONDS, NOTES, AND OTHER INDEBTEDNESS

Northern Kentucky Water District

Mortgages, Bonds, Notes and Other Indebtedness
As of: 5/31/2025

MORTGAGES								
Mortgage Identification	Brief Description	Date of Execution	Name of Mortgagor	Name of Mortgagee or Trustee	Amount of Indebtedness authorized to be secured	Amount of Indebtedness Actually Secured	Sinking Fund Provisions	Amount Outstanding 5/31/2025
NONE								0
								$ -

BONDS											
Bond Identification	Amount Authorized	Amount Issued	Name of Public Utility	Description of Each Class	Date of Issue	Face Value	Rate of Interest	Date of Maturity	How Secured	Amount of Interest Paid During Last Fiscal Year	Amount Outstanding 5/31/2025
2013A	28,165,000	26,400,000	NKWD	n/a	6/27/2013	26,400,000	4.250 - 5.000%	2/1/2038	Pledge of Future Revenues	803,650	17,280,000
2013B	26,570,000	24,120,000	NKWD	n/a	9/25/2013	24,120,000	5.000 - 4.000%	2/1/2028	Pledge of Future Revenues	347,300	5,350,000
2014A	1,733,000	1,733,000	NKWD	n/a	12/11/2017	1,733,000	2.750%	2/1/2057	Pledge of Future Revenues	44,227	1,563,000
2014B	16,965,000	15,805,000	NKWD	n/a	12/23/2014	15,805,000	3.125 - 4.000%	2/1/2029	Pledge of Future Revenues	101,663	2,250,000
2016A	47,335,000	41,905,000	NKWD	n/a	11/22/2016	41,905,000	5.000 - 3.000%	2/1/2031	Pledge of Future Revenues	972,525	20,115,000
2019	19,600,000	17,845,000	NKWD	n/a	9/26/2019	17,845,000	3.000 - 5.000%	2/1/2044	Pledge of Future Revenues	524,200	14,865,000
2020	25,195,000	22,325,000	NKWD	n/a	11/5/2020	22,325,000	5.000 - 2.000%	2/1/2035	Pledge of Future Revenues	630,325	16,265,000
2021B	32,395,000	27,730,000	NKWD	n/a	12/14/2021	27,730,000	4.000%	2/1/2027	Pledge of Future Revenues	643,700	8,890,000
2023A	27,335,000	17,615,000	NKWD	n/a	1/26/2023	17,615,000	5.000 - 4.125%	2/1/2048	Pledge of Future Revenues	744,531	16,820,000
											$ 103,398,000.00

Northern Kentucky Water District

Mortgages, Bonds, Notes and Other Indebtedness
As of: 5/31/2025

NOTES							
Note Identification	**Date of Issue**	**Amount**	**Date of Maturity**	**Rate of Interest**	**In Whose Favor**	**Amount of Interest Paid During Last Fiscal Year**	**Amount Outstanding 5/31/2025**
KIA Loan F08-07	11/1/2008	4,000,000	12/1/2032	1.2000%	KIA	23,106	1,696,321
KIA Loan F09-02	6/1/2010	24,000,000	6/1/2033	2.2500%	KIA	276,493	11,374,984
KIA Loan F13-012	8/1/2014	8,000,000	6/1/2044	2.0000%	KIA	113,849	7,832,097
KIA Loan F14-015	6/1/2015	3,545,910	6/1/2038	2.0000%	KIA	52,991	2,525,981
KIA Loan F15-011	3/1/2016	3,535,094	6/1/2038	2.0000%	KIA	52,829	2,518,276
KIA Loan B15-003	7/1/2016	1,392,195	12/1/2037	0.9500%	KIA	9,314	929,478
KIA Loan F16-027	1/1/2019	4,000,000	12/1/2044	2.0000%	KIA	31,235	1,620,771
KIA Loan F20-044*	2/16/2023	8,000,000	N/A	1.7500%	KIA	41,951	5,539,523
KIA Loan F23-007S*	N/A	4,000,000	N/A	2.5500%	KIA	-	-
							$ 34,037,431

**not yet closed*

OTHER INDEBTEDNESS					
Indebtedness Identification	**Classes**	**Description of Security**	**Brief Statement of Devolution or assumption of a portion of the indebtedness upon or by person or corporation if the original liability has been transferred**	**Interest Paid During Last Fiscal Year**	**Amount Outstanding 5/31/2025**
NONE					0
					$ -

EXHIBIT F

FINANCIAL STATEMENTS
(Balance Sheet and Income Statement)

