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PUBLIC SERVICE
COMMISSION

November 3, 2017

Gwen R. Pinson, Executive Director
Public Service Commission
211 Sower Blvd.
Frankfort, KY 40602

Re: Case No. 2016-00216
North Shelby Water Company

Dear Ms. Pinson:

Per instructions included in the PSC Order issued to the North Shelby Water Company on September 22, 2016, please be advised that as of September 9, 2017 construction of the East-West Connector – Phase III Water System Improvements project is substantially complete. Please find attached a digital copy of “as-built” drawings for your records.

Should you need additional information, please advise.

Sincerely,

A handwritten signature in blue ink that reads 'Lee Mudd'.

Lee Mudd, P.E.
Project Engineer

/jlm

cc: Jerry Ruble, President
North Shelby Water Company

NORTH SHELBY WATER COMPANY EAST - WEST CONNECTOR - PHASE III WATER SYSTEM IMPROVEMENTS CONTRACT NO. 1 SHELBY COUNTY, KENTUCKY

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PROJECT FUNDED BY:

U.S.D.A. RURAL DEVELOPMENT

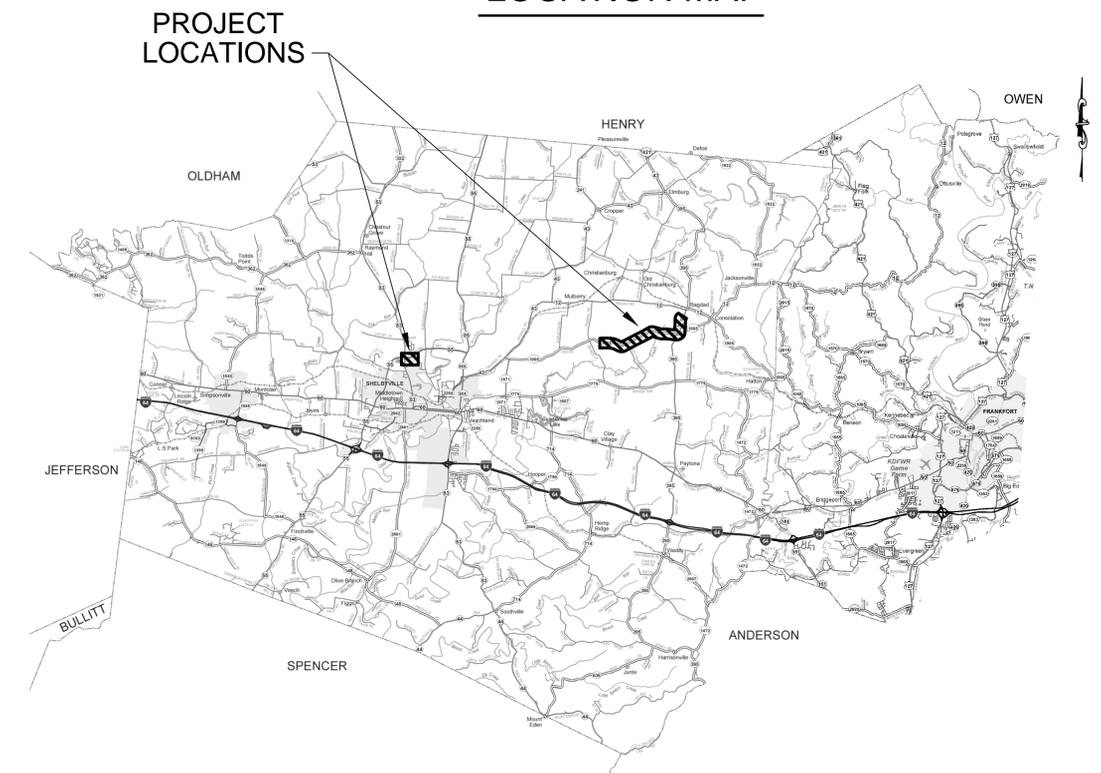
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APRIL 2016

LOCATION MAP



M

Monarch Engineering, Inc.

556 CARLTON DRIVE
LAWRENCEBURG, KY 40342

RECORD DRAWINGS



LOCATION AND SCOPE OF PROJECT

THE PROJECT SITE IS GENERALLY DEFINED AS THE CITY OF SHELBYVILLE, SHELBY COUNTY, KENTUCKY. THE WORK TO BE DONE UNDER THIS CONTRACT INCLUDES FURNISHING ALL MATERIALS, EQUIPMENT, AND LABOR NECESSARY TO CONSTRUCT THE EAST WEST CONNECTOR - PHASE III WATER SYSTEM IMPROVEMENTS PROJECT IN ACCORDANCE WITH THE PLANS, SPECIFICATIONS AND CONTRACT DOCUMENTS.

GENERAL NOTES

- IT IS THE INTENTION OF THESE PLANS TO CONSTRUCT ALL WORK IN ACCORDANCE WITH ALL APPLICABLE REQUIREMENTS OF THE CITY OF SHELBYVILLE, SHELBY COUNTY, THE KENTUCKY DEPARTMENT FOR ENVIRONMENTAL PROTECTION, AND THE U.S. ARMY CORPS OF ENGINEERS, WHERE THERE IS A CONFLICT BETWEEN THE CONTRACT DOCUMENTS, PLANS, AND SPECIFICATIONS AND THE PERMIT REQUIREMENTS OF THE AGENCY CONTROLLING THE UTILITY OR RESPECTIVE RIGHTS-OF-WAY, THE MORE RESTRICTIVE SHALL GOVERN.
- THE CONTRACTOR AND ANY APPLICABLE SUBCONTRACTORS SHALL ATTEND A PRE-CONSTRUCTION MEETING AT A TIME AND PLACE ARRANGED BY THE ENGINEER, IN WHICH THE AFFECTED PARTIES WILL BE PRESENT. ALSO, A PRE-CLEARING WALK THROUGH WILL NEED TO BE ATTENDED BY THE CONTRACTOR.
- FOLLOWING THE PRE-CONSTRUCTION MEETING, THE CONTRACTOR SHALL NOTIFY THE ENGINEER A MINIMUM OF THREE (3) WORKING DAYS PRIOR TO THE START OF CONSTRUCTION FOR INSPECTION COORDINATION. NO WORK CAN COMMENCE UNTIL ALL PERMITS HAVE BEEN OBTAINED AND THE CONTRACTOR HAS BEEN GIVEN THE AUTHORITY TO PROCEED.
- THE CONTRACTOR SHALL NOTIFY KENTUCKY 811 AT LEAST 72 HOURS IN ADVANCE OF CONSTRUCTION, FOR LOCATION AND MARKING OF ALL EXISTING UTILITIES.
- LOCATIONS AND ELEVATIONS OF EXISTING UNDERGROUND UTILITIES AS SHOWN ON THE PLANS ARE APPROXIMATE. NO GUARANTEE IS EITHER EXPRESSED OR IMPLIED AS TO THE COMPLETENESS OR ACCURACY THEREOF. THE CONTRACTOR SHALL BE EXCLUSIVELY RESPONSIBLE FOR DETERMINING AND VERIFYING THE LOCATION, DEPTH, AND ELEVATION OF THE EXISTING UTILITIES WITHIN THE CONSTRUCTION AREA PRIOR TO THE START OF CONSTRUCTION. THE CONTRACTOR SHALL NOTIFY THE ENGINEER IF ANY CONFLICTS ARE APPARENT OR IF LOCATIONS AND DEPTHS DIFFER SIGNIFICANTLY FROM THE PLANS.
- ALL ELEVATIONS REFER TO THE CURRENT NORTH AMERICAN VERTICAL DATUM OF 1988 (NAVD 88).
- THE ENGINEER HAS NOT PERFORMED PROPERTY OR RIGHT-OF-WAY SURVEYS FOR ANY OF THE AREAS INCLUDED IN THIS PROJECT RIGHT-OF-WAY OR PROPERTY LINES SHOWN ON THE PLANS ARE APPROXIMATE AND ARE SHOWN FOR GENERAL ORIENTATION ONLY. CORNERS OR OTHER SURVEY MARKERS HAVE NOT BEEN LOCATED, UNLESS SPECIFICALLY CALLED OUT ON THE PLANS.
- ALL PROPERTIES OR FACILITIES IN THE SURROUNDING AREAS, PUBLIC OR PRIVATE, DESTROYED OR OTHERWISE DAMAGED BY THE CONTRACTOR'S OPERATIONS SHALL BE REPLACED OR REPAIRED TO THE SATISFACTION OF THE AUTHORITY HAVING JURISDICTION OF THE PROPERTY OR FACILITY BY THE CONTRACTOR AT THEIR OWN EXPENSE.
- IF, IN THE OPINION OF THE ENGINEER, WORK HAS NOT PROGRESSED IN A REASONABLE AND TIMELY MANNER, THE ENGINEER SHALL HAVE THE RIGHT, WITH THE APPROVAL OF THE OWNER, TO DIRECT THE CONTRACTOR TO PROCEED WITH THE WORK OR ANY PORTION THEREOF IMMEDIATELY. IN THE EVENT THAT THE CONTRACTOR DOES NOT PROCEED WITH THE WORK IMMEDIATELY, AS DIRECTED BY THE ENGINEER, THE ENGINEER, UNDER THE DIRECTION OF THE OWNER, MAY ORDER ANY OR ALL OTHER OPERATIONS OF THE CONTRACTOR UNDER THIS CONTRACT TO CEASE UNTIL THE CLEANUP AND RESTORATION WORK IS PROCEEDING IN AN ACCEPTABLE MANNER. SHOULD THE CONTRACTOR FAIL TO COMPLY WITH THESE PROVISIONS, THE OWNER MAY, WITH OR WITHOUT NOTICE, CAUSE THE REQUIRED RESTORATION AND CLEANUP TO BE DONE BY THE OWNER OR OTHERS AND WILL DEDUCT THE COST OF SAID WORK FROM ANY FUNDS DUE OR TO BECOME DUE TO THE CONTRACTOR UNDER THIS CONTRACT. THE PERFORMANCE OF SUCH WORK BY THE OWNER OR OTHERS SHALL SERVE IN NO WAY TO RELEASE THE CONTRACTOR FROM HIS GENERAL OR PARTICULAR LIABILITY FOR THE SAFETY OF THE PUBLIC OR COMPLETION OF THE WORK.
- ACTIONS MUST BE TAKEN TO MINIMIZE THE TRACKING OF MUD AND SOIL FROM CONSTRUCTION AREAS ONTO PUBLIC ROADWAYS. SOIL TRACKED ONTO THE ROADWAY SHALL BE REMOVED DAILY.
- ALL WORK SHALL BE INCORPORATED IN TO THOSE UNIT PRICES LISTED IN THE CONTRACT DOCUMENTS. ANY ITEMS NOT SPECIFICALLY LISTED IN THE UNIT PRICES SHALL BE CONSIDERED INCIDENTAL TO THE WORK AND SHALL NOT BE ELIGIBLE FOR SEPARATE PAYMENT OR COMPENSATION.

EROSION AND SEDIMENTATION CONTROL NOTES

- THE CONTRACTOR SHALL COMPLY WITH ALL EROSION AND SEDIMENTATION CONTROL REQUIREMENTS OF THE BOTH THE STATE OF KENTUCKY AND THE U.S. ARMY CORPS OF ENGINEERS FOR ALL DISTURBED AREAS INCLUDED IN THE PROJECT.
- THE CONTRACTOR SHALL CONDUCT CONSTRUCTION OPERATIONS IN A MANNER THAT WILL REDUCE ACCELERATED EROSION TO THE PRACTICAL MINIMUM AND PREVENT DAMAGING SILTATION TO EXISTING SEWERS AND WATER COURSES LEADING FROM THE PROJECT AREA.
- THE CONTRACTOR SHALL CONDUCT WORK IN SUCH A MANNER AS TO PREVENT THE ENTRY OF FUELS, OILS, BITUMINOUS MATERIALS, CHEMICALS, SEWERAGE, OR OTHER HARMFUL MATERIALS INTO NEARBY LAKES AND STREAMS.
- WASTE DISPOSAL AREAS SHALL BE SELECTED BY THE CONTRACTOR WITH FULL CONSIDERATION OF EROSION AND SEDIMENT CONTROL, SELECTION OF DISPOSAL SITE(S), AND CONTROL OF OPERATIONS, AND THE RESTORATION OF SAID AREAS SHALL BE SUBJECT TO APPROVAL OF THE ENGINEER.
- EXCAVATIONS FROM THE PROJECT AREA INCLUDING CHANNELS AND WATERCOURSES SHALL NOT BE DEPOSITED IN OR NEAR RIVERS, STREAMS, OR PONDS WHERE IT MAY ENTER THE WATERWAY.
- AT THE COMPLETION OF EACH DAYS CONSTRUCTION, CARE SHOULD BE TAKEN TO ENSURE THAT MINIMAL EROSION WILL OCCUR IN TRENCHES AND TO STOCKPILED MATERIALS UNTIL RESUMPTION OF WORK.
- THE CONTRACTOR SHALL CONFINE CONSTRUCTION OPERATIONS TO THE MINIMUM AMOUNT OF WORKING SPACE PRACTICAL TO AID IN THE MINIMIZATION OF SOIL EROSION.
- THE PROJECT WILL BE CONTINUALLY OBSERVED BY VARIOUS STATE & LOCAL REGULATORY AGENCIES FOR EROSION CONTROL COMPLIANCE. DEFICIENCIES WILL BE CORRECTED BY THE CONTRACTOR IMMEDIATELY UPON NOTICE OF SUCH DEFICIENCIES. FAILURE TO CORRECT THE DEFICIENCIES MAY RESULT IN THE ISSUANCE OF A STOP WORK ORDER AND THERE WILL BE NO CONTRACT TIME EXTENSION GRANTED FOR THIS TYPE OF STOPPAGE.
- TEMPORARY SOIL EROSION CONTROL MEASURES CONSISTING OF SILT FENCE, MULCHING, AND TARPING SHALL BE IMPLEMENTED THROUGHOUT THE ENTIRE CONSTRUCTION PHASE OF THE PROJECT, AND SHALL BE REMOVED BY THE CONTRACTOR AFTER THE PERMANENT SOIL EROSION MEASURES HAVE BEEN ESTABLISHED.
- PERMANENT SOIL EROSION MEASURES CONSISTING OF AN APPROVED SEED MIXTURE AND MULCH BLANKET SHALL BE COMPLETED WITHIN FIVE (5) CALENDAR DAYS OF FINAL GRADING. IN THE EVENT IT IS NOT POSSIBLE TO PERMANENTLY STABILIZE THE AREA DUE TO SITE CONDITIONS OR SEASONAL LIMITATIONS, THE TEMPORARY MEASURES SHALL REMAIN IN FORCE AND SHALL BE MAINTAINED BY THE CONTRACTOR UNTIL SUCH TIME IT IS PRACTICAL TO COMPLETE THE PERMANENT SOIL EROSION CONTROL MEASURES.
- THE ENGINEER SHALL HAVE FULL AUTHORITY TO TEMPORARILY SUSPEND WORK IN THE EVENT THAT ANY OF THE ABOVE REQUIREMENTS ARE NOT BEING MET BY THE CONTRACTOR, OR IF CONDITIONS INDICATE THAT ADDITIONAL TEMPORARY MEASURES ARE WARRANTED, IN THE OPINION OF THE ENGINEER OR REGULATORY AGENCIES.
- PRIOR TO THE START OF CONSTRUCTION, THE CONTRACTOR SHALL INSTALL INLET FILTERS AT ALL INLETS IN THE CONSTRUCTION AREA.
- THE CONTRACTOR SHALL BE RESPONSIBLE FOR THE MAINTENANCE OF ANY REQUIRED ACCESS ROAD SURFACES AND SOIL EROSION CONTROL MEASURES WITHIN THE CONSTRUCTION AREA UNTIL THE FULL COMPLETION OF THE PROJECT.
- ALL NON-PAVED DISTURBED AREAS SHALL BE RESTORED AS INDICATED ON THE PLANS. IF NOT SPECIFICALLY STATED ON THE PLANS, RESTORATION SHALL CONSIST OF 4-INCHES OF TOPSOIL, FERTILIZER, SEED AND MULCH. UNLESS OTHERWISE STATED, ALL DISTURBED AREAS SHALL BE SEED WITH A SEED MIX APPROVED BY THE ENGINEER.

WORK LIMITS

IF INDICATED ON THE PLANS, THE CONTRACTOR SHALL KEEP ALL OPERATIONS WITHIN THE WORK LIMITS SHOWN. OTHERWISE, THE CONTRACTOR SHALL ESTABLISH CONSTRUCTION LIMITS WITHIN THE EXISTING AND/OR PROPOSED RIGHTS-OF-WAY AND EASEMENTS AS DIRECTED BY THE ENGINEER. THIS REQUIREMENT SHALL INCLUDE MATERIAL STOCKPIILING AND EQUIPMENT STORAGE. THE CONTRACTOR MAY NOT EXIT THE ESTABLISHED PROJECT WORK LIMITS WITHOUT EXPLICIT PERMISSION FROM THE OWNER AND THE ENGINEER.

UTILITIES

FOR PROTECTION OF UNDERGROUND UTILITIES AND IN CONFORMANCE WITH KENTUCKY LAW, THE CONTRACTOR SHALL DAIL KENTUCKY 811 A MINIMUM OF THREE (3) FULL WORKING DAYS, EXCLUDING SATURDAYS, SUNDAYS, AND HOLIDAYS, PRIOR TO BEGINNING WORK IN EACH EXCAVATION AREA WHERE PUBLIC UTILITIES HAVE NOT BEEN PREVIOUSLY LOCATED. MEMBERS WILL THIS BE ROUTINELY NOTIFIED. THIS DOES NOT RELIEVE THE CONTRACTOR OF THE RESPONSIBILITY OF NOTIFYING UTILITY OWNERS WHO MAY NOT BE PART OF THE 'KY 811' ALERT SYSTEM. UTILITY LOCATIONS SHOWN ON THE PLANS ARE ONLY APPROXIMATE AND SHOULD BE LOCATED IN THE FIELD PRIOR TO ANY EXCAVATION.

WORK WITHIN PUBLIC ROAD RIGHT-OF-WAYS

WHEN PERFORMING WORK ALONG OR ACROSS ANY PUBLIC ROADWAY, THE CONTRACTOR SHALL POST WARNING SIGNS PAINTED ORANGE AND THEY SHALL BE FOUR FEET BY FOUR FEET MOUNTED ON POSTS IN ACCORDANCE WITH THE KENTUCKY TRANSPORTATION DEPARTMENT'S MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES. THE SIGNS SHALL BE AS FOLLOWS:

- CAUTION PIPELINE CONSTRUCTION 1500 FEET
- CAUTION PIPELINE CONSTRUCTION 1000 FEET
- CAUTION PIPELINE CONSTRUCTION 500 FEET

ALL SIGNS, BARRICADES, LIGHTS, AND TRAFFIC CONTROL SHALL BE INSTALLED IN ACCORDANCE WITH THE KENTUCKY TRANSPORTATION DEPARTMENT'S MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES.

THE CONTRACTOR SHALL MAINTAIN TWO FLAG MEN AT ALL TIMES WHERE MACHINERY IS IN OPERATION WHERE THE FLOW OF TRAFFIC WILL BE DISTURBED. THERE IS NO EXCEPTION TO THIS REQUIREMENT. THE USE OF RADIOS WILL BE REQUIRED WHEN VISUAL CONTACT BETWEEN THE FLAGMEN DOES NOT EXIST.

THE CONTRACTOR SHALL BE RESPONSIBLE FOR KEEPING ENTIRE ROADWAY FREE AND CLEAR AT THE END OF EACH WORKING DAY. NO EQUIPMENT SHALL BE LEFT ON OR PARKED ALONG THE ROAD RIGHT OF WAY. AT THE COMPLETION OF EACH WORK DAY, THE CONTRACTOR SHALL BACKFILL ALL OPEN TRENCHES AND INSTALL ALL TRAFFIC CONTROL SIGNS, BARRICADES, AND LIGHTS IN ACCORDANCE WITH THE KENTUCKY TRANSPORTATION DEPARTMENT'S MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES.

DISRUPTION OF SERVICE

THE CONTRACTOR SHALL COORDINATE ALL DISRUPTIONS OF SERVICE WITH THE OWNER AND ENGINEER. PRIOR TO ANY DISRUPTION, THE CONTRACTOR SHALL INFORM BOTH PARTIES OF HIS INTENTIONS, METHODS AND PROJECTED DURATION OF DISTURBANCE AND RECEIVE THEIR APPROVAL PRIOR TO INITIATING THE SPECIFIC WORK.

WORK WITHIN STREAMS, CREEKS & WATERWAYS

ANY AND ALL WORK TO BE COMPLETED WITHIN STREAMS, CREEKS & WATERWAYS SHALL BE COMPLETED ONLY DURING TIMES OF LOW FLOW AS DETERMINED BY THE ENGINEER. THE CONTRACTOR SHALL STRICTLY LIMIT THE USE OF HEAVY EQUIPMENT WITHIN THE WATERCOURSE AT ALL TIMES. STREAM FLOW SHALL NOT BE RESTRICTED OR IMPEDED AT ANY TIME DURING THE COURSE OF CONSTRUCTION.

WORK WITHIN RAILROAD RIGHT-OF-WAYS

THE CONTRACTOR SHALL COMPLY WITH ALL REQUIREMENTS INCLUDED IN THE FACILITY ENCROACHMENT PERMIT ISSUED BY CSX TRANSPORTATION, INC (CSXT). A COPY OF THIS PERMIT HAS BEEN INCLUDED IN THE CONTRACT DOCUMENTS FOR THE CONTRACTOR'S REFERENCE.

