

## RECEIVED

JUL 26 2012

## PUBLICE SERVICE OF TRANSMITTAL

## TO

10	DATE: 7/24/2012
Mr. Jeff Derouen	ATTN: Mr. Jeff Derouen
Executive Director	RE: Case 2012-00254
Public Service Commission Of	TVL. Case 2012-00234
Kentucky	North McLean Co. Water District
P.O. Box 615	
Frankfort, KY 40602-0615	

QTY.	DESCRIPTION
1	Phase I – As Builts Plans
1	Phase I – Proposed Construction Plans

## THESE ARE TRANSMITTED AS CHECKED BELOW

FOR APPROVAL	Χ	FOR YOUR USE	AS REQUESTED
REVIEWED		NOTE MARKINGS	REVIEW & COMMENT
REJECTED		REVISE AND RESUBMIT	

REMARKS	
COPIES TO:	TRANSMITTED BY: Michael Hesse

## KY 136 / KY 250 WATER LINE CONSTRUCTION

2012-00254

## RECEIVED

JUL 26 2012

PUBLIC SERVICE COMMISSION

## PREPARED for: THE McLEAN COUNTY FISCAL COURT

MCLEAN COUNTY FISCAL COURT

LARRY WHITAKER

MATT HAYDEN

KENNY WILSON

BOBBY JOHNSON

JIMMY IGLEHEART

JUDGE / EXECUTIVE

MAGISTRATE

MAGISTRATE

MAGISTRATE

PROJECT LOCATION

KY 136

CALHOUN

EX. CALHOUN WATER TANK

LOCATION MAP

CALHOUN WATER WORKS

LARENCE HOLMES MANAGER

NORTH MCLEAN WATER DISTRICT

MICHAEL LANTHAM MANAGER

ASBUILT

## INDEX OF SHEETS

SHEET	<u>ITEM</u>
1 2 3 4 5 6 7 8 9 10 11 12 13 14 15	COVER SHEET TYPICAL SECTION PROJECT SUMMARY PLAN AND PROFILE -STA. 0+50 TO 25+00 PLAN AND PROFILE -STA. 25+00 TO 53+00 PLAN AND PROFILE -STA. 53+00 TO 78+00 PLAN AND PROFILE -STA. 78+00 TO 103+00 NOT USED WATER TANK DETAIL KY 815 / KY 81 CROSSING DETAIL MULTIPLE SITE DETAIL SHEET DETAIL SHEET DETAIL SHEET DETAIL SHEET DETAIL SHEET

DLZ KENTUCKY, INC. 201 BRIGHTON PARK BLVD. FRANKFORT, KY 40601 (502) 695-2300 (fex) 695-1497



LEAN COUNTY FISCAL COUNTY NATION ST.
BOX 127 42327
LHOUN, KY 42327
O) 273-3213

KY 136/ KY 250
WATER LINE CONSTRUCTION
COVER SHEET

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RRC	MCH	31000300	
DATE:	SCALE:	SHEET:	
8/4/2009	N. T. S.	-	

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ВҮ		
DESCRIPTION		
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## UTILITY CONTACTS

GAS Mr. JIM CAPPS ATMOS ENERGY CORPORATION 3425 NEW HARTFORD RD. OWENSBORO, KY. 42303 (270) 685-8103

ELECTRIC Mr. J.E. NEWLAND KENERGY 6402 OLD CORYDON RD. HENDERSON, KY 42420 (270) 826-3991

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TELEPHONE Mr. GEOFFERY JOHNSON AT&T 714 CLAY ST. HARTFORD, KY 42347 (270) 298-4129

Mr. BRENT RASSERTY TIME WARNER 100 INDUSTRIAL DR. OWENSBORO, KY 42301 (270) 222-0861

Mr. LARENCE HOLMES CALHOUN WATER WORKS PO BOX 294 CALHOUN, KY 42327 (270) 273-3092 (270) 316-3123 (MOBILE)

Mr. MICHAEL LANTHAM NORTH MCLEAN COUNTY WATER DISTRICT 217 HILL ST. PO BOX 68 LIVERMORE, KY 42352 (270) 278-2800 (270) 499-3788 (MOBILE)

1901 HIGHWAY 136 EAST CALHOUN, KENTUCKY 42327 (270)273-5191

MCLEAN CO. MIDDLE SCHOOL PRINCIPAL TRES SETILE

MCLEAN CO. HIGH SCHOOL ASHLEY TROUTMAN 1859 HIGHWAY 136 EAST CALHOUN KENTUCKY 42327 (270) 273-5278

## \*EXTREME CAUTION\*

ATMOS GAS REQUIRES 7 DAYS NOTICE PRIOR TO ANY EXCAVATION FOR VERIFICATION OF LOCATION, SIZE, AND MATERIAL, CALL (270) 685-8103 OR (270) 685-8049. A REPRESENTATIVE SHALL BE ON SITE FOR ALL CONSTRUCTION WITHIN 50' OF THE GAS LINE.

## **LEGEND**

-X-ENCE ├ ─ ├ ─ WM ├ EX. WATER MAIN --- -- GM --- EX. GAS MAIN -- T---- EX. TELEPHONE LINE = = = = = = = EX. STORM DRAIN --- EX. OVERHEAD UTILITY ---- FX. FDGF OF PAVEMENT EX. RIGHT OF WAY LINE / EX. PROPERTY LINE EX. FLOW LINE PROPOSED EASEMENT LINE PROPOSED WATER MAIN ∩WM EX. WATER METER EX. TELEPHONE POLE EX. UTILITY POLE EX. GUY WIRE EX. FIRE HYDRANT PROPOSED FIRE HYDRANT PROPOSED GATE VALVE

PROPOSED CAP OR END PLUG

\*CAUTION\* EXISTING UTILITIES. THE INFORMATION SHOWN ON THESE DRAWINGS CONCERNING THE TYPE AND LOCATION OF UNDERGROUND UTILITIES IS NOT GUARANTEED TO BE ACCURATE OR ALL INCLUSIVE. LOCATION, SIZE, AND MATERIAL SHOWN ON UTILITIES ARE FROM AVAILABLE RECORDS, SUPPLIED BY THE RESPECTIVE UTILITY COMPANY. B.U.D. MUST BE NOTIFIED 24 HOURS PRIOR TO ANY EXCAVATION FOR VERIFICATION OF LOCATION, SIZE, AND MATERIAL, CALL 1-800-752-6007.

## NOTES:

- 1. PROPERTY LINES HAVE BEEN OBTAINED FROM PVA OFFICE AND ARE APPROXIMATE LOCATION OF PROPERTY.
- 2. UTILITY DEPTHS HAVE BEEN ASSUMED AND SHALL BE FIELD VERIFIED BY THE CONTRACTOR: TELEPHONE - 24" DEPTH GAS - 30' DEPTH WATER - 36' DEPTH
- 3. WATER MAIN AND SERVICES SHALL BE INSTALLED WITH A MINIMUM
- 4. EXISTING WATER MAIN SIZES WERE PROVIDED BY KY. INFRASTRUCTURE
- 5. CONTRACTOR SHALL VERIFY UTILITY LOCATION AND SIZES PRIOR TO ORDERING MATERIALS.
- 6. CONTRACTOR SHALL CONTACT ENGINEER PRIOR TO REMOVAL OF ANY ADDITIONAL TREES NOT NOTED TO BE REMOVED. REMOVAL OF ANY TREES FOR THE CONTRACTOR'S CONVENIENCE WILL NOT BE SUBJECT TO A CHANGE ORDER.
- ADDITIONAL BENDS MAY BE REQUIRED FOR HORIZONTAL AND VERTICAL CLEARANCE WITH EXISTING UTILITIES AND STRUCTURES THAT ARE NOT SHOWN ON PLAN AND PROFILE SHEETS. THESE COSTS WILL BE CONSIDERED INCIDENTAL TO WATER MAIN INSTALLATION.
- 8. A THRUST BLOCK IS REQUIRED FOR EVERY BEND, CAP, TEE, VALVE, FIRE HYDRANT, AND FLUSH HYDRANT AS SHOWN IN THE THRUST
- ALL FLUSH HYDRANTS AND FIRE HYDRANTS SHALL BE INSTALLED WITH A 6°GATE VALVE AS SHOWN IN THE FIRE HYDRANT DETAIL, UNLESS OTHERWISE NOTED.
- 10. CONTRACTOR SHALL VERIFY PROPERTY SERVICE LOCATION WITH EACH



DLZ KENTUCKY, INC. 201 BRIGHTON PARK BLVO. FRANKFORT, KY 40601 (502) 695-2300 (fex) 695-1497

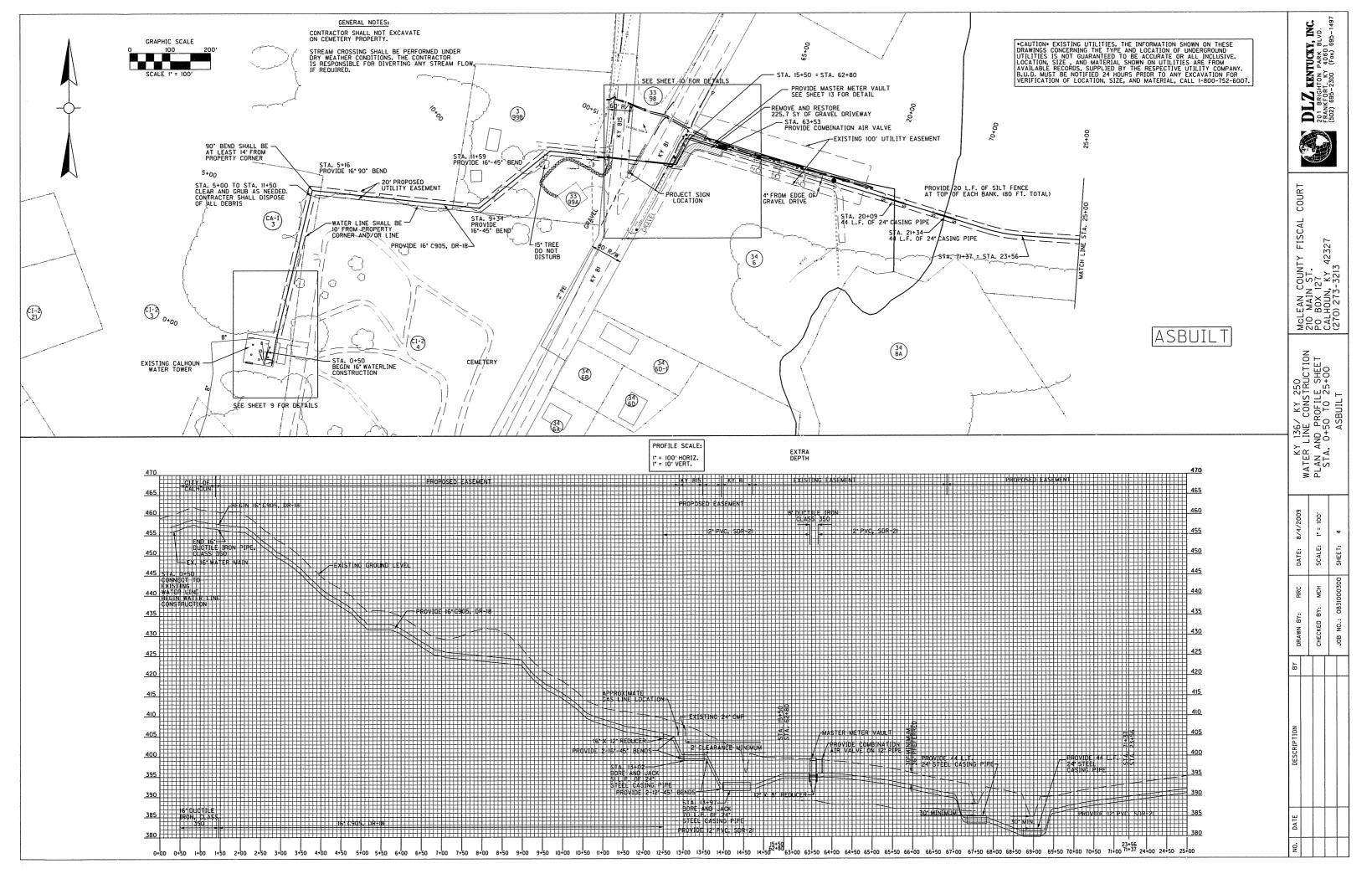
FISCAL MCLEAN COUNTY FISC 210 MAIN ST. PO BOX 127 CALHOUN, KY 42327 (270) 273-3213

