

**ADDENDUM NO. 1  
TO THE  
PLANS AND SPECIFICATIONS  
for  
COUNTRY COURT V SUBDIVISION  
for the  
CITY OF LOOGOOTEE  
MARTIN COUNTY, INDIANA**

**MEI PROJECT NO. 2022038-04**

**March 26, 2024**

The following items shall amend, clarify, and/or correct plans and specifications for the above project and shall take precedence over items in conflict herein:

**ITEM NO. 1 - Reference Specifications, Advertisement for Bids, Page 1**

**CHANGE:** ...“City of Loogootee Birdseye, 401 John F. Kennedy Ave., Loogootee, IN 47553”...

**TO READ:** ...“City of Loogootee, 401 John F. Kennedy Ave., Loogootee, IN 47553”...

**ITEM NO. 2 - Reference Specifications, Attachment to Form 96 (BID FORM), Bid Proposal, Pages 30 & 30A**

**CLARIFICATION:** The bid proposal has been updated and is included with this addendum. Please be sure to submit the updated bid proposal (dated 3/26/2024 at the bottom of the page) with the bid package. Specifically, the updated bid proposal addresses revisions made to the size listed for some of the water construction items, adds a pay item for the stone shoulder, and addresses differences in quantities caused by modifications to the plans.

**ITEM NO. 3 - Reference Specifications, General Water Specifications, G-24 - Gate Valves, Page G-10**

**CHANGE:** ...“Valve boxes shall consist of PVC, SDR-35 pipe with an aluminum valve box top, Model VBTA 10 A1 as manufactured by Castings, Inc., or equal. Valve boxes shall be provided for all gate valves located in the distribution system and in other locations where required or necessary for the operation of the valves”...

**TO READ:** ...“Valve boxes shall be screw type, 2-piece or 3-piece cast iron with cast iron lid in all stone, asphalt, or concrete areas. Valve boxes shall be PVC, SDR-35 pipe with an aluminum valve box top, Model VBTA 10 A1 as manufactured by Castings, Inc., or equal in all other areas. Valve boxes shall be provided for all gate valves located in the distribution system and in other locations where required or necessary for the operation of the valves”...

**ITEM NO. 4 - Reference Specifications, Measurement and Payment**

**DELETE:** Entire “Measurement and Payment” section.

**REPLACE WITH:** Attached “Measurement and Payment” section.

**CLARIFICATION:** Modified Item 1, “Stormwater Pollution Prevention and Erosion Control” to clarify contractor responsibility.

**ITEM NO. 5 -** Reference Plans, Sheets 3, 6, 7, 17, 18, 23, 32, 33, 34, and 48

**DELETE:** Original Plan Sheets indicated above.

**REPLACE WITH:** Revised Plan Sheets attached to this addendum.

**CLARIFICATION:** The attached Plan Sheets include the following edits:

- Revised Lift Station drive layout.
- Revised electrical layout.
- Revised culverts along with corresponding edits to pipe/structure tables.
- Relocated water service line and hydrant to new location (from Lot 22 to Lot 24).
- Added force main profile to plans.

Respectfully submitted,

**MIDWESTERN ENGINEERS, INC.**

A handwritten signature in black ink that reads "Clint W. Roos". The signature is written in a cursive, flowing style with a long horizontal stroke at the end.

Clint W. Roos, P.E.  
Sr. Project Engineer

**BID PROPOSAL  
FOR  
COUNTRY COURT V  
ROADWAY AND INFRASTRUCTURE IMPROVEMENTS  
FOR THE  
CITY OF LOOGOOTEE  
LOOGOOTEE, MARTIN COUNTY, INDIANA**

**BASE BID: COUNTRY COURT**

ITEM NO.	DESCRIPTION	QTY	UNIT	UNIT PRICE	TOTAL PRICE
<b><u>GENERAL CONSTRUCTION ITEMS</u></b>					
1.	105-06845 CONSTRUCTION ENGINEERING	1	LS	\$ _____	\$ _____
2.	110-01001 MOBILIZATION AND DEMOBILIZATION	1	LS	\$ _____	\$ _____
3.	621-01004 MOBILIZATION AND DEMOBILIZATION FOR SEEDING	1	LS	\$ _____	\$ _____
4.	201-52370 CLEARING RIGHT OF WAY	1	LS	\$ _____	\$ _____
5.	EROSION EROSION CONTROL AND STORMWATER PREVENTION	1	LS	\$ _____	\$ _____
6.	801-06775 MAINTAINING TRAFFIC	1	LS	\$ _____	\$ _____
<b>SUBTOTAL - GENERAL CONSTRUCTION ITEMS</b>					\$ _____

**ROADWAY/STORMWATER CONSTRUCTION ITEMS**

1.	207-08264 SUBGRADE TREATMENT, TYPE II	10,200	SYS	\$ _____	\$ _____
2.	303-01180 COMPACTED AGGREGATE NO. 53 STONE SHOULDER	500	TON	\$ _____	\$ _____
3.	621-06550 MULCHED SEEDING P	60,000	SYS	\$ _____	\$ _____
4.	801-06640 CONSTRUCTION SIGN, A	2	EACH	\$ _____	\$ _____
5.	801-07118 BARRICADE, III-A	53	LFT	\$ _____	\$ _____
6.	802-05704 SIGN POST, SQUARE TYPE 1 UNREINFORCED ANCHOR BASE	72	LFT	\$ _____	\$ _____
7.	802-99058 SIGN, SHEET, INSTALL	9	EACH	\$ _____	\$ _____
8.	401-07321 QC/QA-HMA, 2, 64, SURFACE, 9.5 mm	1,100	TON	\$ _____	\$ _____
9.	401-07371 QC/QA-HMA, 2, 64, INTERMEDIATE, 12.5 mm	1,100	TON	\$ _____	\$ _____
10.	401-07423 QC/QA-HMA, 2, 64, BASE, 19.0 mm	2,200	TON	\$ _____	\$ _____
11.	808-75297 TRANSVERSE MARKING, THERMOPLASTIC, STOP LINE, WHITE, 24 IN.	108	LFT	\$ _____	\$ _____
12.	211-09265 STRUCTURE BACKFILL, TYPE 2	4,400	CYS	\$ _____	\$ _____
13.	STORM PIPE PIPE, HDPE, CIRCULAR, 8 IN.	95	LFT	\$ _____	\$ _____
14.	STORM PIPE PIPE, HDPE, CIRCULAR, 12 IN.	70	LFT	\$ _____	\$ _____
15.	STORM PIPE PIPE, RCP, CIRCULAR, 12 IN.	300	LFT	\$ _____	\$ _____
16.	STORM PIPE PIPE END SECTION, PRECAST CONCRETE, 8 IN	8	EA	\$ _____	\$ _____
17.	715-46000 PIPE END SECTION, PRECAST CONCRETE, 12 IN	22	EA	\$ _____	\$ _____
18.	616-06405 RIPRAP, REVETMENT	70	TON	\$ _____	\$ _____
19.	616-05688 RIPRAP, CLASS 1	2	TON	\$ _____	\$ _____
20.	BASIN DETENTION BASIN CONSTRUCTION	1	LS	\$ _____	\$ _____
<b>SUBTOTAL - ROADWAY CONSTRUCTION ITEMS</b>					\$ _____

**BASE BID COUNTRY COURT CONTINUED**

ITEM NO.	DESCRIPTION	QTY	UNIT	UNIT PRICE	TOTAL PRICE
<b>SANITARY SEWER CONSTRUCTION ITEMS</b>					
1.	715-05408 PIPE SANITARY SEWER 8 IN, PVC SDR 26	3200	L.F.	\$	\$
2.	715-98961 FORCE MAIN 4 IN, PVC SDR-21	750	L.F.	\$	\$
3.	715-05711 PIPE SANITARY SERVICE SEWER 6 IN, PVC SDR 26 ALL DEPTHS WITH #8 STONE ENCASEMENT	1500	L.F.	\$	\$
4.	718-04986 6" CLEANOUT	41	EA	\$	\$
5.	720-45410 MANHOLE C4	13	EA	\$	\$
6.	301-12233 INDOT NO. 8 CRUSHED STONE FOR BACKFILL FOR LATERALS IN STREETS	300	C.Y.	\$	\$
7.	715-04482 PIPE CONNECTION COLLAR AND PAD	3	EA	\$	\$
8.	716-01382 AIR RELIEF VALVE	1	EA.	\$	\$
9.	LIFT STATION LIFT STATION CONSTRUCTION (INCLUDES WET WELL, VALVE PIT, PUMPS, ELECTRICAL, AND CONTROLS)	1	LS	\$	\$
<b>SUBTOTAL - SANITARY SEWER CONSTRUCTION ITEMS</b>					\$
<b>WATER CONSTRUCTION ITEMS</b>					
1.	715-93912 6" C900 DR-18 CL 235 PVC WATER MAIN W/TRACER WIRE	3,900	L.F.	\$	\$
2.	715-02744 6" D.I. GATE VALVE WITH POLY. ENCASEMENT	10	EA.	\$	\$
3.	715-04596 3/4" HDPE SERVICE LINE	1,300	L.F.	\$	\$
4.	715-03053 NEW METER PIT (5/8") AND ALL APPURTENANCES	41	EA.	\$	\$
5.	720-96999 3 WAY FIRE HYDRANT WITH 6" GATE VALVE	8	EA.	\$	\$
6.	715-07794 DRY TAP NEW 6" TO EX. 6" MAIN	3	EA.	\$	\$
7.	TEST PRESSURE AND LEAKAGE TESTING OF WATER MAINS	3,900	L.F.	\$	\$
8.	DISINFECT DISINFECTION OF WATER MAINS	3,900	L.F.	\$	\$
<b>SUBTOTAL - WATER CONSTRUCTION ITEMS</b>					\$
<b>TOTAL BASE BID</b>					\$
					(Figures)

(Words)

**NOTE: THE BASIS OF AWARD MAY CONSIDER ANY COMBINATION OF BASE BID ITEMS IN THE DETERMINATION OF THE LOWEST RESPONSIBLE AND RESPONSIVE BIDDER.**

Respectfully,

Signature

Address

Title

Date

(SEAL) (If BID is by a Corporation)

License Number (if applicable)

# MEASUREMENT AND PAYMENT

## SCOPE

It is intended that payment for all work done under the Contract Documents for Unit Price Contracts, including the furnishing of all labor, tools, equipment, materials, and the performing of all operations in connection with the construction of all work under unit Price Contracts as described in the contract documents will be made under the applicable INDOT Standard Pay Items and the following Pay items. Other work for which there is not a pay item will be considered incidental and shall be included in the Contract Unit Price for the various pay items and no additional compensation will be allowed.

The Owner reserves the right to alter the plans, extend or shorten the project, and such incidental work as may be necessary, and increase or decrease the quantities of work to be performed to accord with such changes, including the deduction or cancellation of any one or more of the pay items. Such changes shall not be considered as a waiver of any conditions of the contract nor to invalidate any of the provisions thereof.

The work will be done in compliance with the Contract Documents and measured and paid for under the applicable INDOT Standard Pay Items or Contract Items herein listed and detailed. Quantities shown on the plans shall govern over those shown in the proposal. The Contractor shall take no advantage of any apparent error or omission in the plans or specifications, and the Engineer shall be permitted to make any corrections and interpretations as may be deemed necessary for the fulfillment of the intent of the Contract Documents. The following are Contract Items not covered under INDOT Standard Pay Items:

### **1. STORM WATER POLLUTION PREVENTION AND EROSION CONTROL**

Contractors shall bid based on plan documents and specifications, and knowledge of the specific site from actual field visit(s). The contractor shall hold the owner faultless for any non-compliance with permit-related specifications. All temporary erosion control measures shall be in accordance with the Indiana Storm Water Quality Manual, or as otherwise stated in these special provisions. The Contractor shall be responsible, through the implementation of erosion control and sedimentation control measures within R/W and easement areas for minimizing erosion on the project and minimizing sedimentation inside and outside of the project limits. Payment shall be Lump Sum and shall include all labor, equipment, and materials necessary for said work.

The Contractor shall be responsible for supplying all materials required to install and maintain erosion and sediment controls required by the Local Agencies, State Agencies and Federal Agencies.

The contractor shall be responsible for obtaining or verifying that all permits and approvals are obtained from the respective City, County, or State Agencies prior to starting and construction.

It shall be the contractor's responsibility to determine the exact location of all utilities in the vicinity of the construction area prior to starting any construction.

It shall be the contractor's responsibility for notification and coordination of all construction with the respective utility companies prior to starting any construction.

All erosion control measures indicated on plans or in the Construction Stormwater General Permit

(CSGP) shall be maintained by the Contractor within R/W and easement areas. The Owner has the right to require additional erosion control measures in the field as conditions warrant.

All erosion control practices shall be in accordance with the IDEM Storm Water Quality Manual dated October 2007 and the NRCS Field Office Technical Guide.

At the completion of construction all excess soil and other material shall be removed from the site. To ensure proper water quality the site and its storm water conveyance facilities shall be inspected at regular intervals and after all major rain events. The storm water conveyance systems shall be kept free of debris and fluids that could potentially pollute storm water runoff.

The project contractor or their representative, knowledgeable in erosion and sediment control, shall inspect the site for storm water pollution prevention deficiencies at least weekly and again within 24 hours of every ½ inch rain event. Inspection reports shall be kept on file and be available for review upon request.

All hazardous materials used during the construction of the site shall be handled at all times according to recommendations in the Material Safety Data Sheets provided by the manufacturer. The site contractor will implement a spill prevention plan prior to start of construction.

The erosion control measures included in the SWPPP shall be installed prior to initial land disturbance activities or as soon as practical. Sediment shall be prevented from discharging from the project site by installing and maintaining the erosion control measures as stated in the SWPPP.

Except as prevented by inclement weather conditions or other circumstances beyond the control of the contractor/developer appropriate erosion control practices will be initiated within 7 days of the last land disturbing activity at the site. The site shall be stabilized by seeding, sodding, mulching, covering, or by other equivalent erosion control measures.

The SWPPP shall be implemented on all disturbed areas within the construction limits. All measures involving erosion control practices shall be installed under the guidance of a qualified personnel experienced in erosion control and following the SWPPP specifications.

During the period of construction activity all erosion control measures shall be maintained by the contractor. At the completion of construction the contractor shall coordinate the transfer of required maintenance responsibilities to the Owner.

Roadways shall be kept cleared of accumulated sediment. Bulk clearing of accumulated sediment shall not include flushing the area with water. Cleared sediment shall be returned to the point of likely origin or other suitable location.

The contractor shall control waste, garbage, debris, wastewater, and other substances on the site in such a way that they shall not be transported from the site by the action of winds, stormwater runoff, or other forces. Proper disposal or management of all wastes and unused building materials appropriate to the nature of the waste or material is required.

The Owner's staff has the authority to conduct inspections of site activities as needed, to ensure compliance with the above cited plan and permit.

## **2. HOT MIX ASPHALT PAVEMENT**

This item shall include the furnishing and installing complete and in place, all labor, materials and equipment necessary for the construction of hot mix asphalt pavement (HMA) base, intermediate, surface mixtures or other miscellaneous applications. Payment shall be based on the unit price per ton submitted.

All pavements shall be placed to facilitate drainage.

The course aggregate shall be crushed limestone. No slag or natural gravel materials shall be allowed.

The accepted quantities for this work will be paid for at the contract unit price per ton for HMA of the type specified, complete in place.

<u>Pay Item*</u>	<u>Pay Unit</u>
HMA, 9.5mm, Surface, Type B	Ton
HMA, 25.0mm, Base, Type B	Ton

## **3. SODDING**

All areas disturbed by construction shall be returned to their previous state. The item shall include furnishing, complete and in place, six (6) inches thick topsoil and sod, except twelve (12) inches total soil material to be placed in locations containing No. 8 stone backfill. Both the sod and topsoil shall meet current industry standards. The item shall include, but not be limited to, all material, labor, tools, equipment, excavation, disposal, and backfill necessary to restore all areas. This shall include restoration of sprinkler systems (if necessary). Watering schedule for sod is to be followed as specified in INDOT Standards Specifications, except that it shall be watered for a minimum period of two months. This work will not be paid for separately but included with the applicable sod items. Payment for sodding shall be per square yard, measured in place.