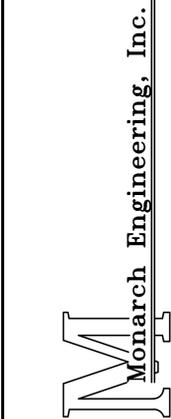
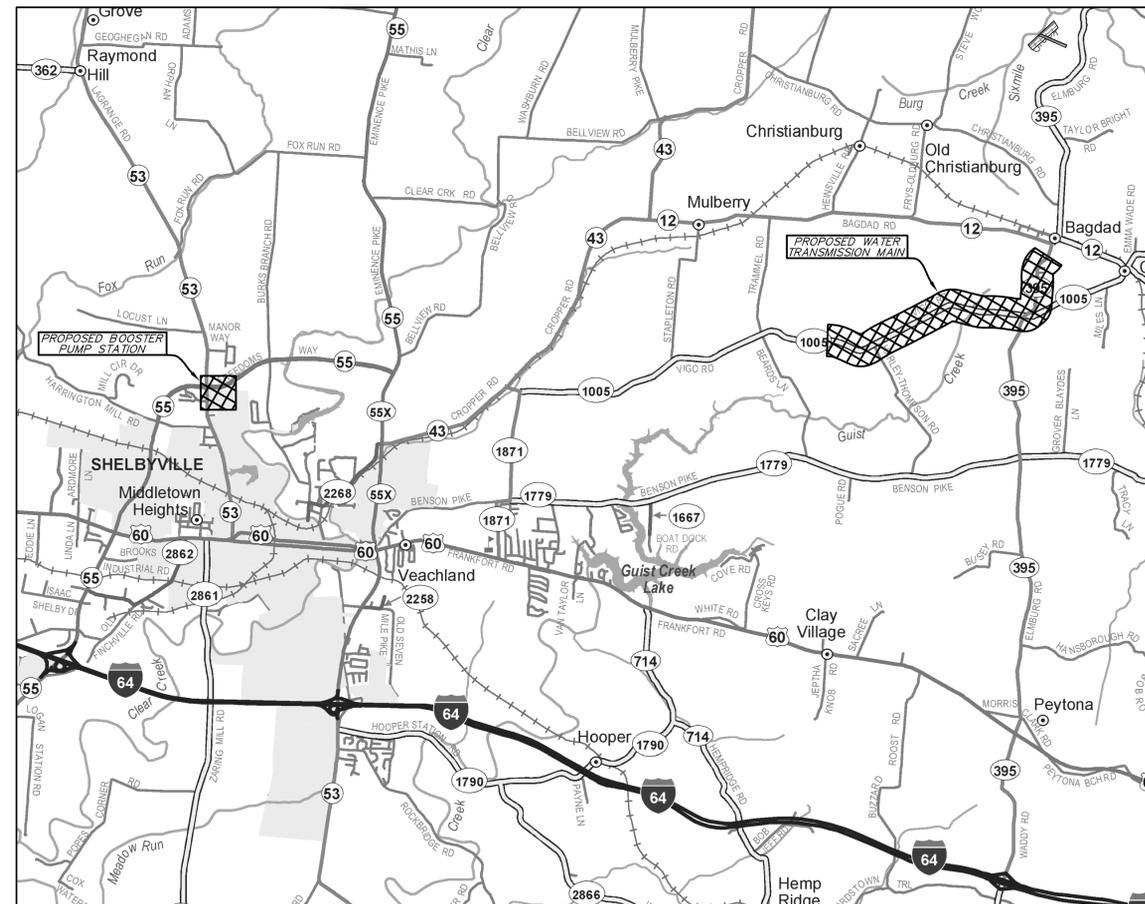
ALL OPERATIONS SHALL BE CONDUCTED SO AS NOT TO INTERFERE WITH, INTERRUPT, OR ENDANGER THE OPERATION OF TRAINS NOR DAMAGE, DESTROY, OR ENDANGER THE INTEGRITY OF RAILROAD FACILITIES. ALL WORK ON OR NEAR CSXT PROPERTY SHALL BE CONDUCTED IN ACCORDANCE WITH CSXT SAFETY RULES AND REGULATIONS. SPECIFICALLY ALL CONTRACTOR EMPLOYEES AND AGENTS, WHILE ON CSXT PROPERTY, SHALL BE REQUIRED TO WEAR AN ORANGE HARD HAT, SAFETY GLASSES WITH SIDE SHIELDS, 6" LACE UP BOOTS WITH A DISTINCT HEEL, SHIRTS WITH SLEEVES, AND LONG PANTS. THE CONTRACTOR AND ITS EMPLOYEES SHALL COMPLY WITH THE CSXT SAFETY RULES AT ALL TIMES WHILE OCCUPYING CSXT'S PROPERTY. OPERATIONS WILL BE SUBJECT TO CSXT INSPECTION AT ANY AND ALL TIMES.

ALL CRANES, LIFTS, OR OTHER EQUIPMENT THAT WILL BE OPERATED IN THE VICINITY OF THE RAILROAD'S ELECTRIFICATION AND POWER TRANSMISSION FACILITIES SHALL BE ELECTRICALLY GROUNDED AS DIRECTED BY CSXT.

WHENEVER EQUIPMENT OR PERSONNEL ARE WORKING CLOSER THAN 25 FEET FROM THE CENTERLINE OF AN ADJACENT TRACK, THAT TRACK SHALL BE CONSIDERED AS BEING OBSTRUCTED. INsofar AS POSSIBLE, ALL OPERATIONS SHALL BE CONDUCTED NO LESS THAN THIS DISTANCE. ALL OPERATIONS SHALL BE CONDUCTED ONLY WITH THE PERMISSION OF, AND AS DIRECTED BY, A DULY QUALIFIED RAILROAD EMPLOYEE PRESENT AT THE SITE OF THE WORK. ALL COSTS RELATED TO RAILROAD PROTECTION WILL BE PASSED ON TO THE APPLICANT.

CROSSING OF TRACKS AT GRADE BY EQUIPMENT AND PERSONNEL IS PROHIBITED EXCEPT AT EXISTING PUBLIC ROADWAY CROSSINGS OR BY PRIOR ARRANGEMENT WITH AND AS DIRECTED BY, CSXT.

PROJECT LOCATION MAP



556 CARLTON DRIVE
LAWRENCEBURG, KY 40342

DESCRIPTION:
**GENERAL NOTES
EAST-WEST CONNECTOR - PHASE III**

CUSTOMER:
**NORTH SHELBY WATER COMPANY
SHELBY COUNTY, KENTUCKY**

PROJECT NO. 1321
DATE: APRIL 2016
DRAWN BY: JLM
CHECKED BY: DSB
CHECKED BY: DMB
SCALE: AS NOTED
SHEET:
GN-1



RECORD DRAWINGS



RECORD DRAWINGS

WATER SYSTEM IMPROVEMENTS
 NORTH SHELBY WATER COMPANY
 SHELBY COUNTY, KENTUCKY

EAST-WEST CONNECTOR - PHASE III



M
 Monarch Engineering, Inc.
 556 CARLTON DRIVE
 LAWRENCEBURG, KY 40342

DRAWN BY: JRC	DATE: APRIL 2016	REVISED	SHEET
CHECKED BY: JLM	SCALE: 1"=50'		1
CHECKED BY: DSB	PROJECT: 1321		



RECORD DRAWINGS

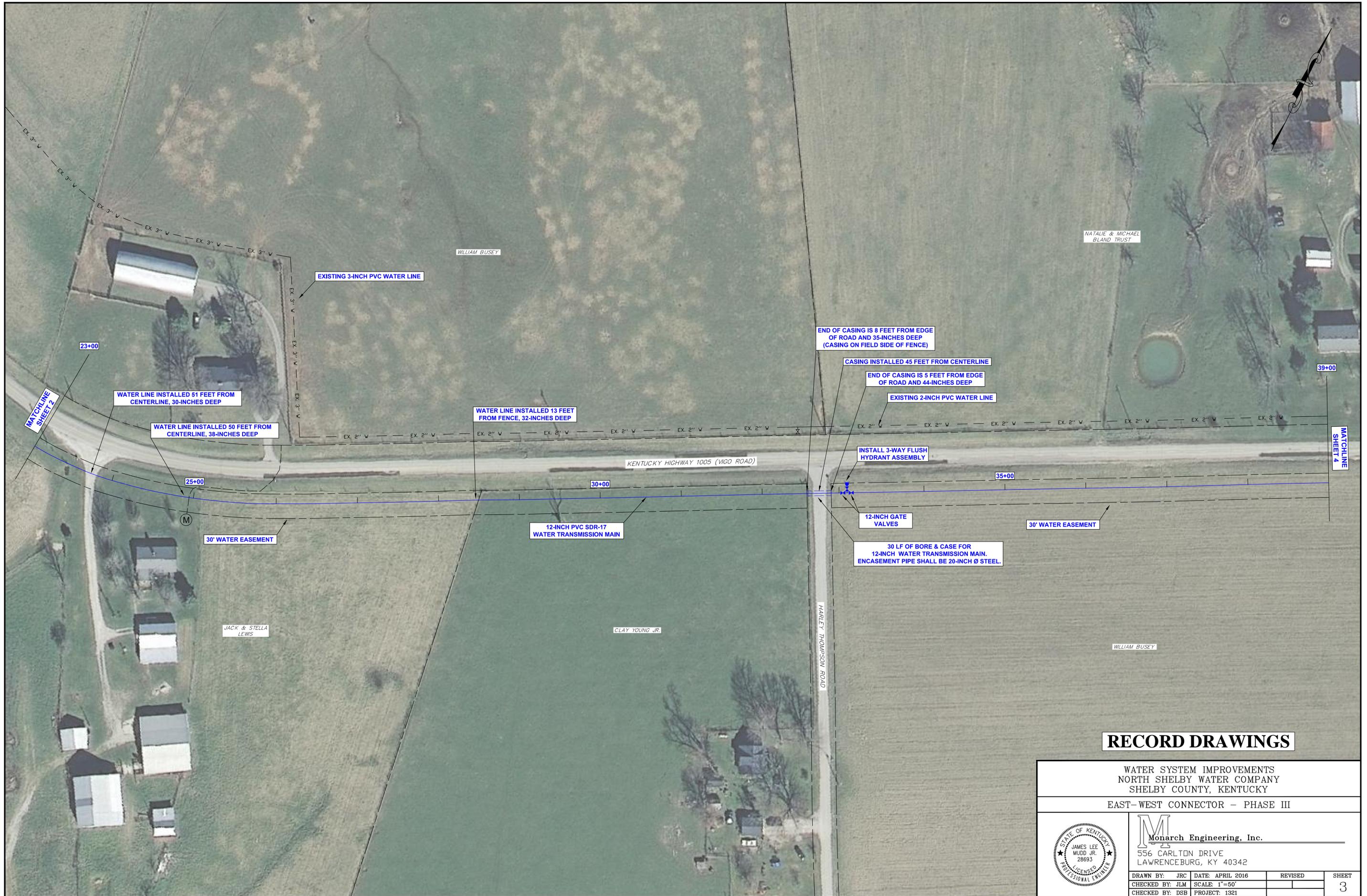
WATER SYSTEM IMPROVEMENTS
 NORTH SHELBY WATER COMPANY
 SHELBY COUNTY, KENTUCKY

EAST-WEST CONNECTOR - PHASE III



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 LAWRENCEBURG, KY 40342

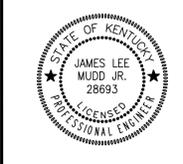
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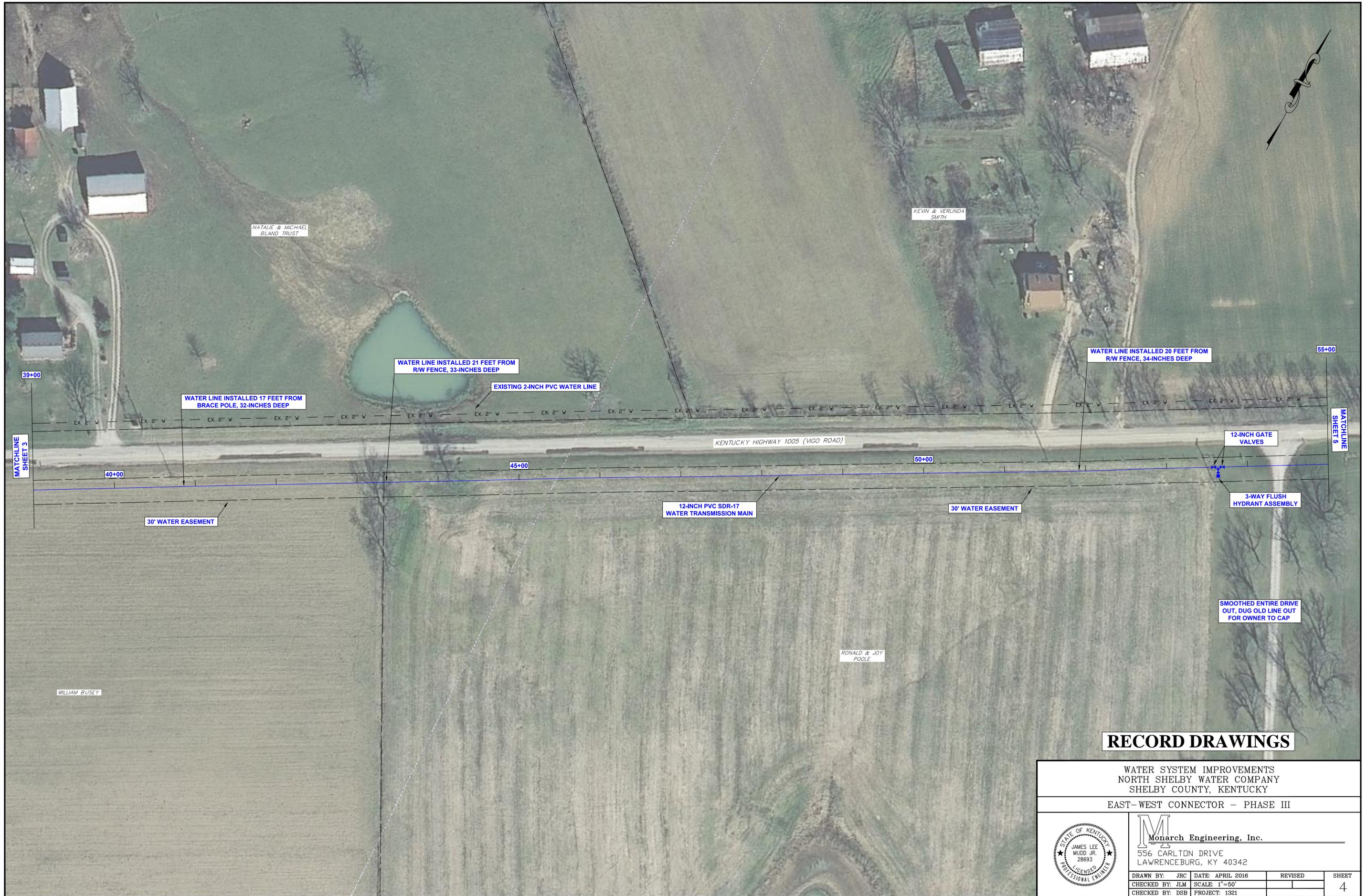
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CHECKED BY: DSB	PROJECT: 1321		



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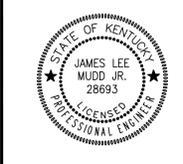
WATER SYSTEM IMPROVEMENTS NORTH SHELBY WATER COMPANY SHELBY COUNTY, KENTUCKY			
EAST-WEST CONNECTOR - PHASE III			
		 Monarch Engineering, Inc. 556 CARLTON DRIVE LAWRENCEBURG, KY 40342	
DRAWN BY: JRC CHECKED BY: JLM CHECKED BY: DSB	DATE: APRIL 2016 SCALE: 1"=50' PROJECT: 1321	REVISED:	SHEET 4



RECORD DRAWINGS

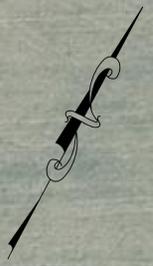
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 NORTH SHELBY WATER COMPANY
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EAST-WEST CONNECTOR - PHASE III



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 LAWRENCEBURG, KY 40342

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CHECKED BY: DSB	PROJECT: 1321		



BLAND FAMILY LIMITED PARTNERSHIP

LELAND, RONALD, PHILLIP & MICHAEL DALE BLAND TRUST

END OF CASING IS 35 FEET FROM CENTERLINE, 35-INCHES DEEP

WATER LINE INSTALLED 45 FEET FROM CENTERLINE, 32-INCHES DEEP

EXISTING 2-INCH PVC WATER LINE

WATER LINE INSTALLED 17 FEET FROM R/W FENCE, 36-INCHES DEEP

WATER LINE INSTALLED 15.5 FEET FROM R/W FENCE, 31-INCHES DEEP

END OF CASING IS 32.5 FEET FROM CENTERLINE, 48-INCHES DEEP

71+00

75+00

80+00

85+00

87+00

WATCHLINE SHEET 5

WATCHLINE SHEET 7

LELAND, RONALD, PHILLIP & MICHAEL DALE BLAND TRUST

ERIC & MAUREEN BLAND

LELAND, RONALD, PHILLIP & MICHAEL DALE BLAND TRUST

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WATER SYSTEM IMPROVEMENTS
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WATER SYSTEM IMPROVEMENTS NORTH SHELBY WATER COMPANY SHELBY COUNTY, KENTUCKY			
EAST-WEST CONNECTOR - PHASE III			
	556 CARLTON DRIVE LAWRENCEBURG, KY 40342		
	DRAWN BY: JRC CHECKED BY: JLM CHECKED BY: DSB	DATE: APRIL 2016 SCALE: 1"=50' PROJECT: 1321	REVISED:



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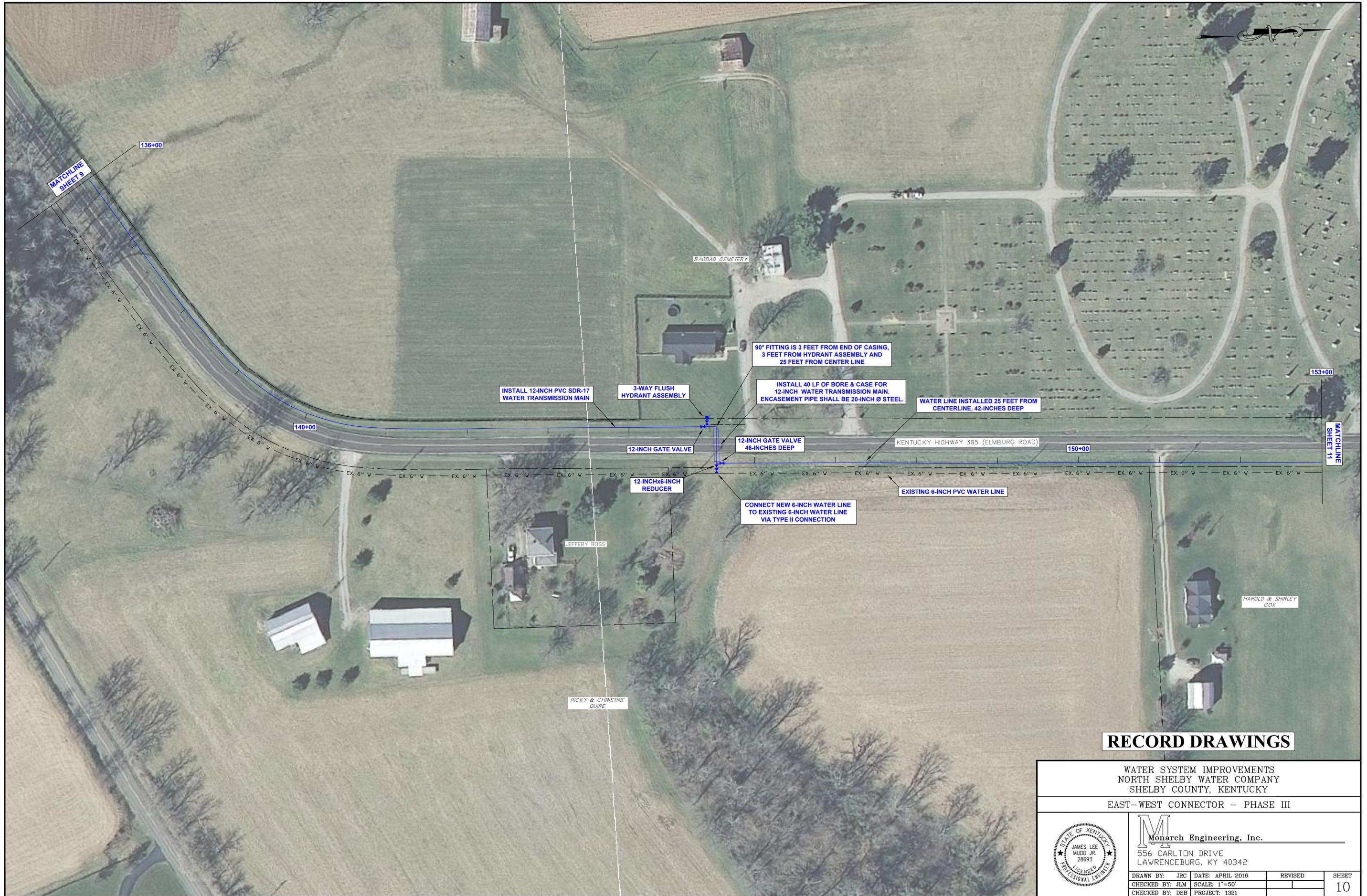
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 SHELBY COUNTY, KENTUCKY

EAST-WEST CONNECTOR - PHASE III



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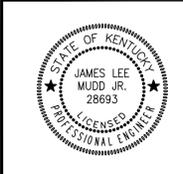
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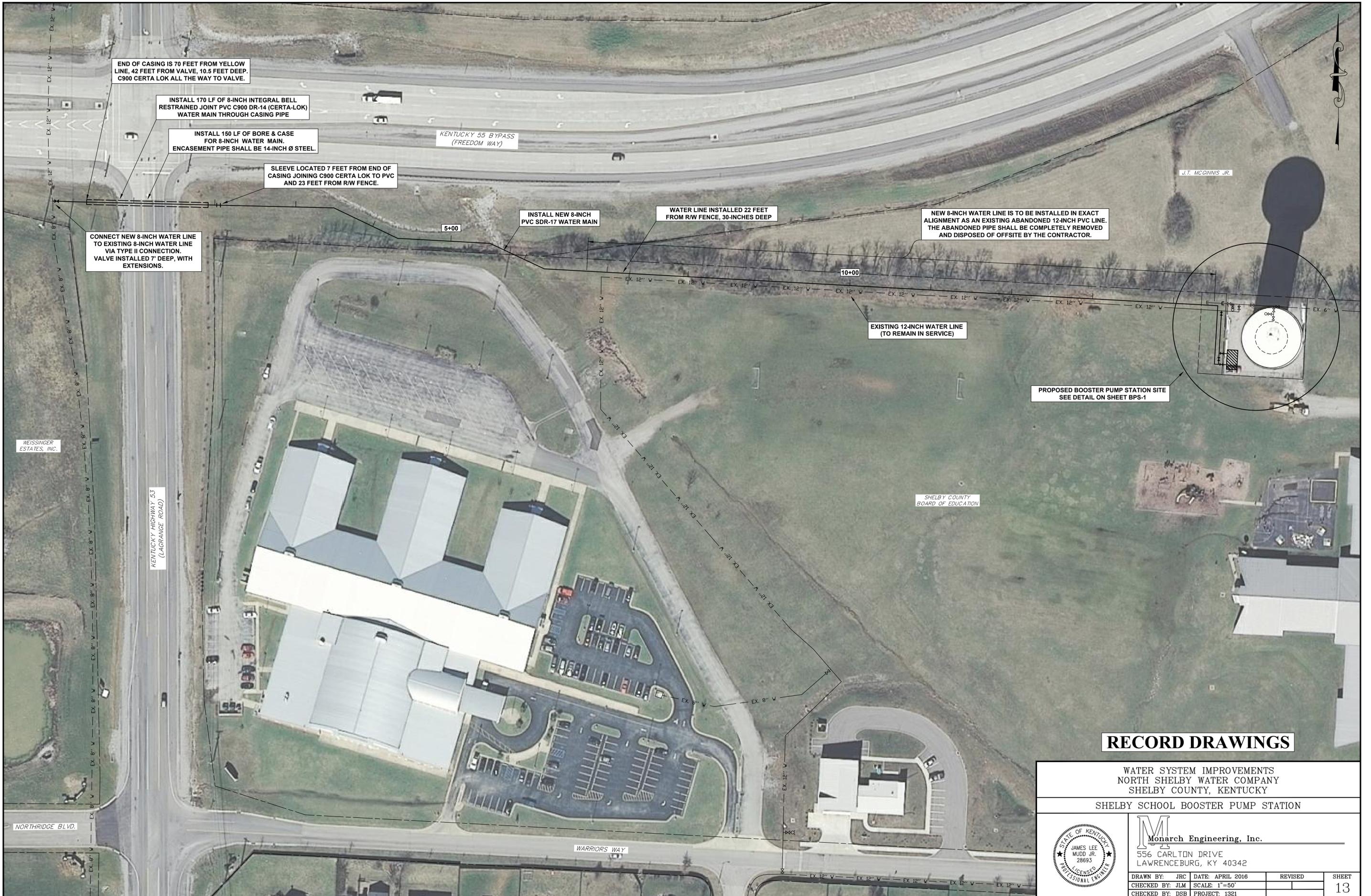
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CHECKED BY: DSB	PROJECT: 1321		



END OF CASING IS 70 FEET FROM YELLOW LINE, 42 FEET FROM VALVE, 10.5 FEET DEEP. C900 CERTA LOK ALL THE WAY TO VALVE.