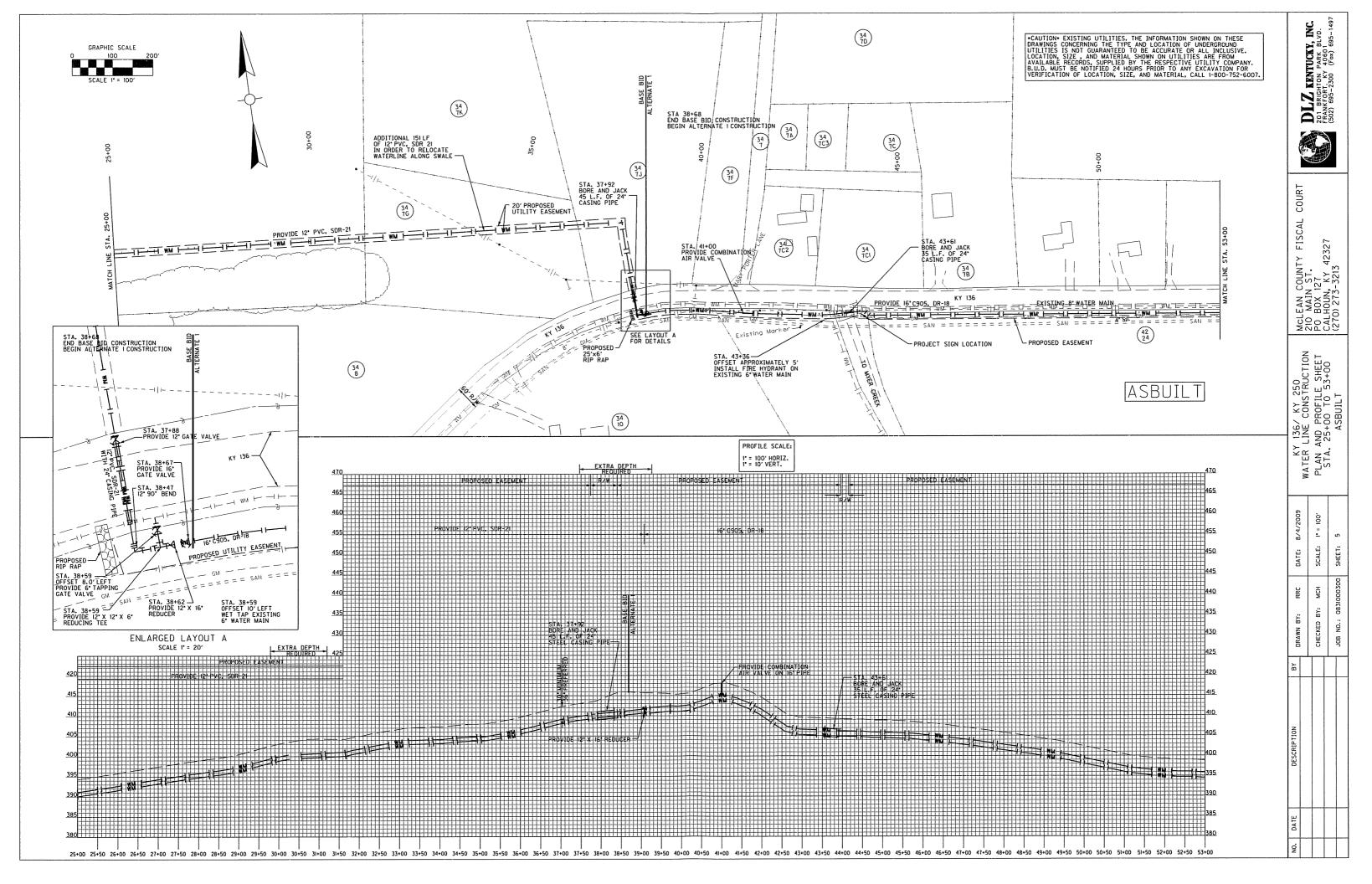
/ KY 250 CONSTRUCTION TYPICAL SECTION ASBUILT 136/ LINE KY WATER L

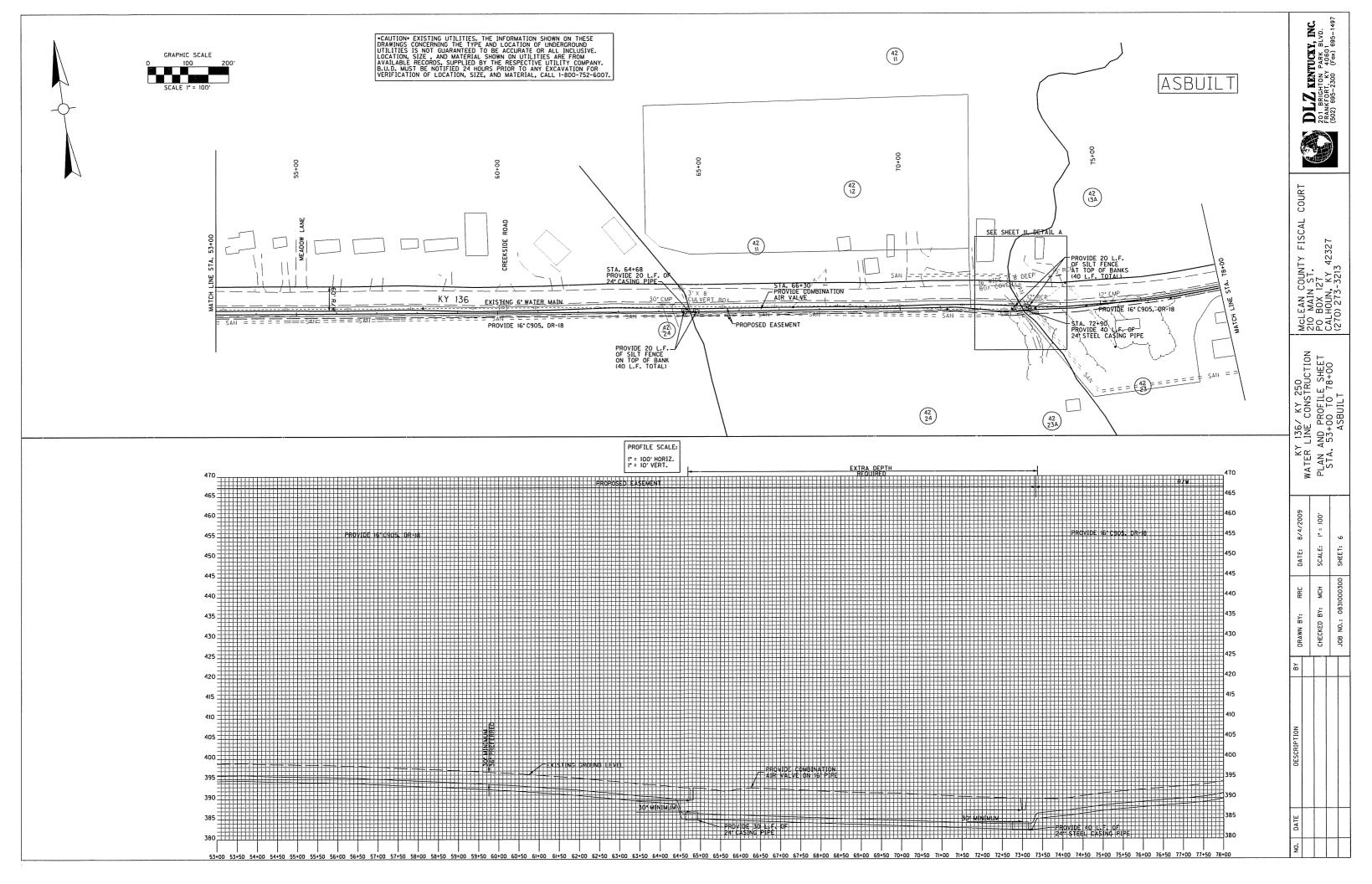
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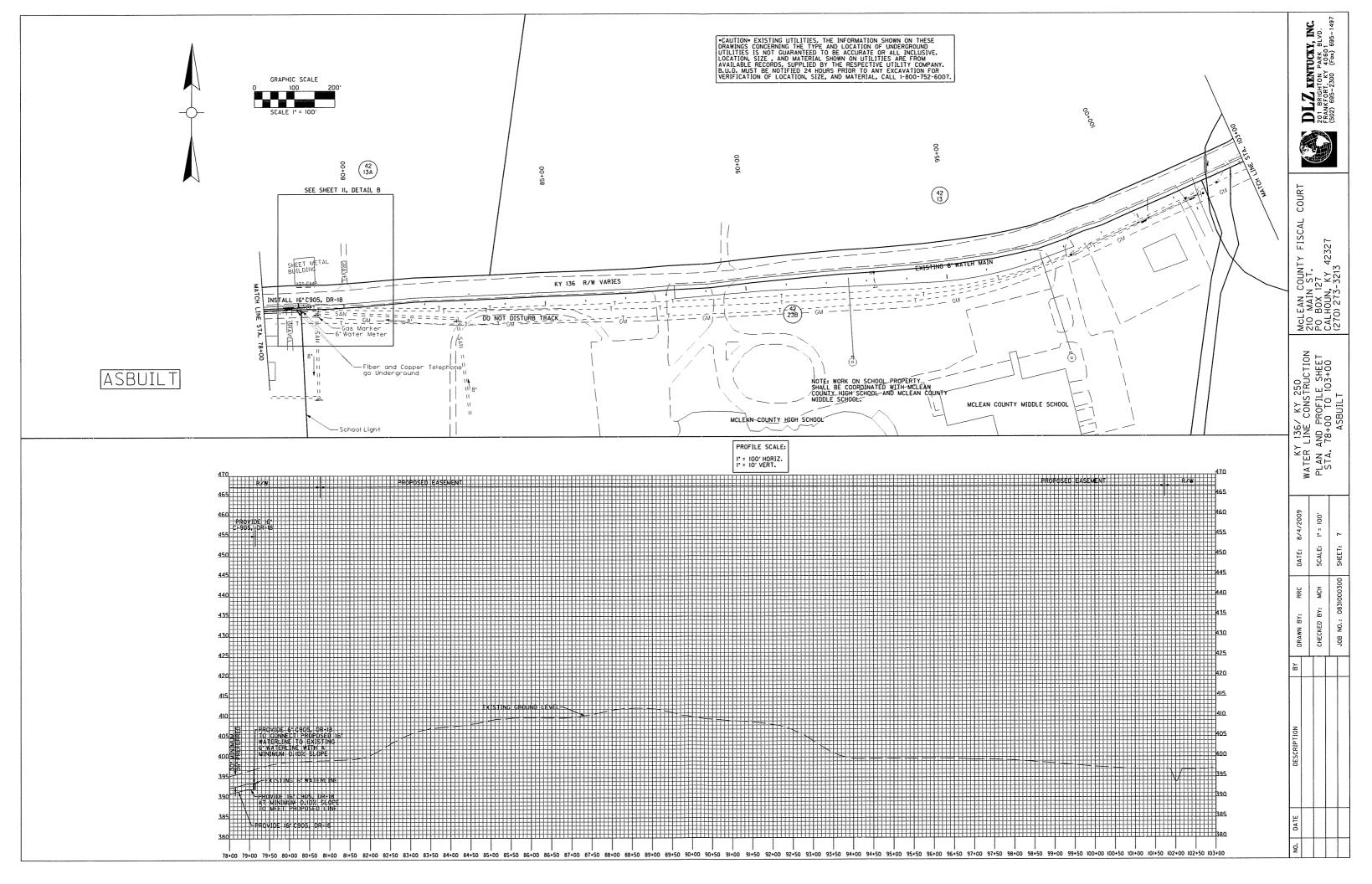
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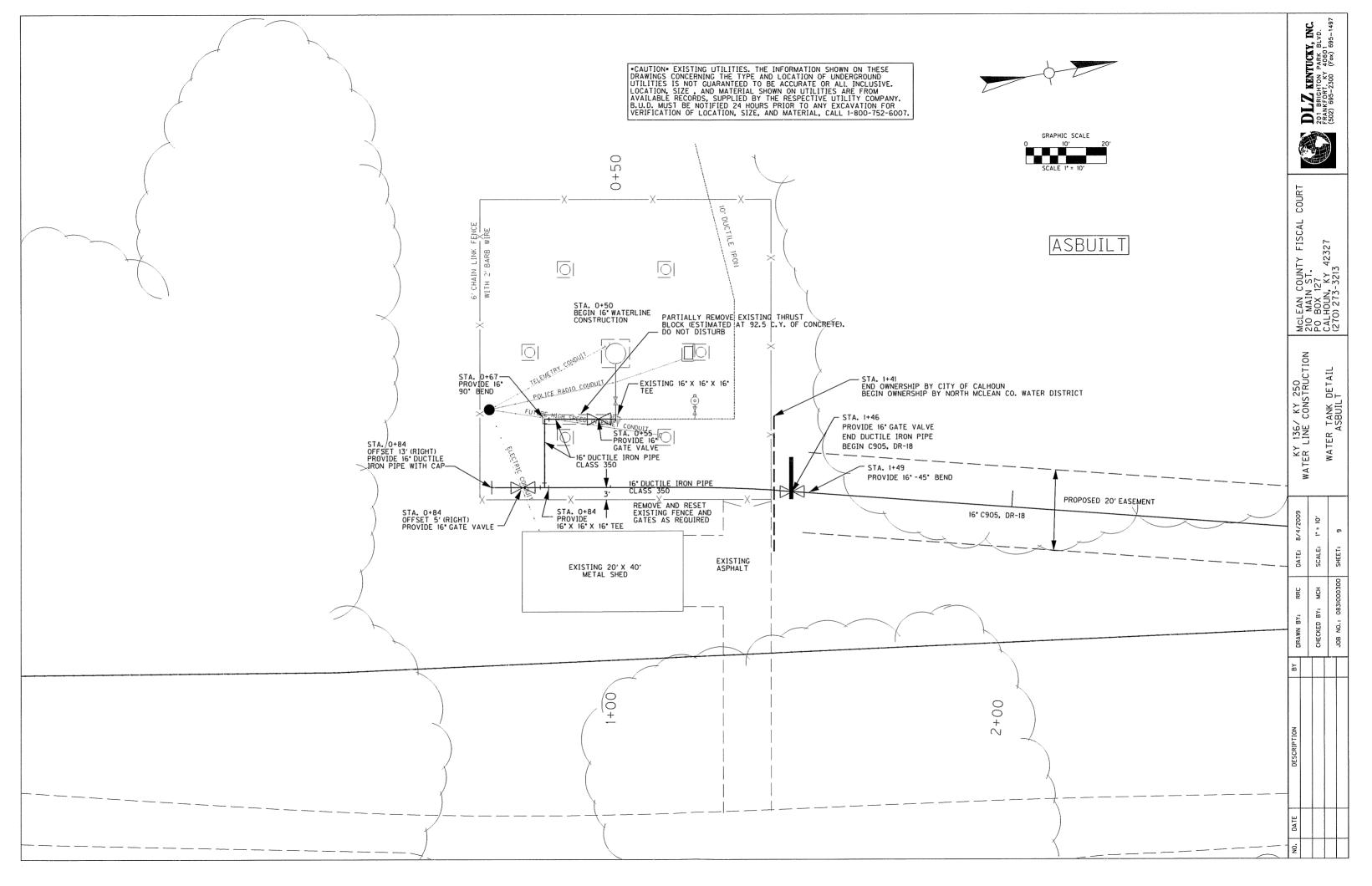


