

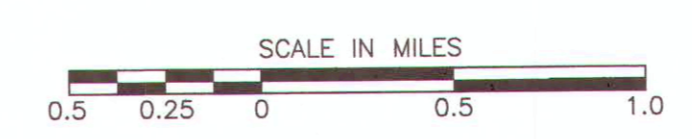
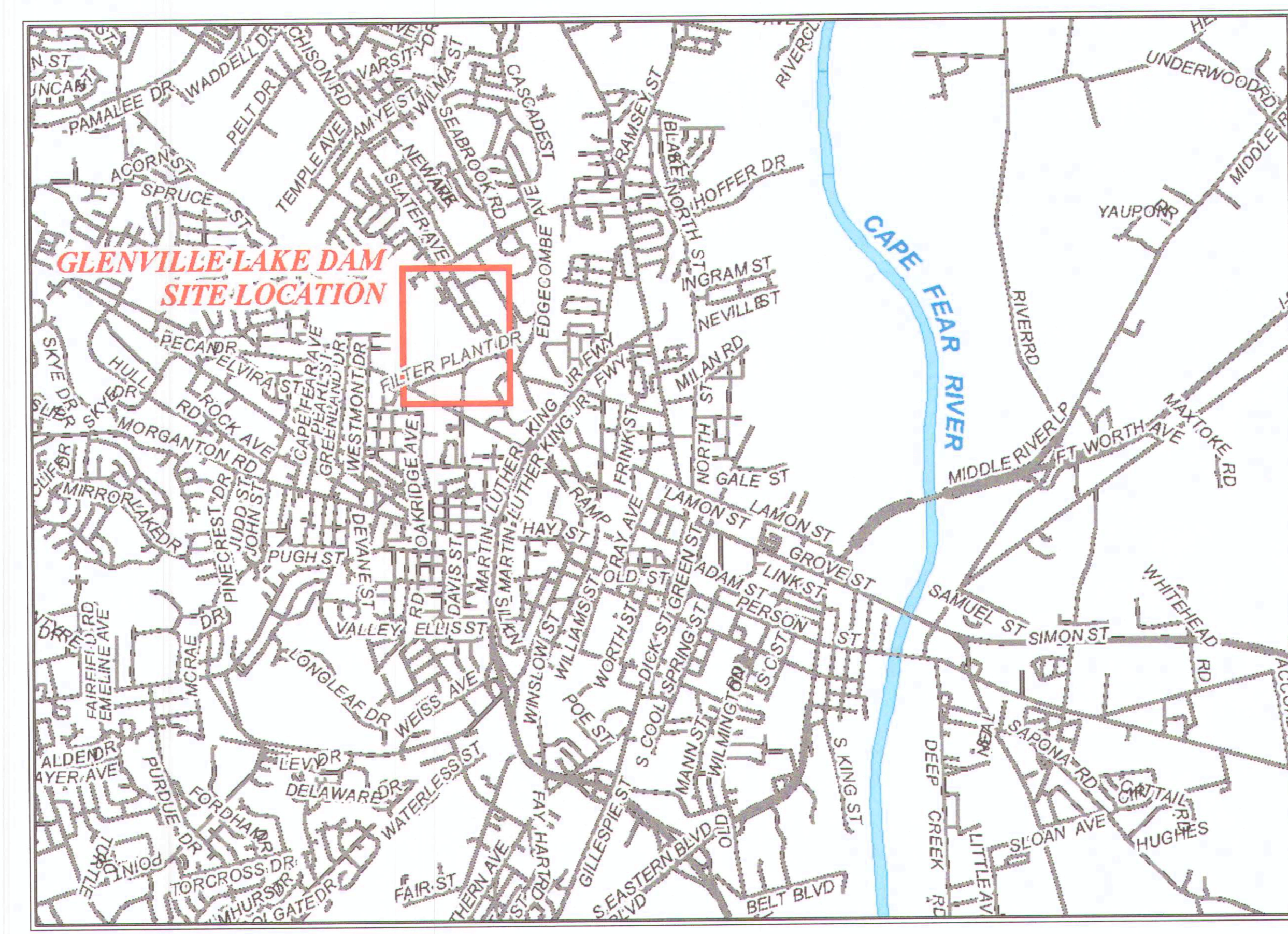


**PUBLIC WORKS COMMISSION  
OF THE CITY OF FAYETTEVILLE, NORTH CAROLINA**

**DEMOLITION AND DECOMMISSIONING  
OF FORMER WTP AT GLENVILLE LAKE DAM (CUMBE-038)**

CIVIL	ELECTRICAL
STRUCTURAL	

<b>PWC</b> FAYETTEVILLE PUBLIC WORKS COMMISSION	
Demolition and Decommissioning of Former WTP At Glenville Lake Dam (Cumbe-038)	
<input checked="" type="checkbox"/> ORIGINAL	<input type="checkbox"/> TAPS ONLY
<input type="checkbox"/> RECORD DRAWING	<input type="checkbox"/> MODIFICATION
WO # WT: N/A	WO # ST: N/A
WO # WD: N/A	WO # SD: N/A
ENG TECH: MEJ	PERMIT #: N/A
REVIEWED BY: JMM	DATE: 2/18/2022
DATE: 2/18/2022	DWG # DW-15608
WREP #:	# OF SHEETS: 37



LOCATION PLAN

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**BID SET  
FEBRUARY 2022**



**Camp Dresser McKee & Smith**  
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North Carolina State License Number: f-0412  
CDM Project No. 6384-231131



# ABBREVIATIONS

#	NUMBER
&	AND
Ø	DIAMETER
APPROX	APPROXIMATE
BLDG	BUILDING
C&G	CURB AND GUTTER
CFS	CUBIC FEET PER SECOND
CONC	CONCRETE
DET	DETAIL
DI	DUCTILE IRON
DIA	DIAMETER
DIM	DIMENSION
DISCH	DISCHARGE
DWG	DRAWING
EA	EACH
ELEV	ELEVATION
ELEC	ELECTRIC
EOP	EDGE OF PAVING
EQUIP	EQUIPMENT
ESMT	EASEMENT
EW	EACH WAY
EXIST	EXISTING
EXP	EXPANSION
EXT	EXTERIOR/EXTENDED
FES	FLARED END SECTION
FFE	FINISHED FLOOR ELEVATION
FIN	FINISH (ED)
FLG	FLANGE
FLR	FLOOR
FLEX	FLEXIBLE
FT	FOOT/FEET
FTG	FOOTING
GN	GROUND
GPD	GALLONS PER DAY
GPM	GALLONS PER MINUTE
GR	GRADE
GV	GATE VALVE
HDPPE	HIGH DENSITY POLYETHYLENE
HOR	HORIZONTAL
ID	INSIDE DIAMETER
IE	INVERT ELEVATION
IN	INCH (ES)
INV	INVERT
JT	JOINT
LB(S)	POUND (S)
LG	LONG
MATL	MATERIAL
MFD	MANUFACTURED
MFG	MANUFACTURING
MFR/MFGR	MANUFACTURER
MGD	MILLION GALLONS PER DAY
MH	MANHOLE
MIN	MINIMUM
MISC	MISCELLANEOUS
MTL	METAL
NEC	NATIONAL ELECTRIC CODE
NIC	NOT IN CONTRACT
NOM	NOMINAL
NTS	NOT TO SCALE
OC	ON CENTER
OD	OUTSIDE DIAMETER
OH	OVERHEAD UTILITIES
OPNG	OPENING
PERF	PERFORATED
PL	PROPERTY LINE
PP	POWER POLE
PS	PUMP STATION
PVC	POLYVINYL CHLORIDE
ROW	RIGHT OF WAY
RCP	REINFORCED CONCRETE PIPE
RD	ROAD
REINF	REINFORCING
REQ'D	REQUIRED
RW	RAW WATER
SCH	SCHEDULE
SD	STORM DRAIN
SEC	SECTION
SF	SILT FENCE
SHT	SHEET
S/W	SIDEWALK
SO	SQUARE
SS	SANITARY SEWER
SSMH	SANITARY SEWER MANHOLE
STA	STATION
STD/STND	STANDARD
TC	TOP OF CONCRETE
THK	THICK
TSP	TOP OF SHEETPILE
TW	TOP OF WALL
TYP	TYPICAL
UE	UNDERGROUND ELECTRIC
UNK	UNKNOWN
W	WIDTH
W/	WITH
WL	WATER LEVEL
WTP	WATER TREATMENT PLANT

# LEGEND

	EXISTING BUILDING/STRUCTURE
	PROPOSED INTERMEDIATE CONTOUR
	PROPOSED INDEX CONTOUR
	EXISTING INTERMEDIATE CONTOUR
	EXISTING INDEX CONTOUR
	EXISTING CONTROL POINT
	EXISTING BENCHMARK
	EXISTING PIEZOMETER
	ACCESS ROAD
	SHEETING
	EMBANKMENT SLOPES
	HORIZONTAL & VERTICAL CONTROL
	SANITARY SEWER
	SILT FENCE
	STORM DRAIN
	WATER LINE
	OVERHEAD UTILITIES
	UNDERGROUND ELECTRIC
	FENCELINE
	VEGETATION LINE
	LIMITS OF DISTURBANCE
	PROPOSED FILTER DRAIN
	PROPOSED UNDERDRAIN MONITORING/CLEANOUT MANHOLE
	TEST HOLE

	PROPOSED SANITARY SEWER MANHOLE
	EXISTING SANITARY SEWER MANHOLE
	EXISTING STORM DRAIN MANHOLE
	EXISTING CURB INLET
	EXISTING DROP INLET
	EXISTING YARD INLET
	EXISTING WATER VALVE
	EXISTING FIRE HYDRANT
	EXISTING WATER METER
	EXISTING POWER POLE
	EXISTING AREA LIGHT
	EXISTING ELECTRIC BOX
	EXISTING BOLLARD
	EXISTING MAILBOX
	EXISTING TELEPHONE PEDESTAL
	EXISTING SHRUBS AND BUSHES
	EXISTING DECIDUOUS TREE
	EXISTING CONIFEROUS TREE
	EXISTING SPOT ELEVATION

# GENERAL NOTES

ABBREVIATIONS ON THIS SHEET APPLY TO "G" AND "C" SHEETS.

WHERE NOTED, "RIGHT" AND "LEFT" CONVENTION SHALL BE CONSIDERED AS LOOKING DOWNSTREAM FROM THE SPILLWAY/DAM.

**UTILITIES**

UTILITIES ARE ILLUSTRATED FOR INFORMATION PURPOSES ONLY. THE ENGINEER WILL NOT BE HELD RESPONSIBLE FOR THE ACCURACY OF UTILITY LOCATIONS, SIZES, AND DEPTHS, OR FOR COMPLETENESS OF UTILITY INFORMATION.

PRIOR TO CONSTRUCTION, THE CONTRACTOR SHALL NOTIFY ALL UTILITY OWNERS WHOSE FACILITIES WILL BE AFFECTED TO DETERMINE UTILITY LOCATIONS. THE CONTRACTOR SHALL PROTECT ALL UTILITIES FROM DAMAGE CAUSED BY HIS OPERATIONS OR THOSE OF HIS AGENTS. THE CONTRACTOR SHALL HOLD THE CITY HARMLESS FOR ANY THIRD-PARTY INCONVENIENCE CREATED BY WORK OF HIS OWN FORCES OR THAT OF HIS AGENTS.

- FOR UTILITY LOCATIONS CALL NORTH CAROLINA 811 @ 1-800-632-4949.
- FOR LOCATION OF UTILITIES NOT MEMBERS OF NORTH CAROLINA 811, CONTACT UTILITY OWNER.

## GRASSED SURFACE RESTORATION:

ALL EXISTING GRASSED AREAS DISTURBED DURING CONSTRUCTION ARE TO BE SODDED PER THE SPECIFICATIONS UNLESS OTHERWISE INDICATED ON THE DRAWINGS OR AS DIRECTED BY THE ENGINEER.

## EROSION AND SEDIMENTATION CONTROL:

THE CONTRACTOR SHALL MAINTAIN EROSION AND SEDIMENT CONTROL DEVICES IN ACCORDANCE WITH ALL FEDERAL, STATE AND LOCAL REQUIREMENTS AND PREVENT ANY STANDING WATER DUE TO CONSTRUCTION. ALL DISTURBED AREAS SHALL BE STABILIZED IN ACCORDANCE WITH THE DRAWINGS (C-9 AND C-10) AND SPECIFICATIONS. ALL REPORTING, INSPECTING, AND RECORD KEEPING IS THE RESPONSIBILITY OF THE CONTRACTOR.

## CONSTRUCTION EQUIPMENT

CONSTRUCTION EQUIPMENT SHALL BE OF A TYPE AND SIZE THAT WILL MINIMIZE DAMAGE TO SURROUNDING AREAS, PAVEMENT, TREES, UTILITIES, AND OTHER FEATURES DURING CONSTRUCTION.

## TREES, SHRUBS, AND HEDGES

THE CONTRACTOR SHALL REMOVE ALL TREES, SHRUBS, AND ROOT BALLS FROM THE DAM AND ABUTMENTS IN THE AREA OF REGRADING ONLY.

THE CONTRACTOR SHALL PROTECT ALL TREES AND SHRUBS OUTSIDE OF CUT/FILL LINES, IN ADDITION TO THOSE THAT RECEIVE TREE/SHRUB PROTECTION BARRIERS. THE CONTRACTOR IS ALSO TO SAVE ALL OTHER EXISTING TREES AND SHRUBS WHERE POSSIBLE.

WHEN ROOT PRUNING IS NECESSARY, CUT ROOTS CLEANLY USING A DISC TRENCHER AND IMMEDIATELY COVER ALL ROOT CUT SURFACES, LARGER THAN TWO INCHES IN DIAMETER, WITH TREE WOUND DRESSING. USE PLYWOOD FORMS WHEN TREE ROOTS ARE ADJACENT TO PROPOSED CURB & GUTTER OR SIDEWALK.

## CONSTRUCTION LIMITS

PROJECT LIMITS ARE DEFINED ON THE CONSTRUCTION DRAWINGS. THE CONTRACTOR SHALL LIMIT ALL DISTURBANCE TO WITHIN THE CONSTRUCTION LIMITS.

## CONSTRUCTION ACCESS

PERMITS AND BONDS WILL BE REQUIRED FOR THE USE OF AMES STREET AND FILTER PLANT DRIVE. CONTRACTOR SHALL BE RESPONSIBLE FOR COORDINATING AND PAYING FOR ALL PERMITS/BONDS FOR AMES STREET AND FILTER PLANT DRIVE WITH THE CITY OF FAYETTEVILLE. CONTRACTOR SHALL ALSO BE RESPONSIBLE FOR OBTAINING AND PAYING FOR THE PERMITS/BONDS ON ANY OTHER ROADS ALONG CONSTRUCTION ROUTE, IF REQUIRED.

CONSTRUCTION ACCESS FOR ALL VEHICLES LARGER THAN 10,000 LBS WILL BE FROM AMES STREET. CONTRACTOR SHALL INSTALL GATE AND CONSTRUCTION ACCESS. CONTRACTOR SHALL SHALL USE FLAGMEN ON AMES STREET FOR TRAFFIC ENTERING AND LEAVING THE SITE. CONTRACTOR SHALL SECURE GATE AT THE END OF EACH WORK DAY.

# DRAWING, SECTION AND DETAIL TITLES

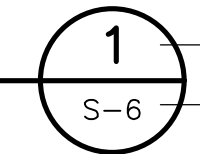
SUBTITLE OR DESCRIPTION (AS REQ'D)

## PLAN

1" = 20'  
(VARIES)

## SECTION

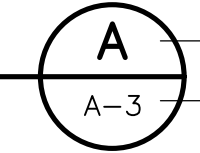
1/8" = 1'-0"



SECTION NUMBER  
SHEET WHERE SECTION CUT IS TAKEN \*

## DETAIL

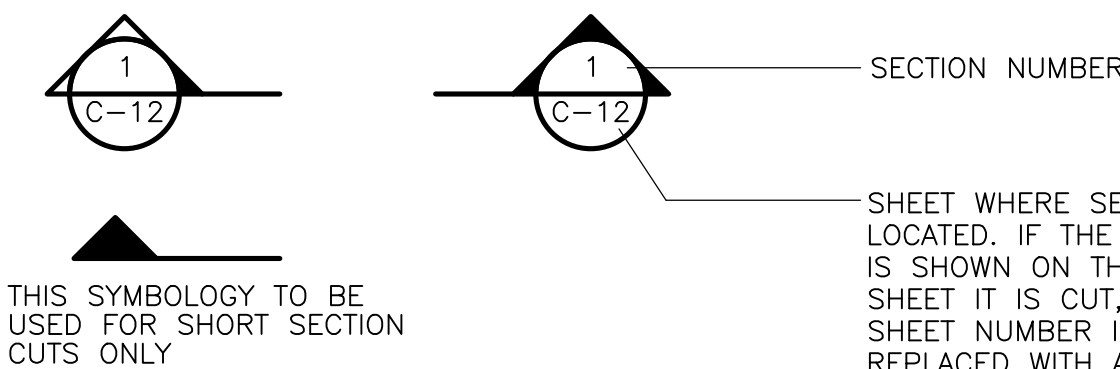
1/4" = 1'-0"



DETAIL LETTER  
SHEET WHERE DETAIL IS TAKEN \*

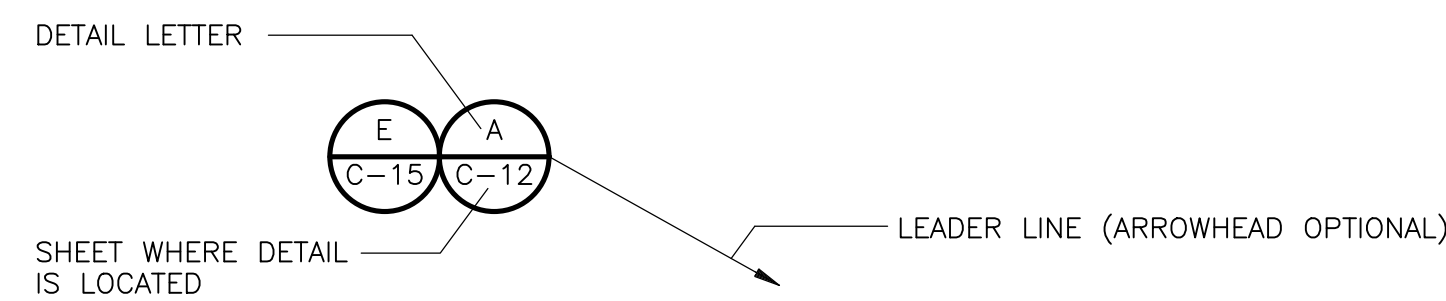
\* IF SECTION, DETAIL OR DIAGRAM IS DRAWN ON THE SAME SHEET THAT IT IS TAKEN FROM, THE SHEET NUMBER IS REPLACED WITH A HYPHEN. IF THE SECTION IS REFERENCED ON MULTIPLE SHEETS, THE SHEET NUMBER SHOWN INDICATES THE FIRST SHEET THE SECTION IS TAKEN FROM.

# SECTION CUT SYMBOLS

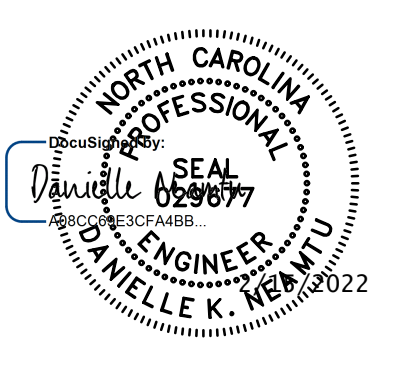


SHEET WHERE SECTION IS LOCATED. IF THE SECTION IS SHOWN ON THE SAME SHEET IT IS CUT, THE SHEET NUMBER IS REPLACED WITH A DASH.

# DETAIL CALL OUT SYMBOLS



WHERE A NOTE IS REQUIRED FOR CLARITY, A/C-12 FORMAT IS USED IN THE NOTE INSTEAD OF BUBBLE. IF MULTIPLE DETAILS REFER TO THE SAME AREA OF THE DRAWING, THE BUBBLES ARE STACKED SIDE BY SIDE.



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DESIGNED BY:	R. NAGEL
DRAWN BY:	R. BOGGS
SHEET CHK'D BY:	D. NEAMTU
CROSS CHK'D BY:	R. NAGEL
APPROVED BY:	D. NEAMTU
DATE:	FEBRUARY 2022

PUBLIC WORKS COMMISSION OF FAYETTEVILLE  
**DEMOLITION AND DECOMMISSIONING OF FORMER WTP  
 AT GLENVILLE LAKE DAM (CUMBE-038)  
 FAYETTEVILLE, NC**

**GENERAL NOTES**

SHEET NO.  
**G-1**

PROJECT NO.	6384-231131
FILE NAME:	GO01GNFG.DWG
SHEET NO.	G-1



# CONSTRUCTION SEQUENCE

1. NOTIFY THE PERMITTING AGENCY (DEMLR, FAYETTEVILLE REGIONAL OFFICE) AT 910-433-3300 AT LEAST 48 HOURS PRIOR TO ANY LAND-DISTURBING ACTIVITIES AND HOLD PRE-CONSTRUCTION CONFERENCE PRIOR TO STARTING CONSTRUCTION.
2. OBTAIN ALL PERMITS NEEDED FOR THE WORK. EROSION AND SEDIMENTATION CONTROL PERMIT AND STORMWATER NPDES CERTIFICATE OF COVERAGE (COC) MUST BE OBTAINED BEFORE LAND-DISTURBING ACTIVITIES OCCUR. THE COC CAN BE OBTAINED BY FILLING OUT THE ELECTRONIC NOTICE OF INTENT (ENOI) FORM AT DEQ.NC.GOV/NGO1. PLEASE NOTE, THE ENOI MAY BE FILLED OUT ONLY AFTER THE EROSION AND SEDIMENTATION CONTROL PLAN HAS BEEN APPROVED.
3. KEEP A COPY OF THE EROSION AND SEDIMENTATION CONTROL PERMIT, APPROVED PLANS, AND THE COC AT THE SITE IN AN ACCESSIBLE PERMITS BOX THROUGHOUT THE CONSTRUCTION DURATION.
4. IDENTIFY SITE ACCESS, LIMITS OF DISTURBANCE (LOD), AND STOCKPILE AREA WITHIN THE LOD.
5. MAINTAIN RECORDS ON SITE USING STORMWATER INSPECTION MONITORING FORMS TITLED "INSPECTION AND MONITORING RECORDS FOR ACTIVITIES UNDER STORMWATER GENERAL PERMIT NCG010000 AND SELF-INSPECTION RECORDS FOR LAND DISTURBING ACTIVITIES PER G.S. 113A-54.1" FROM DEMLR.
6. INSTALL PHASE ONE EROSION AND SEDIMENTATION CONTROL DEVICES. LOWER LAKE LEVELS TO EL. 108 OR LOWER AND MAINTAIN BY UTILIZING PRIMARY BOTTOM DRAIN (30" SQUARE GATE) IN THE PRIMARY SPILLWAY STRUCTURE. DRAWDOWN IN THE LAKE SHALL NOT EXCEED 1 FOOT PER DAY AT ANY TIME DURING CONSTRUCTION.
7. INSTALL MONITORING POINTS AND GEOTECHNICAL INSTALLATION AS SPECIFIED TO MONITOR THE WALL AND DAM DURING DEMOLITION ACTIVITIES. EXISTING PIEZOMETERS (P-301 AND P-302) SHALL ALSO BE MONITORED DURING CONSTRUCTION.
8. DE-ENERGIZE EXISTING ELECTRICAL INFRASTRUCTURE FOR WETWELL AND BEGIN DEMOLITION OF FORMER WATER TREATMENT PLANT BUILDING. BUILDING SUPERSTRUCTURE SHALL BE COMPLETELY REMOVED INCLUDING, BUT NOT LIMITED TO, EXTERIOR CLADDING, ROOFING, WOOD FRAMING, INTERIOR FINISHES AND COMPONENTS. CONCRETE SHALL NOT BE CUT, OR OTHERWISE MODIFIED, UNTIL TEMPORARY BRACING HAS BEEN INSTALLED, WHERE REQUIRED.
9. REMOVE INTERIOR PIPE COMPONENTS FROM THE EXISTING BELOW-GRADE PIPE GALLERY. CUT, FILL WITH FLOWABLE FILL, AND CAP ANY PIPES WHICH CONTINUE THROUGH WALLS AND ARE INACCESSIBLE FOR REMOVAL. IF TOP SLAB IS DESIRED TO BE REMOVED TO FACILITATE REMOVING THE PIPE FROM THE PIPE GALLERY TEMPORARILY SUPPORT THE EXISTING WALLS PRIOR TO SAWCUTTING AND REMOVING THE TOP SLAB.
10. FILL PIPE GALLERY AND EXISTING MAINTENANCE AREA WITH FLOWABLE FILL TO WITHIN 2-FEET OF FINISHED GRADE.
11. SAWCUT AND REMOVE ALL CONCRETE STRUCTURE WITHIN 2-FEET OF FINISHED GRADE. NO PORTION OF THE FORMER WATER TREATMENT PLANT SHOULD BE LEFT EXPOSED IN THE FINISHED WORK, EXCEPT THE EXISTING RAW WATER INTAKE WET WELL STRUCTURE AND INTAKE RETAINING WALLS, WHICH SHOULD BE PROTECTED AND MAINTAINED THROUGHOUT CONSTRUCTION AND DEMOLITION ACTIVITIES.
12. CLEAN, FLUSH AND RESTORE STORMWATER PIPING BEHIND THE BARN.
13. DEMOLISH AND REMOVE EXISTING STORMWATER PIPING. CONSTRUCT NEW STORMWATER SYSTEM. COMPLETE WITH THE EXCEPTION OF THE DRAIN PIPE AND GATE STRUCTURE UPSTREAM OF INLET-3. CONSTRUCTION SHOULD PROCEED FROM UPSTREAM TO DOWNSTREAM.
14. REMOVE SEDIMENT/DEBRIS MATERIALS FROM THE LAKE BED AREA IN FRONT OF INTAKE/DRAIN USING LONG-REACH EXCAVATOR OR SIMILAR. NOTE THAT EXISTING CONCRETE SLAB EXTENDS BETWEEN THE EXISTING WALLS IN THE LAKE. MATERIALS MAY BE REMOVED IN THE WET AND STOCKPILED ONSITE PRIOR TO BEING TRANSPORTED FOR PROPER DISPOSAL OFFSITE.
15. EMPLOY DEWATERING IN LAKE AREA DIRECTLY UPSTREAM OF THE INTAKE AND AUXILIARY BOTTOM DRAIN TO ALLOW TEMPORARY REMOVAL OF BOTTOM DRAIN SCREEN AND PLUGGING/PLATING OF DRAIN OPENING THROUGH EXISTING CONCRETE WALL. DEWATERING MAY CONSIST OF ONE OF THE FOLLOWING:
  - a. DIVERS SHALL ENTER THE LAKE AND REMOVE THE EXISTING 3-FOOT BY 4-FOOT SCREEN OVER THE BOTTOM DRAIN OPENING. USE PLATE OR PLUG TO COMPLETELY BLOCK DRAIN OPENING ON UPSTREAM SIDE OF CONCRETE WALL TO ALLOW REMOVAL OF EXISTING GATE AND OTHER DOWNSTREAM WORK TO PROCEED IN-THE-DRY.
  - b. DEWATER LAKE TO ELEVATION 103 AND PLACE SUPERSACKS WRAPPED IN GEOMEMBRANE OR EQUAL TO CONSTRUCT COFFERDAM AND ISOLATE THE INTAKE/BOTTOM DRAIN AREA. UPON COMPLETION OF COFFERDAM CONSTRUCTION TO ELEVATION 106, PUMP AND DEWATER THE WORK AREA. REMOVE THE EXISTING 3-FOOT BY 4-FOOT SCREEN OVER THE BOTTOM DRAIN OPENING. USE PLATE OR PLUG TO COMPLETELY BLOCK DRAIN OPENING ON UPSTREAM SIDE OF CONCRETE WALL TO ALLOW REMOVAL OF EXISTING GATE AND OTHER DOWNSTREAM WORK TO PROCEED IN-THE-DRY. COFFERDAM IS INTENDED TO PROVIDE A WORK AREA TO BLOCK/PLUG GATE OPENING AND WILL REMAIN IN PLACE TO FACILITATE REMOVAL OF THE BLOCK/PLUG AT END OF CONSTRUCTION.

IF COFFERDAM ALTERNATIVE IS SELECTED, DESIGN SHALL BE PREPARED BY A NORTH CAROLINA LICENSED PROFESSIONAL ENGINEER AS SPECIFIED. REGARDLESS OF THE ALTERNATIVE SELECTED, LAKE LEVELS DURING THIS PERIOD SHALL BE MAINTAINED AT EL. 103 OR LOWER BY OPERATING THE BOTTOM DRAIN IN THE PRIMARY SPILLWAY AND PUMPING (AS NEEDED).
16. RELOCATE RAW WATER PIPING.
17. INSTALL PIPE, GATE STRUCTURE, AND FILTER DRAIN FROM THE WALL OPENING FOR THE AUXILIARY BOTTOM DRAIN TO THE CONNECTION POINT WITH INLET-3.
18. INSTALL VAULT AND PIPING FOR WETWELL DRAIN.
19. BACKFILL AROUND CONCRETE COLLAR INSIDE THE EXISTING GATE DISCHARGE AREA WITH FLOWABLE FILL AS SHOWN ON STRUCTURAL DRAWINGS.
20. PLACE AND COMPACT FILL AROUND WETWELL. COMPLETE RELOCATION OF ELECTRICAL CONDUIT, AND TRANSFORMER AND REGRADE AS INDICATED.
21. INSTALL PHASE TWO EROSION AND SEDIMENTATION CONTROL DEVICES.
22. REMOVE PLUG/COFFERDAM, REINSTALL 3-FOOT BY 4-FOOT SCREEN, AND ALLOW LAKE LEVELS TO BE RESTORED.
23. INSTALL FLOATING DEBRIS BARRIER.
24. INSTALL SOD ON ALL DISTURBED AREAS. PROVIDE PERMANENT STABILIZATION OF ALL GRASS AREAS AS IDENTIFIED ON SHEET C-10 IN ACCORDANCE WITH THE TIME FRAME GUIDELINES SPECIFIED IN NCG010000. ESTABLISH GROUND COVER WITHIN TIME FRAMES REQUIRED ON SHEET C-11.
25. SAWCUT, GRIND, AND REMOVE EXISTING ASPHALT PAVING.
26. INSTALL PROPOSED ASPHALT PAVING.
27. REMOVE STOCKPILE AREAS AND DISPOSE AT A PERMITTED FACILITY AND COMPLETE ALL MISCELLANEOUS WORK AND CLEAN-UP.
28. CONTACT DEMLR UPON PROJECT COMPLETION AND ESTABLISHMENT OF PERMANENT GROUND COVER FOR PROJECT CLOSEOUT. AFTER INSPECTION, SUBMIT AN ELECTRONIC NOTICE OF TERMINATION (ENOT). A \$100 ANNUAL GENERAL PERMIT FEE WILL BE CHARGED UNTIL THE ENOT HAS BEEN SUBMITTED.
29. REMOVE ALL EROSION AND SEDIMENTATION CONTROL DEVICES ONCE THE SITE IS STABILIZED.

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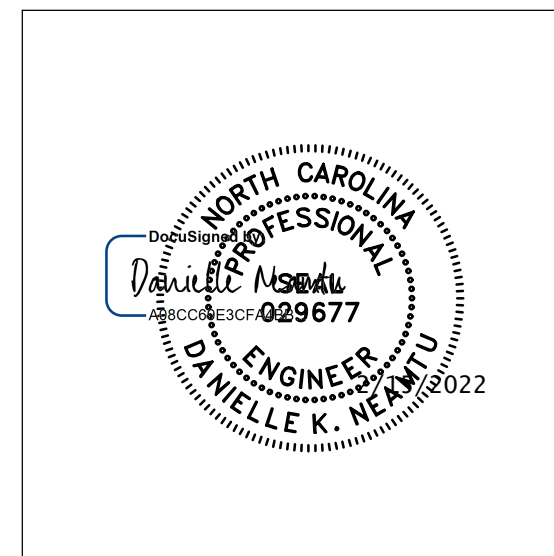
REV. NO.	DATE	DRWN	CHKD	REMARKS

DESIGNED BY: R. NAGEL  
 DRAWN BY: R. BOGGS  
 SHEET CHK'D BY: D. NEAMTU  
 CROSS CHK'D BY: R. NAGEL  
 APPROVED BY: D. NEAMTU  
 DATE: FEBRUARY 2022

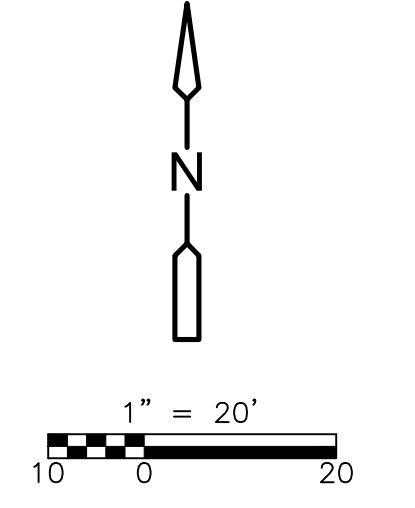


PUBLIC WORKS COMMISSION OF FAYETTEVILLE  
 DEMOLITION AND DECOMMISSIONING OF FORMER WTP  
 AT GLENVILLE LAKE DAM (CUMBE-038)  
 FAYETTEVILLE, NC

PROJECT NO. 6384-231131  
 FILE NAME: G002CSNT.DWG  
 SHEET NO. G-2







**NOTES:**

1. ORIGINAL SURVEY PERFORMED BY MCKIM & CREED IN MAY 2008. ADDITIONAL SURVEY PERFORMED BY JOYNER KEENEY IN OCTOBER 2013, CROWDER CONSTRUCTION COMPANY IN FEBRUARY 2016, AND PWC IN FEBRUARY 2019. ADDITIONAL EXISTING CONDITIONALS PROVIDED USING PLEX.EARTH. LIMITS ARE AS INDICATED ON THE PLANS.
2. HORIZONTAL DATUM (NC GRID NAD83) AND VERTICAL DATUM (NGVD 29) CONTROL POINTS PROVIDED BY PWC.
3. LOCATIONS OF ALL UNDERGROUND UTILITIES THAT MAY OR MAY NOT BE SHOWN HEREON ARE FROM VARIOUS OTHER SOURCES. CONTRACTORS SHOULD NOT ONLY MAKE SPECIFIC SUBSURFACE INVESTIGATIONS BUT SHOULD ALSO ALLOW FOR CONTINGENCIES WHICH MIGHT ARISE BY REASON OF ENCOUNTERING UNRECORDED LINES OR LINES BEING IN DIFFERENT LOCATIONS THAN INDICATED ON THIS SURVEY.
4. THIS PORTION OF THE SURVEY IS LOCATED WITHIN THE 100-YEAR FLOOD PLAIN AS SHOWN ON FEMA- FIRM PANEL 0438, MAP NUMBER 3720043800J, EFFECTIVE DATE: JANUARY 5, 2007 AND PANEL 0437, MAP NUMBER 3720043700J, EFFECTIVE DATE: JANUARY 5, 2007 AND PANEL 0428, MAP NUMBER 3720042800J, EFFECTIVE DATE: JANUARY 5, 2007



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REV. NO.	DATE	DRWN	CHKD	REMARKS

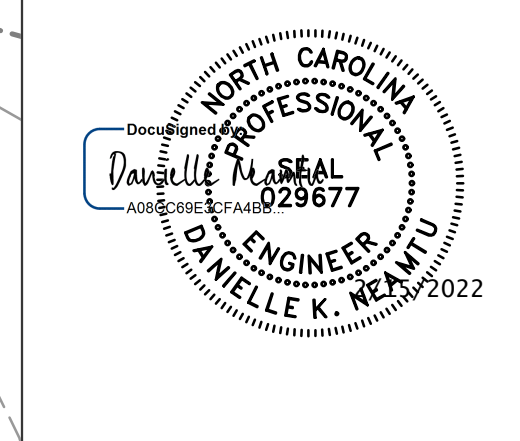
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 DRAWN BY: R. BOGGS  
 SHEET CHK'D BY: D. NEAMTU  
 CROSS CHK'D BY: R. NAGEL  
 APPROVED BY: D. NEAMTU  
 DATE: FEBRUARY 2022



PUBLIC WORKS COMMISSION OF FAYETTEVILLE  
**DEMOLITION AND DECOMMISSIONING OF FORMER WTP  
 AT GLENVILLE LAKE DAM (CUMBE-038)**  
 FAYETTEVILLE, NC