## **4. STORM PIPE, GENERAL**

Payment for storm sewer lines of various sizes, types and depths of cut shall be based upon the unit price per foot submitted and will include dewatering, backfilling, tamping, stoppers, testing, clean-up, bracing or shoring, culverts, curbs, gutters, paved ditches, existing utilities, connection to existing manholes. The quantity of the pipe to be paid will be as shown on plans unless changed by the engineer and shall include the length of pipe measured along the centerline of the completed pipelines without deducting the length of fittings, encasements and manhole. Rock excavation is included in this item and will not be paid separately. Milling and HMA surface is paid for under other bid items. Stone backfill for bedding of stormwater pipe and trench shall be included with the unit price per foot of storm pipe submitted. Stone backfill for bedding of stormwater pipe and trench is not a separate pay item.

**5. DETENTION BASIN CONSTRUCTION**

Payment of the detention basin construction shall be based upon the lump sum unit price submitted and shall include all labor, materials, equipment, tools, and all other necessary items for work shown on the plans and specifications. This includes excavation, grading, rock work, and all other necessary items to complete the work.

**6. LIFT STATION CONSTRUCTION**

Payment of the lift station construction shall be based upon the lump sum unit price submitted and shall include all labor, materials, equipment, tools, etc., and all other necessary items for work shown on the plans and specifications. This includes complete lift station construction including a new concrete wet well and valve pit, water tight access hatches, site work, new pumps and equipment, piping, electrical and controls as shown on construction plans, fencing, construction of the stone drive leading to the lift station, and all other necessary items to complete the work.

**7. PRESSURE AND LEAKAGE TESTING OF WATER MAINS**

Payment for pressure and leakage testing of water mains shall be based upon the unit price per linear foot and include all labor, materials and equipment necessary to provide the testing of the water mains.

Contractor is required to have a unit price bid of \$1.00/L.F. or more for pressure and leakage testing. Unit price bids for pressure and leakage testing less than \$1.00/L.F. may be considered non-responsive.

**8. DISINFECTION OF WATER MAINS**

Payment for disinfection at the water mains shall be based upon the unit price per linear foot and include all labor, materials and equipment necessary to provide the disinfection of the water mains. Contractor is required to have a unit price bid of \$1.00/L.F. or more for disinfection. Unit price bids for disinfection less than \$1.00/L.F. may be considered non-responsive.

**9. BASIS OF PAYMENT INFORMATION**

The items listed under Pay Items constitute all Pay Items for contract. Any other items of work listed in the Specifications, shown on the plans, or required for a complete installation (including ROCK EXCAVATION & Dewatering), shall be considered incidental to the above items and are not Pay Items. Specifically where so specified on plans for subgrade fill or grading, locating existing utility lines and cutting existing concrete or blacktop surface areas.



## **PAY ITEMS**

### **Payment – Special Provisions**

**Quantities of crushed stone, sand, etc., will not be approved for payment, unless the corresponding delivery tickets have been received by the Engineer's Representative on the job site. Crushed stone and sand delivery tickets shall also be identified by the Contractor as to the location and purpose for which the material is used.**

**Prior to the approval of the Contractor's first monthly progress payment, verification must be furnished by the Contractor to Owner, that all material and equipment required for the project have been ordered.**

### GENERAL NOTES

- TOPOGRAPHY SHOWN ON PLAN SHEETS IS INTENDED TO SHOW THE GENERAL LOCATION OF FENCES, CULVERTS, DRIVES, EXISTING UTILITIES, POINTS OF CONNECTION, ETC. HOWEVER, THE EXACT LOCATION AND QUANTITIES SHALL BE VERIFIED AT THE TIME OF CONSTRUCTION.
- THE HORIZONTAL LOCATION DATA IS BASED UPON THE INDIANA STATE PLANE COORDINATE SYSTEM (WEST ZONE) REFERENCED TO THE 1983 NORTH AMERICAN DATUM (NAD 83). ELEVATIONS ARE BASED ON THE 1988 NORTH AMERICAN VERTICAL DATUM (NAVD 88).
- THE CONTRACTOR SHALL CALL INDIANA UNDERGROUND SERVICES AT 811 PRIOR TO ANY CONSTRUCTION TWO FULL WORKING DAYS BEFORE CONSTRUCTION IS TO BEGIN.
- THE LOCATION OF EXISTING UTILITIES ETC. SHOWN ON THESE PLANS ARE NOT THE EXACT LOCATIONS BUT ONLY A GENERAL LOCATION. ALTHOUGH THESE PLANS HAVE ATTEMPTED TO SHOW ALL EXISTING UTILITIES, THE CONTRACTOR SHALL NOT ASSUME ALL EXISTING UTILITIES HAVE BEEN SHOWN. THEREFORE IT SHALL BE THE CONTRACTOR'S RESPONSIBILITY TO SEE THAT ALL EXISTING UTILITIES WITHIN CONSTRUCTION AREAS ARE CLEARLY MARKED IN THE FIELD PRIOR TO ANY CONSTRUCTION IN THE AREA.
- PROPERTY LINES, WHERE SHOWN, ARE BASED ON COUNTY PLAT RECORDS. THE SAID PROPERTY LINES ON THESE SHEETS DO NOT REPRESENT PROPERTY SURVEYS, BUT ARE ONLY APPROXIMATE LOCATIONS FOR REFERENCE PURPOSES ONLY.
- THE CONTRACTOR SHALL BE REQUIRED TO IMPLEMENT DUST CONTROL MEASURE (SURFACE WETTING) AS NECESSARY TO MINIMIZE FUGITIVE DUST EMISSIONS. ALL AREAS DISTURBED BY CONSTRUCTION SHALL BE SEEDED OR SODDED, UNLESS OTHERWISE SHOWN.
- THE CONTRACTOR SHALL BE REQUIRED TO FIELD VERIFY EXISTING STRUCTURE AND PIPE DATA AND REPORT ANY DISCREPANCIES TO THE ENGINEER PRIOR TO ORDERING NEW STRUCTURES.
- FOR ANY EXCAVATION WITHIN PAVED AREAS FOR MANHOLE ADJUSTMENTS, VALVE BOX ADJUSTMENTS, INLET ADJUSTMENTS OR RELOCATIONS, METER ADJUSTMENTS OR RELOCATIONS, FIRE HYDRANT RELOCATIONS, ETC., THE CONTRACTOR SHALL REPLACE THE EXCAVATED MATERIAL WITH FLOWABLE FILL.
- THE CONTRACTOR SHALL NOTIFY, IN WRITING, THE ENGINEER OF ANY CHANGES, OMISSIONS, OR ERRORS FOUND ON THESE PLANS.
- ALL CONSTRUCTION METHODS & MATERIALS MUST CONFORM TO CURRENT STANDARDS AND SPECIFICATIONS OF THE FEDERAL, STATE, COUNTY, CITY/TOWN, OR LOCAL REQUIREMENTS, WHICHEVER HAS JURISDICTION.
- FINAL GRADES AT THE PROJECT BOUNDARY SHALL MATCH EXISTING ELEVATIONS UNLESS OTHERWISE SHOWN.
- WHEN PERFORMING GRADING OPERATIONS DURING PERIODS OF WET WEATHER, PROVIDE ADEQUATE DEWATERING DRAINAGE AND GROUND WATER MANAGEMENT TO CONTROL MOISTURE OF SOILS.
- AFTER STRIPPING TOPSOIL, THE SUBGRADE SHOULD BE PROOF-ROLLED WITH AN ADEQUATELY LOADED VEHICLE SUCH AS A FULLY LOADED TANDUM-AXLE DUMP TRUCK TO DETERMINE LOCATIONS OF ANY POCKETS OF UNSUITABLE MATERIAL. AREAS EXCESSIVELY DEFLECTING SHOULD BE DELINEATED. RECOMMENDATIONS FOR DRYING, AMENDING, AND/OR REMOVAL OF ANY UNSUITABLE MATERIAL WITHIN THE PROPOSED PAVED AREAS WILL BE DETERMINED AT THE TIME OF CONSTRUCTION BY THE CONTRACTOR'S GEOTECHNICAL TESTING REPRESENTATIVE.
- CONTRACTOR SHALL FOLLOW ALL TERMS AND CONDITION OF THE CONSTRUCTION STORMWATER GENERAL PERMIT OBTAINED BY THE CITY OF LOOGOOTEE, A COPY OF WHICH WILL BE PROVIDED PRIOR TO THE START OF CONSTRUCTION.
- ROADWAY AND MATERIAL SPECIFICATIONS SHALL BE IN ACCORDANCE WITH APPLICABLE PORTIONS OF THE INDOT STANDARD SPECIFICATIONS (LATEST EDITION) UNLESS SPECIFICALLY STATED OTHERWISE ON THESE PLANS, CONTRACT DOCUMENTS, OR LOCAL CODE.
- THE CONTRACTOR SHALL REPAIR AND/OR REPLACE ALL EX. UTILITIES, SIDEWALKS, CURB, OR OTHER EX. INFRASTRUCTURE DAMAGED AS A RESULT OF THE PROJECT.

#### PROPOSED WATER

- PROPOSED WATER MAIN & SIZE
- PROPOSED GATE VALVE
- PROPOSED BUTTERFLY VALVE
- PROPOSED BLOW OFF VALVE
- PROPOSED FLUSH HYDRANT
- PROPOSED 3 WAY HYDRANT
- PROPOSED HYDRA STOP
- PROPOSED INSERTA VALVE
- PROPOSED LEAK DETECTION
- PROPOSED / RELOCATED METER
- PROPOSED PRV
- PROPOSED CHECK VALVE
- PROPOSED CUT AND CAP
- PROPOSED REDUCER

#### EXISTING WATER

- EXISTING WATER MAIN & SIZE
- EXISTING GATE VALVE
- EXISTING BUTTERFLY VALVE
- EXISTING BLOW OFF VALVE
- EXISTING FLUSH HYDRANT
- EXISTING 3 WAY HYDRANT
- EXISTING HYDRA STOP
- EXISTING INSERTA VALVE
- EXISTING LEAK DETECTION
- EXISTING METER
- EXISTING PRV
- EXISTING CHECK VALVE
- EXISTING YARD HYDRANT
- EXISTING CORP. STOP

#### PROPOSED SANITARY

- PROPOSED MAIN & SIZE
- PROPOSED FORCE MAIN & SIZE
- PROPOSED SERVICE LINE
- PROPOSED MANHOLE
- PROPOSED CLEANOUT

#### EXISTING SANITARY

- EXISTING MAIN & SIZE
- EXISTING FORCE MAIN & SIZE
- EXISTING SERVICE LINE
- EXISTING MANHOLE
- EXISTING CLEANOUT

#### PROPOSED STORM

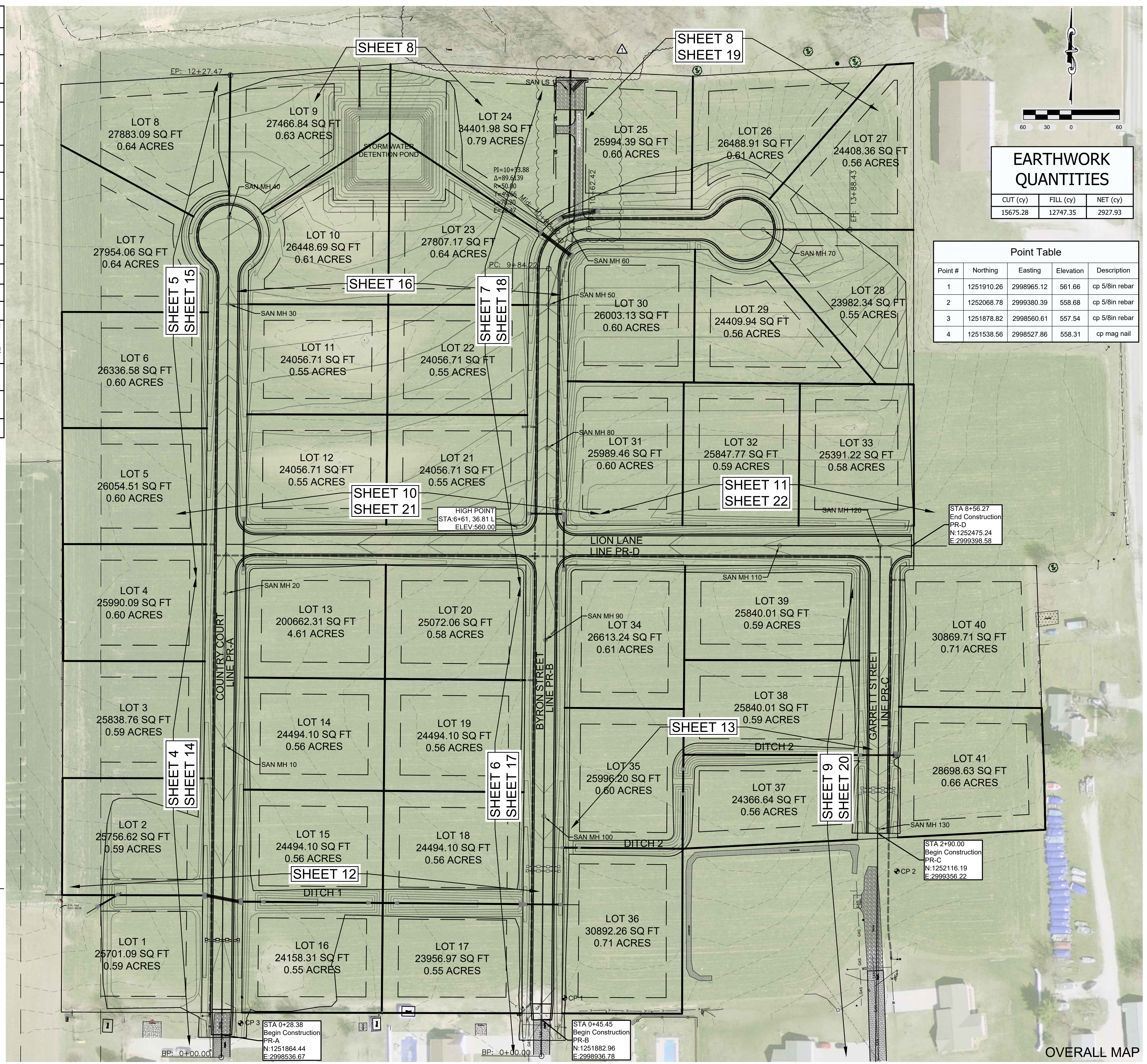
- PROPOSED MAIN & SIZE
- PROPOSED MANHOLE
- PROPOSED INLET
- PROPOSED CURB INLET

#### EXISTING STORM

- EXISTING MAIN & SIZE
- EXISTING MANHOLE
- EXISTING INLET
- EXISTING CURB INLET

#### GENERAL TOPO

- SIGN
- SATELLITE DISH
- RIGHT OF WAY MARKER
- MAIL BOX
- POST/BOLLARD
- SANITARY MANHOLE
- STORM MANHOLE
- TREE
- WOOD / BARBED WIRE FENCE
- ELECTRIC / CHAINLINK FENCE
- HOUSE
- HOUSE TRAILER
- BURIED TELEPHONE CABLE
- LIGHT POLE
- POWER POLE / GUY WIRE
- GAS MAIN
- TELEPHONE
- FIBER OPTIC
- OVERHEAD ELECTRIC
- SURVEY CONTROL POINT
- SURVEY MONUMENT
- SURVEY PIN
- ELECTRIC METER
- GAS VALVE / GAS METER



### EARTHWORK QUANTITIES

CUT (cy)	FILL (cy)	NET (cy)
15675.28	12747.35	2927.93

### Point Table

Point #	Northing	Easting	Elevation	Description
1	1251910.26	2998965.12	561.66	cp 5/8in rebar
2	1252068.78	2999380.39	558.68	cp 5/8in rebar
3	1251878.82	2998560.61	557.54	cp 5/8in rebar
4	1251538.56	2998527.86	558.31	cp mag nail

Quality Engineering Services Since 1989

**Midwestern Engineers, Inc.**

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 802 West Broadway St., P.O. Box 205, Loogootee, IN 47533  
 Phone: 317-338-8822 Fax: 317-338-8820  
 Website: www.midwesternengineers.com

Civil Mechanical Electrical

COUNTRY COURT V SUBDIVISION  
 ROAD, STORM DRAINAGE, WASTEWATER  
 COLLECTION, AND WATER SYSTEM IMPROVEMENTS  
 FOR THE  
**CITY OF LOOGOOTEE**  
 MARTIN COUNTY, INDIANA

