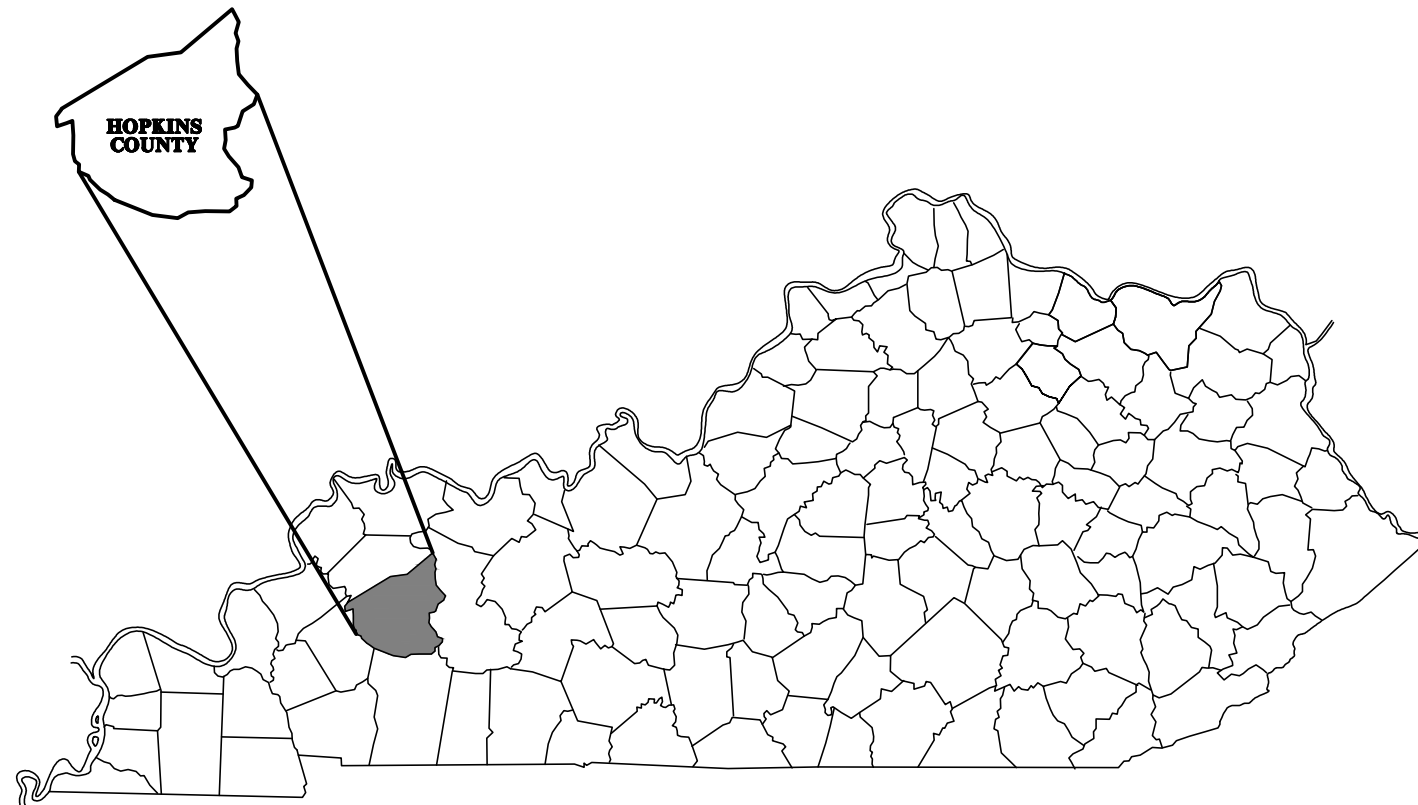
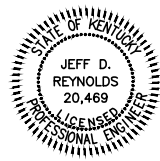


SYSTEM IMPROVEMENTS PROJECT NEBO WATER DISTRICT HOPKINS COUNTY, KENTUCKY CONTRACT I - BOOSTER PUMP STATION



MARCH 2023
HMB PROJECT #4317.00



JEFF D. REYNOLDS, P.E.
KENTUCKY REGISTRATION NO. 20,469

Plans Prepared By:



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Frankfort, Kentucky (502)695-9800
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GENERAL NOTES

UNLESS OTHERWISE NOTED, A SEPARATE BID ITEM HAS NOT BEEN ESTABLISHED FOR FITTINGS. THE FITTINGS INVOLVED, BUT NOT LIMITED TO, TEES, BENDS, PLUGS, REDUCERS, SADDLES, CROSSES, COUPLINGS, ETC. CONTRACTOR SHALL INCLUDE THE COST OF THESE ITEMS IN THE UNIT PRICE FOR THE PIPE.

NO PAY ITEM FOR EXTRA TRENCH DEPTH HAS BEEN SET UP. CONTRACTOR SHALL INCLUDE THE COST OF THE ADDITIONAL DEPTH IN HIS UNIT PRICE WHEN THE WATER PIPE CROSSES UNDER AN EXISTING UTILITY, CULVERT OR DRAINAGE DITCH.

FINAL LOCATION OF SERVICES, GATE VALVES AND OTHER APPURTENANCES ARE TO BE FIELD LOCATED DURING CONSTRUCTION AND APPROVED BY THE ENGINEER.

EXISTING UTILITIES, ESPECIALLY GAS LINES AND OIL LINES, MAY BE CATHODICALLY PROTECTED, THEREFORE, DUCTILE IRON PIPE, FITTINGS GATE VALVES, AND/OR BOXES LAID WITHIN 100' OF THESE LINES WITH CATHODIC PROTECTION SHALL MEET THE REQUIREMENTS OF AWWA C-105, LATEST REVISION. A SEPARATE PAY ITEM HAS NOT BEEN ESTABLISHED. ALL COSTS FOR LABOR AND MATERIALS MUST BE INCLUDED IN THE UNIT PRICE BID FOR PIPE.

ALL DAMAGE TO EXISTING UTILITIES CAUSED BY THE CONTRACTOR'S OPERATION SHALL BE REPAIRED BY THE CONTRACTOR AT NO COST TO THE OWNER.

THE CONTRACTOR SHALL CONFINE ALL CONSTRUCTION ACTIVITY TO THE AREA WITHIN THE EXISTING EASEMENTS AND CONSTRUCTION LIMITS, UNLESS OTHERWISE APPROVED IN WRITING BY THE OWNER.

THE CONTRACTOR WILL BE SOLELY LIABLE FOR ANY WORK HE PERFORMS OUTSIDE OF LEGAL EASEMENTS OR CONSTRUCTION LIMITS.

IT SHALL BE THE CONTRACTORS RESPONSIBILITY TO ASCERTAIN THE LOCATIONS OF ANY AND ALL UTILITIES ENCOUNTERED BY THE FINAL ALIGNMENT OF WATERLINE. THE CONTRACTOR SHALL USE CAUTION WHEN EXCAVATING AND SHALL TAKE THE NECESSARY MEASURES TO PROTECT THE EXISTING UTILITIES TO KEEP THEM IN SERVICE. IF UTILITIES ARE SHOWN, THE INFORMATION IS GENERAL IN NATURE AND NOT TO BE TAKEN AS AS-BUILTS. CONTRACTOR SHALL CONTACT REPRESENTATIVES OF LOCAL UTILITIES A MINIMUM OF 48 HOURS BEFORE COMMENCING WORK ON THE PROJECT.

ALL WATER MAINS SHALL BE PVC CLASS 200 SDR 21 UNLESS OTHERWISE NOTED ON THE PLANS.

AT THE CONTRACTORS OPTION, CLASS 350 DUCTILE IRON PIPE MAY BE SUBSTITUTED FOR ANY PIPE PARTICULARLY SPECIFIED, BUT AT NO ADDITIONAL COST TO THE OWNER.

PROVIDE 40" MINIMUM COVER FOR ALL WATER MAINS PLACED WITHIN UNPAVED COUNTY ROADS OR IN DITCH LINES.

REASONABLE CARE SHALL BE TAKEN BY THE CONTRACTOR DURING CONSTRUCTION TO AVOID DAMAGE TO EXISTING VEGETATION, ORNAMENTAL SHRUBBERY AND TREE BRANCHES SHALL BE TEMPORARILY TIED BACK, WHERE APPROPRIATE, TO MINIMIZE DAMAGE. TREES THAT RECEIVE DAMAGE TO BRANCHES SHALL BE TRIMMED OF THOSE BRANCHES TO IMPROVE THE APPEARANCE OF THE TREE. TREE TRUNKS RECEIVING DAMAGE FROM EQUIPMENT SHALL BE TREATED WITH A TREE DRESSING. PROPERTY OWNERS SHALL BE NOTIFIED BY THE CONTRACTOR PRIOR TO ANY ALTERATION TO EXISTING TREES AND/OR LANDSCAPING ON THEIR PROPERTY.

THE CONTRACTOR SHALL NOTIFY PROPERTY OWNERS PRIOR TO PERFORMING DRIVEWAY CUTS IN ORDER TO PROVIDE PROPERTY OWNER ACCESS TO THE PUBLIC RIGHT-OF-WAY. THE CONTRACTOR SHALL INSTALL THESE DRIVEWAY CROSSINGS WITH EXPEDIENCE AND SHALL RESTORE THE DRIVEWAY AS SOON AS POSSIBLE.

ALL PAVED AND CONCRETE SURFACES, INCLUDING DRIVEWAYS, CROSSED BY THE PROPOSED WATER MAINS SHALL BE BORED AND JACKED (UNCASSED).

ALL TEES AND BENDS SHALL BE THRUST BLOCKED AS DETAILED ON THE THRUST BLOCK DETAIL SHEET. COST TO BE INCLUDED IN THE UNIT PRICE BID FOR PIPE.

SEPTIC SYSTEMS NOTED WHERE PROPERTY OWNER NOTIFIED US. ALL MAY NOT BE SHOWN. CONTRACTOR TO USE CAUTION IN THESE AREAS. WATER MAIN TO BE ENCASED IN CONCRETE WHEN LAID WITHIN 10' OF DRAIN LINES OR FIELD. SEE DETAIL AND NOTE ON STANDARD DETAIL SHEET.

UNLESS OTHERWISE NOTED, A SEPARATE BID ITEM HAS NOT BEEN ESTABLISHED FOR CONNECTIONS TO EXISTING SYSTEM. CONTRACTOR SHALL INCLUDE COST OF CONNECTIONS TO EXISTING SYSTEM IN THE UNIT PRICE FOR THE PIPE.

THE CONTRACTOR SHALL BE REQUIRED TO CLEAN IMMEDIATELY AFTER INSTALLING WATER LINE WHERE MAIN IS TO BE LAID ON STATE RIGHT-OF-WAY.

GRIP RING RESTRAINTS SHALL BE USED ON ALL M.J. FITTINGS.

THE FOLLOWING GENERAL NOTES ARE REQUIREMENTS OF THE COMMONWEALTH OF KENTUCKY TRANSPORTATION CABINET PERMIT ENGINEERS. THESE NOTES APPLY WHEN LAYING WATER LINE IN STATE RIGHT-OF-WAY:

ALL WATER LINES BEING PLACED ABOVE CROSS DRAINS NEED TO HAVE AT LEAST ONE (1) FOOT OF SOIL MATERIAL AS A CUSHION BETWEEN LINE AND THE CROSS DRAIN CULVERT. SEE UTILITY CROSSING DETAIL.