NORTHERN KENTUCKY WATER DISTRICT
STATEMENT OF NET POSITION
May 31, 2025

ASSETS AND DEFERRED OUTFLOWS OF RESOURCES

Current Assets	
Cash and Cash Equivalents	$ 42,517,241
Investments	5,022,228
Accounts Receivable	
Customers, Net	5,087,738
Unbilled Customers	11,200,000
Others	2,761,527
Lease Receivable - Current	132,309
Inventory Supplies for New Installation	
and Maintenance, at Cost	3,479,012
Prepaid Items	1,631,703
Restricted Assets - Cash and Cash Equivalents	
Bond Proceeds Fund	
Debt Service Account	1,639,830
Improvement, Repair & Replacement	528,307
Total Current Assets	73,999,895
Noncurrent Assets	
Lease Receivable	4,819,201
Restricted Assets - Cash and Cash Equivalents	
Bond Proceeds Fund	2,108,371
Debt Service Account	13,166,157
Improvement, Repair and Replacement	9,662,818
Restricted Assets - Investments	
Debt Service Reserve Account	20,600,921
Net Other Postemployment Benefits Asset	623,600
Miscellaneous Deferred Charges	10,440,832
Subscription Assets, Net of Amortization	1,863,994
Capital Assets	
Land, System, Buildings and Equipment	572,020,555
Construction in Progress	17,348,941
Total Capital Assets	589,369,496
Less Accumulated Depreciation	229,509,461
Total Capital Assets, Net of Accumulated Depreciation	359,860,035
Total Noncurrent Assets	423,145,929
Total Assets	497,145,824
Deferred Outflows of Resources	
Deferred Outflows Related to Pension	2,698,616
Deferred Outflows Related to OPEB	1,709,422
Deferred Loss on Refundings	1,646,829
Total Deferred Outflows of Resources	6,054,867
Total Assets and Deferred Outflows of Resources	$ 503,200,691

NORTHERN KENTUCKY WATER DISTRICT
STATEMENT OF NET POSITION
May 31, 2025

LIABILITIES, DEFERRED INFLOWS OF RESOURCES, AND NET POSITION

Liabilities and Deferred Inflows of Resources		
Current Liabilities		
Bond Indebtedness	$	15,032,333
Notes Payable		2,187,884
Subscription Liability - Current		238,471
Accounts Payable		263,942
Accrued Payroll and Taxes		604,556
Accrued Subscription Interest		65,141
Compensated Absences		256,252
Arbitrage Liability		
Other Accrued Liabilities		163,596
Liabilities Payable-Restricted Assets		
Accrued Interest Payable		1,639,830
Accounts Payable		528,307
Total Current Liabilities		20,980,312
Long-Term Liabilities (Net of Current Portion)		
Liabilities Payable-Restricted Assets		
Accounts Payable		802,511
Compensated Absences		1,806,259
Arbitrage Liability		804,416
Bond Indebtedness		95,918,946
Notes Payable		31,849,548
Subscription Liability - Noncurrent		1,686,635
Net Pension Liability		21,538,855
Net Unfunded OPEB Liability		-
Total Long-Term Liabilities		154,407,170
Total Liabilities		175,387,482
Deferred Inflows of Resources		
Deferred Inflows Related to Pension		2,357,965
Deferred Inflows Related to OPEB		6,551,796
Deferred Inflows Related to Leases		4,587,131
Deferred Gain on Refundings		924,796
Total Deferred Inflows of Resources		14,421,688
Total Liabilities and Deferred Inflows of Resources		189,809,170
Net Position		
Net Investment in Capital Assets		215,593,357
Restricted For		
Debt Service Funds		33,767,078
Capital Improvement Projects		10,968,678
Unrestricted		53,062,408
Total Net Position		313,391,521
Total Liabilities, Deferred Inflows of Resources, and Net Position	$	503,200,691

NORTHERN KENTUCKY WATER DISTRICT
STATEMENT OF REVENUES, EXPENSES AND CHANGES IN NET POSITION
12 MONTH PERIOD ENDED MAY 31, 2025

Operating Revenues		
Water Sales	$	72,956,704
Forfeited Discounts		1,147,994
Rents From Property		351,498
Other Water Revenues		311,248
Total Operating Revenues		74,767,444
Operating Expenses		
Operating and Maintenance Expense		40,836,634
Depreciation Expense		13,154,918
Total Operating Expenses		53,991,552
Net Operating Income		20,775,892
Non-Operating Income (Expense)		
Investment Income		4,245,292
Miscellaneous Non-Operating Income/(Expense)		3,054,787
Loss on Abandonment of Mains		(431,646)
Gain/(Loss) on Disposal of Fixed Assets		(110,966)
Interest on Long Term Debt		(4,439,900)
Pension Expense		1,080,609
Other Post Employment Benefit Expense		1,501,463
Arbitrage Expense		(338,179)
Amortization of Debt Premiums and Defeasance Costs		1,570,787
Bond Issuance Costs		-
Total Non-Operating Income (Expenses)		6,132,247
Change in Net Position Before Capital Contributions		26,908,139
Capital Contributions		2,216,253
Change in Net Position		29,124,392
Net Position - Beginning of Year		284,267,129
Net Position - End of Year	$	313,391,521

EXHIBIT G

CUSTOMER NOTICE

NOTICE OF FUTURE WATER SERVICE AND SURCHARGE

Northern Kentucky Water District will seek approval of the Public Service Commission of Kentucky to furnish potable water service to Sub-District O Water Main Extension Project. This project is located in the rural area in Kenton County which includes the following streets or portions thereof:

Sub-District O –

1. Highwater Road (from River Heights Lane to #1873);
2. Scenic Ridge Drive;
3. Decoursey Pike (from Ryland Lakes Drive to Steep Creek Road);
4. Steep Creek Road (from Decoursey Pike to #3704 at the bridge);
5. Mann Road (from Steep Creek Road to #11290);
6. Gene Street;
7. Fiskburg Road (Goshorn Road to Alexander Road);
8. Alexander Road (Fiskburg Road to St. Marys Road); and
9. Elliot Road (from KY 17 to the Pendleton County Line).