REVISIONS  
 3/25/2024

CLINT W. ROOS  
 REGISTERED  
 No. PE11300241  
 STATE OF INDIANA  
 PROFESSIONAL ENGINEER  
 Clint W. Roos  
 2/29/2024

**BID SET**

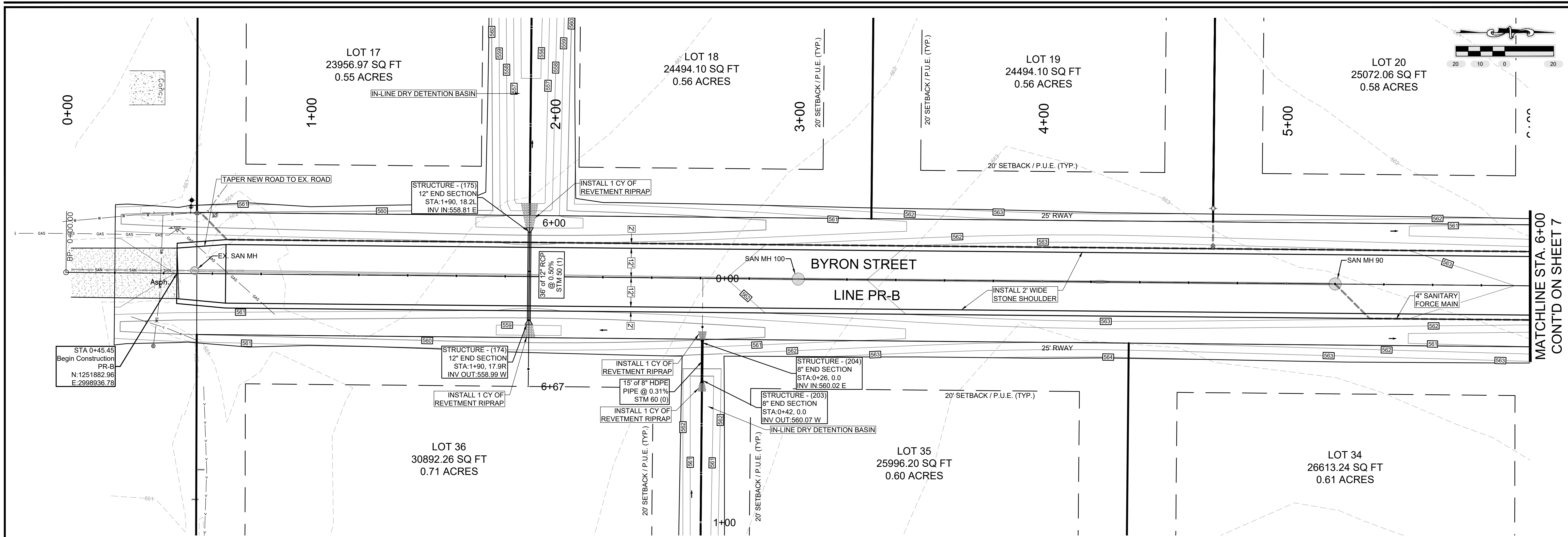
© 2024 Midwestern Engineers, Inc.  
 802 West Broadway Street  
 P.O. Box 205  
 Loogootee, Indiana 47533

DATE  
 FEBRUARY 2024  
 DESIGN  
 CWR  
 DRAWN  
 DRK/BDH  
 O.C. CHECK  
 RAB  
 PROJECT NUMBER  
 2022038-04

**3**  
 3 of 48

FILE NUMBER  
 43925

Author: DKOONTZ, Plot Date: 3/25/2024 9:34 AM  
 Path: Z:\CAD\INCOMPLETE\2022038-04\LOOGOOTEE\COUNTRY COURT\_V02E\_PROD\CD\DWG\18 GRADING - DRAINAGE.DWG



STA 0+45.45  
Begin Construction  
PR-B  
N:1251882.96  
E:2998936.78

STRUCTURE - (175)  
12" END SECTION  
STA:1+90, 18.2L  
INV IN:558.81 E

STRUCTURE - (174)  
12" END SECTION  
STA:1+90, 17.9R  
INV OUT:558.99 W

INSTALL 1 CY OF  
REVETMENT RIPRAP  
15" of 8" HDPE  
PIPE @ 0.31%  
STM 60 (0)

STRUCTURE - (204)  
8" END SECTION  
STA:0+26.00 E  
INV IN:560.02 E

STRUCTURE - (203)  
8" END SECTION  
STA:0+42.00  
INV OUT:560.07 W

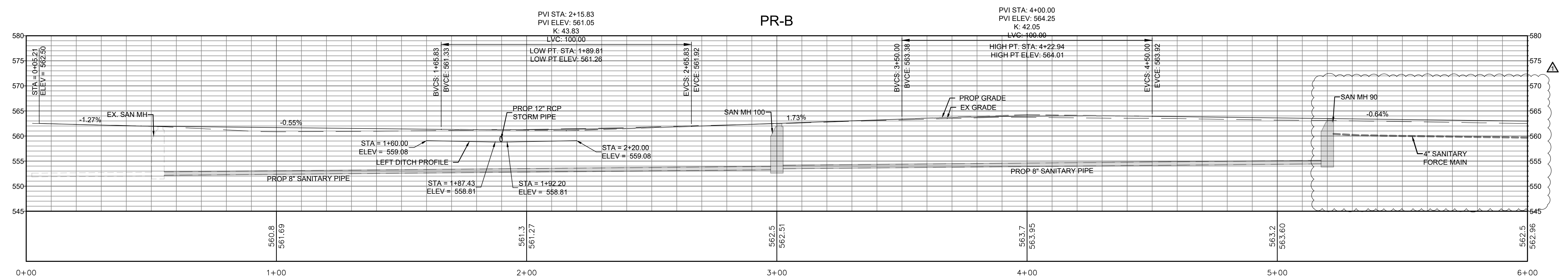
LOT 36  
30892.26 SQ FT  
0.71 ACRES

LOT 35  
25996.20 SQ FT  
0.60 ACRES

LOT 34  
26613.24 SQ FT  
0.61 ACRES

NOTE: CONTRACTOR SHALL USE EARTHWORK GENERATED WITH ROAD, UTILITY, AND DRAINAGE WORK TO GET LOTS PAD READY WHERE AVAILABLE. CONTRACTOR SHALL COORDINATE.

MATCHLINE STA. 6+00  
CONT'D ON SHEET 7



HORIZ. SCALE: 1"=20'  
VERT. SCALE: 1"=10' LINE PR-B

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COUNTRY COURT V SUBDIVISION  
ROAD, STORM DRAINAGE, WASTEWATER  
COLLECTION, AND WATER SYSTEM IMPROVEMENTS  
FOR THE  
**CITY OF LOOGOOTEE**  
MARTIN COUNTY, INDIANA

REVISIONS  
3/25/2024

CLINT W. ROOS  
REGISTERED  
No.  
PE11300241  
STATE OF  
INDIANA  
PROFESSIONAL ENGINEER  
Clint W. Roos  
2/29/2024

**BID SET**  
Midwestern Engineers, Inc.  
802 West Broadway Street  
P.O. Box 295  
Loogootee, Indiana 47553

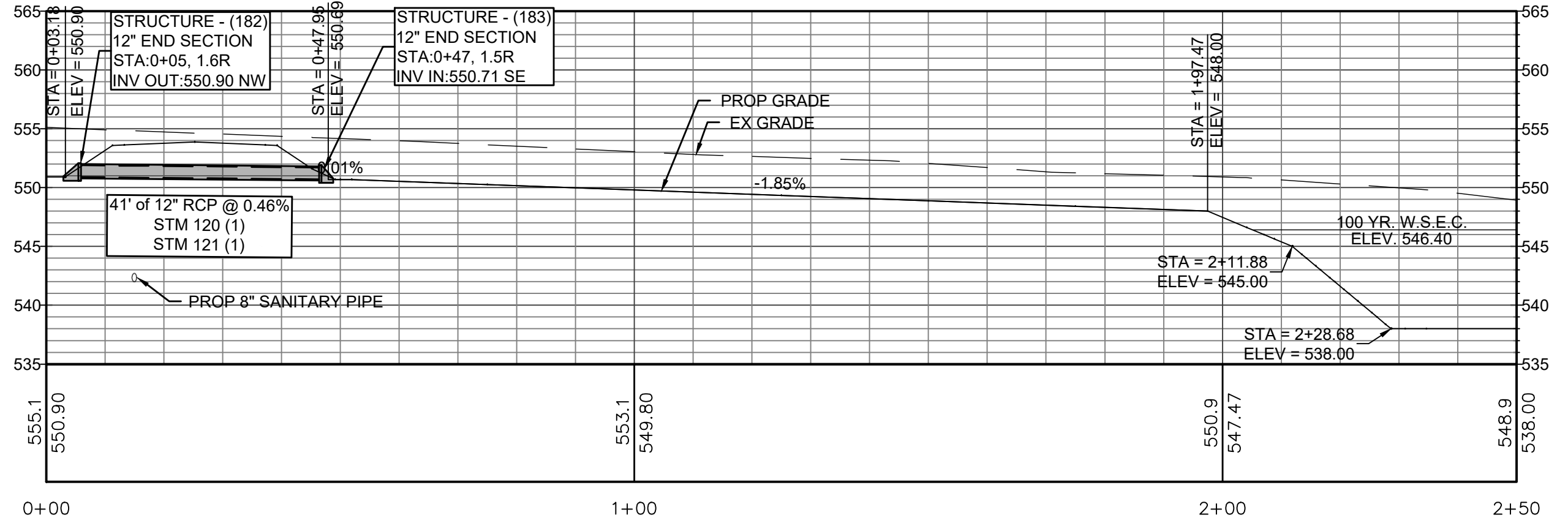
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DRAWN  
DRK/BDH  
O.C. CHECK  
RAB  
PROJECT NUMBER  
2022038-04

**6**  
6 of 48

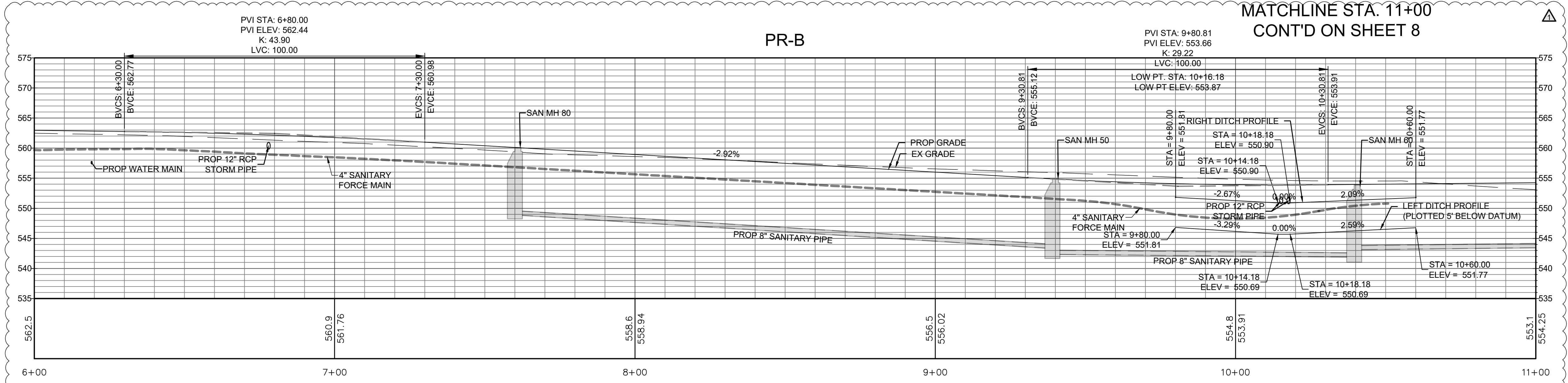
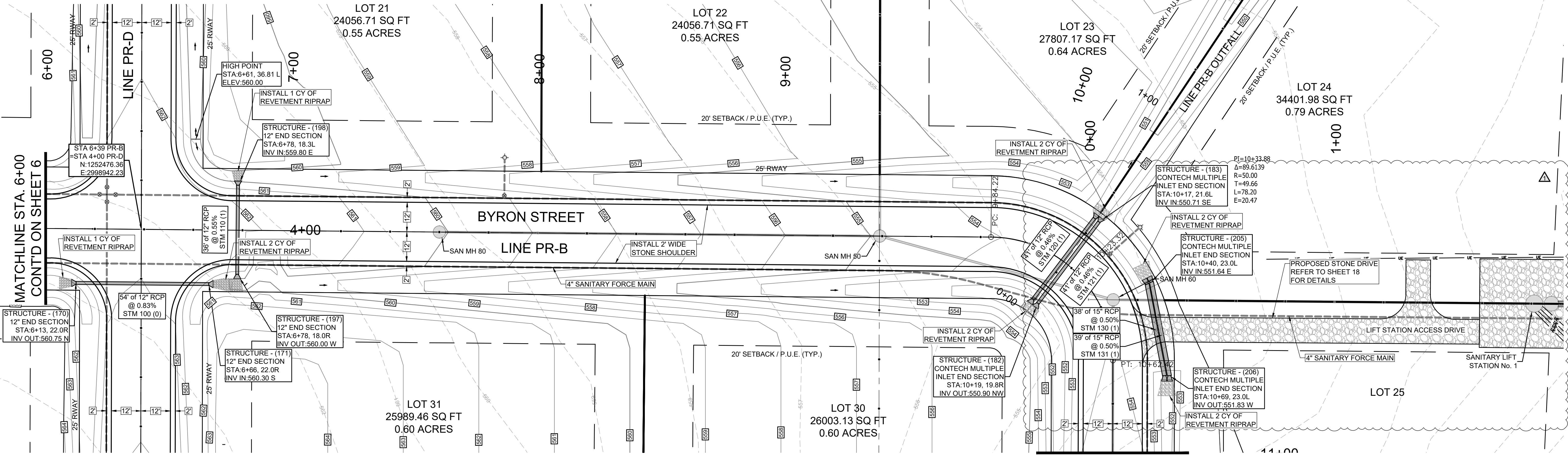
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PR-B Outfall



PROPOSED WET  
DETENTION BASIN  
21,475 S.F.  
T.O.B. = 530.0  
E.O. = 549.0  
N.P. = 545.0



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STATE OF INDIANA  
PROFESSIONAL ENGINEER  
Clint W. Roos  
2/29/2024

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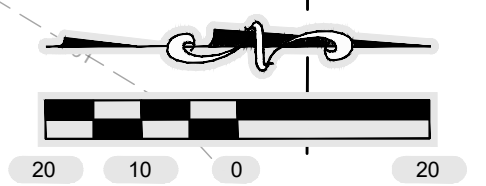
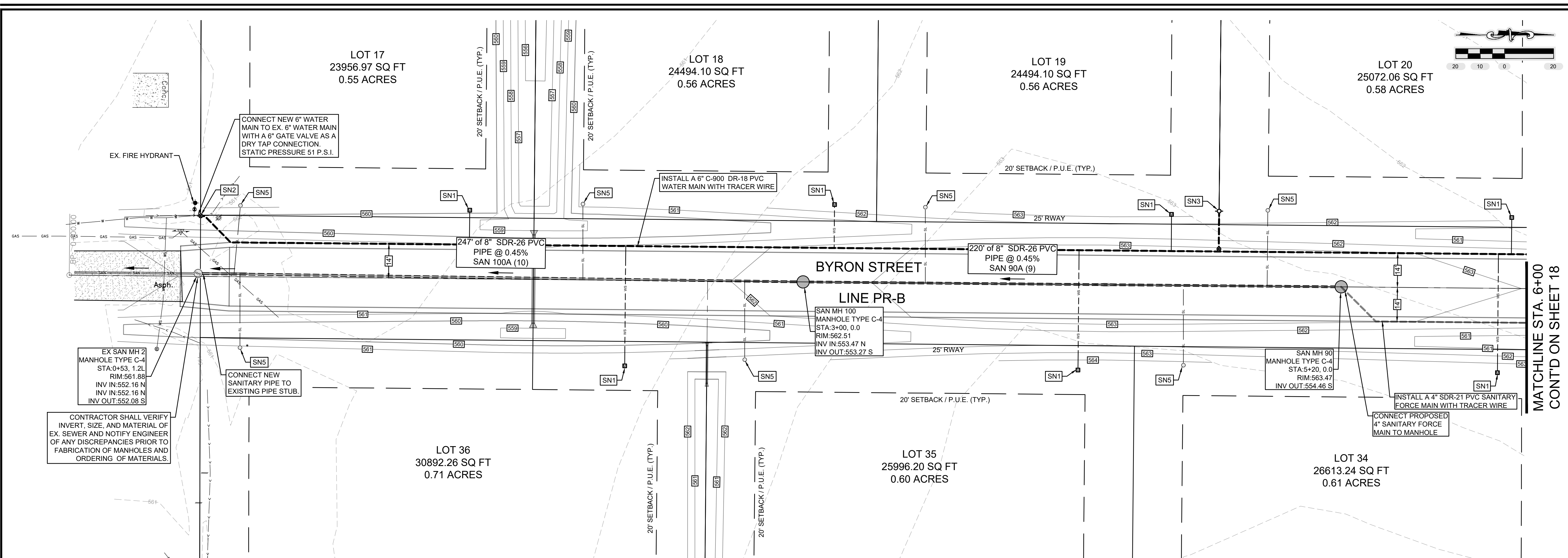
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O.C. CHECK  
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PROJECT NUMBER  
2022038-04