ALL PROPOSED WATER LINES TO BE PLACED BEHIND ALL PRIVATE AND COMMERCIAL ENTRANCE CULVERTS.

ALL PROPOSED WATER LINES TO BE PLACED AT BACK OF DITCH LINE IN TIGHT AREAS.

BORE PITS AND TRENCHES SHALL BE RESTORED TO THEIR ORIGINAL CONDITION OR BETTER.



LEGEND

PROPOSED WATER LINE	
EXISTING WATER LINE	
PROPOSED GATE VALVE	
EXISTING GATE VALVE	
AUTOMATIC AIR RELEASE VALVE	
FIRE HYDRANT	
PROPERTY LINE	
BLOWOFF ASSEMBLY	
FENCE	

INDEX

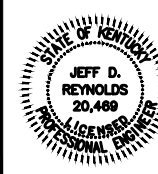
COVER	
GN1	GENERAL NOTES / LEGEND / SHEET INDEX / TOPOGRAPHIC MAP
1	PUMP STATION SITE PLAN
2	PUMP STATION PIPING PLAN
3	BOOSTER PUMP STATION
	DEMOLITION PLAN
SD1 - SD2	STANDARD DETAILS
E1	ELECTRICAL SITE PLAN AND DETAILS
E2	BOOSTER PUMP STATION - ELECTRICAL PLAN

NO.	DATE	REVISIONS	CHK'D	APPR'D	DATE

PROJECT: 4317.00 DATE: JAN. 2023		
SCALE: N.T.S.		
DESIGNED BY	NAME	DATE
DRAWN BY	GAB	
CHECKED BY	JDR	
RECORD DWG.		



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**SYSTEM IMPROVEMENTS PROJECT
NEBO WATER DISTRICT
HOPKINS COUNTY, KENTUCKY
CONTRACT I - BOOSTER PUMP STATION**

**GENERAL NOTES / LEGEND /
SHEET INDEX / TOPOGRAPHIC MAP**

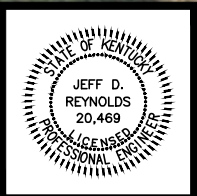
SHEET
GN1



NO.	DATE	REVISIONS	CHK'D	APPR'D	DATE

PROJECT: 4317.00 DATE: SEPT. 2022		
SCALE: 1" = 50'		
DESIGNED BY	NAME	DATE
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RECORD DWGS.		

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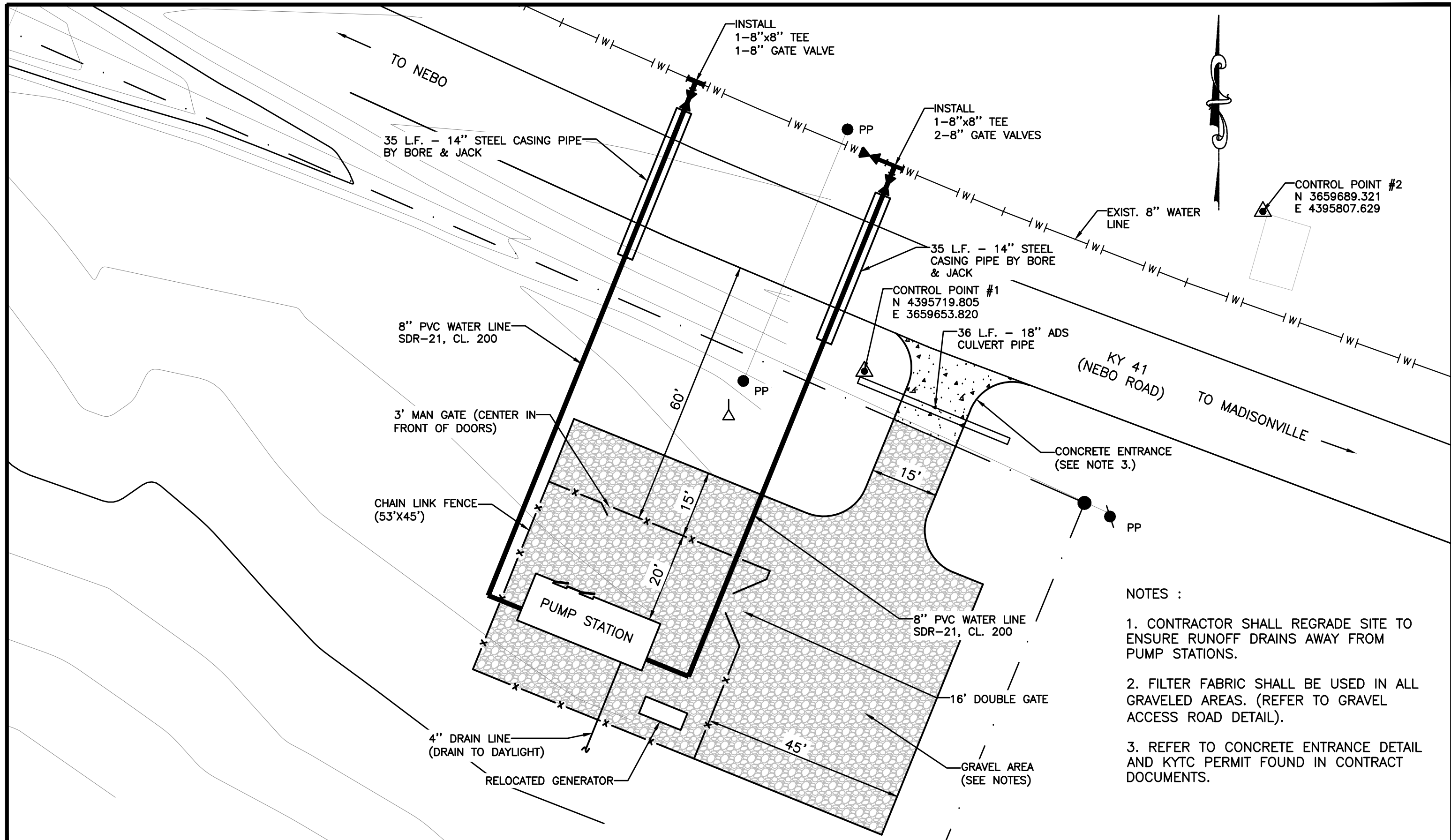


**CONTRACT I - BOOSTER PUMP STATION
SYSTEM IMPROVEMENTS PROJECT
NEBO WATER DISTRICT
HOPKINS COUNTY, KENTUCKY**

PUMP STATION SITE PLAN

SHEET
1

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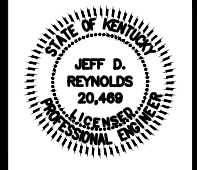
- NOTES :
1. CONTRACTOR SHALL REGRADE SITE TO ENSURE RUNOFF DRAINS AWAY FROM PUMP STATIONS.
 2. FILTER FABRIC SHALL BE USED IN ALL GRAVELED AREAS. (REFER TO GRAVEL ACCESS ROAD DETAIL).
 3. REFER TO CONCRETE ENTRANCE DETAIL AND KYTC PERMIT FOUND IN CONTRACT DOCUMENTS.

NO.	DATE	REVISIONS	CHK'D	APPR'D	DATE

PROJECT: 4317.00 DATE: SEPT. 2022		
SCALE: 1" = 20'		
DESIGNED BY	NAME	DATE
DRAWN BY	SAB	
CHECKED BY	JDR	
RECORD DWG.		