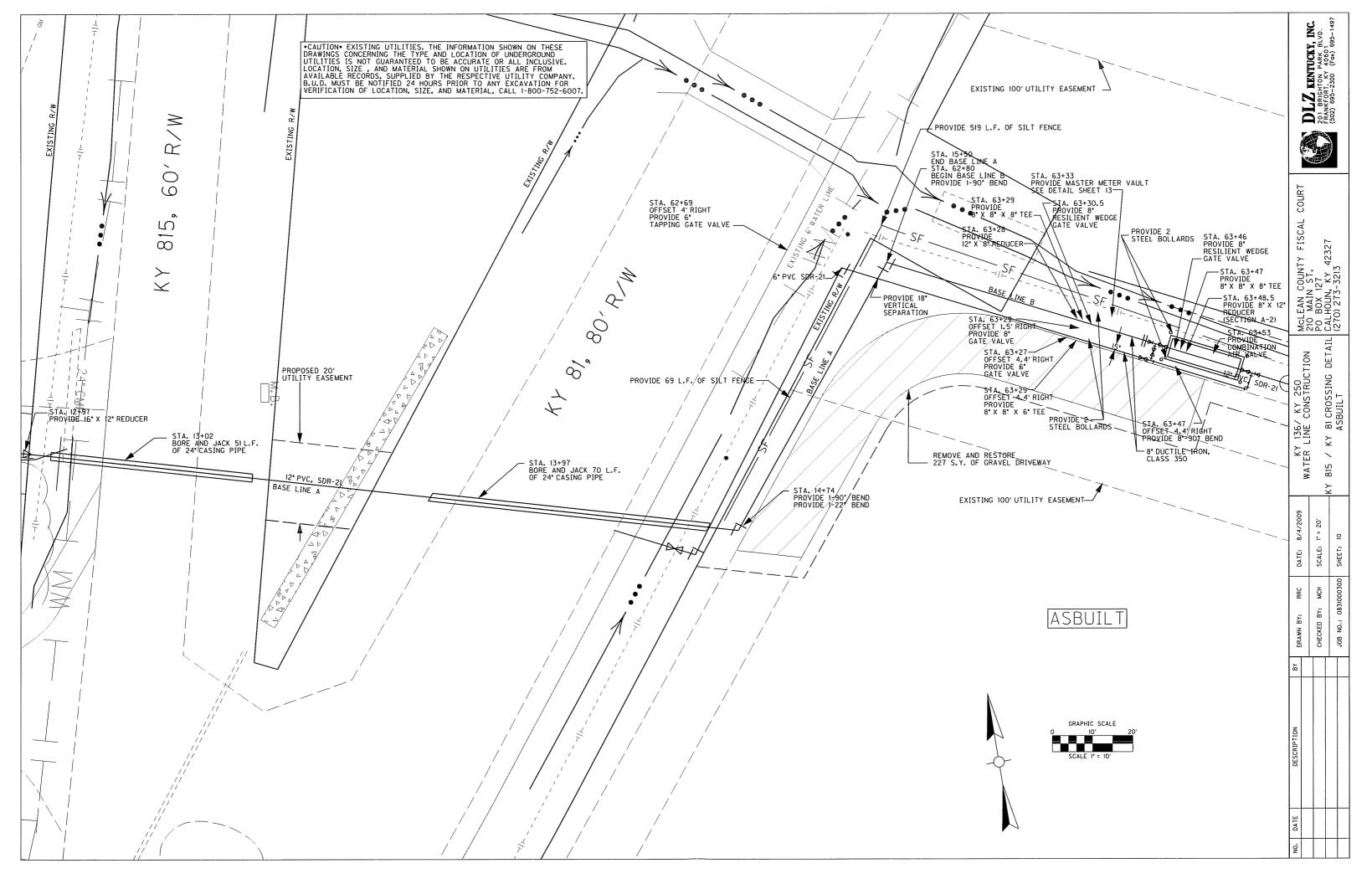


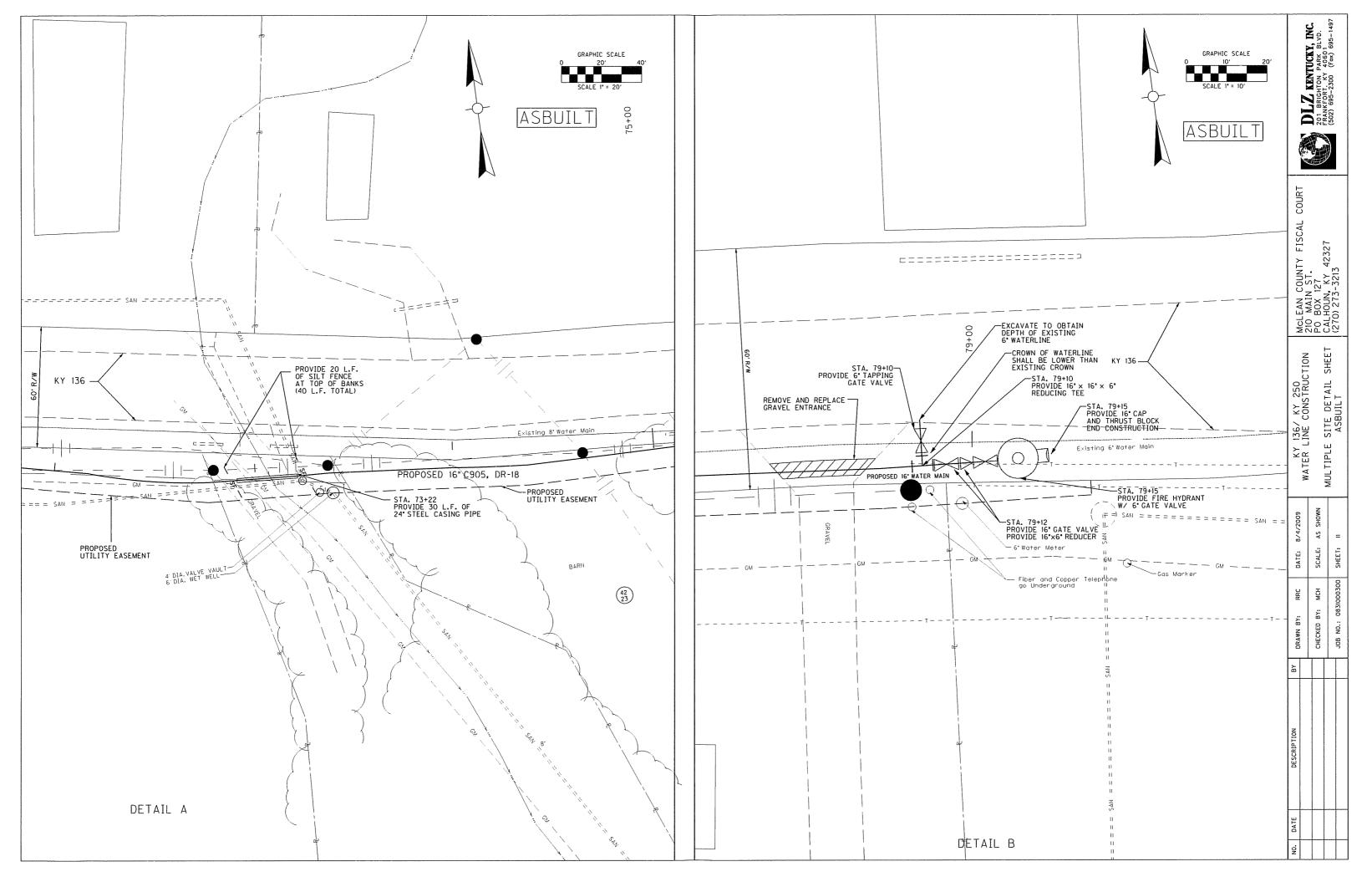


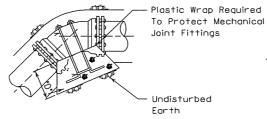


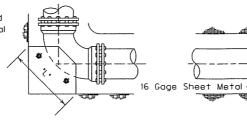






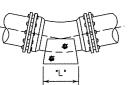




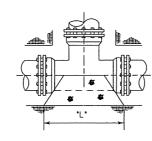


90° BEND END OF MAIN

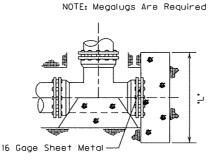
VERTICAL BEND







TEE



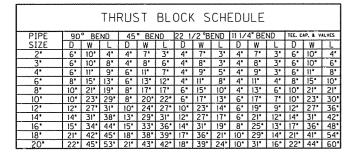
ASBUILT PLUGGED TEE

Min. 1' Compacted Bituminous

Asphalt Surface

HORIZONTAL BEND 11 1/4°, 22 1/2° AND 45° BEND

Existing Concrete Pavement



Soil Subgrade without

Stone Base

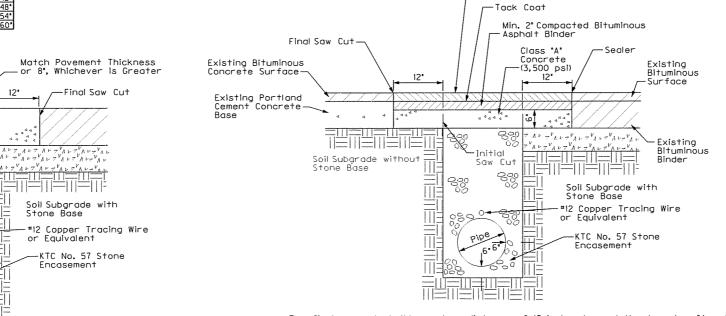
Class "A" Concrete (3,500 psi)

(See Note 2)

Notes:

- 1. Concrete Shall Rest On Undisturbed Earth And Cured In Place.
- 2. The Use Of Precast Concrete Blocks May Be Used, But Must Be Encased In At Least 4'Of Concrete Cured In Place.

## WATER MAIN THRUST BLOCKS



The final saw cut shall be made a distance of 12 Inches beyond the trench, after trench excavation and backfill are complete, and immediately prior to placing concrete. If the distance from the edge of the trench to an existing break or joint is less than 4 feet, the final saw cut shall be located at the existing break or joint.

Concrete cap to be 8 inches or greater. If the existing pavement section is less than 8 inches thick, excavation of underlying stone base or soil subgrade will be required to provide the specific thickness.

— Initial-

Cut

80Sow

The contractor shall be responsible during the ensuing five years for proper backfilling and replacement of the surface. During the five year period any povement settlement shall be immediately replaced by the contractor at the expense of the contractor.

STREET CROSSING CONCRETE PAVEMENT RESTORATION The final saw cut shall be made a distance of 12 inches beyond the trench, after trench excavation and backfill are complete, and immediately prior to placing concrete.

Tack material consisting of emulsified asphalt SS-lh shall be placed on the surface of the bituminous base at the rate of  $0.1\,\mathrm{gallon}$  per square yard.

Pavement joints shall be sealed with an approved joint sealant after placement of bituminous concrete surface.

The contractor shall be responsible during the ensuing five years for proper backfilling and replacement of the surface. During the five year period any povement settlement shall be immediately replaced by the contractor at the expense of the contractor. Match existing pavement structure or a minimum of:
Asphalt surface - I'
Asphalt base - 2'
Asphalt base - 2'
Aspace - 6'

STREET CROSSING

BITUMINOUS CONCRETE PAVEMENT RESTORATION

## NOTES

- Water main pipe to be P.V.C SDR-21 and approved for potable water systems by the National Sanitation Foundation and bearing the NSF stamp unless other material is called for on the plans. P.V.C. pipe is to be joined by a rubber gasket bell joint except at fittings. Fitting and pipe joints are to be megalugs
- as are pipe and valve joints.

  Fittings used with P.V.C. mains shall be ductile iron conforming to the requirements of AWWA C-110 with megalug joints.

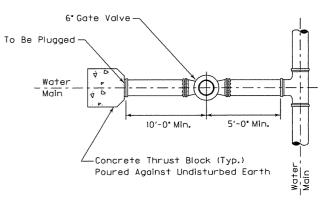
  Fittings shall have a minimum pressure rating of 150 psi and shall be provided with cement linings complying with AWWA C-104 or latest revision. Fittings shall be tar-coated outside. Where valves are fitted directly to mislips to the table of measure. are fitted directly to a mainline tee, the tee is to be a megalug joint anchoring tee.

  3. GATE VALVES - 4 AND LARGER: Mueller (or approved alternative) resil-
- barl valves, modified wedge disc. type, suitable for direct earth burial, suitable for mechanical joint and to comply with AWWA Specifi-
- 4. GATE VALVES UNDER 4": Bronze Body 150 p.s.i. working pressure Wedge Disc.
- sure weage usc.

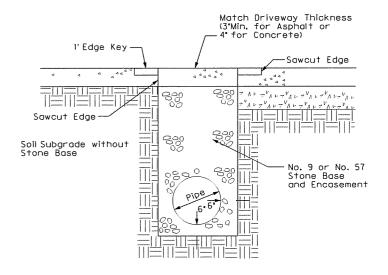
  All valves of each size classification must be of the same manufacture and contractor is to furnish owner with one T-handle socket wrench for each size of operating nut on valves and hydrants installed.

  MINIMUM COVER: All mains to have 30 minimum cover and all service lines to have 24 minimum cover.

  All water mains of non-ferrous material shall have a 2 inch wide
- metallic backed tape (suitable for elec/mag, tracing of mains) or "12 copper tracing wire.



## TYPICAL STUBOUT DETAIL



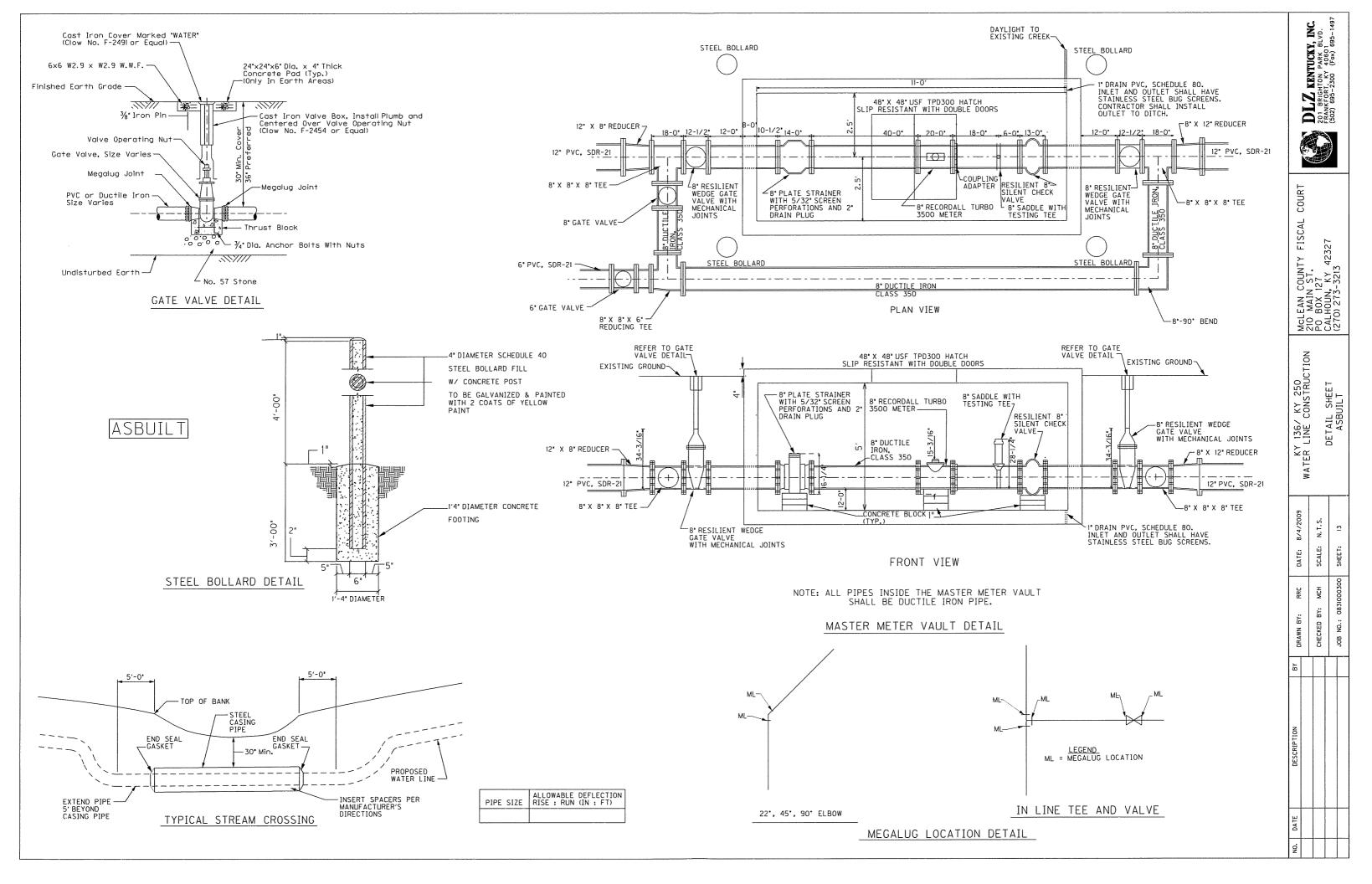
DRIVEWAY PAVEMENT RESTORATION

ا**الا** دِهِ الا KENTUCKY, PARK 40601 (Fax) DLZ KENT 201 BRIGHTON P FRANKFORT, KY (502) 695-2300

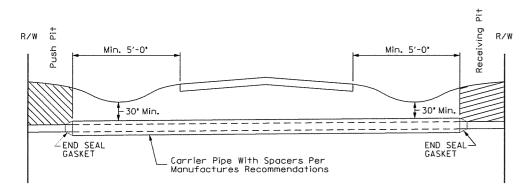
FISCAL McLEAN COUNTY FISC 210 MAIN ST. PO BOX 127 CALHOUN, KY 42327 (270) 273-3213

KY 250 CONSTRUCTION DETAIL SHEET ASBUILT 136/ LINE ( KY WATER

N. T. S. SCALE: DATE: CHECKED õ 90

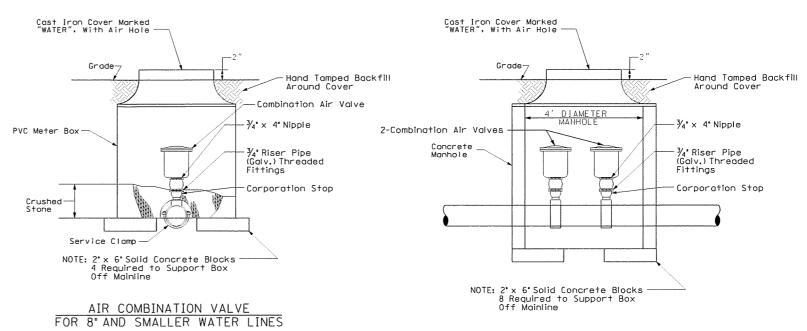






- 1. Push pit and receiving pit to be backfilled and thoroughly compacted.
- 2. All ditch lines to be left open.
- 3. Seed and straw all areas disturbed by this work.