**EXISTING CONDITIONS PLAN**  
 SHEET NO. **C-1**

PROJECT NO. 6384-231131  
 FILE NAME: C001STPL.DWG  
 SHEET NO. **C-1**  
 BID SET

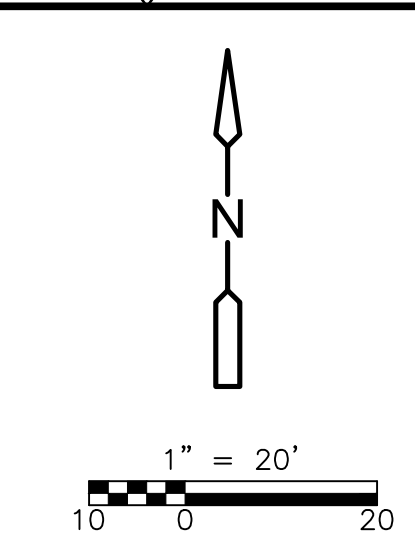
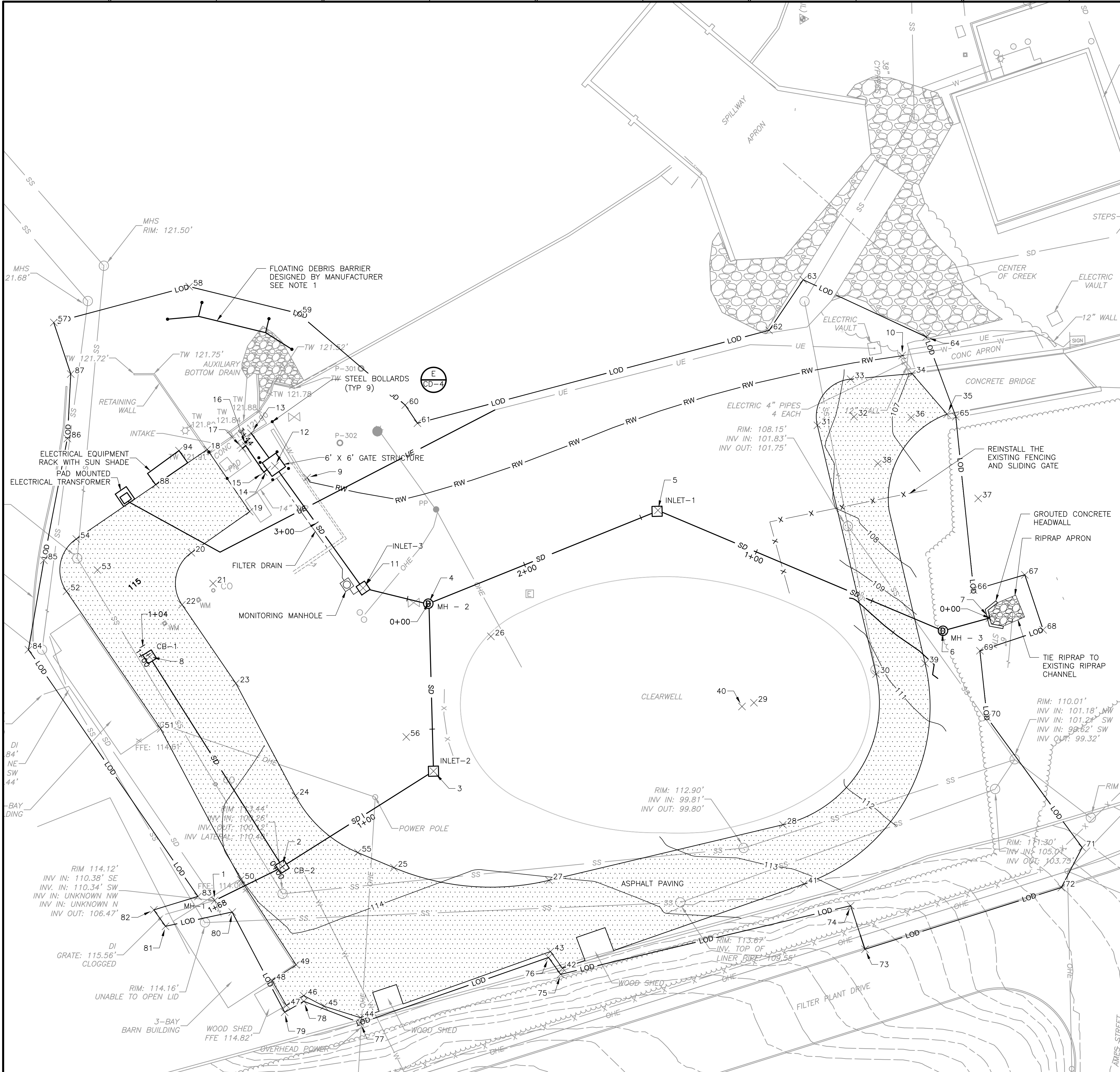








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POINT TABLE			
POINT NO.	NORTHING	EASTING	DESCRIPTION
1	479781.03	2030682.00	MH-1
2	479794.53	2030708.99	CB-2
3	479832.61	2030769.22	INLET-2
4	479899.37	2030767.17	MH-2
5	479936.63	2030858.69	INLET-1
6	479888.57	2030972.31	MH-3
7	479893.67	2030990.83	HEADWALL
8	479878.23	2030656.09	CB-1
9	479949.66	2030718.87	16" RAW WATER
10	479998.38	2030956.00	16" RAW WATER
11	479905.64	2030741.17	INLET-3
12	479954.32	2030705.99	6' x 6' STRUCTURE
13	479967.40	2030696.54	EX. WALL
14	479952.86	2030702.93	8" DIP
15	479951.90	2030701.58	8" DIP
16	479962.36	2030694.42	8" DIP
17	479961.43	2030693.06	8" DIP
18	479960.90	2030679.04	EOP
19	479936.14	2030695.98	EOP
20	479919.71	2030672.73	RADIUS
21	479907.46	2030681.39	EOP
22	479898.99	2030669.01	EOP
23	479867.64	2030690.46	EOP
24	479822.86	2030714.20	EOP
25	479794.13	2030753.45	EOP
26	479886.36	2030792.10	RADIUS
27	479789.07	2030815.24	EOP
28	479811.26	2030908.52	EOP
29	479859.90	2030896.95	RADIUS
30	479871.38	2030945.62	EOP
31	479970.53	2030922.23	EOP
32	479973.97	2030936.83	RADIUS
33	479988.91	2030935.46	EOP
34	479991.16	2030959.96	EOP
35	479974.97	2030973.91	EOP
36	479973.66	2030959.60	EOP
37	479941.35	2030986.33	RADIUS
38	479955.28	2030946.37	EOP
39	479875.61	2030965.17	EOP
40	479858.39	2030892.17	RADIUS
41	479787.58	2030916.89	EOP
42	479753.98	2030820.65	EOP
43	479760.70	2030815.85	EOP
44	479734.34	2030740.07	EOP

POINT TABLE			
POINT NO.	NORTHING	EASTING	DESCRIPTION
45	479738.87	2030725.61	EOP
46	479743.11	2030717.49	EOP
47	479739.19	2030710.62	EOP
48	479749.11	2030704.86	EOP
49	479755.36	2030714.47	EOP
50	479789.29	2030692.38	EOP
51	479849.50	2030660.46	EOP
52	479904.35	2030622.94	EOP
53	479912.82	2030635.32	RADIUS
54	479925.20	2030626.85	EOP
55	479800.17	2030739.05	EOP
56	479846.28	2030758.38	RADIUS
57	480011.53	2030617.87	LIMITS OF DISTURBANCE
58	480025.86	2030671.86	LIMITS OF DISTURBANCE
59	480015.15	2030715.34	LIMITS OF DISTURBANCE
60	479978.60	2030757.95	LIMITS OF DISTURBANCE
61	479971.35	2030762.83	LIMITS OF DISTURBANCE
62	480008.41	2030903.02	LIMITS OF DISTURBANCE
63	480028.55	2030916.61	LIMITS OF DISTURBANCE
64	480005.78	2030965.60	LIMITS OF DISTURBANCE
65	479973.99	2030977.40	LIMITS OF DISTURBANCE
66	479904.87	2030984.46	LIMITS OF DISTURBANCE
67	479910.91	2031004.91	LIMITS OF DISTURBANCE
68	479888.97	2031012.19	LIMITS OF DISTURBANCE
69	479880.62	2030987.02	LIMITS OF DISTURBANCE
70	479854.05	2030989.83	LIMITS OF DISTURBANCE
71	479802.16	2031027.75	LIMITS OF DISTURBANCE
72	479786.20	2031019.47	LIMITS OF DISTURBANCE
73	479761.59	2030941.20	LIMITS OF DISTURBANCE
74	479778.97	2030935.50	LIMITS OF DISTURBANCE
75	479751.60	2030819.90	LIMITS OF DISTURBANCE
76	479758.32	2030815.09	LIMITS OF DISTURBANCE
77	479732.23	2030740.10	LIMITS OF DISTURBANCE
78	479740.84	2030717.53	LIMITS OF DISTURBANCE
79	479736.47	2030709.89	LIMITS OF DISTURBANCE
80	479776.44	2030688.99	LIMITS OF DISTURBANCE
81	479770.75	2030662.42	LIMITS OF DISTURBANCE
82	479777.30	2030657.78	LIMITS OF DISTURBANCE
83	479782.65	2030675.34	LIMITS OF DISTURBANCE
84	479881.08	2030607.79	LIMITS OF DISTURBANCE
85	479916.71	2030613.94	LIMITS OF DISTURBANCE
86	479965.27	2030623.31	LIMITS OF DISTURBANCE
87	479990.95	2030624.66	LIMITS OF DISTURBANCE
88	479946.85	2030658.51	ELEC. EQUIP. RACK WITH SUN SHADE

NOTES:  
 1. FLOATING DEBRIS BARRIER SHALL BE DESIGNED AND PROVIDED BY A QUALIFIED MANUFACTURER SUCH AS TUFF BOOM (BY WORTHINGTON PRODUCTS).



REV. NO.	DATE	DRWN	CHKD	REMARKS

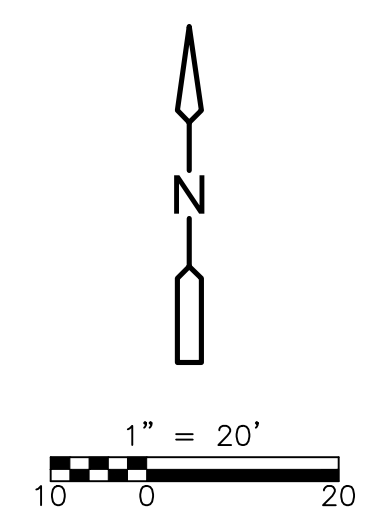
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 DRAWN BY: R. BOGGS  
 SHEET CHK'D BY: D. NEAMTU  
 CROSS CHK'D BY: R. NAGEL  
 APPROVED BY: D. NEAMTU  
 DATE: FEBRUARY 2022



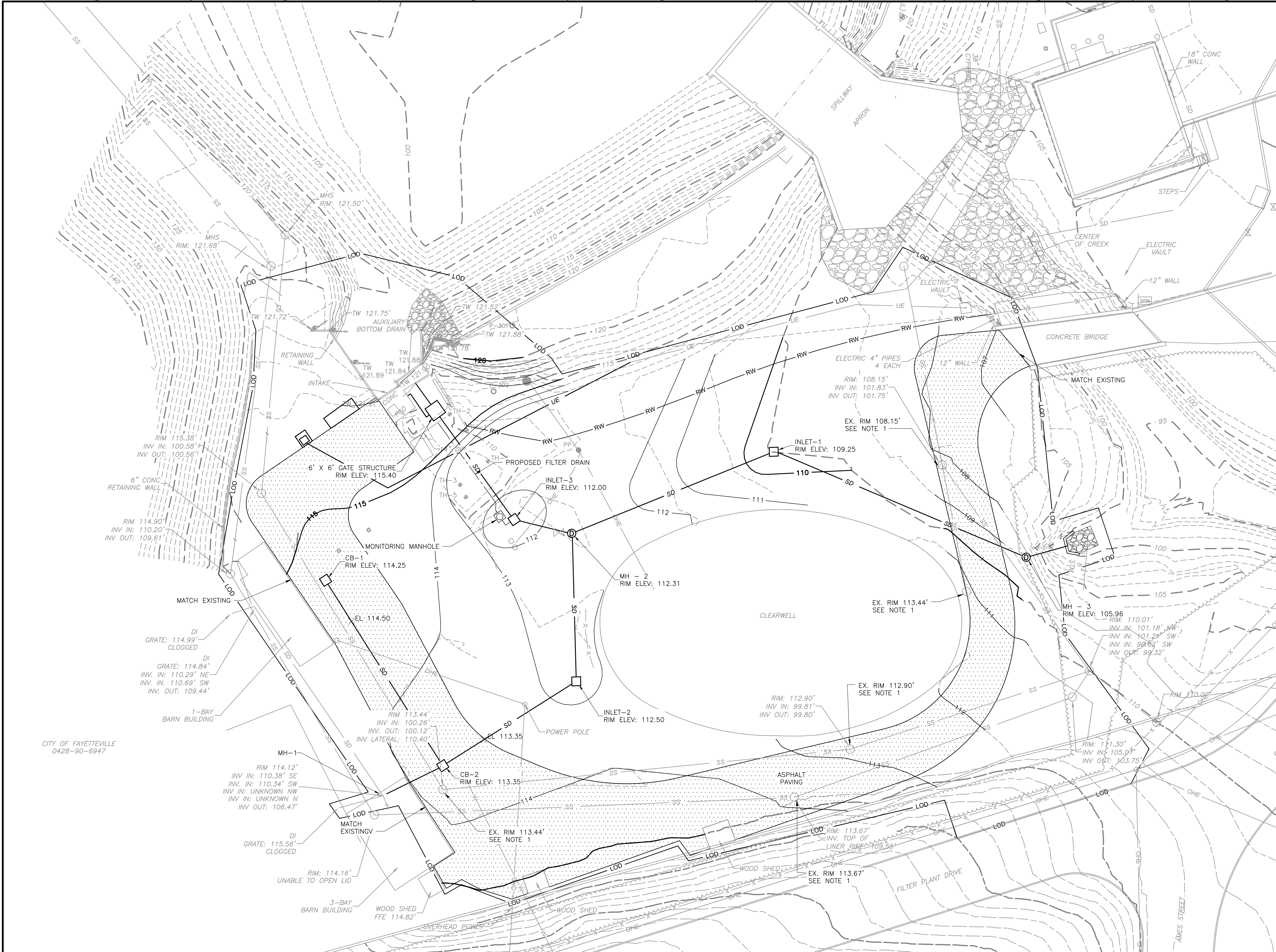
PUBLIC WORKS COMMISSION OF FAYETTEVILLE  
 DEMOLITION AND DECOMMISSIONING OF FORMER WTP  
 AT GLENVILLE LAKE DAM (CUMBE-038)  
 FAYETTEVILLE, NC

HORIZONTAL CONTROL PLAN  
 PROJECT NO. 6384-231131  
 FILE NAME: C003STPL.DWG  
 SHEET NO. C-3  
 BID SET





- NOTES:**
- EXISTING MANHOLE RIMS SHALL BE ADJUSTED TO MATCH PROPOSED ASPHALT PAVING.



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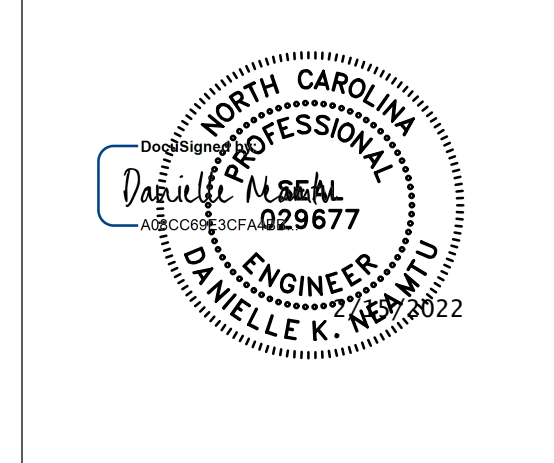
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 DRAWN BY: R. BOGGS  
 SHEET CHK'D BY: D. NEAMTU  
 CROSS CHK'D BY: R. NAGEL  
 APPROVED BY: D. NEAMTU  
 DATE: FEBRUARY 2022



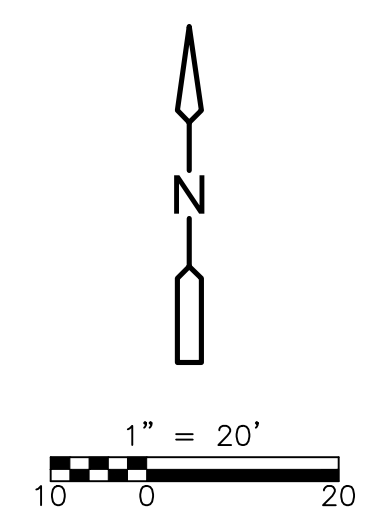
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**DEMOLITION AND DECOMMISSIONING OF FORMER WTP**  
**AT GLENVILLE LAKE DAM (CUMBE-038)**  
**FAYETTEVILLE, NC**

**GRADING PLAN**  
 SHEET NO. **C-4**

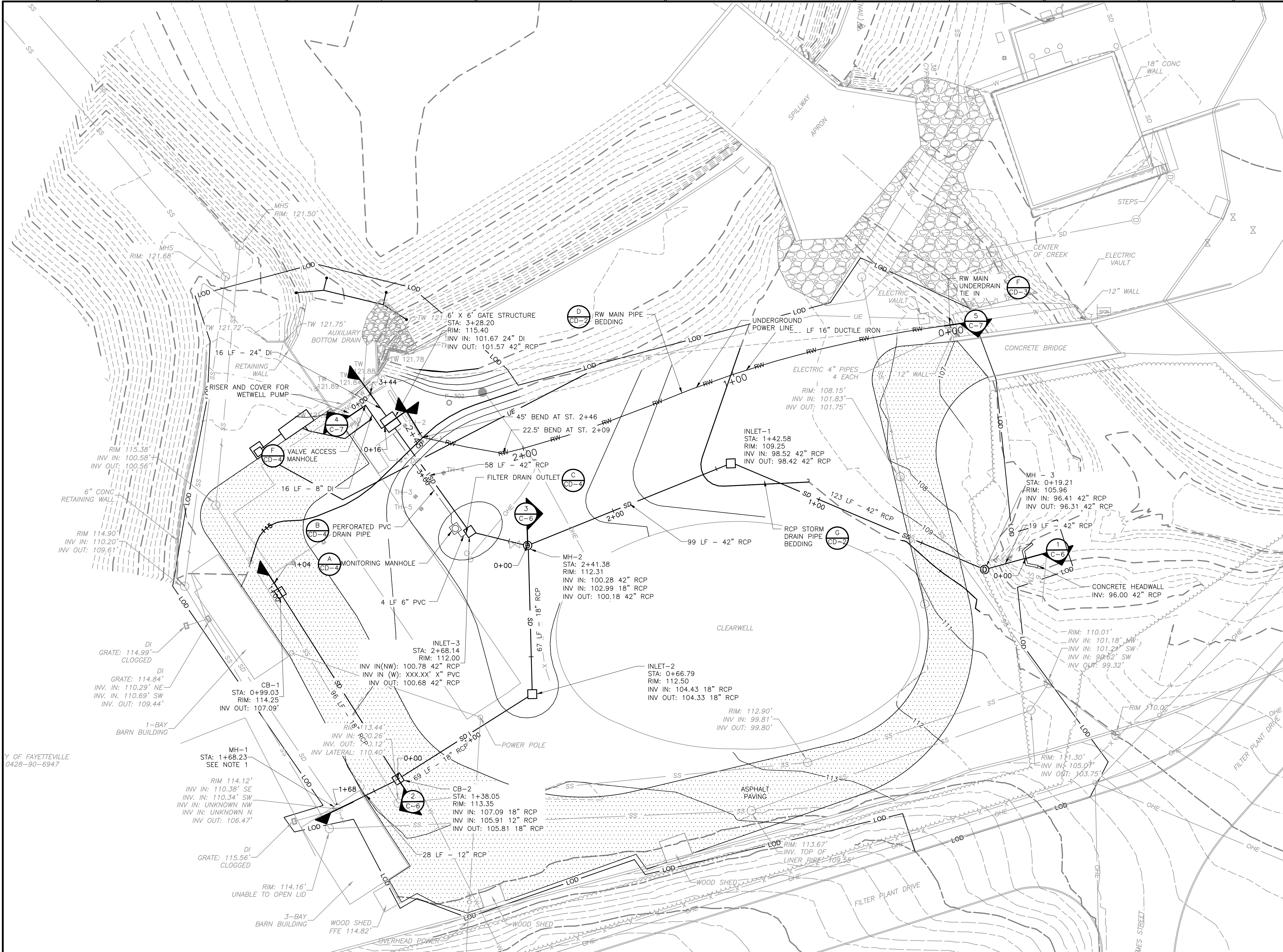
PROJECT NO. 6384-231131  
 FILE NAME: C004STPL.DWG  
 SHEET NO. **C-4**







- NOTES:**
- MANHOLE IS LOCATED INSIDE EXISTING STEEL BUILDING. EXTRA CARE SHALL BE MADE NOT TO DAMAGE BUILDING. CONTRACTOR SHALL INSPECT MANHOLE AND VERIFY ELEVATIONS PRIOR TO ORDERING PIPE OR STORMWATER STRUCTURES.



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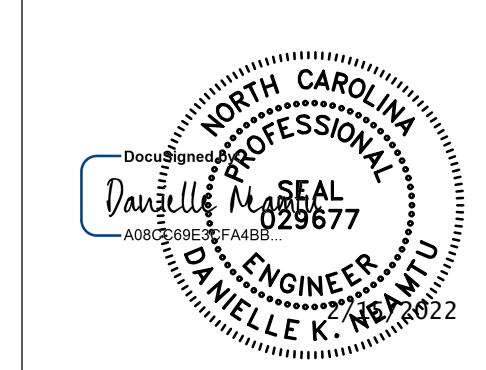
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 DRAWN BY: R. BOGGS  
 SHEET CHK'D BY: D. NEAMTU  
 CROSS CHK'D BY: R. NAGEL  
 APPROVED BY: D. NEAMTU  
 DATE: FEBRUARY 2022



**PUBLIC WORKS COMMISSION OF FAYETTEVILLE**  
**DEMOLITION AND DECOMMISSIONING OF FORMER WTP**  
**AT GLENVILLE LAKE DAM (CUMBE-038)**  
**FAYETTEVILLE, NC**

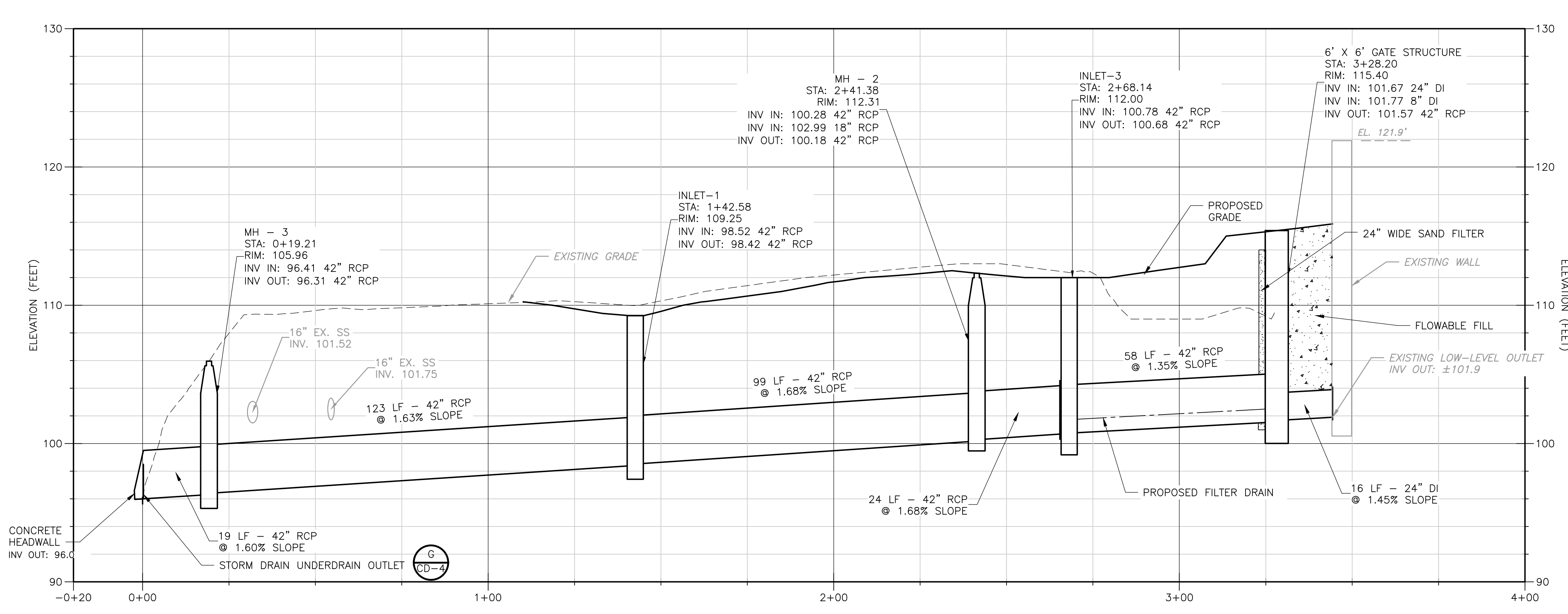
**YARD PIPING PLAN**  
**C-5**

PROJECT NO. 6384-231131  
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 SHEET NO. C-5  
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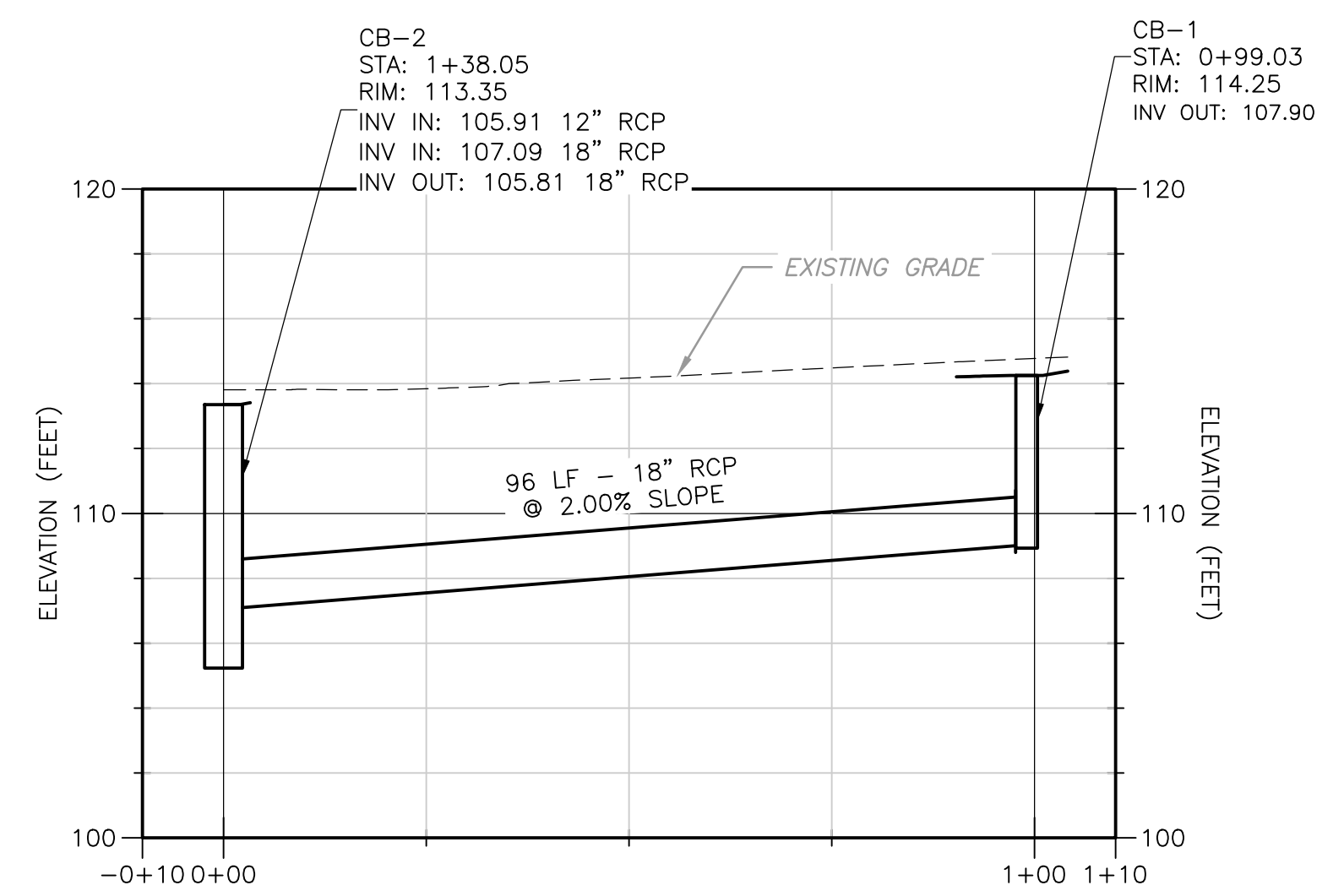




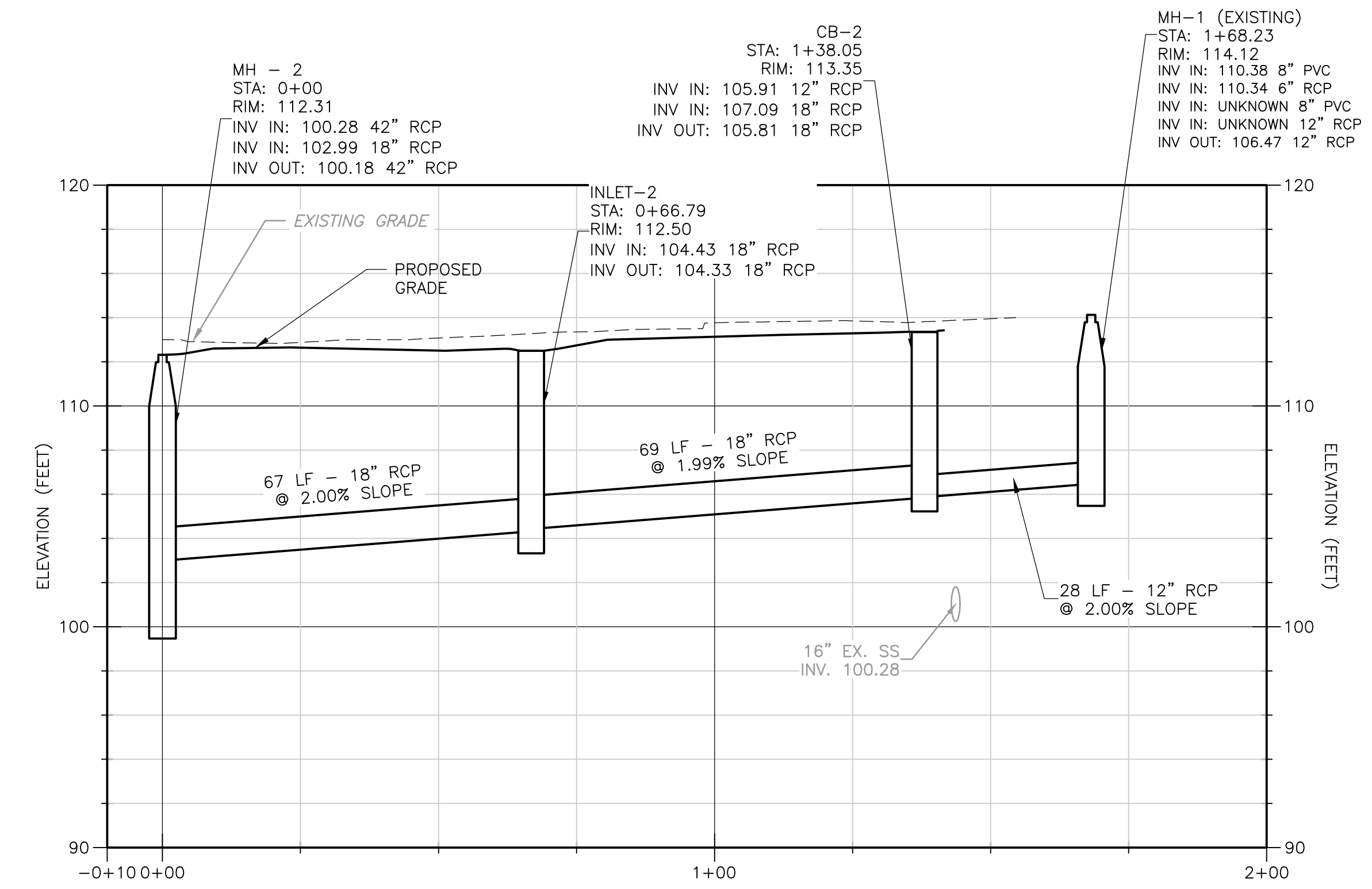
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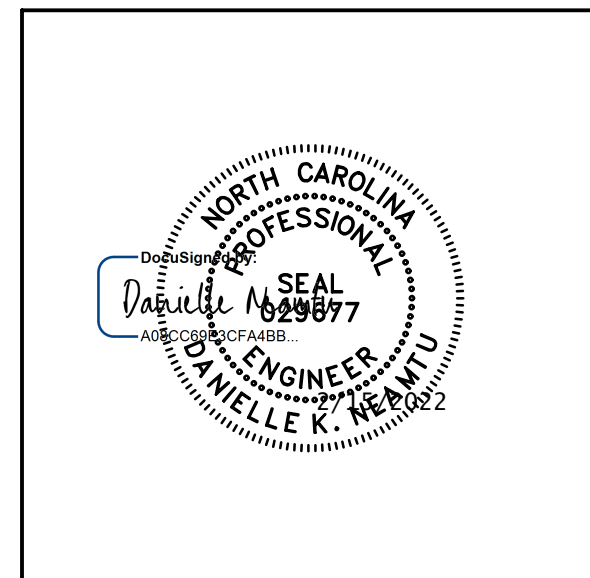
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 1" = 5' VERT.



SECTION 2  
 1"=20' HORIZ.  
 1" = 5' VERT.



SECTION 3  
 1"=20' HORIZ.  
 1" = 5' VERT.



REV. NO.	DATE	DRWN	CHKD	REMARKS

DESIGNED BY: R. NAGEL  
 DRAWN BY: R. BOGGS  
 SHEET CHK'D BY: D. NEAMTU  
 CROSS CHK'D BY: R. NAGEL  
 APPROVED BY: D. NEAMTU  
 DATE: FEBRUARY 2022



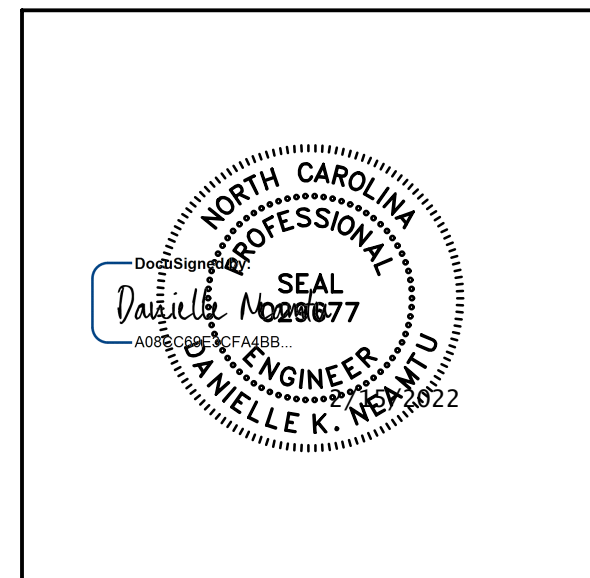
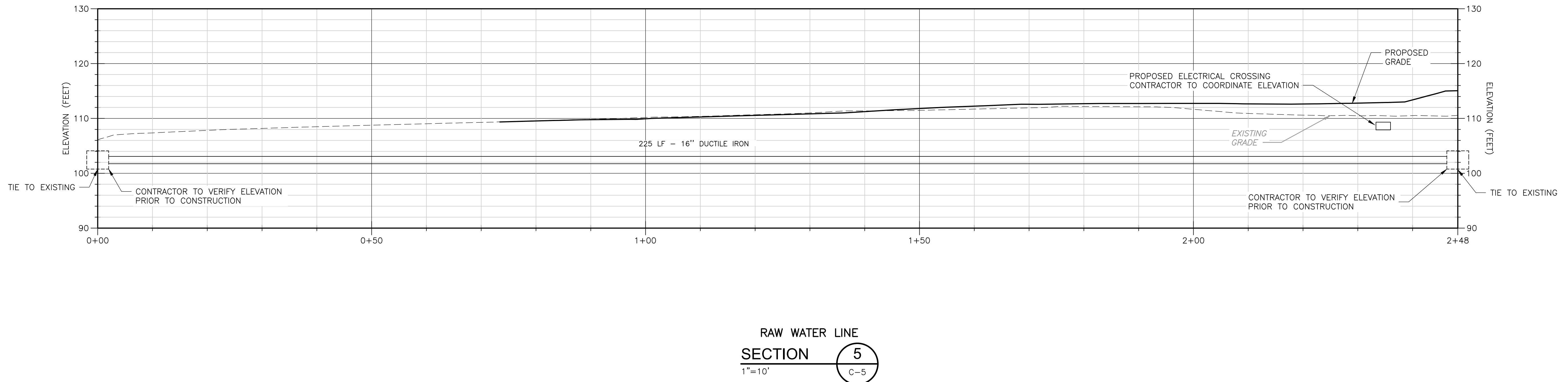
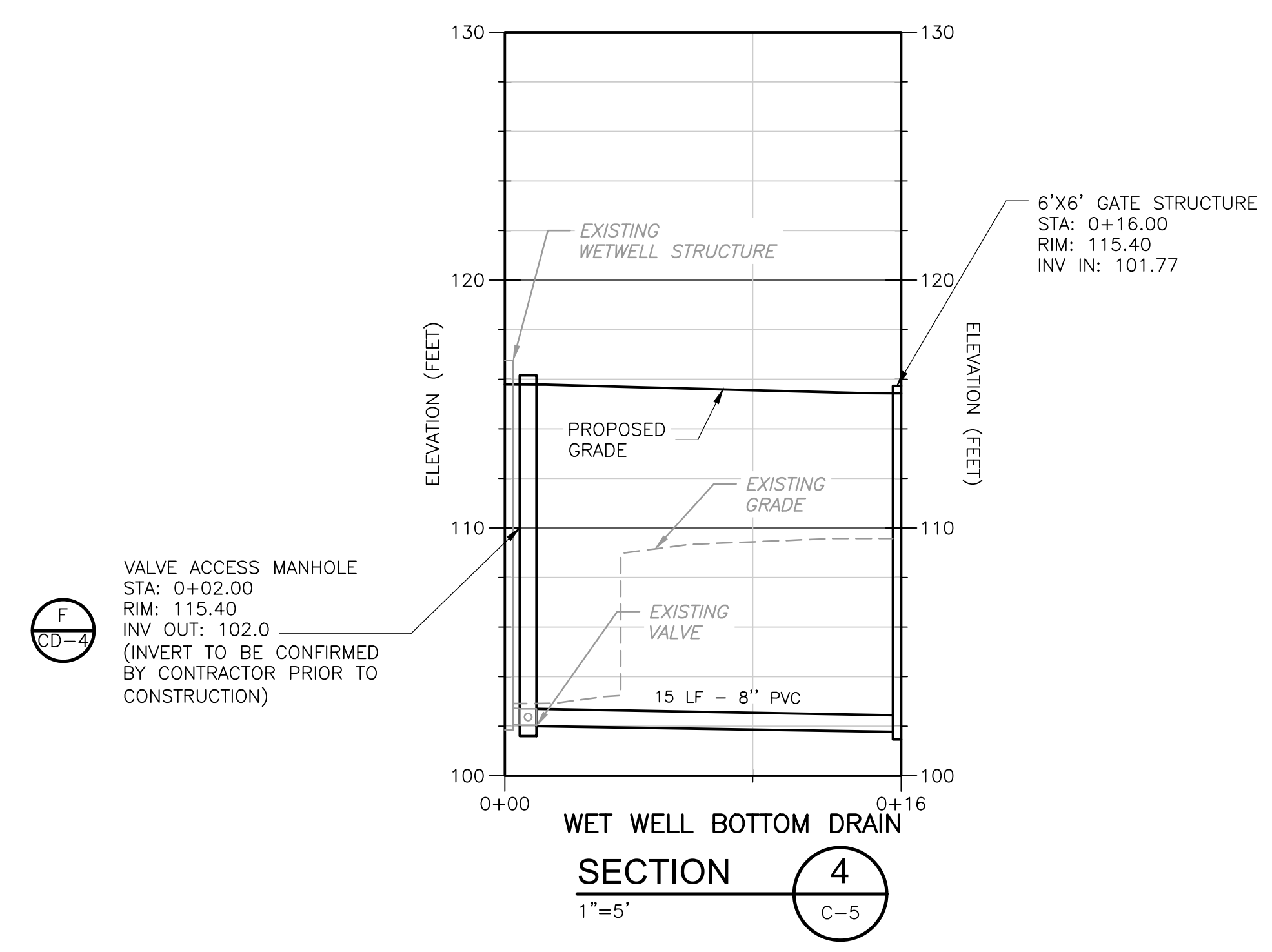
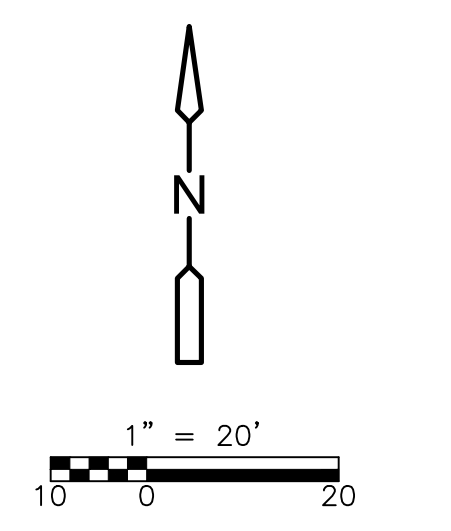
PUBLIC WORKS COMMISSION OF FAYETTEVILLE  
 DEMOLITION AND DECOMMISSIONING OF FORMER WTP  
 AT GLENVILLE LAKE DAM (CUMBE-038)  
 FAYETTEVILLE, NC