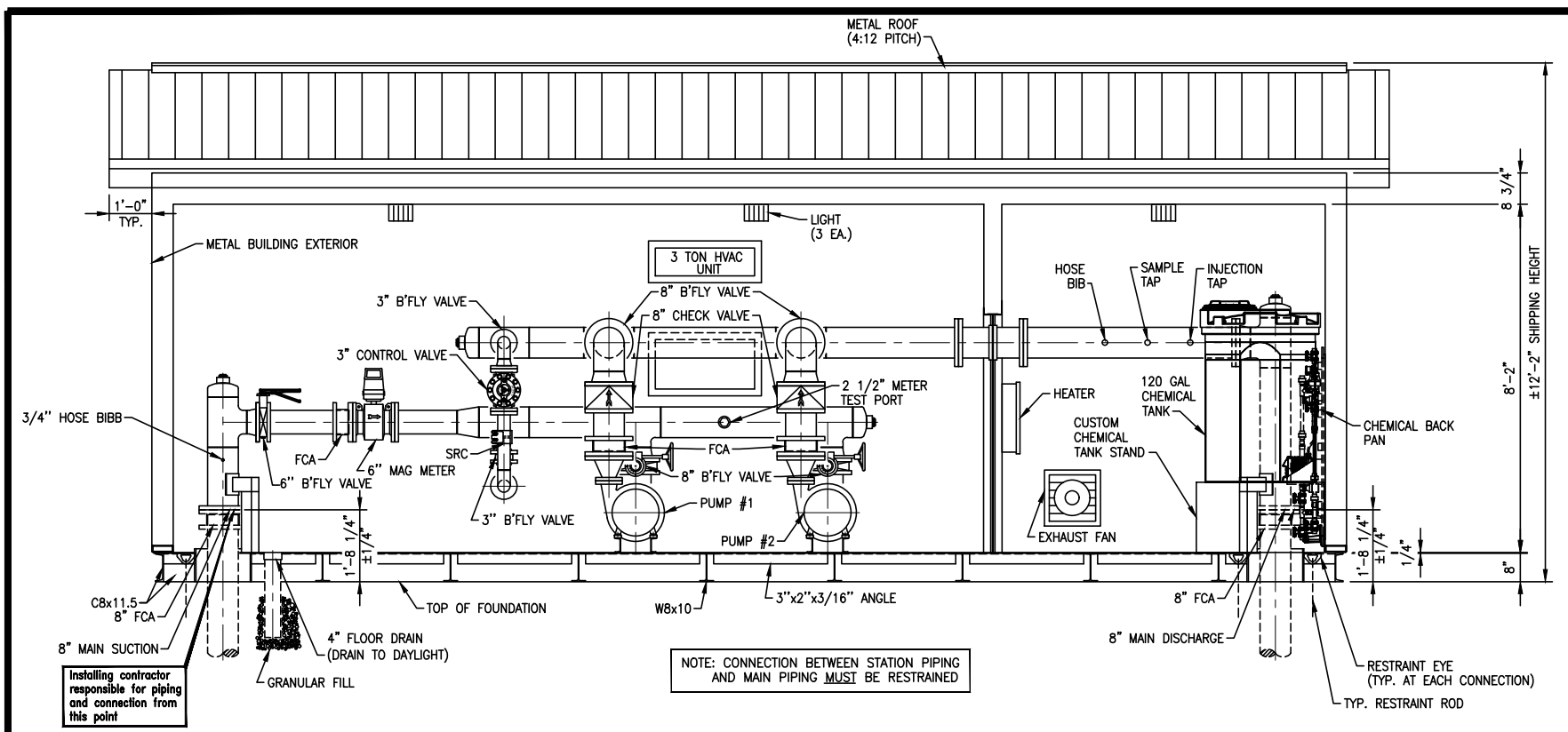


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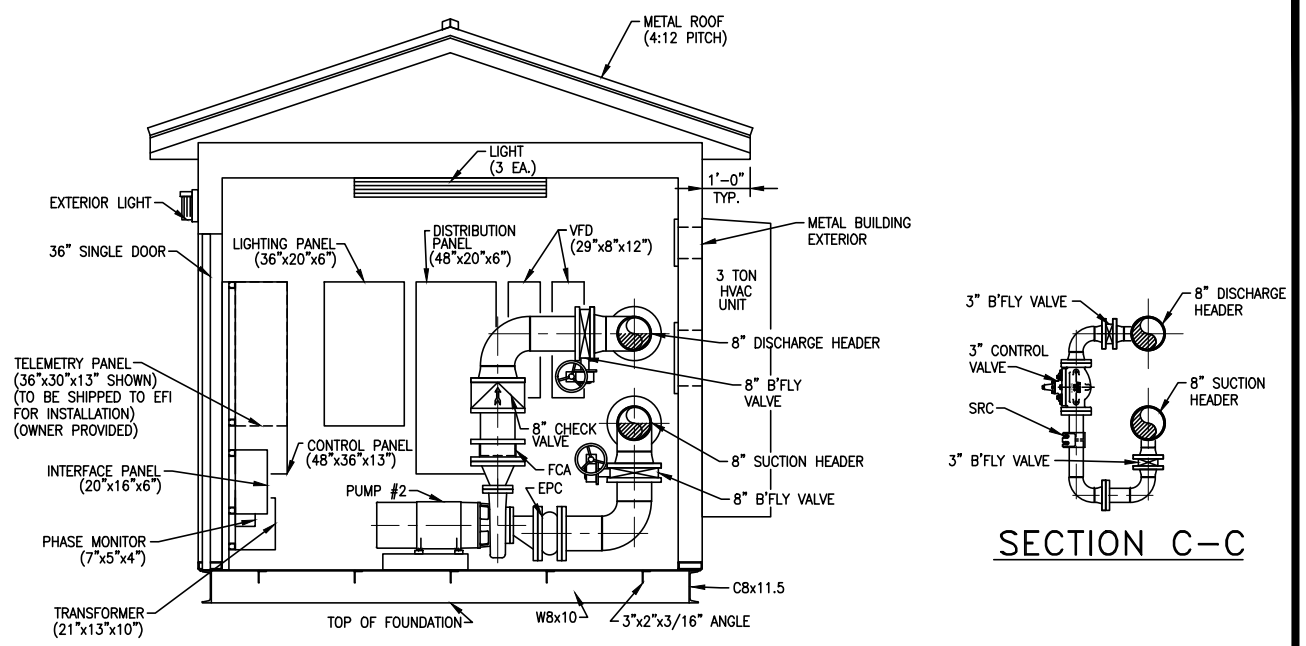


**CONTRACT I - BOOSTER PUMP STATION
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HOPKINS COUNTY, KENTUCKY**

PUMP STATION PIPING PLAN

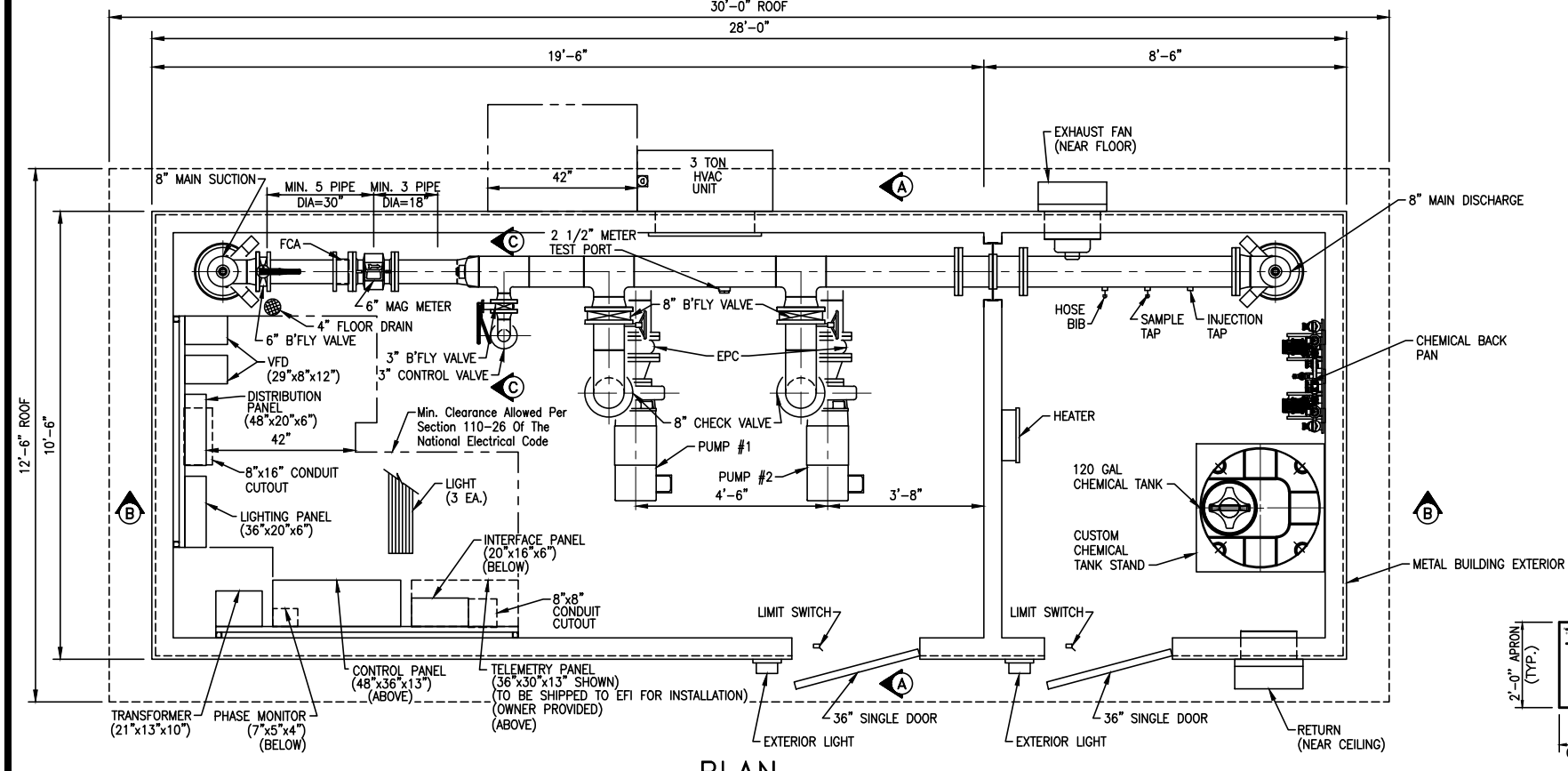


SECTION B-B

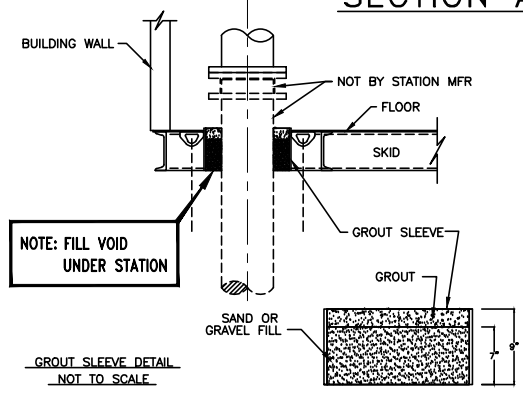


SECTION A-A

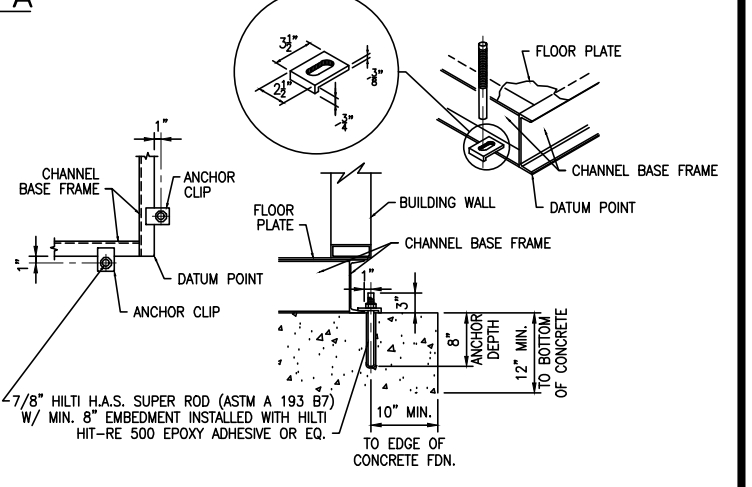
SECTION C-C



PLAN



TYPICAL GROUT DETAIL



BASE FRAME ANCHOR DETAIL CHANNEL FRAMING MEMBERS

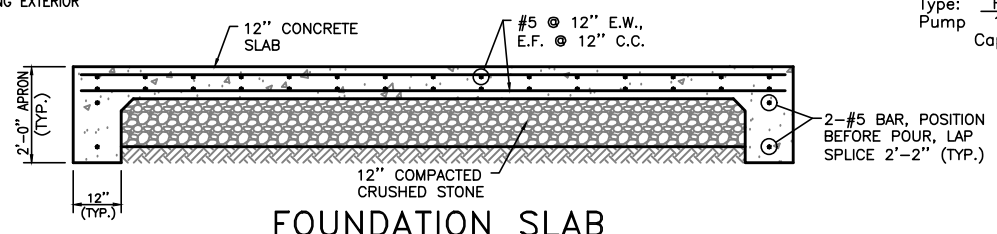
- NOTE:
1. SHIMS MAY BE REQUIRED AROUND PERIMETER OF BASE FRAME FOR LEVELNESS AND PROPER DOOR ALIGNMENT IN FRAME.
 2. ANCHOR BOLTS SHALL BE PLACED WITHIN 12" OF EACH CORNER WITH THE REMAINING ANCHORS BEING SPACED NO MORE THAN 6' APART ALONG ALL SIDES OF THE BUILDING PERIMETER WITH ANY WALL OF 7 FEET OR LESS HAVING TWO ANCHOR BOLTS, ALL ACCORDING TO IBC 2308.3.1, 2015 ED.
 3. PUMP STATION SHALL BE ANCHORED TO THE FOUNDATION AS RECOMMENDED BY THE MANUFACTURER.
 4. CONNECTION BETWEEN PUMP STATION PIPING AND THE MAIN PIPING SHALL BE RESTRAINED.
 5. SEE DETAIL SHEET FOR FOUNDATION SLAB DETAIL.

DESIGN CRITERIA

Controls: TELEMETRY (NOT BY STATION MFR.)
 Power Service: 240 Volts, 3 Phase, 60 Cycle

PUMP DATA

Type: HORIZ., CLOSE CPLG., END SUCTION
 Pump: 1 & 2
 Capacity: 500 G.P.M. AT 95 FEET T.D.H.
 Size: 6" X 4" X 9"
 Motor: 20 H.P., 1800 R.P.M.