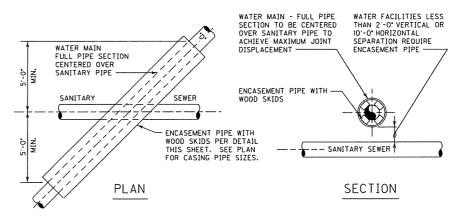
## TYPICAL HIGHWAY BORING CROSSING



AIR RELEASE VALVE FOR 10" AND LARGER WATER LINES

ASBUILT

NOTE:
ENCASEMENT PIPE TO BE PAID PER LINEAR FOOT OF WATER MAIN ENCASED.



WATER / SANITARY SEWER CROSSING - ENCASEMENT

DLZ KENTUCKY, INC 201 BRIGHTON PARK BLVO. FRANKFORT, KY 40601 (502) 695-2300 (Fax) 695-1497

McLEAN COUNTY FISCAL COURT 210 MAIN ST. P0 BOX 127 CALHOUN, KY 42327 (270) 273-3213

KY 136/ KY 250 WATER LINE CONSTRUCTION DETAIL SHEET ASBUILT

| ESCRIPTION | BY | DRAWN BY: RRC | DATE: 8/4/2009 | CHECKED BY: MCH | SCALE: N.T.S. | JOB NO.: 0831000300 | SHEET: 14

## McLEAN COUNTY FISCAL COURT

JUDGE EXECUTIVE: LARRY WHITAKER

MAGISTRATE: MATT HAYDEN

MAGISTRATE: KENNY WILSON MAGISTRATE: BOBBY JOHNSON MAGISTRATE: JIMMY IGLEHEART



KY136 / KY250 WATER LINE COST: \$00,000

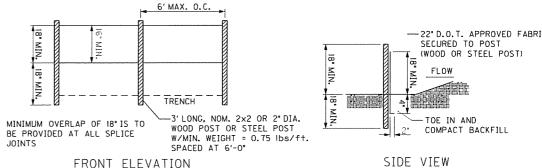
PAID FOR BY COAL SEVERANCE FUNDS AND TOBACCO SEVERANCE FUNDS

NOTES:

- 1. Sign will be good quality plywood 3/4 MDO or equal.
- 2. Border and letters shall be blue 1925 Federal Safety Blue), high gloss.
- 3. Background board shall be white, (2766 high gloss white).
- 4. Letters may be painted or vinyl die-cut.
- 5. Letter type will be Helvetica light italic and Helvetica compact.
- 6. Mount sign on two 4°x4° wooden posts painted same white.

**ASBUILT** 

WATER PROJECT ADVERTISEMENT SIGN



Slit Fence Detail

<u>Installation:</u>
The fence should be placed across the slope along a line of uniform elevation (perpendicular to the direction of flow). The fence should be located at least 10-feet from the slopes to provide sediment storage and access for maintenance

A flat- bottom trench approximately 4- inches wide and 8- inches deep, or a v- shaped trench 8- inches deep should be excavated. On the downslope side of the trench, drive the 2- inch. X 2- inch posts at least 18- inches into the ground, spacing them no further than 6- feet aport.

Posts should be installed, with 1- to 2- inches of the posts protruding above the top of the fabric and no more than 3- feet of the post should protrude above the ground. The minimum fence height (height of filter fabric above ground shall be 18- Inches. The maximum fence height (height of filter above ground shall be 24- inches.

The filter fobric should be purchased in a continuous roll and cut to the length of the barrier to avoid the use of joints. When joints are necessary, filter cloth should be wrapped together only at a support post with ends securely fastened to the post, with a minimum 6- Inch overlap.

Extra- strength fliter cloth (50 pounds/ linear inch minimum tensile strength) should be used. A 2- Inch wide lathe shall be stopled over the filter fabric oscurely fasten it to the upslope side of the posts. The staples used should be 1.5- Inch heavy- duty wire staples spaced a maximum of 8- Inches apart.

Place the bottom I2- inches of the filter fabric into the 8- inch deep trench, extending the remaining 4- inches towards the up- slope side of the trench and backfill the trench with soil or gravel and compact.

<u>Inspection and Maintenance</u>
Inspect silt fence every seven (7) calendar days and within 24- hours after each rainfall event that produces .5- inches or more of precipitation. Check for areas where runoff has eroded a channel beneath the fence, or where the fence was caused to sag or collapse by runoff overtopping the fence.

If the fence fabric tears, begins to decompose, or any way becomes ineffective, replace the affected section of the fence immediately.

Sediment must be removed when it reaches approximately 1/3 the height of the fence, especially If heavy rains are expected.

Slit fence should be removed within 30 days after final site stabilization is achieved or after temporary BMPs are no longer needed. Trapped sediment should be removed or stabilized on site. Disturbed areas resulting from fence removal shall be permanently stabilized.

\_\_SILT\_FENCE N.T.S.

DLZ KENTUCKY, INC.
201 BRIGHTON PARK BLVD.
FRANKFORT. Y 40601
(502) 695-2300 (Fox) 695-1497

KY 250 CONSTRUCTION KY 136/ WATER LINE (

MCH .: N 108

# KY 136 / KY 250 WATER LINE CONSTRUCTION PHASE II

2012-00254

**RECEIVED** 

JUL **26** 2012

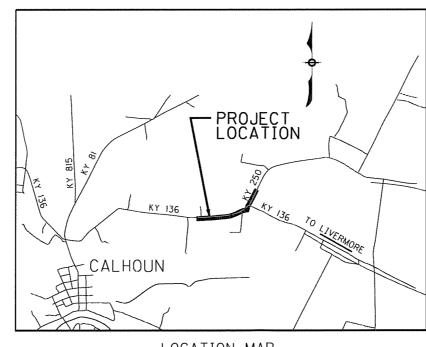
PUBLIC SERVICE COMMISSION

PREPARED for:
North McLean County Water District

NORTH MCLEAN WATER DISTRICT

MICHAEL LANTHAM

SUPERINTENDENT



LOCATION MAP NOT TO SCALE

## INDEX OF SHEETS

SHEET	ITEM
1 2 3 4 5 6 7 8	COVER SHEET PROJECT SUMMARY / TYPICAL SECTION PLAN AND PROFILE -STA. 79+15 TO 103+00 PLAN AND PROFILE -STA. 103+00 TO 116+68 DETAIL A AND B DETAIL SHEET DETAIL SHEET DETAIL SHEET





NOKIH MCLEAN COUNTY
NOTER DISTRICT
NO. BOX 68
217 HILL STREET
IJVERMORE, KY 42352
2770, 278-2800

KY 136/ KY 250
WATER LINE CONSTRUCTION
PHASE II

CHECKED BY: MCH SCALE: N.T.S.
JOB NO.: 1131003690 SHEET: 1

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## NOTES:

- PROPERTY LINES HAVE BEEN OBTAINED FROM PVA OFFICE AND ARE APPROXIMATE LOCATION OF PROPERTY.
- UTILITY DEPTHS HAVE BEEN ASSUMED AND SHALL BE FIELD VERIFIED BY THE CONTRACTOR; TELEPHONE - 24° DEPTH GAS - 30' DEPTH WATER - 36° DEPTH
- 3. WATER MAIN AND SERVICES SHALL BE INSTALLED WITH A MINIMUM COVER OF 30' (36' PREFERRED).
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- 9. ALL FIRE HYDRANTS SHALL BE INSTALLED WITH A 6 GATE VALVE AS SHOWN IN THE FIRE HYDRANT DETAIL, UNLESS OTHERWISE NOTED.
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EX. WATER MAIN EX. GAS MAIN EX. TELEPHONE LINE EX. STORM DRAIN EX. OVERHEAD UTILITY

EX. EDGE OF PAVEMENT

PROPOSED WATER MAIN EX. WATER METER

EX. TELEPHONE POLE

EX. UTILITY POLE

EX. FIRE HYDRANT

PROPOSED FIRE HYDRANT

PROPOSED GATE VALVE

PROPOSED CAP OR END PLUG

EX. GUY WIRE

(P)

FX. FLOW LINE

EX.SHOULDER EX.ROADWAY PAVEMENT 8'-0" PREFERRED **VARIES** € DITCH -2'-0" MIN. EX. RIGHT OF WAY LINE / EX. PROPERTY LINE PROPOSED EASEMENT LINE 2'-0" MIN. PROP. 16" OR 12"

WATERLINE PLACEMENT

## TYPICAL SECTION

## \*EXTREME CAUTION\*

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TRANSPORTATION KENTUCKY TRANSPORTATION CABINET KENTUCKY DEPT. OF HIGHWAYS DISTRICT 2 PO BOX 600 MADISONVILLE, KY 42431-5003 (270) 824-7080 (270) 824-709I (FAX)

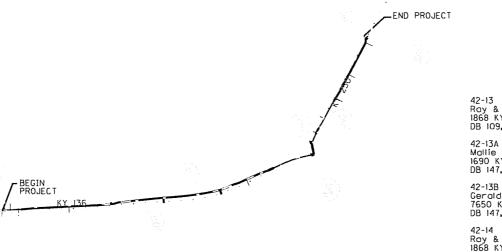
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CABLE Mr. BRENT RASSERTY TIME WARNER 100 INDUSTRIAL DR. OWENSBORO, KY 42301 (270) 222-0861

WATER Mr. MICHAEL LANTHAM NORTH MCLEAN COUNTY WATER DISTRICT 217 HILL ST. PO BOX 68 LIVERMORE, KY 42352 (270) 278-2800 (270) 499-3788 (MOBILE)

MCLEAN CO. MIDDLE SCHOOL PRINCIPAL TRES SETILE 1901 HIGHWAY 136 EAST CALHOUN, KENTUCKY 42327 (270)273-5191

MCLEAN CO. HIGH SCHOOL ASHLEY TROUTMAN 1859 HIGHWAY 136 EAST CALHOUN KENTUCKY 42327 (270) 273-5278



## PROPERTY OWNERS

Ray & Eina Hayden 1868 KY 136 E, Calhoun, KY 42327 DB 109, PG 353 Mallie Denise McElwain 1690 KY 136 E, Calhoun, KY 42327 DB 147, PG 241 Raiph B. & Carol A. Hayden 42-23 Gerald A. Hayden 7650 KY 1046, Calhoun, KY 42327 DB 147, PG 245 42-23A Roy & Eino Hoyden 1868 KY 136 E, Calhoun, KY 42327 DB 109, PG 353 Ralph B. & Carol A. Hayden 2204 KY 136 E. Calhoun, KY 42327 DB 118, PG 616