PROJECT NO. 6384-231131  
 FILE NAME: C006STPL.DWG  
 SHEET NO. C-6

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REV. NO.	DATE	DRWN	CHKD	REMARKS

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 DRAWN BY: R. BOGGS  
 SHEET CHK'D BY: D. NEAMTU  
 CROSS CHK'D BY: R. NAGEL  
 APPROVED BY: D. NEAMTU  
 DATE: FEBRUARY 2022



PUBLIC WORKS COMMISSION OF FAYETTEVILLE  
 DEMOLITION AND DECOMMISSIONING OF FORMER WTP  
 AT GLENVILLE LAKE DAM (CUMBE-038)  
 FAYETTEVILLE, NC

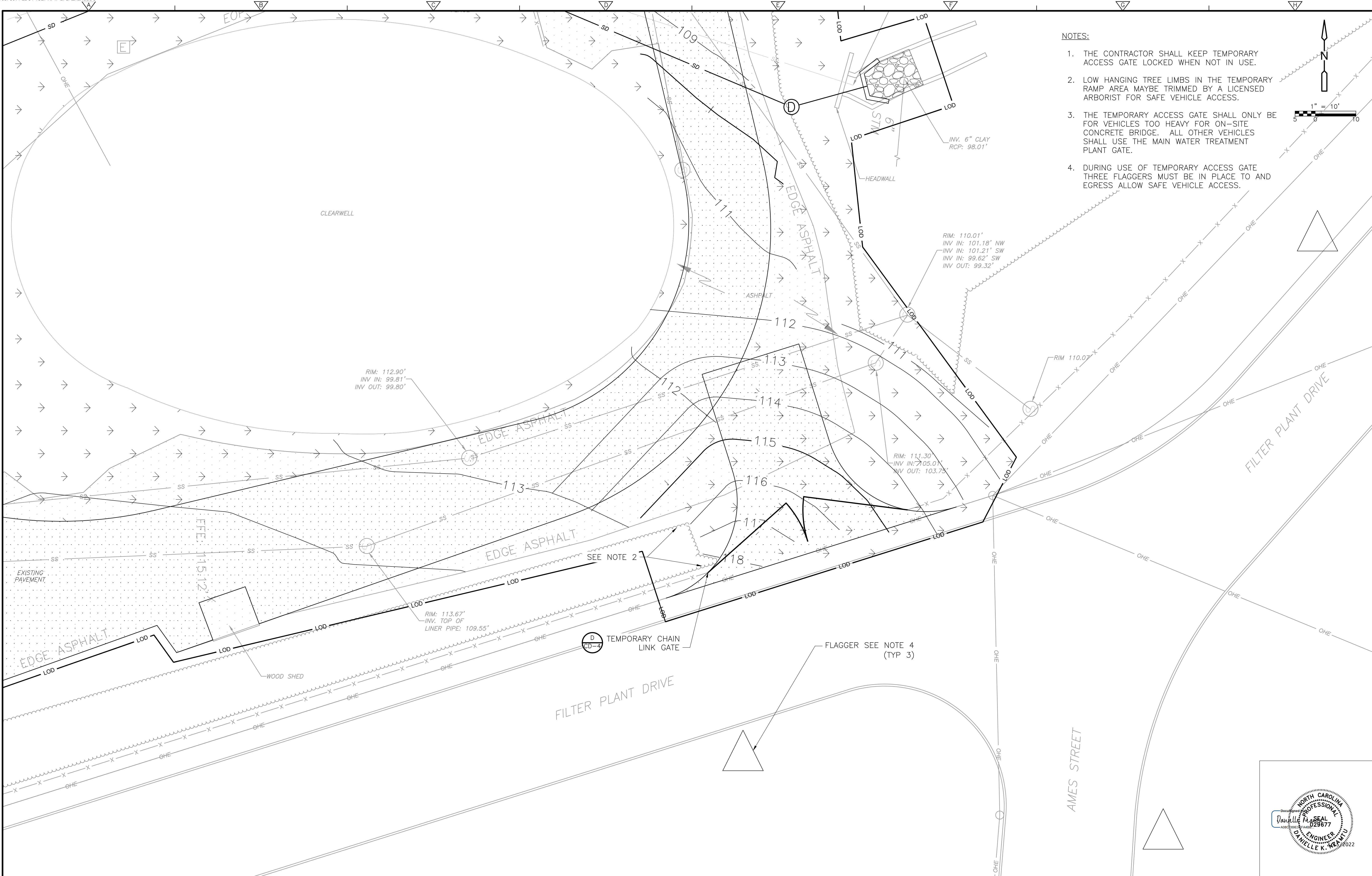
YARD PIPING PROFILE  
 SHEET NO. C-7

PROJECT NO. 6384-231131  
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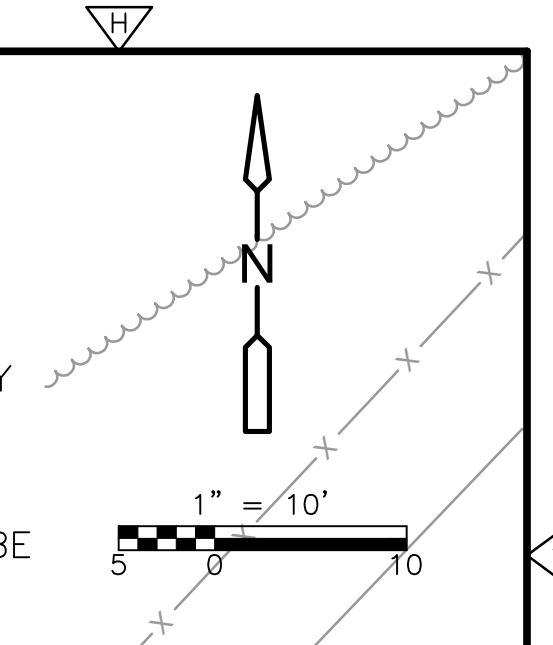


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- NOTES:
1. THE CONTRACTOR SHALL KEEP TEMPORARY ACCESS GATE LOCKED WHEN NOT IN USE.
  2. LOW HANGING TREE LIMBS IN THE TEMPORARY RAMP AREA MAYBE TRIMMED BY A LICENSED ARBORIST FOR SAFE VEHICLE ACCESS.
  3. THE TEMPORARY ACCESS GATE SHALL ONLY BE FOR VEHICLES TOO HEAVY FOR ON-SITE CONCRETE BRIDGE. ALL OTHER VEHICLES SHALL USE THE MAIN WATER TREATMENT PLANT GATE.
  4. DURING USE OF TEMPORARY ACCESS GATE THREE FLAGGERS MUST BE IN PLACE TO AND EGRESS ALLOW SAFE VEHICLE ACCESS.



REV. NO.	DATE	DRWN	CHKD	REMARKS

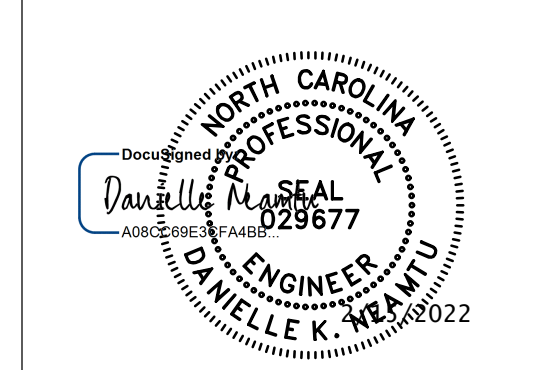
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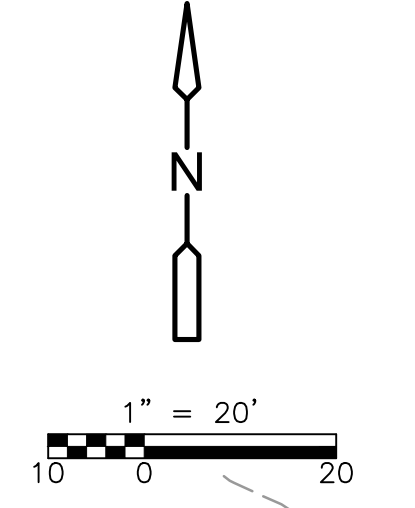
PUBLIC WORKS COMMISSION OF FAYETTEVILLE  
 DEMOLITION AND DECOMMISSIONING OF FORMER WTP  
 AT GLENVILLE LAKE DAM (CUMBE-038)  
 FAYETTEVILLE, NC

TRAFFIC CONTROL PLAN

PROJECT NO. 6384-231131  
 FILE NAME: C008STPL.DWG  
 SHEET NO. C-8







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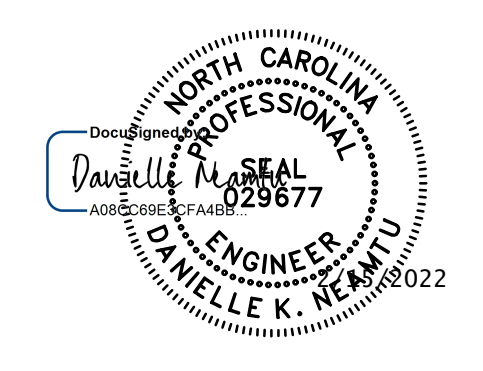


**LEGEND**

- STAGING AND STOCKPILE AREA
- TEMPORARY CONSTRUCTION ENTRANCE
- SILT FENCE OUTLET
- YARD INLET PROTECTION

**NOTE:**

- DOUBLE SWING GATE SHALL BE INSTALLED FOR CONSTRUCTION ACCESS. THE GATE SHALL BE USED FOR LARGE VEHICLE ACCESS ONLY. THE GATE SHALL REMAIN CLOSED AND LOCKED WHEN NOT IN USE.



REV. NO.	DATE	DRWN	CHKD	REMARKS

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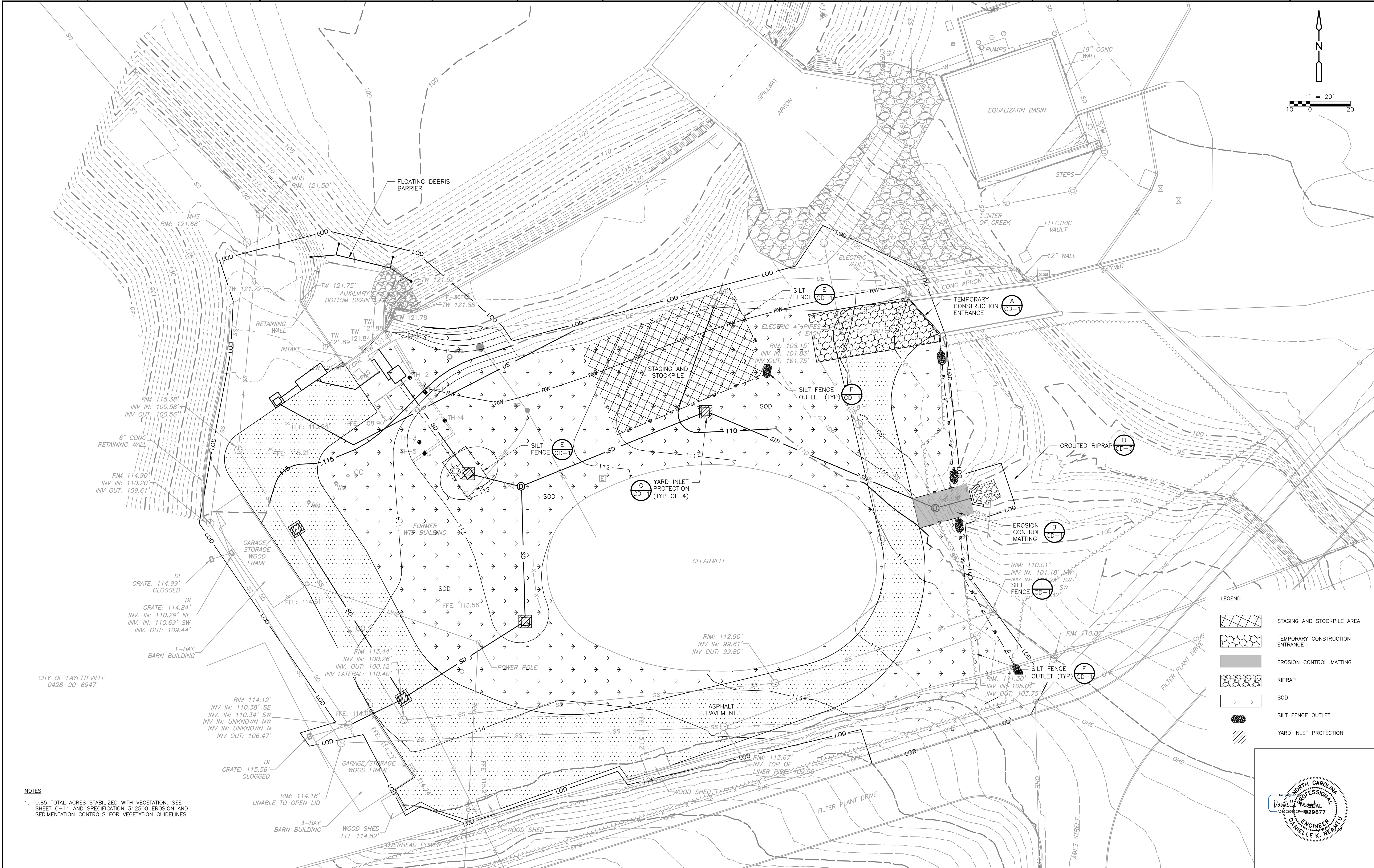
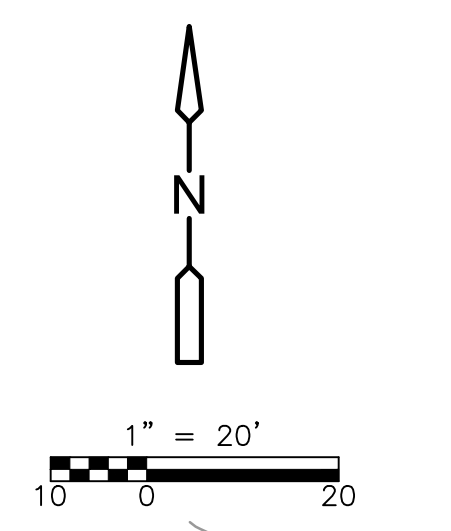


PUBLIC WORKS COMMISSION OF FAYETTEVILLE  
**DEMOLITION AND DECOMMISSIONING OF FORMER WTP  
 AT GLENVILLE LAKE DAM (CUMBE-038)**  
 FAYETTEVILLE, NC

**EROSION AND SEDIMENTATION CONTROL PLAN  
 PHASE 1**

PROJECT NO. 6384-231131  
 FILE NAME: C009STPL.DWG  
 SHEET NO.  
**C-9**



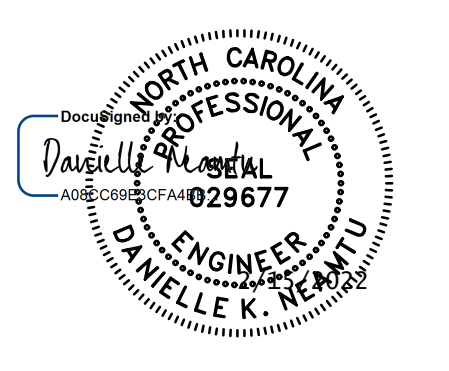


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**NOTES**  
 1. 0.85 TOTAL ACRES STABILIZED WITH VEGETATION. SEE SHEET C-11 AND SPECIFICATION 312500 EROSION AND SEDIMENTATION CONTROLS FOR VEGETATION GUIDELINES.

**LEGEND**

	STAGING AND STOCKPILE AREA
	TEMPORARY CONSTRUCTION ENTRANCE
	EROSION CONTROL MATTING
	RIPRAP
	SOD
	SILT FENCE OUTLET
	YARD INLET PROTECTION



REV. NO.	DATE	DRWN	CHKD	REMARKS

DESIGNED BY: R. NAGEL  
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 SHEET CHK'D BY: D. NEAMTU  
 CROSS CHK'D BY: R. NAGEL  
 APPROVED BY: D. NEAMTU  
 DATE: FEBRUARY 2022



PUBLIC WORKS COMMISSION OF FAYETTEVILLE  
**DEMOLITION AND DECOMMISSIONING OF FORMER WTP  
 AT GLENVILLE LAKE DAM (CUMBE-038)  
 FAYETTEVILLE, NC**

**EROSION AND SEDIMENTATION CONTROL PLAN  
 PHASE 2**

PROJECT NO. 6384-231131  
 FILE NAME: CO10STPL.DWG  
 SHEET NO.  
**C-10**



**MAINTENANCE PLAN**

MAINTENANCE OF THE EROSION AND SEDIMENTATION CONTROL MEASURES SHALL BE PERFORMED THROUGHOUT THE DURATION OF THE PROJECT. ALL REPORTING, INSPECTING, AND RECORD KEEPING IN THE RESPONSIBILITY OF THE CONTRACTOR. THE FOLLOWING MINIMUM MAINTENANCE ACTIVITIES SHALL BE REQUIRED DURING CONSTRUCTION:

1. ALL EROSION AND SEDIMENTATION CONTROL PRACTICES (DEVICES) SHALL BE CHECKED FOR STABILITY AND OPERATION FOLLOWING EVERY RUN-OFF PRODUCING RAINFALL, BUT IN NO CASE LESS THAN ONCE PER WEEK. ANY NEEDED REPAIR SHALL BE MADE IMMEDIATELY TO MAINTAIN ALL PRACTICES AS DESIGNED.
2. TEMPORARY CONSTRUCTION ENTRANCES SHALL BE DRESSED WITH 2-INCH-DIAMETER STONE PERIODICALLY TO PREVENT SEDIMENT FROM LEAVING THE CONSTRUCTION SITE.
3. ACCUMULATED SEDIMENT AND DEBRIS SHALL BE REMOVED FROM CLOTH AND GRAVEL INLET DEVICES. EXTREME CARE SHALL BE TAKEN NOT TO DAMAGE OR UNDERCUT THE WIRE MESH DURING SEDIMENT REMOVAL. FOLLOWING CLEANING ACTIVITIES, STONE SHALL BE REPLACED AS NECESSARY.
4. SEDIMENT SHALL BE REMOVED FROM BEHIND SEDIMENT FENCES, WHEN IT BECOMES ABOUT 1/2 FOOT DEEP AT THE FENCE. THE SEDIMENT FENCE SHALL BE REPAIRED AS NECESSARY TO MAINTAIN A BARRIER.
5. EROSION CONTROL MATTING SHALL BE CHECKED PERIODICALLY TO ENSURE THAT CLOSE CONTACT WITH THE GROUND IS MAINTAINED AND EROSION HAS NOT OCCURRED BENEATH THE DEVICE. ANY AREAS OF THE VEGETATION CONTROL MATTING THAT HAVE BEEN DAMAGED OR NOT IN CLOSE CONTACT WITH THE GROUND SHALL BE REPAIRED. SEE THE SEQUENCE OF CONSTRUCTION IN THE EROSION AND SEDIMENTATION CONTROL PERMIT FOR ADDITIONAL EROSION AND SEDIMENTATION CONTROL DETAILS.
6. ALL SEEDED AREAS SHALL BE FERTILIZED, RE-SEEDED AS NECESSARY AND MULCHED ACCORDING TO THE SPECIFICATIONS IN THE VEGETATION PLAN TO MAINTAIN A VIGOROUS, DENSE VEGETATIVE COVER. IF WASHOUT OCCURS, REPAIR THE SLOPE GRADE.
8. CONTRACTOR IS RESPONSIBLE FOR COORDINATING ALL INSPECTION, RECORDS, AND DAILY REPORTS.
9. MAINTAIN RECORDS ON SITE USING STORMWATER INSPECTION MONITORING FORMS TITLED "INSPECTION AND MONITORING RECORDS FOR ACTIVITIES UNDER STORMWATER GENERAL PERMIT NCG010000 AND SELF-INSPECTION RECORDS FOR LAND DISTURBING ACTIVITIES PER G.S. 113A-54.1" FROM DEMLR (HTTPS://FILES.NC.GOV/NCDEQ/ENERGY%20MINERAL%20AND%20LAND%20RESOURCES/STORMWATER/NPDES%20MONITORING%20FORMS/DEMLR-CSW-MON-FORM-20130807.PDF).

**EROSION AND SEDIMENTATION CONTROL NOTES:**

1. SEE SHEETS C-3 FOR HORIZONTAL CONTROL AND SHEET C-4 FOR GRADING.
2. ALL OPEN AREAS WITHIN CONSTRUCTION LIMITS SHALL RECEIVE SOD PER THE VEGETATION PLAN AT THE COMPLETION OF CONSTRUCTION.
3. THE EROSION AND SEDIMENTATION CONTROL FEATURES SHOWN ON THESE DRAWINGS REPRESENT MINIMUM MEASURES REQUIRED DURING CONSTRUCTION. THE CONTRACTOR IS RESPONSIBLE FOR INTEGRATING THESE FEATURES AND OTHERS REQUIRED TO SUPPORT THE CONTRACTOR'S PROPOSED PLAN.
4. AT ALL TIMES, DISTURB THE MINIMUM AMOUNT OF AREA WITHIN THE IDENTIFIED LIMITS OF CONSTRUCTION REQUIRED TO ACCOMPLISH THE TASK AT HAND AND STABILIZE DISTURBED AREA AS SOON AS PRACTICAL.
5. SEE THE SEQUENCE OF CONSTRUCTION IN THE EROSION AND SEDIMENTATION CONTROL PERMIT FOR ADDITIONAL EROSION AND SEDIMENTATION CONTROL DETAILS.
6. SEE SHEETS C-9 AND C-10 FOR ADDITIONAL EROSION AND SEDIMENTATION CONTROL MEASURES.

**STABILIZATION NOTES**

> STABILIZATION FOR THIS PROJECT SHALL COMPLY WITH THE TIME FRAME GUIDELINES AS SPECIFIED BY THE NCG-010000 GENERAL CONSTRUCTION PERMIT EFFECTIVE APRIL 1, 2019 ISSUED BY THE NORTH CAROLINA DEPARTMENT OF ENVIRONMENTAL QUALITY DIVISION OF ENERGY, MINERAL, AND LAND RESOURCES. PERMANENT GROUND COVER IS REQUIRED FOR ALL DISTURBED AREAS WITHIN 15 WORKING DAYS OR 90 CALENDAR DAYS (WHICHEVER IS SHORTER) FOLLOWING COMPLETION OF CONSTRUCTION OR DEVELOPMENT. TEMPORARY OR PERMANENT GROUND COVER IS REQUIRED WITHIN 7 DAYS.

**DEFINITION:**

- > TEMPORARY SEEDING: PLANTING RAPID-GROWING ANNUAL GRASSES, SMALL GRAINS, OR LEGUMES TO PROVIDE INITIAL, TEMPORARY COVER FOR EROSION CONTROL ON DISTURBED AREAS.
- > PERMANENT SODDING: CONTROLLING RUNOFF AND EROSION ON DISTURBED AREAS BY ESTABLISHING PERENNIAL VEGETATIVE COVER.

**PURPOSE:**

- > TEMPORARY SEEDING: TO TEMPORARILY STABILIZE DENUDED AREAS THAT WILL NOT BE BROUGHT TO FINAL GRADE FOR A PERIOD OF MORE THAN 7 CALENDAR DAYS. TEMPORARY SEEDING CONTROLS RUNOFF AND EROSION UNTIL PERMANENT VEGETATION CAN BE ESTABLISHED.
- > PERMANENT SODDING: TO REDUCE EROSION AND DECREASE SEDIMENT YIELD FROM DISTURBED AREAS, AND TO PERMANENTLY STABILIZE SUCH AREAS IN A MANNER THAT IS ECONOMICAL, ADAPTS TO SITE CONDITIONS, AND ALLOWS SELECTION OF THE MOST APPROPRIATE PLANT MATERIALS.

**CONDITIONS WHERE PRACTICE APPLIES:**

- > TEMPORARY SEEDING: ON ANY CLEARED, UNVEGETATED, OR SPARSELY VEGETATED SOIL SURFACE WHERE VEGETATION COVER IS NEEDED FOR LESS THAN 1 YEAR. APPLICATIONS OF THIS PRACTICE INCLUDE DIVERSIONS, DAMS, TEMPORARY SEDIMENT BASINS, TEMPORARY ROAD BANKS, AND TOPSOIL STOCKPILES.
- > PERMANENT SODDING:
  - > FINE-GRADED AREAS ON WHICH PERMANENT, LONG-LIVED VEGETATIVE COVER IS THE MOST PRACTICAL OR MOST EFFECTIVE METHOD OF STABILIZING THE SOIL.

**SPECIFICATIONS:**

> SEEDBED REQUIREMENTS:

ESTABLISHMENT OF VEGETATION SHOULD NOT BE ATTEMPTED ON SITES THAT ARE UNSUITABLE DUE TO INAPPROPRIATE SOIL TEXTURE, POOR DRAINAGE, CONCENTRATED OVERLAND FLOW, OR STEEPNESS OF SLOPE UNTIL MEASURES HAVE BEEN TAKEN TO CORRECT THESE PROBLEMS.

TO MAINTAIN A GOOD STAND OF VEGETATION, THE SOIL MUST MEET CERTAIN MINIMUM REQUIREMENTS AS A GROWTH MEDIUM. THE EXISTING SOIL SHOULD HAVE THESE CRITERIA:

- > ENOUGH FINE-GRAINED (SILT AND CLAY) MATERIAL TO MAINTAIN ADEQUATE MOISTURE AND NUTRIENT SUPPLY (AVAILABLE WATER CAPACITY OF AT LEAST .05 INCHES WATER TO 1 INCH OF SOIL).
- > SUFFICIENT PORE SPACE TO PERMIT ROOT PENETRATION.
- > SUFFICIENT DEPTH OF SOIL TO PROVIDE AN ADEQUATE ROOT ZONE. THE DEPTH TO ROCK OR IMPERMEABLE LAYERS SUCH AS HARDPANS SHOULD BE 12 INCHES OR MORE, EXCEPT ON SLOPES STEEPER THAN 2H:1V WHERE THE ADDITION OF SOIL IS NOT FEASIBLE.
- > A FAVORABLE PH RANGE FOR PLANT GROWTH, USUALLY 6.0 TO 6.5.
- > FREE FROM LARGE ROOTS, BRANCHES, STONES, LARGE CLODS OF EARTH, OR TRASH OF ANY KIND. CLODS AND STONES MAY BE LEFT ON SLOPES STEEPER THAN 3H:1V IF THEY ARE TO BE HYDROSEEDED.

IF ANY OF THE ABOVE CRITERIA ARE NOT MET (I.E., IF EXISTING SOIL IS TOO COARSE, DENSE, SHALLOW OR ACIDIC TO FOSTER VEGETATION), SPECIAL AMENDMENTS ARE REQUIRED. THE SOIL CONDITIONERS DESCRIBED BELOW MAY BE BENEFICIAL OR, PREFERABLY, TOPSOIL MAY BE APPLIED.

> SEEDBED PREPARATION:

ROUGHEN SURFACES PRIOR TO SEEDING. TILL OR DISC THE PREPARED AREAS TO BE SEEDED TO A MIN. DEPTH OF FOUR (4) INCHES AND RETURN AREAS TO THE APPROVED FINAL GRADE AS NECESSARY.

LIME AND FERTILIZER NEEDS SHALL BE DETERMINED BY SOIL TESTS. SOIL TESTING IS PERFORMED FREE OF CHARGE BY THE NORTH CAROLINA DEPARTMENT OF AGRICULTURE SOIL TESTING LABORATORY.

WHEN SOIL TESTS ARE NOT AVAILABLE, FOLLOW RATES SUGGESTED IN THE SEEDING SPECIFICATIONS SHOWN BELOW:

- > GROUND AGRICULTURAL LIMESTONE:
  - LIGHT-TEXTURED, SANDY SOILS: 1 TO 1 1/2 TONS/ACRE
  - HEAVY-TEXTURED, CLAYEY SOILS: 2 TO 3 TONS/ACRE
- > FERTILIZER:
  - GRASSES: 1000 LB/ACRE OF 10-10-10 OR EQUIVALENT

APPLY LIME AND FERTILIZER EVENLY AND INCORPORATE INTO THE TOP 4 TO 6 INCHES OF SOIL BY DISKING OR OTHER SUITABLE MEANS. OPERATE MACHINERY ON THE CONTOUR. WHEN USING A HYDROSEEDER, APPLY LIME AND FERTILIZER TO A ROUGH, LOOSE SURFACE. COMPLETE SEEDBED PREPARATION BY BREAKING UP LARGE CLODS AND RAKING INTO A SMOOTH, UNIFORM SURFACE (SLOPES LESS THAN 3H:1V). FILL IN OR LEVEL DEPRESSIONS THAT CAN COLLECT WATER. BROADCAST SEED INTO A FRESHLY LOOSENEED SEEDBED THAT HAS NOT BEEN SEALED BY RAINFALL.

> SEEDING:

SEEDING DATES GIVEN IN THE SEEDING MIXTURE SPECIFICATIONS ARE DESIGNATED AS "BEST" OR "POSSIBLE". SEEDINGS PROPERLY CARRIED OUT WITHIN THE "BEST" DATES HAVE A HIGH PROBABILITY OF SUCCESS. IT IS ALSO POSSIBLE TO HAVE SATISFACTORY ESTABLISHMENT WHEN SEEDING OUTSIDE THESE DATES. HOWEVER, AS YOU DEVIATE FROM THEM, THE PROBABILITY OF FAILURE INCREASES RAPIDLY. SEEDING ON THE LAST DATE SHOWN UNDER "POSSIBLE" MAY REDUCE CHANGES OF SUCCESS BY 30 TO 50 PERCENT. ALWAYS TAKE THIS INTO ACCOUNT IN SCHEDULING LAND-DISTURBING ACTIVITIES.

USE CERTIFIED SEED FOR PERMANENT SEEDING WHENEVER POSSIBLE. CERTIFIED SEED IS INSPECTED BY THE NORTH CAROLINA CROP IMPROVEMENT ASSOCIATION. IT MEETS PUBLISHED NORTH CAROLINA STANDARDS AND SHOULD BEAR AN OFFICIAL "CERTIFIED SEED" LABEL.

LABELING OF NON-CERTIFIED SEED IS ALSO REQUIRED BY LAW. LABELS CONTAIN IMPORTANT INFORMATION ON SEED PURITY, GERMINATION, AND PRESENCE OF WOOD SEEDS. SEEDS MUST MEET STATE STANDARDS FOR CONTENT OF NOXIOUS WEEDS. DO NOT ACCEPT SEED CONTAINING "PROHIBITED" NOXIOUS WEED SEED.

INOCULATE LEGUME SEED WITH THE RHIZOBIUM BACTERIA APPROPRIATE TO THE SPECIES OF LEGUME.

APPLY SEED UNIFORMLY WITH A CYCLONE SEEDER, DROP-TYPE SPREADER, DRILL, CULTIPACKER SEEDER, OR HYDROSEEDER ON A FIRM, FRIABLE SEEDBED.

WHEN USING A DRILL OR CULTIPACKER SEEDER, PLANT SMALL GRAINS NO MORE THAN 1 INCH DEEP. GRASSES AND LEGUMES NO MORE THAN 1/2 INCH. EQUIPMENT SHOULD BE CALIBRATED IN THE FIELD FOR THE DESIRED SEEDING RATE.

WHEN USING BROADCAST-SEEDING METHODS, SUBDIVIDE THE AREA INTO WORKABLE SECTIONS AND DETERMINE THE AMOUNT OF SEED NEEDED FOR EACH SECTION. APPLY ONE-HALF THE SEED WHILE MOVING BACK AND FORTH ACROSS THE AREA, MAKING A UNIFORM PATTERN; THEN APPLY THE SECOND HALF IN THE SAME WAY, BUT MOVING AT RIGHT ANGLES TO THE FIRST PASS.

MULCH ALL PLANTINGS IMMEDIATELY AFTER SEEDING.

> HYDROSEEDING:

SURFACE ROUGHENING IS PARTICULARLY IMPORTANT WHEN HYDROSEEDING, AS A ROUGHENED SLOPE WILL PROVIDE SOME NATURAL COVERAGE FOR LIME, FERTILIZER, AND SEED. THE SURFACE SHOULD NOT BE COMPACTED OR SMOOTH. FINE SEEDBED PREPARATION IS NOT NECESSARY FOR HYDROSEEDING OPERATIONS: LARGE CLODS, STONES, AND IRREGULARITIES PROVIDE CAVITIES IN WHICH SEEDS CAN LODGE.

RATE OF WOOD FIBER (CELLULOSE) APPLICATION SHOULD BE AT LEAST 4000 LB/ACRE.

APPLY LEGUME INOCULANTS AT FOUR TIMES THE RECOMMENDED RATE WHEN ADDING INOCULANT TO A HYDROSEEDER SLURRY.

IF A MACHINERY BREAKDOWN OF 1/2 TO 2 HOURS OCCURS, ADD 50 PERCENT MORE SEED TO THE TANK, BASED ON THE PROPORTION OF THE SLURRY REMAINING. THIS SHOULD COMPENSATE FOR DAMAGE TO SEED. BEYOND 2 HOURS, A FULL RATE OF NEW SEED MAY BE NECESSARY.

LIME IS NOT NORMALLY APPLIED WITH A HYDRAULIC SEEDER BECAUSE IT IS ABRASIVE. IT CAN BE BLOWN ONTO STEEP SLOPES IN DRY FORM.

WHEN APPLYING HYDROSEED THE TOWER OR TANK METHOD SHALL BE USED. BELOW ARE THE SEQUENCE OF APPLICATION FOR BOTH METHODS:

WHEN USING THE TANK METHOD THE FIRST APPLICATION SHOULD BE WITH 3/4 MULCH, ALL SEED AND FERTILIZER AND THE SECOND APPLICATION SHOULD BE WITH 1/2 MULCH ONLY.

WHEN USING THE TOWER METHOD THE FIRST APPLICATION SHOULD BE WITH 1/2 MULCH ONLY AND THE SECOND APPLICATION SHOULD BE WITH 3/4 MULCH, ALL SEED AND FERTILIZER.

> MAINTENANCE:

GENERALLY, A STAND OF VEGETATION CANNOT BE DETERMINED TO BE FULLY ESTABLISHED UNTIL SOIL COVER HAS BEEN MAINTAINED FOR ONE FULL YEAR FROM PLANTING, INSPECT SEEDED AREAS FOR FAILURE AND MAKE NECESSARY REPAIRS AND RESEEDINGS WITHIN THE SAME SEASON, IF POSSIBLE.

RESEEDING: IF A STAND HAS INADEQUATE COVER, REEVALUATE CHOICE OF PLANT MATERIALS AND QUANTITIES OF LIME AND FERTILIZER. REESTABLISH THE STAND AFTER SEEDBED PREPARATION OR OVERSEED THE STAND. CONSIDER SEEDING TEMPORARY, ANNUAL SPECIES IF THE TIME OF YEAR IS NOT APPROPRIATE FOR PERMANENT SEEDING. IF VEGETATION FAILS TO GROW, SOIL MUST BE TESTED TO DETERMINE IF ACIDITY OR NUTRIENT IMBALANCE IS RESPONSIBLE.

FERTILIZATION: ON THE TYPICAL DISTURBED SITE, FULL ESTABLISHMENT USUALLY REQUIRES REFERTILIZATION IN THE SECOND GROWING SEASON. FINE TURF REQUIRES ANNUAL MAINTENANCE FERTILIZATION. USE SOIL TESTS IF POSSIBLE OR FOLLOW THE GUIDELINES GIVEN FOR THE SPECIFIC SEEDING MIXTURE.

> TEMPORARY SEEDING SPECIFICATIONS\*:

> SEEDING MIXTURES AND DATES:

FALL TO EARLY SPRING (AUG. 15 TO MAY 1)	RATE (LB/ACRE)
WINTER RYE (GRAIN)	120
KOBE LESPEDEZA	50
SPRING TO LATE SUMMER (MAY 1 TO AUG. 15)	RATE (LB/ACRE)
GERMAN MILLET	40

> SOIL AMENDMENTS:

1. FOLLOW RECOMMENDATIONS OF SOIL TESTS; OR
2. APPLY 2000 LB/ACRE GROUND AGRICULTURAL LIMESTONE AND 750 LB/ACRE 10-10-10 FERTILIZER.

> MULCH:

APPLY 4,000 LB/ACRE STRAW. ANCHOR MULCH BY TACKING WITH ASPHALT, ROVING OR A MULCH ANCHORING TOOL. A DISK WITH BLADES SET NEARLY STRAIGHT CAN BE USED AS A MULCH ANCHORING TOOL.

> MAINTENANCE:

REFERTILIZE IF GROWTH IS NOT FULLY ADEQUATE. RESEED, REFERTILIZE AND MULCH IMMEDIATELY FOLLOWING EROSION OR OTHER DAMAGE.

REF: 6.10 A, B & C, NC EROSION AND SEDIMENT CONTROL PLANNING AND DESIGN MANUAL, REV. MAY 2008.