Total construction costs for this project will be approximately $4,826,785.00. The proposed consumer rates will be:

PRELIMINARY NORTHERN KENTUCKY WATER DISTRICT
MONTHLY WATER RATES FOR PROPOSED
SUB-DISTRICT O
WATER MAIN EXTENSION PROJECT

ESTIMATED MONTHLY SURCHARGE OF $30.00
SHALL BE ADDED TO THE MINIMUM MONTHLY BILL
SECTION II – RETAIL WATER RATES

Monthly Service Rate

First 1,500 cubic feet used per month	$0.0552 per cubic foot
Next 163,500 cubic feet used per month	$0.0513 per cubic foot
Over 165,500 cubic feet used per month	$0.0383 per cubic foot

Fixed Service Charge

Meter Size	Monthly Service Charge	Meter Size	Monthly Service Charge
5/8"	$20.45	3"	$78.80
3/4"	$21.40	4"	$98.90
1"	$23.00	6"	$146.40
1-1/2"	$25.90	8"	$197.60
2"	$32.70	10" & larger	$262.90

Sample Monthly Bill Amount for a 5/8" meter is as follows:

Estimated Monthly Usage of 2,000 Gallons	Estimated Monthly Bill = $65.21
Estimated Monthly Usage of 3,000 Gallons	Estimated Monthly Bill = $72.59
Estimated Monthly Usage of 4,000 Gallons	Estimated Monthly Bill = $79.97
Estimated Monthly Usage of 5,000 Gallons	Estimated Monthly Bill = $87.35
Estimated Monthly Usage of 6,000 Gallons	Estimated Monthly Bill = $94.72

Note: Actual bill will vary according to actual measured usage

Note: The estimated monthly bill includes the $30.00 surcharge amount.

The proposed surcharge may be changed by the Kentucky Public Service Commission and may be higher or lower than proposed.

Any corporation, association, body politic or person may by timely motion, within 30 days of the initial notice, request intervention in the case. The motion must be submitted in writing to the Public Service Commission, 211 Sower Blvd., Box 615 Frankfort, KY 40602 and should state the grounds for the request, including the interest and status of the party. Intervention may be granted beyond 30 days for good cause. Customers may obtain without cost a copy of the Application and any testimony filed by contacting Northern Kentucky Water District at the address below, or at the District website www.nkywater.org. Any person may obtain a copy of the Application or examine the application and supporting documents at the District's website, or at the Public Service Commission website www.psc.ky.gov. A copy of the Application and testimony is available for public review and examination at the district's office or the Public Service Commission office. Written comments regarding the proposed rates may be submitted to the Public Service Commission by mail or through the Public Service Commission's website listed below.

For further information contact the PSC of Kentucky at
PO Box 615
Frankfort, KY 40602
Tel: (502) 564 3940
www.psc.ky.gov

Or contact the undersigned.

Northern Kentucky Water District
2835 Crescent Springs Road
PO Box 18640
Erlanger, KY 41018
Tel: (859) 578-9898
www.nkywater.org

EXHIBIT H

PROPOSED TARIFFS

SECTION II – RETAIL WATER RATES

Northern Kentucky Water District Service Area

~~1.~~ Monthly Service Rate

First	1,500 cubic feet	$0.0552 per cubic foot
Next	163,500 cubic feet	$0.0513 per cubic foot
Over	165,000 cubic feet	$0.0383 per cubic foot

Customers in Subdistrict B *shall be assessed a monthly surcharge in the amount of	$15.54	~~(I)~~
Customers in Subdistrict C *shall be assessed a monthly surcharge in the amount of	$10.14	~~(R)~~
Customers in Subdistrict D *shall be assessed a monthly surcharge in the amount of	$27.70	~~(R)~~
Customers in Subdistrict E *shall be assessed a monthly surcharge in the amount of	$27.94	~~(R)~~
Customers in Subdistrict F *shall be assessed a monthly surcharge in the amount of	$12.24	
Customers in Subdistrict G *shall be assessed a monthly surcharge in the amount of	$17.72	~~(R)~~
Customers in Subdistrict H *shall be assessed a monthly surcharge in the amount of	$30.00	
Customers in Subdistrict I *shall be assessed a monthly surcharge in the amount of	$23.73	~~(R)~~
Customers in Subdistrict K *shall be assessed a monthly surcharge in the amount of	$6.16	~~(R)~~
Customers in Subdistrict M *shall be assessed a monthly surcharge in the amount of	$30.00	
Customers in Subdistrict RF *shall be assessed a monthly surcharge in the amount of	$20.97	~~(I)~~
Customers in Subdistrict HB *shall be assessed a monthly surcharge in the amount of	$30.00	
Customers in Subdistrict O *shall be assessed a monthly surcharge in the amount of	$30.00	(N)

*Subdistrict charges are reviewed annually.
*Detailed street listing within each Subdistrict can be found under Section XXIV.
*Service connections on extensions or laterals from a subdistrict street will be assessed the appropriate Subdistrict charge.

2. Quarterly Rates

First	4,500 cubic feet	$0.0552 per cubic foot
Next	490,500 cubic feet	$0.0513 per cubic foot
Over	495,000 cubic feet	$0.0383 per cubic foot