INSTALL 170 LF OF 8-INCH INTEGRAL BELL RESTRAINED JOINT PVC C900 DR-14 (CERTA-LOK) WATER MAIN THROUGH CASING PIPE

INSTALL 150 LF OF BORE & CASE FOR 8-INCH WATER MAIN. ENCASUREMENT PIPE SHALL BE 14-INCH Ø STEEL.

SLEEVE LOCATED 7 FEET FROM END OF CASING JOINING C900 CERTA LOK TO PVC AND 23 FEET FROM R/W FENCE.

CONNECT NEW 8-INCH WATER LINE TO EXISTING 8-INCH WATER LINE VIA TYPE II CONNECTION. VALVE INSTALLED 7' DEEP, WITH EXTENSIONS.

KENTUCKY 55 BYPASS (FREEDOM WAY)

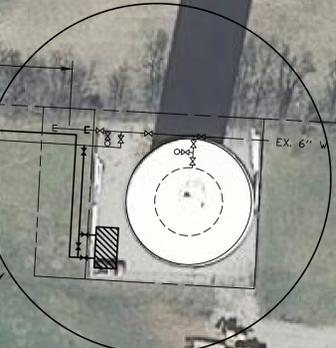
INSTALL NEW 8-INCH PVC SDR-17 WATER MAIN

WATER LINE INSTALLED 22 FEET FROM R/W FENCE, 30-INCHES DEEP

NEW 8-INCH WATER LINE IS TO BE INSTALLED IN EXACT ALIGNMENT AS AN EXISTING ABANDONED 12-INCH PVC LINE. THE ABANDONED PIPE SHALL BE COMPLETELY REMOVED AND DISPOSED OF OFFSITE BY THE CONTRACTOR.

EXISTING 12-INCH WATER LINE (TO REMAIN IN SERVICE)

PROPOSED BOOSTER PUMP STATION SITE SEE DETAIL ON SHEET BPS-1



RECORD DRAWINGS

WATER SYSTEM IMPROVEMENTS
NORTH SHELBY WATER COMPANY
SHELBY COUNTY, KENTUCKY

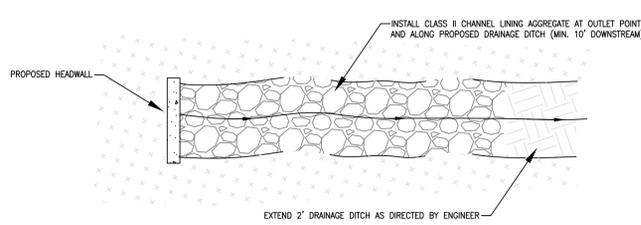
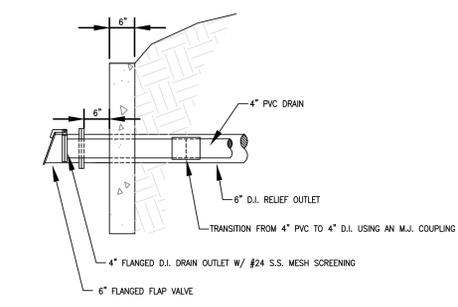
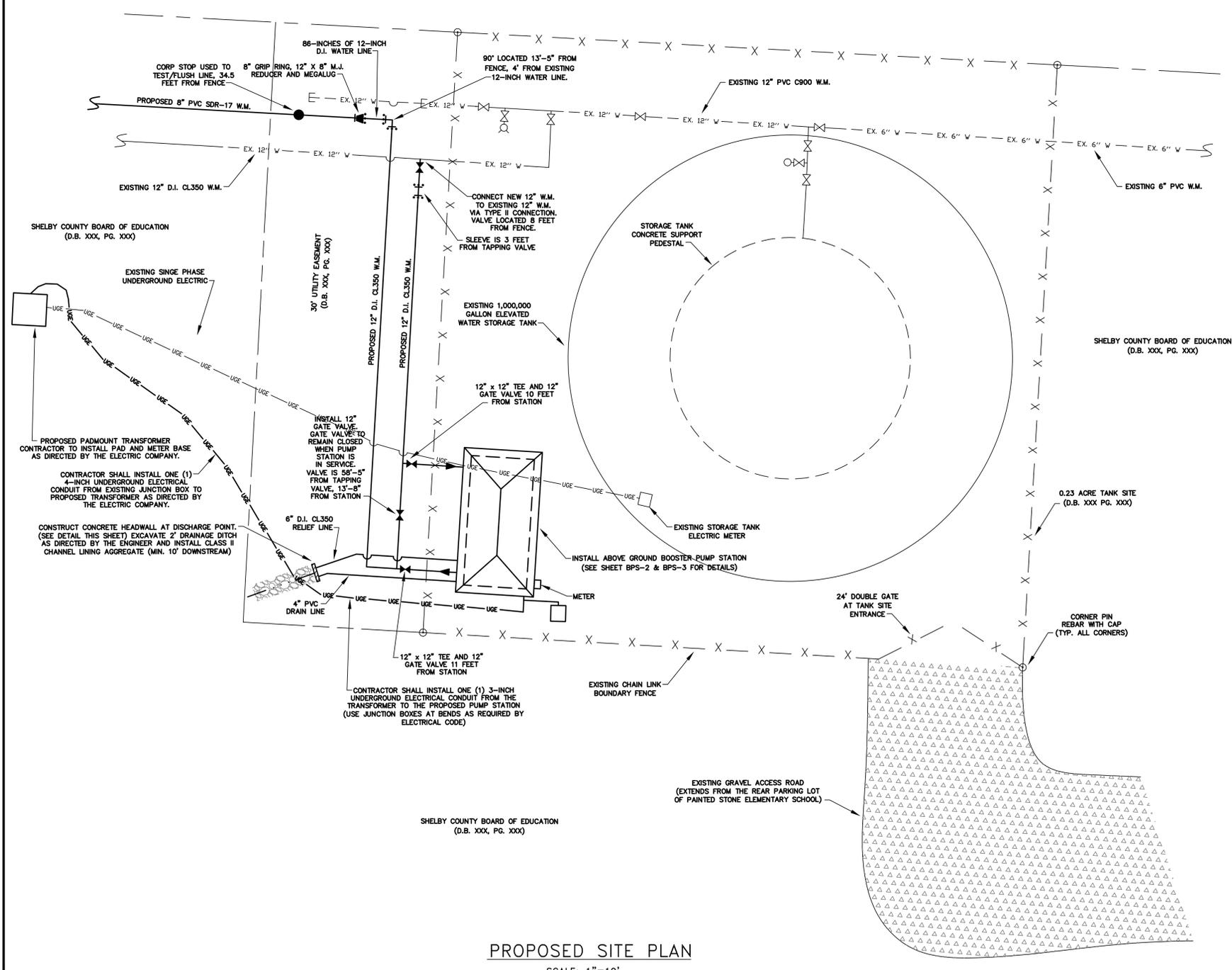
SHELBY SCHOOL BOOSTER PUMP STATION



Monarch Engineering, Inc.
556 CARLTON DRIVE
LAWRENCEBURG, KY 40342

DRAWN BY: JRC	DATE: APRIL 2016	REVISED	SHEET
CHECKED BY: JLM	SCALE: 1"=50'		13
CHECKED BY: DSB	PROJECT: 1321		

J.T. MCGINNIS, JR.
(D.B. XXX, PG. XXX)



Monarch Engineering, Inc.
556 CARLTON DRIVE
LAWRENCEBURG, KY 40342

DESCRIPTION:
SHELBY SCHOOL BOOSTER PUMP STATION

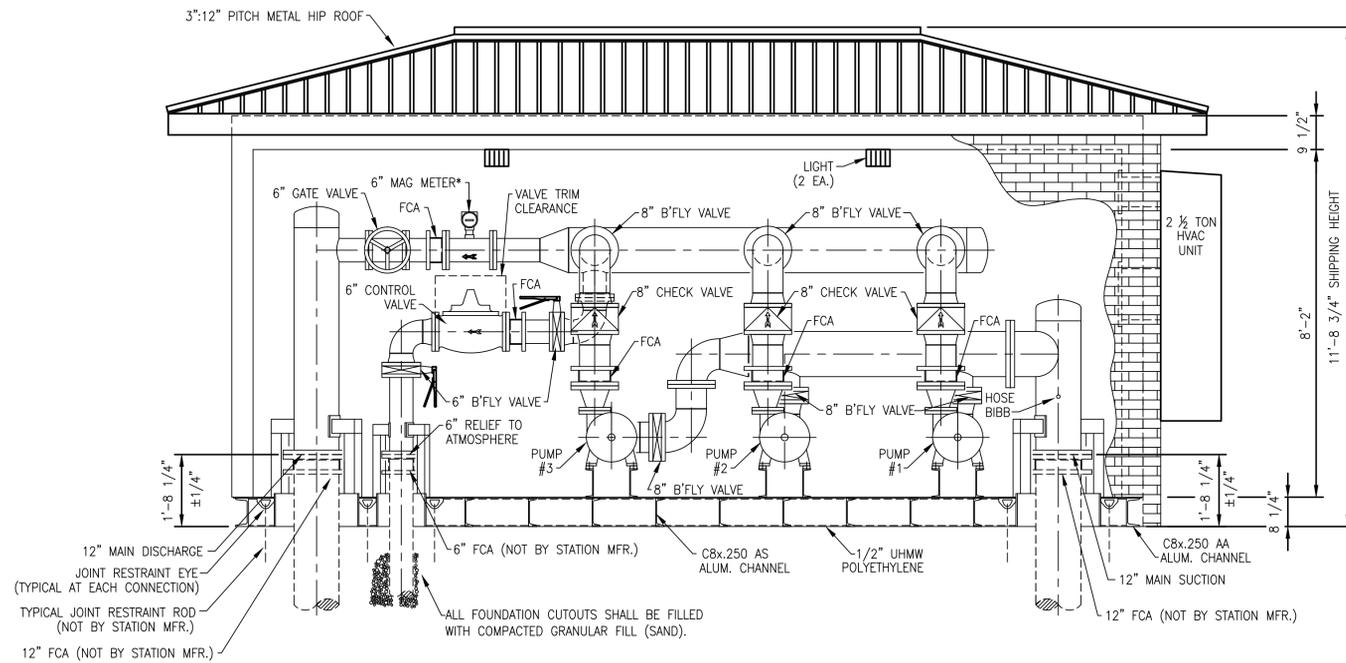
CUSTOMER:
NORTH SHELBY WATER COMPANY
SHELBY COUNTY, KENTUCKY

PROJECT NO. 1321
DATE: APRIL 2016
DRAWN BY: JLM
CHECKED BY: DSB
CHECKED BY: DMB
SCALE: AS NOTED

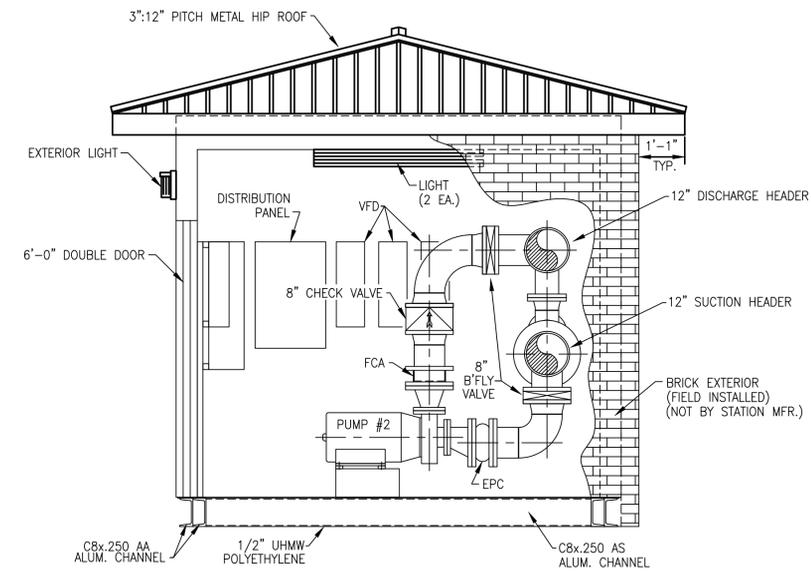
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BPS-1

RECORD DRAWINGS

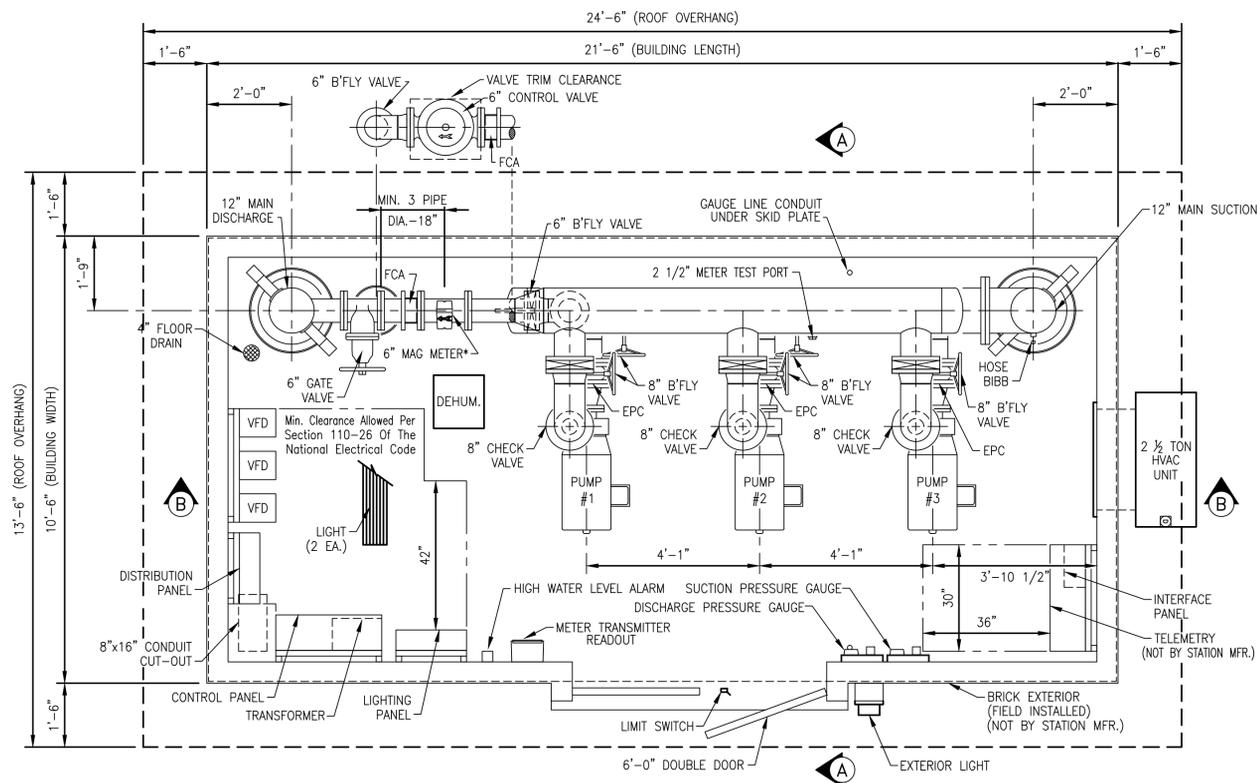




SECTION B-B



SECTION A-A



INTERIOR PLAN

DESIGN CRITERIA:

Controls LOCAL PRESSURE/ TELEMETRY (BY OTHERS)
 Power Service: 480 Volts, 3 Phase, 60 Cycle

PUMP DATA

Type: HORZ., CLOSE CPLD., END SUCTION
 Pump 1, 2 & 3
 Capacity: 500 G.P.M. AT 120 FEET T.D.H.
 Size: 8" x 4" x 3"
 Motor: 30 H.P., 3600 R.P.M.

* THIS DESIGN IS BASED ON THE SPARLING MODEL 656 MAGNETIC FLOW METER, REQUIRING 3 UPSTREAM AND ZERO DOWNSTREAM STRAIGHT PIPE DIAMETER LENGTHS FOR MAINTAINING STATED ACCURACY LIMITS. SPECIFICATION OR USE OF ANY OTHER MANUFACTURERS FLOW METER WILL NOT KEEP THIS DESIGN WITHIN THE ACCURACY LIMITS OF THAT FLOW METER.
 * EXCEPT FOR PIPE END SUPPORTS, WHICH ARE SHOWN, VERTICAL AND ANGLE PIPE BRACES ARE NOT SHOWN FOR DRAWING CLARITY

GENERAL NOTES:

ALL STATION PIPING SHALL BE STANDARD WIEGHT (.375" WALL) STEEL PIPE
 MAIN SUCTION & DISCHARGE SHALL BE ANSI STNADARD B16.5, CLASS 150 FLANGE
 ALL PIPING AND EQUIPMENT SHALL BE ADEQUATELY SUPPORTED AND BRACED
 PLATE ALUMINUM SHALL BE ASTM B-209, ALLOY 6061-T6
 STRUCTURAL ALUMINUM SHAPES SHALL BE ASTM B-308, ALLOY 6061-T6, 6061-T 651, 6661-T6 AS PER REQUIREMENTS INCLUDED IN THE SPECIFICATIONS.
 FCA - FLANGED COUPLING ADAPTER
 EPC - ELASTOMER PIPE CONNECTOR
 SRC - SELF RESTRAINED COUPLING

CONTRACTOR NOTES:

DEHUMIDIFIER MUST BE POWERED UP AND TURNED ON IMMEDIATELY AFTER THIS STATION IS SET IN PLACE.
 SHIMS MAY BE REQUIRED AROUND PERIMETER OF THE STATION TO ENSURE PROPER LEVEL.
 THIS IS CRITICAL FOR PROPER DOOR OPERATION.
 PLEASE NOTE ORIENTATION OF THE INLET AND OUTLET PIPE AND ELECTRICAL/TELEMETRY LOCATIONS IN REFERENCE TO THE JOBSITE LAYOUT.
 THE STATION IS NOT DESIGNED TO ACCEPT PIPELINE FORCES THRUST BLOCKING MUST BE PROVIDED EXTERNAL TO THE STATION. THRUST BLOCKING TO BE INSTALLED AS DIRECTED BY THE ENGINEER.
 CONNECTION BETWEEN STATION PIPING AND MAIN PIPING MUST BE RESTRAINED.

RECORD DRAWINGS

Monarch Engineering, Inc.