> PERMANENT SODDING SPECIFICATIONS\*:

> SOD:

- ALL DISTURBED AREAS SHALL BE STABILIZED WITH BERMUDA SOD.
- SOD SHALL BE WATERED AND MAINTAINED PER SPECIFICATIONS.

> SOIL AMENDMENTS:

1. FOLLOW RECOMMENDATIONS OF SOIL TESTS; OR
2. APPLY 4000 LB/ACRE GROUND AGRICULTURAL LIMESTONE AND 1000 LB/ACRE 10-10-10 FERTILIZER.

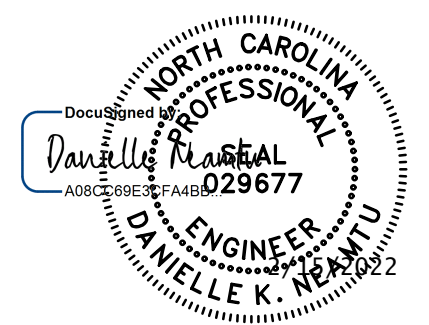
> MAINTENANCE:

REFERTILIZE IN THE SECOND YEAR UNLESS GROWTH IS ADEQUATE. MAY BE MOWED ONCE OR TWICE A YEAR, BUT MOWING IS NOT NECESSARY. RESOD AND REFERTILIZE DAMAGED AREAS IMMEDIATELY.

\* REF: 6.11, NC EROSION AND SEDIMENT CONTROL PLANNING AND DESIGN MANUAL, REV. MARCH 2009

TEMPORARY GROUND STABILIZATION*		
SITE AREA DESCRIPTION	STABILIZATION TIME FRAME	STABILIZATION TIME FRAME EXCEPTIONS
PERIMETER DIKES, SWALES, DITCHES AND SLOPES	7 DAYS	NONE
HIGH QUALITY WATER (HQW) ZONES	7 DAYS	NONE
SLOPES STEEPER THAN 3H:1V	7 DAYS	NONE
SLOPES 3H:1V OR FLATTER	7 DAYS	NONE
ALL OTHER AREAS WITH SLOPES FLATTER THAN 4H:1V	7 DAYS	NONE

\*EXTENSIONS OF TIME MAY BE APPROVED BY THE PERMITTING AUTHORITY BASED ON WEATHER OR OTHER SITE-SPECIFIC CONDITIONS THAT MAKE COMPLIANCE IMPRACTICABLE (SECTION II.B (2)(1)).



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PUBLIC WORKS COMMISSION OF FAYETTEVILLE  
**DEMOLITION AND DECOMMISSIONING OF FORMER WTP  
 AT GLENVILLE LAKE DAM (CUMBE-038)  
 FAYETTEVILLE, NC**

**EROSION AND SEDIMENTATION CONTROL NOTES**

PROJECT NO.	6384-231131
FILE NAME:	C011ESNT.DWG
SHEET NO.	<b>C-11</b>



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**GROUND STABILIZATION AND MATERIALS HANDLING PRACTICES FOR COMPLIANCE WITH THE NCG01 CONSTRUCTION GENERAL PERMIT**

Implementing the details and specifications on this plan sheet will result in the construction activity being considered compliant with the Ground Stabilization and Materials Handling sections of the NCG01 Construction General Permit (Sections E and F, respectively). The permittee shall comply with the Erosion and Sediment Control plan approved by the delegated authority having jurisdiction. All details and specifications shown on this sheet may not apply depending on site conditions and the delegated authority having jurisdiction.

**SECTION E: GROUND STABILIZATION**

Required Ground Stabilization Timeframes		
Site Area Description	Stabilize within this many calendar days after ceasing land disturbance	Timeframe variations
(a) Perimeter dikes, swales, ditches, and perimeter slopes	7	None
(b) High Quality Water (HQW) Zones	7	None
(c) Slopes steeper than 3:1	7	If slopes are 10' or less in length and are not steeper than 2:1, 14 days are allowed
(d) Slopes 3:1 to 4:1	7	-7 days for slopes greater than 50' in length and with slopes steeper than 4:1 -7 days for perimeter dikes, swales, ditches, perimeter slopes and HQW Zones -10 days for Falls Lake Watershed
(e) Areas with slopes flatter than 4:1	7	-7 days for perimeter dikes, swales, ditches, perimeter slopes and HQW Zones -10 days for Falls Lake Watershed unless there is zero slope

**Note:** After the permanent cessation of construction activities, any areas with temporary ground stabilization shall be converted to permanent ground stabilization as soon as practicable but in no case longer than 90 calendar days after the last land disturbing activity. Temporary ground stabilization shall be maintained in a manner to render the surface stable against accelerated erosion until permanent ground stabilization is achieved.

**GROUND STABILIZATION SPECIFICATION**

Stabilize the ground sufficiently so that rain will not dislodge the soil. Use one of the techniques in the table below:

Temporary Stabilization	Permanent Stabilization
<ul style="list-style-type: none"> <li>Temporary grass seed covered with straw or other mulches and tackifiers</li> <li>Hydroseeding</li> <li>Rolled erosion control products with or without temporary grass seed</li> <li>Appropriately applied straw or other mulch</li> <li>Plastic sheeting</li> </ul>	<ul style="list-style-type: none"> <li>Permanent grass seed covered with straw or other mulches and tackifiers</li> <li>Geotextile fabrics such as permanent soil reinforcement matting</li> <li>Hydroseeding</li> <li>Shrubs or other permanent plantings covered with mulch</li> <li>Uniform and evenly distributed ground cover sufficient to restrain erosion</li> <li>Structural methods such as concrete, asphalt or retaining walls</li> <li>Rolled erosion control products with grass seed</li> </ul>

**POLYACRYLAMIDES (PAMS) AND FLOCCULANTS**

- Select flocculants that are appropriate for the soils being exposed during construction, selecting from the *NC DWR List of Approved PAMS/Flocculants*.
- Apply flocculants at or before the inlets to Erosion and Sediment Control Measures.
- Apply flocculants at the concentrations specified in the *NC DWR List of Approved PAMS/Flocculants* and in accordance with the manufacturer's instructions.
- Provide ponding area for containment of treated Stormwater before discharging offsite.
- Store flocculants in leak-proof containers that are kept under storm-resistant cover or surrounded by secondary containment structures.

**EQUIPMENT AND VEHICLE MAINTENANCE**

- Maintain vehicles and equipment to prevent discharge of fluids.
- Provide drip pans under any stored equipment.
- Identify leaks and repair as soon as feasible, or remove leaking equipment from the project.
- Collect all spent fluids, store in separate containers and properly dispose as hazardous waste (recycle when possible).
- Remove leaking vehicles and construction equipment from service until the problem has been corrected.
- Bring used fuels, lubricants, coolants, hydraulic fluids and other petroleum products to a recycling or disposal center that handles these materials.

**LITTER, BUILDING MATERIAL AND LAND CLEARING WASTE**

- Never bury or burn waste. Place litter and debris in approved waste containers.
- Provide a sufficient number and size of waste containers (e.g dumpster, trash receptacle) on site to contain construction and domestic wastes.
- Locate waste containers at least 50 feet away from storm drain inlets and surface waters unless no other alternatives are reasonably available.
- Locate waste containers on areas that do not receive substantial amounts of runoff from upland areas and does not drain directly to a storm drain, stream or wetland.
- Cover waste containers at the end of each workday and before storm events or provide secondary containment. Repair or replace damaged waste containers.
- Anchor all lightweight items in waste containers during times of high winds.
- Empty waste containers as needed to prevent overflow. Clean up immediately if containers overflow.
- Dispose waste off-site at an approved disposal facility.
- On business days, clean up and dispose of waste in designated waste containers.

**PAINT AND OTHER LIQUID WASTE**

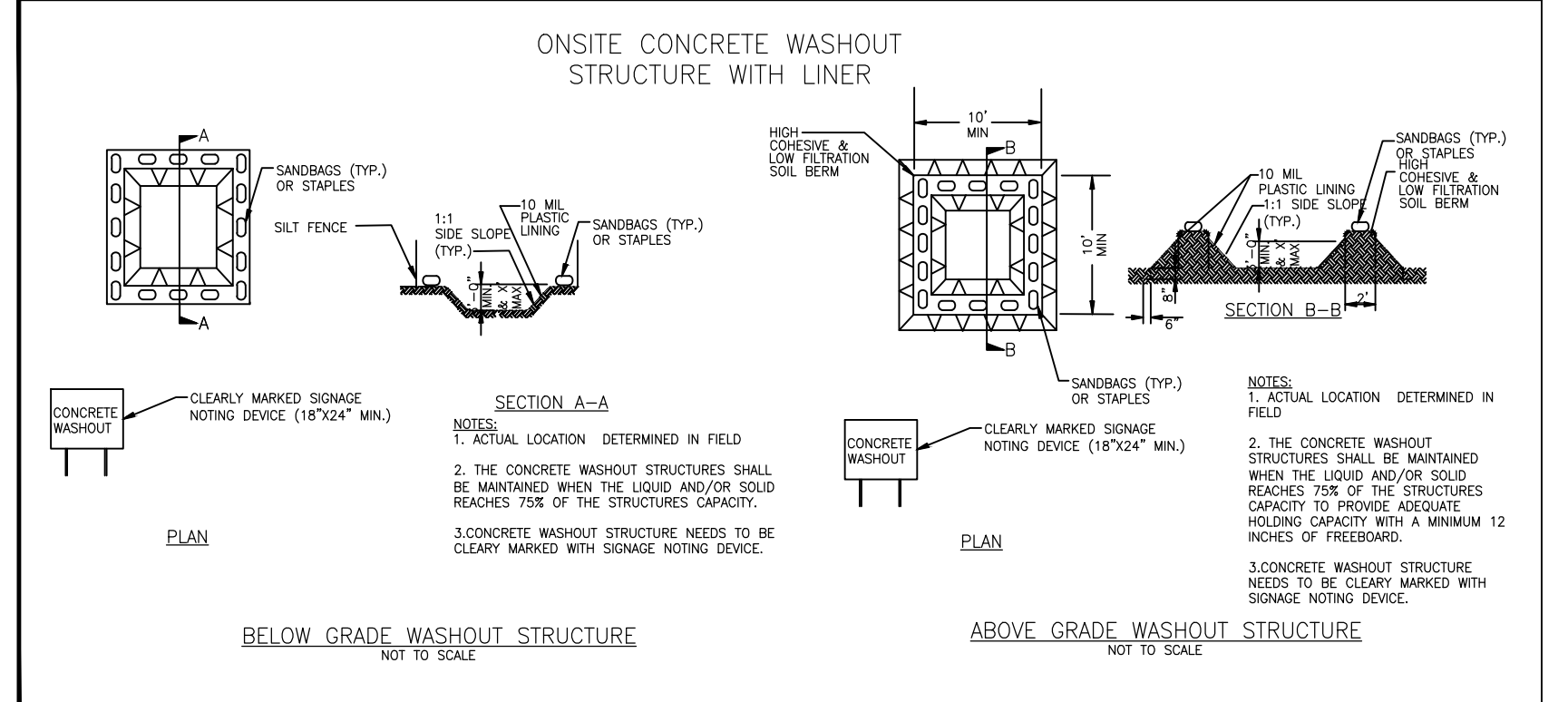
- Do not dump paint and other liquid waste into storm drains, streams or wetlands.
- Locate paint washouts at least 50 feet away from storm drain inlets and surface waters unless no other alternatives are reasonably available.
- Contain liquid wastes in a controlled area.
- Containment must be labeled, sized and placed appropriately for the needs of site.
- Prevent the discharge of soaps, solvents, detergents and other liquid wastes from construction sites.

**PORTABLE TOILETS**

- Install portable toilets on level ground, at least 50 feet away from storm drains, streams or wetlands unless there is no alternative reasonably available. If 50 foot offset is not attainable, provide relocation of portable toilet behind silt fence or place on a gravel pad and surround with sand bags.
- Provide staking or anchoring of portable toilets during periods of high winds or in high foot traffic areas.
- Monitor portable toilets for leaking and properly dispose of any leaked material. Utilize a licensed sanitary waste hauler to remove leaking portable toilets and replace with properly operating unit.

**EARTHEN STOCKPILE MANAGEMENT**

- Show stockpile locations on plans. Locate earthen-material stockpile areas at least 50 feet away from storm drain inlets, sediment basins, perimeter sediment controls and surface waters unless it can be shown no other alternatives are reasonably available.
- Protect stockpile with silt fence installed along toe of slope with a minimum offset of five feet from the toe of stockpile.
- Provide stable stone access point when feasible.
- Stabilize stockpile within the timeframes provided on this sheet and in accordance with the approved plan and any additional requirements. Soil stabilization is defined as vegetative, physical or chemical coverage techniques that will restrain accelerated erosion on disturbed soils for temporary or permanent control needs.



**CONCRETE WASHOUTS**

- Do not discharge concrete or cement slurry from the site.
- Dispose of, or recycle settled, hardened concrete residue in accordance with local and state solid waste regulations and at an approved facility.
- Manage washout from mortar mixers in accordance with the above item and in addition place the mixer and associated materials on impervious barrier and within lot perimeter silt fence.
- Install temporary concrete washouts per local requirements, where applicable. If an alternate method or product is to be used, contact your approval authority for review and approval. If local standard details are not available, use one of the two types of temporary concrete washouts provided on this detail.
- Do not use concrete washouts for dewatering or storing defective curb or sidewalk sections. Stormwater accumulated within the washout may not be pumped into or discharged to the storm drain system or receiving surface waters. Liquid waste must be pumped out and removed from project.
- Locate washouts at least 50 feet from storm drain inlets and surface waters unless it can be shown that no other alternatives are reasonably available. At a minimum, install protection of storm drain inlet(s) closest to the washout which could receive spills or overflow.
- Locate washouts in an easily accessible area, on level ground and install a stone entrance pad in front of the washout. Additional controls may be required by the approving authority.
- Install at least one sign directing concrete trucks to the washout within the project limits. Post signage on the washout itself to identify this location.
- Remove leavings from the washout when at approximately 75% capacity to limit overflow events. Replace the tarp, sand bags or other temporary structural components when no longer functional. When utilizing alternative or proprietary products, follow manufacturer's instructions.
- At the completion of the concrete work, remove remaining leavings and dispose of in an approved disposal facility. Fill pit, if applicable, and stabilize any disturbance caused by removal of washout.

**HERBICIDES, PESTICIDES AND RODENTICIDES**

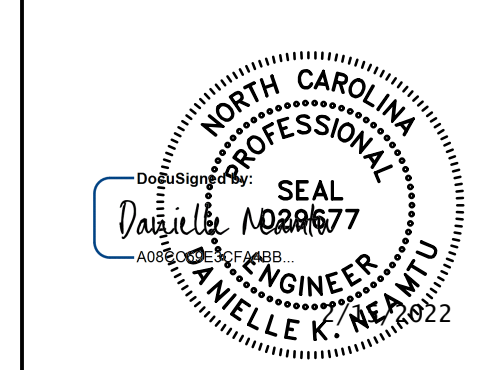
- Store and apply herbicides, pesticides and rodenticides in accordance with label restrictions.
- Store herbicides, pesticides and rodenticides in their original containers with the label, which lists directions for use, ingredients and first aid steps in case of accidental poisoning.
- Do not store herbicides, pesticides and rodenticides in areas where flooding is possible or where they may spill or leak into wells, stormwater drains, ground water or surface water. If a spill occurs, clean area immediately.
- Do not stockpile these materials onsite.

**HAZARDOUS AND TOXIC WASTE**

- Create designated hazardous waste collection areas on-site.
- Place hazardous waste containers under cover or in secondary containment.
- Do not store hazardous chemicals, drums or bagged materials directly on the ground.

**NCG01 GROUND STABILIZATION AND MATERIALS HANDLING**

**EFFECTIVE: 04/01/19**



REV. NO.	DATE	DRWN	CHKD	REMARKS

DESIGNED BY: R. NAGEL  
 DRAWN BY: R. BOGGS  
 SHEET CHK'D BY: D. NEAMTU  
 CROSS CHK'D BY: R. NAGEL  
 APPROVED BY: D. NEAMTU  
 DATE: FEBRUARY 2022

5400 Glenwood Avenue, Suite 400  
 Raleigh, NC 27612  
 Tel: (919) 325-3500  
 NC F-0412

PUBLIC WORKS COMMISSION OF FAYETTEVILLE  
 DEMOLITION AND DECOMMISSIONING OF FORMER WTP  
 AT GLENVILLE LAKE DAM (CUMBE-038)  
 FAYETTEVILLE, NC

PROJECT NO. 6384-231131  
 FILE NAME: C012ESNT.DWG  
 SHEET NO. C-12



**PART III  
SELF-INSPECTION, RECORDKEEPING AND REPORTING**

**SECTION A: SELF-INSPECTION**  
 Self-inspections are required during normal business hours in accordance with the table below. When adverse weather or site conditions would cause the safety of the inspection personnel to be in jeopardy, the inspection may be delayed until the next business day on which it is safe to perform the inspection. In addition, when a storm event of equal to or greater than 1.0 inch occurs outside of normal business hours, the self-inspection shall be performed upon the commencement of the next business day. Any time when inspections were delayed shall be noted in the Inspection Record.

Inspect	Frequency (during normal business hours)	Inspection records must include:
(1) Rain gauge maintained in good working order	Daily	Daily rainfall amounts. If no daily rain gauge observations are made during weekend or holiday periods, and no individual-day rainfall information is available, record the cumulative rain measurement for those unattended days (and this will determine if a site inspection is needed). Days on which no rainfall occurred shall be recorded as "zero." The permittee may use another rain-monitoring device approved by the Division.
(2) E&SC Measures	At least once per 7 calendar days and within 24 hours of a rain event ≥ 1.0 inch in 24 hours	1. Identification of the measures inspected, 2. Date and time of the inspection, 3. Name of the person performing the inspection, 4. Indication of whether the measures were operating properly, 5. Description of maintenance needs for the measure, 6. Description, evidence, and date of corrective actions taken.
(3) Stormwater discharge outfalls (SDOs)	At least once per 7 calendar days and within 24 hours of a rain event ≥ 1.0 inch in 24 hours	1. Identification of the discharge outfalls inspected, 2. Date and time of the inspection, 3. Name of the person performing the inspection, 4. Evidence of indicators of stormwater pollution such as oil sheen, floating or suspended solids or discoloration, 5. Indication of visible sediment leaving the site, 6. Description, evidence, and date of corrective actions taken.
(4) Perimeter of site	At least once per 7 calendar days and within 24 hours of a rain event ≥ 1.0 inch in 24 hours	If visible sedimentation is found outside site limits, then a record of the following shall be made: 1. Actions taken to clean up or stabilize the sediment that has left the site limits, 2. Description, evidence, and date of corrective actions taken, and 3. An explanation as to the actions taken to control future releases.
(5) Streams or wetlands onsite or offsite (where accessible)	At least once per 7 calendar days and within 24 hours of a rain event ≥ 1.0 inch in 24 hours	If the stream or wetland has increased visible sedimentation or a stream has visible increased turbidity from the construction activity, then a record of the following shall be made: 1. Description, evidence and date of corrective actions taken, and 2. Records of the required reports to the appropriate Division Regional Office per Part III, Section C, Item (2)(a) of this permit.
(6) Ground stabilization measures	After each phase of grading	1. The phase of grading (installation of perimeter E&SC measures, clearing and grubbing, installation of storm drainage facilities, completion of all land-disturbing activity, construction or redevelopment, permanent ground cover). 2. Documentation that the required ground stabilization measures have been provided within the required timeframe or an assurance that they will be provided as soon as possible.

NOTE: The rain inspection resets the required 7 calendar day inspection requirement.

**PART III  
SELF-INSPECTION, RECORDKEEPING AND REPORTING**

**SECTION B: RECORDKEEPING**  
**1. E&SC Plan Documentation**  
 The approved E&SC plan as well as any approved deviation shall be kept on the site. The approved E&SC plan must be kept up-to-date throughout the coverage under this permit. The following items pertaining to the E&SC plan shall be kept on site and available for inspection at all times during normal business hours.

Item to Document	Documentation Requirements
(a) Each E&SC measure has been installed and does not significantly deviate from the locations, dimensions and relative elevations shown on the approved E&SC plan.	Initial and date each E&SC measure on a copy of the approved E&SC plan or complete, date and sign an inspection report that lists each E&SC measure shown on the approved E&SC plan. This documentation is required upon the initial installation of the E&SC measures or if the E&SC measures are modified after initial installation.
(b) A phase of grading has been completed.	Initial and date a copy of the approved E&SC plan or complete, date and sign an inspection report to indicate completion of the construction phase.
(c) Ground cover is located and installed in accordance with the approved E&SC plan.	Initial and date a copy of the approved E&SC plan or complete, date and sign an inspection report to indicate compliance with approved ground cover specifications.
(d) The maintenance and repair requirements for all E&SC measures have been performed.	Complete, date and sign an inspection report.
(e) Corrective actions have been taken to E&SC measures.	Initial and date a copy of the approved E&SC plan or complete, date and sign an inspection report to indicate the completion of the corrective action.

**2. Additional Documentation to be Kept on Site**  
 In addition to the E&SC plan documents above, the following items shall be kept on the site and available for inspectors at all times during normal business hours, unless the Division provides a site-specific exemption based on unique site conditions that make this requirement not practical:

- This General Permit as well as the Certificate of Coverage, after it is received.
- Records of inspections made during the previous twelve months. The permittee shall record the required observations on the Inspection Record Form provided by the Division or a similar inspection form that includes all the required elements. Use of electronically-available records in lieu of the required paper copies will be allowed if shown to provide equal access and utility as the hard-copy records.

**3. Documentation to be Retained for Three Years**  
 All data used to complete the e-NOI and all inspection records shall be maintained for a period of three years after project completion and made available upon request. [40 CFR 122.41]

**PART III  
SELF-INSPECTION, RECORDKEEPING AND REPORTING**

**SECTION C: REPORTING**  
**1. Occurrences that Must be Reported**  
 Permittees shall report the following occurrences:

- Visible sediment deposition in a stream or wetland.
- Oil spills if:
  - They are 25 gallons or more,
  - They are less than 25 gallons but cannot be cleaned up within 24 hours,
  - They cause sheen on surface waters (regardless of volume), or
  - They are within 100 feet of surface waters (regardless of volume).
- Releases of hazardous substances in excess of reportable quantities under Section 311 of the Clean Water Act (Ref: 40 CFR 110.3 and 40 CFR 117.3) or Section 102 of CERCLA (Ref: 40 CFR 302.4) or G.S. 143-215.85.
- Anticipated bypasses and unanticipated bypasses.
- Noncompliance with the conditions of this permit that may endanger health or the environment.

**2. Reporting Timeframes and Other Requirements**  
 After a permittee becomes aware of an occurrence that must be reported, he shall contact the appropriate Division regional office within the timeframes and in accordance with the other requirements listed below. Occurrences outside normal business hours may also be reported to the Department's Environmental Emergency Center personnel at (800) 858-0368.

Occurrence	Reporting Timeframes (After Discovery) and Other Requirements
(a) Visible sediment deposition in a stream or wetland	<ul style="list-style-type: none"> <li><b>Within 24 hours</b>, an oral or electronic notification.</li> <li><b>Within 7 calendar days</b>, a report that contains a description of the sediment and actions taken to address the cause of the deposition. Division staff may waive the requirement for a written report on a case-by-case basis.</li> <li>If the stream is named on the <a href="#">NC 303(d) list</a> as impaired for sediment-related causes, the permittee may be required to perform additional monitoring, inspections or apply more stringent practices if staff determine that additional requirements are needed to assure compliance with the federal or state impaired-waters conditions.</li> </ul>
(b) Oil spills and release of hazardous substances per Item 1(b)-(c) above	<ul style="list-style-type: none"> <li><b>Within 24 hours</b>, an oral or electronic notification. The notification shall include information about the date, time, nature, volume and location of the spill or release.</li> </ul>
(c) Anticipated bypasses [40 CFR 122.41(m)(3)]	<ul style="list-style-type: none"> <li><b>A report at least ten days before the date of the bypass, if possible.</b> The report shall include an evaluation of the anticipated quality and effect of the bypass.</li> </ul>
(d) Unanticipated bypasses [40 CFR 122.41(m)(3)]	<ul style="list-style-type: none"> <li><b>Within 24 hours</b>, an oral or electronic notification.</li> <li><b>Within 7 calendar days</b>, a report that includes an evaluation of the quality and effect of the bypass.</li> </ul>
(e) Noncompliance with the conditions of this permit that may endanger health or the environment [40 CFR 122.41(l)(7)]	<ul style="list-style-type: none"> <li><b>Within 24 hours</b>, an oral or electronic notification.</li> <li><b>Within 7 calendar days</b>, a report that contains a description of the noncompliance, and its causes; the period of noncompliance, including exact dates and times, and if the noncompliance has not been corrected, the anticipated time noncompliance is expected to continue; and steps taken or planned to reduce, eliminate, and prevent reoccurrence of the noncompliance. [40 CFR 122.41(l)(6)].</li> <li>Division staff may waive the requirement for a written report on a case-by-case basis.</li> </ul>

**PART II, SECTION G, ITEM (4)  
DRAW DOWN OF SEDIMENT BASINS FOR MAINTENANCE OR CLOSE OUT**

Sediment basins and traps that receive runoff from drainage areas of one acre or more shall use outlet structures that withdraw water from the surface when these devices need to be drawn down for maintenance or close out unless this is infeasible. The circumstances in which it is not feasible to withdraw water from the surface shall be rare (for example, times with extended cold weather). Non-surface withdrawals from sediment basins shall be allowed only when all of the following criteria have been met:

- The E&SC plan authority has been provided with documentation of the non-surface withdrawal and the specific time periods or conditions in which it will occur. The non-surface withdrawal shall not commence until the E&SC plan authority has approved these items,
- The non-surface withdrawal has been reported as an anticipated bypass in accordance with Part III, Section C, Item (2)(c) and (d) of this permit,
- Dewatering discharges are treated with controls to minimize discharges of pollutants from stormwater that is removed from the sediment basin. Examples of appropriate controls include properly sited, designed and maintained dewatering tanks, weir tanks, and filtration systems,
- Vegetated, upland areas of the sites or a properly designed stone pad is used to the extent feasible at the outlet of the dewatering treatment devices described in Item (c) above,
- Velocity dissipation devices such as check dams, sediment traps, and riprap are provided at the discharge points of all dewatering devices, and
- Sediment removed from the dewatering treatment devices described in Item (c) above is disposed of in a manner that does not cause deposition of sediment into waters of the United States.

**NCG01 SELF-INSPECTION, RECORDKEEPING AND REPORTING** **EFFECTIVE: 04/01/19**

REV. NO.	DATE	DRWN	CHKD	REMARKS

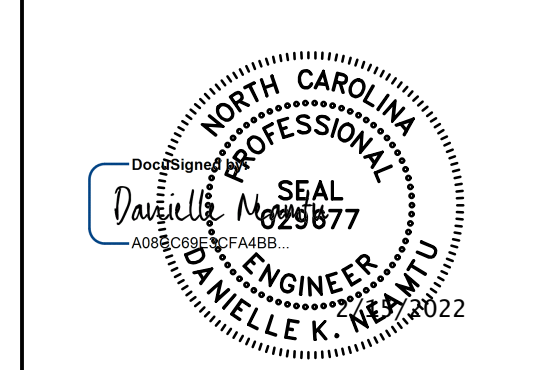
DESIGNED BY: R. NAGEL  
 DRAWN BY: R. BOGGS  
 SHEET CHK'D BY: D. NEAMTU  
 CROSS CHK'D BY: R. NAGEL  
 APPROVED BY: D. NEAMTU  
 DATE: FEBRUARY 2022



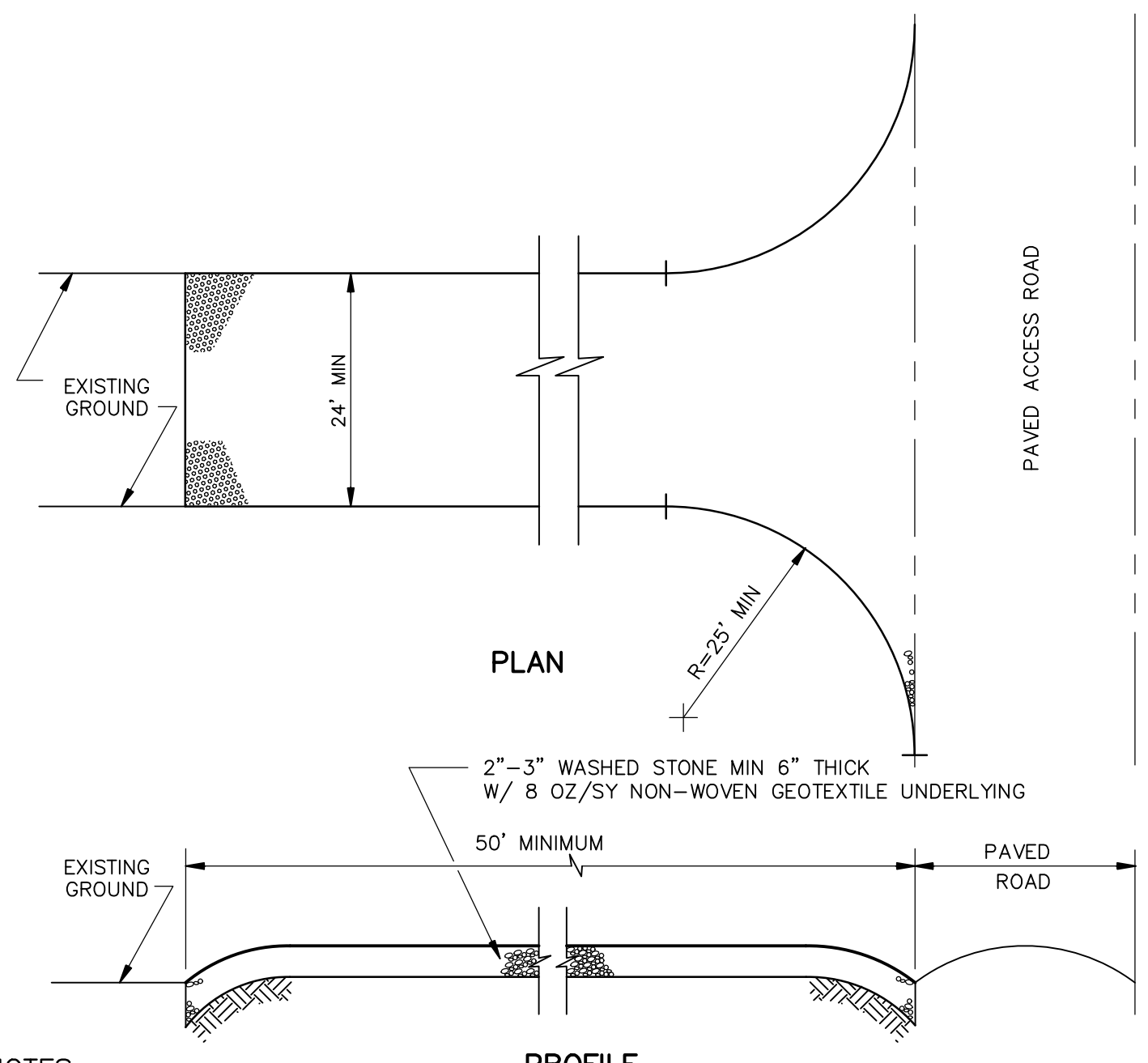
PUBLIC WORKS COMMISSION OF FAYETTEVILLE  
**DEMOLITION AND DECOMMISSIONING OF FORMER WTP  
 AT GLENVILLE LAKE DAM (CUMBE-038)  
 FAYETTEVILLE, NC**

**NCG01 SELF-INSPECTION,  
 RECORDKEEPING AND REPORTING**

PROJECT NO. 6384-231131
FILE NAME: C013ESNT.DWG
SHEET NO. <b>C-13</b>



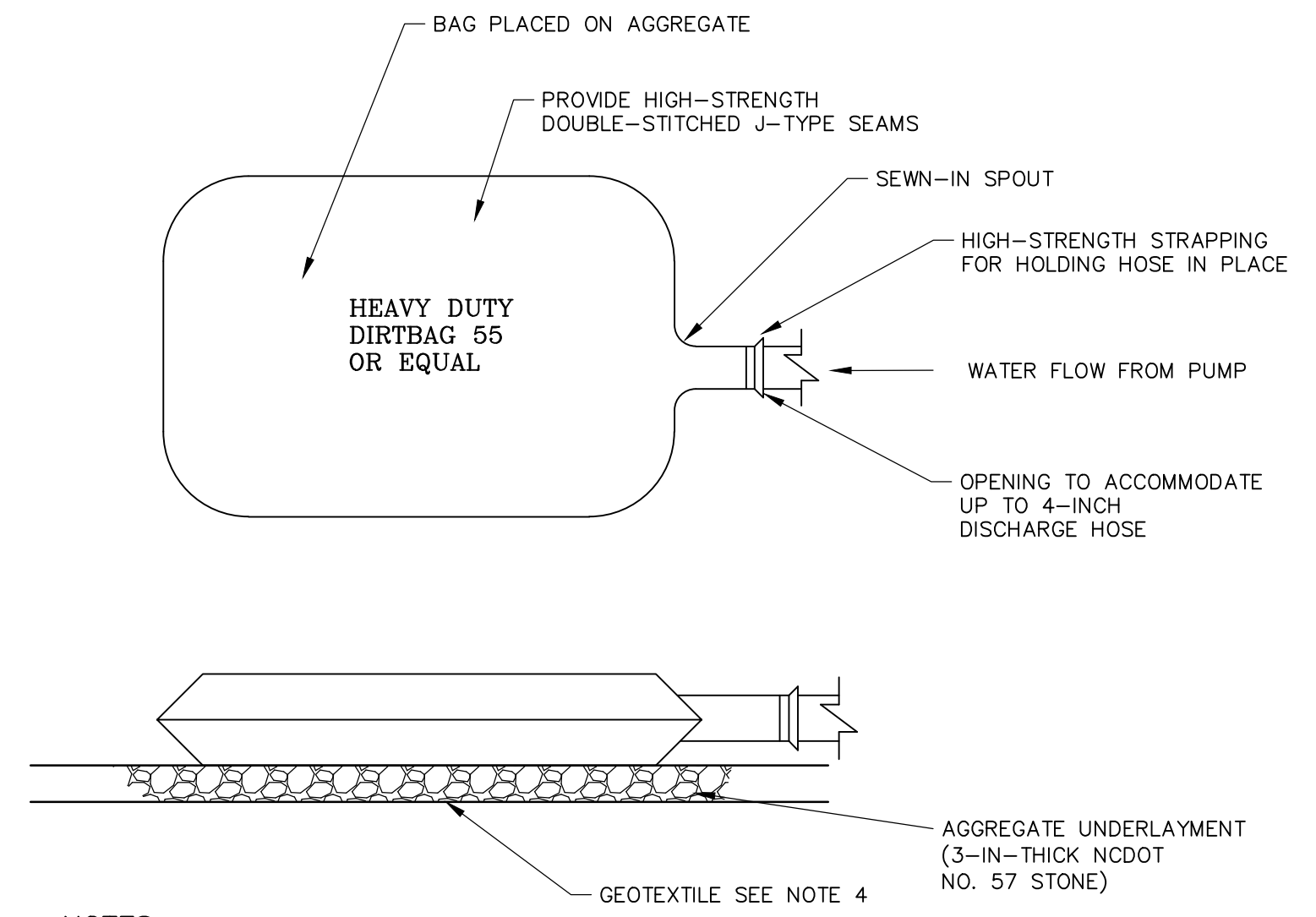




- NOTES:**
1. PROVIDE APPROPRIATE TRANSITION BETWEEN TEMPORARY GRAVEL CONSTRUCTION ENTRANCE AND EXISTING ROAD.
  2. THE ENTRANCE SHALL BE MAINTAINED IN A CONDITION THAT WILL PREVENT TRACKING OR FLOWING OF SEDIMENT ONTO PUBLIC RIGHT-OF-WAY. THIS MAY REQUIRE PERIODIC TOP DRESSING WITH ADDITIONAL STONE OR ADDING STONE TO THE LENGTH OF THE ENTRANCE.
  3. REPAIR AND CLEAN OUT ANY MEASURES USED TO TRAP SEDIMENT.
  4. ALL SEDIMENT SPILLED, DROPPED, WASHED, OR TRACKED ONTO PUBLIC RIGHT-OF-WAY MUST BE REMOVED IMMEDIATELY.

**TEMPORARY GRAVEL CONSTRUCTION ENTRANCE/EXIT**

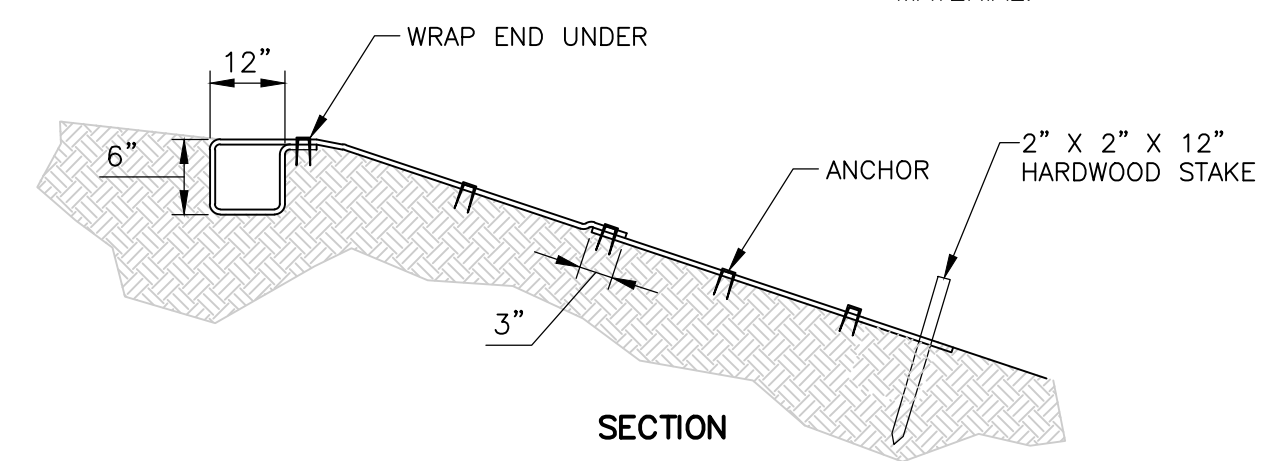
**DETAIL A**  
NTS



- NOTES:**
1. THE SEDIMENT BAG SHALL BE MADE OF NON-WOVEN GEOTEXTILE SIZED FOR DEWATERING PUMP FLOW.
  2. ALL STRUCTURAL SEAMS SHALL BE SEWN WITH A DOUBLE STITCH USING A DOUBLE-NEEDLE MACHINE WITH HIGH-STRENGTH THREAD.
  3. THE SEAM STRENGTH SHALL WITHSTAND 100 LB/IN USING ASTM D-4884 TEST METHOD.
  4. THE GEOTEXTILE FABRIC SHALL BE 8 OZ. NON-WOVEN FABRIC.
  5. DISCHARGE FROM THE SEDIMENT BAG SHALL BE DIRECTED SUCH THAT PRE-DISTURBANCE HYDROLOGY IS NOT CHANGED.
  6. DISPOSE OF SEDIMENT BAG PER NC STATE REGULATIONS ONCE THE BAG HAS REACHED CAPACITY.