**7**  
7 OF 48

FILE NUMBER  
43921

HORIZ. SCALE: 1"=20'  
VERT. SCALE: 1"=10' LINE PR-B

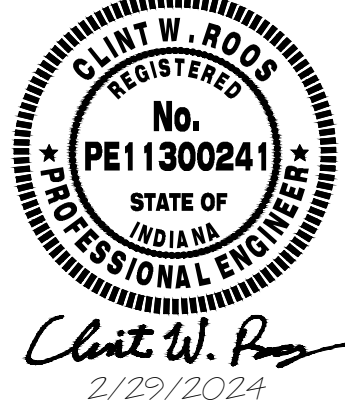
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 COLLECTION, AND WATER SYSTEM IMPROVEMENTS  
 FOR THE  
**CITY OF LOOGOOTE**  
 MARTIN COUNTY, INDIANA

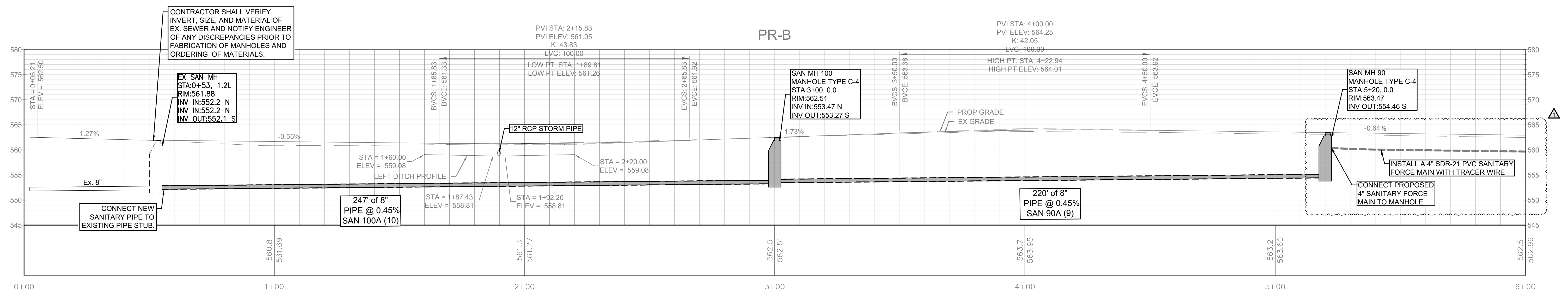
REVISIONS  
 3-25-2024



Clint W. Ross  
 2/29/2024

- SPECIAL NOTES:**
- SN1 INSTALL A NEW WATER METER AND 3/4" CTS DR-9 POLY SERVICE LINE
  - SN2 INSTALL A NEW GATE VALVE
  - SN3 INSTALL A NEW 3-WAY FIRE HYDRANT AND 6" GATE VALVE
  - SN4 INSTALL A 8"x6" REDUCER
  - SN5 INSTALL A NEW 6" SANITARY LATERAL AND CLEANOUT
  - SN6 INSTALL A SANITARY CLEANOUT

NOTE: CONTRACTOR SHALL USE EARTHWORK GENERATED WITH ROAD, UTILITY, AND DRAINAGE WORK TO GET LOTS PAD READY WHERE AVAILABLE. CONTRACTOR SHALL COORDINATE.



HORIZ. SCALE: 1"=20'  
 VERT. SCALE: 1"=10'  
**LINE PR-B**  
 SANITARY & WATER

**BID SET**

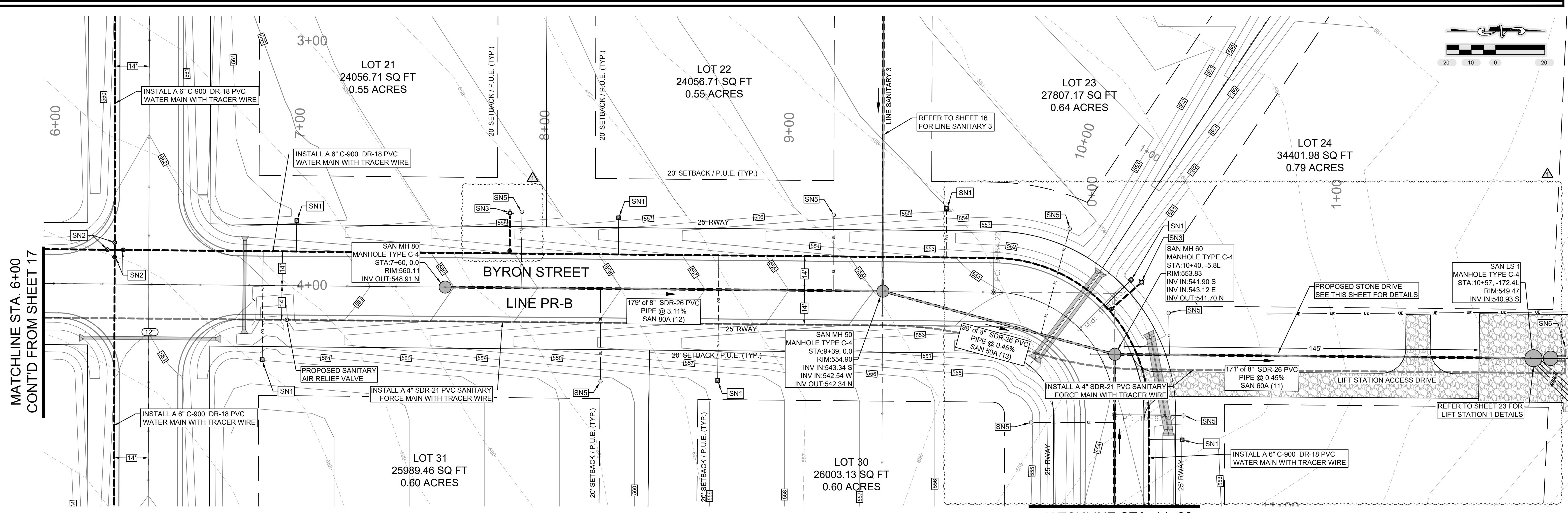
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 DESIGN  
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 RAB  
 PROJECT NUMBER  
 2022038-04

**17**  
 17 of 48

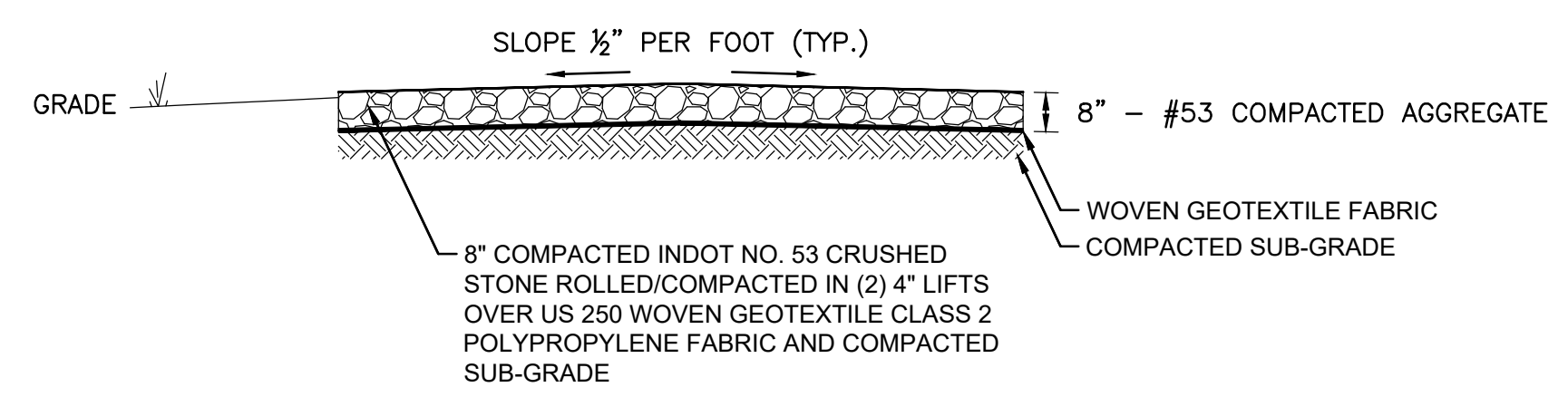
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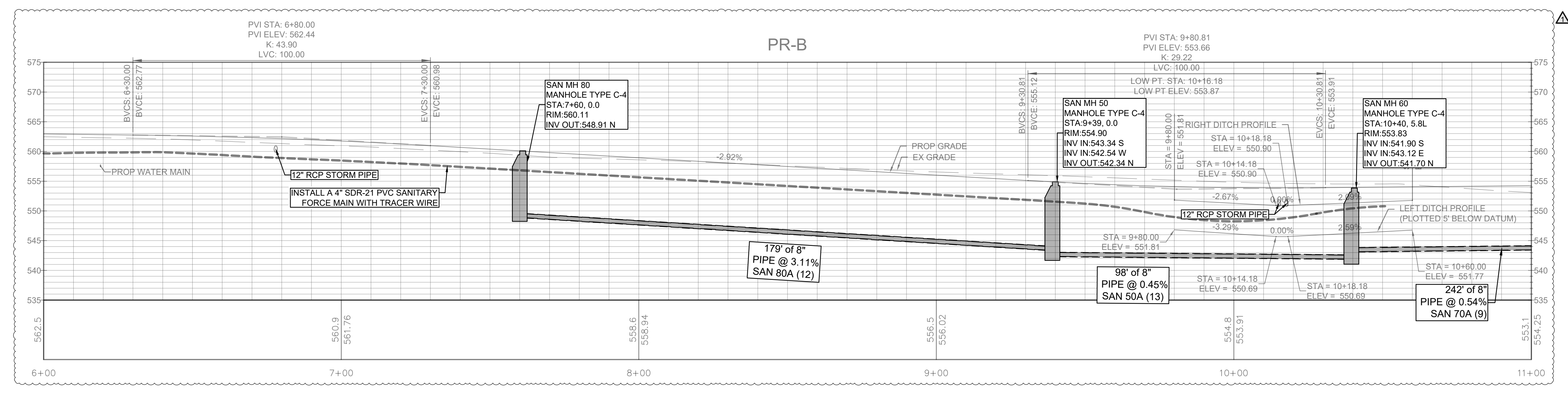
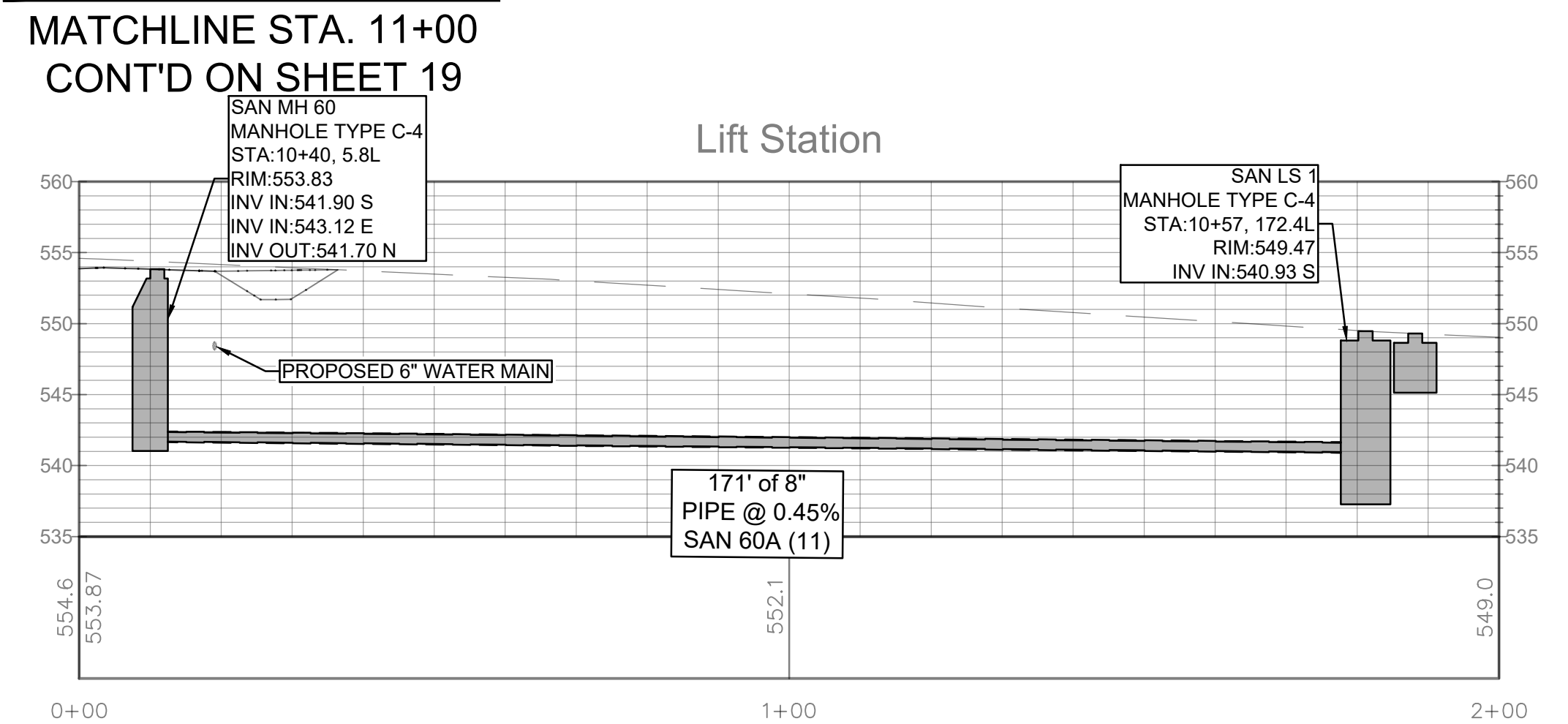


- SPECIAL NOTES:**
- SN1 INSTALL A NEW WATER METER AND 3/4" CTS DR-9 POLY SERVICE LINE
  - SN2 INSTALL A NEW GATE VALVE
  - SN3 INSTALL A NEW 3-WAY FIRE HYDRANT AND 6" GATE VALVE
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  - SN6 INSTALL A SANITARY CLEANOUT

NOTE: CONTRACTOR SHALL USE EARTHWORK GENERATED WITH ROAD, UTILITY, AND DRAINAGE WORK TO GET LOTS PAD READY WHERE AVAILABLE. CONTRACTOR SHALL COORDINATE.