SECTION XXIV – SUBDISTRICT STREET NAMES AND MAPS – Cont'd

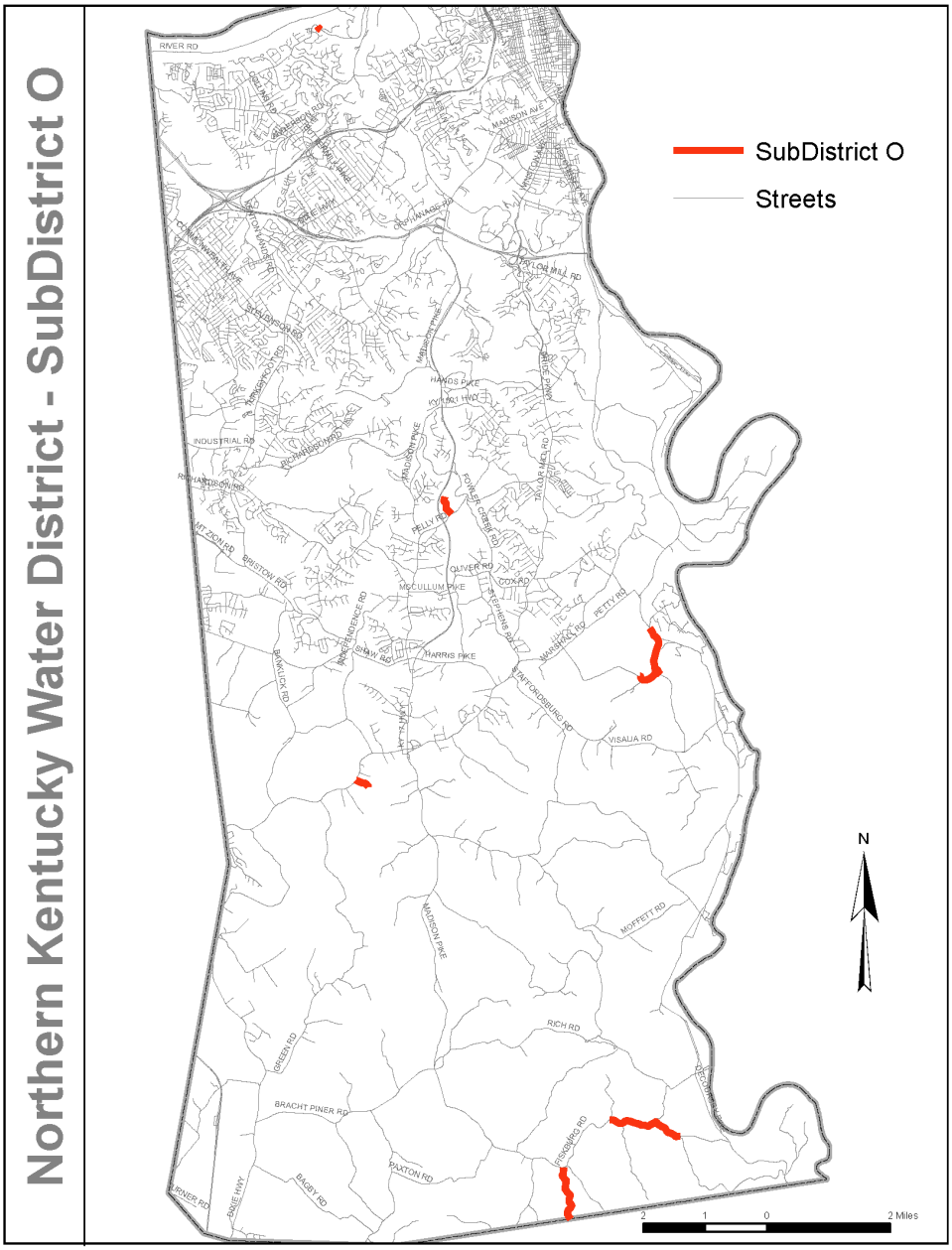
~~**Customers in Subdistriet RL**~~ ~~(D)~~
- ~~Crystal Court~~ ~~(D)~~
- ~~Crystal Drive~~ ~~(D)~~
- ~~Crystal Lane~~ ~~(D)~~
- ~~Ernst Bridge Road~~ ~~(D)~~
- ~~Hillside Drive~~ ~~(D)~~
- ~~Maplewood Drive~~ ~~(D)~~
- ~~Meadow Lane~~ ~~(D)~~
- ~~Mirror Court~~ ~~(D)~~
- ~~Northall Court~~ ~~(D)~~
- ~~Orchard Lane~~ ~~(D)~~
- ~~Redbud Lane~~ ~~(D)~~
- ~~Ryland Lakes Drive~~ ~~(D)~~
- ~~Sylvan Lake Drive~~ ~~(D)~~
- ~~Wild Lake Drive~~ ~~(D)~~

Customers in Subdistrict HB
- Blangey Road – 700' west of Mary Ingles Highway to the end of County maintenance ~~(N)~~
- Enzweiler Road – AA Highway to the end of County maintenance ~~(N)~~
- Gunkel Road – Mystic Rose to the end of County maintenance ~~(N)~~
- Oneonta Road – Washington Trace Road to Mary Ingles Highway ~~(N)~~
- Upper Lick Branch Road – Grandview to house #2421 ~~(N)~~
- Poplar Thicket Road – Licking Pike to house #446 ~~(N)~~
- Pond Creek Road – #10365 to Visalia Road ~~(N)~~
- Rifle Range Road – #539 to the end of County maintenance ~~(N)~~

Customers in Subdistrict O (N)
- Highwater Road – River Heights Lane to #1873 (N)
- Scenic Ridge Drive (N)
- Decoursey Pike – Ryland Lakes Drive to Steep Creek Road (N)
- Steep Creek Road – Decoursey Pike to #3704 at the bridge (N)
- Mann Road – Steep Creek Road to #11290 (N)
- Gene Street (N)
- Fiskburg Road – Goshorn Road to Alexander Road (N)
- Alexander Road – Fiskburg Road to St. Marys Road (N)
- Elliot Road – KY17 to the Pendleton County Line (N)

SECTION XXIV – SUBDISTRICT STREET NAMES AND MAPS – Cont'd

(N)