**DEWATERING SEDIMENT BAG**

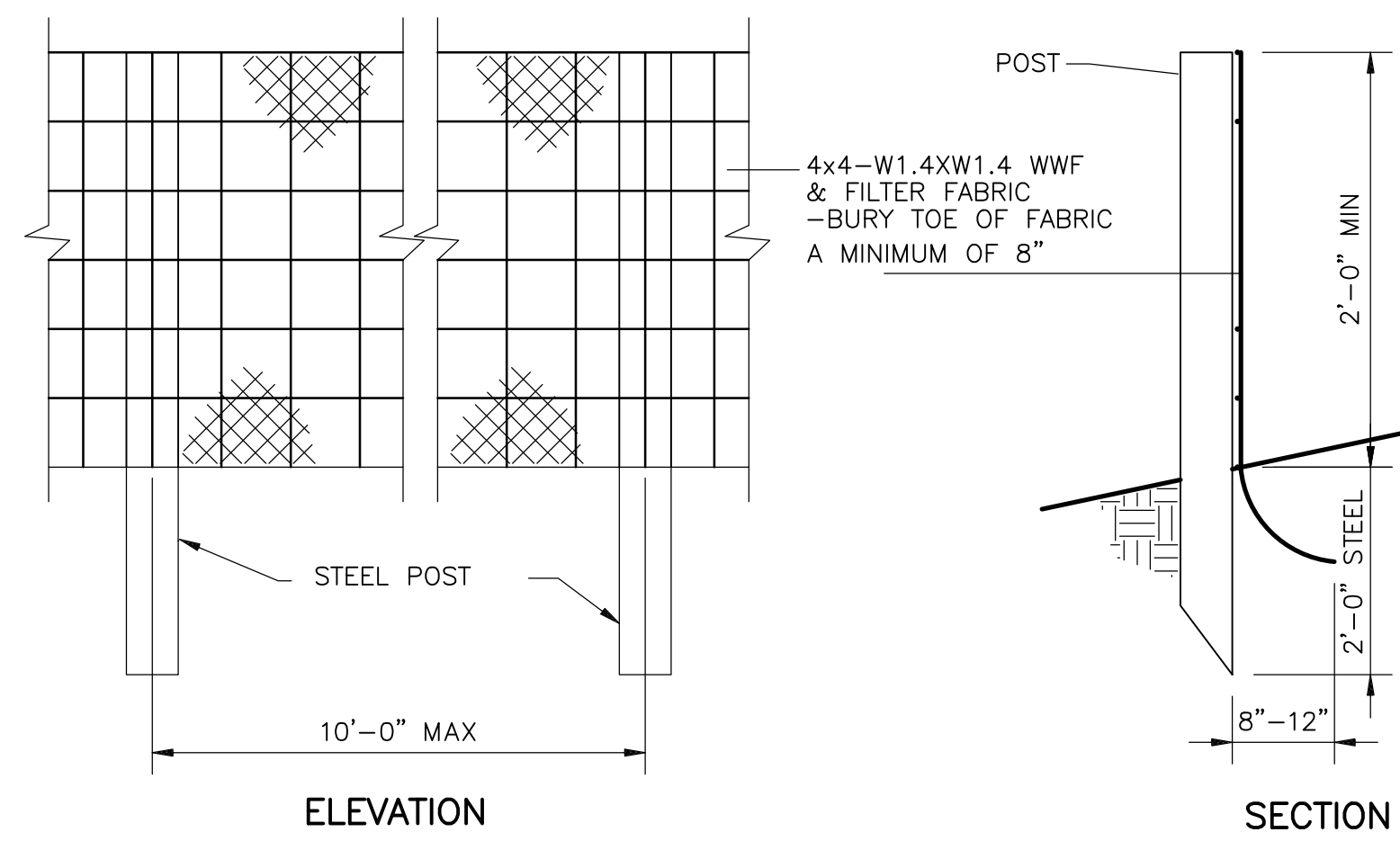
**DETAIL D**  
NTS



- NOTES:**
1. REFER TO MANUFACTURER'S INSTALLATION INSTRUCTIONS.
  2. UTILIZE MAXIMUM MANUFACTURER RECOMMENDED ANCHOR SPACING.

**EROSION CONTROL MATTING**

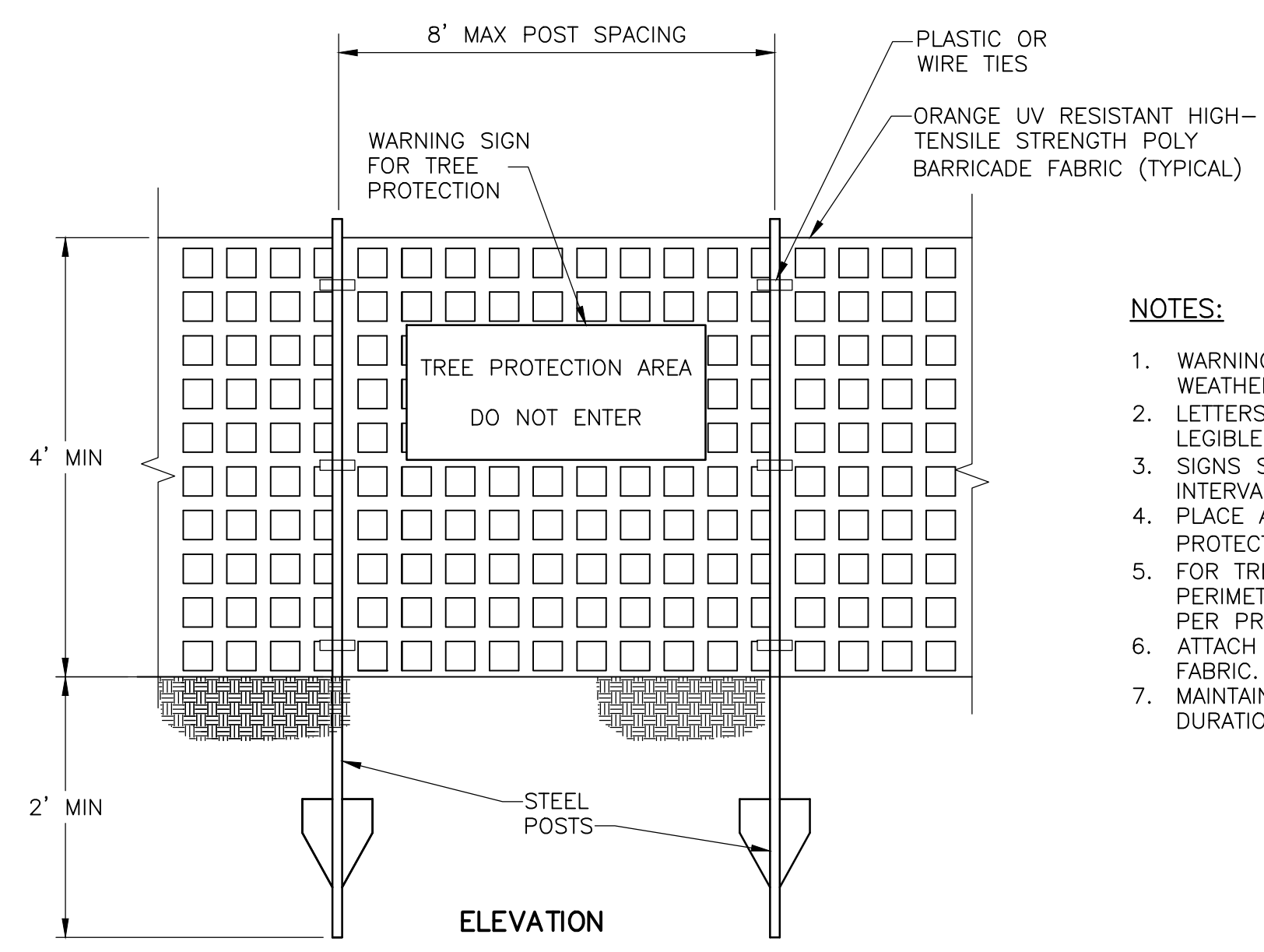
**DETAIL B**  
NTS



- NOTES:**
1. INSPECT SEDIMENT FENCES AT LEAST ONCE A WEEK AND AFTER EACH RAINFALL. MAKE ANY REQUIRED REPAIRS IMMEDIATELY.
  2. SHOULD THE FABRIC COLLAPSE, TEAR, DECOMPOSE, OR BECOME INEFFECTIVE, REPLACE IT PROMPTLY.
  3. REMOVE ACCUMULATED SEDIMENT ONCE IT BUILDS UP TO 1/3 FOOT DEEP AT THE FENCE. TAKE CARE TO AVOID UNDERMINING THE FENCE DURING CLEANOUT.
  4. REMOVE ALL FENCING MATERIALS AND UNSTABLE SEDIMENT DEPOSITS AND BRING THE AREA TO GRADE AND STABILIZE IT AFTER THE CONTRIBUTING DRAINAGE AREA HAS BEEN PROPERLY STABILIZED.

**SILT FENCE**

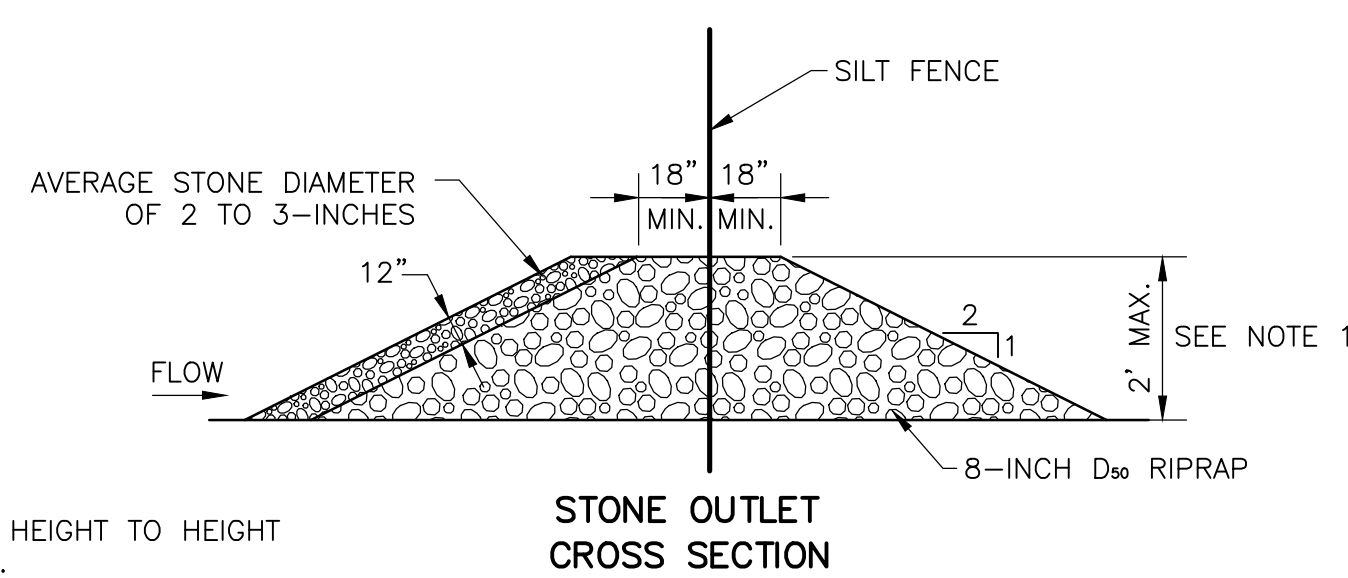
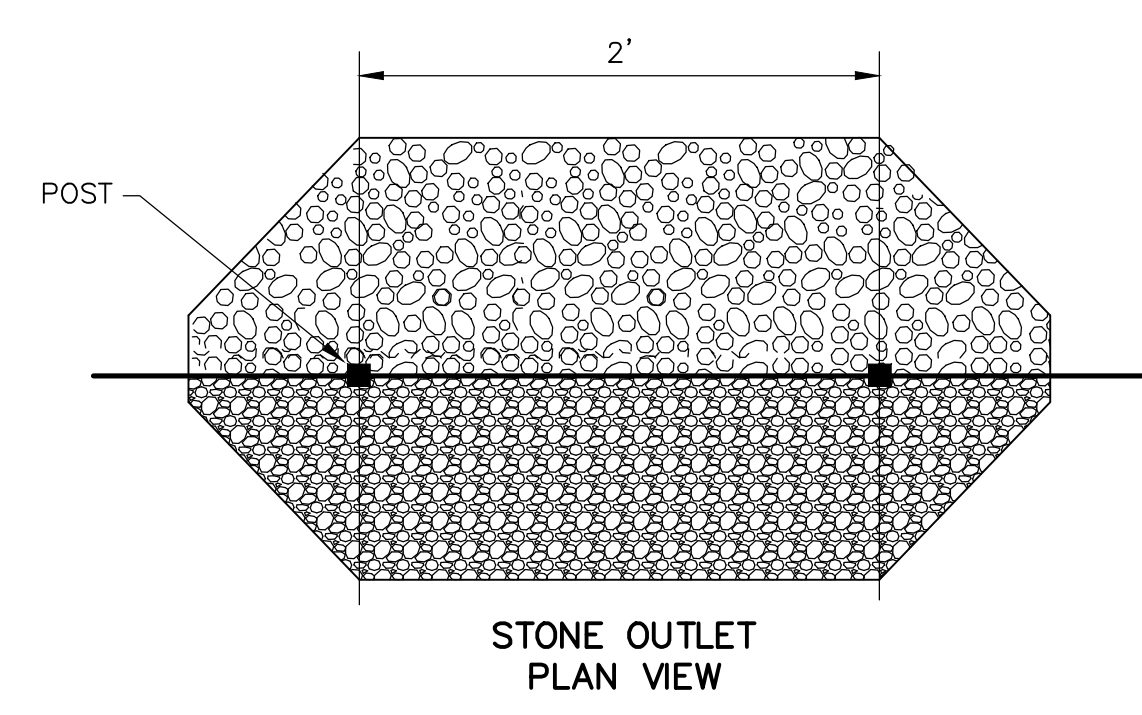
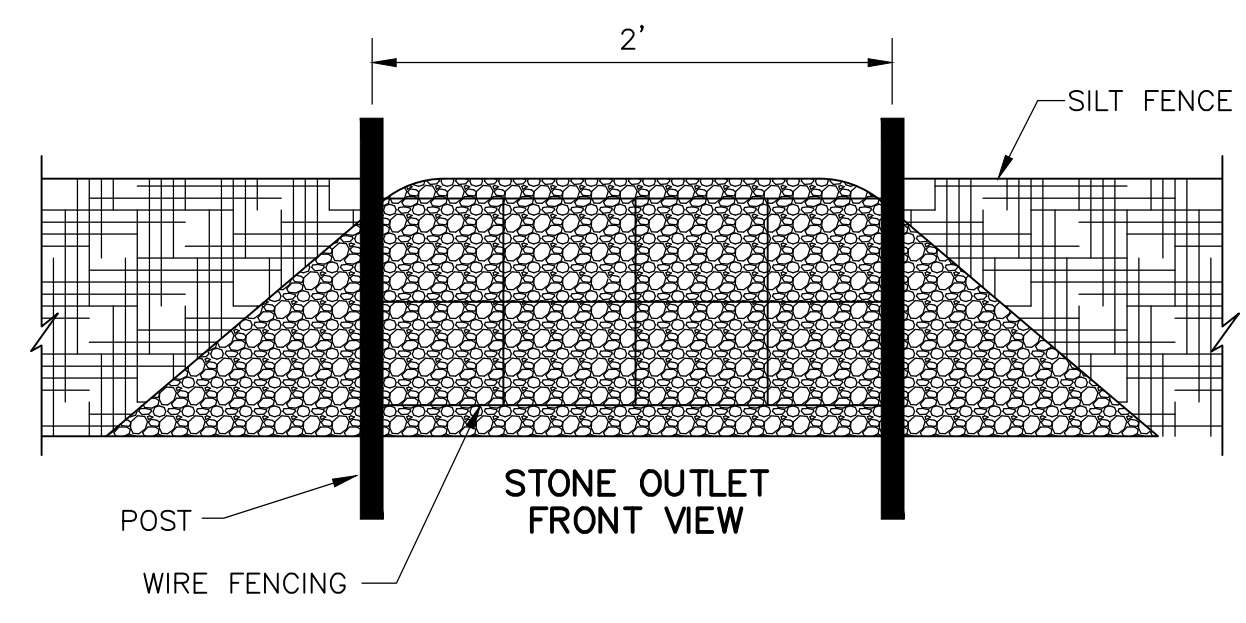
**DETAIL E**  
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**CONSTRUCTION AND TREE PROTECTION FENCE**

**DETAIL C**  
NTS

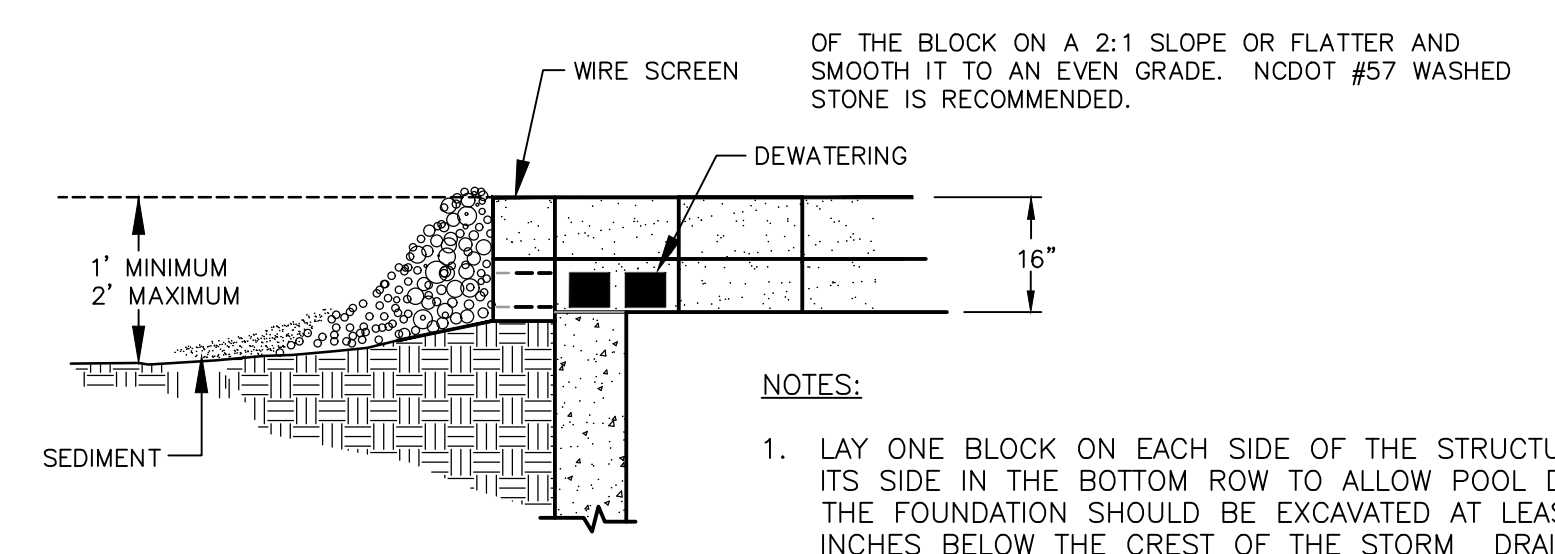
- NOTES:**
1. WARNING SIGNS TO BE MADE OF DURABLE, WEATHERPROOF MATERIAL.
  2. LETTERS TO BE 3" HIGH MINIMUM, CLEARLY LEGIBLE AND SPACED AS DETAILED.
  3. SIGNS SHALL BE PLACED AT 50' MAXIMUM INTERVALS.
  4. PLACE A SIGN AT EACH END OF LINEAR TREE PROTECTION AND 50' ON CENTER THEREAFTER.
  5. FOR TREE PROTECTION AREAS LESS THAN 50' IN PERIMETER, PROVIDE NO LESS THAN ONE SIGN PER PROTECTION AREA.
  6. ATTACH SIGNS SECURELY TO FENCE POSTS AND FABRIC.
  7. MAINTAIN TREE PROTECTION FENCE THROUGHOUT DURATION OF PROJECT.



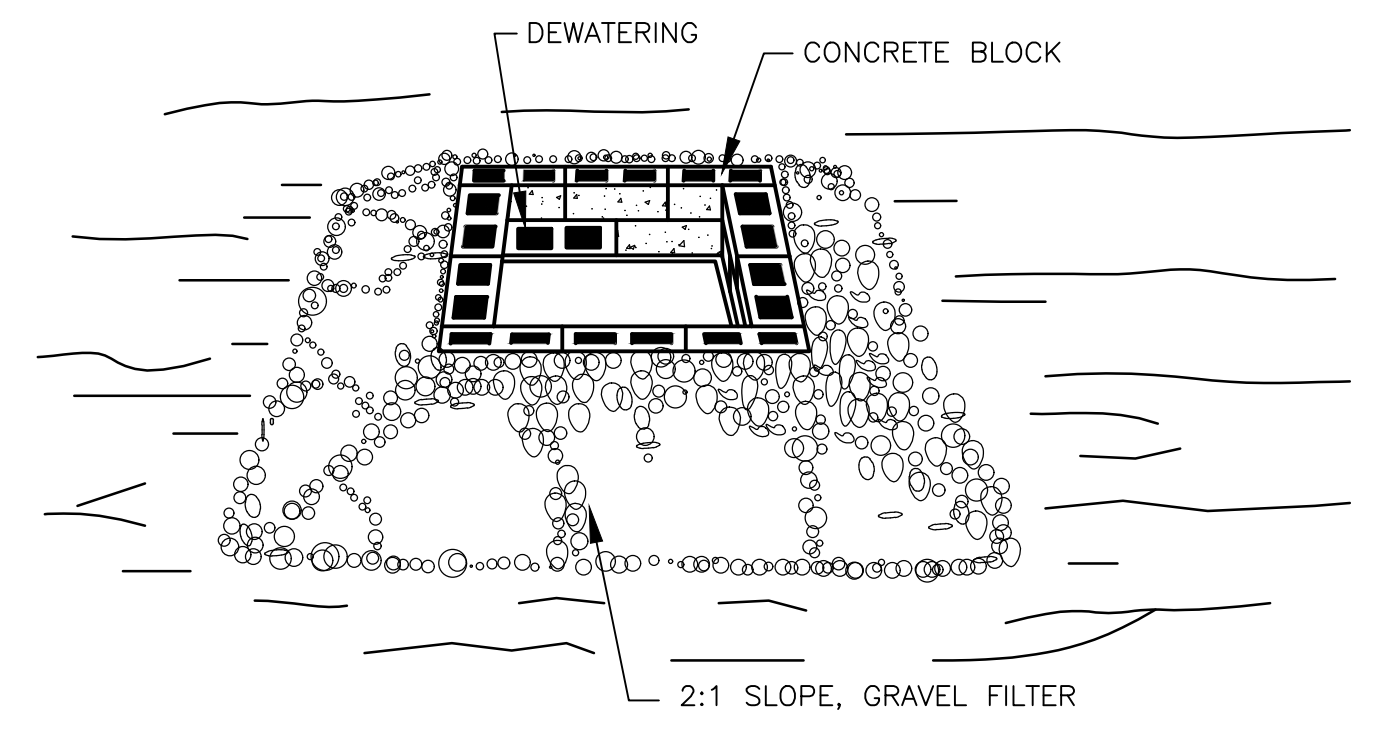
- NOTES:**
1. MATCH OUTLET HEIGHT TO HEIGHT OF SILT FENCE.
  2. REMOVE SEDIMENT WHEN 1/3 OF OUTLET IS COVERED.

**SILT FENCE OUTLET**

**DETAIL F**  
NTS

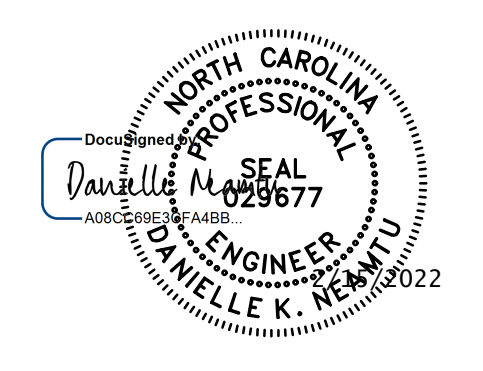


- NOTES:**
1. LAY ONE BLOCK ON EACH SIDE OF THE STRUCTURE ON ITS SIDE IN THE BOTTOM ROW TO ALLOW POOL DRAINAGE. THE FOUNDATION SHOULD BE EXCAVATED AT LEAST 2 INCHES BELOW THE CREST OF THE STORM DRAIN. PLACE THE BOTTOM ROW OF BLOCKS AGAINST THE EDGE OF THE STORM DRAIN FOR LATERAL SUPPORT AND TO AVOID WASHOUTS WHEN OVERFLOW OCCURS. IF NEEDED, GIVE LATERAL SUPPORT TO SUBSEQUENT ROWS BY PLACING 2x4 WOOD STUDS THROUGH BLOCK OPENINGS.
  2. CAREFULLY FIT HARDWARE CLOTH OR COMPARABLE WIRE MESH WITH 1/2 INCH OPENINGS OVER ALL BLOCK OPENINGS TO HOLD GRAVEL IN PLACE.
  3. USE CLEAN GRAVEL, 3/4 TO 1/2 INCH IN DIAMETER, PLACED 2 INCHES BELOW THE TOP.
  4. REMOVE ACCUMULATED SEDIMENT ONCE IT BUILDS UP TO 1/2 FOOT DEEP AT THE YARD INLET. REFRESH GRAVEL AS NEEDED TO PREVENT CLOGGING.



**YARD INLET PROTECTION**

**DETAIL G**  
NTS



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REV. NO.	DATE	DRWN	CHKD	REMARKS

DESIGNED BY:	R. NAGEL
DRAWN BY:	R. BOGGS
SHEET CHK'D BY:	D. NEAMTU
CROSS CHK'D BY:	R. NAGEL
APPROVED BY:	D. NEAMTU
DATE:	FEBRUARY 2022

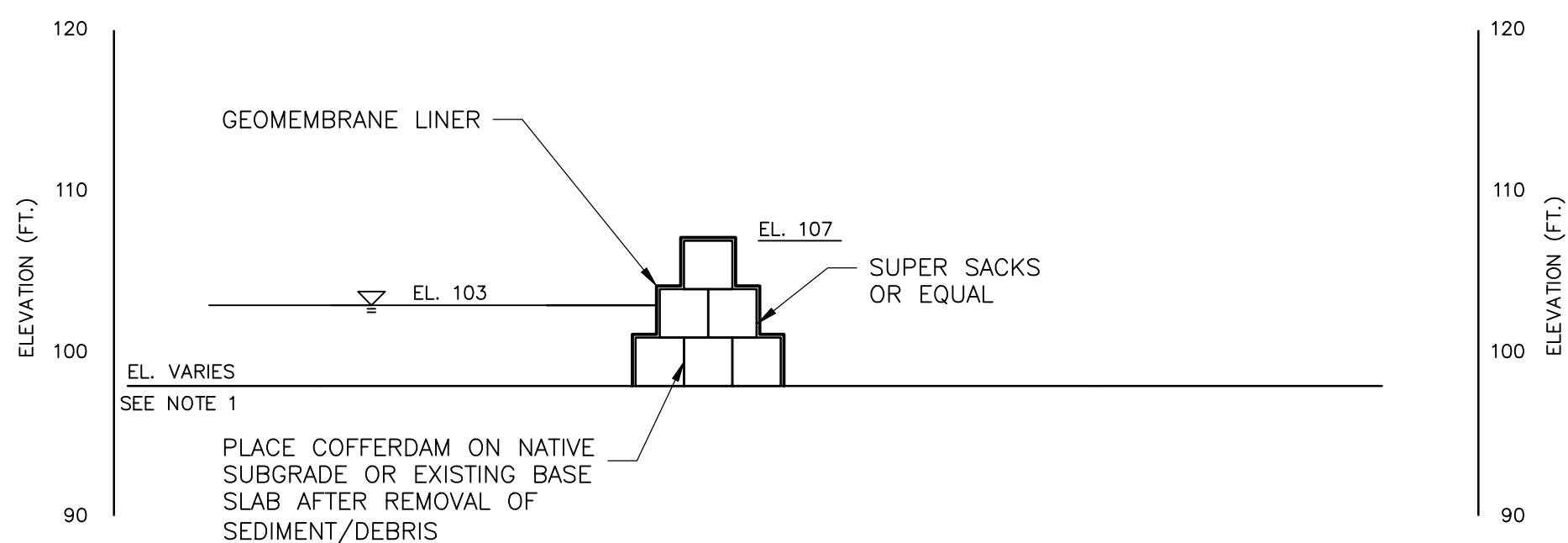


PUBLIC WORKS COMMISSION OF FAYETTEVILLE  
**DEMOLITION AND DECOMMISSIONING OF FORMER WTP  
 AT GLENVILLE LAKE DAM (CUMBE-038)  
 FAYETTEVILLE, NC**

**EROSION AND SEDIMENTATION DETAILS**  
 PROJECT NO. 6384-231131  
 FILE NAME: CD01ESDT.DWG  
 SHEET NO. **CD-1**

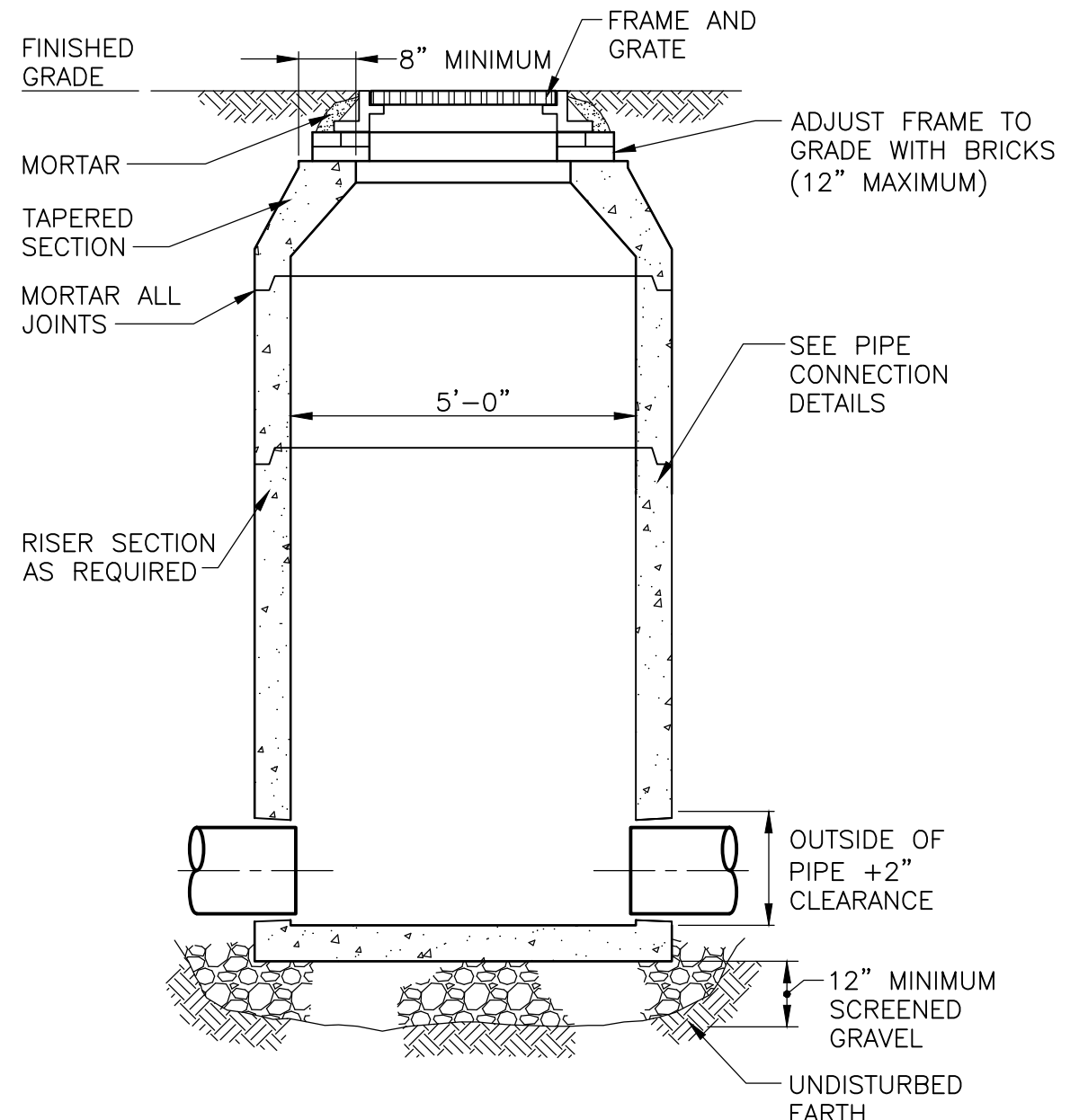
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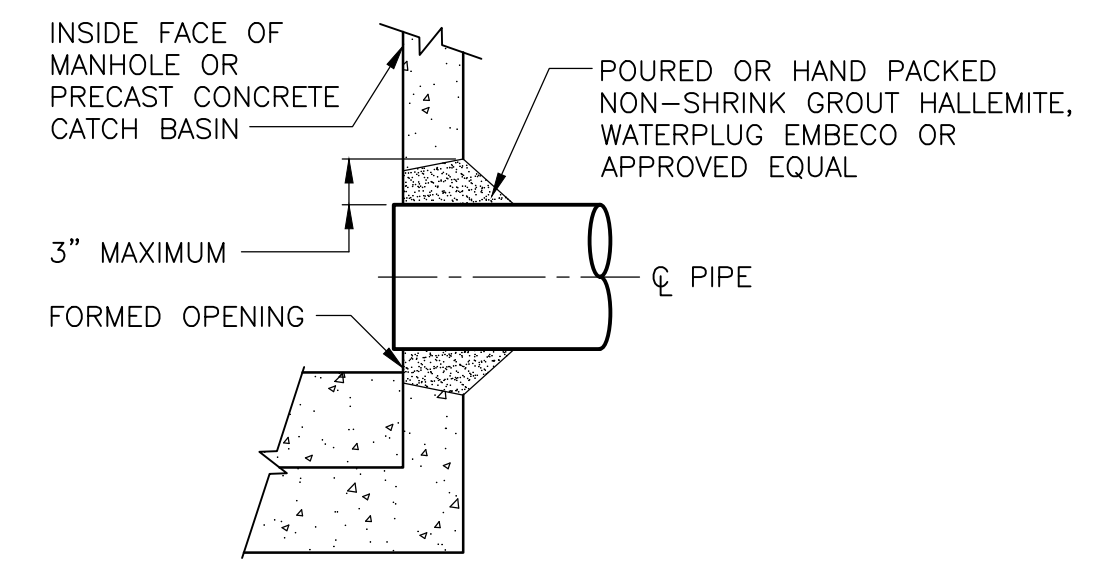


**COFFERDAM CROSS SECTION DETAIL A**  
SCALE 1"=10"

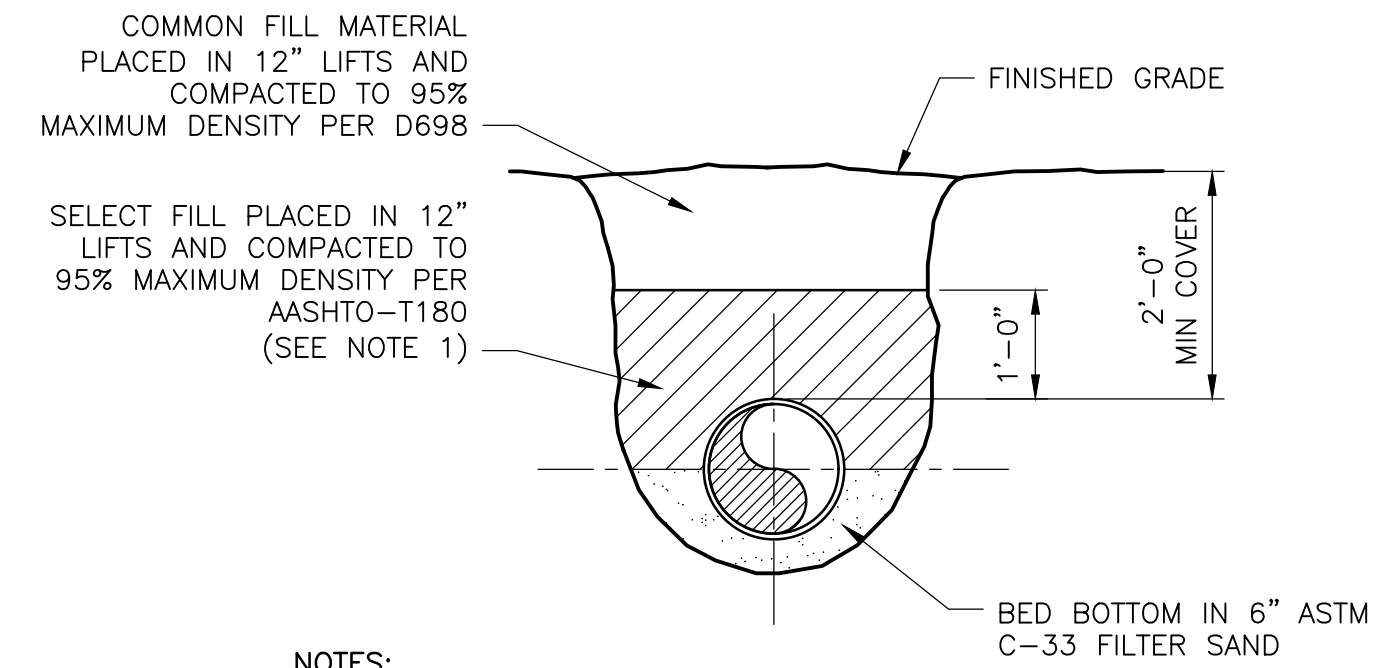
**NOTES:**  
1. IF TEMPORARY COFFERDAM IS UTILIZED FOR AUXILIARY BOTTOM DRAIN REPAIR IN LIEU OF DIVERS, SUBMIT COFFERDAM DESIGN PREPARED BY N.C. LICENSED PROFESSIONAL ENGINEER AS SPECIFIED IN SECTION 312319 "DEWATERING".