Gerold & Judy Hayden 7650 KY 1046, Calhoun, KY 42327 DB 112, PG 461

205 KY 250, Calhoun, KY 42327 DB 112, PG 466

James C. Bickett 4610 KY 81, Owensboro, KY 42301 DB 104, PG 83

Linda & Dewayne Burden 1559 KY 136 E, Calhoun, KY 42327 DB 134, PG 419

McLean Co. Board of Education DB 68, PG 469



GRAPHIC SCALE

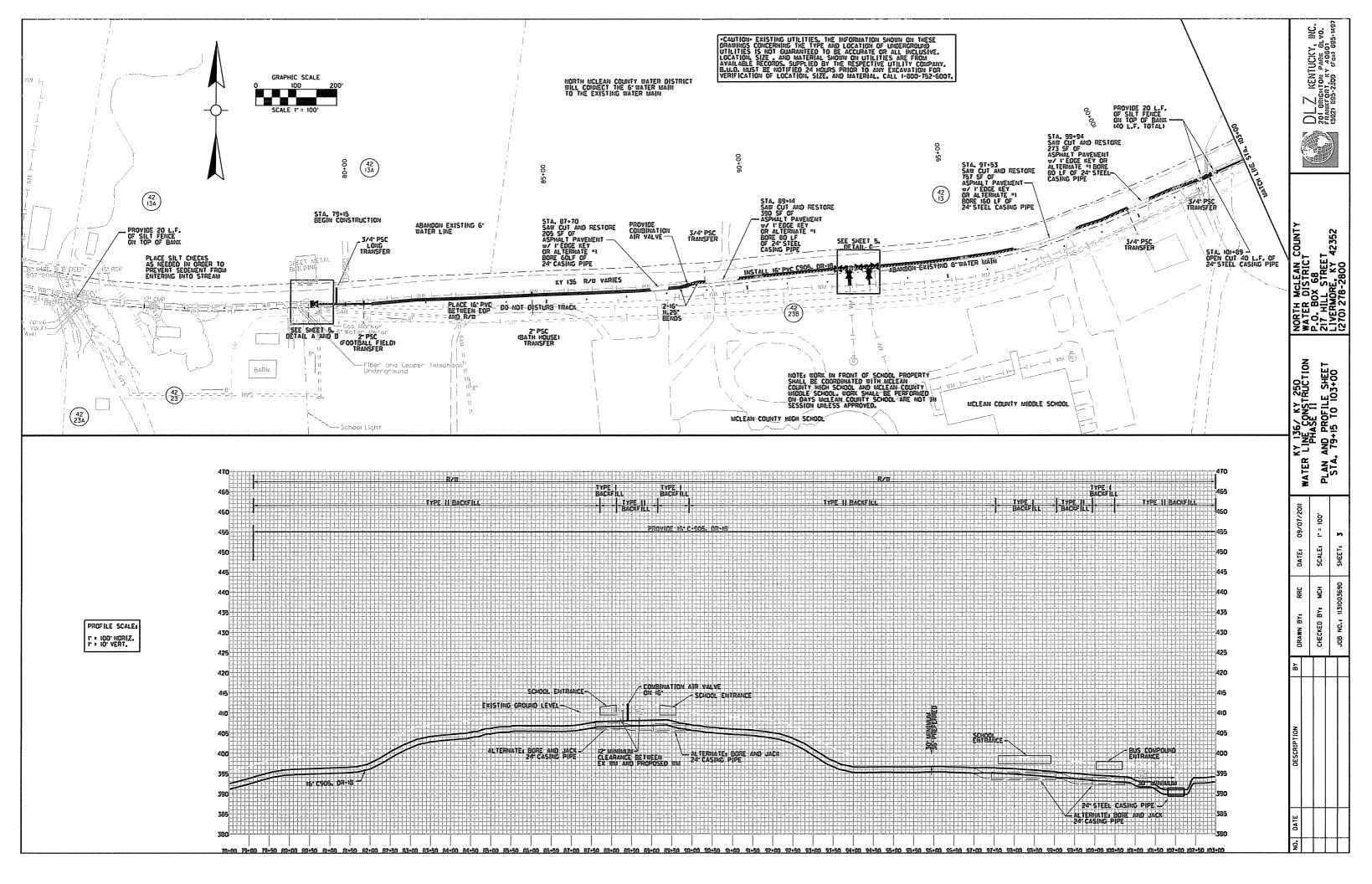
SCALE 1' = 400

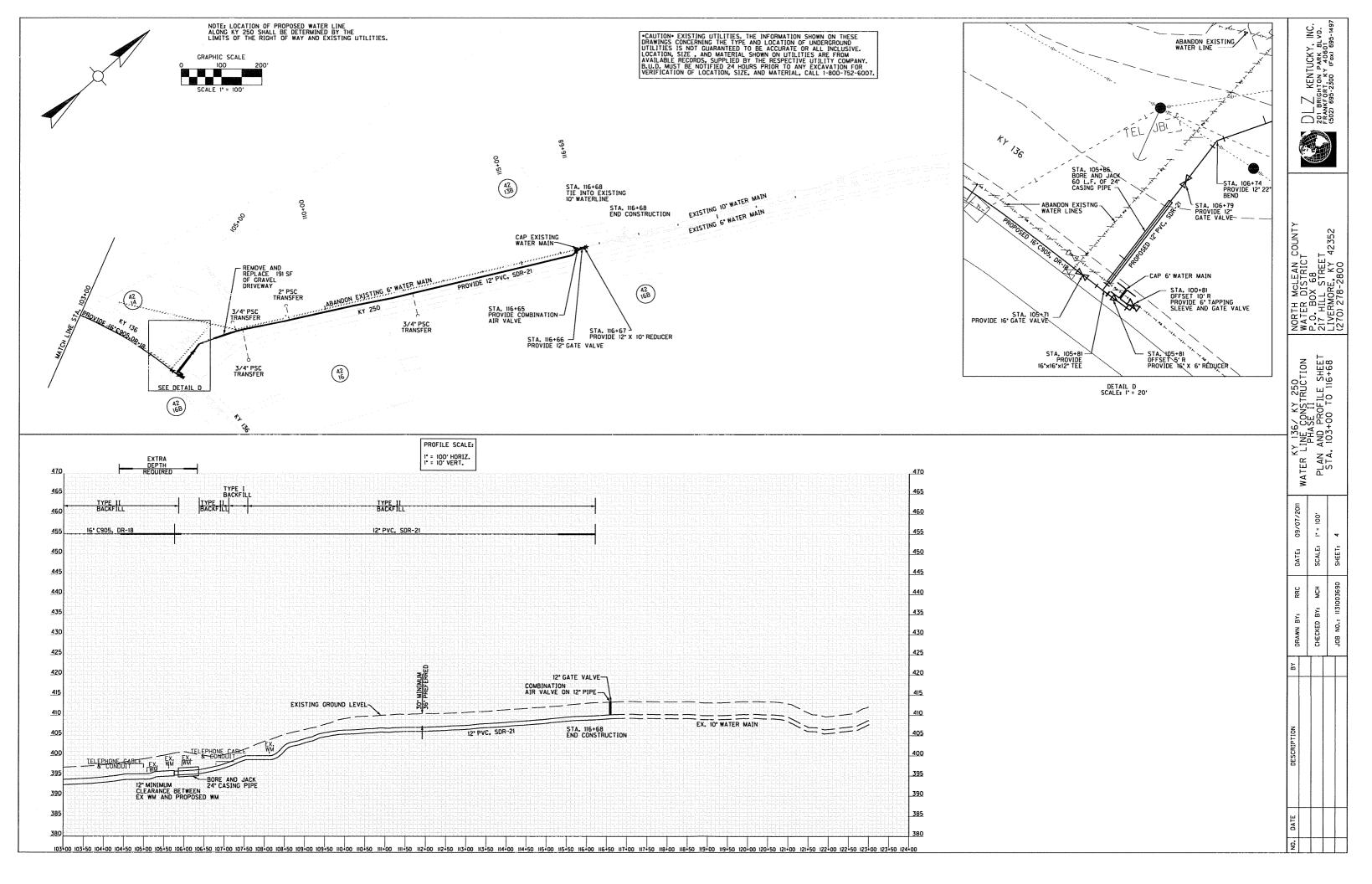


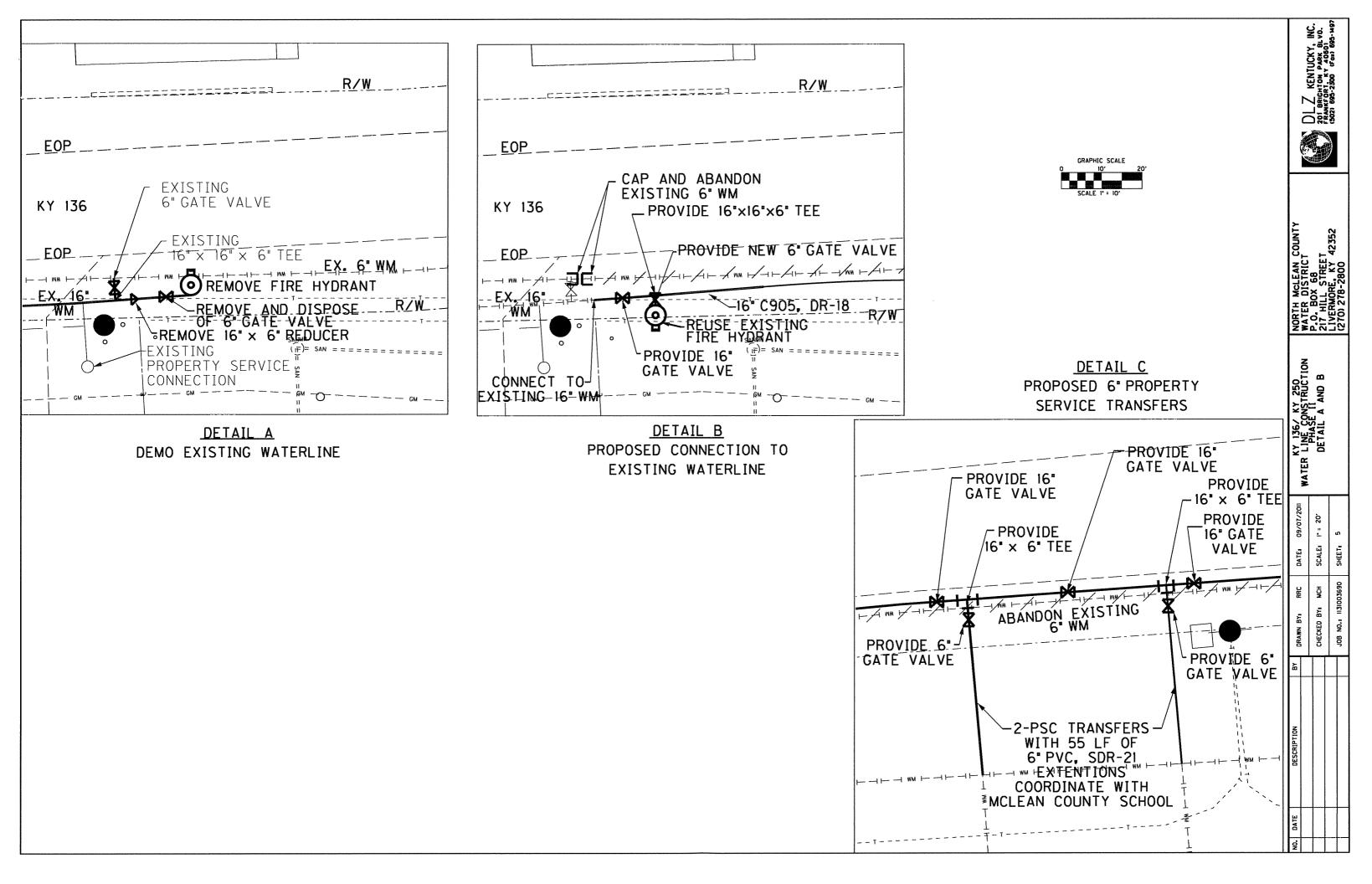
NORTH MCLEAN COUNTY WATER DISTRICT P.O. BOX 68 217 HILL STREET LIVERMORE, KY 42352 (270) 278-2800