**GRAVEL ACCESS DRIVE AND COMPACTED BASE DETAIL**  
 NOT TO SCALE



HORIZ. SCALE: 1"=20'  
 VERT. SCALE: 1"=10'

**LINE PR-B  
 SANITARY & WATER**

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 Consultants: Civil Mechanical Electrical

**CITY OF LOOGOOTEE**  
 FOR THE  
 COUNTRY COURT V SUBDIVISION  
 ROAD, STORM DRAINAGE, WASTEWATER  
 COLLECTION, AND WATER SYSTEM IMPROVEMENTS  
 MARTIN COUNTY, INDIANA

**REVISIONS**

3-25-2024	
-----------	--

**CLINT W. ROOS**  
 REGISTERED  
 No. PE11300241  
 STATE OF INDIANA  
 PROFESSIONAL ENGINEER  
 Clint W. Roos  
 2/29/2024

**BID SET**

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 DRK/BDH  
 Q.C. CHECK  
**RAB**  
 PROJECT NUMBER  
 2022038-04

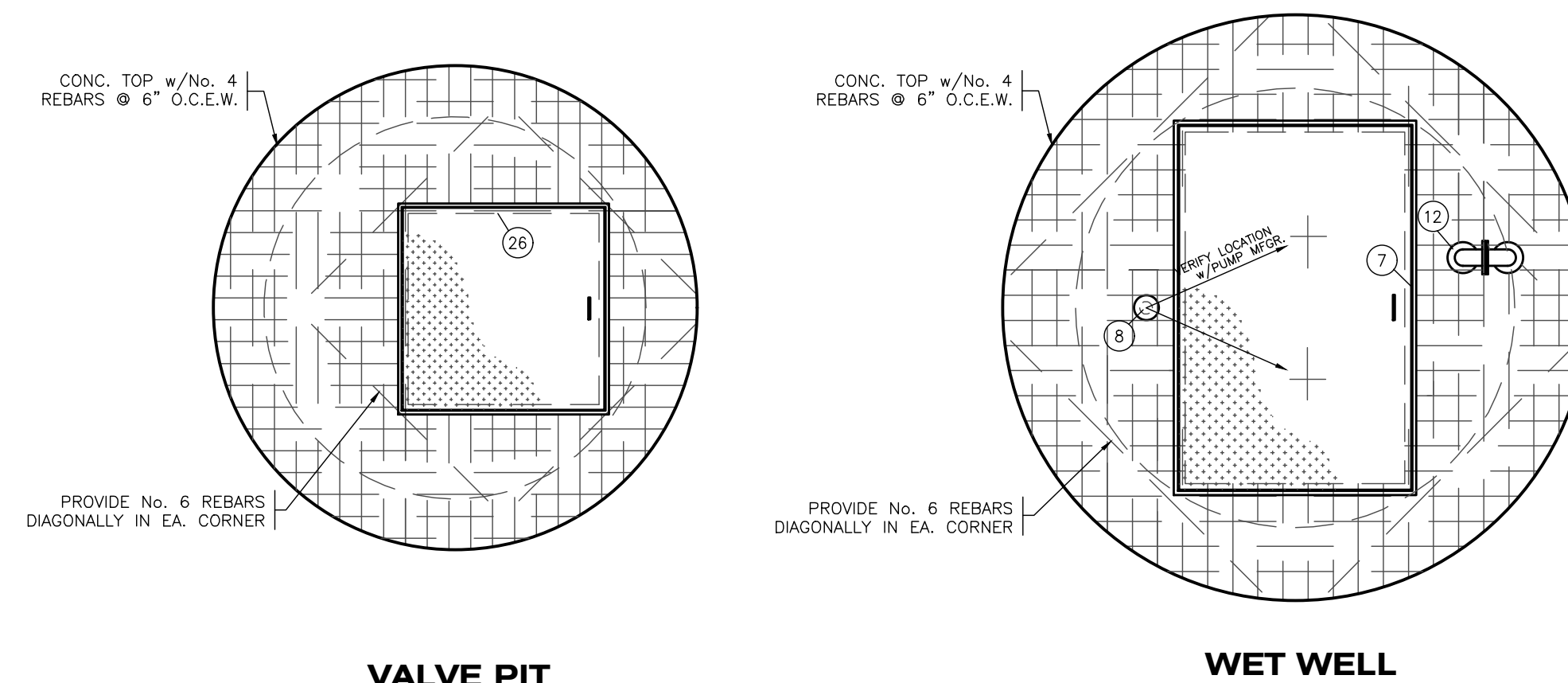
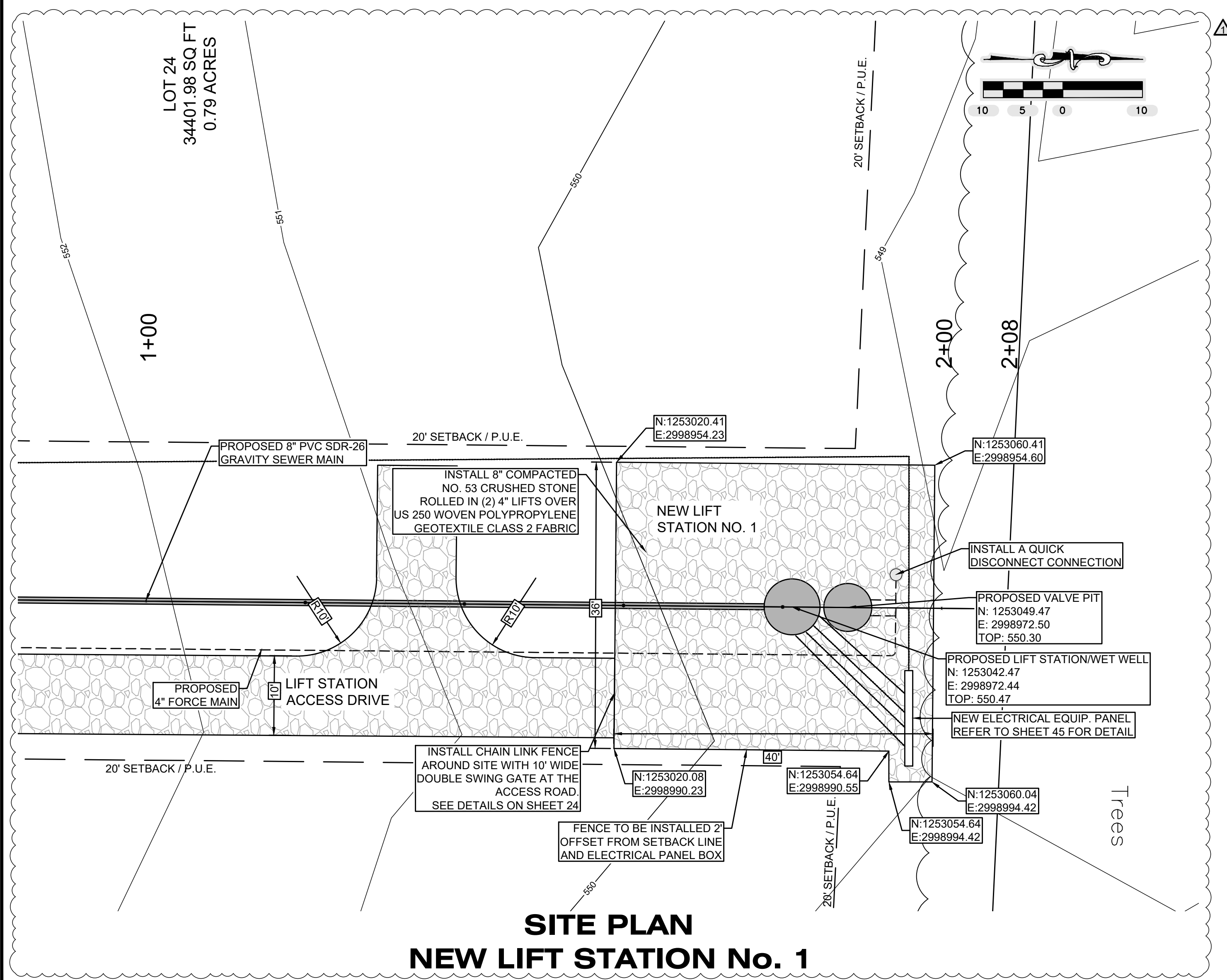
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 18 OF 48

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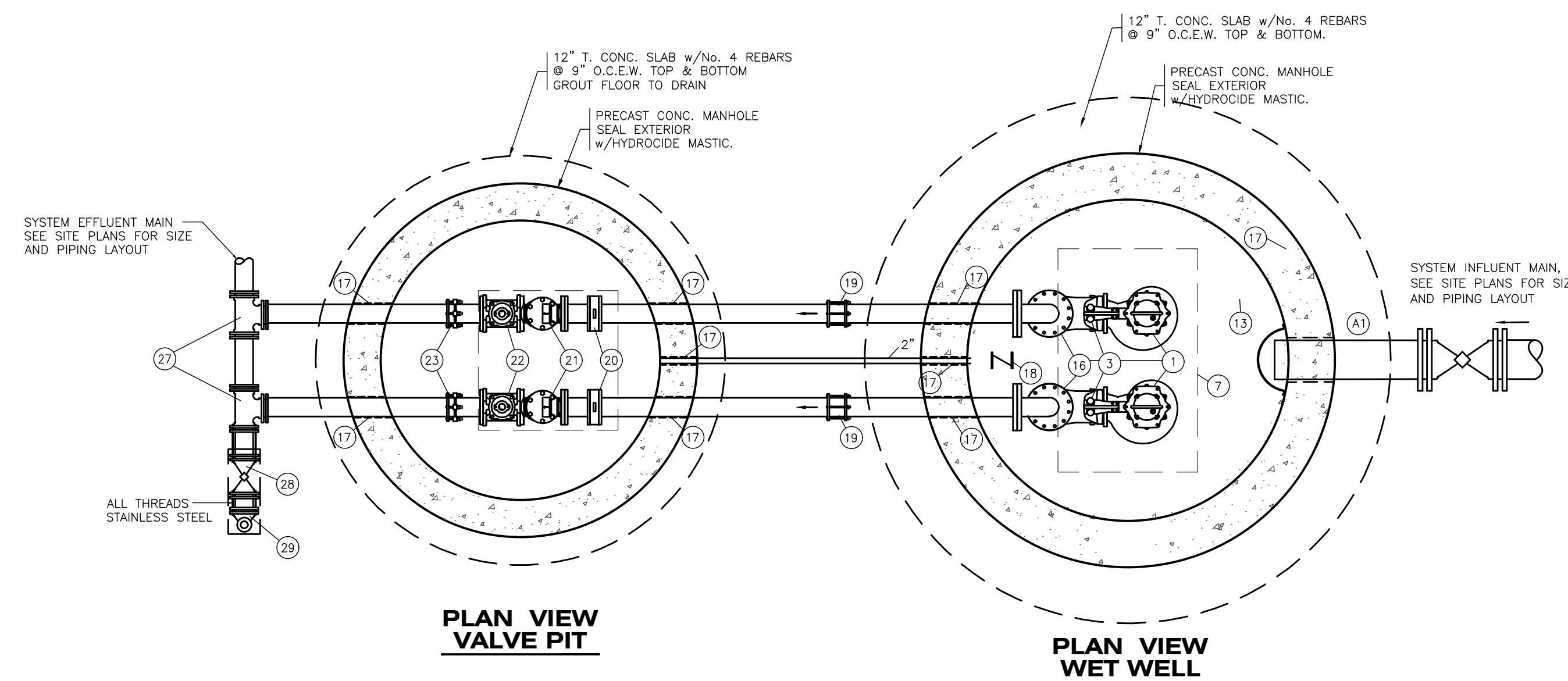
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LIFT STATION SCHEDULE					
Item	Symbol	Lift Station	Item	Symbol	Lift Station
<b>Mechanical Information</b>					
P.V.C. PIPE, SEWER INLET INVERT	A1	(8") 540.93	Pump Discharge	2	4"
ELEV. LAG PUMP ON IN EVENT OF LEAD PUMP FAILURE	B	539.45	(2) 2" 304 Stainless Steel Guide Rails per Pump	3	2 PER STATION
ELEV. LEAD PUMP ON	C	538.60	5/16" 304 Stainless Steel Lifting Chain per Pump	4	2 PER STATION
ELEV. LEAD PUMP OFF	D	538.10	Level Regulators	5	4 PER STATION
STATION BOTTOM ELEV.	E	536.60	Stainless Steel Cable Holder	6	1 PER STATION
TOP OF STATION ELEV.	F	550.47	Access Hatch, "Holiday Products" Series H2R7248 with Safety Gate	7	30"x48"
FINISH GRADE ELEV.	G	549.47			
HIGH WATER ALARM	H	540.45	Stainless Steel Socket w/Removable Cover and Anchor Embedded in Conc. Top for Portable Hoist	8	1 PER STATION
VALVE PIT BOTTOM ELEV.	I	543.50	"Holiday Products, Inc." Stainless Steel Adjustable Portable Hoist, D3B36B - Load Max 1330 lbs.	9	1
WET WELL - INSIDE DIAMETER (FT)		6'-0"	Electrical Conduit - see Electrical Plans for Cont.	11	
VALVE PIT - INSIDE DIAMETER (FT)		5'-0"	D.I. Vent Pipe	12	6"
PUMP MODEL - XYLEM FLYGT NP 3102 (2 REQUIRED)	1	*	Alum. Baffle, Bolt to Wall w/S.S. Inserts	13	
IMPELLER SIZE - MT ADAPTIVE 464		149	Not Used	14	
G.P.M.		81.7	D.I. Discharge Pipe, CL 350	15	4"
T.D.H.		26.0	D.I. 90° Bend	16	4"
R.P.M.		1755	Link-Seal Wall Sleeve and Wall Penetration Seal	17	
MAX. ELEV. TO PUMP OVER		558.00	2" P.V.C. Drain Line w/Backwater Check Valve	18	
STATIC		19.9	Dresser Coupling	19	4"
<b>Electrical Information</b>					
PUMP H.P.			"Red Valve Co." Series 40 Pressure Sensing Unit Benz-N-Flxible Cylinder w/Petcock Valve and 100 PSI Pressure Gauge	20	
CONNECTED H.P.			"Apco Valve" Series 100 Rubber Flapper Swing Check Valve W/Backflow Device	21	4"
VOLTAGE			"Vaivematic" Model No. 5800 EPT Coated Ballcentric Plug Valve w/Wrench Operated Adjustable Memory Stop	22	4"
PHASE			Flanged Coupling Adapter	23	4"
FUSED DIS. SIZE			Flange Support, Standon Model No. S89	24	2 PER STATION
WIRE SIZE			"Holiday Products" Alum. Wall/Floor Mounted Ladder Model No. L1D w/Safety Extension Model No. L1E	25	1 PER STATION
CONDUIT SIZE			"Holiday Products" Series S1S Alum Access Hatch w/Safety Gate	26	30"x30"
BARE CU. GND.			Mechanical Joint Tee	27	4"x4"x4"
EFFICIENCY			"Waterous Co." Resilient Wedge Gate Valve Series 500	28	4"
			Mechanical Joint 90° Bend (Regular or Reducing)	29	4"
			Mechanical Joint Plug Valve	30	4"

NOTE:  
REFER TO SHEET 18 FOR LIFT STATION 1  
PLAN AND PROFILE

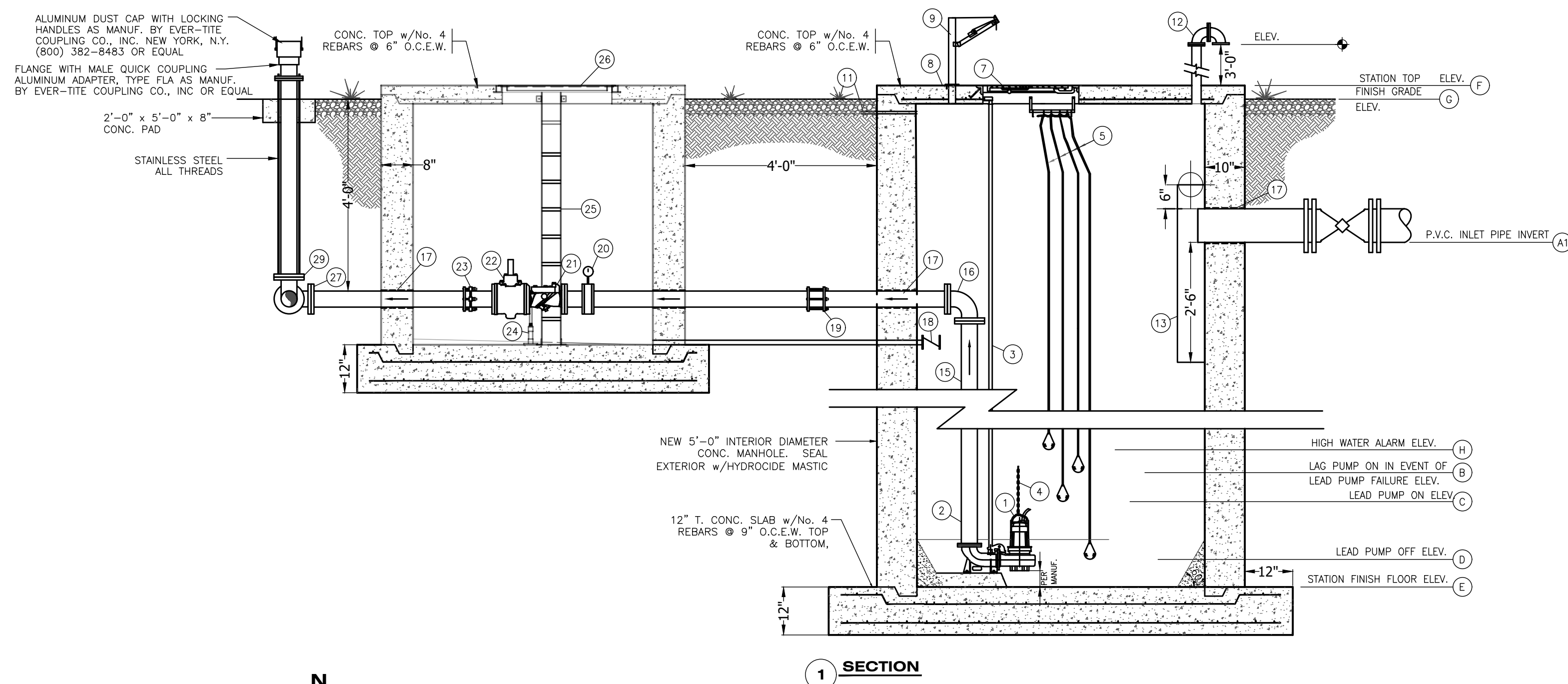


TOP REINFORCEMENT PLAN



PLAN VIEW VALVE PIT

PLAN VIEW WET WELL



SECTION 1

LIFT STATION No. 1 PLANS and DETAILS

SCALE: 1/2" = 1'-0"