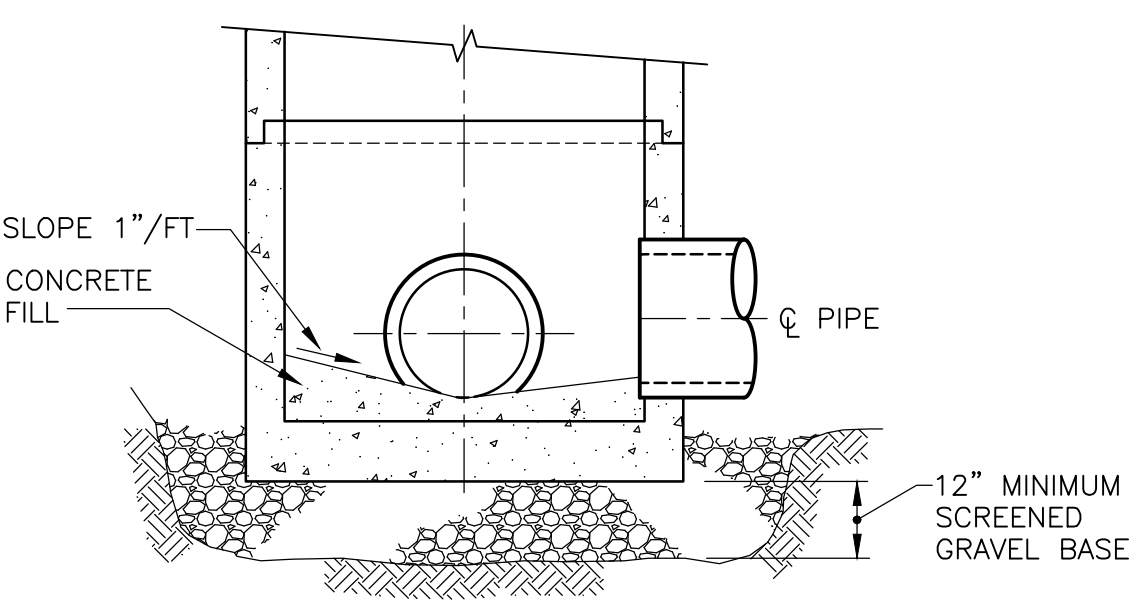
**PRECAST CATCH BASIN DETAIL B**  
NTS



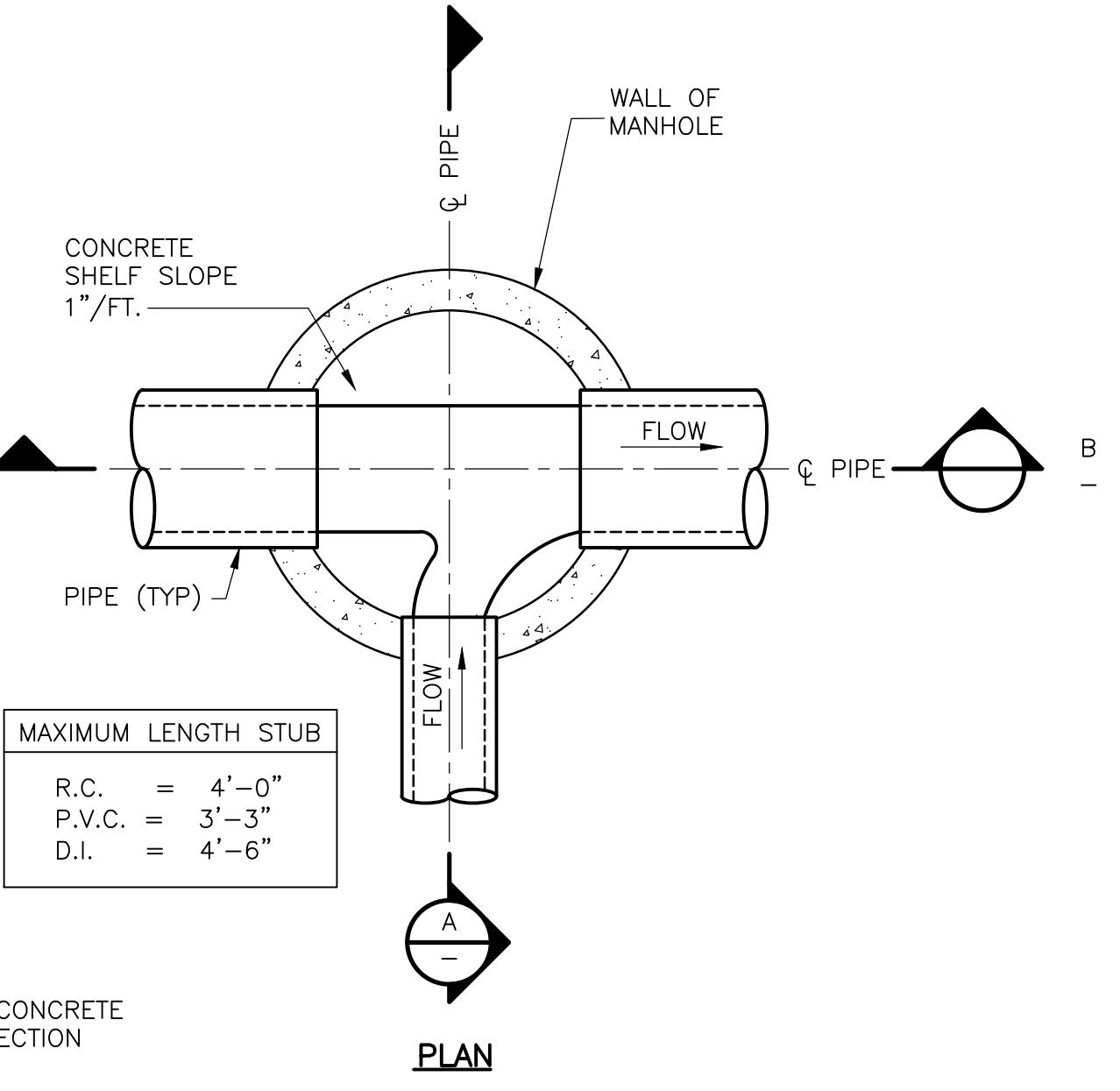
**PIPE CONNECTION FOR MANHOLE AND CATCH BASIN DETAIL C**  
NTS



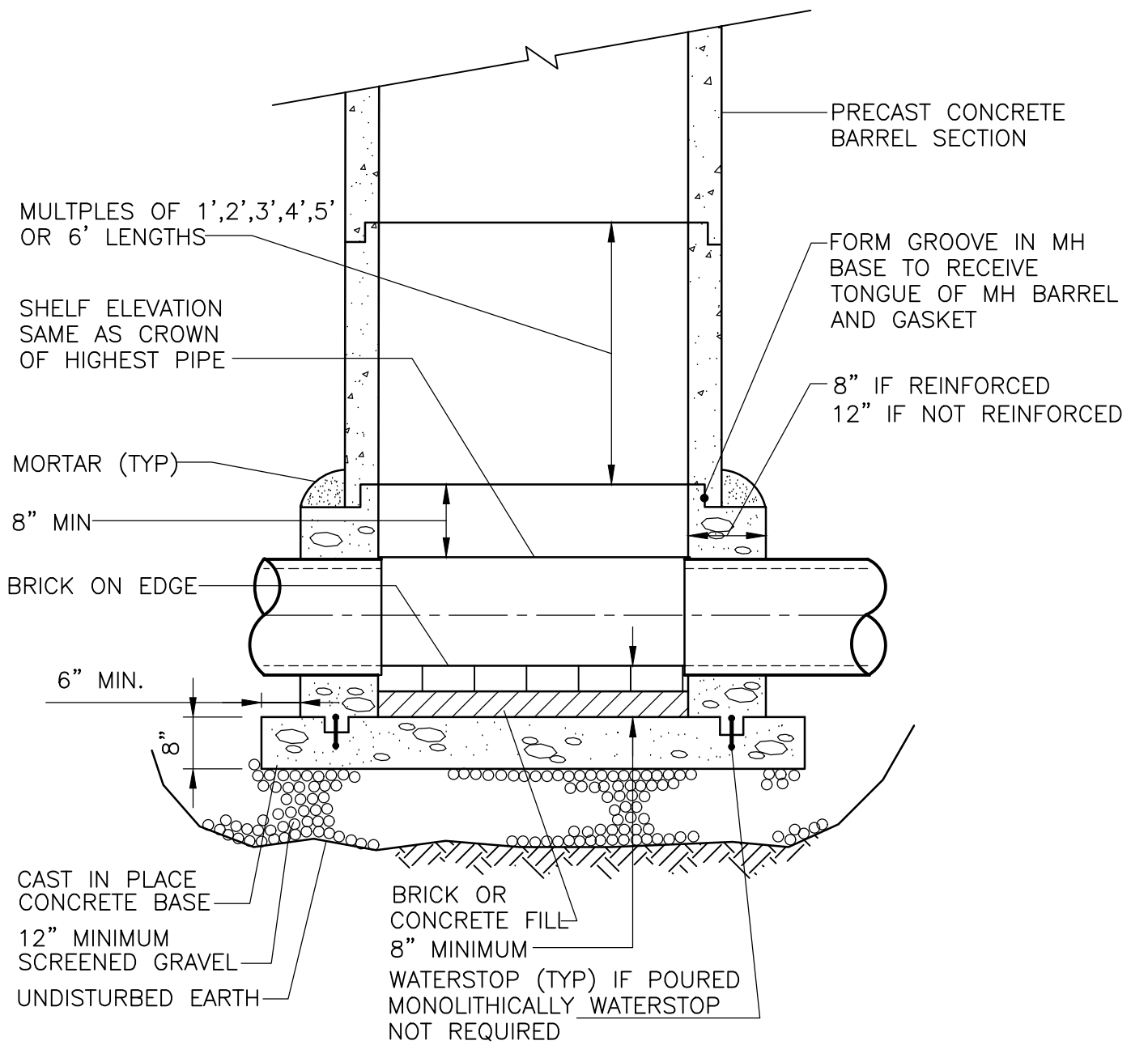
**RW MAIN PIPE BEDDING DETAIL D**  
NTS



**SECTION A-A**

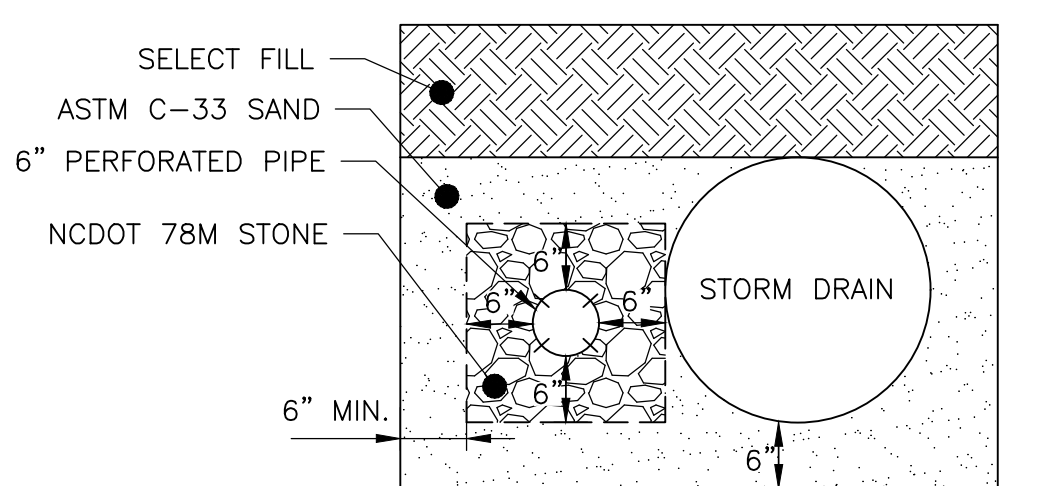


**PLAN**

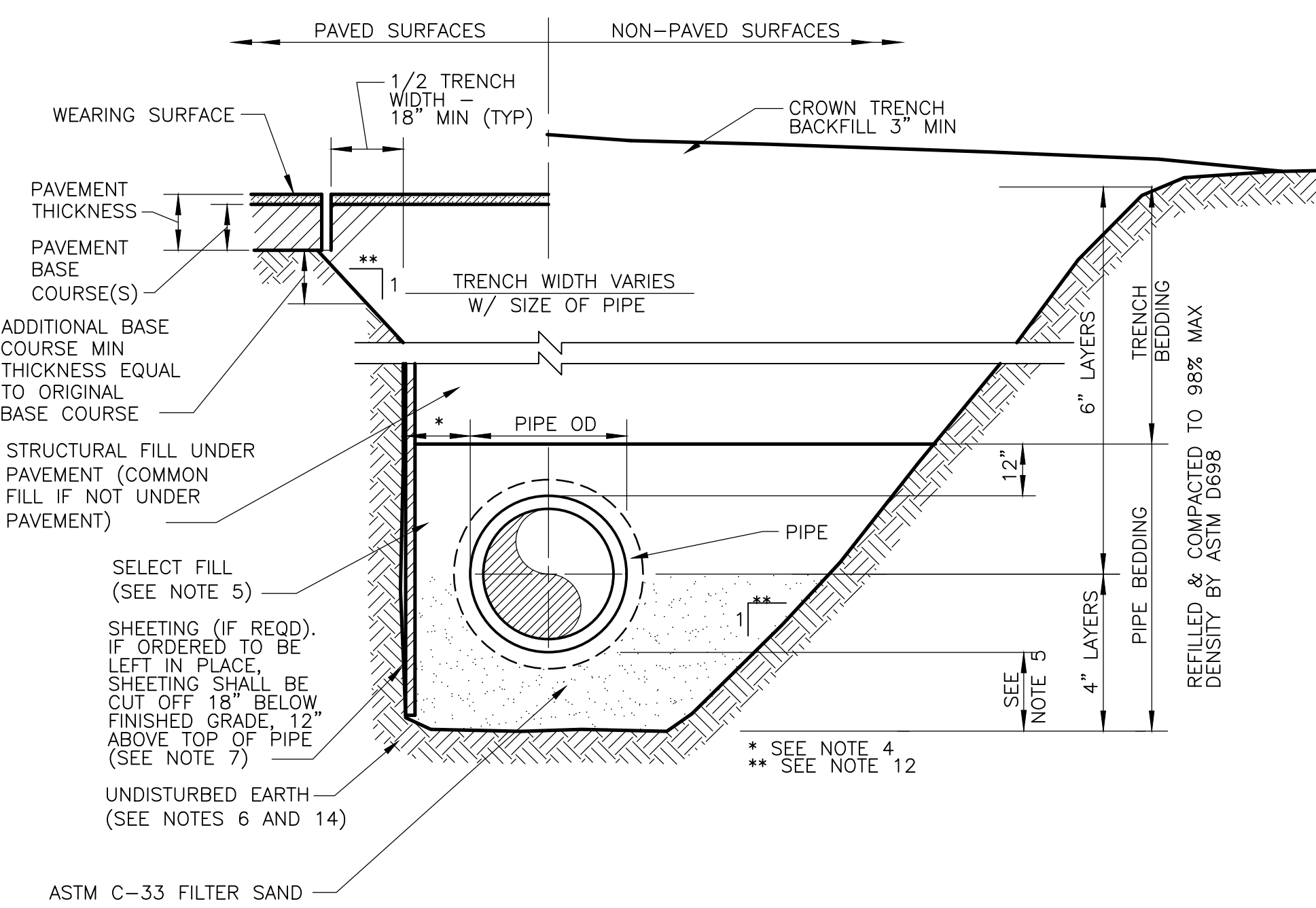


**SECTION B-B**

**PRECAST MANHOLE WITH CAST-IN-PLACE BASE DETAIL E**  
NTS



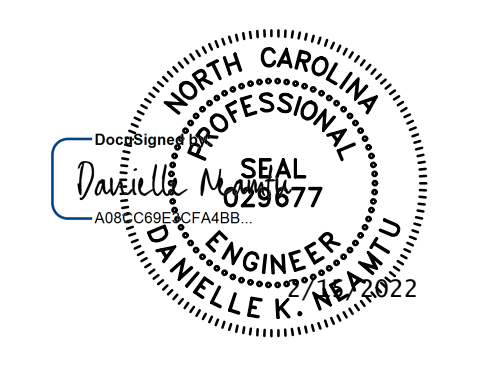
**PIPE BEDDING AND FILTER DRAIN DETAIL F**  
NTS



**RCP STORM DRAIN PIPE BEDDING DETAIL G**  
NTS

**NOTES:**

- PIPE BEDDING & TRENCH BACKFILL - COMPACTED IN LAYERS TO 98% MAXIMUM DENSITY AS PER ASTM D698 (STANDARD PROCTOR) & SPECIFICATION SECTION EXCEPT TRENCH BEDDING WHERE NOT UNDER ROADS CAN BE 95% MAX. DENSITY PER ASTM D698.
- WATER SHALL NOT BE PERMITTED IN THE TRENCH DURING CONSTRUCTION. DEWATER AS NECESSARY.
- ALL PIPE TO BE INSTALLED WITH BELL FACING UPSTREAM TO THE DIRECTION OF FLOW.
- 10" MAX FOR PIPE DIAMETER LESS THAN 24"; 12" MAX FOR PIPE DIAMETER LESS THAN 42" AND 24" MAX FOR PIPE DIAMETER 42" AND OVER.
- 4" MIN ON SIDE FOR PIPE 24" DIA & LESS; 6" MIN ON SIDE FOR 30" DIA & LARGER OF COMPACTED SELECT COMMON FILL. 8" MIN IN ROCK. FOR PVC PIPES, USE SAND OR SELECT FILL.
- IF UNSUITABLE FOUNDATION IS ENCOUNTERED REMOVE UNSUITABLE MATERIAL TO REACH SUITABLE FOUNDATION, OR TO A DEPTH OF 3 FEET MAX CONFIRM WITH GEOTECHNICAL. REPLACE WITH STRUCTURAL FILL, SEE SPECIFICATIONS.
- SHEETING SHALL BE DRIVEN BELOW THE UTILITY INVERT IF REQUIRED FOR LATERAL SUPPORT OR UNSUITABLE MATERIAL REMOVAL. WHERE DRIVEN BELOW PIPE INVERT, SHEETING SHALL BE CUT OFF A MIN OF 12" ABOVE TOP OF PIPE OR HIGHER, AS AUTHORIZED BY THE ENGINEER, AND LEFT IN PLACE. IN NO CASE SHALL SHEETING LEFT IN PLACE EXTEND HIGHER THAN 18" BELOW SURFACE GRADE UNLESS SPECIFICALLY APPROVED. BRACING SHALL BE PROVIDED AS REQUIRED.
- EXCAVATED MATERIALS MIXED WITH DELETERIOUS SUBSTANCES DURING CONSTRUCTION SHALL NOT BE USED FOR BACKFILLING.
- FOR INSTALLATIONS IN PAVEMENT, ALL EXISTING PAVEMENT SHALL BE CUT SQUARELY WITH A SAW. WEARING SURFACE SHALL BE SAME TYPE AND THICKNESS AS THE EXISTING PAVEMENT.
- TRENCH SLOPES SHALL BE AS REQUIRED BY OSHA AND SHALL NOT EXCEED 1:1 NEXT TO ROADS - USE TRENCHBOXES AND SHEETING AS REQUIRED.
- CONTRACTOR SHALL ASSUME AN AVERAGE OF 2" ADDITIONAL CUT AT BOTTOM OF TRENCH FOR 15% OF THE LENGTH OF EACH BURIED PIPE SHOWN FOR THE QUANTITY OF UNSUITABLE MATERIAL TO BE UNDERCUT UNDER PIPES AND REPLACED WITH STRUCTURAL FILL.
- ALL PRESSURIZED PIPING SHALL HAVE RESTRAINED JOINTS UNLESS OTHERWISE NOTED.



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REV. NO.	DATE	DRWN	CHKD	REMARKS

DESIGNED BY:	R. NAGEL
DRAWN BY:	R. BOGGS
SHEET CHK'D BY:	D. NEAMTU
CROSS CHK'D BY:	R. NAGEL
APPROVED BY:	D. NEAMTU
DATE:	FEBRUARY 2022

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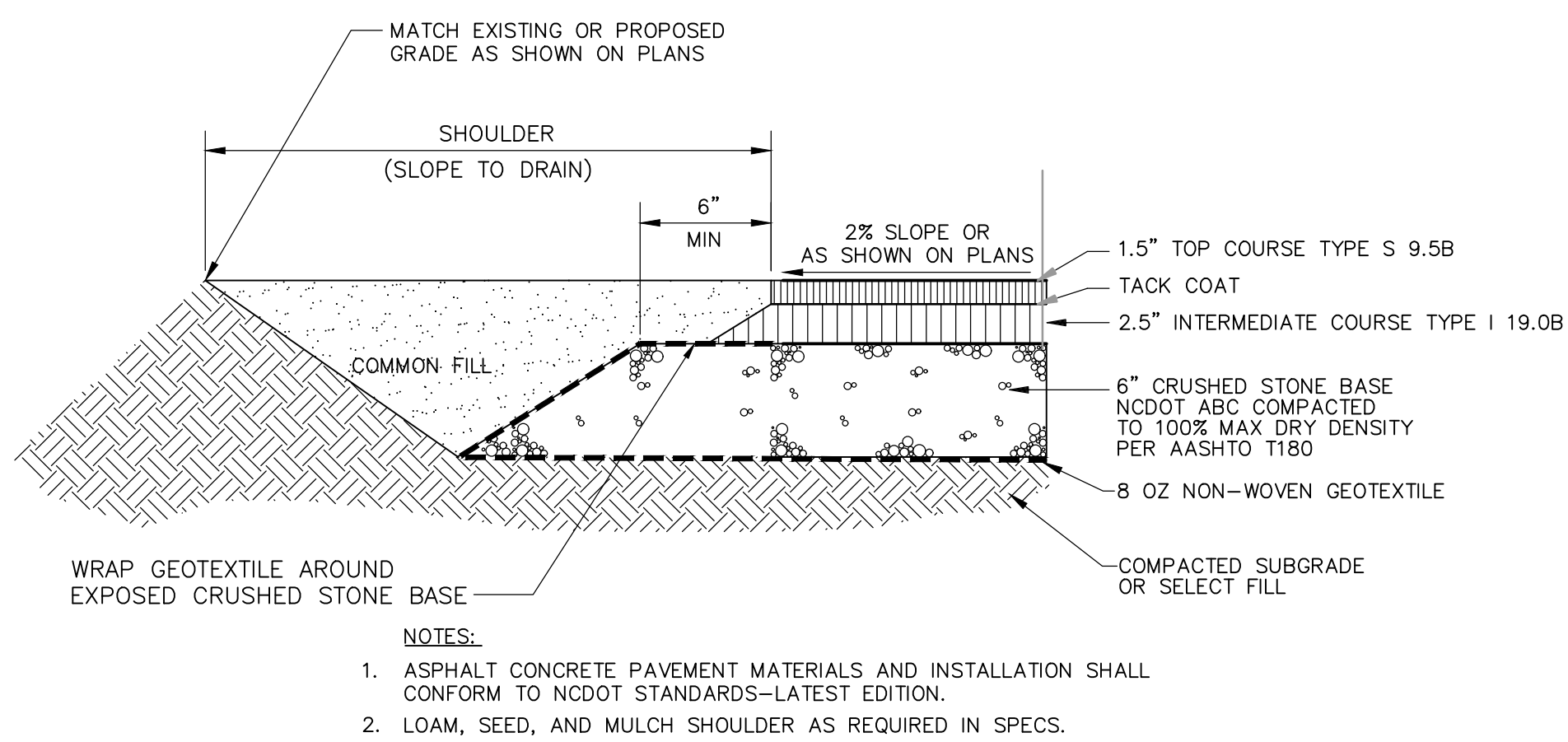
PUBLIC WORKS COMMISSION OF FAYETTEVILLE  
**DEMOLITION AND DECOMMISSIONING OF FORMER WTP AT GLENVILLE LAKE DAM (CUMBE-038)**  
 FAYETTEVILLE, NC

**CIVIL DETAILS**

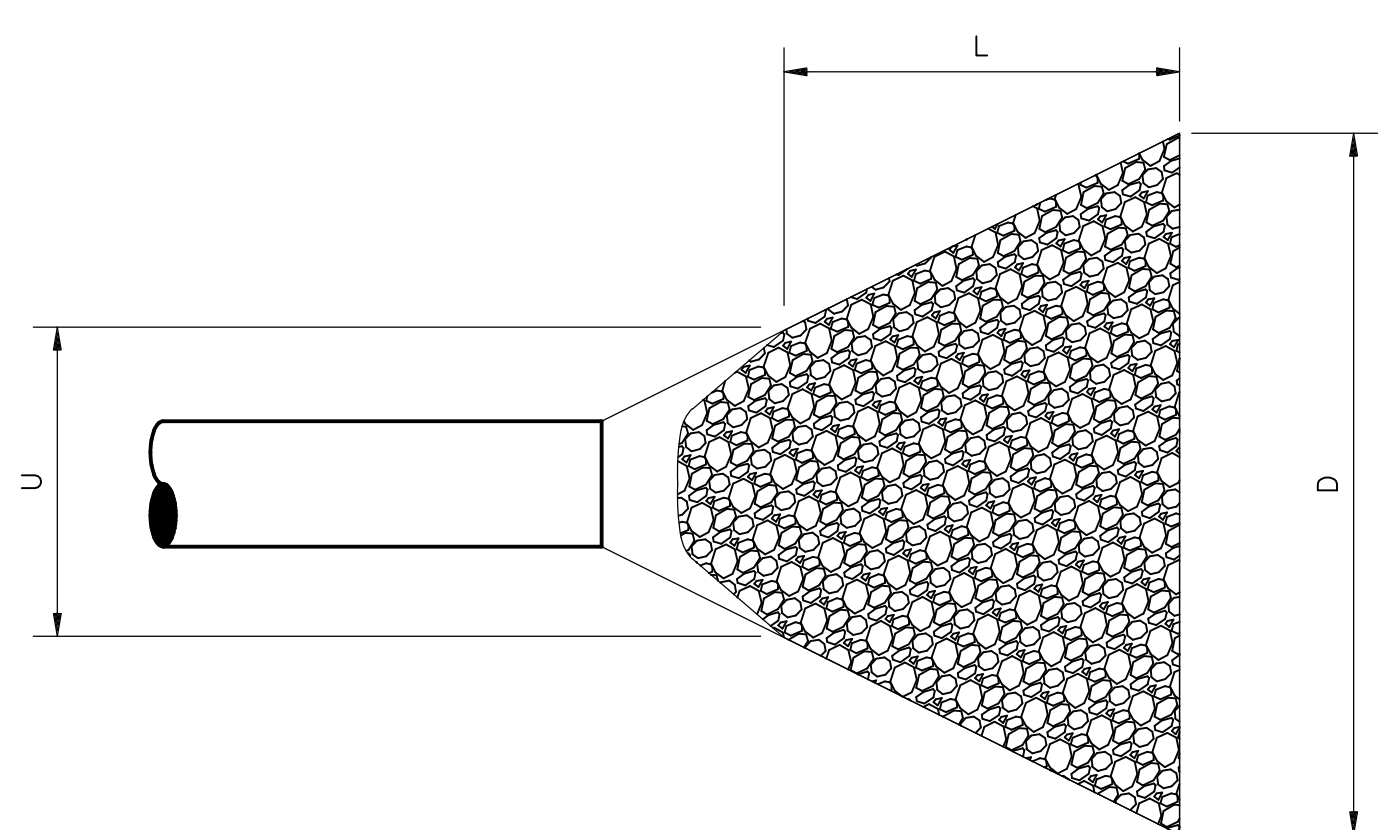
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SHEET NO.	CD-2



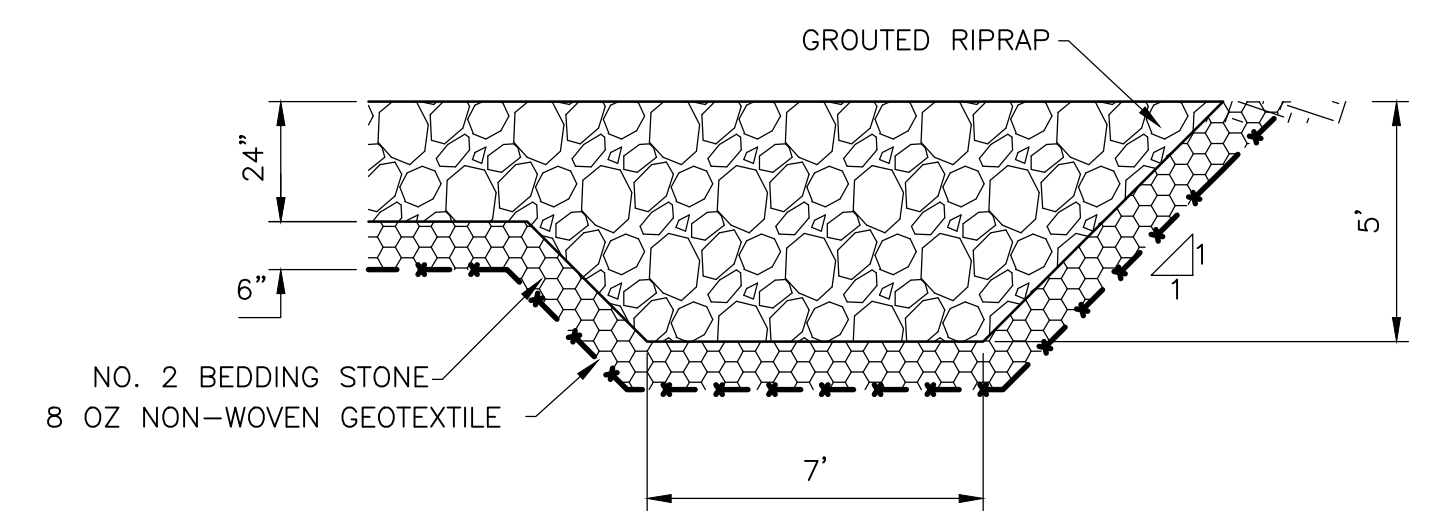
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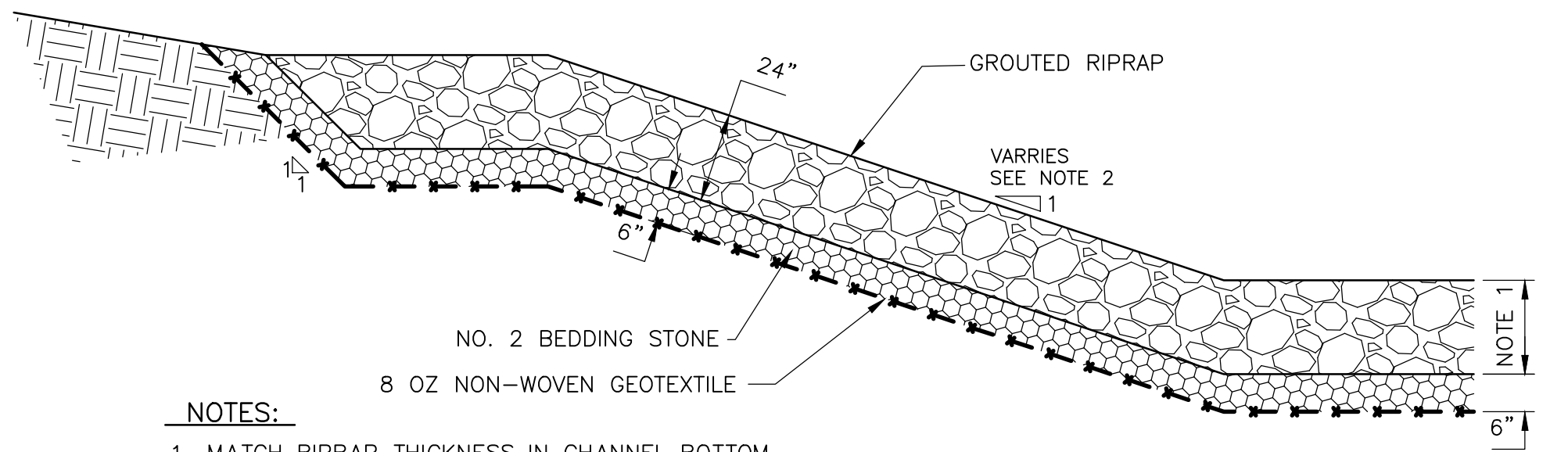
**ASPHALT PAVING**  
**DETAIL A**  
NTS



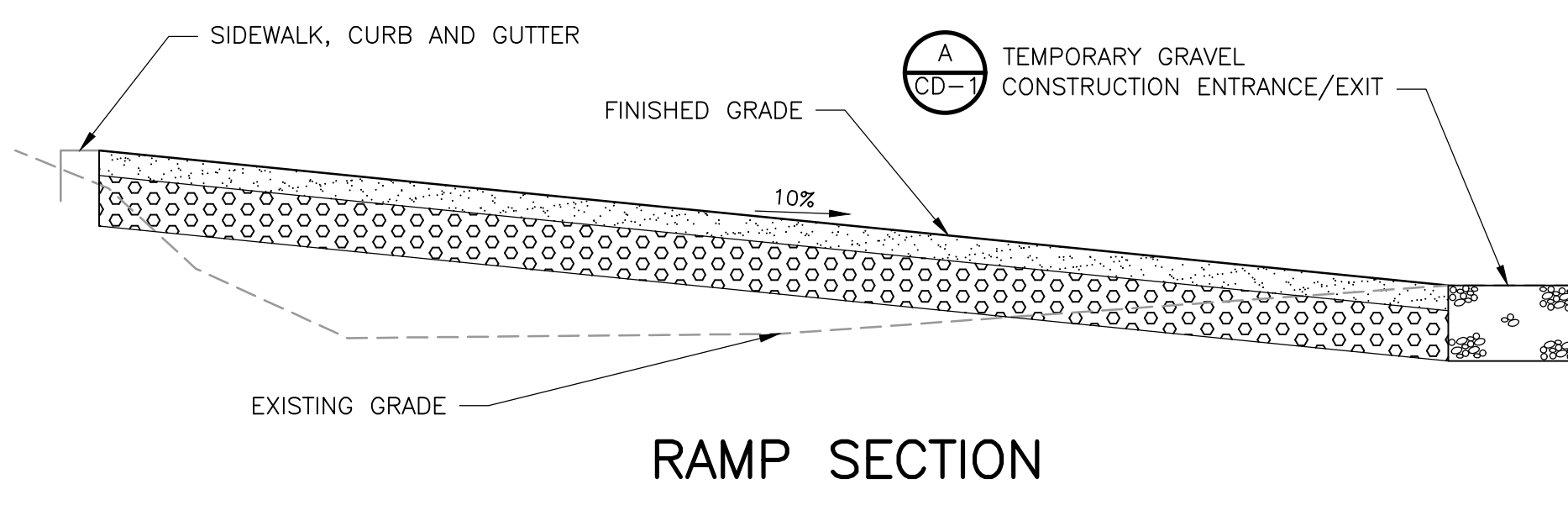
APRON NO.	LENGTH L - (FT)	TOTAL THICKNESS (IN)	UPSTREAM WIDTH - U (FT)	DOWNSTREAM WIDTH - D (FT)	MATERIALS
1	10.0	30"	3.0	13.0	8 oz GEOTEXTILE FABRIC, 6" THICK BEDDING STONE, AND 24" THICK CLASS B RIPRAP



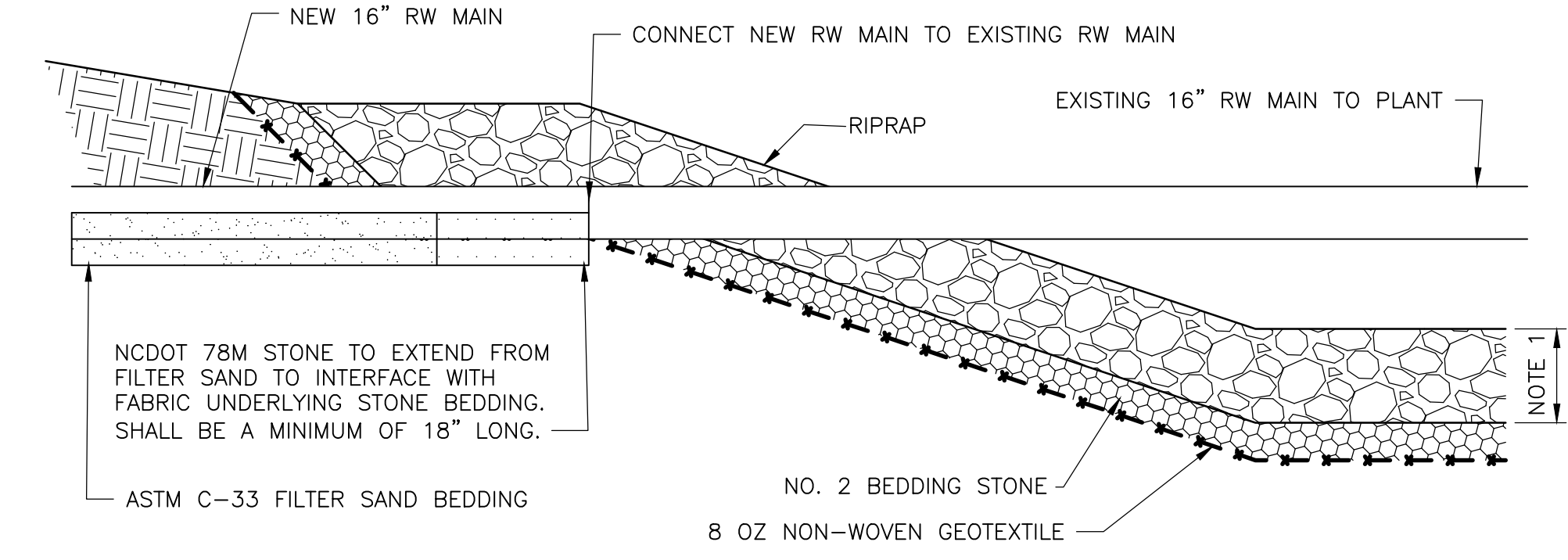
**GRouted RIPRAP TIE-IN WITH EXISTING DOWNSTREAM GRADES**  
**DETAIL C**  
NTS