556 CARLTON DRIVE
 LAWRENCEBURG, KY 40342

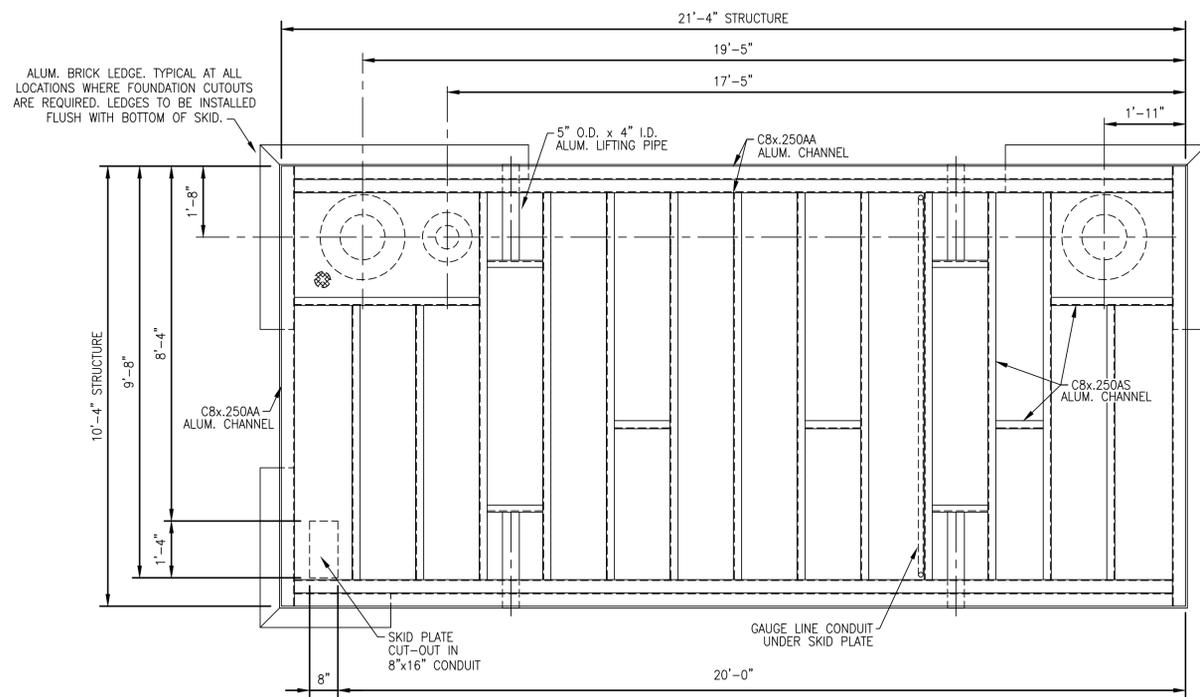
DESCRIPTION:
 SHELBY SCHOOL BOOSTER PUMP STATION

CUSTOMER:
 NORTH SHELBY WATER COMPANY
 SHELBY COUNTY, KENTUCKY

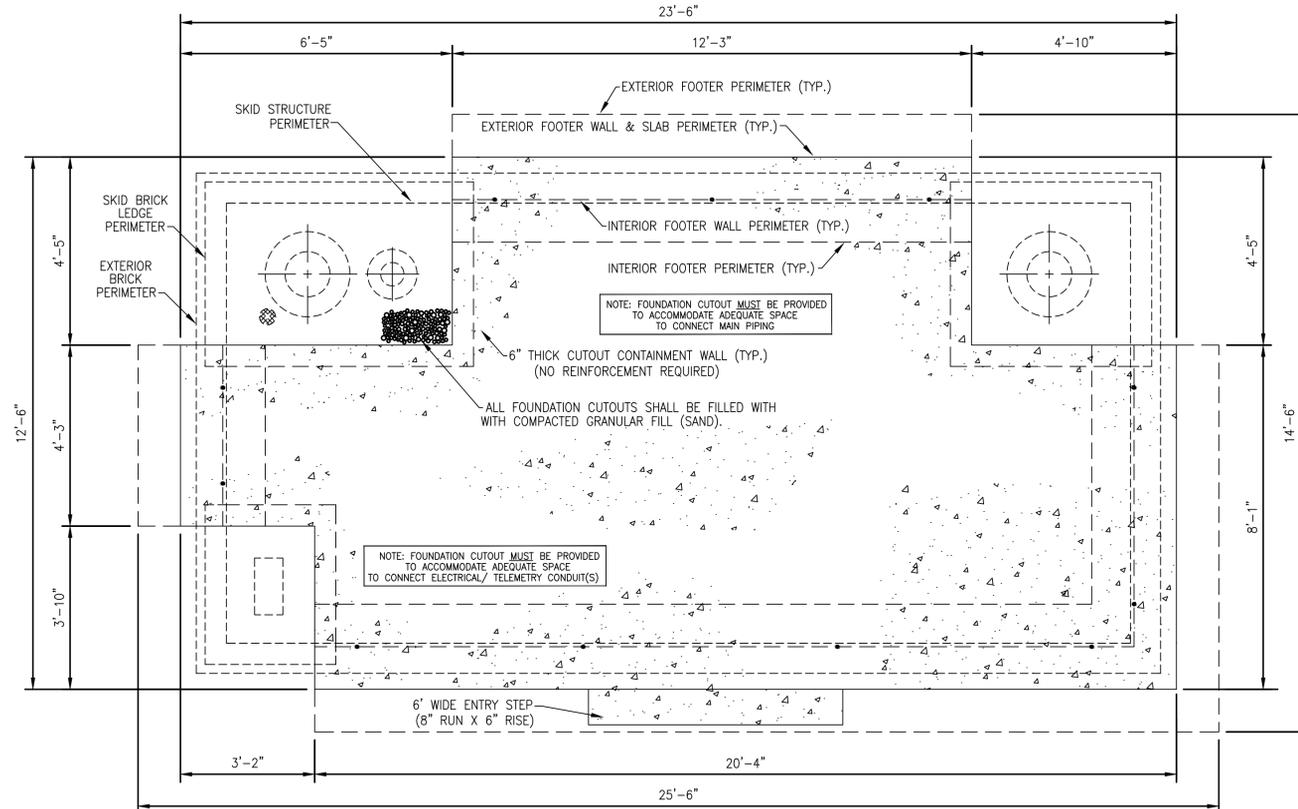
PROJECT NO. 1321
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 DRAWN BY: JLM
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 CHECKED BY: DMB
 SCALE: AS NOTED

SHEET:
 BPS-2

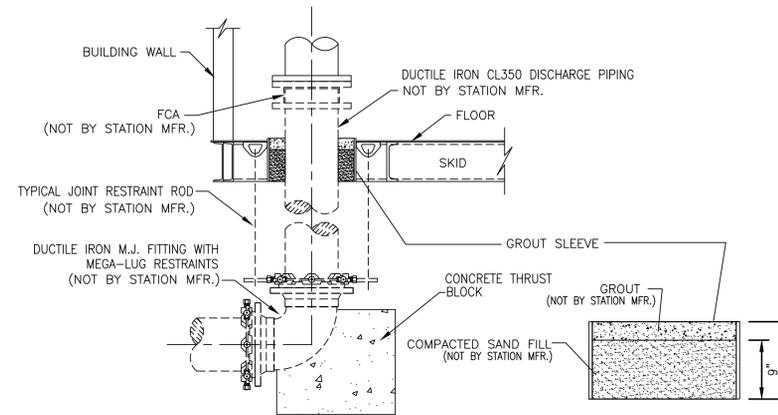




SKID PLAN

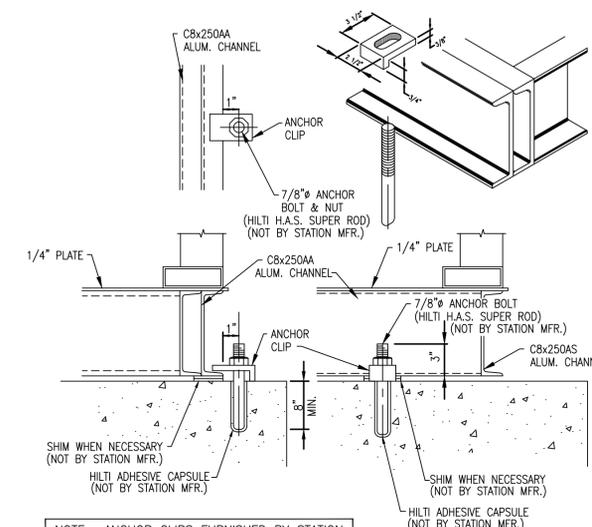


FOUNDATION LAYOUT



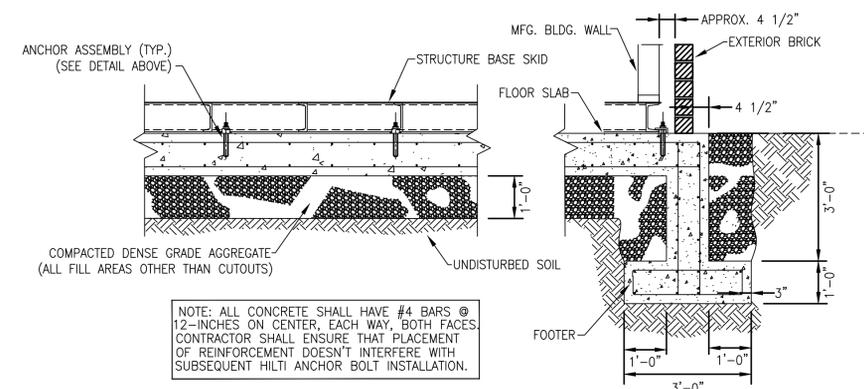
TYPICAL PIPING CONNECTION DETAIL

NOT TO SCALE



TYPICAL ANCHOR DETAIL

NOT TO SCALE



SECTION FOUNDATION & REINFORCING DETAIL

RECORD DRAWINGS

Monarch Engineering, Inc.

556 CARLTON DRIVE
LAWRENCEBURG, KY 40342

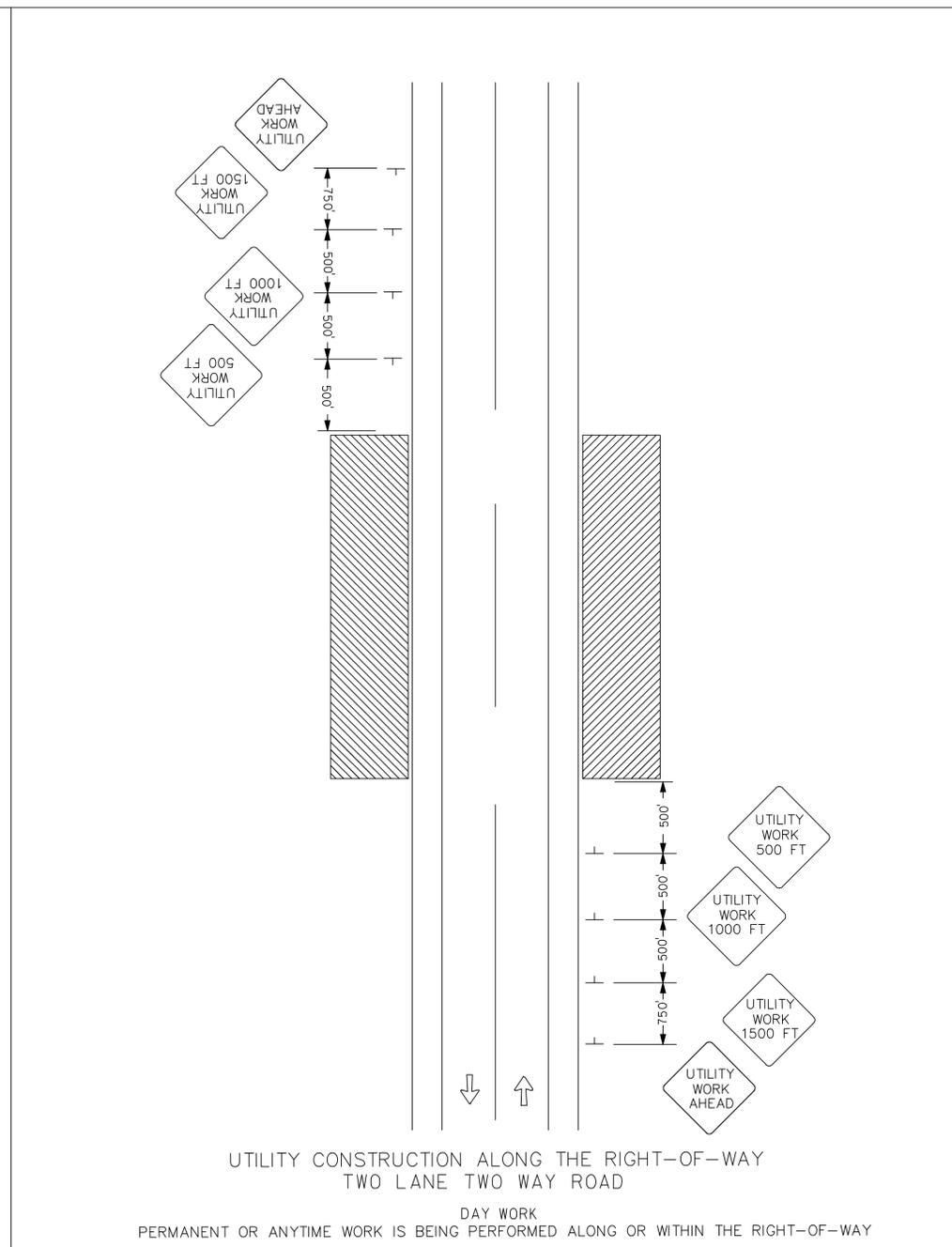
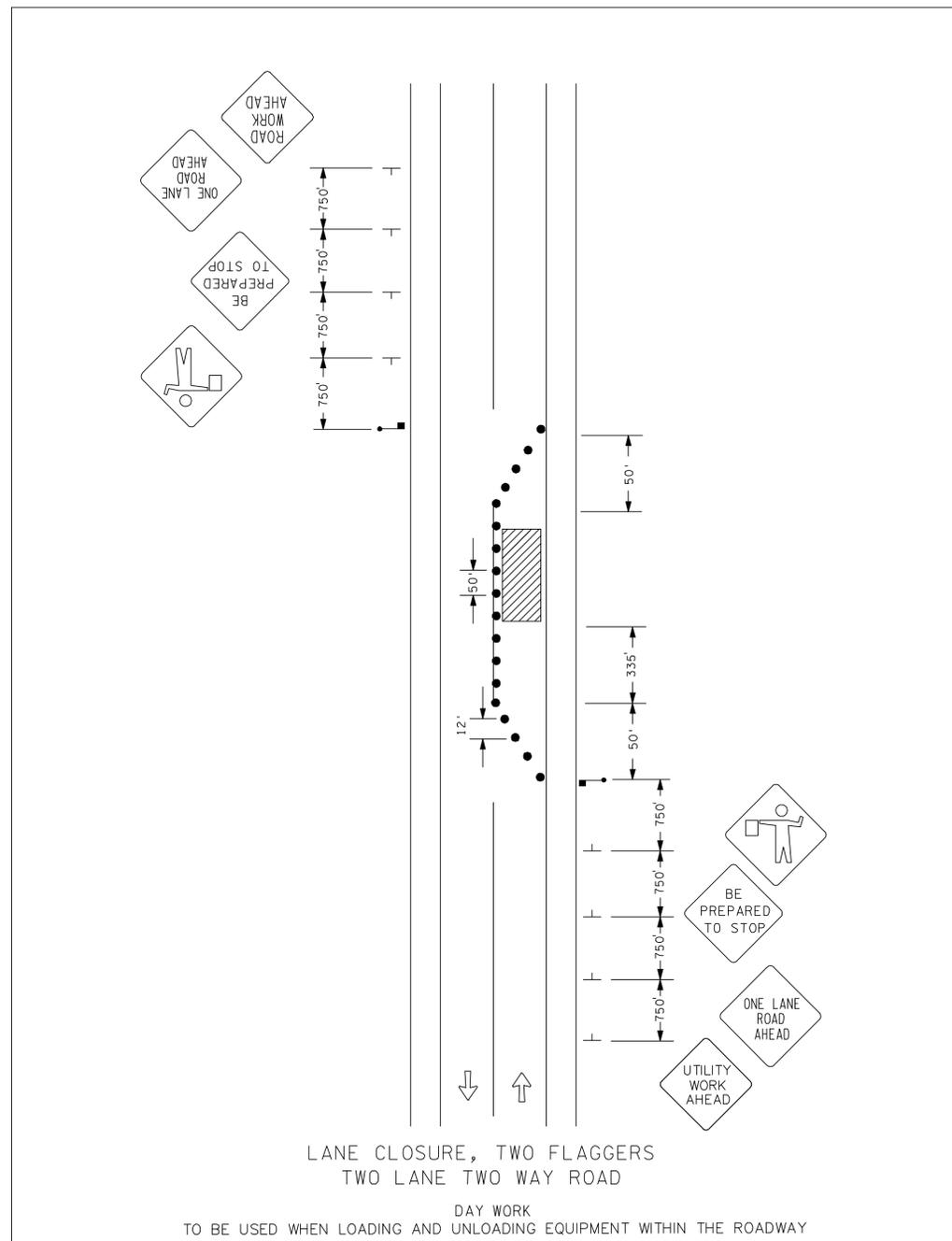
DETAIL DRAWINGS
SHELBY SCHOOL BOOSTER PUMP STATION

CUSTOMER:
NORTH SHELBY WATER COMPANY
SHELBY COUNTY, KENTUCKY

PROJECT NO. 1321
DATE: APRIL 2016
DRAWN BY: JLM
CHECKED BY: DSB
CHECKED BY: DMB
SCALE: AS NOTED

SHEET:
BPS-3





NOTES & GUIDELINES

GENERAL INFORMATION:

1. THE CONTRACTOR SHALL FURNISH, INSTALL AND MAINTAIN THE DEVICES IN THIS TRAFFIC CONTROL PLAN UNLESS OTHERWISE NOTED.
2. FIELD CONDITIONS MAY REQUIRE MODIFICATIONS OF THIS LAYOUT AS DEEMED NECESSARY BY THE ENGINEER.
3. ALL DISTANCES ARE APPROXIMATE.
4. THE CONTRACTOR IS RESPONSIBLE FOR PROTECTING ANY WORK AREAS NEAR TRAFFIC IN ACCORDANCE WITH KYDOT STANDARDS

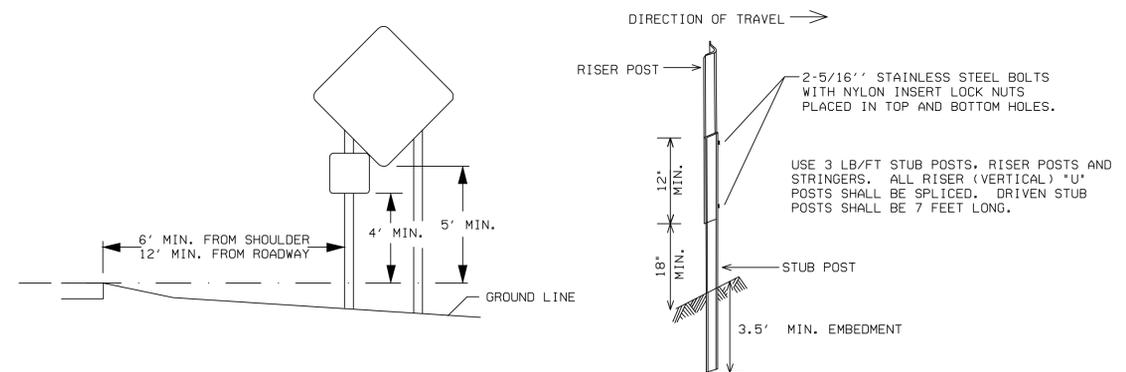
SIGNING:

1. ALL TRAFFIC CONTROL DEVICES, INCLUDING OVERHEAD SIGNS ON ROADS OPEN TO TRAFFIC THAT ARE NOT CONSISTANT WITH TRAFFIC OPERATION SHALL BE COVERED, REMOVED OR REVISED AS DIRECTED BY THE ENGINEER.
2. WHEN SIGNS ARE INSTALLED, THEY SHALL BE MOUNTED ON POSTS DRIVEN INTO THE GROUND AT THE PROPER HEIGHT AND LATERAL OFFSET AS DETAILED BY THE KYDOT. IF THIS IS NOT POSSIBLE THEY WILL BE MOUNTED ON PORTABLE SUPPORTS AS APPROVED BY THE ENGINEER. WHEN THE SIGNS ARE REMOVED THE SIGN POSTS SHALL ALSO BE REMOVED AS SOON AS POSSIBLE.
3. THE CONTRACTOR SHALL BE RESPONSIBLE FOR ANY EXTRA SIGNING NEEDED TO FACILITATE TRAFFIC SWITCHES OR FOR TRANSITIONING TRAFFIC FROM ONE STAGE TO ANOTHER.
4. ALL ORANGE WARNING AND ORANGE GUIDE SIGNS SHALL BE FABRICATED WITH SIGN SHEETING MATERIAL AS LISTED ON THE KYDOT APPROVED PRODUCT LIST FOR "SHEETING FOR RIGID TEMPORARY WORK ZONE SIGNS".
5. THE CONTRACTOR SHALL COORDINATE THE INSTALLATION OF THE FINAL SIGNS TO ASSURE THAT THE FINAL SIGNS ARE INSTALLED AS NEEDED, OR PROVIDE TEMPORARY SIGNING AT THEIR EXPENSE UNTIL THE FINAL SIGNING IS INSTALLED.

TRAFFIC CONTROL DEVICES & SYMBOLS LEGEND

SYMBOL	DESCRIPTION	SIGN	COLOR	SIZE
	AREA CLOSED TO TRAFFIC / WORK AREA		BLACK ON ORANGE	48" x 48"
	TRAFFIC CONTROL SIGN		BLACK ON ORANGE	48" x 48"
	DRUM-LIKE CHANNELIZER =		BLACK ON ORANGE	48" x 48"
	FLAGGER LOCATION		BLACK ON ORANGE	48" x 48"
			BLACK ON ORANGE	48" x 48"
			BLACK ON ORANGE	48" x 48"
			BLACK ON ORANGE	48" x 48"

SIGN CONSTRUCTION DETAILS



RECORD DRAWINGS

Monarch Engineering, Inc.
556 CARLTON DRIVE
LAWRENCEBURG, KY 40342

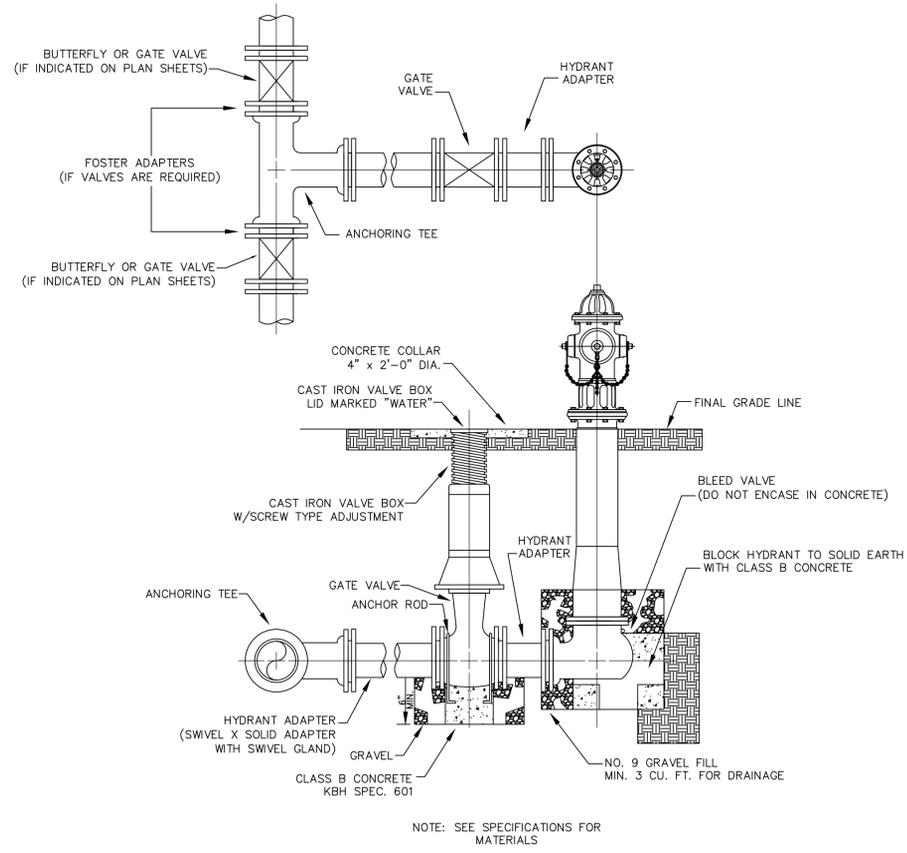
DESCRIPTION:
MAINTENANCE OF TRAFFIC PLAN

CUSTOMER:
NORTH SHELBY WATER COMPANY
SHELBY COUNTY, KENTUCKY

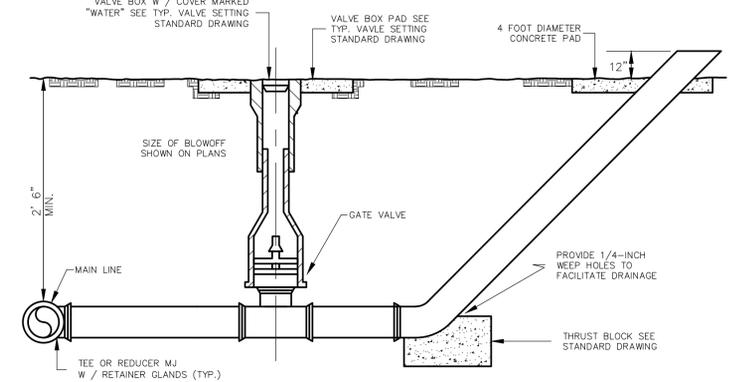
PROJECT NO. 1321
DATE: APRIL 2016
DRAWN BY: JLM
CHECKED BY: DSB
CHECKED BY: DMB
SCALE: N.T.S.