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COUNTRY COURT V SUBDIVISION  
ROAD, STORM DRAINAGE, WASTEWATER  
COLLECTION, AND WATER SYSTEM IMPROVEMENTS  
FOR THE  
**CITY OF LOOGOOTE**  
MARTIN COUNTY, INDIANA

REVISIONS  
3-25-2024

CLINT W. ROOS  
REGISTERED  
No. PE11300241  
STATE OF INDIANA  
PROFESSIONAL ENGINEER  
Clint W. Roos  
2/29/2024

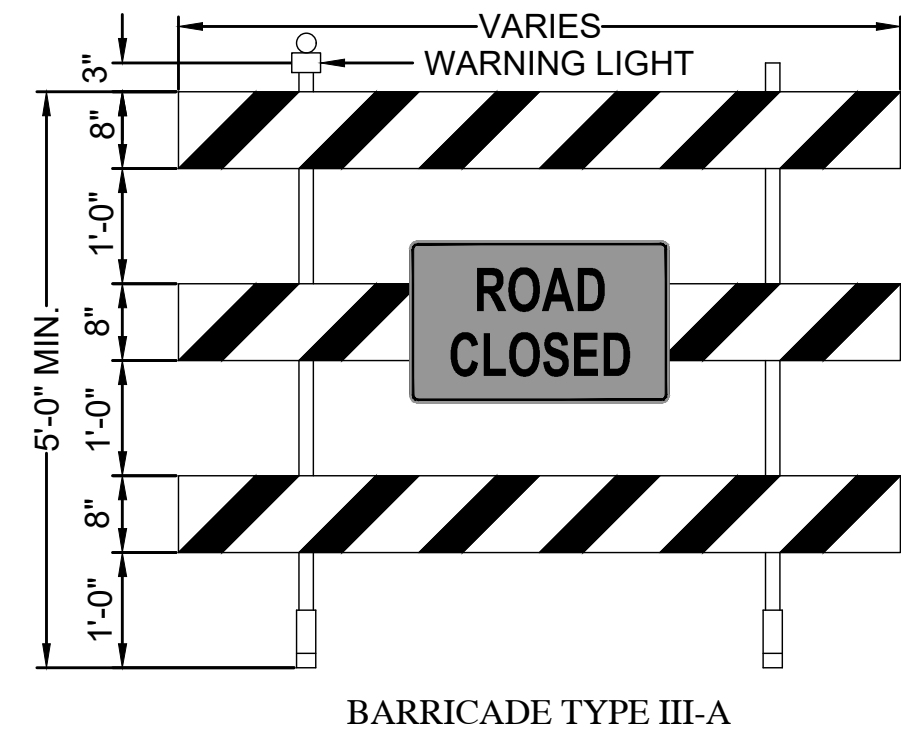
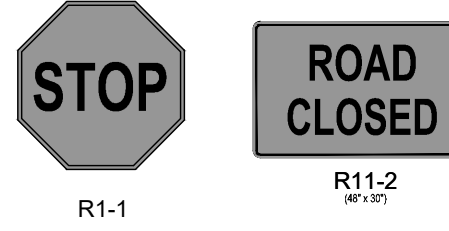
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**23**  
23 OF 48

LIFT STATION 1  
FILE NUMBER  
43905

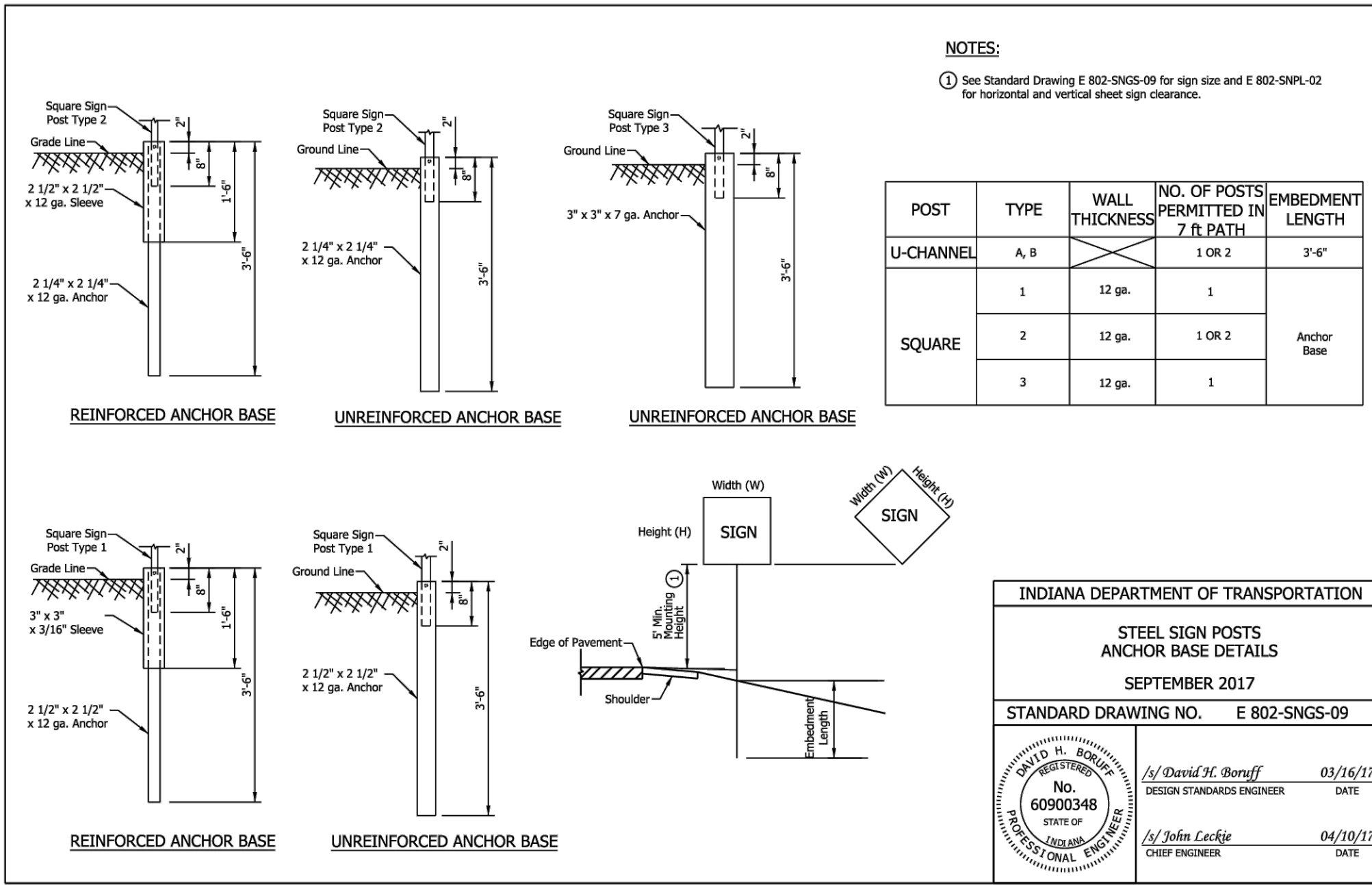
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BARRICADE TYPE III-A

SHEET SIGN & POST SUMMARY

PLAN SHEET NO. / LINE	SIGN LOCATION (STA.)	SIGN CODE	SIGN				POST			
			SIGN SIZE (IN. X IN.)	GROUND - MOUNTED SIGN AREA (ft <sup>2</sup> )			MOUNTED ON PANEL SIGN, AREA (ft <sup>2</sup> )	SQUARE		
				0.080"	0.100"	0.125"		2 1/2" X 2 1/2" - 12 GA. (TYPE 3) UNREINFORCED ANCHOR	POST LENGTH (FT.)	
PR-A	0+27	R11-2	48 X 30				1	2	TOTAL	
PR-A	6+79	R1-1	30 X 30				8		8	
PR-A	6+79	R1-1	30 X 30				8		8	
PR-B	0+45	R11-2	48 X 30							
PR-B	6+02	R1-1	30 X 30				8		8	
PR-B	6+76	R1-1	30 X 30				8		8	
PR-C	6+12	R1-1	30 X 30				8		8	
PR-D	0+37	R1-1	30 X 30				8		8	
PR-D	3+63	R1-1	30 X 30				8		8	
PR-D	4+37	R1-1	30 X 30				8		8	
PR-D	7+80	R1-1	30 X 30				8		8	
TYPE III-A BARRIER		53 L.F.								



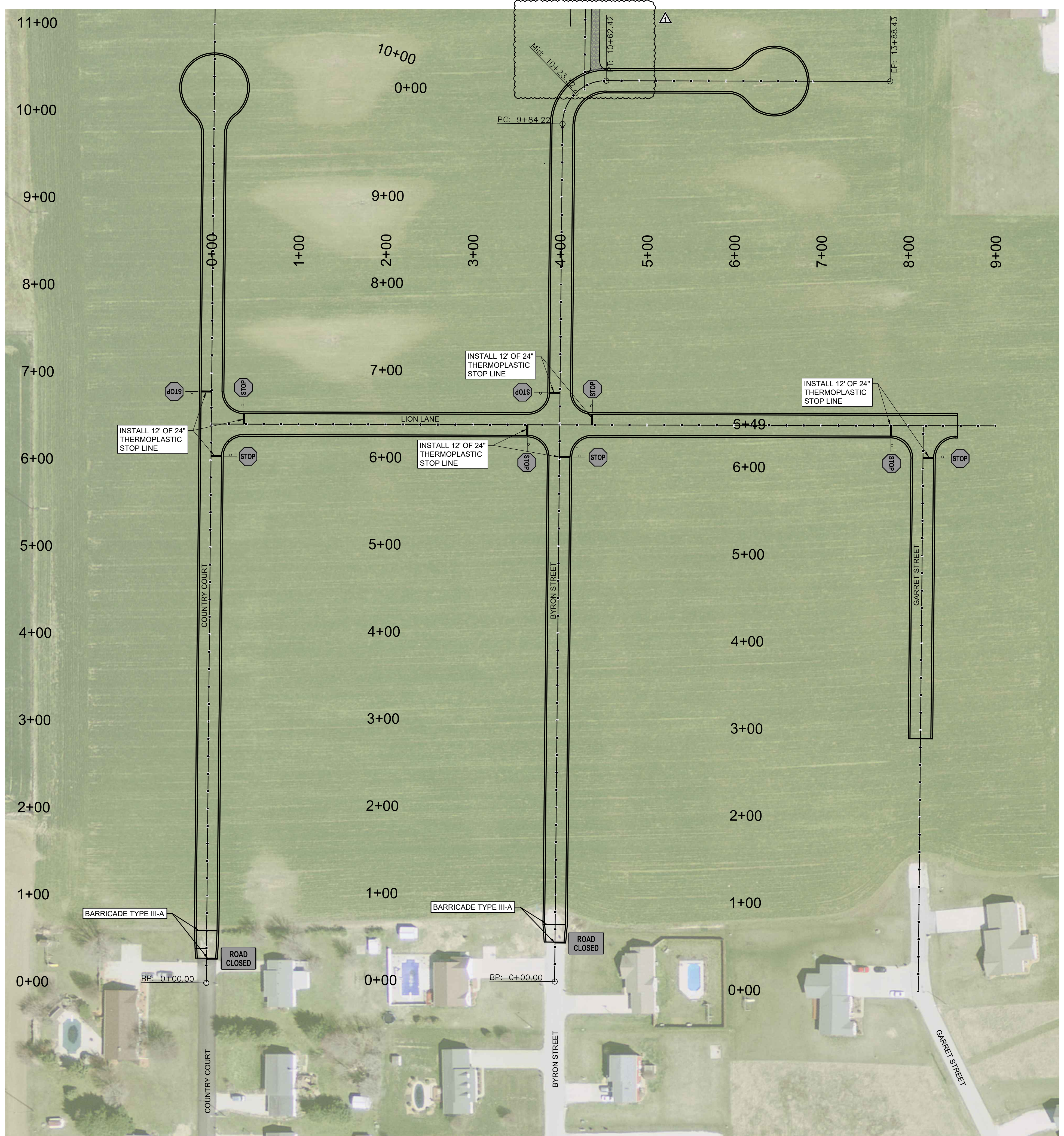
NOTES:  
 1 See Standard Drawing E 802-SNGS-09 for sign size and E 802-SNPL-02 for horizontal and vertical sheet sign clearance.