(N)

SECTION II – RETAIL WATER RATES

Northern Kentucky Water District Service Area

~~1.~~ Monthly Service Rate

First	1,500 cubic feet	$0.0552 per cubic foot
Next	163,500 cubic feet	$0.0513 per cubic foot
Over	165,000 cubic feet	$0.0383 per cubic foot

Customers in Subdistrict B *shall be assessed a monthly surcharge in the amount of	$15.54	
Customers in Subdistrict C *shall be assessed a monthly surcharge in the amount of	$10.14	
Customers in Subdistrict D *shall be assessed a monthly surcharge in the amount of	$27.70	
Customers in Subdistrict E *shall be assessed a monthly surcharge in the amount of	$27.94	
Customers in Subdistrict F *shall be assessed a monthly surcharge in the amount of	$12.24	
Customers in Subdistrict G *shall be assessed a monthly surcharge in the amount of	$17.72	
Customers in Subdistrict H *shall be assessed a monthly surcharge in the amount of	$30.00	
Customers in Subdistrict I *shall be assessed a monthly surcharge in the amount of	$23.73	
Customers in Subdistrict K *shall be assessed a monthly surcharge in the amount of	$6.16	
Customers in Subdistrict M *shall be assessed a monthly surcharge in the amount of	$30.00	
Customers in Subdistrict RF *shall be assessed a monthly surcharge in the amount of	$20.97	
Customers in Subdistrict HB *shall be assessed a monthly surcharge in the amount of	$30.00	
Customers in Subdistrict O *shall be assessed a monthly surcharge in the amount of	$30.00	(N)

*Subdistrict charges are reviewed annually.
*Detailed street listing within each Subdistrict can be found under Section XXIV.
*Service connections on extensions or laterals from a subdistrict street will be assessed the appropriate Subdistrict charge.

2. Quarterly Rates

First	4,500 cubic feet	$0.0552 per cubic foot
Next	490,500 cubic feet	$0.0513 per cubic foot
Over	495,000 cubic feet	$0.0383 per cubic foot

SECTION XXIV – SUBDISTRICT STREET NAMES AND MAPS – Cont'd

Customers in Subdistrict HB

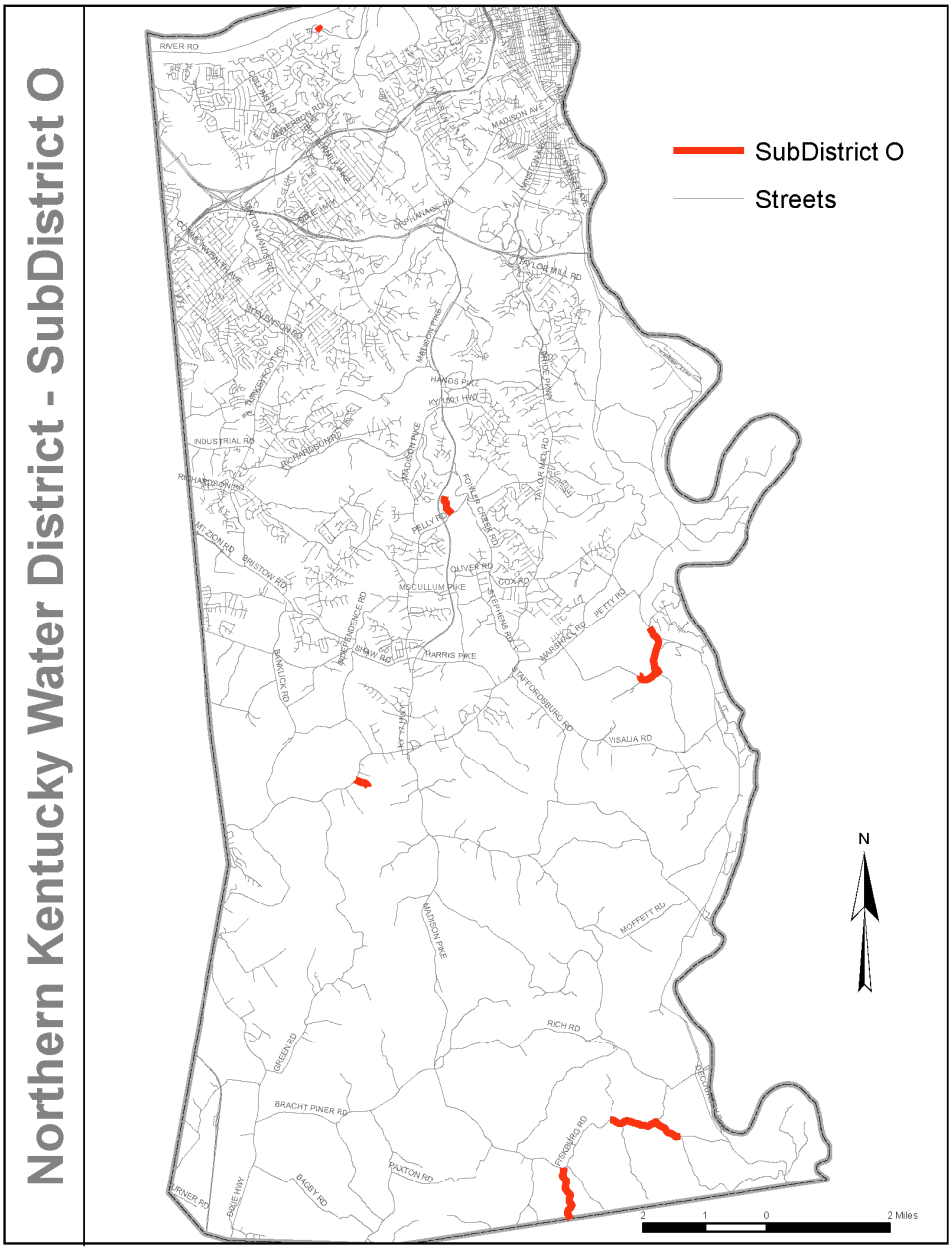
- Blangey Road – 700' west of Mary Ingles Highway to the end of County maintenance
- Enzweiler Road – AA Highway to the end of County maintenance
- Gunkel Road – Mystic Rose to the end of County maintenance
- Oneonta Road – Washington Trace Road to Mary Ingles Highway
- Upper Lick Branch Road – Grandview to house #2421
- Poplar Thicket Road – Licking Pike to house #446
- Pond Creek Road – #10365 to Visalia Road
- Rifle Range Road – #539 to the end of County maintenance