SHEET:
MOT-1



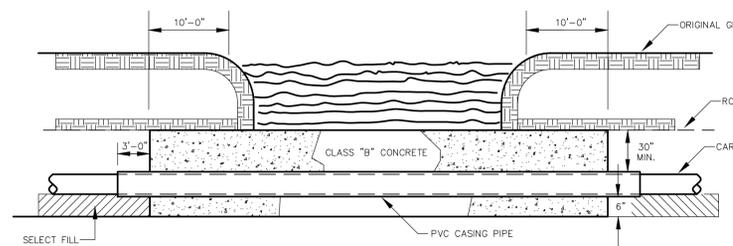


FLUSH HYDRANT ASSEMBLY



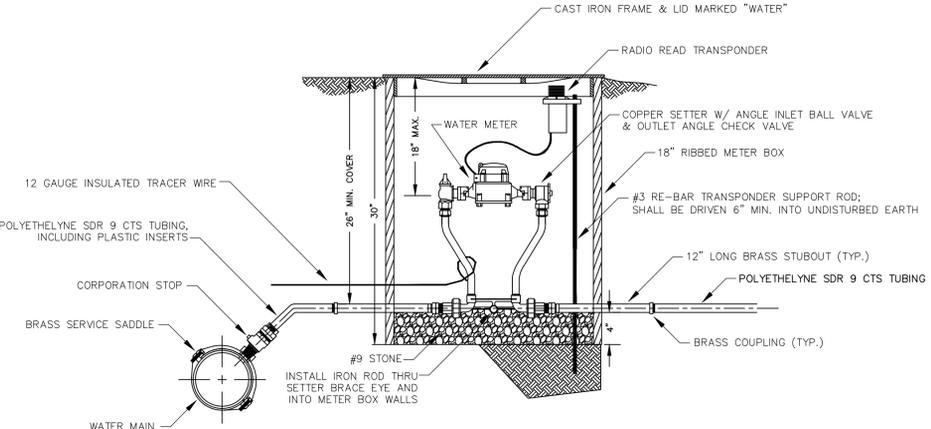
NOTE: WHERE BLOWOFF ASSEMBLIES ARE REQUIRED AT THE END OF A LINE NO TEE OR REDUCER IS REQUIRED. AT THESE LOCATIONS VALVES AND PIPES ARE TO BE THE SAME SIZE AS THE WATER MAIN.
TEMPORARY BLOWOFF ASSEMBLIES WILL NOT REQUIRE CONCRETE PADS AT GRADE.

BLOWOFF ASSEMBLY



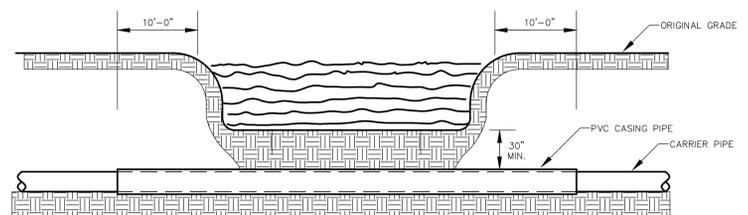
CREEK CROSSING IN ROCK

CREEK CROSSING

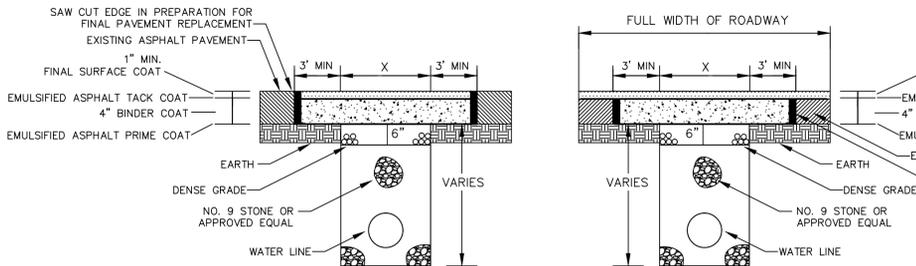


NOTE: INSTALL 12 GA. TRACER WIRE FROM WATER MAIN TO THE METER BOX. THE SERVICE LINE TRACER WIRE SHALL BE CONNECTED TO THE MAIN LINE TRACER WIRE VIA A WATER TIGHT CONNECTION. THE WIRE SHALL BE ROUTED INTO THE METER BOX AND SHALL BE ACCESSIBLE FOR LOCATOR CONNECTION.
METER SETTING SHALL BE PLACED 2 FEET INSIDE PROPERTY LINE UNLESS OTHERWISE DIRECTED BY ENGINEER.

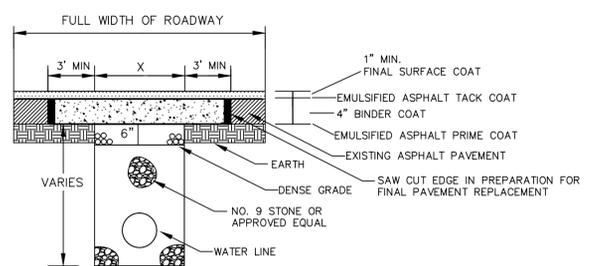
METER SETTING



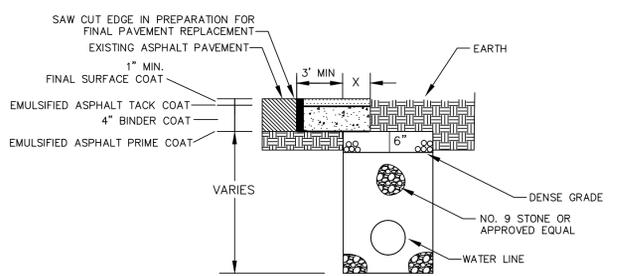
CREEK CROSSING IN SOIL



PAVEMENT REPLACEMENT



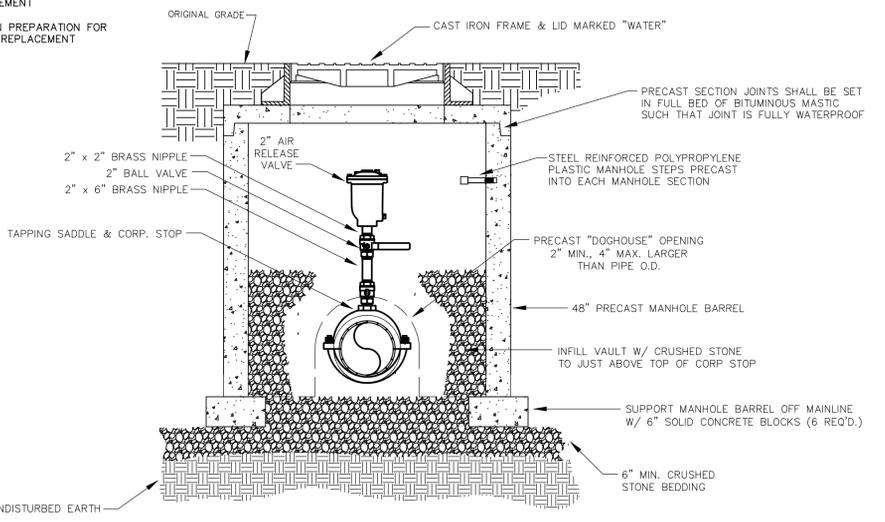
FULL WIDTH PAVEMENT REPLACEMENT



PARTIAL PAVEMENT REPLACEMENT

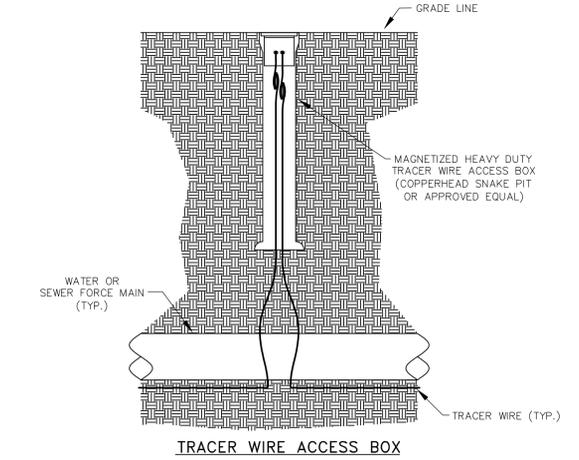
NOTES:
ANY TRENCH THAT DISTURBS PAVEMENT SHALL BE BACKFILLED WITH STONE
REPLACE BITUMINOUS PAVEMENT WITH SAME TYPE AND DEPTH AS EXISTING PAVEMENT
ANY PUBLICLY TRAVELED AREA (I.E. COUNTY ROADS, BUSINESS ENTRANCES, BUSINESS AND PUBLIC PARKING LOTS, ETC.) SHALL BE TEMPORARILY RESTORED AT THE END OF EACH WORK DAY USING AN APPROVED COLD PATCH ASPHALT PAVEMENT

BITUMINOUS PAVEMENT REPLACEMENT

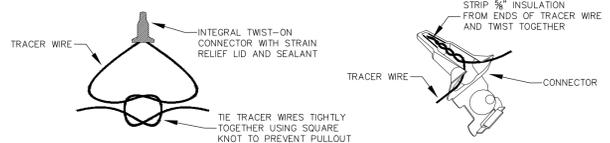


NOTE:
WHERE THE WATER LINE IS LOCATED IN A STREET OR ROAD, THE AIR RELEASE VALVE AND BOX ARE TO BE LOCATED OFF THE ROAD AS DIRECTED BY THE ENGINEER AND CONNECTED TO THE MAINLINE BY 1" P.E. SERVICE LINE. THE SERVICE LINE WILL BE A SEPARATE PAY ITEM.

AIR RELEASE VALVE



TRACER WIRE ACCESS BOX



TRACER WIRE CONNECTION

TRACER WIRE CONNECTOR DETAIL

NOTES:
FOR OPEN CUT INSTALLATION, TRACER WIRE IS TO BE #12 AWG SOLID COPPER WITH 30 MIL BLUE HMWPE INSULATION. FOR TRENCHLESS INSTALLATION, TRACER WIRE IS TO BE #12 AWG SOLID COPPER CLAD STEEL CORE WITH 45 MIL BLUE HDPE INSULATION.
TRACER WIRE SHALL BE INSTALLED WITH THE PIPE AT THE TRENCH BOTTOM. ACCESS BOXES SHALL BE INSTALLED AT EACH VALVE, HYDRANT AND AIR RELEASE VALVE. TRACER WIRE ACCESS BOXES SHALL BE SPACED NO FURTHER THAN 1000' APART. A MINIMUM OF 3 FEET OF TRACER WIRE SHOULD BE COILED UP INSIDE OF EACH ACCESS BOX.

TRACER WIRE DETAILS

RECORD DRAWINGS

Monarch Engineering, Inc.
556 CARLTON DRIVE
LAWRENCEBURG, KY 40342

STANDARD DETAIL DRAWINGS

DESCRIPTION:

CUSTOMER:

NORTH SHELBY WATER COMPANY
SHELBY COUNTY, KENTUCKY

PROJECT NO. 1321
DATE: APRIL 2016
DRAWN BY: JLM
CHECKED BY: DSB
CHECKED BY: DMB
SCALE: N.T.S.
SHEET:
SD-2

JAMES LEE MUDD JR.
28693
LICENSED PROFESSIONAL ENGINEER

NORTH SHELBY WATER COMPANY EAST - WEST CONNECTOR - PHASE III WATER SYSTEM IMPROVEMENTS CONTRACT NO. 2 TODDS POINT WATER STORAGE TANK SHELBY COUNTY, KENTUCKY

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EROSION CONTROL & SITE PROTECTION PLAN	EC-1
STANDARD DRAWINGS	SD-1

PROJECT FUNDED BY:

U.S.D.A. RURAL DEVELOPMENT

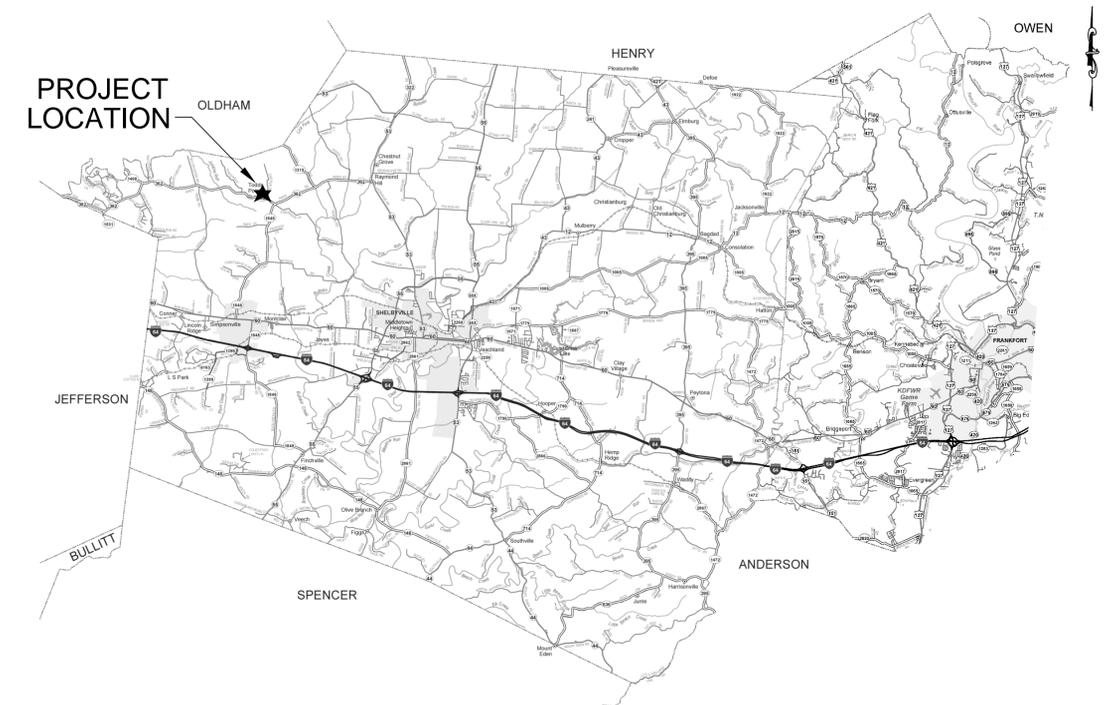
BOARD OF DIRECTORS

JERRY RUBLE, PRESIDENT
LLOYD EADES, VICE PRESIDENT
TOM MCGINNIS, TREASURER
HERB MCCOUN
BRYAN FRANKLIN
JIMMY ANGLIN
JIM SMITH
KEVIN ARMSTRONG

MANAGER
DAVID HEDGES

APRIL 2016

LOCATION MAP



M

Monarch Engineering, Inc.

556 CARLTON DRIVE
LAWRENCEBURG, KY 40342

RECORD DRAWINGS



LOCATION AND SCOPE OF PROJECT

THE PROJECT LOCATION IS GENERALLY DEFINED AS NORTHWESTERN SHELBY COUNTY, KENTUCKY. THE WORK TO BE DONE UNDER THIS CONTRACT INCLUDES FURNISHING ALL MATERIALS, EQUIPMENT, AND LABOR NECESSARY TO CONSTRUCT THE TODDS POINT WATER STORAGE TANK IN ACCORDANCE WITH THE PLANS, SPECIFICATIONS AND CONTRACT DOCUMENTS.

GENERAL NOTES

- IT IS THE INTENTION OF THESE PLANS TO CONSTRUCT ALL WORK IN ACCORDANCE WITH ALL APPLICABLE REQUIREMENTS OF THE NORTH SHELBY WATER COMPANY, SHELBY COUNTY, THE KENTUCKY DEPARTMENT FOR ENVIRONMENTAL PROTECTION, AND THE U.S. ARMY CORPS OF ENGINEERS. WHERE THERE IS A CONFLICT BETWEEN THE CONTRACT DOCUMENTS, PLANS, AND SPECIFICATIONS AND THE PERMIT REQUIREMENTS OF THE AGENCY CONTROLLING THE UTILITY OR RESPECTIVE RIGHTS-OF-WAY, THE MORE RESTRICTIVE SHALL GOVERN.
- THE CONTRACTOR AND ANY APPLICABLE SUBCONTRACTORS SHALL ATTEND A PRE-CONSTRUCTION MEETING AT A TIME AND PLACE ARRANGED BY THE ENGINEER, IN WHICH ALL AFFECTED PARTIES WILL BE PRESENT. ALSO, A PRE-DISTURBANCE WALK THROUGH WILL NEED TO BE ATTENDED BY THE CONTRACTOR.
- FOLLOWING THE PRE-CONSTRUCTION MEETING, THE CONTRACTOR SHALL NOTIFY THE ENGINEER A MINIMUM OF THREE (3) WORKING DAYS PRIOR TO THE START OF CONSTRUCTION FOR INSPECTION COORDINATION. NO WORK CAN COMMENCE UNTIL ALL PERMITS HAVE BEEN OBTAINED AND THE CONTRACTOR HAS BEEN GIVEN THE AUTHORITY TO PROCEED.
- THE CONTRACTOR SHALL NOTIFY KENTUCKY 811 AT LEAST 72 HOURS IN ADVANCE OF CONSTRUCTION, FOR LOCATION AND MARKING OF ALL EXISTING UTILITIES.
- LOCATIONS AND ELEVATIONS OF EXISTING UNDERGROUND UTILITIES AS SHOWN ON THE PLANS ARE APPROXIMATE. NO GUARANTEE IS EITHER EXPRESSED OR IMPLIED AS TO THE COMPLETENESS OR ACCURACY THEREOF. THE CONTRACTOR SHALL BE EXCLUSIVELY RESPONSIBLE FOR DETERMINING AND VERIFYING THE LOCATION, DEPTH, AND ELEVATION OF THE EXISTING UTILITIES WITHIN THE CONSTRUCTION AREA PRIOR TO THE START OF CONSTRUCTION. THE CONTRACTOR SHALL NOTIFY THE ENGINEER IF ANY CONFLICTS ARE APPARENT OR IF LOCATIONS AND DEPTHS DIFFER SIGNIFICANTLY FROM THE PLANS.
- ALL ELEVATIONS REFER TO THE CURRENT NORTH AMERICAN VERTICAL DATUM OF 1988 (NAVD '88).
- THE ENGINEER HAS NOT PERFORMED PROPERTY OR RIGHT-OF-WAY SURVEYS FOR ANY OF THE AREAS INCLUDED IN THIS PROJECT. RIGHT-OF-WAY OR PROPERTY LINES SHOWN ON THE PLANS ARE APPROXIMATE AND ARE SHOWN FOR GENERAL ORIENTATION ONLY. PROPERTY CORNERS OR OTHER SURVEY MARKERS HAVE NOT BEEN LOCATED, UNLESS SPECIFICALLY CALLED OUT ON THE PLANS.
- ALL PROPERTIES OR FACILITIES IN THE SURROUNDING AREAS, PUBLIC OR PRIVATE, DESTROYED OR OTHERWISE DAMAGED BY THE CONTRACTORS OPERATIONS SHALL BE REPLACED OR REPAIRED BY THE CONTRACTOR AT THEIR OWN EXPENSE TO THE SATISFACTION OF THE AUTHORITY HAVING JURISDICTION OVER THE IMPACTED PROPERTY OR FACILITY.
- IF, IN THE OPINION OF THE ENGINEER, WORK HAS NOT PROGRESSED IN A REASONABLE AND TIMELY MANNER, THE ENGINEER SHALL HAVE THE RIGHT, WITH THE APPROVAL OF THE OWNER, TO DIRECT THE CONTRACTOR TO PROCEED WITH THE WORK OR ANY PORTION THEREOF IMMEDIATELY. IN THE EVENT THAT THE CONTRACTOR DOES NOT PROCEED WITH THE WORK IMMEDIATELY, AS DIRECTED BY THE ENGINEER, THE ENGINEER, UNDER THE DIRECTION OF THE OWNER, MAY ORDER ANY OR ALL OTHER OPERATIONS OF THE CONTRACTOR, UNDER THIS CONTRACT, TO CEASE UNTIL THE REQUESTED WORK IS PROCEEDING IN AN ACCEPTABLE MANNER. SHOULD THE CONTRACTOR FAIL TO COMPLY WITH THESE PROVISIONS, THE OWNER MAY, WITH OR WITHOUT NOTICE, CAUSE THE REQUIRED WORK TO BE DONE BY THE OWNER OR OTHERS AND WILL DEDUCT THE COST OF SAID WORK FROM ANY FUNDS DUE OR TO BECOME DUE TO THE CONTRACTOR UNDER THIS CONTRACT. THE PERFORMANCE OF SUCH WORK BY THE OWNER OR OTHERS SHALL SERVE IN NO WAY TO RELEASE THE CONTRACTOR FROM HIS GENERAL OR PARTICULAR LIABILITY FOR THE SAFETY OF THE PUBLIC OR COMPLETION OF THE WORK.
- ACTIONS MUST BE TAKEN TO MINIMIZE THE TRACKING OF MUD AND SOIL FROM CONSTRUCTION AREAS ONTO PUBLIC ROADWAYS. ANY SOIL TRACKED ONTO A PUBLIC ROADWAY SHALL BE REMOVED DAILY.
- ALL WORK SHALL BE INCORPORATED IN TO THOSE UNIT PRICES LISTED IN THE CONTRACT DOCUMENTS. ANY ITEMS NOT SPECIFICALLY LISTED IN THE UNIT PRICES SHALL BE CONSIDERED INCIDENTAL TO THE WORK AND SHALL NOT BE ELIGIBLE FOR SEPARATE PAYMENT OR COMPENSATION.