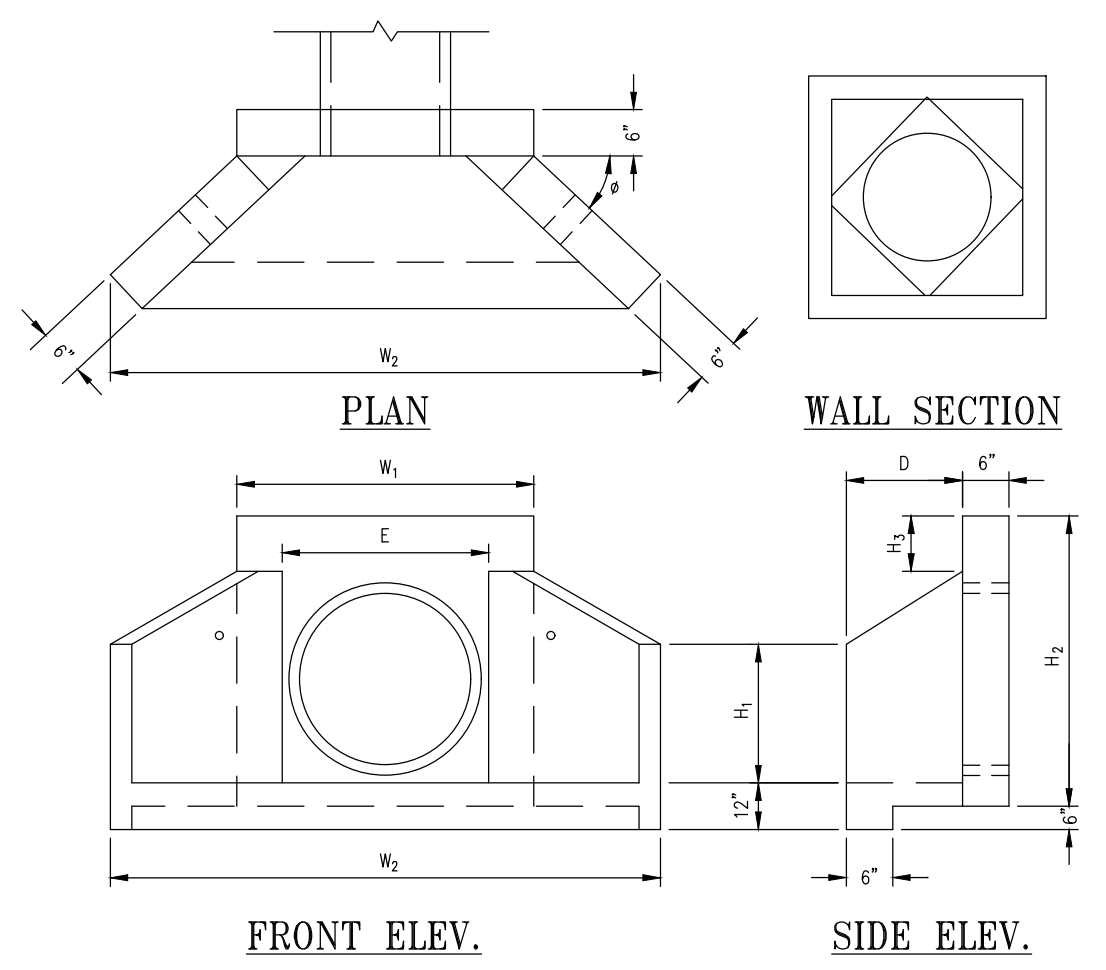
**GRouted RIPRAP TIE-IN WITH BANK**  
**DETAIL D**  
NTS



**RAMP SECTION**  
**DETAIL E**  
NTS



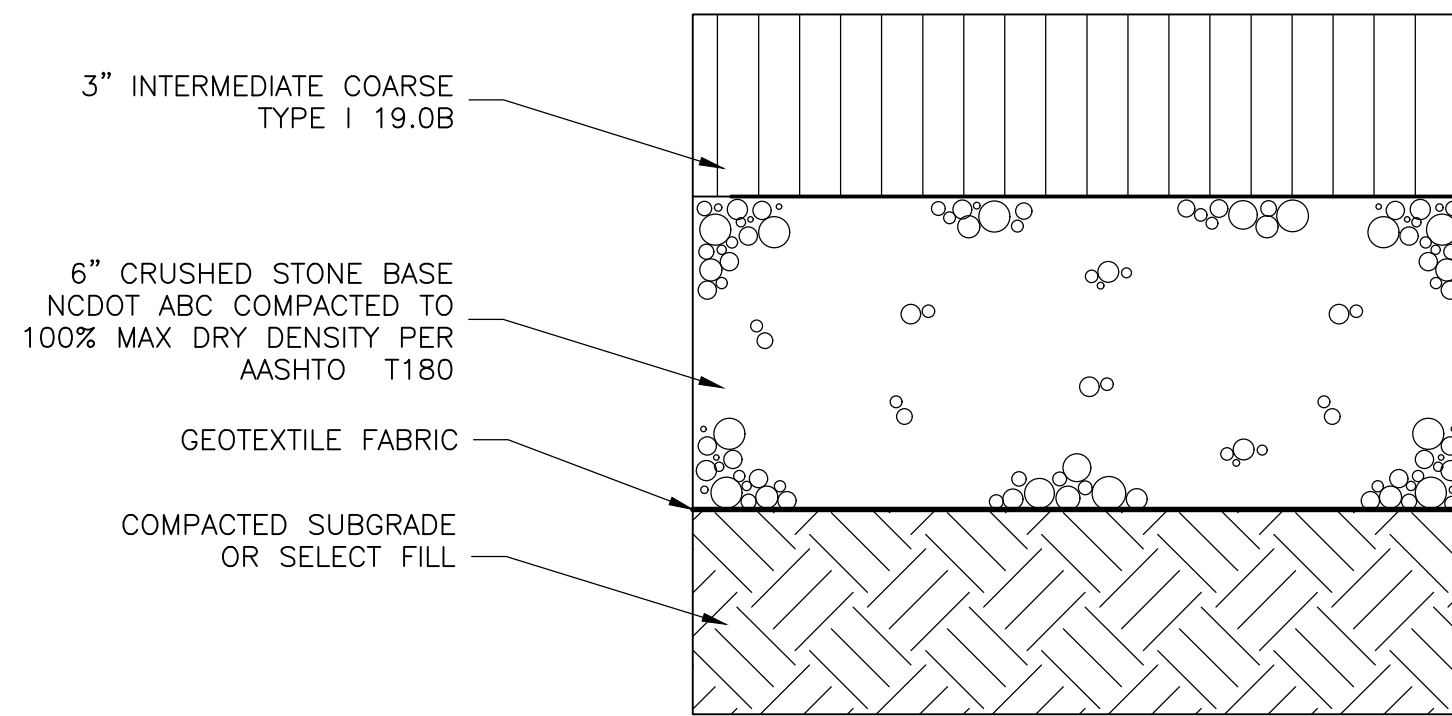
**RW MAIN UNDERDRAIN TIE IN**  
**DETAIL F**  
NTS



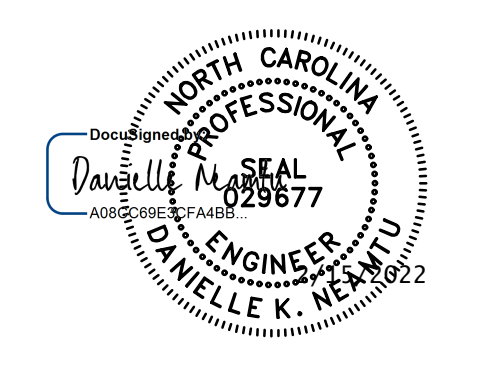
**PRECAST CONCRETE HEADWALL**  
**DETAIL G**  
NTS

PIPE SIZE (IN)	HOLE SIZE (IN)	REF.	W1	W2	H1	H2	H3	D	E	#	WT.
12"	10"	#4	3'-2"	5'-5"	1'-3"	3'-1"	12"	1'-3"	1'-0"	40'	1600
18"	16"	#4	3'-8"	6'-0"	1'-9"	3'-7"	12"	1'-8"	2'-3"	45'	2000
24"	22"	#5	4'-3"	7'-2"	2'-0"	4'-3"	12"	1'-10"	2'-0"	45'	2850
27"	24"	#5	4'-8"	8'-4"	2'-4"	4'-9"	12"	2'-2"	3'-3"	45'	3700
36"	32"	#5	5'-8"	10'-10"	3'-3"	5'-9"	12"	2'-11"	4'-4"	45'	5600
42"	38"	#5	6'-7"	12'-4"	3'-8"	6'-8"	12"	3'-4"	5'-3"	45'	7500
54"	48"	#5	8'-9"	15'-4"	4'-5"	8'-0"	12"	3'-4"	7'-0"	50'	10000
66"	58"	#5	8'-9"	15'-4"	4'-5"	9'-0"	27"	3'-4"	7'-5"	50'	10000

- GENERAL NOTES:**
- ALL CONCRETE TO BE 4000 PSI MIN.
  - REINFORCEMENT STEEL SHALL MEET ASTM 615 GRADE 60 WITH 2" MIN CLEARANCE.
  - CHAMFER ALL EXPOSED EDGES 3/4".
  - PRECAST HEADWALL UNIT SHALL BE CAREFULLY POSITIONED ON THE PREPARED FOUNDATION AND PIPE INSERTED INTO HEADWALL OR HEADWALL SLID OVER PIPE AND CHECKED FOR ALIGNMENT.
  - PIPE SHALL BE GROUTED INTO HEADWALL WITH CEMENTITIOUS MATERIAL BY CONTRACTOR. BONDING AGENT MAY BE USED IF REQD.
  - CARE SHALL BE TAKEN DURING BACKFILLING AND COMPACTION TO PREVENT DAMAGE AND MAINTAIN ALIGNMENT. MINOR DAMAGE TO THE UNIT MAY BE REPAIRED BY CONTRACTOR WHEN PERMITTED BY ENGINEER.
  - REINFORCEMENT VARIES WITH SIZE OF UNIT.
  - VARIOUS HOLE SIZE AND SHAPES AVAILABLE BY SPECIAL ORDER.
  - ALL DIMENSIONS ARE NOMINAL.



**ASPHALT SECTION**  
**DETAIL**  
NTS



REV. NO.	DATE	DRWN	CHKD	REMARKS

DESIGNED BY: R. NAGEL  
 DRAWN BY: R. BOGGS  
 SHEET CHK'D BY: D. NEAMTU  
 CROSS CHK'D BY: R. NAGEL  
 APPROVED BY: D. NEAMTU  
 DATE: FEBRUARY 2022

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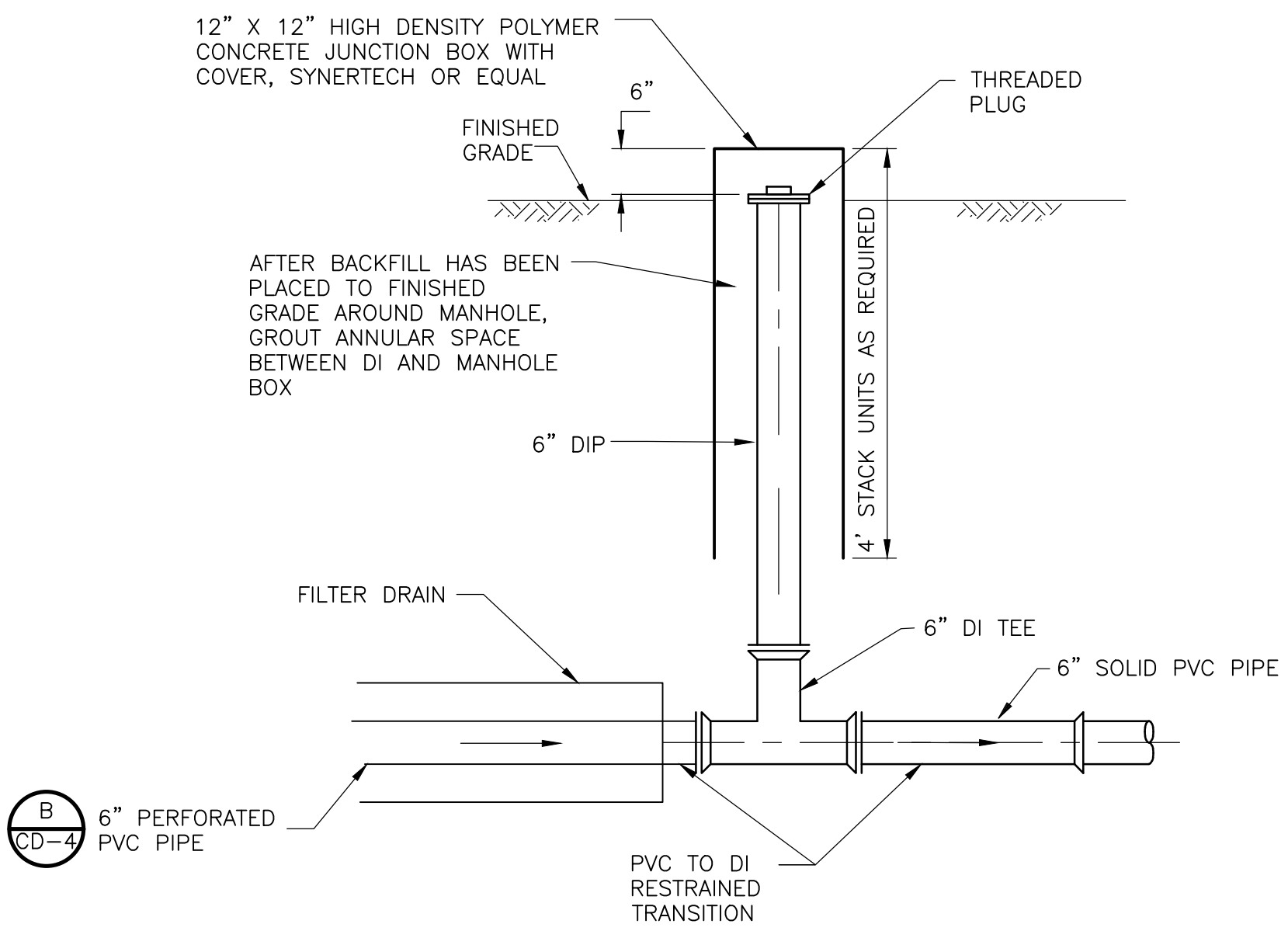
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 FAYETTEVILLE, NC

**CIVIL DETAILS**  
 SHEET NO. **CD-3**

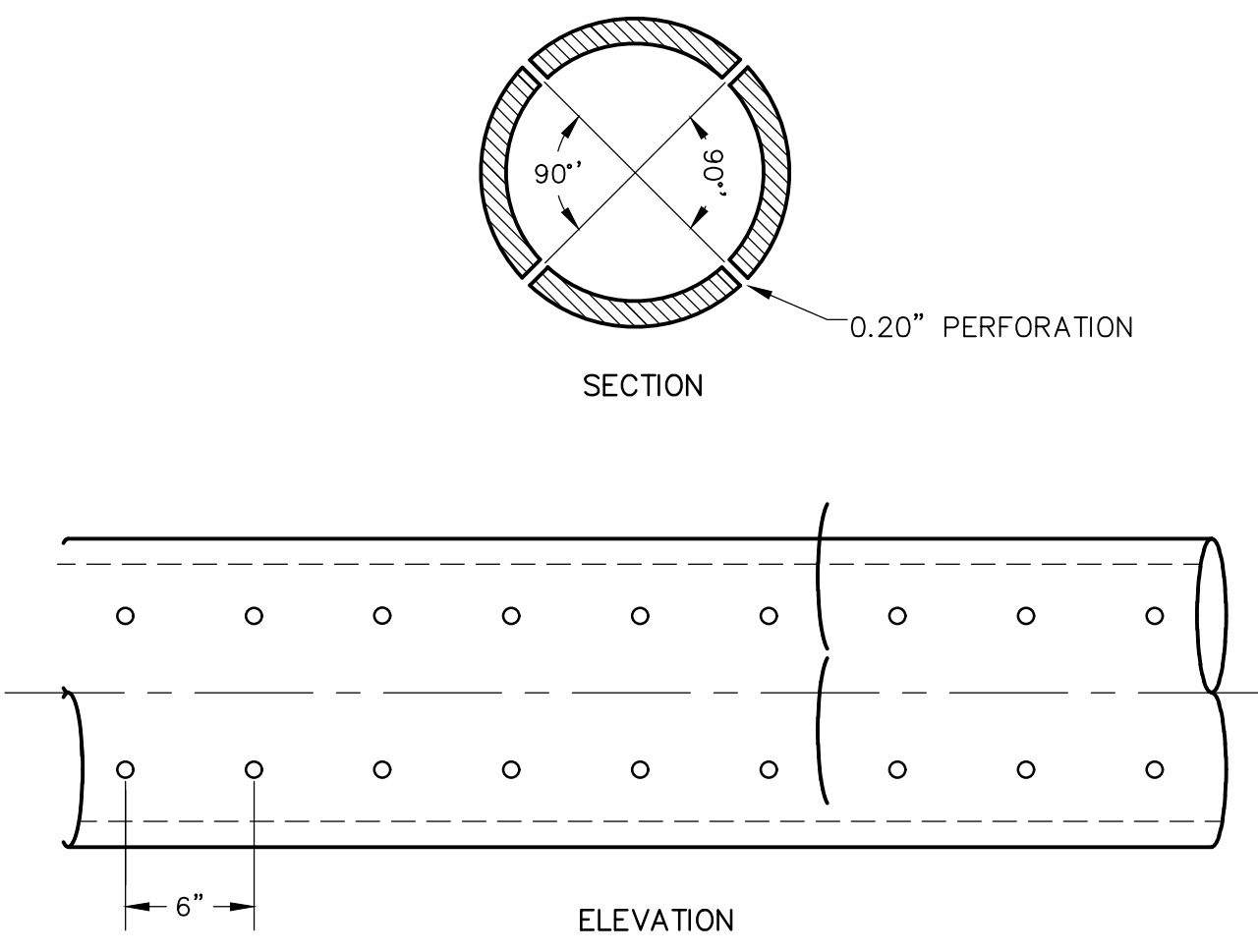
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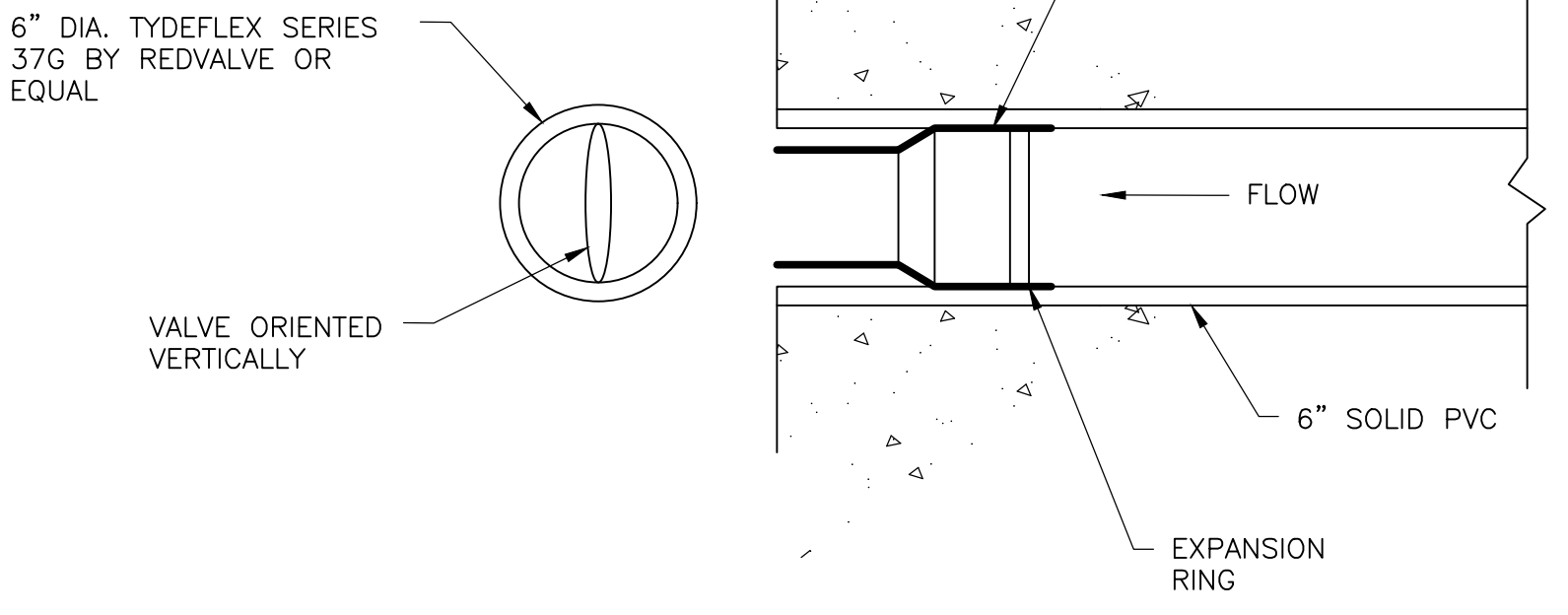
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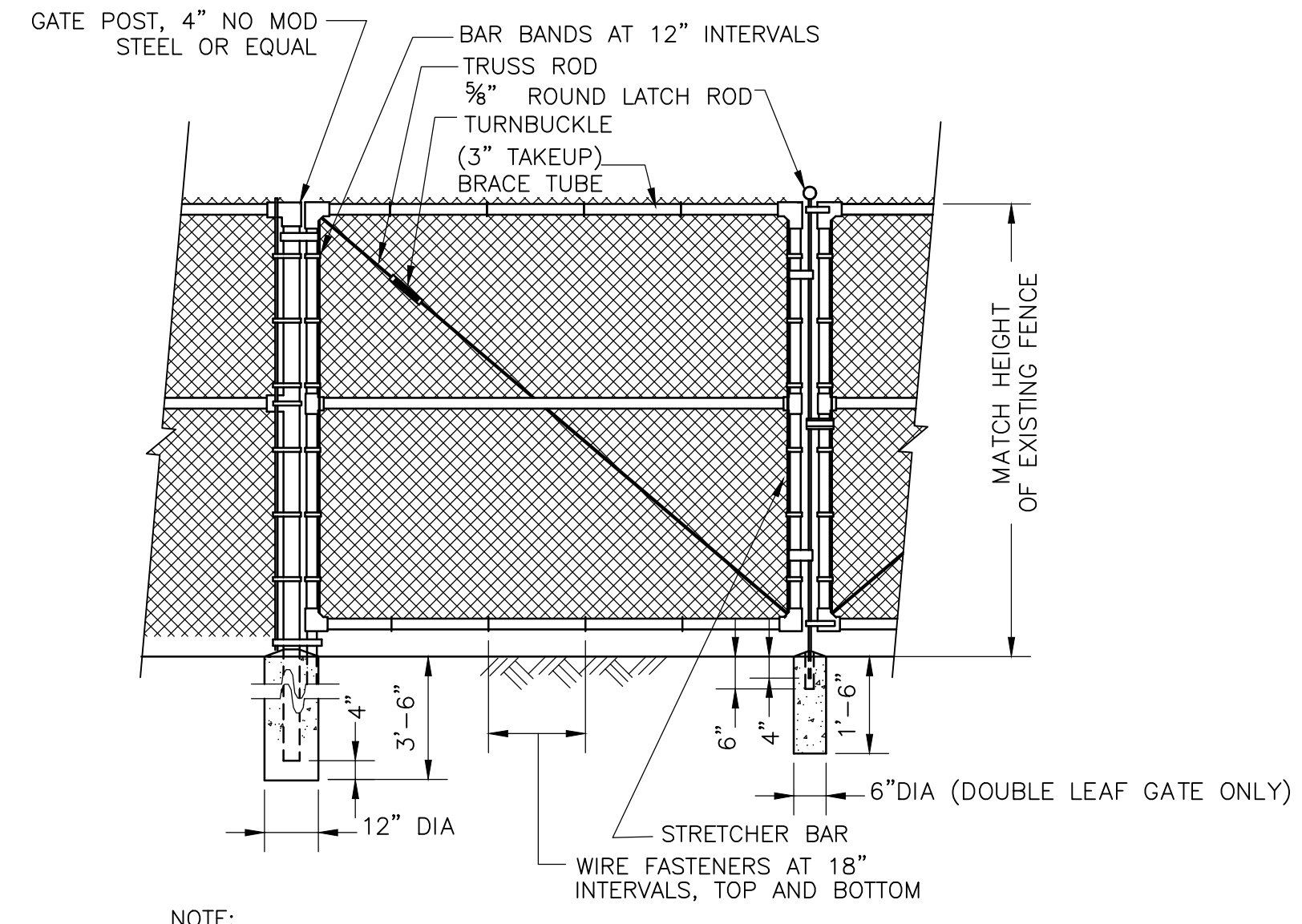
**MONITORING MANHOLE**  
**DETAIL A**  
 NTS



**PERFORATED PVC DRAIN PIPE**  
**DETAIL B**  
 NTS

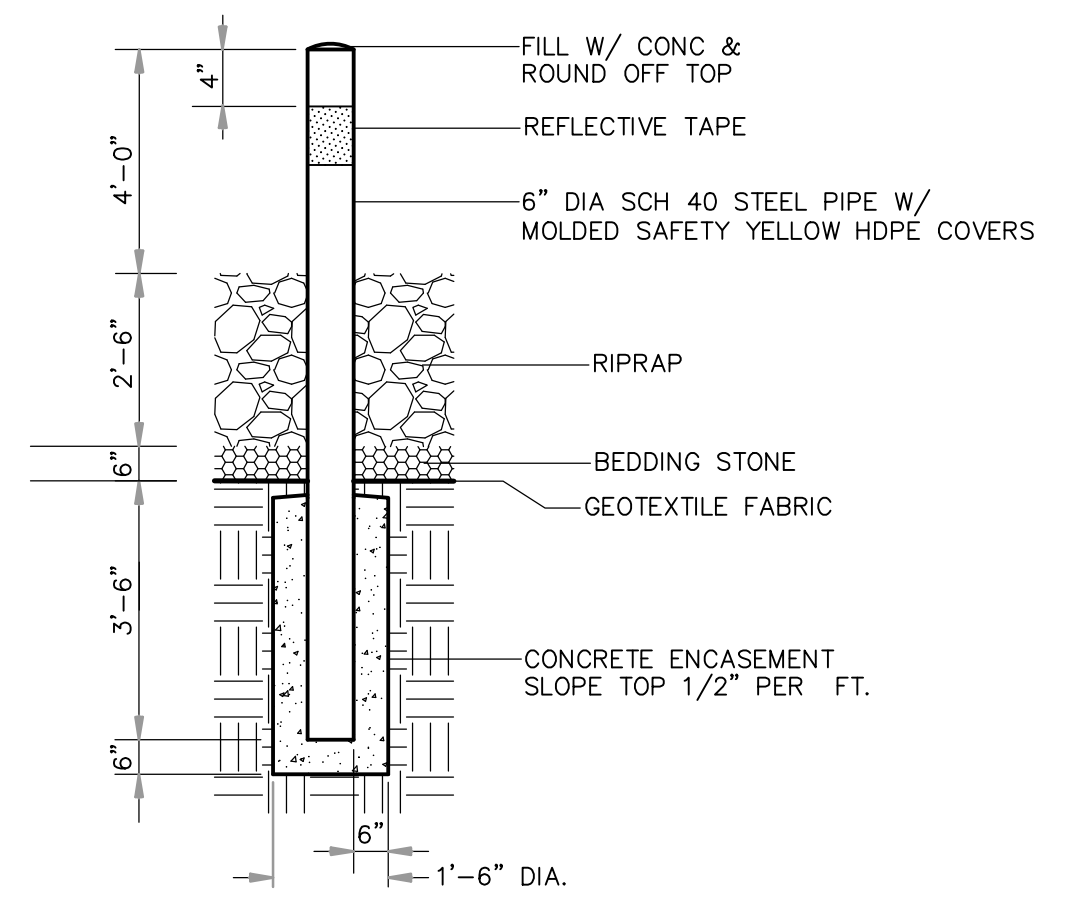


**FILTER DRAIN OUTLET**  
**DETAIL C**  
 NTS

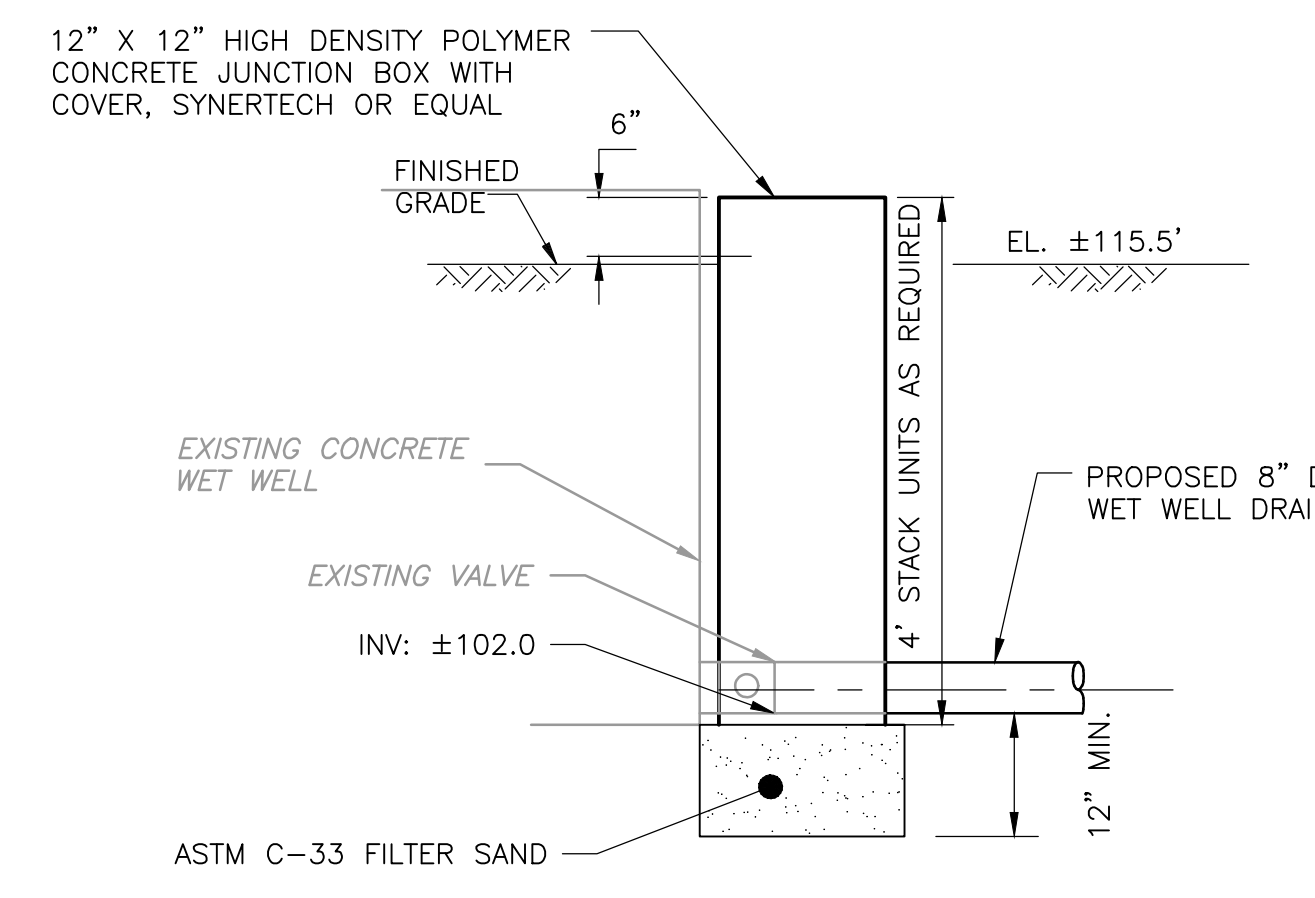


**TEMPORARY CHAIN LINK GATE**  
**DETAIL D**  
 NTS

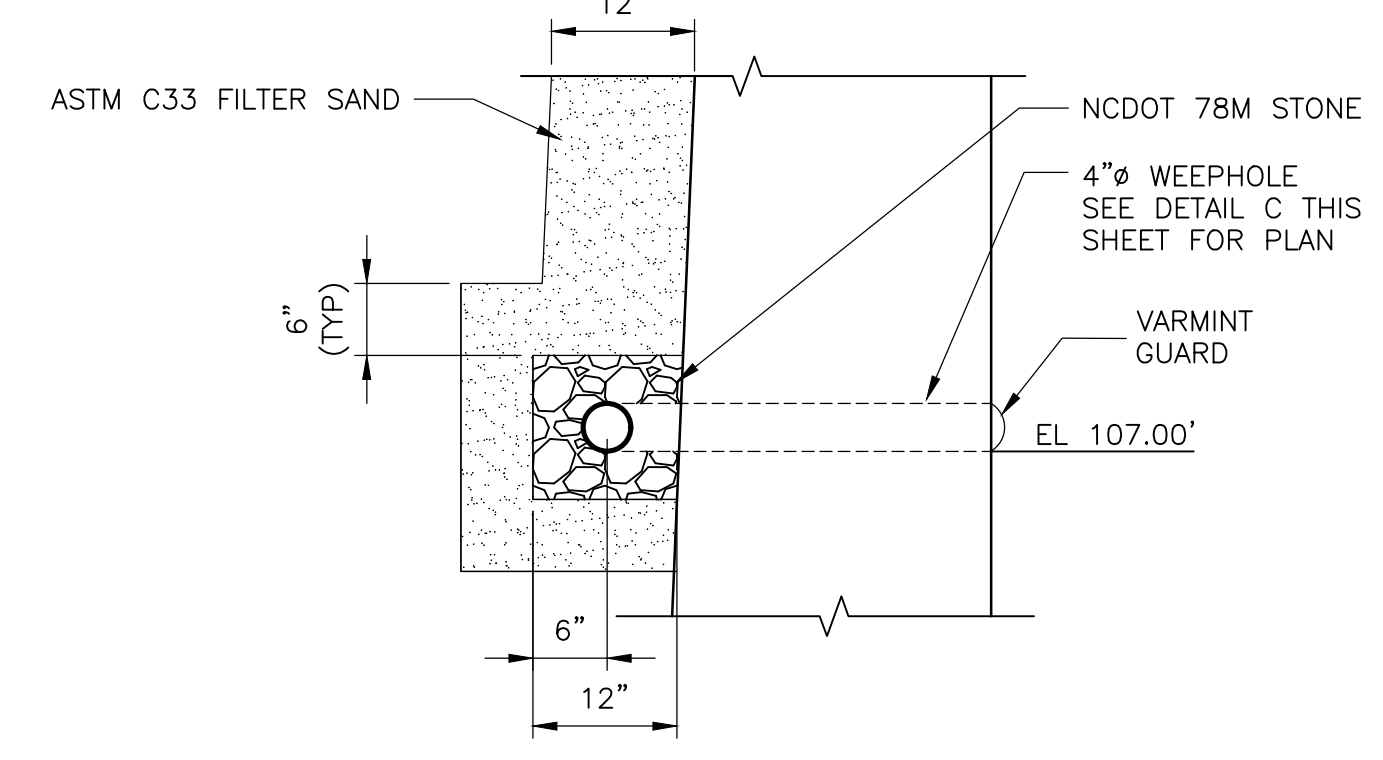
NOTE:  
 1. GATE WIDTH WILL BE PROPOSED BY THE CONTRACTOR AND APPROVED BY THE CITY OF RALEIGH TO PROVIDE REQUIRED ACCESS TO WORK.  
 2. TEMPORARY LOCKING MECHANISM AND LOCK SHALL BE PROVIDED.



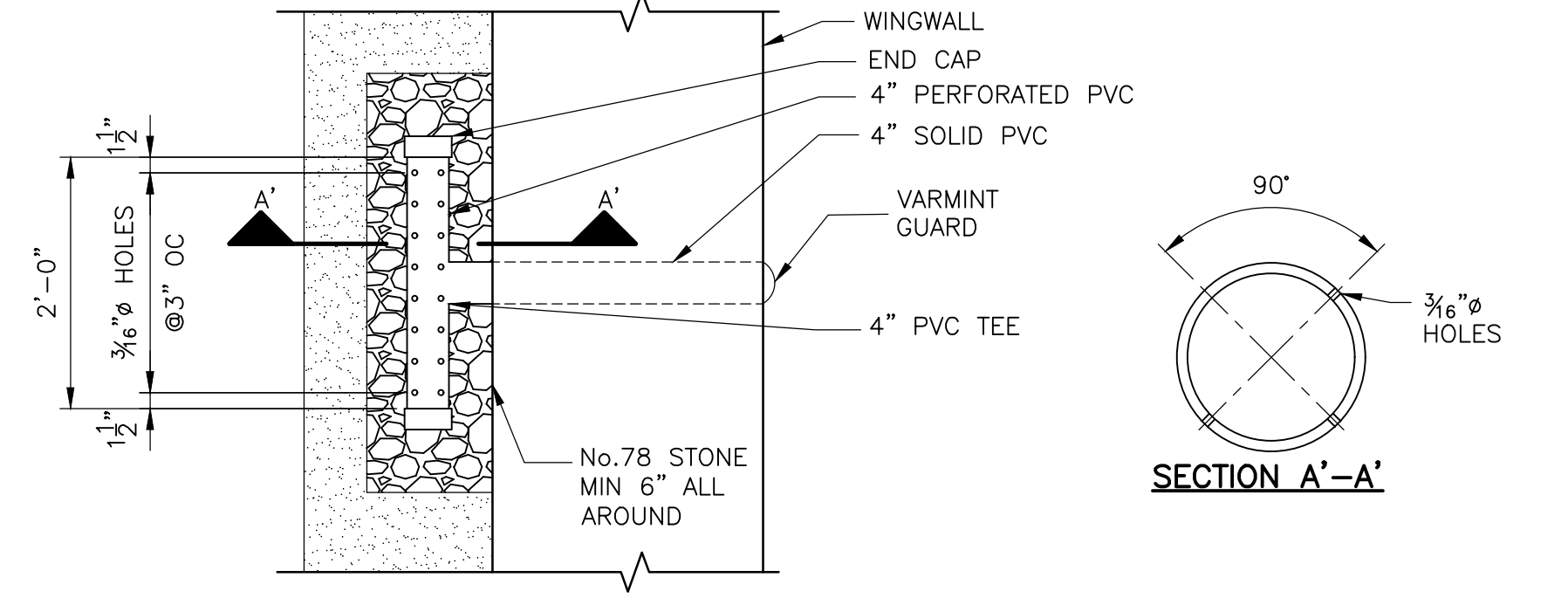
**STEEL BOLLARD**  
**DETAIL E**  
 NTS



**VALVE ACCESS MANHOLE**  
**DETAIL F**  
 NTS



**STORM DRAIN UNDERDRAIN OUTLET**  
**DETAIL G**  
 3/4" = 1'-0"



**SECTION A-A'**

NOTE:  
 1. INSTALL 4" WEEPHOLES ON 6'-0" CENTERS BEDDED IN DRAINAGE STONE AS SHOWN. SAND IS CONTINUOUS BEHIND ENTIRE WINGWALL.