Customers in Subdistrict O (N)

- Highwater Road – River Heights Lane to #1873 (N)
- Scenic Ridge Drive (N)
- Decoursey Pike – Ryland Lakes Drive to Steep Creek Road (N)
- Steep Creek Road – Decoursey Pike to #3704 at the bridge (N)
- Mann Road – Steep Creek Road to #11290 (N)
- Gene Street (N)
- Fiskburg Road – Goshorn Road to Alexander Road (N)
- Alexander Road – Fiskburg Road to St. Marys Road (N)
- Elliot Road – KY17 to the Pendleton County Line (N)

SECTION XXIV – SUBDISTRICT STREET NAMES AND MAPS – Cont'd

(N)



(N)

EXHIBIT I

STREET DENSITY TABLE

Kenton County Unserved Street Listing

November 2022

Sorted by "Weighted Unserved Households per Mile"

Full Listing

Sub-District O Highlighted in Yellow

Selection Methodology: "% Interested" and "Weighted % Interested" must be ≥ 45%

Selected streets limited to available funding and reviewed starting from the highest density of Weighted Unserved Households per Mile to the lowest. Interest surveys were sent to all unserved households along public streets in the Fall of 2022. Responses were due 11/28/22. Those who were interested in public water are quantified in the "Interested - Yes" column below. Other considerations for selection are listed in the "Notes" column.

Street	Description	Unserved Households	Distance	Interested "Yes"	% Interested	Depends On	Weighted Unserved Households	Weighted Interested - Yes	Weighted % Interested	Weighted Distance (miles)	Weighted Unserved Households / Mile	Notes
James Road	North of Moffett	3	0.1	1	33%		3	1	33%	0.10	30.00	
Campbell Road	US 25 to D.E. (wide gravel)	3	0.15	1	33%		3	1	33%	0.15	20.00	
Gene Street	Off Walton Nicholson Road	5	0.25	4	80%		5	4	80%	0.25	20.00	Current signups = 4
Scenic Ridge Drive	Off Pelly Road	6	0.3	5	83%		6	5	83%	0.30	20.00	Current signups = 6
~~Mason Road~~	~~hydrant at #460 to Decoursey~~	4	~~0.22~~	~~2~~	~~50%~~		4	~~2~~	~~50%~~	~~0.22~~	~~18.18~~	Current signups = 0 (low) & Geotechnical Issues
Alexander Road	Fiskburg Road to St. Mary Road	13	0.48	8	62%	Fiskburg Rd	21	10	48%	1.24	16.94	Current signups = 4 (high potential for 3 more)
~~Goshorn Road~~	~~Fiskburg to D.E.~~	~~13~~	~~0.8~~	~~6~~	~~46%~~		~~13~~	~~6~~	~~46%~~	~~0.80~~	~~16.25~~	Current signups = 3 (low)
~~Webster Road~~	~~Richardson Road to D.E.~~	~~12~~	~~0.75~~	~~6~~	~~50%~~		~~12~~	~~6~~	~~50%~~	~~0.75~~	~~16.00~~	Current signups = 6 & Geotechnical Issues
Old Fowler Creek Road	Off KY 17	3	0.2	1	33%		3	1	33%	0.20	15.00	
Steep Creek	Marshall to #3382 at bridge	9	0.6	3	33%		9	3	33%	0.60	15.00	
~~Pfanstiehl Road~~	~~Fiskburg to D.E.~~	~~21~~	~~1.4~~	~~12~~	~~57%~~	~~Fiskburg Rd~~	~~22~~	~~12~~	~~55%~~	~~1.57~~	~~14.01~~	Current signups = 7 (low)
Saint Marys Road	Alexander to KY 177	7	0.8	3	43%	Fiskburg Rd and Alexander Rd	28	13	46%	2.04	13.73	
Elliot Road	KY 17 to Pendelton County line	13	0.95	8	62%		13	8	62%	0.95	13.68	Current signups = 6 (high potential for 4 more)
Alexander Road	St. Mary Road to KY 177	31	2.6	10	32%	Alexander Rd	52	20	38%	3.84	13.54	
~~Justice Lane~~	~~Last hydrant to D.E.~~	~~4~~	~~0.3~~	~~3~~	~~75%~~		~~4~~	~~3~~	~~75%~~	~~0.30~~	~~13.33~~	Current signups = 1 (low)
KY 177	Alexander Road to Pendleton County Line	0	0.3	0	0%	Fiskburg and Alexander Rd	52	20	38%	4.14	12.56	
Highwater Road	River Heights Lane to #1873	1	0.08	1	100%		1	1	100%	0.08	12.50	Current signups = 1
~~Trace Run Road~~	~~Off of Moffett~~	~~10~~	~~0.8~~	~~6~~	~~60%~~		~~10~~	~~6~~	~~60%~~	~~0.80~~	~~12.50~~	Current signups = 2 (low)
Conley Road	KY 177 to #3953	9	0.3	3	33%	Conley Rd	17	6	35%	1.40	12.14	
Alexander Road	KY 177 to D.E.	9	1.2	3	33%	Fiskburg and Alexander Rd	61	23	38%	5.04	12.10	
Steep Creek	#3382 at bridge to #3709 at bridge	10	1	4	40%	Steep Creek	19	7	37%	1.60	11.88	
KY 177	St. Mary Rd to Alexander Road	8	1.3	1	13%	Fiskburg and Alexander Rd	60	21	35%	5.14	11.67	
Pruett	Marshall to Petty	5	0.44	2	40%		5	2	40%	0.44	11.36	
Ernst Bridge Road	From hydrant at #4262 to #4425 (Ryland CC)	6	0.55	0	0%		6	0	0%	0.55	10.91	
~~Fowler Creek Road~~	~~Old Madison to new Madison connector road~~	~~12~~	~~1.1~~	~~6~~	~~50%~~		~~12~~	~~6~~	~~50%~~	~~1.10~~	~~10.91~~	Geotechnical & KYTC Issues
Fiskburg Road	Pfanstiehl to Alexander	7	0.59	2	29%	Fiskburg Rd	8	2	25%	0.76	10.53	Part of project due to dependency. Current signups = 5
Mann Road (lower)	Steep Creek to/inc. 11290	4	0.11	4	100%	Steep Creek	13	10	77%	1.25	10.40	Current signups = 3
Vises's Trail	From KY177 go North 0.77 miles(south end)	8	0.77	1	13%		8	1	13%	0.77	10.39	
Eads Road	US 25 to #298	6	0.6	2	33%		6	2	33%	0.60	10.00	
Forest View Lane	Last hydrant on Cleveland Ave to D.E.	3	0.3	1	33%		3	1	33%	0.30	10.00	
Independence Station Rd	Justice to RR Tracks	3	0.3	1	33%		3	1	33%	0.30	10.00	
Ishmael	End of existing hydrant to #14072	1	0.1	0	0%		1	0	0%	0.10	10.00	
Kensington Road	Off Green Road	2	0.2	1	50%		2	1	50%	0.20	10.00	
Moffett Road	George W. Bach (Armstrong) to #3628	3	0.3	1	33%		3	1	33%	0.30	10.00	