FOUNDATION SLAB

NOTE: FCA - FLANGED COUPLING ADAPTER
 EPC - ELASTOMER PIPE CONNECTOR

NOTE: "EXCEPT FOR PIPE END SUPPORTS, WHICH ARE SHOWN, VERTICAL AND ANGLE PIPE BRACES ARE NOT SHOWN FOR DRAWING CLARITY"

NO.	DATE	REVISIONS	CHK'D	APPR'D	DATE

PROJECT: 431100 DATE: DEC. 2022
 SCALE: 1/4" = 1'-0"

DESIGNED BY	NAME	DATE
JDR	JDR	
SAB	SAB	
BGB	BGB	
RECORD DUGS.		



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CONTRACT I - BOOSTER PUMP STATION
 SYSTEM IMPROVEMENTS PROJECT
 NEBO WATER DISTRICT
 HOPKINS COUNTY, KENTUCKY

BOOSTER PUMP STATION



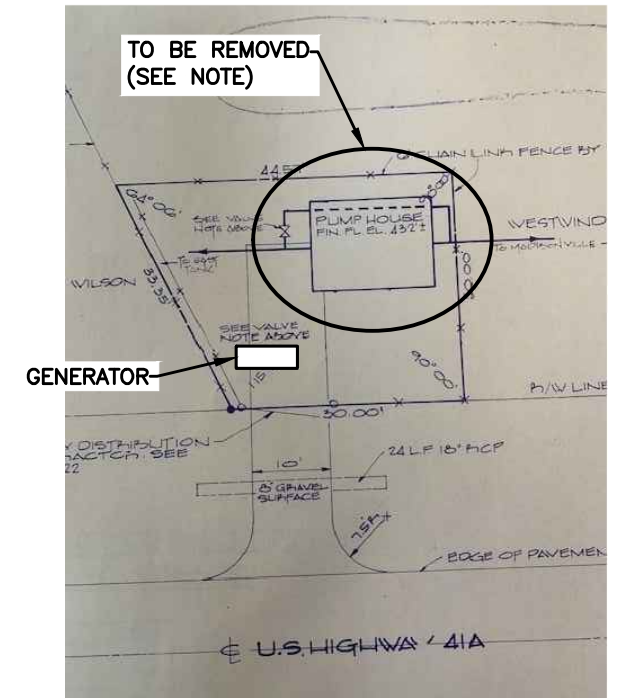
GENERATOR
SCALE : N.T.S.



PUMP STATION
SCALE : N.T.S.

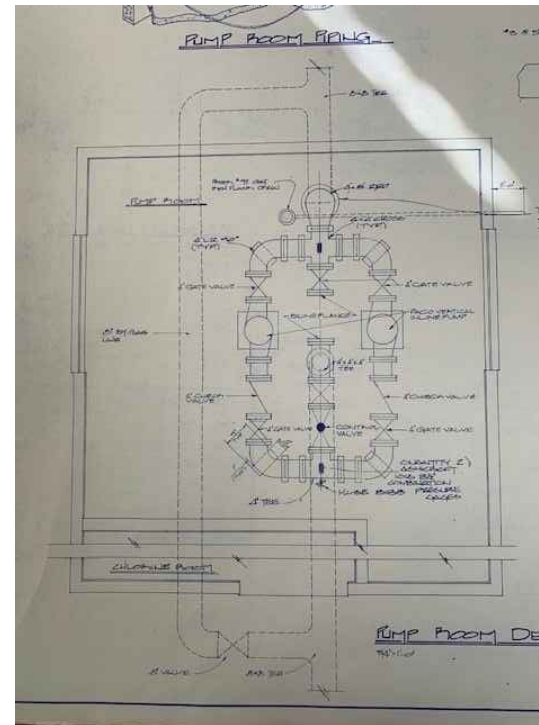
DEMOLITION PLAN NOTES :

1. THE EXIST. PUMP STATION SHALL REMAIN IN SERVICE AND FULLY OPERATIONAL UNTIL THE NEW PUMP STATION IS FULLY OPERATIONAL FOR A MINIMUM OF 30 DAYS TO INSURE THERE ARE NO ISSUES.
2. DEMO OF THE PUMP STATION SHALL BE CLOSELY COORDINATED WITH NEBO WATER DISTRICT. THE WATER LINE SHALL NOT BE OUT OF SERVICE FOR MORE THAN 8 HOURS DURING THE DEMOLITION.
3. CONTRACTOR SHALL BE RESPONSIBLE FOR DISCONNECTING ALL ELECTRICAL SERVICE TO THE PUMP STATION.
4. ALL UNNECESSARY POWER POLES AND LIGHT POLES SHALL BE PROPERLY DISCONNECTED AND REMOVED.
5. THE PUMP STATION BUILDING, ALL PIPING, CONCRETE FOUNDATIONS (PUMP STATION AND GENERATOR) AND FENCING SHALL BE COMPLETELY REMOVED AND PROPERLY DISPOSED OF.
6. CONTRACTOR SHALL BE RESPONSIBLE FOR PROPERLY DISPOSING OF ALL MATERIALS NOT WANTED BY NEBO WATER DISTRICT.
7. AFTER DEMOLITION IS COMPLETE, CONTRACTOR BACKFILL AND COMPACT ANY EXCAVATED AREA WITH SELECT BACKFILL. ALL DISTURBED AREA SHALL BE PROPERLY GRADED, SEEDED AND STRAWED.
8. GENERATOR AND TRANSFER SWITCH SHALL BE RELOCATED TO PROPOSED PUMP STATION SITES REFER TO ELECTRICAL SHEETS.
9. THE 200 AMP ELECTRICAL PANEL AND TELEMETRY BOX SHALL REMAIN THE PROPERTY OF THE OWNER. THESE ITEMS SHALL BE DELIVERED TO THE OWNER.

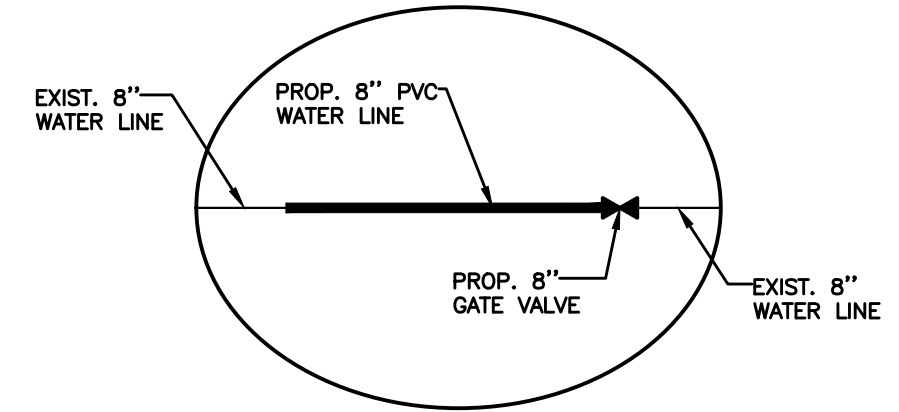


EXIST. PUMP STATION SITE PLAN
SCALE : N.T.S.

NOTE :
PUMP STATION AND PIPING SHALL BE REMOVED AND REPLACED WITH 8" PVC WATER LINE AND 8" GATE VALVE. SEE PROPOSED PIPING DETAIL. GATE VALVE AND WATER LINE SHALL BE PAID FOR SEPARATELY. COST FOR CONNECTION TO EXISTING WATER LINE SHALL BE INCLUDED IN COST OF PUMP STATION DEMOLITION.



EXIST. PUMP STATION PIPING
SCALE : N.T.S.



PROPOSED PIPING DETAIL
SCALE : N.T.S.

NO.	DATE	REVISIONS	CHK'D	APPR'D	DATE

PROJECT: 431700 DATE: MAR 2023		
SCALE: AS NOTED		
DESIGNED BY	NAME	DATE
DRAWN BY	SAB	
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RECORD DWSG.		



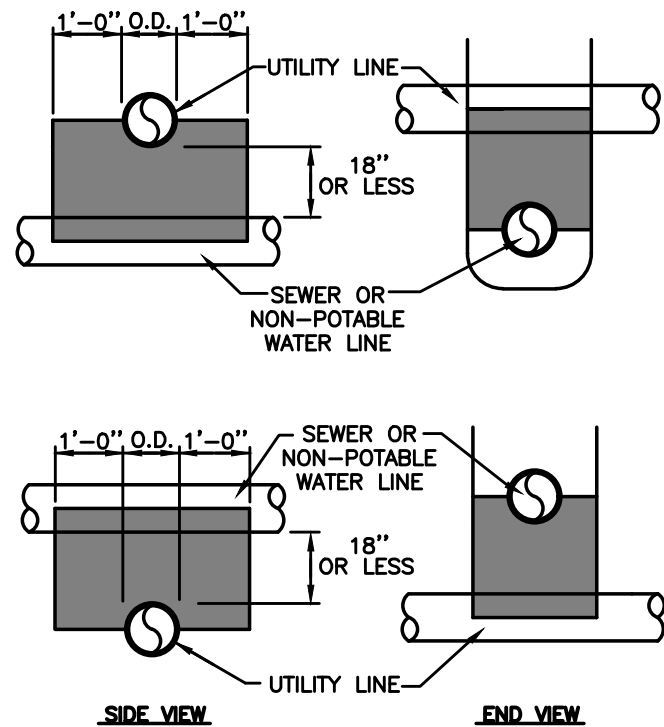
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**SYSTEM IMPROVEMENTS PROJECT
NEBO WATER DISTRICT
HOPKINS COUNTY, KENTUCKY
CONTRACT I - BOOSTER PUMP STATION**

DEMOLITION PLAN

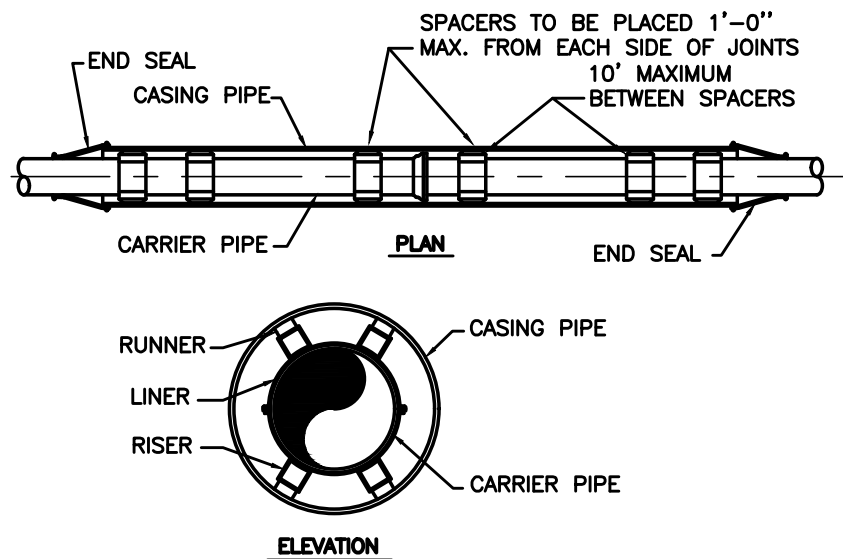
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UTILITY CROSSING / ENCASUREMENT
SCALE : N.T.S.