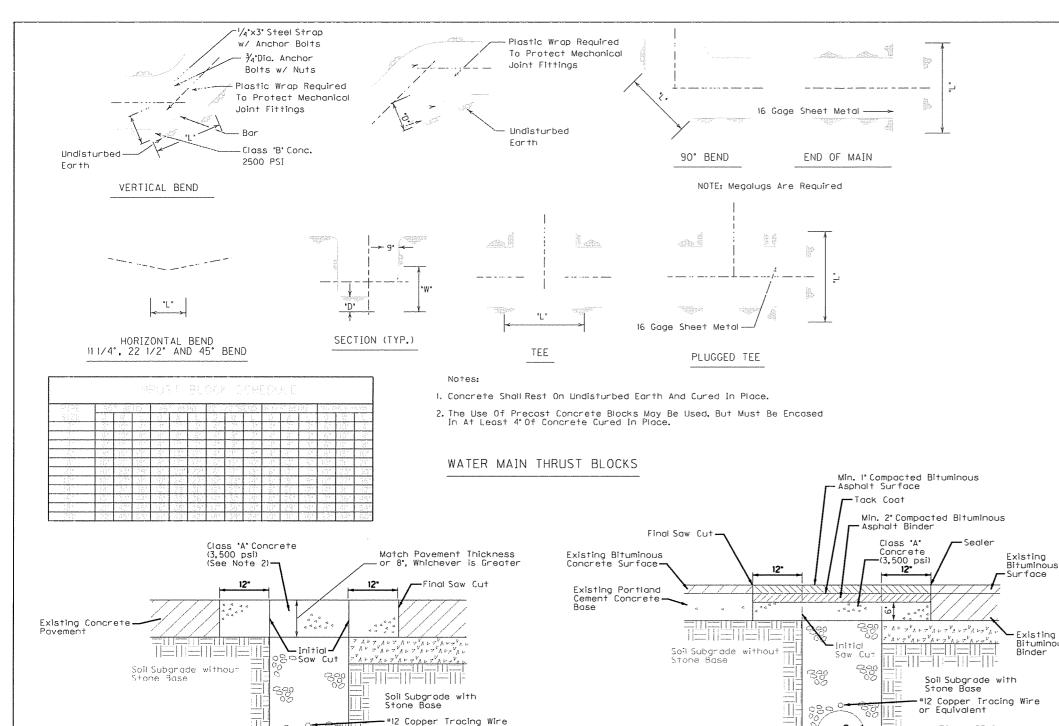
KY 136/ KY 250
ER LINE CONSTRUCTION
PHASE II
PROJECT SUMMARY/
TYPICAL SECTION WATER

> 09/0 SCALE: 3RC MCH NO.: CHECKED 98









The final saw cut shall be made a distance of 12 inches beyond the trench, after trench

KTC No. 57 Stone

Encasement

Tack material consisting of emulsified asphalt SS-lh shall be placed on the surface of the bituminous base at the rate of 0.1 gallon per square yard.

Pavement joints shall be sealed with an approved joint sealant after placement of bituminous concrete surface.

The contractor shall be responsible during the ensuing five years for proper backfilling and replacement of the surface. During the five year period any pavement settlement shall be immediately replaced by the contractor at the expense of the contractor. Match existing pavement structure or a minimum of: Asphalt surface - 1' Asphalt base - 2' Base - 6'

> STREET CROSSING BITUMINOUS CONCRETE PAVEMENT RESTORATION

## NOTES

- 1. Water main pipe to be P.V.C SDR-21 and approved for potable water systems by the National Sanitation Foundation and bearing the NSF stamp unless other material is called for an the plans. P.V.C. pipe is to be joined by a rubber gasket bell joint except at fittings. Fitting and pipe joints are to be megalugs as are pipe and valve joints.

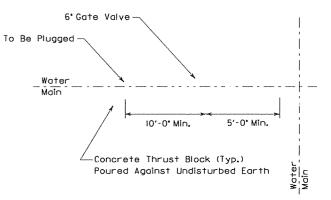
  2. Fittings used with P.V.C. mains shall be ductile iron conforming to the
- requirements of AWWA C-110 with megalug joints.
  Fittings shall have a minimum pressure rating of 150 psi and shall be provided with cement linings complying with AWWA C-104 or latest revision. Fittings shall be tar-coated outside. Where valves are fitted directly to a mainline tee, the tee is to be a megalug
- joint anchoring tee.

  3. CATE VALVES 4\*AND LARGER: Mueller (or approved alternative) resilent wedge gate valve, modified wedge disc. type, suitable for direct earth burial, suitable for mechanical joint and to comply with AWWA Specifi-
- cations.
  4. GATE VALVES UNDER 4': Bronze Body 150 p.s.i. working pres-
- sure Wedge Disc.

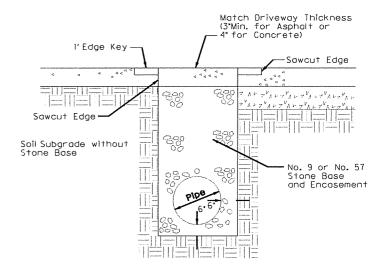
  5. All valves of each size classification must be of the same manufacture and contractor is to furnish owner with one I-handle sacket wrench for each size of operating nut on valves and hydrants installed.

  6. MINIMUM COVER: All mains to have 30 minimum cover and
- all service lines to have 24 minimum cover.

  7. All water mains of non-ferrous material shall have a 2 inch wide metallic backed tape (suitable for elec/mag, tracing of mains) or "12 copper tracing wire.



## TYPICAL STUBOUT DETAIL



## DRIVEWAY PAVEMENT RESTORATION

MCLEAN COUNTY DISTRICT SOX 68 LL STREET MORE, KY 42352

KY 136/ KY 250 R LINE CONSTRUCTION PHASE II DETAIL SHEET WATER

STREET CROSSING CONCRETE PAVEMENT RESTORATION

Concrete cap to be 8 inches or greater. If the existing pavement section is less than 8 inches thick, excavation of underlying stone base or soil subgrade will be required to provide the specific

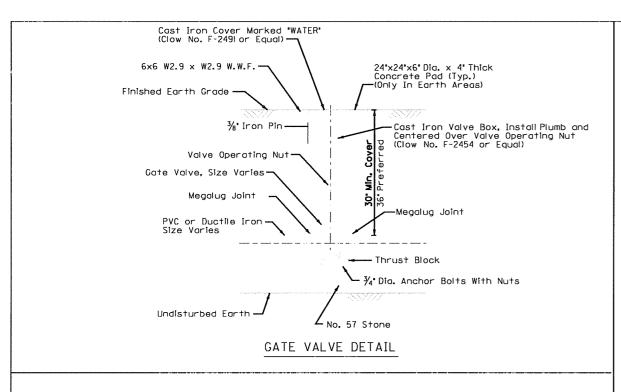
The final saw cut shall be made a distance of 12 inches beyond the trench, after trench excavation and backfill are complete, and immediately prior to placing concrete. If the distance from the edge of the trench to an existing break or joint is less than 4 feet, the final saw cut shall be located at the existing break or joint.

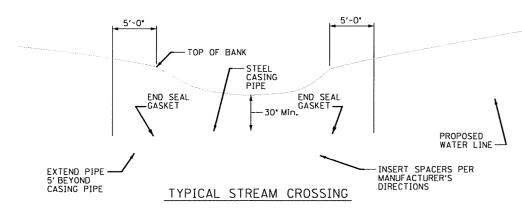
The contractor shall be responsible during the ensuing five years for proper backfilling and replacement of the surface. During the five year period any povement settlement shall be immediately replaced by the contractor at the expense of the contractor.

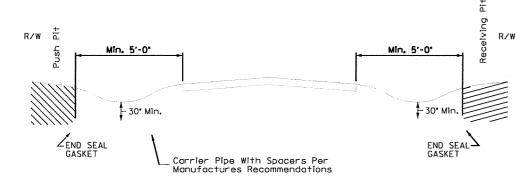
thickness.

or Equivalent

KTC No. 57 Stone







- 1. Push pit and receiving pit to be backfilled and thoroughly compacted.
- 2. All ditch lines to be left open.
- 3. Seed and straw all areas disturbed by this work.

TYPICAL HIGHWAY BORING CROSSING

## GENERAL NOTES

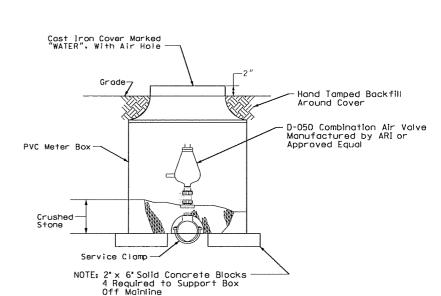
- TRAFFIC SHALL BE MAINTAINED IN ACCORDANCE WITH THE MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES, THE STANDARD SPECIFICATIONS FOR ROAD AND BRIDGE CONSTRUCTION AND THE STANDARD DRAWINGS, CURRENT EDITIONS.
- EXCEPT FOR THE ROADWAY AND TRAFFIC CONTROL BID ITEMS LISTED, ALL ITEMS OF WORK NECESSARY TO MAINTAIN AND CONTROL TRAFFIC WILL BE PAID AT THE LUMP SUM BID PRICE TO "MAINTAIN AND CONTROL TRAFFIC" AS SET FORTH IN THE CURRENT STANDARD SPECIFICATIONS FOR ROAD AND BRIDGE CONSTRUCTION UNLESS OTHERWISE PROVIDED FOR IN THESE NOTES. THE LUMP SUM BID TO "MAINTAIN AND CONTROL TRAINSHALL ALSO INCLUDE, BUT IS NOT LIMITED TO, THE FOLLOWING ITEMS AND OPERATIONS:
  - A. ALL GRADING AND NECESSARY DRAINAGE (UNLESS A BID ITEM FOR DETOUR CONSTRUCTION IS INCLUDED) FOR THE TEMPORARY ROADWAY AND REMOVAL THEREOT, WHEN IT IS NO LONGER NEEDED. IF A BID ITEM FOR DETOUR CONSTRUCTION IS INCLUDED, GRADING AND DRAINAGE WILL BE PAID FOR IN THE BID ITEM 'DETOUR CONSTRUCTION'.
  - B. ALL LABOR AND MATERIALS NECESSARY FOR CONSTRUCTION AND MAINTENANCE OF TRAFFIC CONTROL DEVICES AND MARKINGS.
  - C. ALL FLAGPERSONS AND TRAFFIC CONTROL DEVICES SUCH AS, BUT NOT LIMITED TO, FLASHERS, SIGNS BARRICADES AND VERTICAL PANELS, PLASTIC DRUMS (STEEL DRUMS WILL NOT BE PERMITTED) AND CONES NECESSARY FOR THE CONTROL AND PROTECTION OF VEHICULAR AND PEDESTRIAN TRAFFIC AS SPECIFIED IN THESE NOTES, THE PLANS, THE MUTCO OR THE ENGINEER.
- ANY TEMPORARY TRAFFIC CONTROL ITEMS, DEVICES, MATERIALS AND INCIDENTALS SHALL REMAIN THE PROPERTY OF THE CONTRACTOR WHEN NO LONGER NEEDED.
- THE CONTRACTOR SHALL MAINTAIN A TWO-LANE TRAVELED WAY WITH A MINIMUM LANE WIDTH OF 11 FEET, HOWEVER, DURING WORKING HOURS, ONE-MAY TRAFFIC MAY BE ALLOWED AT THE DISCRETION OF THE ENGINEER, PROVIDED ADEQUATE SIGNING AND A FLAGPERSON ARE AT THE LOCATION.
- THE CONTRACTOR SHALL COMPLETELY COVER ANY SIGNS, EITHER EXISTING, PERMANENT OR TEMPORARY, WHICH DD NOT PROPERLY APPLY TO THE CURRENT TRAFFIC PHASING, AND SHALL MAINTAIN THE COVERING UNTIL THE SIGNS ARE APPLICABLE OR ARE REMOVED.
- 6. IN GENERAL, ALL TRAFFIC CONTROL DEVICES SHALL BE PLACED STARTING AND PROCEEDING IN THE DIRECTION OF THE FLOW OF TRAFFIC AND REMOVED STARTING AND PROCEEDING IN THE DIRECTION OPPOSITE THE FLOW OF TRAFFIC.
- IF THE CONTRACTOR DESIRES TO DEVIATE FROM THE TRAFFIC CONTROL SCHEME AND CONSTRUCTION SCHEDULE OUTLINED IN THESE PLANS AND THIS PROPOSAL, HE SHALL PREPARE AN ALTERNATE PLAN AND PRESENT IT IN WRITING TO THE ENGINEER. THIS ALTERNATE PLAN CAN BE USED ONLY AFTER REVIEW AND APPROVAL OF THE DIVISIONS OF TRAFFIC, DESIGN AND CONSTRUCTION, AND THE FEDERAL HIGHWAY ADMINISTRATION, WHERE APPLICABLE.
- IF TRAFFIC SHOULD BE STOPPED DUE TO CONSTRUCTION OPERATIONS AND AN EMERGENCY VEHICLE ON AN OFFICIAL EMERGENCY RUN ARRIVES AT THE SCENE, THE CONTRACTOR SHALL MAKE THE PROVISIONS FOR THE PASSAGE OF THAT VEHICLE AS OUICRLY AS POSSIBLE.