POST	TYPE	WALL THICKNESS	NO. OF POSTS PERMITTED IN 7 ft PATH	EMBEDMENT LENGTH
U-CHANNEL	A, B		1 OR 2	3'-6"
SQUARE	1	12 ga.	1	Anchor Base
	2	12 ga.	1 OR 2	
	3	12 ga.	1	

INDIANA DEPARTMENT OF TRANSPORTATION  
 STEEL SIGN POSTS ANCHOR BASE DETAILS  
 SEPTEMBER 2017  
 STANDARD DRAWING NO. E 802-SNGS-09

*David St. Bernuff* 03/16/17  
 DESIGN STANDARDS ENGINEER DATE

*John Leckie* 04/10/17  
 CHIEF ENGINEER DATE



SIGNAGE AND MAINTENANCE OF TRAFFIC

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 Website: [www.midwesternengineers.com](http://www.midwesternengineers.com)  
 Consultants: Civil Mechanical Electrical

COUNTRY COURT V SUBDIVISION  
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 MARTIN COUNTY, INDIANA

REVISIONS  
 3-25-2024

CLINT W. ROOS  
 REGISTERED PROFESSIONAL ENGINEER  
 No. PE11300241  
 STATE OF INDIANA  
 Clint W. Roos  
 2/29/2024

BID SET

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 P.O. Box 205  
 Loogootee, Indiana 47533

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 DRAWN: DRK/BDH  
 Q.C. CHECK: G.C.  
 RAB PROJECT NUMBER: 2022038-04

**32**  
 32 OF 48

FILE NUMBER: 43896

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**STRUCTURE DATA**

STRUCTURE NUMBER	LOCATION					DESCRIPTION MANHOLE, INLET, CATCH BASIN, OR SPECIALTY STRUCTURE AND TYPE	LENGTH LFT	VIDEO INSPECTION LENGTH LFT	SKEW	COVER		FLOW LINE		SUMP DEPTH IN.	TOP OF CASTING ELEV.	SERVICE LIFE YRS	SITE DESIGNATION	PH	BACKFILL METHOD	STRUCTURE BACKFILL TYPE 1 CYS	STRUCTURE BACKFILL TYPE 2 CYS	FLOWABLE BACKFILL TYPE 4 CYS	FLOWABLE BACKFILL TYPE 5 CYS	UNDERCUT					SCOUR PROTECTION			CONCRETE, CLASS A, FOR STR.	PIPE, REMOVE LFT	VIDEO INSPECTION LFT	PIPE END SECTION EA.	GRATED BOX END SECTION			SAFETY METAL END SECTION			CONNECT TO STR.	REMARKS																									
	STATION	LEFT	RIGHT	CROSS	OFFSET FT					PIPE TYPE	SIZE IN.	MIN FT	MAX FT											UP STREAM ELEV.	DOWN STREAM ELEV.	EXCAVATION CYS	COMPACTED AGGREGATE #5 IN. TONS	COMPACTED AGGREGATE #53 IN. TONS	GEOTEXTILES for COMPACTED AGGREGATE SYS	REVETMENT RIPRAP TONS	REVETMENT RIPRAP TONS					CLASS 1 RIPRAP TONS	SYS.	TONS	TONS	TONS	TONS			EA.	TYPE	SLOPE	EA.	TYPE	SLOPE	EA.																		
																																																			FT	IN.	ELEV.	TONS	TONS	TONS	TONS	TONS	TONS	TONS	TONS	TONS	TONS	TONS	TONS	TONS	TONS	TONS
<b>STORM SEWER</b>																																																																				
	0+78					12	2			0.0	1.3	554.00	553.83			50			1	5.64															0.85	2		STM 10																														
	2+22					12	2			0.0	1.3	554.50	554.31			50			1	8.35															0.51	2		STM 20																														
	2+22					12	2			0.0	1.3	554.50	554.31			50			1	8.35															0.51	2		STM 21																														
	2+58					8	2			0.0	2.7	554.64	554.54			50			1	7.11															0.47	2		STM 30																														
	4+22					8	2			0.0	3.5	555.45	555.36			50			1	10.34															0.34	2		STM 40																														
	6+22					12	2			0.0	1.3	558.99	558.81			50			1	8.05																0.5	2		STM 50																													
	0+34					8	2			0.0	1.5	560.07	560.02			50			1	3.68																0.31	2		STM 60																													
	2+49					8	2			0.0	3.1	560.73	560.65			50			1	8.64																0.3	2		STM 70																													
	5+17					12	2			0.0	1.1	561.65	561.47			50			1	7.4																0.5	2		STM 80																													
	0+22					12	2			0.0	1.2	556.90	556.50			50			1	10.34																	0.74	2		STM 90																												
	4+22					12	2			0.0	1.2	560.75	560.30			50			1	10.34																	0.83	2		STM 100																												
	6+78					12	2			0.0	1.2	560.00	559.80			50			1	7.73																	0.55	2		STM110																												
	10+15					12	2			0.0	2.0	550.90	550.71			50			1	11.36																	0.46	2		STM 120																												
	10+18					12	2			0.0	2.0	550.90	550.71			50			1	11.36																	0.46	2		STM 121																												
	10+54	X		21.0		15	2			0.0	0.6	551.83	551.64			50			1	6.78																0.5	2		STM 130																													
	10+54	x		23.0		15	2			0.0	0.6	551.83	551.64			50			1	6.9																0.5	2		STM 131																													
	0+80					12	2			0.0	5.5	545.36	544.21			50			1	27.35																	2.64	2		STM 140																												
<b>SANITARY SEWER</b>																																																																				
SAN MH 10	3+90			0.0		8	2			5.8	8.3	550.53	549.00			50			1	304.7																			EX SAN MH 1																													
SAN MH 20	5+80			0.0		8	2			8.4	9.5	549.52	544.54			50			1	434																				SAN MH 30																												
SAN MH 30	9+41			0.0		8	2			8.5	12.7	544.34	542.54			50			1	592.5																				SAN MH 50																												
SAN MH 40	10+50			0.0		8	2			6.4	8.4	545.08	544.54			50			1	128.4																				SAN MH 30																												
SAN MH 50	9+39			0.0		8	2			11.8	12.9	542.34	541.90			50			1	254.2																				SAN MH 60																												
SAN MH 60	10+40	X		5.8		8	2			7.8	12.0	541.70	540.93			50			1	267.4																				SAN LS 1																												
SAN MH 70	12+80			0.0		8	2			6.1	10.6	544.42	543.12			50			1	281.3																				SAN MH 60																												
SAN MH 80	7+60			0.0		8	2			9.7	11.9	548.91	543.34			50			1	313.1																				SAN MH 50																												
SAN MH 90	5+20			0.0		8	2			8.3	9.3	554.46	553.47			50			1	278.3																				SAN MH 100																												
SAN MH 100	3+00			0.0		8	2			7.7	9.1	553.27	552.16			50			1	288.4																				EX SAN MH 2																												
SAN MH 110	6+92			0.0		8	2			9.8	10.3	555.49	554.92			50			1	218.2																				SAN MH 120																												
SAN MH 120	6+49			0.0		8	2			8.9	13.4	554.72	551.08			50			1	570.2																				SAN MH 130																												
SAN MH 130	2+95			0.0		8	2			6.6	9.1	550.88	547.99			50			1	302.5																				EX SAN MH 3																												

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 Civil Mechanical Electrical

COUNTRY COURT V SUBDIVISION  
 ROAD, STORM DRAINAGE, WASTEWATER  
 COLLECTION, AND WATER SYSTEM IMPROVEMENTS  
 FOR THE  
**CITY OF LOOGOOTE**  
 MARTIN COUNTY, INDIANA

REVISIONS  
 3-25-2024

**CLINT W. ROOS**  
 REGISTERED  
 No.  
**PE11300241**  
 STATE OF  
 INDIANA  
 PROFESSIONAL ENGINEER  
*Clint W. Roos*  
 2/29/2024

**BID SET**

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 PROJECT NUMBER  
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**33**  
 33 OF 48

FILE NUMBER  
 43895

Author: DKOONTZ, Plot Date: 2/29/2024 8:33 AM  
 Path: Z:\CAD\INCOMPLETED\2022038-04\LOOGOOTE\COUNTRY COURT\_VISE\_PRODUCTION\DWG\33-4 STRUCTURE AND PIPE TABLES.DWG

Author: D:\0001\Z\_Plot Date: 2/25/2024 8:24 AM  
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STRUCTURE NUMBER		STM 10	STM 20	STM 21	STM 30	STM 40	STM 50	STM 60	STM 70	STM 80	STM 90	STM 100	STM 110	STM 120	STM 121	STM 130	STM 131	STM 140		
INT. DES.	PIPE TYPE / SHAPE (CIR or DEF)	CIR	CIR	CIR	CIR	CIR	CIR	CIR	CIR	CIR	CIR	CIR	CIR	CIR	CIR	CIR	CIR	CIR	CIR	
	SMOOTH PIPE SIZE		12	12			12			12	12	12	12	12	12	15	15			
	CORRUGATED PIPE SIZE																			
	SEMI-SMOOTH PIPE SIZE																			
CONC.	RCP/RCHP (S)		IV	IV			IV			IV	IV	IV	IV	IV	IV	IV	IV			
	CLASS		2000	2000			2000			2000	2000	2000	2000	2000	2000	2000	2000			
	D <sub>0.01</sub> RATING																			
	NON-REINFORCED CONCRETE PIPE, CLASS 3 (S)																			
PLASTIC PIPE	CORRUGATED PE PIPE, TYPE S (S)*																			
	PROFILE WALL (RIBBED) PE PIPE (S)*	12			8	8		8	8											12
	PROFILE WALL (CLOSED) PE PIPE (S)*																			
	SMOOTH WALL PE PIPE (S)* / MAXIMUM DR																			
CLAY	CORRUGATED PP PIPE (S)																			
	PROFILE WALL PVC PIPE (S)																			
	SMOOTH WALL PVC PIPE (S)*																			
	VITRIFIED CLAY PIPE, EXTRA STRENGTH (S)																			
CORRUGATED STEEL PIPE / PIPE-ARCH	FULLY BIT. PAVED & LINED (S)																			
	ZINC COATED (C)																			
	ZINC COATED W/ BPI (C)																			
	ALUM. COATED TYPE 2 (C)																			
COR. ALUM. PIPE / PIPE-ARCH	POLYMER PRECOATED GALVANIZED (C)																			
	POLYMER PRECOATED GALVANIZED																			
	CORRUGATED STEEL PIPE TYPE 1A (S)																			
	CORRUGATED ALUM. ALLOY (C)																			
SPIRAL RIB STEEL PIPE	CORRUGATED ALUM. ALLOY W/ BPI (C)																			
	ZINC COATED (SS)																			
	ZINC COATED W/ BPI (SS)																			
	ALUM. COATED TYPE 2 (SS)																			
STRUCTURAL PLATE PIPE / PIPE-ARCH	POLYMER PRECOATED GALVANIZED (SS)																			
	STR. PLATE ALUMINUM ALLOY (C)																			
	STR. PLATE ALUMINUM ALLOY W/ CFP (C)																			
	STR. PLATE STEEL (C)																			
STRUCTURAL PLATE PIPE / PIPE-ARCH	STR. PLATE STEEL W/ CFP (C)																			
	STR. PLATE STEEL W/ CFP (C)																			

STRUCTURE NUMBER		SAN 10	SAN 20	SAN 30	SAN 40	SAN 50	SAN 60	SAN 70	SAN 80	SAN 90	SAN 100	SAN 110	SAN 120	SAN 130
INT. DES.	PIPE TYPE / SHAPE (CIR or DEF)	CIR	CIR	CIR	CIR	CIR	CIR	CIR	CIR	CIR	CIR	CIR	CIR	CIR
	SMOOTH PIPE SIZE													
	CORRUGATED PIPE SIZE													
	SEMI-SMOOTH PIPE SIZE													
CONC.	RCP/RCHP (S)													
	CLASS													
	D <sub>0.01</sub> RATING													
	NON-REINFORCED CONCRETE PIPE, CLASS 3 (S)													
PLASTIC PIPE	CORRUGATED PE PIPE, TYPE S (S)*													
	PROFILE WALL (RIBBED) PE PIPE (S)*													
	PROFILE WALL (CLOSED) PE PIPE (S)*													
	SMOOTH WALL PE PIPE (S)* / MAXIMUM DR													
CLAY	CORRUGATED PP PIPE (S)	8	8	8	8	8	8	8	8	8	8	8	8	8
	PROFILE WALL PVC PIPE (S)													
	SMOOTH WALL PVC PIPE (S)*													
	VITRIFIED CLAY PIPE, EXTRA STRENGTH (S)													
CORRUGATED STEEL PIPE / PIPE-ARCH	FULLY BIT. PAVED & LINED (S)													
	ZINC COATED (C)													
	ZINC COATED W/ BPI (C)													
	ALUM. COATED TYPE 2 (C)													
COR. ALUM. PIPE / PIPE-ARCH	POLYMER PRECOATED GALVANIZED (C)													
	POLYMER PRECOATED GALVANIZED													
	CORRUGATED STEEL PIPE TYPE 1A (S)													
	CORRUGATED ALUM. ALLOY (C)													
SPIRAL RIB STEEL PIPE	CORRUGATED ALUM. ALLOY W/ BPI (C)													
	ZINC COATED (SS)													
	ZINC COATED W/ BPI (SS)													
	ALUM. COATED TYPE 2 (SS)													
STRUCTURAL PLATE PIPE / PIPE-ARCH	POLYMER PRECOATED GALVANIZED (SS)													
	STR. PLATE ALUMINUM ALLOY (C)													
	STR. PLATE ALUMINUM ALLOY W/ CFP (C)													
	STR. PLATE STEEL (C)													
STRUCTURAL PLATE PIPE / PIPE-ARCH	STR. PLATE STEEL W/ CFP (C)													
	STR. PLATE STEEL W/ CFP (C)													

**LEGEND**

**PIPE MATERIAL**

- RCP Reinforced Concrete Pipe
- RCHP Reinforced Concrete Horizontal Elliptical Pipe
- PE Polyethylene
- DR Dimension Ratio
- PVC Polyvinyl Chloride
- PP Polypropylene
- CORR Corrugation
- ALUM Aluminum
- STR Structural
- (LS) Lock Seam Pipe Required

**PIPE PROTECTION**

- BPI Bituminous Paved Invert
- CFP Concrete Field Paving
- BIT Bituminous

**SHAPE**

- CIR Circular Pipe
- DEF Deformed Pipe

**INTERIOR DESIGNATION**

- (S) Smooth Pipe Material
- (C) Corrugated Pipe Material
- (SS) Semi-Smooth Pipe Material

**PIPE SIZE**

Circular pipe is shown as diameter in inches  
 Deformed pipe is shown as area in square feet

\* Refer to Standard Drawings 715-PHCL-20 through -22 for nominal diameter appropriate for pay item diameter.