NOTES :

1. CONCRETE ENCASUREMENT SHALL BE USED WHEN CLEARANCE BETWEEN SEWER OR NON-POTABLE WATER LINE AND UTILITY LINE IS 18" OR LESS.
2. WHEN ENCOUNTERING UTILITY LINE WITH SEPARATION LESS THAN 18" VERTICAL OR 10'-0" HORIZONTAL, CONCRETE ENCASUREMENT SHALL BE USED. FULL SECTION OF PIPE SHALL BE CENTERED ABOVE OR BELOW UTILITY LINE TO ACHIEVE MAXIMUM JOINT DISPLACEMENT.
3. CONCRETE ENCASUREMENT IS NOT A SEPARATE PAY ITEM.



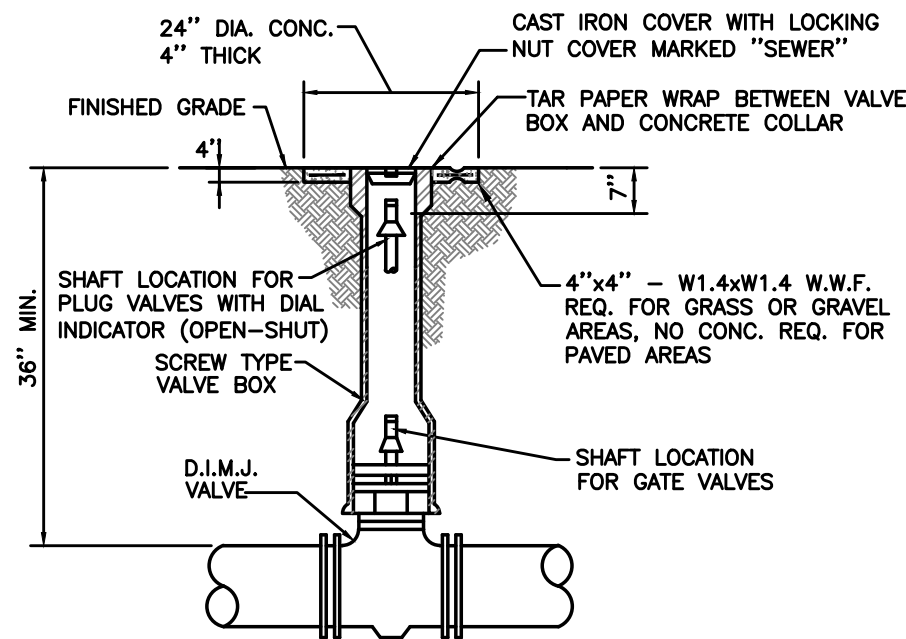
ENCASUREMENT PIPE SPACER
SCALE : N.T.S.

TYPICAL ROAD CROSSING NOTES:

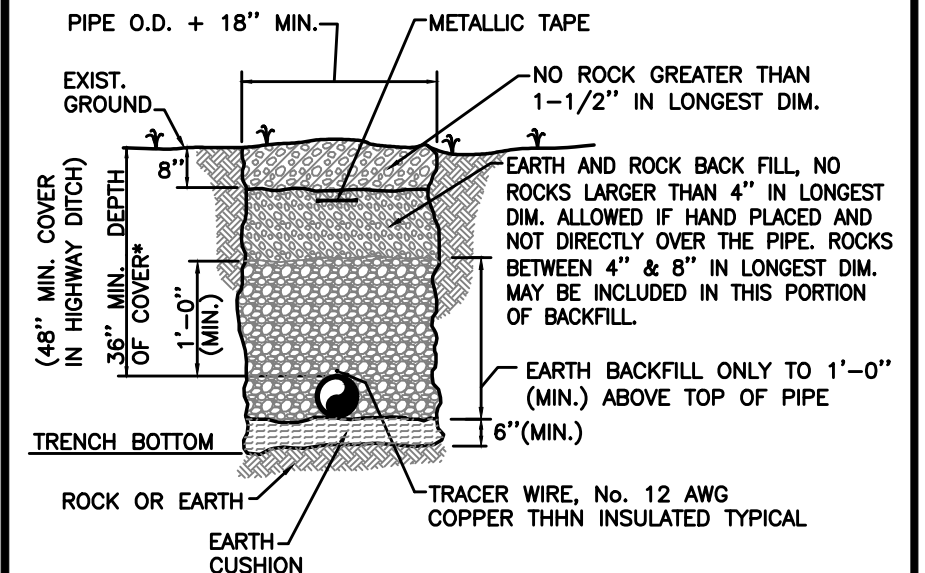
1. ALL JOINTS SHALL BE SOLIDLY WELDED. END OF CASING SHALL BE SEALED AFTER LINE HAS BEEN INSTALLED AND TESTED.
2. MINIMUM DEPTHS MAY INCREASE IN AREAS WHICH REQUIRE MINIMUM SEPARATION WITH OTHER FACILITIES.
3. OPEN TRENCH NO CLOSER THAN THE DITCH LINE OR TOE OF FILL FROM THE EDGE OF THE PAVEMENT OR AS DIRECTED BY STATE, COUNTY OR MUNICIPAL SPECIFICATIONS.
4. HIGHWAY CROSSINGS SHALL UTILIZE STEEL CASING PIPE. STEEL CASING PIPES 4" AND LESS SHALL BE NEW SCHEDULE 40. STEEL CASING PIPES LARGER THAN 4" SHALL HAVE MINIMUM WALL THICKNESS OF 0.25". ALL BORED AND JACKED ENCASUREMENT PIPE SHALL BE INSTALLED IN BORE HOLES NO LARGER THAN THE OUTSIDE DIAMETER OF THE ENCASUREMENT PIPE.
5. SDR-21 SHALL BE USED FOR PVC CASING FOR COUNTY ROADS, WHERE PVC CASING PIPE IS REQUIRED.

TYPICAL STREAM CROSSING NOTES:

1. END CASING SHALL BE SEALED AFTER LINE HAS BEEN INSTALLED AND TESTED.
2. CONCRETE CAP SHALL END A MINIMUM OF ONE FOOT FROM EDGE OF CASING PIPE.
3. STREAM CROSSINGS SHALL UTILIZE PVC SDR 35 CASING PIPE.



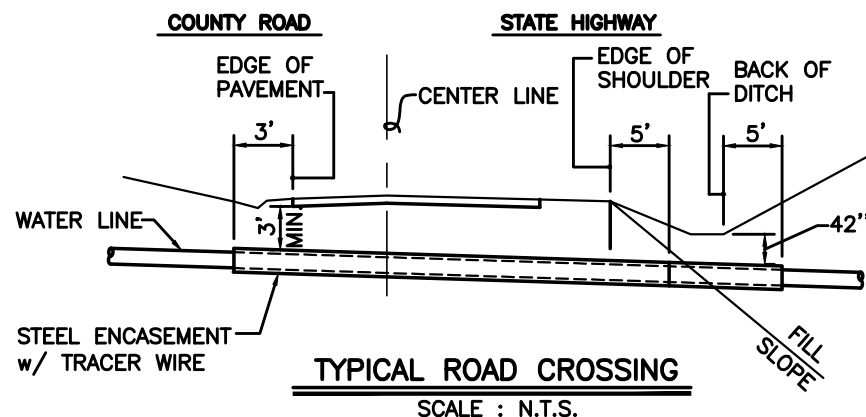
VALVE & VALVE BOX
SCALE : N.T.S.



BEDDING/BACKFILL
SCALE : N.T.S.

NOTES :

1. TRACER WIRE SHALL BE SPLICED WITH GEL FILLED WIRE CONNECTORS.
2. ALL WATER MAINS AND SERVICE LINES SHALL BE INSTALLED WITH WATER LINE IDENTIFICATION TAPE AND TRACER WIRE.
3. TRACER WIRE SHALL BE TERMINATED AT EACH APPURTENANCE TO ALLOW FOR CONNECTION.
4. CONTRACTOR SHALL VERIFY CONTINUITY OF TRACER WIRE.



TYPICAL ROAD CROSSING
SCALE : N.T.S.

NO.	DATE	REVISIONS	CHK'D	APPR'D	DATE

PROJECT: 4317.00 DATE: MAY 2023		
SCALE: AS NOTED		
DESIGNED BY	NAME	DATE
DRAWN BY	SAB	
CHECKED BY	JDR	
RECORD DUGG.		

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PROFESSIONAL ENGINEERS, INC.

STATE OF KENTUCKY
JEFF D. REYNOLDS
20,488
LICENSED PROFESSIONAL ENGINEER

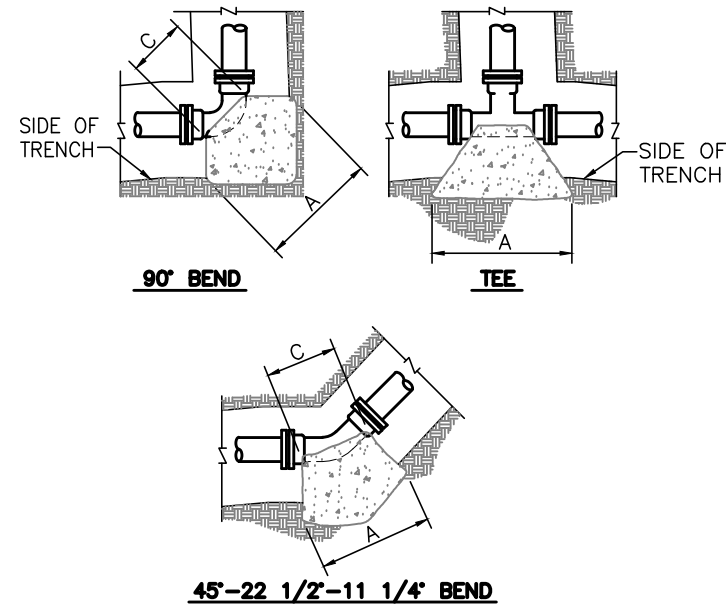
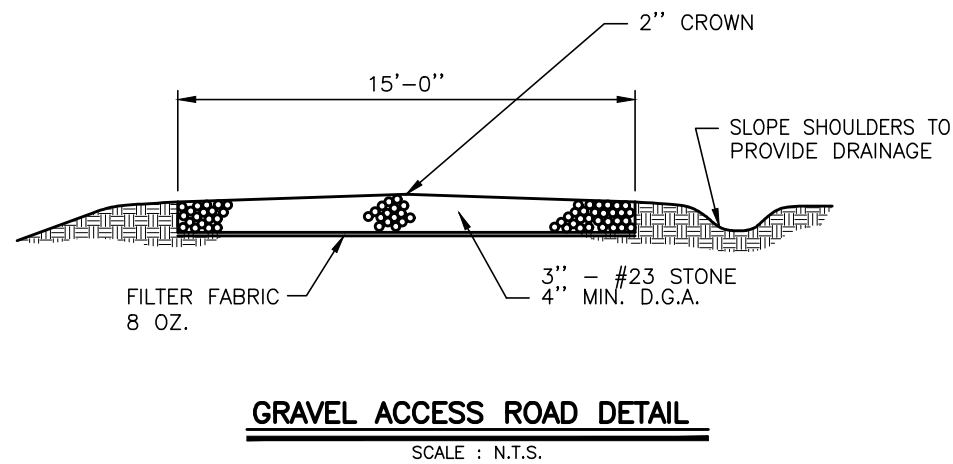
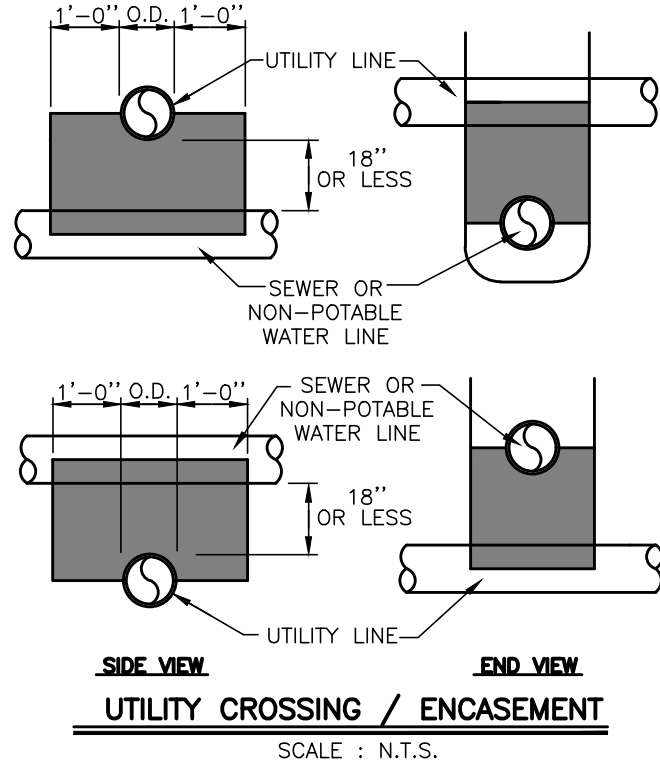
**SYSTEM IMPROVEMENTS PROJECT
NEBO WATER DISTRICT
HOPKINS COUNTY, KENTUCKY
CONTRACT I - BOOSTER PUMP STATION**