EROSION AND SEDIMENTATION CONTROL NOTES

- THE CONTRACTOR SHALL COMPLY WITH ALL EROSION AND SEDIMENTATION CONTROL REQUIREMENTS OF THE BOTH THE STATE OF KENTUCKY AND THE U.S. ARMY CORPS OF ENGINEERS FOR ALL DISTURBED AREAS INCLUDED IN THE PROJECT.
- THE CONTRACTOR SHALL CONDUCT CONSTRUCTION OPERATIONS IN A MANNER THAT WILL REDUCE ACCELERATED EROSION TO THE PRACTICAL MINIMUM AND PREVENT DAMAGING SILTATION TO EXISTING SEWERS AND WATER COURSES LEADING FROM THE PROJECT AREA.
- THE CONTRACTOR SHALL CONDUCT WORK IN SUCH A MANNER AS TO PREVENT THE ENTRY OF FUELS, OILS, BITUMINOUS MATERIALS, CHEMICALS, SEWERAGE, OR OTHER HARMFUL MATERIALS INTO NEARBY LAKES AND STREAMS.
- WASTE DISPOSAL AREAS SHALL BE SELECTED BY THE CONTRACTOR WITH FULL CONSIDERATION OF EROSION AND SEDIMENT CONTROL, SELECTION OF DISPOSAL SITE(S), AND CONTROL OF OPERATIONS, AND THE RESTORATION OF SAID AREAS SHALL BE SUBJECT TO APPROVAL OF THE ENGINEER.
- EXCAVATIONS FROM THE PROJECT AREA INCLUDING THOSE IN CHANNELS AND WATERCOURSES SHALL NOT BE DEPOSITED IN OR NEAR RIVERS, STREAMS, OR PONDS WHERE IT MAY ENTER THE WATERWAY.
- AT THE COMPLETION OF EACH DAYS CONSTRUCTION, CARE SHOULD BE TAKEN TO ENSURE THAT MINIMAL EROSION WILL OCCUR IN TRENCHES AND TO STOCKPILED MATERIALS UNTIL RESUMPTION OF WORK.
- THE CONTRACTOR SHALL CONFINE CONSTRUCTION OPERATIONS TO THE MINIMUM AMOUNT OF WORKING SPACE PRACTICAL TO AID IN THE MINIMIZATION OF SOIL EROSION.
- THE PROJECT WILL BE CONTINUALLY OBSERVED BY VARIOUS STATE & LOCAL REGULATORY AGENCIES FOR EROSION CONTROL COMPLIANCE. DEFICIENCIES WILL BE CORRECTED BY THE CONTRACTOR IMMEDIATELY UPON NOTICE OF SUCH DEFICIENCIES. FAILURE TO CORRECT THE DEFICIENCIES MAY RESULT IN THE ISSUANCE OF A STOP WORK ORDER AND THERE WILL BE NO CONTRACT TIME EXTENSION GRANTED FOR THIS TYPE OF STOPPAGE.
- TEMPORARY SOIL EROSION CONTROL MEASURES CONSISTING OF SILT FENCE, MULCHING, AND TARPING SHALL BE IMPLEMENTED THROUGHOUT THE ENTIRE CONSTRUCTION AREA OF THE PROJECT, AND SHALL BE REMOVED BY THE CONTRACTOR AFTER THE PERMANENT SOIL EROSION MEASURES HAVE BEEN ESTABLISHED.
- PERMANENT SOIL EROSION MEASURES CONSISTING OF AN APPROVED SEED MIXTURE AND MULCH BLANKET SHALL BE COMPLETED WITHIN FIVE (5) CALENDAR DAYS OF FINAL GRADING. IN THE EVENT IT IS NOT POSSIBLE TO PERMANENTLY STABILIZE THE AREA DUE TO SITE CONDITIONS OR SEASONAL LIMITATIONS, THE TEMPORARY MEASURES SHALL REMAIN IN FORCE AND SHALL BE MAINTAINED BY THE CONTRACTOR UNTIL SUCH TIME IT IS PRACTICAL TO COMPLETE THE PERMANENT SOIL EROSION CONTROL MEASURES.
- THE ENGINEER SHALL HAVE FULL AUTHORITY TO TEMPORARILY SUSPEND WORK IN THE EVENT THAT ANY OF THE ABOVE REQUIREMENTS ARE NOT BEING MET BY THE CONTRACTOR, OR IF CONDITIONS INDICATE THAT ADDITIONAL TEMPORARY MEASURES ARE WARRANTED, IN THE OPINION OF THE ENGINEER OR REGULATORY AGENCIES.
- PRIOR TO THE START OF CONSTRUCTION, THE CONTRACTOR SHALL INSTALL INLET FILTERS AT ALL STORM SEWER INLETS WHICH MAY BE PRESENT IN THE CONSTRUCTION AREA.
- THE CONTRACTOR SHALL BE RESPONSIBLE FOR THE MAINTENANCE OF ANY REQUIRED ACCESS ROAD SURFACES AND SOIL EROSION CONTROL MEASURES WITHIN THE CONSTRUCTION AREA UNTIL THE FULL COMPLETION OF THE PROJECT.
- ALL NON-PAVED DISTURBED AREAS SHALL BE RESTORED AS INDICATED ON THE PLANS. IF NOT SPECIFICALLY STATED ON THE PLANS, RESTORATION SHALL CONSIST OF 4-INCHES OF TOPSOIL, FERTILIZER, SEED AND MULCH. UNLESS OTHERWISE STATED, ALL DISTURBED AREAS SHALL BE SEEDDED WITH A SEED MIX APPROVED BY THE ENGINEER.

WORK LIMITS

IF INDICATED ON THE PLANS, THE CONTRACTOR SHALL KEEP ALL OPERATIONS WITHIN THE WORK LIMITS SHOWN. OTHERWISE, THE CONTRACTOR SHALL ESTABLISH CONSTRUCTION LIMITS WITHIN THE EXISTING AND/OR PROPOSED RIGHTS-OF-WAY AND EASEMENTS AS DIRECTED BY THE ENGINEER. THIS REQUIREMENT SHALL INCLUDE MATERIAL STOCKPILING AND EQUIPMENT STORAGE. THE CONTRACTOR MAY NOT EXIT THE ESTABLISHED PROJECT WORK LIMITS WITHOUT EXPLICIT PERMISSION FROM THE OWNER AND THE ENGINEER.

UTILITIES

FOR PROTECTION OF UNDERGROUND UTILITIES AND IN CONFORMANCE WITH KENTUCKY LAW, THE CONTRACTOR SHALL SHALL DIAL KENTUCKY 811 A MINIMUM OF THREE (3) FULL WORKING DAYS, EXCLUDING SATURDAYS, SUNDAYS, AND HOLIDAYS, PRIOR TO BEGINNING WORK IN EACH CONSTRUCTION AREA WHERE PUBLIC UTILITIES HAVE NOT BEEN PREVIOUSLY LOCATED. MEMBERS WILL THUS BE ROUTINELY NOTIFIED. THIS DOES NOT RELIEVE THE CONTRACTOR OF THE RESPONSIBILITY OF NOTIFYING UTILITY OWNERS WHO MAY NOT BE PART OF THE 'KY 811' ALERT SYSTEM. UTILITY LOCATIONS SHOWN ON THE PLANS ARE ONLY APPROXIMATE AND SHOULD BE LOCATED IN THE FIELD PRIOR TO ANY EXCAVATION.

WORK WITHIN STREAMS, CREEKS & WATERWAYS

ANY AND ALL WORK TO BE COMPLETED WITHIN STREAMS, CREEKS & WATERWAYS SHALL BE COMPLETED ONLY DURING TIMES OF LOW FLOW AS DETERMINED BY THE ENGINEER. THE CONTRACTOR SHALL STRICTLY LIMIT THE USE OF HEAVY EQUIPMENT WITHIN THE WATERCOURSE AT ALL TIMES. STREAM FLOW SHALL NOT BE RESTRICTED OR IMPEDED AT ANY TIME DURING THE COURSE OF CONSTRUCTION.

DISRUPTION OF SERVICE

THE CONTRACTOR SHALL COORDINATE ALL DISRUPTIONS OF SERVICE WITH THE OWNER AND ENGINEER. PRIOR TO ANY DISRUPTION, THE CONTRACTOR SHALL INFORM BOTH PARTIES OF HIS INTENTIONS, METHODS AND PROJECTED DURATION OF DISTURBANCE AND RECEIVE THEIR APPROVAL PRIOR TO INITIATING THE SPECIFIC WORK.

WORK WITHIN PUBLIC ROAD RIGHT-OF-WAYS

WHEN PERFORMING WORK ALONG OR ACROSS ANY PUBLIC ROADWAY, THE CONTRACTOR SHALL POST WARNING SIGNS PAINTED ORANGE AND THEY SHALL BE FOUR FEET BY FOUR FEET MOUNTED ON POSTS IN ACCORDANCE WITH THE KENTUCKY TRANSPORTATION DEPARTMENT'S MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES. THE SIGNS SHALL BE AS FOLLOWS:

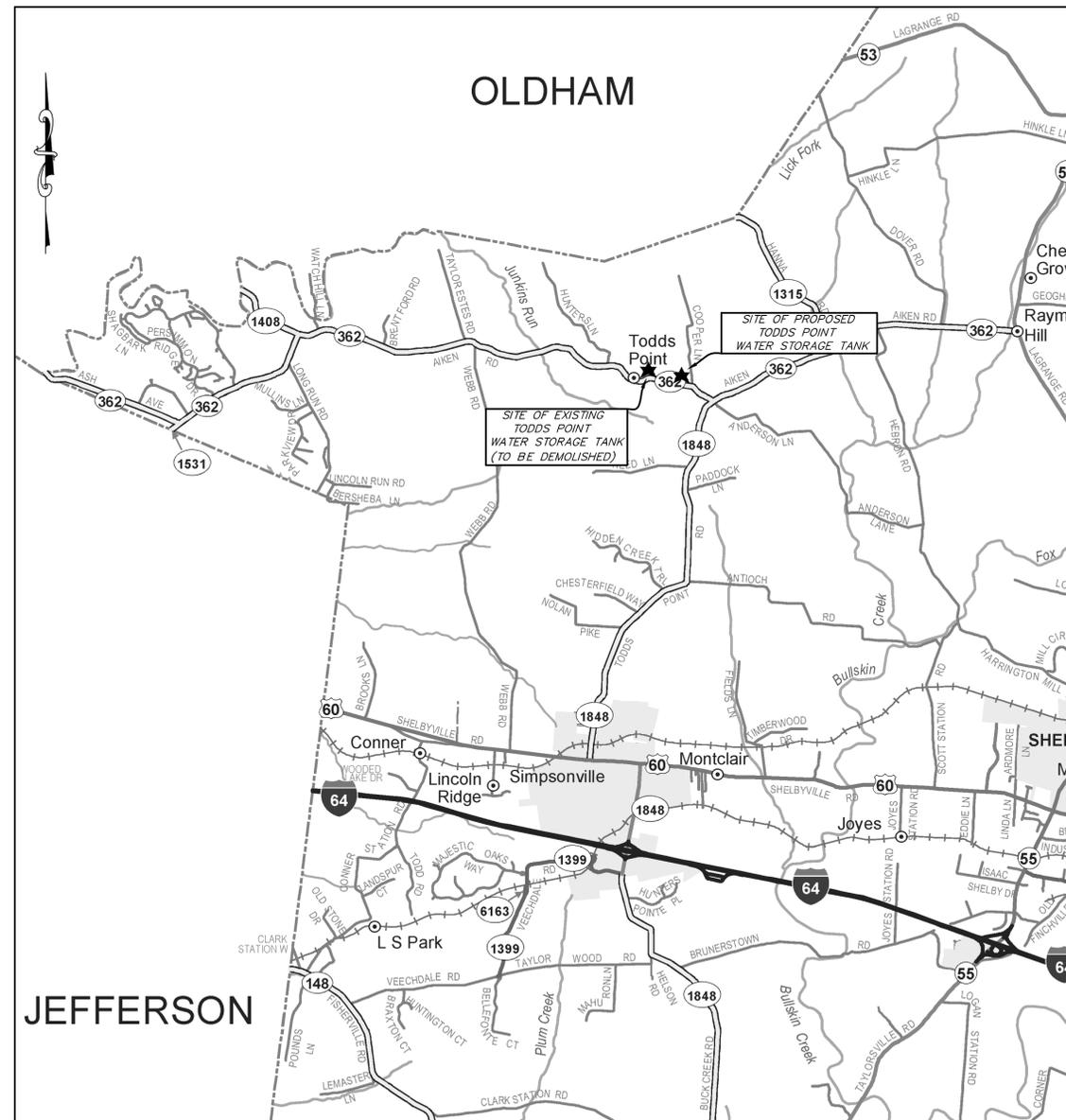
- CAUTION PIPELINE CONSTRUCTION 1500 FEET
- CAUTION PIPELINE CONSTRUCTION 1000 FEET
- CAUTION PIPELINE CONSTRUCTION 500 FEET

ALL SIGNS, BARRICADES, LIGHTS, AND TRAFFIC CONTROL SHALL BE INSTALLED IN ACCORDANCE WITH THE KENTUCKY TRANSPORTATION DEPARTMENT'S MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES.

THE CONTRACTOR SHALL MAINTAIN TWO FLAG MEN AT ALL TIMES WHERE MACHINERY IS IN OPERATION WHERE THE FLOW OF TRAFFIC WILL BE DISTURBED. THERE IS NO EXCEPTION TO THIS REQUIREMENT. THE USE OF RADIOS WILL BE REQUIRED WHEN VISUAL CONTACT BETWEEN THE FLAGMEN DOES NOT EXIST.

THE CONTRACTOR SHALL BE RESPONSIBLE FOR KEEPING ENTIRE ROADWAY FREE AND CLEAR AT THE END OF EACH WORKING DAY. NO EQUIPMENT SHALL BE LEFT ON OR PARKED ALONG THE ROAD RIGHT OF WAY. AT THE COMPLETION OF EACH WORK DAY, THE CONTRACTOR SHALL BACKFILL ALL OPEN TRENCHES AND INSTALL ALL TRAFFIC CONTROL SIGNS, BARRICADES, AND LIGHTS IN ACCORDANCE WITH THE KENTUCKY TRANSPORTATION DEPARTMENT'S MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES.

PROJECT LOCATION MAP



Monarch Engineering, Inc.
 556 CARLTON DRIVE
 LAWRENCEBURG, KY 40342

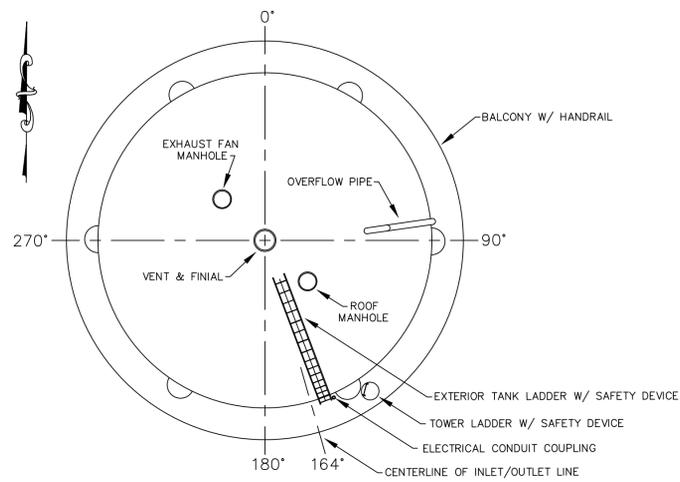
DESCRIPTION:
GENERAL NOTES
TODDS POINT WATER STORAGE TANK
 CUSTOMER:
NORTH SHELBY WATER COMPANY
SHELBY COUNTY, KENTUCKY

PROJECT NO. 1321
 DATE: APRIL 2016
 DRAWN BY: JLM
 CHECKED BY: DSB
 CHECKED BY: DMB
 SCALE: AS NOTED

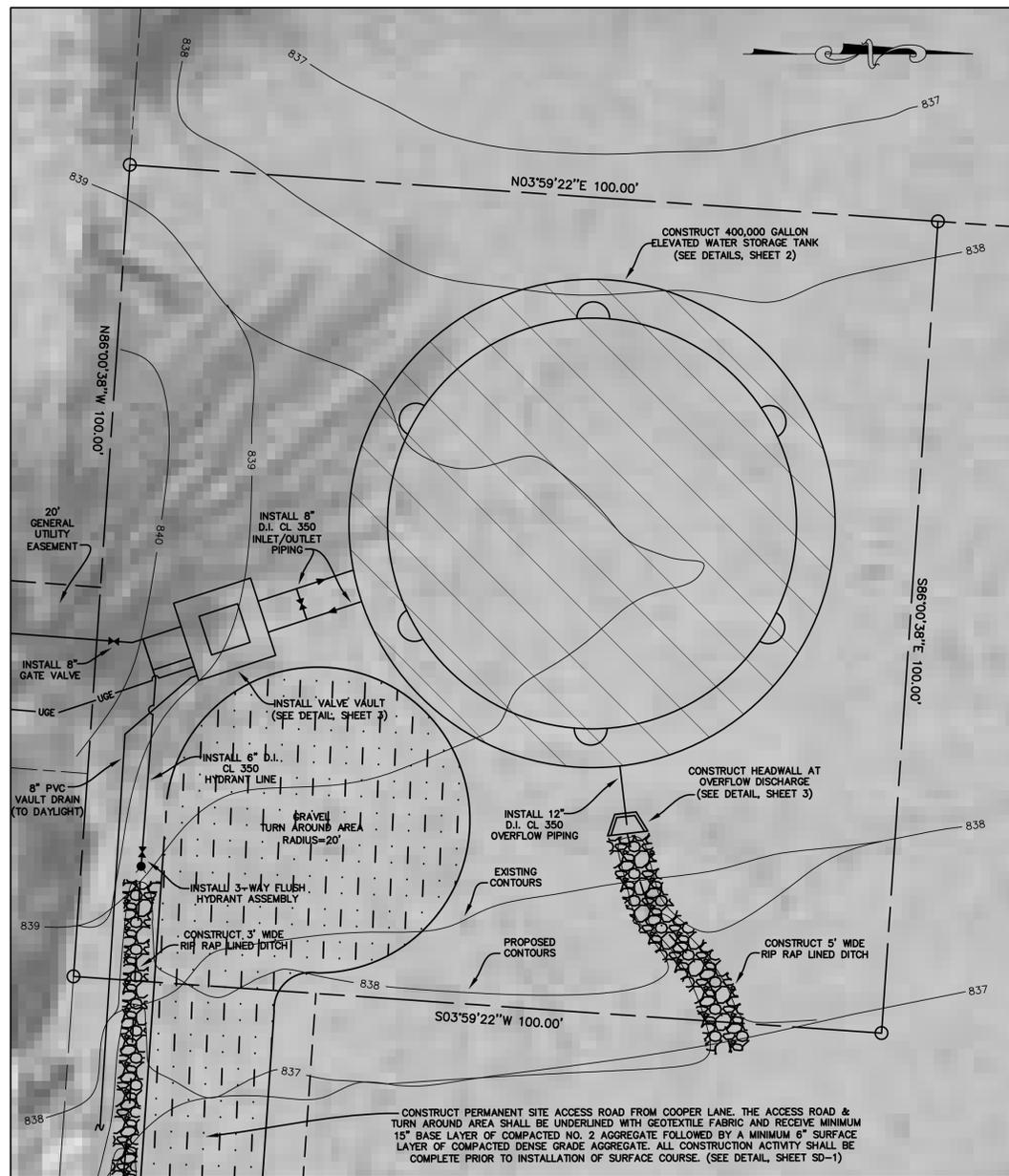
SHEET:
GN-1



RECORD DRAWINGS



TANK ORIENTATION
NOT TO SCALE



SITE PLAN
SCALE: 1"=10'



SITE PLAN
SCALE: 1"=30'

RECORD DRAWINGS



Monarch Engineering, Inc.

556 CARLTON DRIVE
LAWRENCEBURG, KY 40342

DESCRIPTION:
SITE PLAN

400,000 GALLON WATER STORAGE TANK

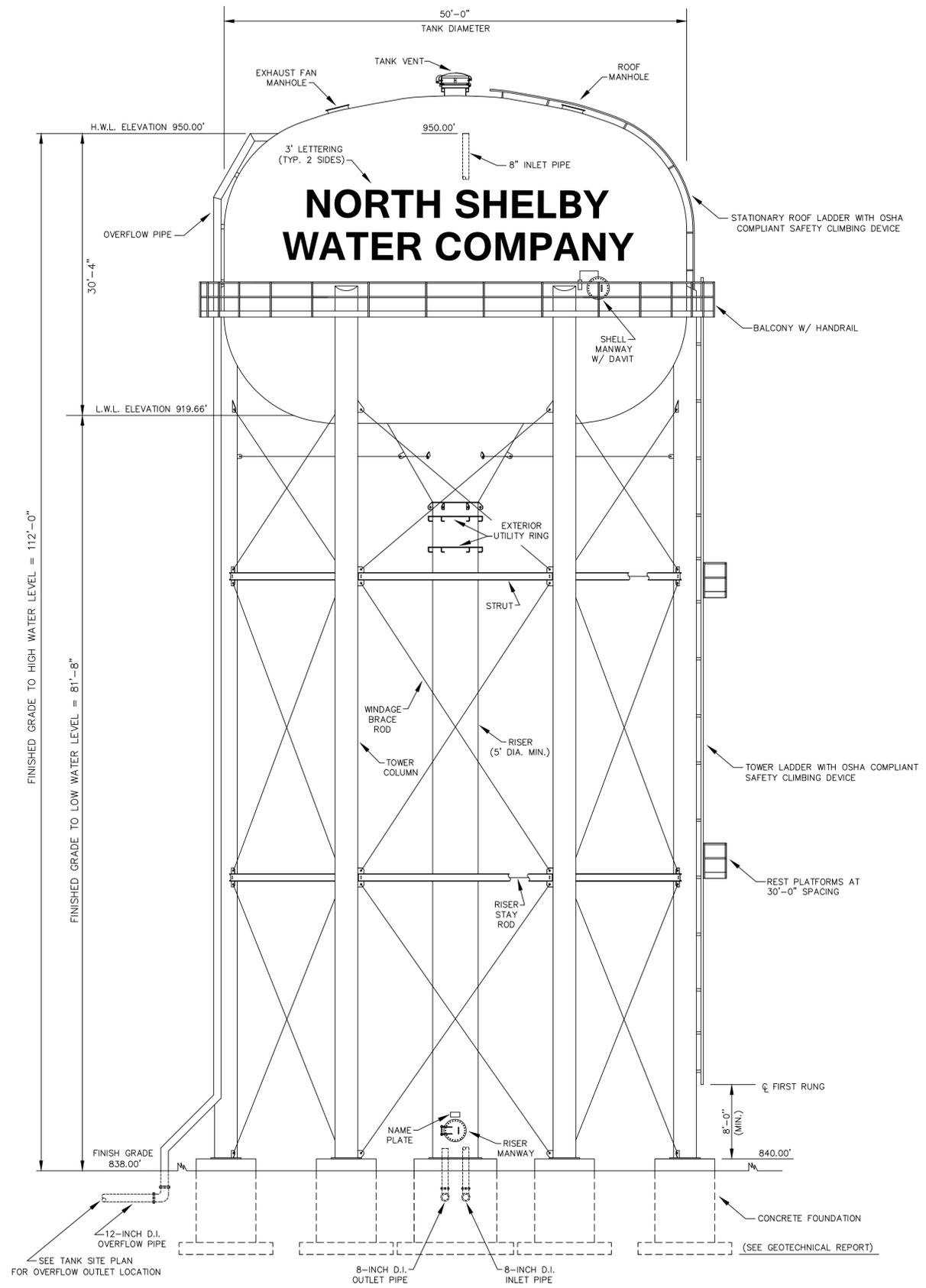
CUSTOMER:
**NORTH SHELBY WATER COMPANY
SHELBY COUNTY, KENTUCKY**

PROJECT NO. 1321
DATE: APRIL 2016
DRAWN BY: JLM
CHECKED BY: DSB
CHECKED BY: DMB
SCALE: AS NOTED

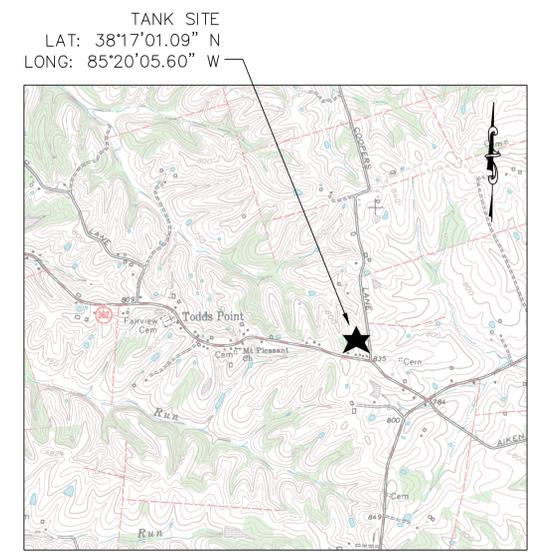
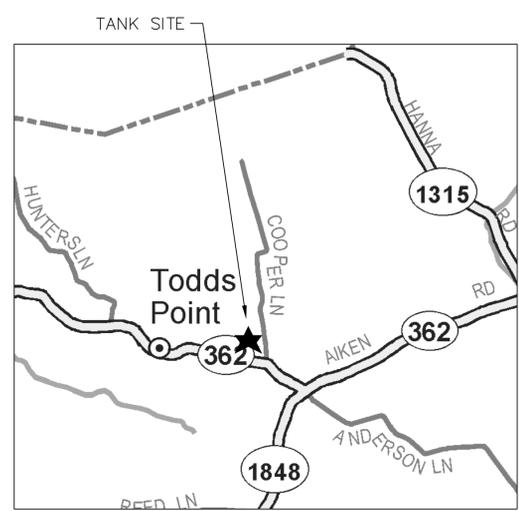
SHEET:

1





ELEVATION DETAIL



LOCATION MAPS

NOTES:

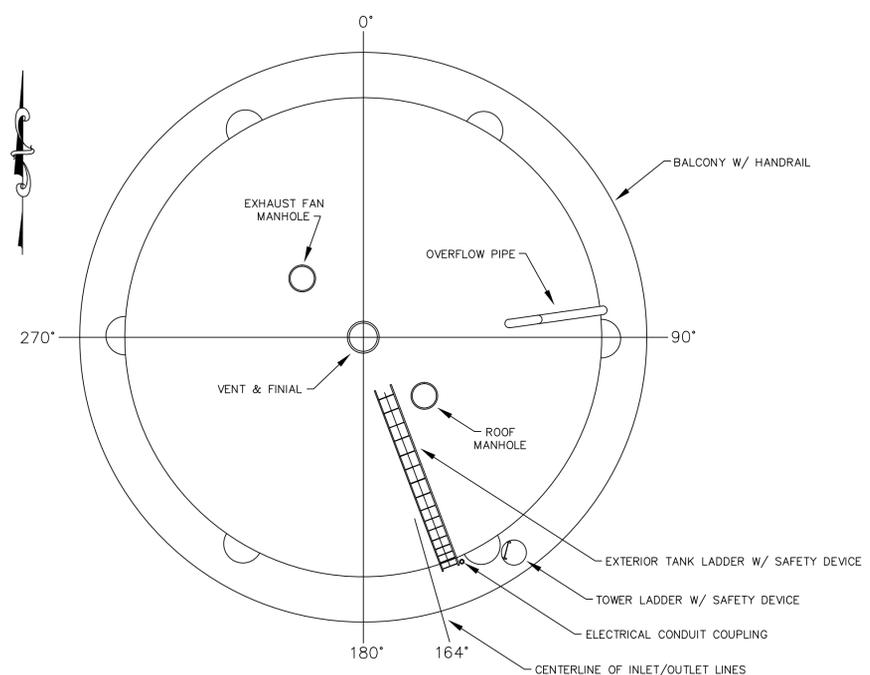
DESIGN:
THE TANK AND CONCRETE SUPPORT PEDESTAL SHALL BE DESIGNED AND CONSTRUCTED IN ACCORDANCE WITH AWWA D100-11, AND PROJECT SPECIFICATIONS.

LOADING CRITERIA:
DESIGN WIND VELOCITY: 100 MPH
DESIGN WIND VELOCITY: 100 PSF
MSE SPECTRAL RESPONSE ACCELERATION - 0.2-SEC PERIOD (S_s): PER AWWA D100-11
MSE SPECTRAL RESPONSE ACCELERATION - 1.0-SEC PERIOD (S₁): PER AWWA D100-11
THE CONTRACTOR SHALL GROUT BENEATH BASE PLATES UPON COMPLETION OF ERECTION.

MATERIAL:
STEEL PLATE: ASTM A283 GR.C/A36
STRUCTURAL STEEL SHAPES: ASTM A36
BRACE & STAY RODS: ASTM A36
LADDER RUNGS: ASTM A706

GENERAL:

- ACCESSORIES SHOWN ON ELEVATION DRAWINGS ARE ROTATED FOR CLARITY.
- ALL HANDRAILS, PLATFORM LANDINGS, WALKWAYS, LADDERS AND SAFETY CLIMB DEVICES SHALL CONFORM WITH CURRENT OSHA STANDARDS.
- SEE PROJECT SPECIFICATIONS FOR SHOP AND FIELD PAINT REQUIREMENTS FOR THE STEEL TANK.
- STERILIZE TANK IN ACCORDANCE WITH AWWA C652-02 AND PROJECT SPECIFICATIONS.
- TOWER LADDER SHALL HAVE 3' X 3' REST PLATFORMS AT 30'-0" MAX. SPACING.
- FOR TANKS LOCATED IN REGIONS WHERE FREEZING CONDITIONS MAY OCCUR, CONSIDERATION SHALL BE MADE TO OMIT INSIDE TANK LADDER.



ORIENTATION DETAIL

RECORD DRAWINGS

Monarch Engineering, Inc.

556 CARLTON DRIVE
LAWRENCEBURG, KY 40342

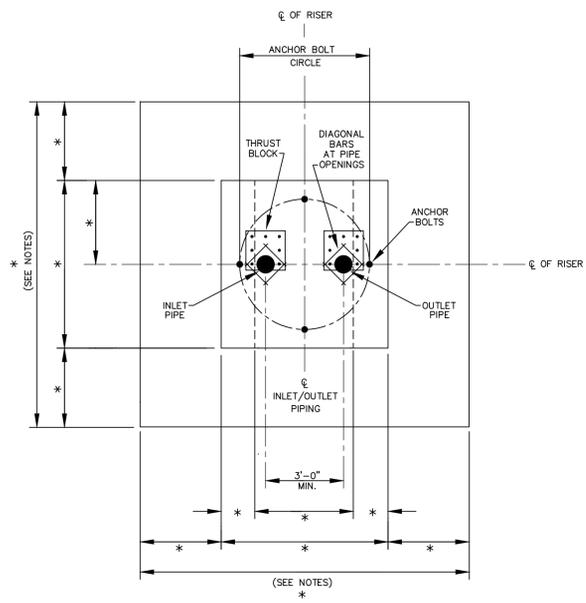
DESCRIPTION:
CONSTRUCTION DETAILS
400,000 GALLON WATER STORAGE TANK

CUSTOMER:
NORTH SHELBY WATER COMPANY
SHLEBY COUNTY, KENTUCKY

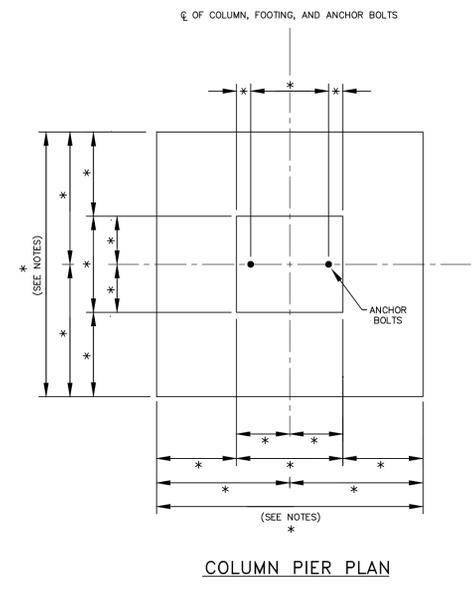
PROJECT NO. 1321
DATE: APRIL 2016
DRAWN BY: JLM
CHECKED BY: DSB
CHECKED BY: DMB
SCALE: N.T.S.

SHEET:
2

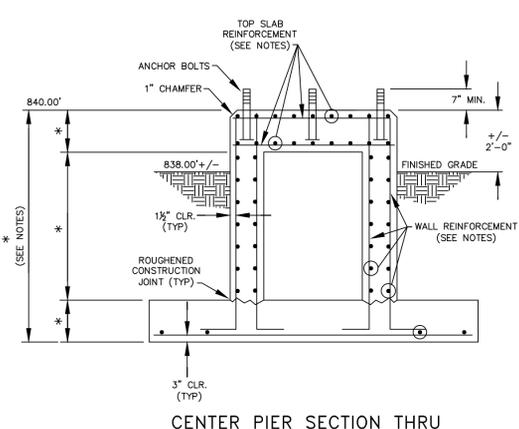




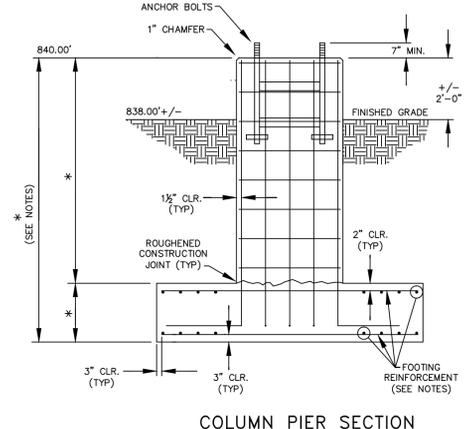
CENTER PIER PLAN



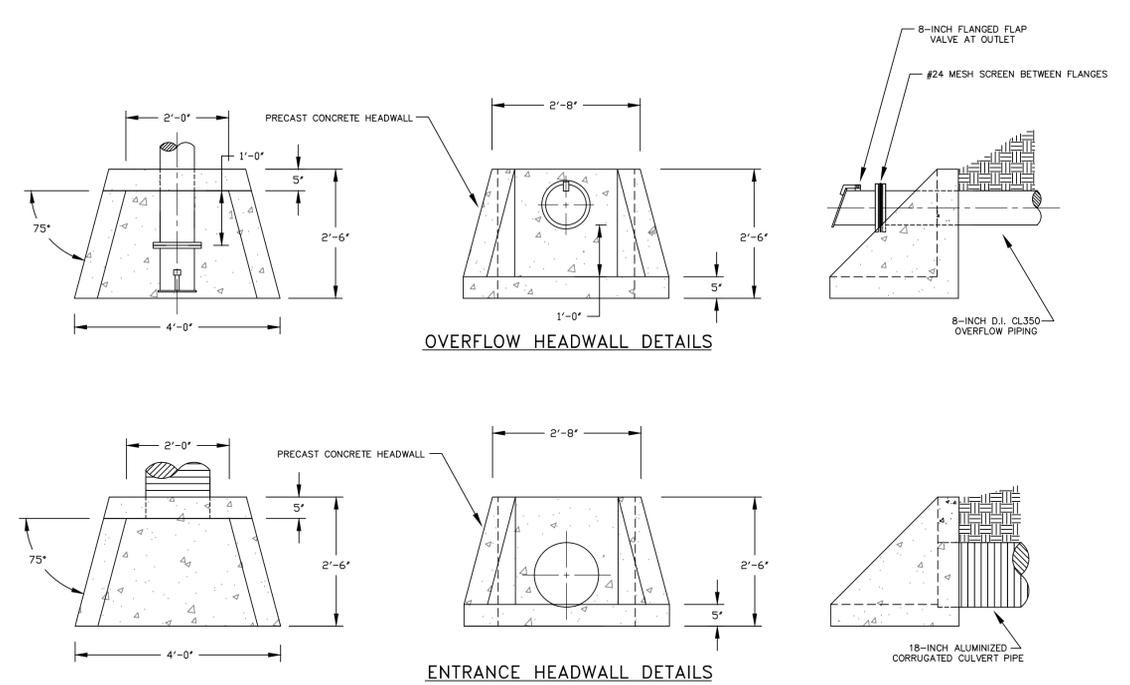
COLUMN PIER PLAN



CENTER PIER SECTION THRU



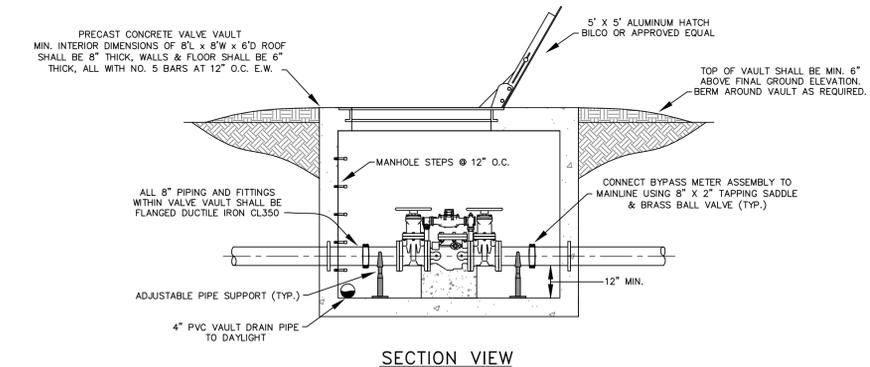
COLUMN PIER SECTION



OVERFLOW HEADWALL DETAILS

ENTRANCE HEADWALL DETAILS

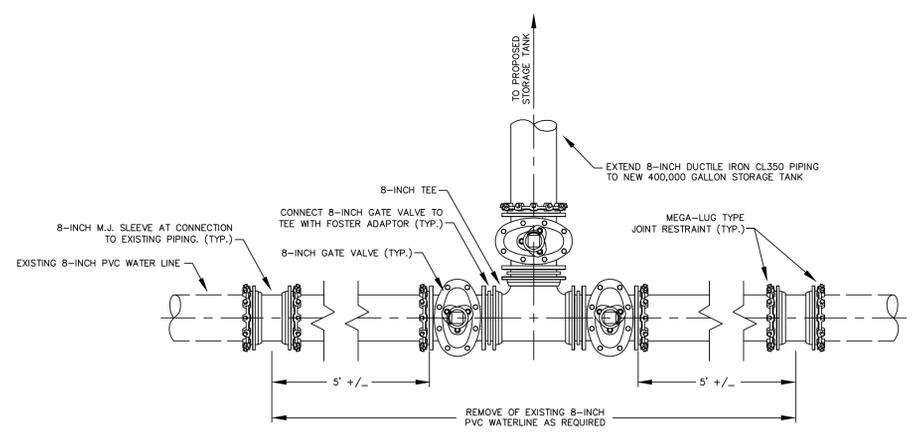
HEADWALL DETAILS
SCALE: NTS



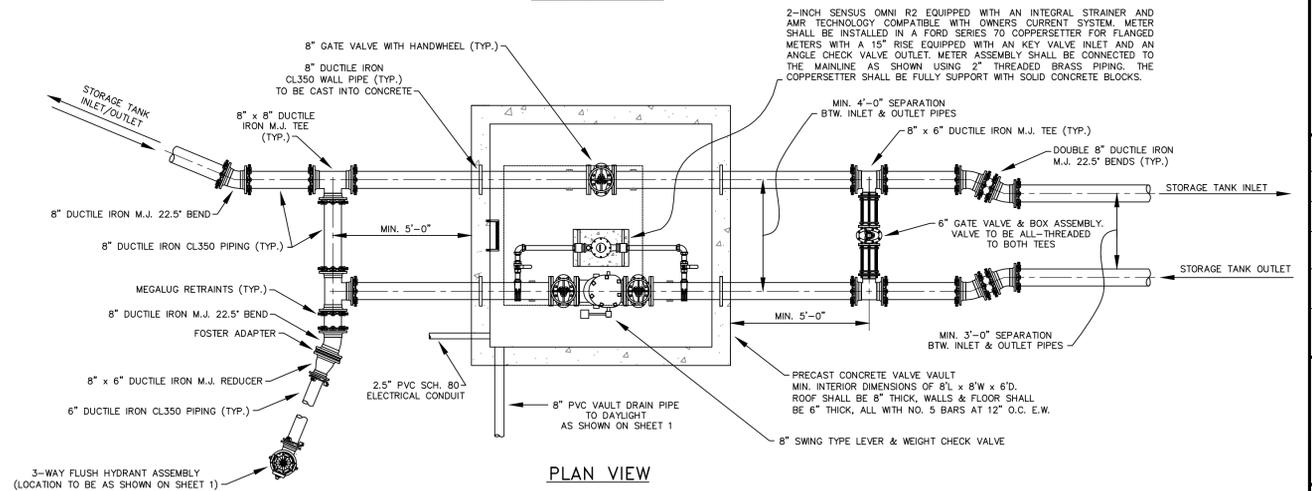
SECTION VIEW

NOTES:
 FINAL FOUNDATION DESIGN WILL BE THE RESPONSIBILITY OF THE TANK CONTRACTOR
 FINAL PIER AND FOOTING DIMENSIONS (*) AND CONCRETE REINFORCEMENT REQUIREMENTS SHALL BE DETERMINED BY THE TANK CONTRACTOR.
 FOUNDATION CONSTRUCTION SHALL COMPLY WITH AWWA D100-11, A.C.I. 318-99, A.C.I. 301-96 AND APPLICABLE SECTIONS OF THE PROJECT SPECIFICATIONS AND THE PROJECT SOILS REPORT.
 MINIMUM CONCRETE COMPRESSIVE STRENGTH SHALL BE 4,000 PSI @ 28 DAYS. REINFORCEMENT SHALL CONFORM TO A.S.T.M. A615 GR. 60.
 CONSTRUCTION JOINTS SHALL BE ROUGHENED ACROSS ENTIRE FACE WITH 1/4" MINIMUM DEPTH INDENTATIONS.
 THE TOP OF CONCRETE FOR ALL PIERS INCLUDING THE CENTER PIER SHALL BE LEVEL AND SHALL BE THE SAME ELEVATION (UNLESS OTHERWISE NOTED BY A SPECIFIED ELEVATION) WITH A MAXIMUM DIFFERENTIAL OF (+/-) 1/4".
 ANCHOR BOLTS SHALL BE PLACED WITHIN (+/-) 1/8" OF THE PLAN DIMENSIONS AT THE TOP OF THE CONCRETE, PLUMB WITHIN 1/4" IN 12" AND EXTEND WITHIN 1/2" OF THE SPECIFIED PROJECTION ABOVE THE TOP OF THE FOUNDATION.

FOUNDATION DETAILS
SCALE: N.T.S.



CONNECTION DETAIL
SCALE: N.T.S.



VALVE VAULT DETAILS
SCALE: N.T.S.

DESCRIPTION:
CONSTRUCTION DETAILS
400,000 GALLON WATER STORAGE TANK

CUSTOMER:
NORTH SHELBY WATER COMPANY
SHELBY COUNTY, KENTUCKY

PROJECT NO. 1321
 DATE: APRIL 2016
 DRAWN BY: JLM
 CHECKED BY: DSB
 CHECKED BY: DMB
 SCALE: N.T.S.

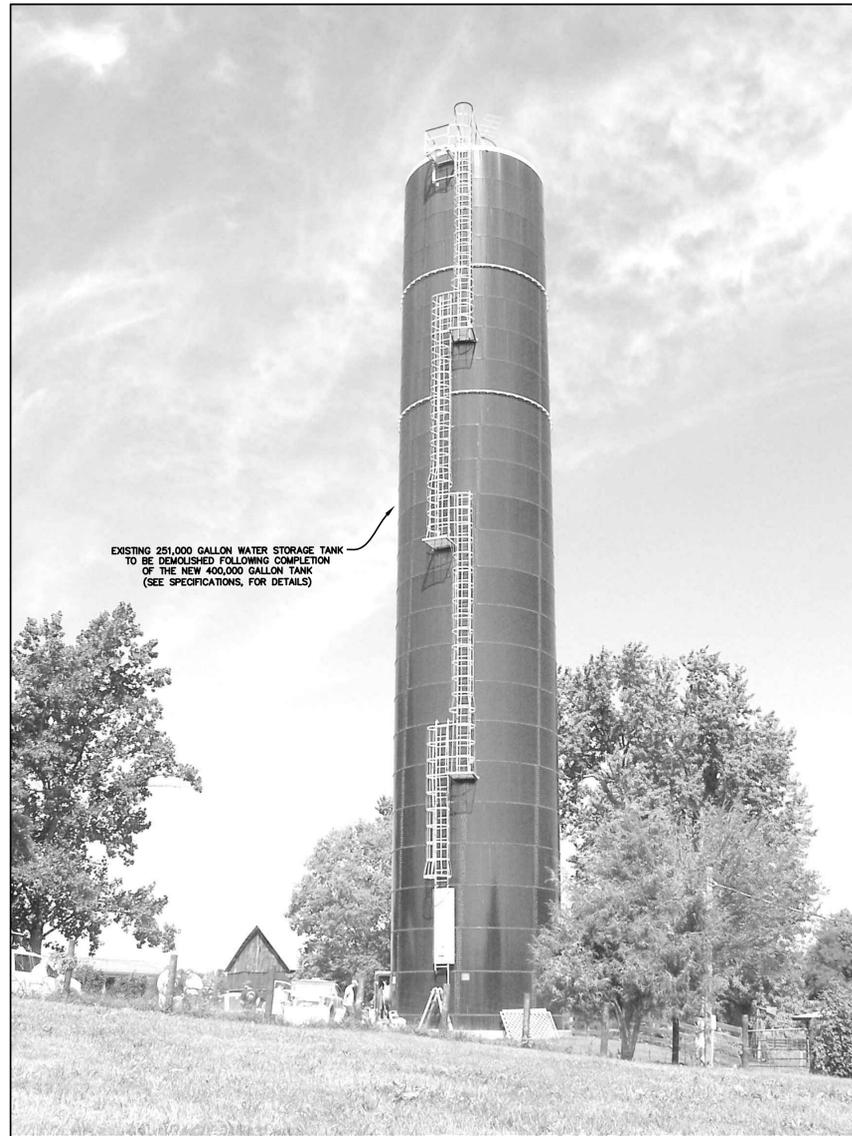
SHEET:

3

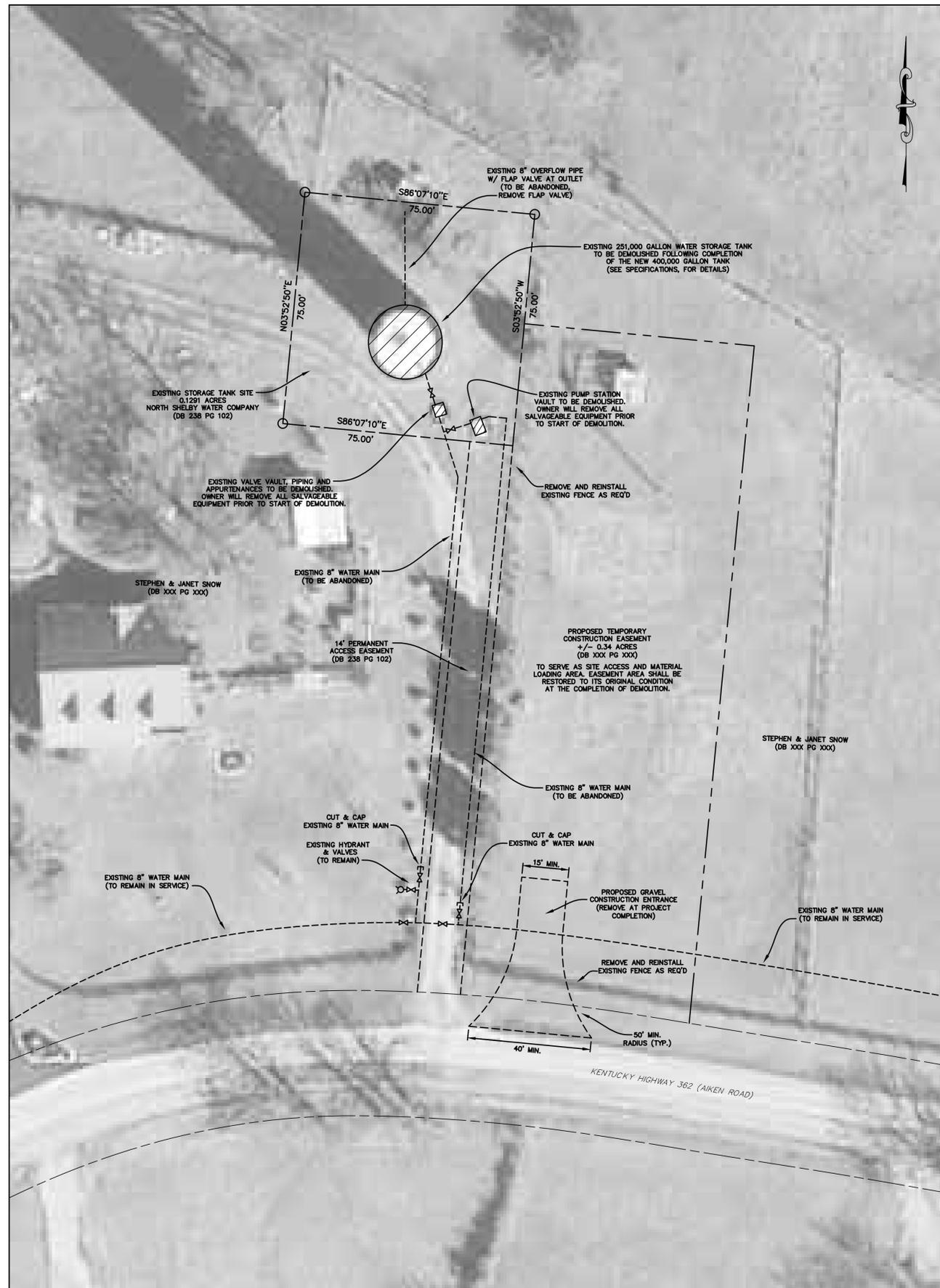


RECORD DRAWINGS

Monarch Engineering, Inc.
 556 CARLTON DRIVE
 LAWRENCEBURG, KY 40342



EXISTING 251,000 GALLON
WATER STORAGE TANK



SITE PLAN
SCALE: 1"=20'

RECORD DRAWINGS

Monarch Engineering, Inc.
556 CARLTON DRIVE
LAWRENCEBURG, KY 40342

DESCRIPTION:
**SITE PLAN & DETAILS
TODDS POINT STORAGE TANK DEMOLITION**

CUSTOMER:
**NORTH SHELBY WATER COMPANY
SHELBY COUNTY, KENTUCKY**

PROJECT NO. 1321
DATE: APRIL 2016
DRAWN BY: JRC
CHECKED BY: JLM
CHECKED BY: DSB
SCALE: AS NOTED

SHEET:
4

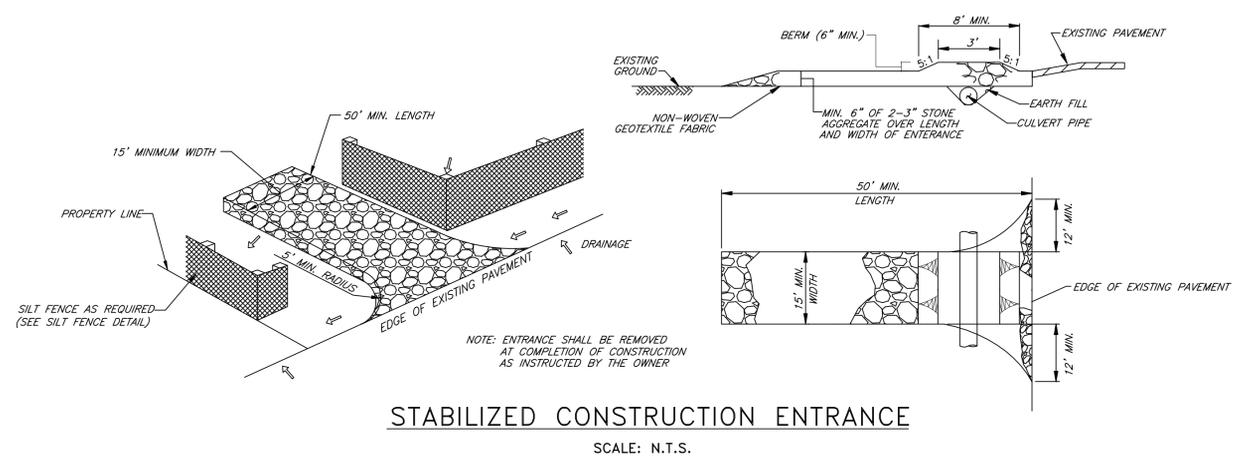
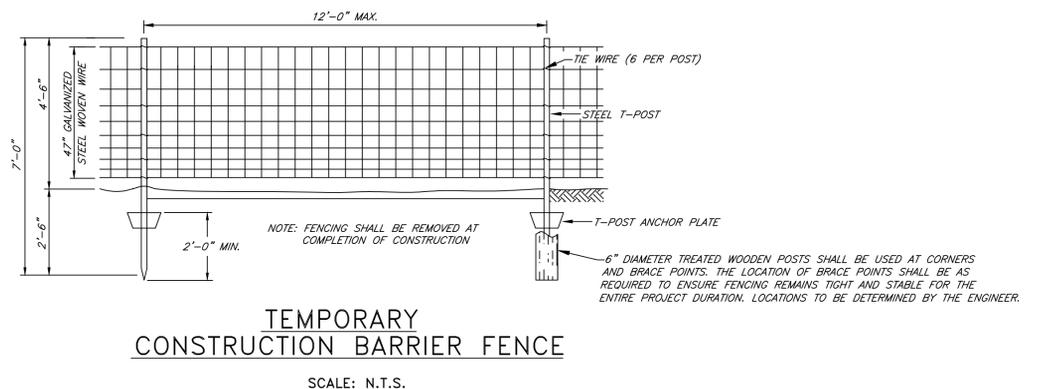
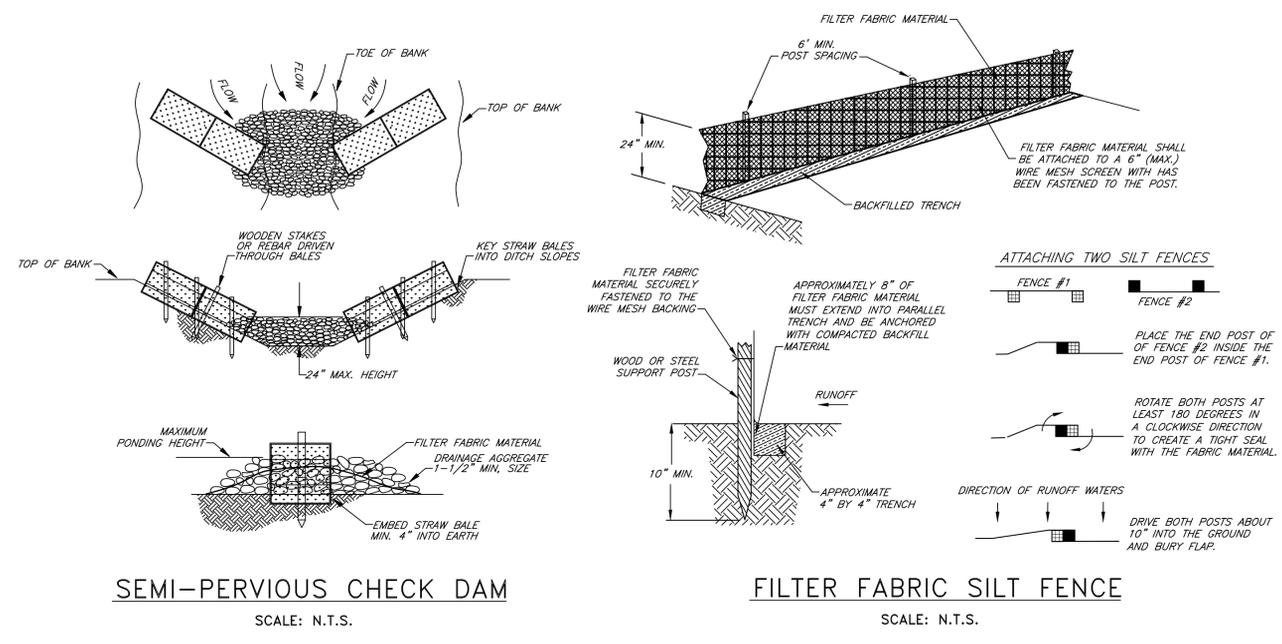




EROSION CONTROL & SITE PROTECTION PLAN

SCALE: 1"=30'

LEGEND	
PROPERTY LINES	-----
TEMPORARY CONSTRUCTION BARRIER FENCE	-X-X-X-X-
FILTER FABRIC SILT FENCE	-SF-SF-SF-SF-SF-
ANTICIPATED LIMITS OF DISTURBANCE
SEMI-PERVIOUS CHECK DAM	
PROPOSED STRUCTURE	
SOIL STOCKPILE	
STABILIZED CONSTRUCTION ENTRANCE	



NOTE: THE CONTRACTOR SHALL DO ALL WORK AND TAKE ALL MEASURES NECESSARY TO CONTROL SOIL EROSION RESULTING FROM CONSTRUCTION OPERATIONS. THE FLOW OF SEDIMENT AND ALL OTHER CONSTRUCTION MATERIALS INCLUDING EXCAVATION AND BACKFILL SHALL BE CONTAINED TO THE CONSTRUCTION SITE SO TO PROTECT ADJACENT WATERCOURSE AND WETLANDS. CONTRACTOR SHALL USE ANY APPROVED METHOD REQUIRED TO ACHIEVE THIS, AND AT A MINIMUM THOSE MEASURES DEPICTED HEREIN. THIS REQUIREMENT APPLIES TO ANY AND ALL DISTURBED AREAS WITHIN PROJECT AREA. THE COST OF EROSION CONTROL MEASURES SHALL BE INCIDENTAL TO THE COST OF CONSTRUCTING OTHER PROJECT COMPONENTS.

RECORD DRAWINGS

Monarch Engineering, Inc.
556 CARLTON DRIVE
LAWRENCEBURG, KY 40342

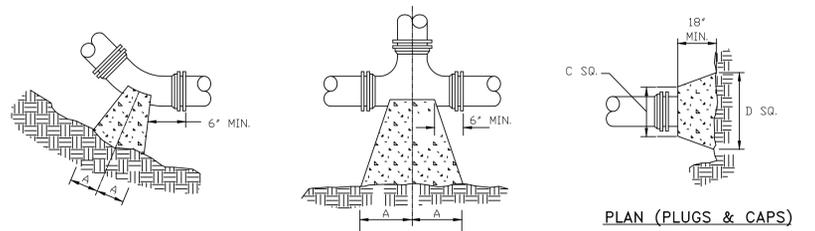
EROSION CONTROL & SITE PROTECTION DETAILS

**CUSTOMER: NORTH SHELBY WATER COMPANY
SHELBY COUNTY, KENTUCKY**

DESCRIPTION:
PROJECT NO. 1321
DATE: APRIL 2016
DRAWN BY: JLM
CHECKED BY: DSB
CHECKED BY: DMB
SCALE: AS NOTED

SHEET:
EC-1

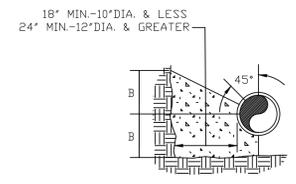




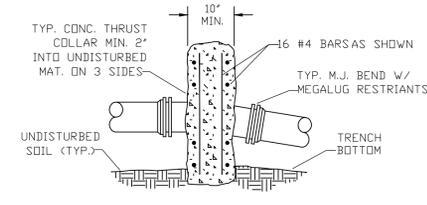
PLAN (HORIZONTAL BENDS)

PLAN (TEES)

PLAN (PLUGS & CAPS)



SECTION (HORIZONTAL BENDS & TEES)



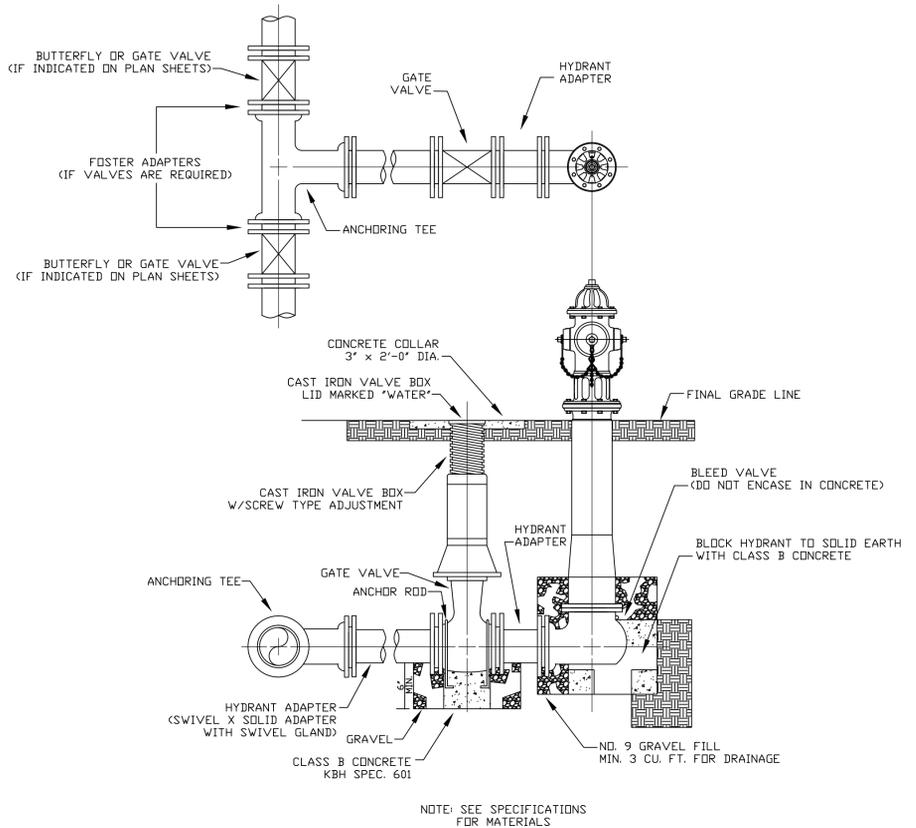
SECTION (VERTICAL BENDS)

NOTES:

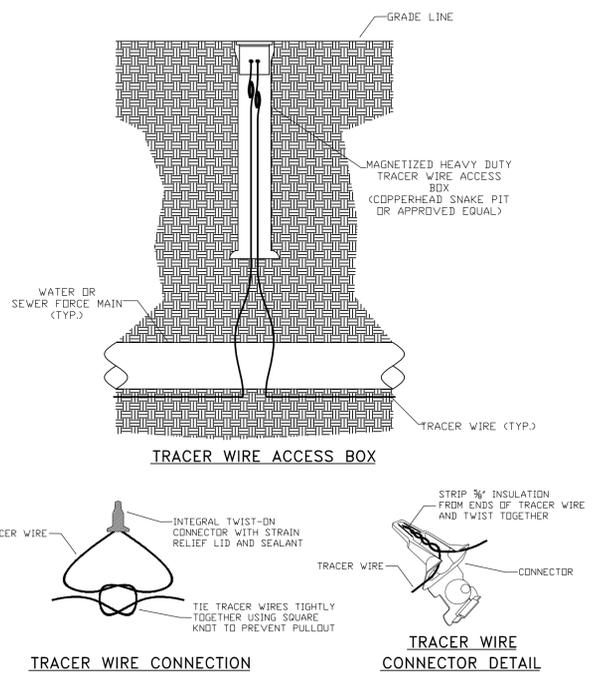
- FOR VERT. BEND DOWN IN EXCESS OF 1 1/4" BEND, ANCHORAGE SHALL BE DESIGNED BY ENGINEER.
- FOR VERT. BEND UPWARD, BLOCKING TO BE SIMILAR TO THAT FOR HORIZ. BEND.
- GLANDS & BOLTS SHALL REMAIN ACCESSIBLE AND MUST BE PROTECTED FROM CONCRETE BY PLASTIC SHEETING OR OTHERWISE.
- ALL THRUST BLOCK & SUPPORT CONCRETE SHALL BE 3000 PSI READY MIX
- THRUST BLOCKS WITH "B" DIMENSION GREATER THAN 30" SHALL HAVE THE RESTRAINED PIPE INSTALLED WITH A MINIMUM OF 4' OF COVER.
- DESIGN CRITERIA:
LINE PRESSURE = 200 psi
SOIL BEARING CAPACITY = 2000 psf
FACTOR OF SAFETY = 1.5

PIPE SIZE	90° BEND		45° BEND		22 1/2° BEND		11 1/4° BEND		TEE		PLUG	
	A	B	A	B	A	B	A	B	A	B	C	D
4"	8"	12"	8"	8"	6"	6"	6"	6"	11"	9"	10"	6"
6"	18"	12"	8"	10"	8"	8"	8"	8"	11"	10"	12"	18"
8"	18"	13"	10"	10"	8"	8"	8"	8"	11"	12"	12"	24"
10"	20"	16"	12"	14"	8"	12"	8"	12"	14"	16"	16"	30"
12"	20"	16"	12"	14"	8"	12"	8"	12"	14"	16"	16"	30"
16"	26"	20"	16"	18"	11"	13"	11"	13"	18"	20"	20"	36"
24"	82"	42"	62"	30"	44"	22"	22"	16"	82"	42"	82"	42"
30"	185"	42"	100"	42"	52"	42"	40"	30"	185"	42"	185"	42"

THRUST BLOCK DETAILS

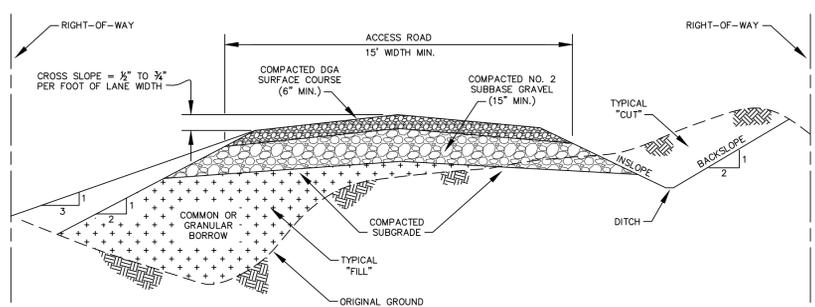


FLUSH HYDRANT ASSEMBLY

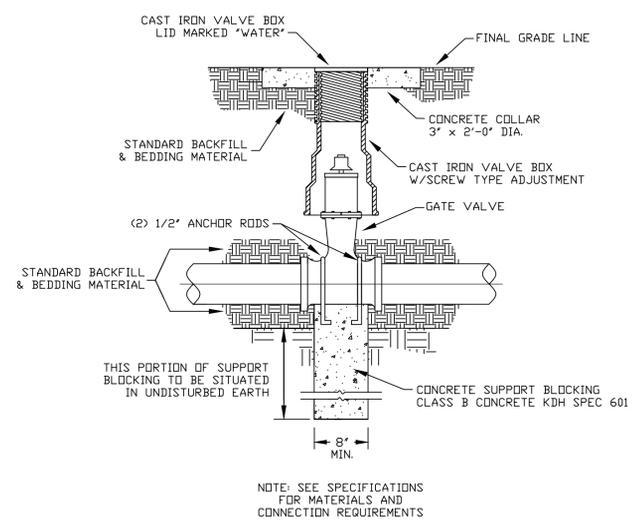


TRACER WIRE DETAILS

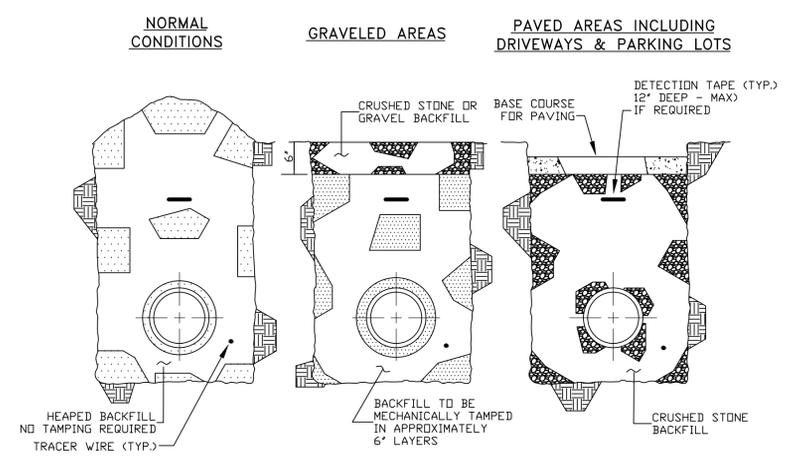
NOTES:
FOR OPEN CUT INSTALLATION, TRACER WIRE IS TO BE #12 AWG SOLID COPPER WITH 30 MIL BLUE HMWPE INSULATION. FOR TRENCHLESS INSTALLATION, TRACER WIRE IS TO BE #12 AWG SOLID COPPER CLAD STEEL CORE WITH 45 MIL BLUE HDPE INSULATION.
TRACER WIRE SHALL BE INSTALLED WITH THE PIPE AT THE TRENCH BOTTOM. ACCESS BOXES SHALL BE INSTALLED AT EACH VALVE, HYDRANT AND AIR RELEASE VALVE. TRACER WIRE ACCESS BOXES SHALL BE SPACED NO FURTHER THAN 100' APART. A MINIMUM OF 3 FEET OF TRACER WIRE SHOULD BE COILED UP INSIDE OF EACH ACCESS BOX.



TYPICAL ACCESS ROAD SECTION DETAIL



GATE VALVE DETAIL



BACKFILLING

Monarch Engineering, Inc.
556 CARLTON DRIVE
LAWRENCEBURG, KY 40342

STANDARD DRAWINGS

CUSTOMER:
NORTH SHELBY WATER COMPANY
SHELBY COUNTY, KENTUCKY

DESCRIPTION:

PROJECT NO. 1321
DATE: APRIL 2016
DRAWN BY: JLM
CHECKED BY: DSB
CHECKED BY: DMB
SCALE: N.T.S.

SHEET:

SD-1

RECORD DRAWINGS