Montague Road	Fire Hydrant to #1770	1	0.1	1	100%		1	1	100%	0.10	10.00	
Rich Road	End of Sub C to Hempfling	7	0.7	1	14%		7	1	14%	0.70	10.00	
Webster Road	North of Independence Station	2	0.2	0	0%		2	0	0%	0.20	10.00	
Mann Road (upper)	Visalia to/inc. #11430	10	1.01	3	30%		10	3	30%	1.01	9.90	
Case Road	Steep Creek to KY 177	5	0.3	3	60%	Steep Creek	14	9	64%	1.44	9.72	
Locust Pike/Lawnmower Road	Feiser Road to # 9712	16	1.7	5	31%		16	5	31%	1.70	9.41	
Oliver Road	From Hydrant at Old McCullum Pk To Stephens Rd	3	0.32	2	67%		3	2	67%	0.32	9.38	
KY 177	End of Sub E, past Conley to 13361	14	1.5	8	57%		14	8	57%	1.50	9.33	
Mann Road (middle)	From #11290 to #11430	3	0.4	1	33%	Mann Rd	13	5	38%	1.41	9.22	
Kenton Station Road	Martin to Rector	16	1.8	9	56%		16	9	56%	1.80	8.89	
River Road (Route 8)	Chevron to #486 (towards Bromley)	8	0.9	5	63%		8	5	63%	0.90	8.89	
Wright Road	Banklick to #633 (bend)	6	0.71	1	17%		6	1	17%	0.71	8.45	
Fiskburg Road	Alexander to Rich Road	5	0.6	1	20%		5	1	20%	0.60	8.33	
Bethel Grove Road	End of Sub E to D.E.	2	0.25	0	0%		2	0	0%	0.25	8.00	
Wayman Branch	Between old T.M. system and NKWD system	4	0.5	1	25%		4	1	25%	0.50	8.00	
Steep Creek & Decoursey	Ryland Ctry Clb/KY 177 to #3704 at bridge	9	1.14	6	67%		9	6	67%	1.14	7.89	Part of project due to dependency. Current signups = 4
Hempfling Road	From #3110 (near Oak Island) to Rich	11	1.404	7	64%		11	7	64%	1.40	7.83	
Conley Road	Kenton Station to #3953	8	1.1	3	38%		8	3	38%	1.10	7.27	
Locust Lane	KY 17 to D.E.	1	0.15	0	0%		1	0	0%	0.15	6.67	
Worthington Drive	Off KY 17, South of Hands Pike	1	0.15	0	0%		1	0	0%	0.15	6.67	
Paxton Road	End of Sub C, last hydrant to #1515	9	1.45	7	78%		9	7	78%	1.45	6.21	
Washboard Road	KY 177 to D.E.	3	0.4	3	100%	Ky 177	6	4	67%	1.00	6.00	
Fiskburg Road	Goshorn to Pfanstiehl Road	1	0.17	0	0%		1	0	0%	0.17	5.88	Part of project due to dependency.
Fowler Creek Road	Pelly Road to #5020	2	0.36	1	50%		2	1	50%	0.36	5.56	
Lambs Ferry Road	Whites Road to Whites Road	10	1.8	3	30%		10	3	30%	1.80	5.56	
Porter Road	Hydrant at #8924 to hydrant at #9028	1	0.18	0	0%		1	0	0%	0.18	5.56	
KY 177	#14443 south of Kenton Station to bridge	3	0.6	1	33%		3	1	33%	0.60	5.00	
Rich Road	Hempfling to Cruise Creek	2	0.4	0	0%		2	0	0%	0.40	5.00	
Rouse	KY 177 to Rich	1	0.2	0	0%		1	0	0%	0.20	5.00	
Decoursey	I-275 to hydrant at #7900	3	0.7	1	33%		3	1	33%	0.70	4.29	
Old Madison Pike	Old Richardson Rd (hydrant at 4724) to Far Hills	3	0.7	1	33%		3	1	33%	0.70	4.29	
George W. Bach (Armstrong Rd)	Off Moffett to D.E.	2	0.47	1	50%		2	1	50%	0.47	4.26	
Decoursey	Marshall to end of Sub-R	3	0.74	0	0%		3	0	0%	0.74	4.05	
Fowler Creek Road	New Madison connector to #5020	0	0.14	0	0%	Fowler Creek	2	1	50%	0.50	4.00	
Gardenersville Road	Grassy Creek to Pendleton Co. Line	2	0.57	0	0%		2	0	0%	0.57	3.51	
Gleason Road	KY 17 to D.E.	1	0.3	0	0%		1	0	0%	0.30	3.33	
Navaho Road	Hempfling to D.E.	1	0.35	0	0%		1	0	0%	0.35	2.86	
Grassy Creek Road	Gardenersville to Pendleton Co. line	1	0.36	1	100%		1	1	100%	0.36	2.78	
Marshall Road	Coleman to Stewart	2	0.8	0	0%		2	0	0%	0.80	2.50	
Moffett Road	Kenton Station to #3628	2	0.8	1	50%		2	1	50%	0.80	2.50	
Anderson Road	County Line to D.E.	2	0.85	2	100%	Bullock Pen	2	0	0%	0.85	2.35	
Eubanks Road	Erlanger-Crs.Spgs. Road to D.E.	1	0.48	1	100%		1	1	100%	0.48	2.08	
Decoursey	Grand to I-275	1	0.6	0	0%		1	0	0%	0.60	1.67	
River Road (Route 8)	Amsterdam to Chevron	3	2	2	67%		3	2	67%	2.00	1.50	
KY 177	Ryland Lakes C.C. to #11282	2	1.4	1	50%		2	1	50%	1.40	1.43	
Oak Island	Moffett to Hempfling	1	0.8	0	0%		1	0	0%	0.80	1.25	
Fowler Creek Road	Cox to Stephens	0	0.5	0	0%		0	0	0%	0.50	0.00	
Horsebranch	Rhine Valley to Thomas More Parkway	0	0.35	0	0%		0	0	0%	0.35	0.00	
Independence Road	#1068 to #1159	0	0.27	0	0%		0	0	0%	0.27	0.00	
KY 177	#15112 to St. Marys Road	0	0.8	0	0%		0	0	0%	0.80	0.00	
Locust Pike	#9712 To end of Sub R near Whites (#9974)	0	0.7	0	0%		0	0	0%	0.70	0.00	
Marshall Road	Klette to #9440	0	0.15	0	0%		0	0	0%	0.15	0.00	
Sleepy Hollow Road	Existing D.E. near #1556 to Ludlow	0	1	0	0%		0	0	0%	1.00	0.00	
Stephens Road	Don Victor to Oliver	0	0.4	0	0%		0	0	0%	0.40	0.00	
Wehrman Road	KY 16 to D.E.	0	0.3	0	0%		0	0	0%	0.30	0.00	
	Total =	448	57.3	195								