STANDARD DETAILS

SHEET
SD1

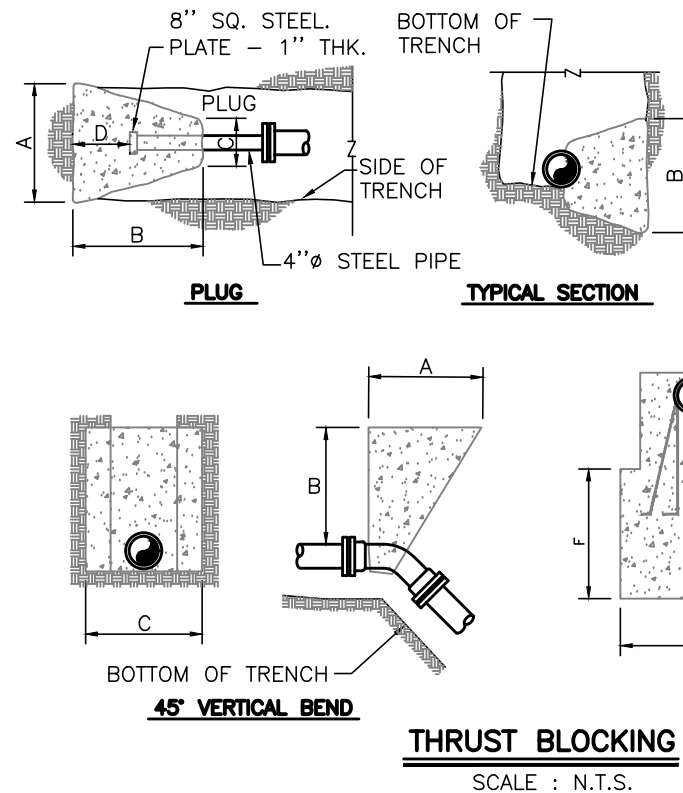
NOTES :

1. CONCRETE ENCASEMENT SHALL BE USED WHEN CLEARANCE BETWEEN SEWER OR NON-POTABLE WATER LINE AND UTILITY LINE IS 18" OR LESS.
2. WHEN ENCOUNTERING UTILITY LINE WITH SEPARATION LESS THAN 18" VERTICAL OR 10'-0" HORIZONTAL, CONCRETE ENCASEMENT SHALL BE USED. FULL SECTION OF PIPE SHALL BE CENTERED ABOVE OR BELOW UTILITY LINE TO ACHIEVE MAXIMUM JOINT DISPLACEMENT.
3. CONCRETE ENCASEMENT IS NOT A SEPARATE PAY ITEM.



NOTES:

1. THRUST BLOCKS DESIGNED FOR 100 PSI PRESSURE AND 1000 PSF SOIL BEARING. FOR GREATER PRESSURE OR LESS SOIL BEARING, QUANTITIES WILL HAVE TO BE RECALCULATED.
2. THRUST BLOCKING TO BE POURED AGAINST UNDISTURBED EARTH.
3. IF EXACT SIZE PIPE BLOCKING IS NOT SHOWN, USE NEXT LARGER SIZE.
4. THRUST BLOCKING TO BE POURED IN PLACE CLASS B CONC.



90° BEND										
SIZE	24"	20"	18"	16"	12"	10"	8"	6"	4"	2"
A	88	80	72	64	50	40	33	26	16	16
B	88	80	72	64	50	40	33	24	16	16
C	45	38	32	30	16	15	12	12	9	9
D	48	40	36	32	25	20	16	12	8	9

45° BEND										
SIZE	24"	20"	18"	16"	12"	10"	8"	6"	4"	2"
A	72	60	54	48	37	31	24	18	12	12
B	72	60	54	48	37	31	24	18	12	12
C	22	20	16	18	16	14	12	12	8	8
D	32	28	25	22	18	15	12	9	6	6

45° VERTICAL BEND										
SIZE	24"	20"	18"	16"	12"	10"	8"	6"	4"	2"
A	72	60	60	45	36	36	36	36	24	24
B	60	48	48	45	36	36	36	36	24	24
C	96	84	84	72	60	60	60	60	48	48
D	84	72	72	60	48	48	48	48	36	36
E	84	72	72	60	48	48	48	48	36	36
F	84	72	72	60	48	48	48	48	36	36

22 1/2° BEND										
SIZE	24"	20"	18"	16"	12"	10"	8"	6"	4"	2"
A	50	42	38	34	26	23	18	13	9	9
B	50	42	38	34	26	23	18	13	9	9
C	22	20	16	18	16	14	12	10	8	8
D	26	22	18	16	13	11	9	6	4	4

11 1/4° BEND										
SIZE	24"	20"	18"	16"	12"	10"	8"	6"	4"	2"
A	36	30	27	24	18	16	13	11	9	9
B	36	30	27	24	18	16	13	11	9	9
C	22	20	16	18	16	14	12	10	8	8
D	22	18	14	12	9	8	6	5	4	4

PLUG										
SIZE	24"	20"	18"	16"	12"	10"	8"	6"	4"	2"
A	80	66	60	54	52	43	34	26	26	26
B	80	66	60	54	52	43	34	26	26	26
C	12	12	12	12	12	12	12	12	12	12
D	72	60	54	44	32	22	15	11	11	11

TEE											
SIZE	MAIN BRANCH	24"	20"	18"	16"	12"	12"	12"	8"-10"	8"-12"	2"-8"
A		80	66	60	54	52	42	26	43	26	26
B		80	66	60	54	52	43	26	43	26	26
C		45	36	32	30	12	12	12	12	12	12
D		48	40	36	30	26	21	13	21	13	13

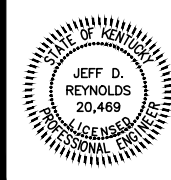
DIMENSIONS ARE IN INCHES

NO.	DATE	REVISIONS	CHK'D	APPR'D	DATE

PROJECT: 4317.00	DATE: JAN 2023		
SCALE: AS NOTED			
DESIGNED BY	JDR	NAME	DATE
DRAWN BY	SAB		
CHECKED BY	JDR		
RECORD DWGS.			



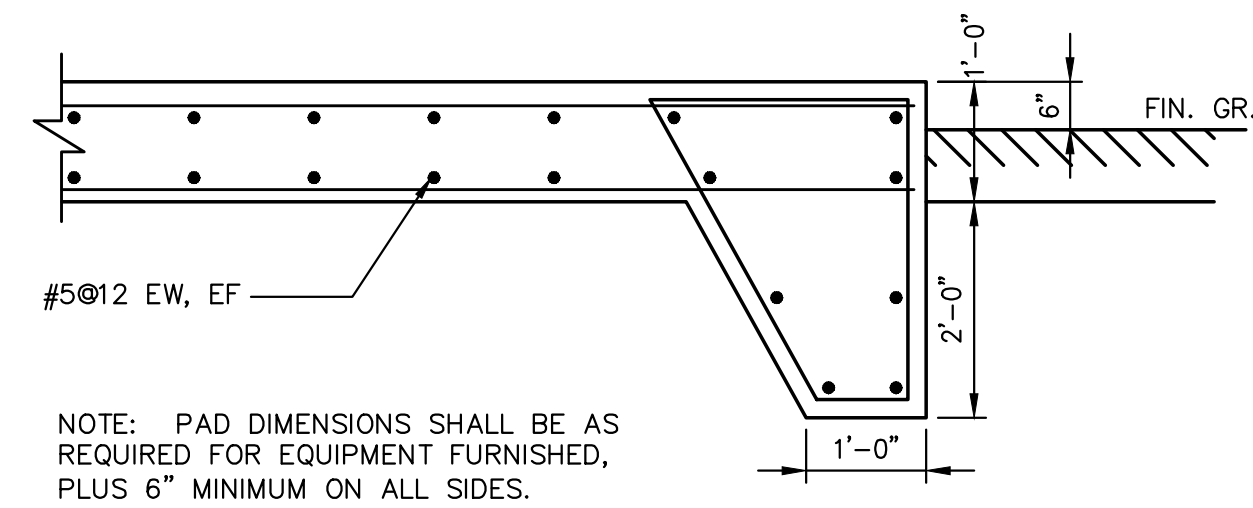
3 HMB CIRCLE
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**SYSTEM IMPROVEMENTS PROJECT
NEBO WATER DISTRICT
HOPKINS COUNTY, KENTUCKY
CONTRACT I - BOOSTER PUMP STATION**

STANDARD DETAILS

SHEET
SD2



NOTE: PAD DIMENSIONS SHALL BE AS REQUIRED FOR EQUIPMENT FURNISHED, PLUS 6" MINIMUM ON ALL SIDES.