\*\* Tabulated

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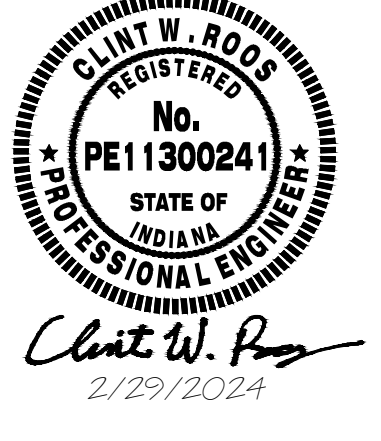
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FOR THE  
**CITY OF LOOGOOTE**  
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REVISIONS  
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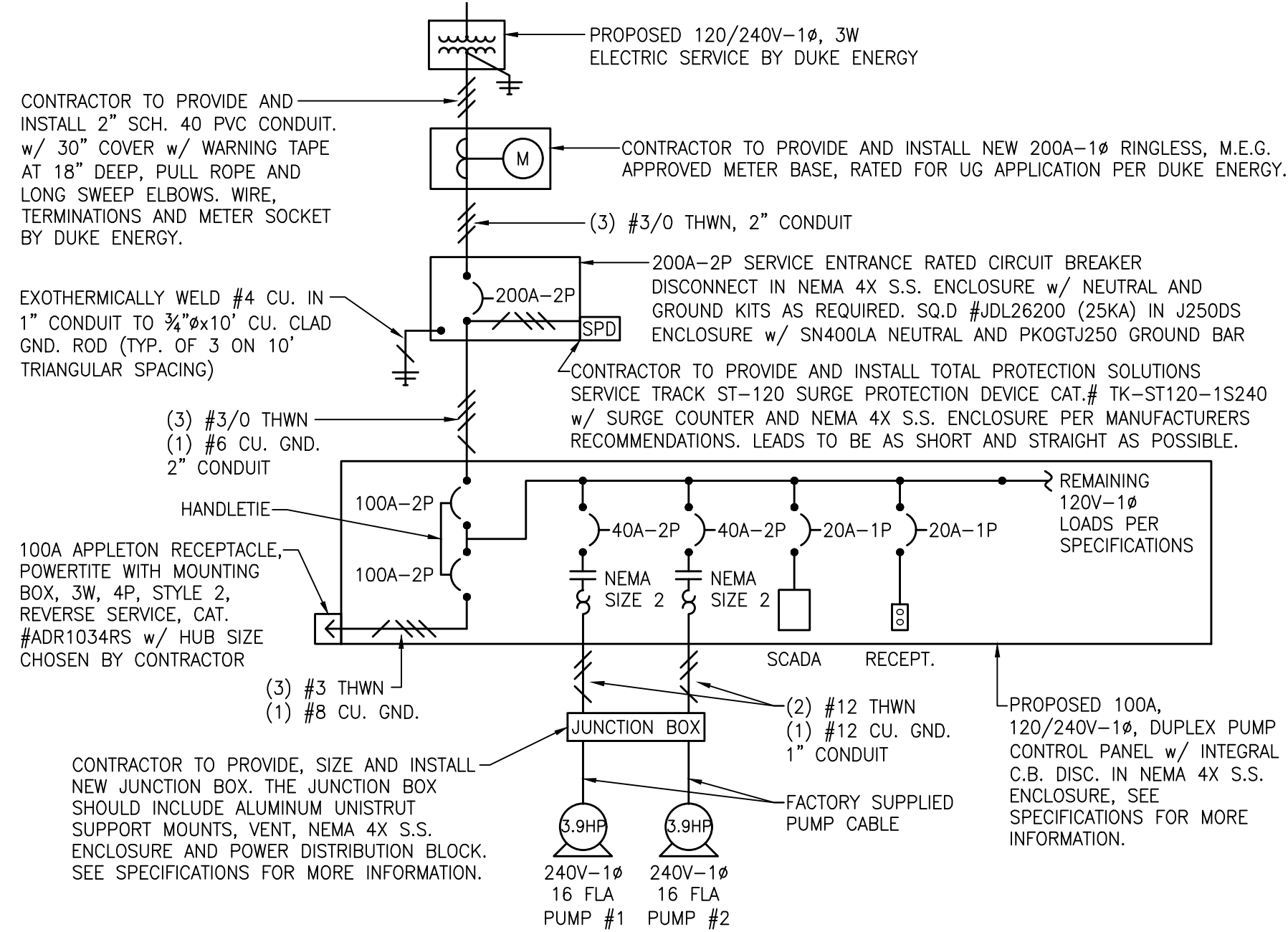
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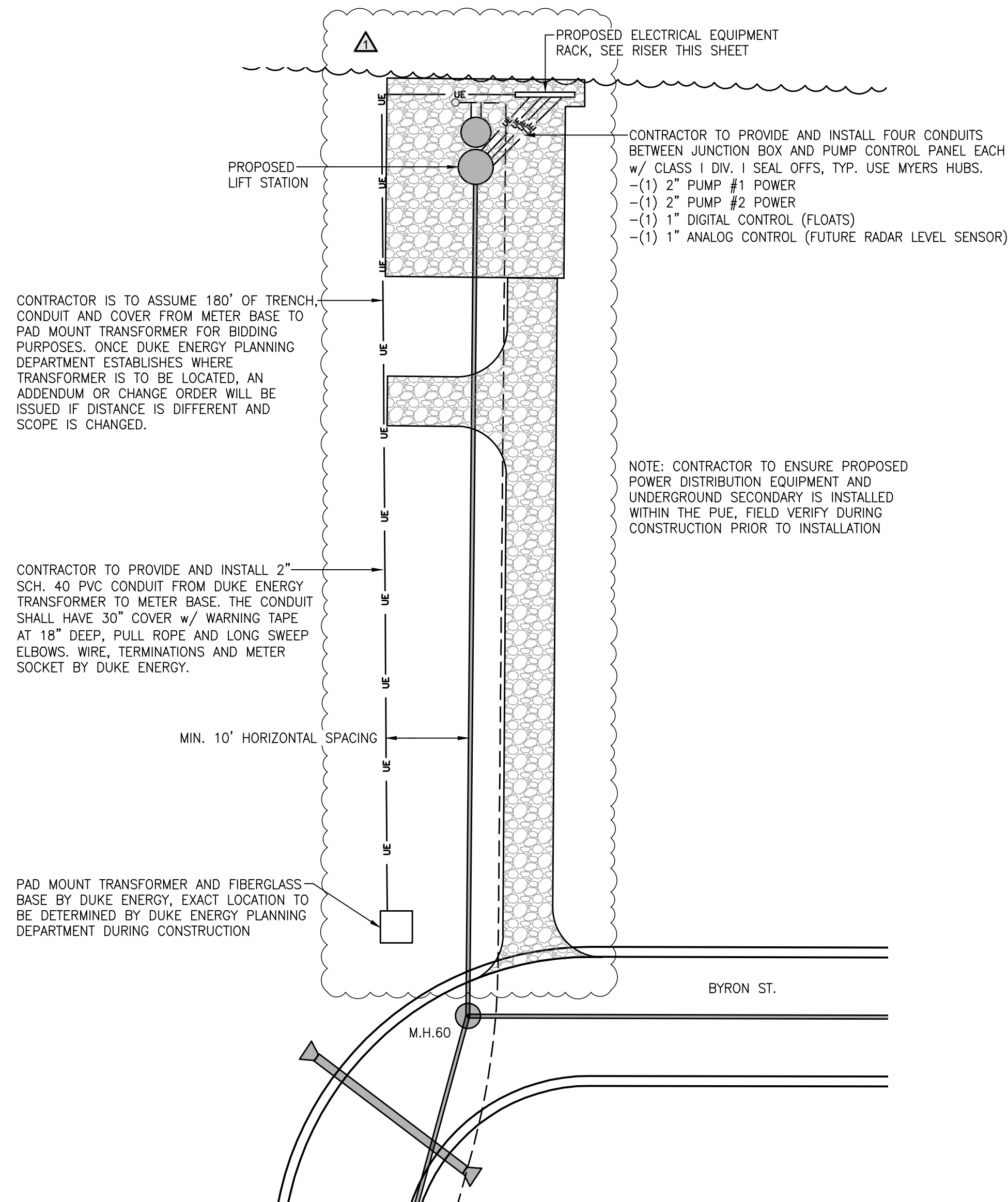
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**34**  
 34 of 48

FILE NUMBER  
 43894



**PROPOSED ONE LINE DIAGRAM**  
NOT TO SCALE



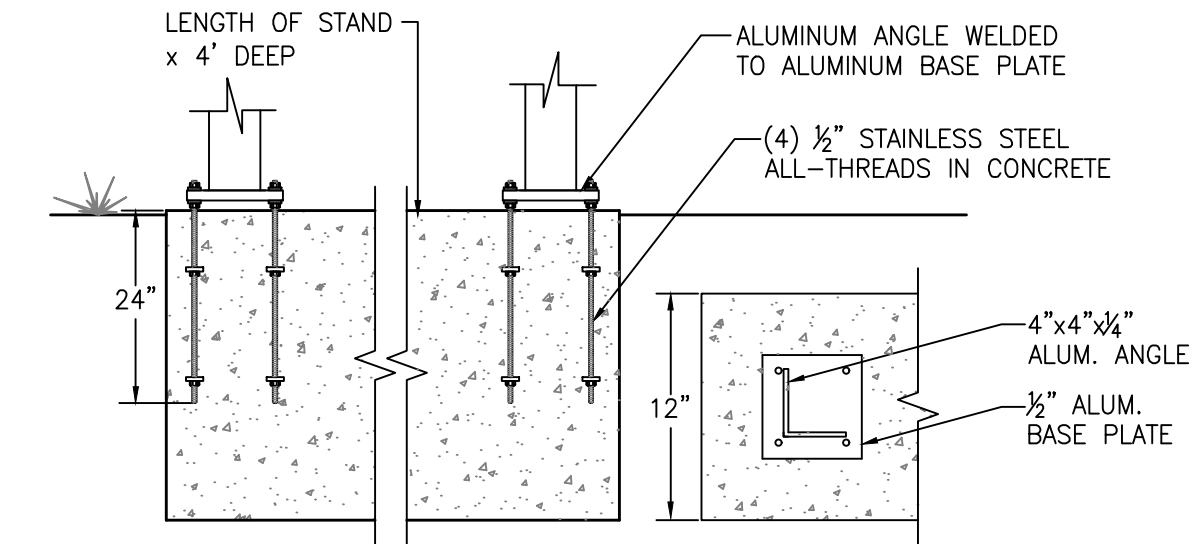
**LIFT STATION ELECTRICAL SITE PLAN**  
SCALE: 1" = 20'

**SCADA SYSTEM NOTES**

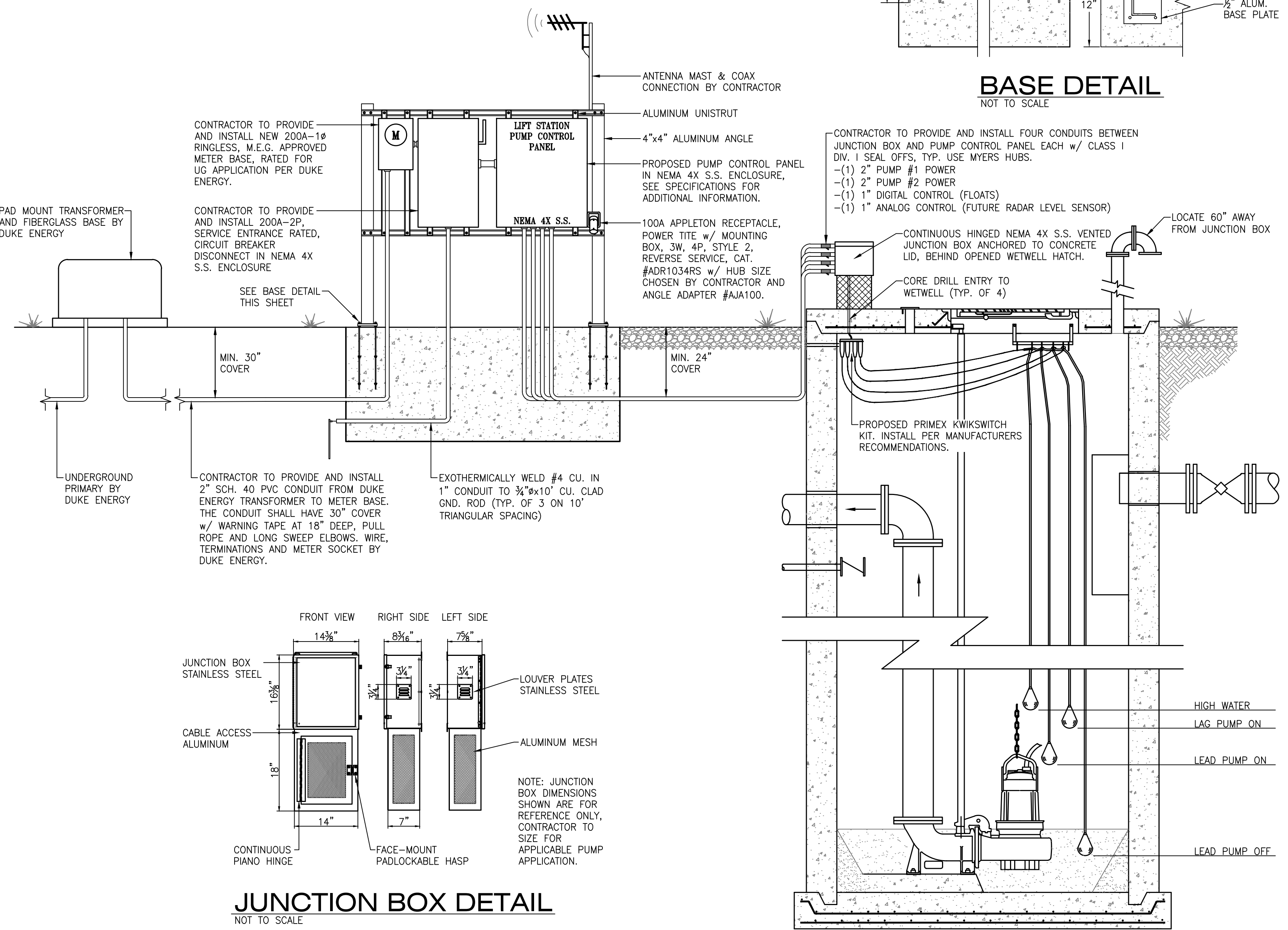
- CONTRACTOR SHALL UTILIZE OWNERS EXISTING CONTROL SYSTEM INTEGRATOR BY CONTACTING DONNIE QUALKENBUSH OF DEQ, INC. AT (812) 936-4415 FOR PRICING PRIOR TO BID.
  - A. TYPE 4X S.S. ENCLOSURE w/ STEEL BACKPLATE
  - B. CONTROL RELAYS
  - C. CONVENIENCE RECEPTACLE
  - D. DIGITAL DISPLAY
  - E. MOTOR CIRCUIT BREAKERS (2) 40A
  - F. NEMA SIZE 2 MOTOR STARTERS (2)
  - G. GENERATOR RECEPTACLE 100A
  - H. EMERGENCY C.B. w/ MECH. INTERLOCK 100A
  - I. MAIN CIRCUIT BREAKER 100A
  - J. TIME DELAY RELAY
  - K. PHASE MONITOR
- DIGITAL INPUTS
  - SITE POWER FAIL
  - RTU POWER FAIL
  - PUMP 1 RUNNING
  - PUMP 1 FAIL
  - PUMP 1 SEAL LEAK
  - PUMP 1 OVERTEMP
  - PUMP 2 RUNNING
  - PUMP 2 FAIL
  - PUMP 2 SEAL LEAK
  - PUMP 2 OVERTEMP
  - HIGH LEVEL
- DIGITAL OUTPUTS
  - PUMP 1 CALL
  - PUMP 2 CALL
- SEPARATE ALL POWER AND CONTROL, DIGITAL, ANALOG, ETHERNET AND FIBER INTO DEDICATED CONDUITS. MINIMUM COVER SHALL BE 24" w/ WARNING TAPE AT 12" UNLESS OTHERWISE REQUIRED BY NEC.

**GENERAL ELECTRICAL NOTES**

- ALL WORK SHALL COMPLY WITH INDIANA ELECTRICAL CODE, CURRENT EDITION.
- PROVIDE ALUMINUM UNI-STRUT AND ACCESSORIES AS REQUIRED TO MOUNT ELECTRICAL EQUIPMENT. ALL HARDWARE SHALL BE STAINLESS STEEL.
- ALL BURIED CONDUIT SHALL BE SCH. 80 PVC, ALL EXPOSED TO BE ALUMINUM UNLESS OTHERWISE NOTED. GROUT AROUND ALL PENETRATIONS INTO CONCRETE STRUCTURES.
- ALL ENCLOSURES SHALL BE NEMA 4X S.S. UNLESS OTHERWISE NOTED. ALL ENCLOSURES SHALL HAVE A HASP AND STAPLE FOR PADLOCK.
- ELECTRICAL CONTRACTOR SHALL BE RESPONSIBLE FOR ALL CONDUIT, WIRING, OTHER MATERIAL, AND INSTALLATION FOR A COMPLETE AND FUNCTIONAL SYSTEM.
- CONTRACTOR TO LOCATE ALL UNDERGROUND UTILITIES PRIOR TO EXCAVATION. SEED AND STRAW ALL SURFACES TO PRE-DISTURBED CONDITION.
- CONTRACTOR TO REMOVE UNUSED ELECTRICAL EQUIPMENT AS A RESULT OF THE PROJECT. OWNER RESERVES THE RIGHT TO ANY REMOVED EQUIPMENT. ANY UNWANTED EQUIPMENT, MATERIAL, CONDUCTORS, ETC. SHALL BE DISPOSED OF BY THE CONTRACTOR AT NO ADDITIONAL COST TO THE OWNER.
- ENSURE 5" MIN. BETWEEN WETWELL VENT AND JUNCTION BOX. LOCATE NEW JUNCTION BOX AT A MIN. OF 18" ABOVE TOP OF WELL.
- CONTRACTOR TO VERIFY CONDUIT SIZE BETWEEN JUNCTION BOX AND PUMPS IN WET WELL TO ACCEPT PUMP POWER CABLES (PER NEC), TYPICALLY USE LONG SWEEP ELBOWS.
- ALL UTILITY FEES WILL BE PAID BY OWNER IN FULL PRIOR TO CONSTRUCTION. CONTRACTOR TO CONTACT ADAM THORNE w/ DUKE ENERGY AT 812-318-3248 A MIN. OF THREE WEEKS PRIOR TO COORDINATE NEW SERVICE INSTALLATION. NOTIFY OWNER OF ALL REQUIRED OUTAGES A MIN. OF 48 HOURS IN ADVANCE.
- POWER FOR TEMPORARY BYPASS PUMPING SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR.
- CONTRACTOR TO VERIFY PROPOSED GENERATOR RECEPTACLE IS COMPATIBLE w/ OWNERS EXISTING PORTABLE GENERATOR PLUG PRIOR TO ORDERING. ONCE PROJECT IS COMPLETE OWNER TO BRING PORTABLE GENERATOR TO THE SITE FOR CONTRACTOR START UP, TESTING AND TRAINING OF BACKUP POWER CONNECTION.
- CONTRACTOR IS TO ASSUME 180' OF TRENCH, CONDUIT AND COVER FROM METER BASE TO PAD MOUNT TRANSFORMER FOR BIDDING PURPOSES. ONCE DUKE ENERGY PLANNING DEPARTMENT ESTABLISHES WHERE TRANSFORMER IS TO BE LOCATED, AN ADDENDUM OR CHANGE ORDER WILL BE ISSUED IF DISTANCE IS DIFFERENT AND SCOPE IS CHANGED.
- MAX. HEIGHT TO DISCONNECT HANDLE PER NEC.



**BASE DETAIL**  
NOT TO SCALE



**JUNCTION BOX DETAIL**  
NOT TO SCALE

**LIFT STATION ELECTRICAL RISER**  
NOT TO SCALE

Author: DKOONIZ, Plot Date: 2/25/2024, 8:41 AM  
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