EXHIBIT J

AFFIDAVIT

COMMONWEALTH OF KENTUCKY

BEFORE THE PUBLIC SERVICE COMMISSION

In the Matter of:

ELECTRONIC APPLICATION OF NORTHERN KENTUCKY WATER DISTRICT FOR A CERTIFICATE OF PUBLIC CONVENIENCE AND NECESSITY FOR THE CONSTRUCTION OF SUB DISTRICT O WATER MAIN EXTENSION, FINANCING AND SURCHARGE	)))))	**CASE NO. 2025-00243**

AFFIDAVIT

Comes now the affiant, STACEY KAMPSEN, after first being duly sworn and cautioned, states as follows:

1. That she is the Vice President of Finance and Support Services for the Northern Kentucky Water District;
2. That she is authorized to submit this Application on behalf of the Northern Kentucky Water District;
3. That the information contained in the Application and its Exhibits are true and correct to the best of her knowledge and belief except as to those matters that are based on information provided to her and as to those she believes to be true and correct.

Further Affiant sayeth naught.

7/23/2025
Date

Stacey Kampsen
Stacey Kampsen

COMMONWEALTH OF KENTUCKY :
: SS
COUNTY OF KENTON :

The foregoing instrument was subscribed and sworn before me by Stacey Kampsen this 23rd day of July 2025.

C Zoda
Notary Public, Kentucky at Large
Notary ID Number: KYNP57619
My Commission Expires: 08/22/26