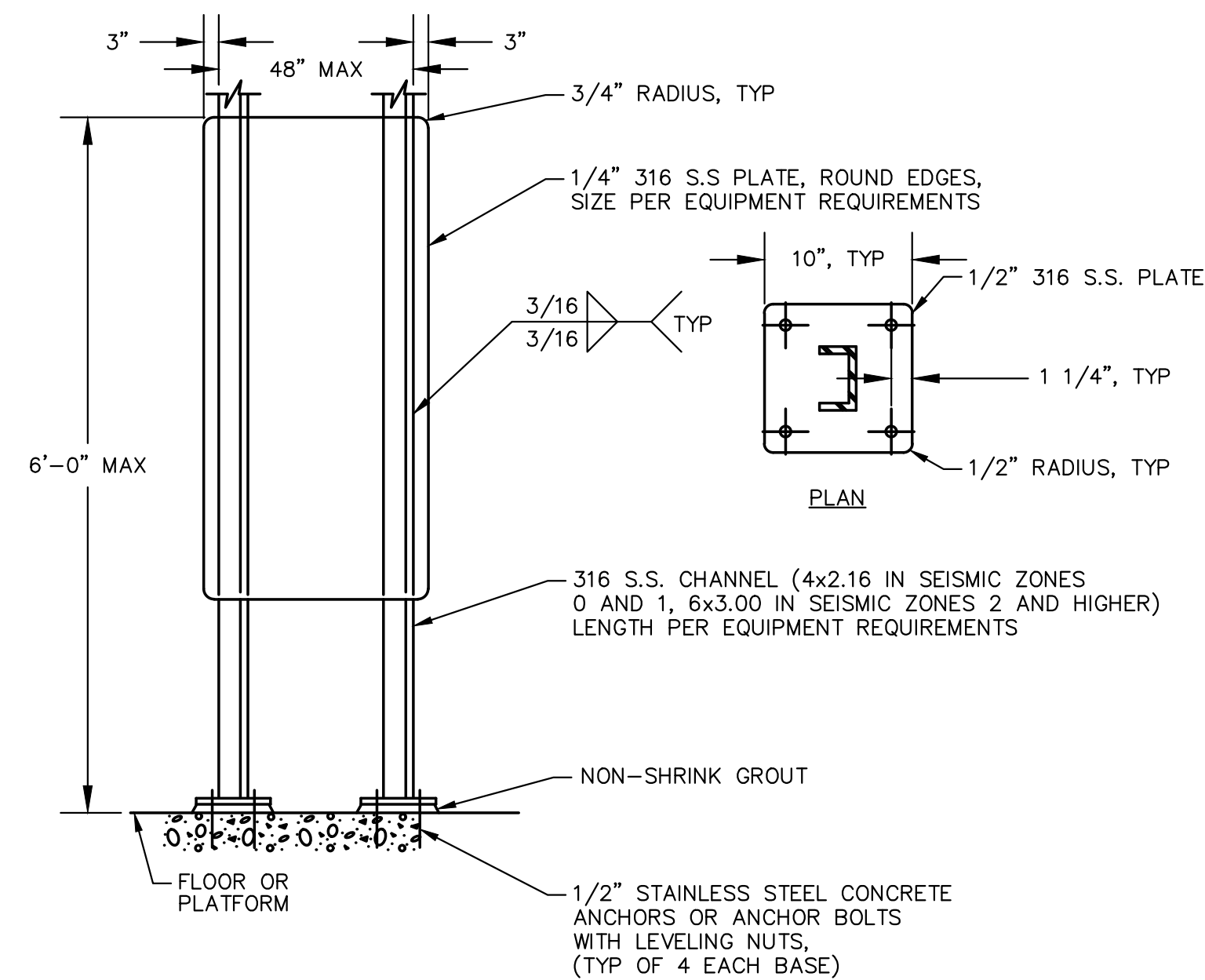
GENERAL NOTES:

- A. CONTRACTOR SHALL SCHEDULE AND COORDINATE ELECTRICAL UTILITY WORK WITH KENERGY CORP. CONTACT KENERGY FIELD ENGINEER FOR INSPECTION BEFORE COVERING TRENCH. WILLIAM RIGGS, (OFFICE) (800)844-4832, (DIRECT) (270)831-4602.
- B. NOT ALL UNDERGROUND CONDUITS ARE SHOWN ON THIS PLAN. REFER TO SHEET 5.

KEYNOTES:

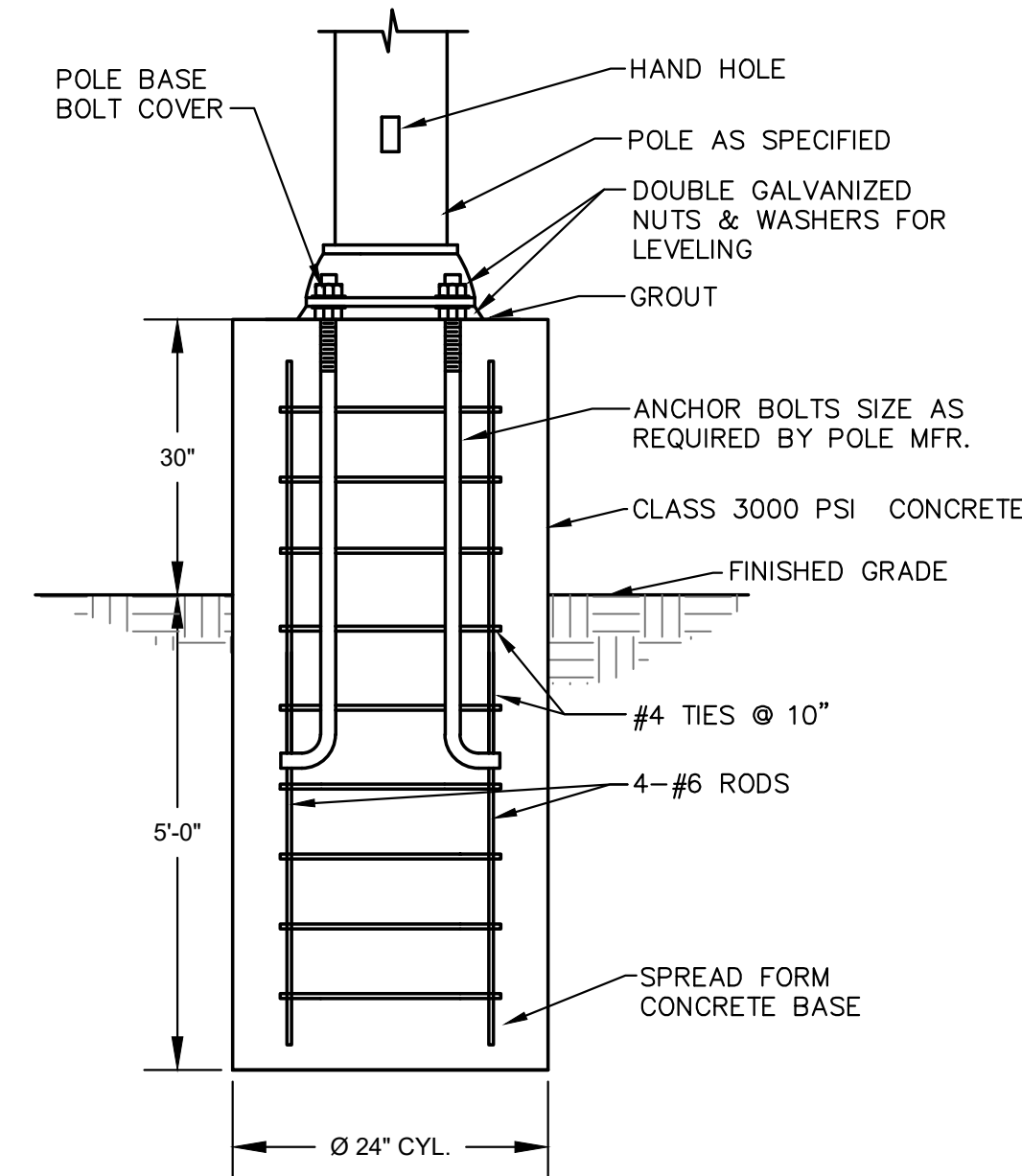
- 1. NEW UTILITY RISER/TRANSFORMER POLE FURNISHED AND INSTALLED BY KENERGY CORP. FINAL LOCATION SHALL BE FIELD COORDINATED.
- 2. UNDERGROUND SECONDARY ONE 3" PVC SCH. 40 CONDUIT WITH PULLWIRE (RATED 50 LBS MINIMUM) UNDERGROUND AT MINIMUM 24" DEEP FROM UTILITY METER TO RISER POLE. CONDUIT SHALL EXTEND 12" ABOVE GRADE AT THE POLE. KEEP 4" OF SPACE SEPARATION BETWEEN CONDUIT AND POLE. MAKE 18" RADIUS STANDARD SWEEPS. PROVIDE MINIMUM 24" OF SLACK OF PULLWIRE AT EACH END. INSTALL WARNING TAPE 12" ABOVE TOP OF CONDUIT PROVIDED BY KENERGY CORP. SECONDARY CONDUCTORS FROM POLE TO UTILITY METER SHALL BE PROVIDED AND INSTALLED BY KENERGY CORP.

1 SECTION THROUGH GENERATOR CONCRETE PAD
SCALE: NOT TO SCALE



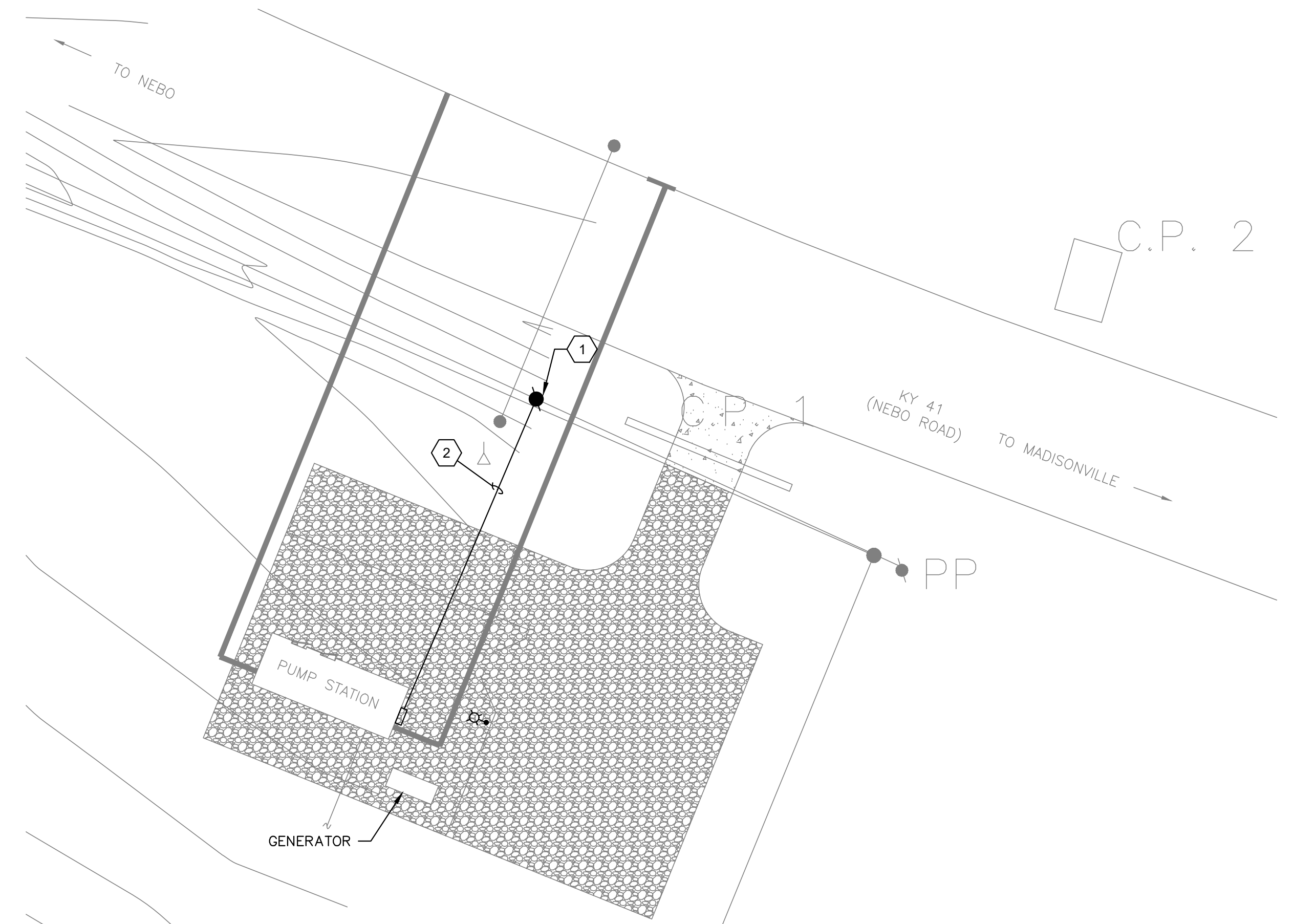
NOTE: USE STAINLESS STEEL MOUNTING HARDWARE. USE WASHER AND SPLIT LOCK WASHER UNDER ALL NUTS.