## MAINTENANCE OF TRAFFIC

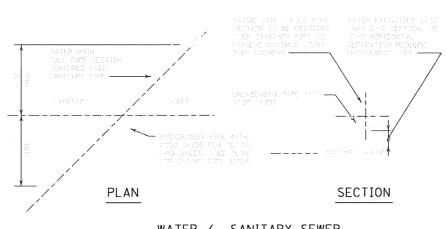
ROAD WORK AHEAD SIGN TO BE PLACED ALONG US 42 THROUGHOUT THE DURATION OF THE CONSTRUCTION WITHIN US 42 RIGHT OF WAY, AT APPROPRIATE LOCATIONS TO WARN THE PUBLIC AHEAD OF THE CONSTRUCTION ACTIVITY AREA.



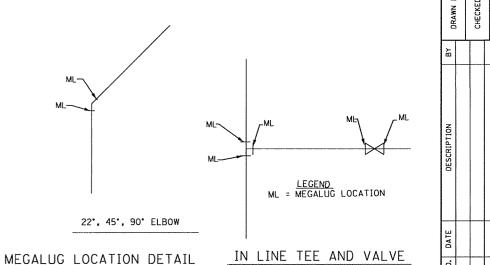
W20-1



## COMBINATION AIR VALVE



WATER / SANITARY SEWER CROSSING - ENCASEMENT



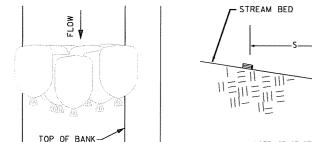


NORTH MCLEAN COUNTY WATER DISTRICT P.O. BOX 68 217 HILL STREET LIVERMORE, KY 42352 (270) 278-2800

Z50 TRUCTION KY 136/ KY 250 LINE CONSTRUCTION PHASE II WATER

ž DATE: MCH

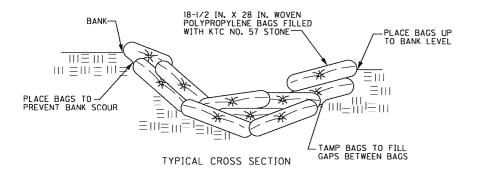
CHECKED



NOTE: SPACE SERIES OF VELOCITY CHECKS ALONG STREAM REACH, USE SPACING "S' SUCH THAT THE CRESIS OF DOWN STREAM CHECKS ARE THE SAME ELEVATION AS THE TOE OF UPSTREAM CHECKS.

EIIIEIIIE

## TYPICAL PLAN



## STONE BAG CHECK DAM IN SMALL DITCH

When and Where to Use It:
Stone bag checks are to be placed in man-made swales and ditches only.
Stone bag check dams should not be built in wetlands, any active or live streams, and in Waters of Commonwealth.

Stone bag check dams are applicable in situations where flow velocities are too high causing channel scour. They should not be used as a primary sediment-trapping device. They should be used as velocity checks only as a short-term temporary solution.

Specific conditions for use include new diversion ditches that will not or cannot be stabilized for several days, and temporary diversion channels that are eroding due to high flow rates or steep slopes.

## Installation

Stone fill bags shall be woven polypropylene bags with approximate dimensions of 18-1/2 inches by 28 inches. The bags shall be filled with KYTC No. 57 stone. The the ends of filled bags using either drawstrings or wire ties.

Stone bag check dams shall span the banks of the ditch or swale.

The height of the dam at the stream centerline shall equal the height noted on the plans, or equal the approximate stage for normal storm flows.

Place bags at the banks to a height at least 6 inches above the center of the

Space stone bag ditch checks as shown on the plans, or such that the crest of the downstream check is at the same elevation as the toe of the check located immediately upstream.

## Inspection and Maintenance:

Inspect checks every seven (7) calendar days and within 24-hours after each roinfall event that produces ½-inches or more of precipitation. Check for structural damage, channel erosion and sediment deposition. If sediment accumulates, remove it from the upstream face of the check before it accumulates to a height equal to 1/3 the structure height. Make all necessary

Split the spacing between existing checks with an additional check if stream erosion problems persist with a reach.

Reinforce checks with additional stone bags as required to maintain integrity. Remove and replace any damaged bags and dispose of them properly. Do not leave damaged or empty bags in the ditch at any time.

Remove checks as soon as they are no longer required to control flow velocities and the ditch can be stabilized according to the appropriate stabilization schedule or is taken out of service.

## Stit Fence Detail

<u>Installation:</u>
The fence should be placed across the slope along a line of uniform elevation (perpendicular to the direction of flow). The fence should be located at least 10- feet from the slopes to provide sediment storage and access for maintenance

A flat-bottom trench approximately 4- Inches wide and 8- Inches deep, or a v-shaped trench 8- inches deep should be excavated. On the downslope side of the trench, drive the 2- inch. X 2- inch posts at least 18- inches into the ground, spacing them no further than 6- feet opart.

Posts should be installed, with 1- to 2- inches of the posts protruding above the top of the fabric and no more than 3- feet of the post should protrude above the ground. The minimum fence height (height of fliter fabric above ground) shall be 18- inches. The maximum fence height (height of fliter above ground shall be 24- inches.

The filter fabric should be purchased in a continuous roll and cut to the length of the barrier to avoid the use of Joints. When Joints are necessary, filter cloth should be wropped together only at a support post with ends securely fastened to the post,

Extra- strength filter cloth (50 pounds/ linear inch minimum tensile strength) should be used. A 2- inch wide lathe shall be stapled over the filter fabric to securely fasten it to the upslope side of the posts. The staples used should be 1.5- inch heavy- duty wire stoples spaced a maximum of 8- inches apart.

Place the bottom 12- inches of the filter fabric into the 8- inch deep trench, extending the remaining 4- inches towards the up- slope side of the trench and backfill the trenchwith soil or grayel and compact.

## Inspection and Maintenance

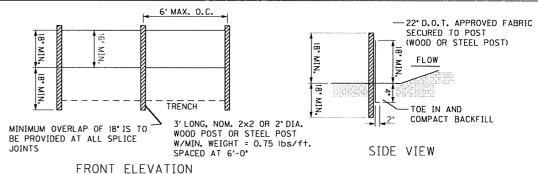
inspect slit fence every seven (7) colendar days and within 24- hours after each rainfall event that produces .5- inches or more of precipitation. Check for areas where runoff has eroded a channel beneath the fence, or where the fence was caused to sag or collapse by runoff

If the fence fabric tears, begins to decompose, or any way becomes ineffective, replace the affected section of the fence immediately.

Sediment must be removed when it reaches approximately 1/3 the height of the fence, especially

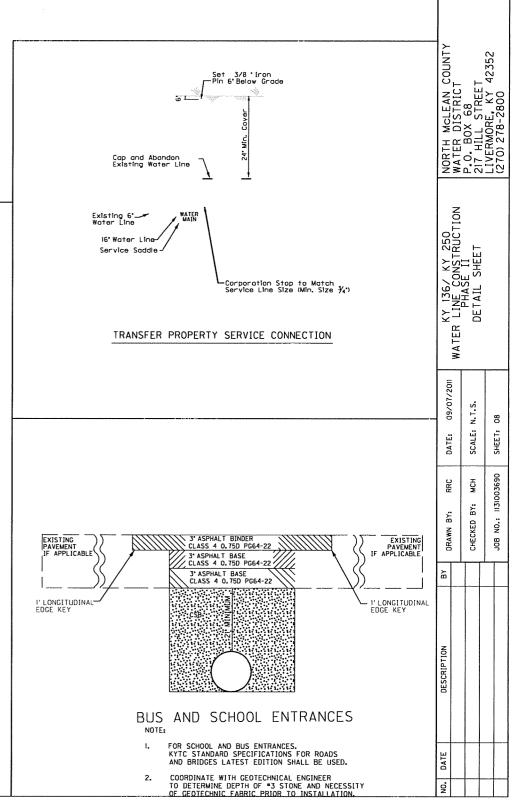
If heavy rains are expected.

Slit fence should be removed within 30 days after final site stabilization is achieved or after temporary BMPs are no longer needed. Trapped sediment should be removed or stabilized on site. Disturbed areas resulting from fence removal shall be permanently stabilized.





DLZ KENTUCKY, 201 BRIGHTON PARK BL FRANKFORT, KY 40601 (502) 695-2300 (F0x) 69



## I-1/2' Pentagon Nut (3 Typ.) Open Counter Clockwise Need #12 Copper Wire as Required. It Shall Be Extended and Attached to Safety Flance Bolt on Each Fire Flanaible Flange Location For Traffic Type Hydrant 24"x24"x6" Concrete Pad (Typ.) -Concrete Collar Hydront Extension As Required For Additional Depth Of Burial Valve Box (Refer to Gate Valve Details) 6x6 W2.9 x W2.9 W.W.F. Standard Water — Valve Box 6° 8\* Pipe Sieeve As Required 6 D.I.M.J. Gate Valve w/Support Blocking ON W € Water Main (Size Varies) Weep Hole Shall Not − Be Covered By Concrete Thrust Block Eoch -Y4'S.S. Rod to Tee No. 57 Gravel Min. of 3 Cu. Ft. of Crushed Stone, Fine Gravel, or Sand Under Hydrant For Drainage Gate Valve Thrust Block 18° Min. Laying Length -48° Max. Laying Length on New Construction

FIRE HYDRANT ASSEMBLY