2 DEVICE MOUNTING, DOUBLE PEDESTAL
SCALE: NOT TO SCALE



NOTE: 1 1/2" COVER REQUIRED OVER ALL REINFORCEMENT STEEL

3 LIGHT POLE BASE DETAIL
SCALE: NOT TO SCALE



ELECTRICAL SITE PLAN

SCALE: 1/2"=1'-0" ON 22"X34" SHEET
SCALE: 1/4"=1'-0" ON 11"X17" SHEET

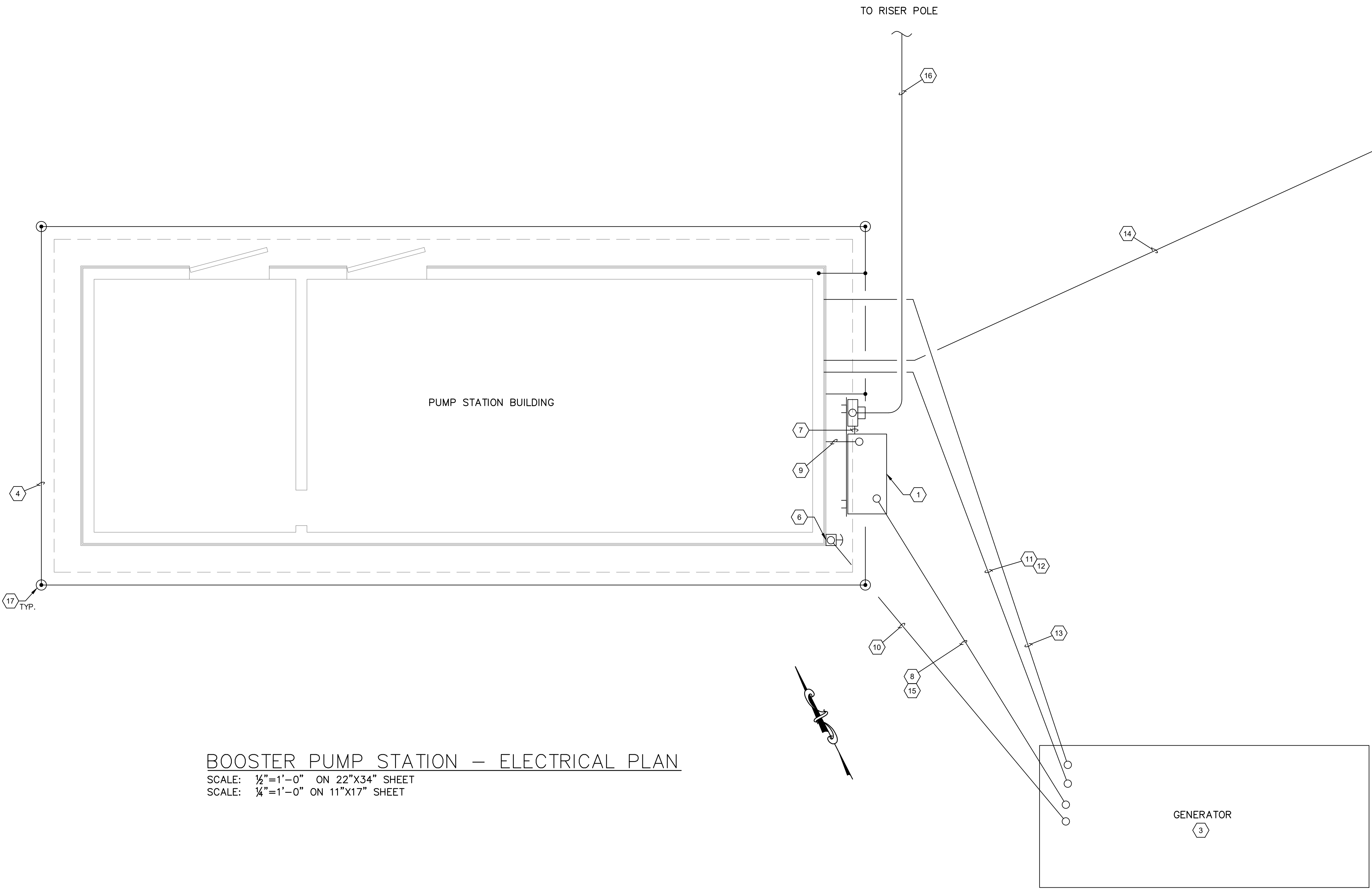
NO.	DATE	REVISIONS	CHK'D	APPR'D	DATE

PROJECT: 4317.00 DATE: MAY. 2023		
SCALE: AS SHOWN		
DESIGNED BY	NAME	DATE
DRAWN BY	YNR	05/2023
CHECKED BY	TMH	05/2023
RECORD DWGS.		



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CONTRACT I - BOOSTER PUMP STATION SYSTEM IMPROVEMENTS PROJECT NEBO WATER DISTRICT HOPKINS COUNTY, KENTUCKY		SHEET E1
ELECTRICAL SITE PLAN AND DETAILS		



KEYNOTES:

1. RELOCATED 200A, 240V, 3-PHASE, 3-POLE TRANSFER SWITCH WITH 200A CIRCUIT BREAKER ON UTILITY SIDE SUPPORTED FROM DOUBLE POST SUPPORT BRACKET ANCHORED TO BUILDING CONCRETE PAD. SEE DETAIL 2 ON SHEET 4. ASCO, CAT NO. D00300030200F100, SERIAL NO. 1042878 RE.
2. UTILITY METER BASE WITH LEVER BYPASS FURNISHED AND INSTALLED BY CONTRACTOR ON DOUBLE POST SUPPORT BRACKET WITH TRANSFER SWITCH. FIELD COORDINATE FINAL LOCATION OF METER TO BE MAXIMUM 75' FROM POLE.
3. RELOCATED DIESEL GENERATOR, 60KW, 120/240V, 3-PHASE, 225A CIRCUIT BREAKER, 140 GAL SUBBASE FUEL TANK. MTU MODEL: DS00060D6SJAK0574. CONTRACTOR SHALL PROVIDE CONCRETE PAD PER DETAIL 1 ON SHEET 4. FIELD COORDINATE FINAL LOCATION OF GENERATOR KEEPING MINIMUM 4' FROM FENCE FOR WORKING CLEARANCE AND MINIMUM 5' FROM BUILDING.
4. #2 BARE COPPER GROUNDING ELECTRODE. BOND TO BUILDING STRUCTURAL STEEL, METAL PIPING, PANELBOARDS (NOT ALL SHOWN ON PLAN)
5. 20' ROUND TAPERED ALUMINUM POLE LIGHT, PLATINUM SILVER PAINT COLOR WITH 4' ELLIPTICAL MAST ARM, WEATHERPROOF SWITCH AND PHOTOCCELL. CONTRACTOR SHALL PROVIDE WEATHERPROOF-WHILE-IN-USE METAL COVER. SWITCH SHALL BE WIRED TO CONTROL PHOTOCCELL LIGHTING FIXTURE BY HUBBELL, RATIO SERIES, MODEL NO. RAR1-160L-100-4K7-4W-UNV-MAF-PSS-7PR-TL. POLE BY VERMONT, MODEL NO. R-1MA0432C-170840605T4-***-1VDA-LX222039. ***POLE PAINT COLOR SHALL MATCH SPECIFIED FIXTURE COLOR. FIELD COORDINATE FINAL LOCATION OF POLE LIGHT TO BE INSIDE THE FENCE NEAR THE GATE.
6. NEMA 4X MUSHROOM HEAD GENERATOR EMERGENCY STOP WALL-MOUNTED.
7. 4#4/0 IN 2 1/2" C FROM UTILITY METER TO TRANSFER SWITCH.
8. UNDERGROUND 4#4/0, 1#4 GND IN 2 1/2" C FROM TRANSFER SWITCH TO GENERATOR CIRCUIT BREAKER.
9. UNDERGROUND 4#4/0, 1#4 GND IN 2 1/2" C FROM TRANSFER SWITCH TO DISTRIBUTION PANEL.
10. UNDERGROUND 2#14, 1#14 GND FROM GENERATOR CONTROL PANEL TO E-STOP.
11. UNDERGROUND 2#12, 1#12 GND IN 3/4" C FROM LIGHTING PANEL TO JACKET WATER HEATER AT GENERATOR.
12. UNDERGROUND 2#12, 1#12 GND IN 3/4" C FROM LIGHTING PANEL TO BATTERY CHARGER AT GENERATOR.
13. UNDERGROUND 6#14, 1#14 GND IN 3/4" C FROM GENERATOR CONTROL PANEL TO TELEMETRY PANEL.
14. UNDERGROUND 2#12, 1#12 GND IN 3/4" C FROM LIGHTING PANEL TO POLE LIGHT.
15. UNDERGROUND 7#14, 1#14 GND FROM TRANSFER SWITCH TO GENERATOR CONTROL PANEL.
16. SECONDARY UNDERGROUND ONE 3" PVC SCH. 40 CONDUIT WITH PULLSTRING FROM RISER POLE TO UTILITY METER. SEE SHEET 4 FOR ADDITIONAL REQUIREMENTS.
17. GROUND DRIVEN ROD, 3/4" X 10' (TYPICAL).

BOOSTER PUMP STATION – ELECTRICAL PLAN

SCALE: 1/2"=1'-0" ON 22"X34" SHEET
 SCALE: 1/4"=1'-0" ON 11"X17" SHEET

NO.	DATE	REVISIONS	CHK'D	APPR'D	DATE

PROJECT: 4317.00 DATE: MAY. 2023		
SCALE: AS SHOWN		
DESIGNED BY	NAME	DATE
	DNR	05/2023
DRAWN BY	NAME	DATE
	YNR	05/2023
CHECKED BY	NAME	DATE
	TMH	05/2023
RECORD DWGS.		



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CONTRACT I – BOOSTER PUMP STATION
 SYSTEM IMPROVEMENTS PROJECT
 NEBO WATER DISTRICT
 HOPKINS COUNTY, KENTUCKY

BOOSTER PUMP STATION – ELECTRICAL PLAN

SHEET
 E2