REV. NO.	DATE	DRWN	CHKD	REMARKS

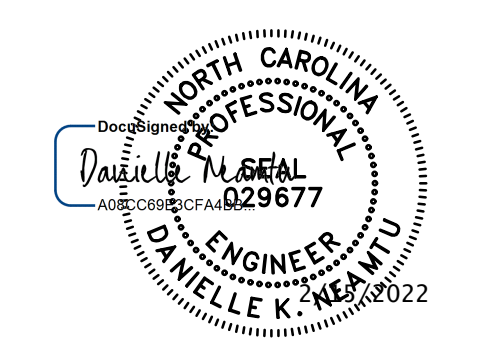
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 DRAWN BY: R. BOGGS  
 SHEET CHK'D BY: D. NEAMTU  
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 APPROVED BY: D. NEAMTU  
 DATE: FEBRUARY 2022



PUBLIC WORKS COMMISSION OF FAYETTEVILLE  
 DEMOLITION AND DECOMMISSIONING OF FORMER WTP  
 AT GLENVILLE LAKE DAM (CUMBE-038)  
 FAYETTEVILLE, NC

CIVIL DETAILS  
 SHEET NO. CD-4

PROJECT NO. 6384-231131  
 FILE NAME: CD04STDT.DWG  
 SHEET NO. CD-4





**GENERAL NOTES**

**DESIGN CRITERIA:**

**CODES:**

- 2018 NORTH CAROLINA BUILDING CODE
- 2018 NORTH CAROLINA EXISTING BUILDING CODE
- ACI 318 "BUILDING CODE REQUIREMENTS FOR REINFORCED CONCRETE"
- AISC MANUAL OF STEEL CONSTRUCTION, FOURTEENTH EDITION

**DESIGN LOADS:**

**LIVE LOADS:**

- UNRESTRICTED VEHICULAR ACCESS 300 PSF OR HS20

**ROOF SNOW LOAD:**

- GROUND SNOW LOAD,  $P_g$  10 PSF
- SNOW EXPOSURE FACTOR,  $C_e$  1.0
- SNOW LOAD IMPORTANCE FACTOR,  $I_s$  1.1
- THERMAL FACTOR,  $C_t$  1.0

**WIND LOADS:**

- RISK CATEGORY III
- ULTIMATE DESIGN WIND SPEED 130 MPH
- NOMINAL DESIGN WIND SPEED 101 MPH
- EXPOSURE CATEGORY C
- COMPONENTS AND CLADDING NA
- INTERNAL PRESSURE COEFFICIENT NA

**EARTHQUAKE:**

- SEISMIC DESIGN CATEGORY C
- SEISMIC IMPORTANCE FACTOR, I 1.25
- MAPPED SPECTRAL RESPONSE ACC,  $S_{DS}$  0.22
- MAPPED SPECTRAL RESPONSE ACC,  $S_{D1}$  0.096
- SPECTRAL RESPONSE COEFFICIENT,  $S_{RS}$  0.234
- SPECTRAL RESPONSE COEFFICIENT,  $S_{R1}$  0.154

**CONCRETE 28-DAY STRENGTH:**

- PIPE ENCASEMENT 2500 PSI
- PRESTRESSED ELEMENTS 5000 PSI

**FOUNDATIONS:**

- ALLOWABLE BEARING PRESSURE FOR SPREAD FOOTINGS OVER SUBSURFACE PREPARED AS PER SPECIFICATIONS: 2000 PSF

**GENERAL CONDITIONS:**

ALL STRUCTURAL DRAWINGS SHALL BE USED IN CONJUNCTION WITH THE ARCHITECTURAL, HVAC, PLUMBING, MECHANICAL, CIVIL, ELECTRICAL AND SHOP DRAWINGS AND SPECIFICATIONS.

THE CONTRACTOR SHALL REVIEW AND VERIFY DIMENSIONS SHOWN IN ALL PLANS AND REVIEW ALL FIELD CONDITIONS THAT MAY AFFECT THE INSTALLATION OF THE FACILITY, SHOULD DISCREPANCIES APPEAR, THE CONTRACTOR SHALL NOTIFY THE ENGINEER IN WRITING TO OBTAIN ENGINEER'S CLARIFICATION BEFORE COMMENCING WITH THE WORK.

FOR ALL ITEMS EMBEDDED IN OR PASSED THROUGH CONCRETE, THE CONTRACTOR SHALL INITIALLY REFER TO MECHANICAL, HEATING AND VENTILATION DRAWINGS FOR TYPE, SIZE, LOCATION AND SPECIAL INSTALLATION REQUIREMENTS FOR THESE ITEMS.

THE CONTRACTOR SHALL TAKE ANY AND ALL NECESSARY MEASURES TO PROTECT EXISTING STRUCTURES FROM DAMAGE WHEN WORKING IN AND AROUND EXISTING STRUCTURES PERFORMING WORK SUCH AS DEMOLITION, FOUNDATION EXCAVATION AND OTHERS.

SIZE AND LOCATION OF EQUIPMENT PADS AND ANCHOR BOLTS SHALL BE PER EQUIPMENT MANUFACTURER'S REQUIREMENTS.

ANY EQUIPMENT THAT MAY INDUCE VIBRATION TO THE STRUCTURE SHALL BE ADEQUATELY ISOLATED FROM THE STRUCTURES.

ALL DETAILS AND SECTIONS SHOWN ON THE DRAWINGS ARE INTENDED TO BE TYPICAL AND SHALL BE CONSTRUED TO APPLY TO ANY SIMILAR SITUATION ELSEWHERE ON THE PROJECT, EXCEPT WHERE A DIFFERENT DETAIL IS SHOWN.

STANDARD DETAILS APPLY TO ALL SIMILAR SITUATIONS ON THE PROJECT, EXCEPT WHERE A DIFFERENT DETAIL IS SHOWN.

UNLESS OTHERWISE NOTED, ALL PIPES UNDER SOIL SUPPORTED STRUCTURAL SLABS AND FOOTINGS SHALL BE ENCASED IN REINFORCED CONCRETE AS SHOWN ON THE STRUCTURAL DRAWINGS. PIPES SHALL BE PRESSURE TESTED BEFORE ENCASING. NOT ALL PIPING SHOWN ON STRUCTURAL DRAWINGS - REFER TO CIVIL, PROCESS MECHANICAL, HVAC AND PLUMBING DRAWINGS FOR PIPING SIZE AND LOCATIONS.

**CONCRETE:**

ALL MATERIALS AND METHODS OF CONSTRUCTION SHALL BE IN ACCORDANCE WITH ACI 318 REQUIREMENTS.

ALL CONCRETE SHALL BE AIR-ENTRAINED UNLESS OTHERWISE NOTED.

WATER REDUCING AGENT SHALL BE IN ACCORDANCE WITH ASTM C494.

ALL CONCRETE SURFACES EXPOSED TO AIR, UNLESS OTHERWISE NOTED IN SPECIFICATIONS, SHALL BE TREATED WITH AN APPROPRIATE CURING COMPOUND AS SOON AS CEMENT FINISHING IS COMPLETED OR FORMS ARE REMOVED.

ALL EXPOSED CORNERS OF CONCRETE SHALL HAVE A MINIMUM CHAMFER OF 3/4" UNLESS OTHERWISE NOTED.

THE CONTRACTOR SHALL OBTAIN ENGINEER'S APPROVAL FOR THE LOCATION OF CONSTRUCTION JOINTS THAT ARE NOT SHOWN ON THE DRAWING.

**REINFORCING STEEL:**

REINFORCEMENT SHALL CONFORM TO ASTM A615, GRADE 60 REQUIREMENTS.

ALL ACCESSORIES SHALL BE IN CONFORMANCE WITH ACI 315 REQUIREMENTS. REINFORCING STEEL SHALL HAVE THE FOLLOWING CLEAR COVER UNLESS OTHERWISE NOTED:

- CONCRETE CAST AGAINST EARTH 3"
- FORMED SURFACES IN CONTACT WITH SOIL, SEWAGE, WATER OR EXPOSED TO WEATHER 2"
- FORMED SURFACES NOT EXPOSED TO WEATHER OR IN CONTACT WITH SOIL:

  - SLABS, WALLS AND JOISTS 1"
  - BEAMS AND COLUMNS 1 1/2"

LAP SPLICES SHALL BE AS SHOWN ON THE DRAWINGS. FOR LAP SPLICES NOT SHOWN ON THE DRAWINGS, THE CONTRACTOR SHALL OBTAIN ENGINEER'S APPROVAL.

THE CONTRACTOR SHALL PREPARE PLACING DRAWINGS AND SCHEDULES IN CONFORMANCE WITH ACI 315 REQUIREMENTS.

**PRECAST PRESTRESSED CONSTRUCTION:**

ALL PRECAST PRESTRESSED MEMBERS SHALL BE DESIGNED BY A REGISTERED PROFESSIONAL ENGINEER FOR THE SUPERIMPOSED LOADS SHOWN ON THE DRAWINGS IN CONFORMANCE WITH THE REQUIREMENTS OF APPLICABLE SPECIFICATIONS. EQUIPMENT LOADS OR OTHER LOADING SUCH AS A BRIDGE CRANE SUPPORT LOADS SHALL BE CONSIDERED AS REQUIRED.

**FLOATATION CONSIDERATION:**

STRUCTURES WERE DESIGNED TO BE NON-BUOYANT AFTER THE STRUCTURE IS PLACED INTO SERVICE. THEREFORE, THE STRUCTURE MAY BE BUOYANT DURING CONSTRUCTION. THE GENERAL CONTRACTOR SHALL PROTECT ALL STRUCTURES (NEW AND EXISTING) FROM FLOATATION DURING CONSTRUCTION, REGARDLESS OF GROUNDWATER LEVELS, UNTIL STRUCTURES ARE PLACED IN OPERATION.

**STRUCTURAL STEEL:**

DESIGN, FABRICATION, ERECTION MATERIALS AND WORKMANSHIP SHALL BE IN ACCORDANCE WITH THE LATEST AISC SPECIFICATIONS AND DESIGN DRAWINGS.

**ALL STRUCTURAL STEEL:**

- W SHAPES - ASTM A992
- M, S AND HP SHAPES - ASTM A36
- CHANNELS AND ANGLES - ASTM A36
- HSS (SQUARE, RECTANGULAR AND ROUND) - ASTM A500
- PLATES - ASTM A36
- HIGH-STRENGTH BOLTS - ASTM A325
- TENSION CONTROL BOLTS - ASTM F1852
- NUTS - ASTM A563
- HARDENED STEEL WASHER - ASTM F436
- ANCHOR RODS - ASTM F1554
- THREADED RODS - ASTM A36

THE FABRICATOR SHALL DESIGN AND DETAIL ALL PARTS OF CONNECTIONS NOT FULLY DETAILED ON THE DESIGN DRAWINGS. THE NUMBER OF BOLTS AND OTHER SIMILAR ELEMENTS SHOWN ON THE DRAWING ARE PICTORIAL ONLY.

SHOP AND ERECTION DRAWINGS SHALL BE SUBMITTED TO THE ENGINEER FOR REVIEW.

WELDED CONNECTIONS SHALL BE IN ACCORDANCE WITH THE LATEST AWS STRUCTURAL WELDING CODE REQUIREMENTS. ELECTRODES SHALL BE E-70XX.

**STRUCTURAL ALUMINUM:**

DESIGN, FABRICATION, ERECTION MATERIALS AND WORKMANSHIP SHALL BE IN ACCORDANCE WITH THE LATEST "ALUMINUM DESIGN MANUAL" (ADM) SPECIFICATIONS AND DESIGN DRAWINGS.

**ALL STRUCTURAL ALUMINUM:**

- ALUMINUM EXTRUDED PIPE - ASTM B429, ALLOY 6063-T6
- ALUMINUM EXTRUDED SHAPE - ASTM B221, ALLOY 6061-T6
- ALUMINUM SHEET AND PLATE - ASTM B209, ALLOY 6061-T6
- ALUMINUM ALLOY ROLLED THREAD PLATE - ASTM B209, ALLOY 6061-T6
- ALUMINUM CASTING - ASTM B26/B36M, ALLOY 443.0-F

SHOP AND ERECTION DRAWINGS SHALL BE SUBMITTED TO THE ENGINEER FOR REVIEW.

WELDED CONNECTIONS SHALL BE IN ACCORDANCE WITH THE LATEST AWS D1.2/D1.2M "STRUCTURAL WELDING CODE - ALUMINUM".

WHERE ALUMINUM CONTACTS A DISSIMILAR METAL, APPLY TO THE DISSIMILAR METAL A HEAVY BRUSH COAT OF ZINC-CHROMATE PRIMER FOLLOWED BY TWO COATS OF ALUMINUM METAL PAINT.

WHERE ALUMINUM CONTACTS MASONRY OR CONCRETE, APPLY A HEAVY COAT OF BITUMASTIC OR EPOXY PAINT.

**CONCRETE CRACK REPAIR:**

CRACKS ON HORIZONTAL SURFACES SHALL BE REPAIRED BY GRAVITY FEEDING CRACK SEALANT INTO CRACKS PER MANUFACTURER'S RECOMMENDATIONS. IF CRACKS ARE LESS THAN 1/8" IN THICKNESS THEY SHALL BE PRESSURE INJECTED.

CRACKS ON VERTICAL SURFACES SHALL BE REPAIRED BY PRESSURE INJECTING CRACK SEALANT THROUGH VALVES SEALED TO SURFACE WITH CRACK REPAIR EPOXY ADHESIVE PER MANUFACTURER'S RECOMMENDATIONS.

**SURFACE REPAIR:**

FOR AREAS IN NEED OF REPAIR UP TO 1 1/2" THICK, REPAIRS SHALL BE ACCOMPLISHED USING A CEMENTITIOUS STRUCTURAL REPAIR MORTAR WITH AN INTEGRAL CORROSION INHIBITOR WHICH IS CAPABLE OF APPLICATION THICKNESS UP TO 1 1/2" IN A SINGLE APPLICATION. CEMENTITIOUS STRUCTURAL REPAIR MORTAR UP TO 1 1/2" THICK SHALL BE EMACO S88 CI BY BASF; SIKATOP 123 PLUS BY SIKA CORPORATION OR PROFESSIONAL APPROVED EQUAL.

FOR AREAS IN NEED OF REPAIR GREATER THAN 1 1/2" BUT LESS THAN 3" THICK, REPAIRS SHALL BE ACCOMPLISHED USING A CEMENTITIOUS STRUCTURAL REPAIR MORTAR, WITH AN INTEGRAL CORROSION INHIBITOR AND CAPABLE OF AN APPLICATION THICKNESS UP TO 3" IN A SINGLE APPLICATION. CEMENTITIOUS STRUCTURAL REPAIR MORTAR BETWEEN 1 1/2" AND 3" THICK SHALL BE EMACO S66 CI BY BASF; SIKATOP 126 PLUS BY SIKA CORPORATION OR PROFESSIONAL APPROVED EQUAL.

FOR AREAS IN NEED OF REPAIR GREATER THAN 3" THICK, REPAIRS SHALL BE ACCOMPLISHED USING A NON-SAG, CEMENTITIOUS STRUCTURAL REPAIR MORTAR WITH A CORROSION INHIBITOR CAPABLE OF VERTICAL SURFACE APPLICATION THICKNESS GREATER THAN 3" IN A SINGLE APPLICATION. CEMENTITIOUS STRUCTURAL REPAIR MORTAR MORE THAN 3" THICK SHALL BE EMACO S77 CI BY BASF; SIKATOP 111 PLUS BY SIKA CORPORATION OR PROFESSIONAL APPROVED EQUAL.

THE CONTRACTOR SHALL FOLLOW ICRI TECHNICAL GUIDELINE NO. 03730 RECOMMENDATIONS FOR SURFACE PREPARATION OF DETERIORATED CONCRETE.

THE CONTRACTOR SHALL FOLLOW THE MANUFACTURER'S RECOMMENDATION FOR BONDING AGENT AND ADDITIONAL WIRE MESH REINFORCING TO BE INSTALLED WITHIN THE REPAIR.

THE CONTRACTOR SHALL CONSULT THE MANUFACTURER FOR RECOMMENDATIONS TO INSURE COMPATIBILITY BETWEEN EACH STRUCTURAL REPAIR MORTAR AND THE LINING SYSTEM.

ONE HUNDRED PERCENT EPOXY GROUT MAY BE USED FOR MINOR REPAIRS.

**ABBREVIATIONS:**

AL	ALUMINUM	MIN	MINIMUM
BLDG	BUILDING	MISC	MISCELLANEOUS
BOT	BOTTOM	NF	NEAR FACE
CC	CENTER TO CENTER	NTS	NOT TO SCALE
CJ	CONTROL JOINT	OC	ON CENTER
CMU	CONCRETE MASONRY UNIT	PCJ	PARTIAL CONTRACTION JOINT
CONC	CONCRETE	PL	PLATE
CONST JT	CONSTRUCTION JOINT	PLF	POUNDS PER LINEAR FOOT
CONT	CONTINUOUS	PROJ	PROJECTION
DIA	DIAMETER	PSF	POUNDS PER SQUARE FOOT
DWG	DRAWING	PSI	POUNDS PER SQUARE INCH
EF	EACH FACE	REINF	REINFORCEMENT
EJ	EXPANSION JOINT	SPECS	SPECIFICATIONS
EL	ELEVATION	SS	STAINLESS STEEL
EW	EACH WAY	STD	STANDARD
FF	FAR FACE	T&B	TOP AND BOTTOM
FTG	FOOTING	T/STRUCTURE	TOP OF STRUCTURE
HORIZ	HORIZONTAL	TYP	TYPICAL
HP	HIGH POINT	UN	UNLESS OTHERWISE NOTED
ID	INSIDE DIAMETER	VERT	VERTICAL
LP	LOW POINT	WSTP	WATERSTOP
MAX	MAXIMUM	WWF	WELDED WIRE FABRIC

**NOTE:**

THESE ABBREVIATIONS ARE FOR USE ON STRUCTURAL DRAWINGS ONLY.

**LEGEND & SYMBOLS**

	EARTH FILL		ALUMINUM
	UNDISTURBED EARTH		GRANULAR FILL
	CONCRETE		SAND
	CONCRETE MASONRY		GRATING
	STEEL		FLOWABLE FILL / GROUT
	STRUCTURAL FILL		DEMOLITION

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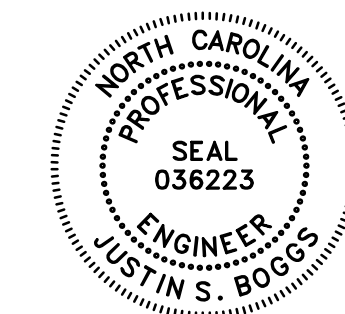
REV. NO.	DATE	DRWN	CHKD	REMARKS

DESIGNED BY:	J. ROSENTHAL
DRAWN BY:	P. SCHIAVO
SHEET CHK'D BY:	J. BOGGS
CROSS CHK'D BY:	D. NEAMTU
APPROVED BY:	J. BOGGS
DATE:	FEBRUARY 2022

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PUBLIC WORKS COMMISSION OF FAYETTEVILLE  
 DEMOLITION AND DECOMMISSIONING OF FORMER WTP  
 AT GLENVILLE LAKE DAM (CUMBE-038)  
 FAYETTEVILLE, NC

STANDARD NOTES



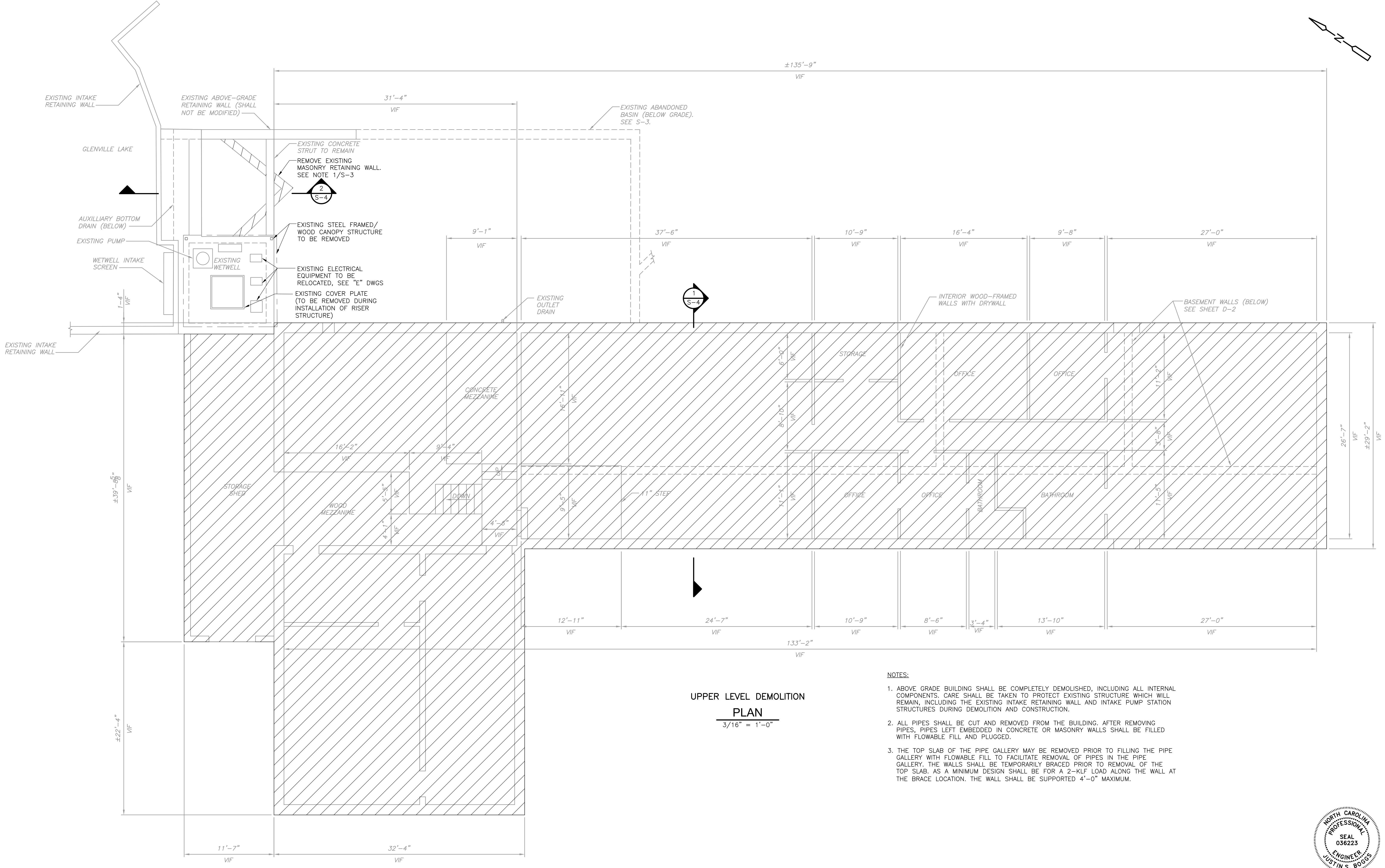
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SHEET NO.

S-1



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**UPPER LEVEL DEMOLITION PLAN**  
 3/16" = 1'-0"

- NOTES:**
1. ABOVE GRADE BUILDING SHALL BE COMPLETELY DEMOLISHED, INCLUDING ALL INTERNAL COMPONENTS. CARE SHALL BE TAKEN TO PROTECT EXISTING STRUCTURE WHICH WILL REMAIN, INCLUDING THE EXISTING INTAKE RETAINING WALL AND INTAKE PUMP STATION STRUCTURES DURING DEMOLITION AND CONSTRUCTION.
  2. ALL PIPES SHALL BE CUT AND REMOVED FROM THE BUILDING. AFTER REMOVING PIPES, PIPES LEFT EMBEDDED IN CONCRETE OR MASONRY WALLS SHALL BE FILLED WITH FLOWABLE FILL AND PLUGGED.
  3. THE TOP SLAB OF THE PIPE GALLERY MAY BE REMOVED PRIOR TO FILLING THE PIPE GALLERY WITH FLOWABLE FILL TO FACILITATE REMOVAL OF PIPES IN THE PIPE GALLERY. THE WALLS SHALL BE TEMPORARILY BRACED PRIOR TO REMOVAL OF THE TOP SLAB. AS A MINIMUM DESIGN SHALL BE FOR A 2-KLF LOAD ALONG THE WALL AT THE BRACE LOCATION. THE WALL SHALL BE SUPPORTED 4'-0" MAXIMUM.

REV. NO.	DATE	DRWN	CHKD	REMARKS

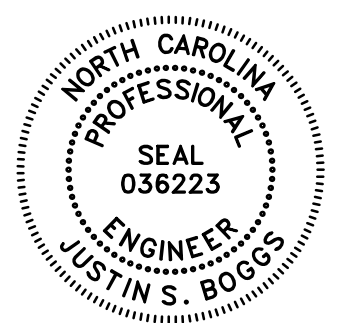
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 DRAWN BY: P. SCHIAVO  
 SHEET CHK'D BY: J. BOGGS  
 CROSS CHK'D BY: D. NEAMTU  
 APPROVED BY: J. BOGGS  
 DATE: FEBRUARY 2022

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PUBLIC WORKS COMMISSION OF FAYETTEVILLE  
**DEMOLITION AND DECOMMISSIONING OF FORMER WTP AT GLENVILLE LAKE DAM (CUMBE-038)**  
 FAYETTEVILLE, NC

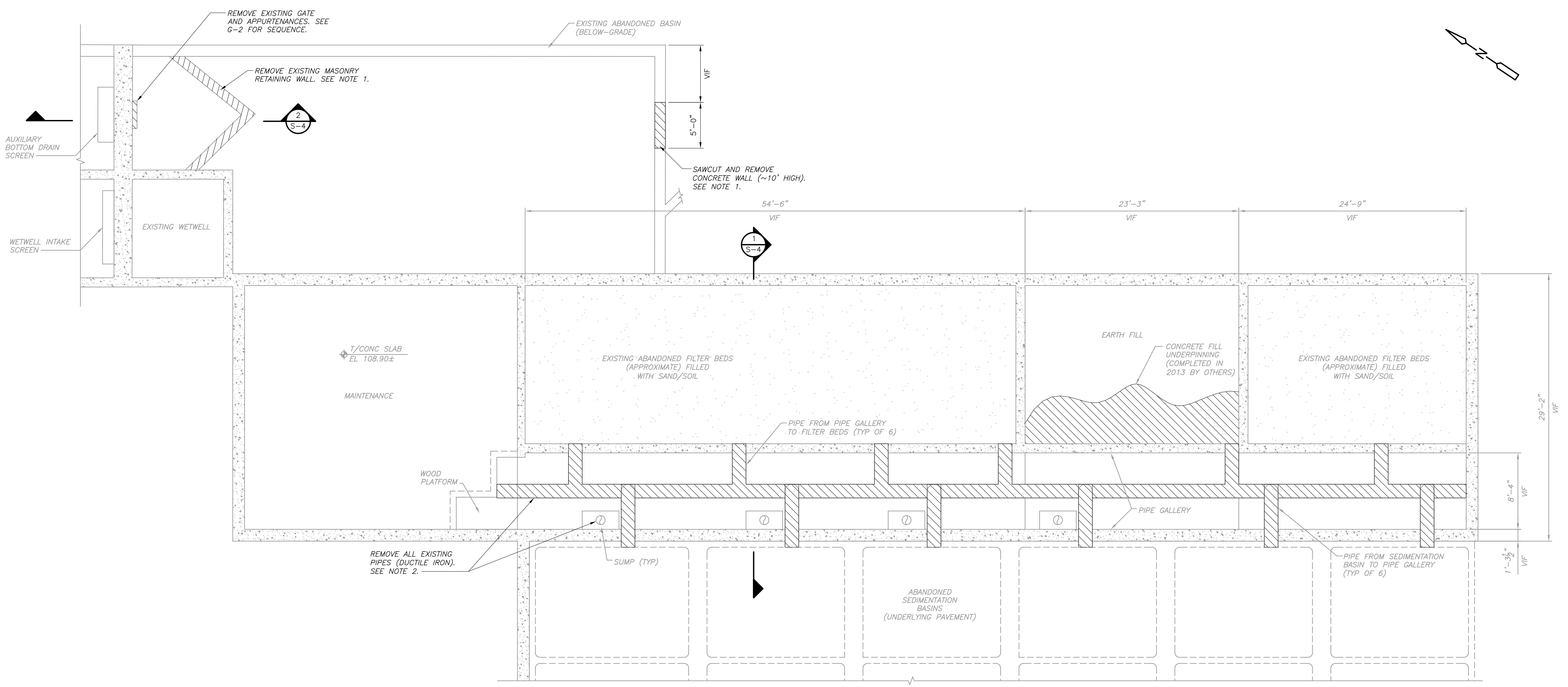
**UPPER LEVEL DEMOLITION PLAN**  
 SHEET NO. S-2

PROJECT NO. 6384-231131  
 FILE NAME: S002ULPL.DWG  
 SHEET NO. S-2



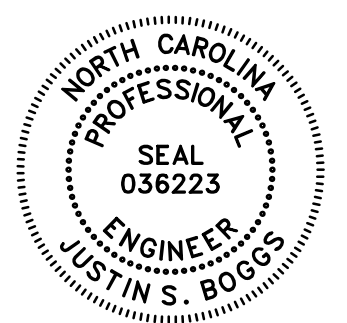


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LOWER LEVEL DEMOLITION  
 PLAN  
 3/16" = 1'-0"

- NOTES:
- EXISTING MASONRY RETAINING WALL AND CONCRETE BASIN WALL SHALL BE DEMOLISHED AS NECESSARY TO INSTALL PROPOSED DRAIN LINE AND PROPOSED STRUCTURE. SEE CONSTRUCTION SEQUENCE ON G-2.
  - ALL PIPES SHALL BE CUT AND REMOVED FROM THE BUILDING. AFTER REMOVING PIPES, PIPES LEFT EMBEDDED IN CONCRETE OR MASONRY WALLS SHALL BE FILLED WITH FLOWABLE FILL AND PLUGGED.



REV. NO.	DATE	DRWN	CHKD	REMARKS

DESIGNED BY: J. ROSENTHAL	 5400 Glenwood Avenue, Suite 400 Raleigh, NC 27612 Tel: (919) 325-3500 NC F-0412
DRAWN BY: P. SCHIAVO	
SHEET CHK'D BY: J. BOGGS	
CROSS CHK'D BY: D. NEAMTU	
APPROVED BY: J. BOGGS	
DATE: FEBRUARY 2022	

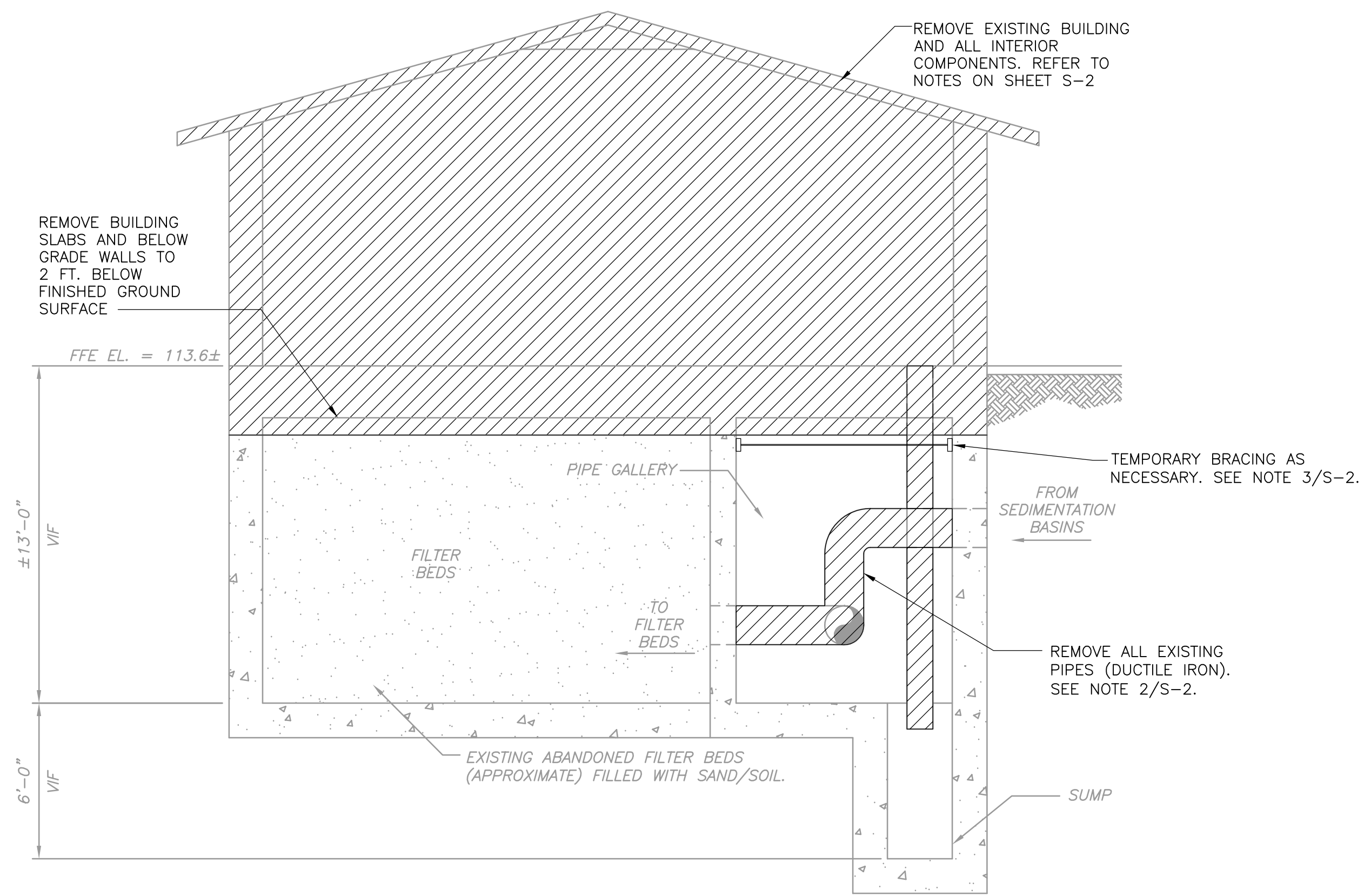
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 DEMOLITION AND DECOMMISSIONING OF FORMER WTP  
 AT GLENVILLE LAKE DAM (CUMBE-038)  
 FAYETTEVILLE, NC

LOWER LEVEL  
 DEMOLITION PLAN  
 SHEET NO.  
 S-3

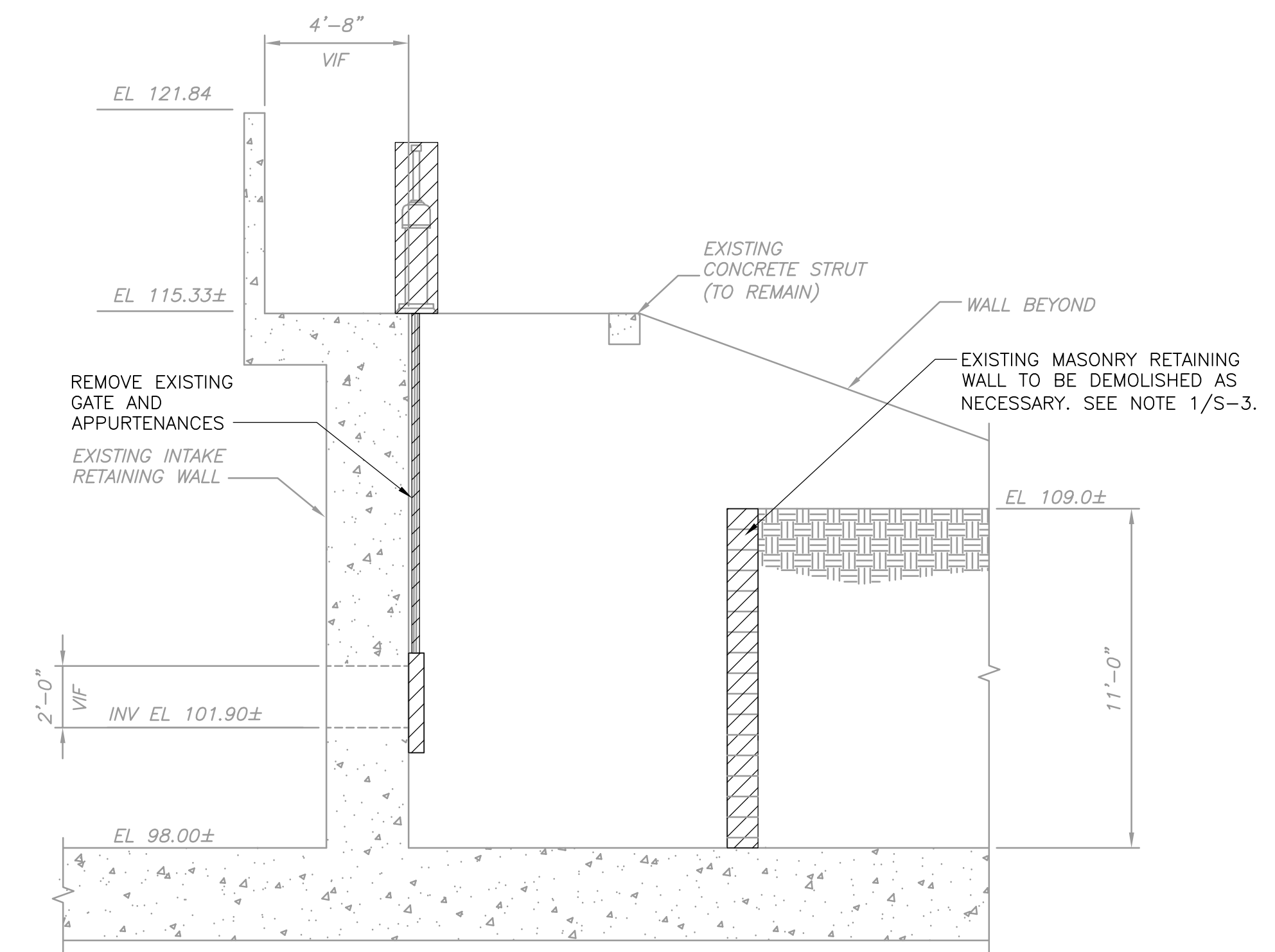
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SECTION 1  
1/4" = 1'-0" S-2



SECTION 2  
1/4" = 1'-0" S-2

REV. NO.	DATE	DRWN	CHKD	REMARKS

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 DRAWN BY: P. SCHIAVO  
 SHEET CHK'D BY: J. BOGGS  
 CROSS CHK'D BY: D. NEAMTU  
 APPROVED BY: J. BOGGS  
 DATE: FEBRUARY 2022

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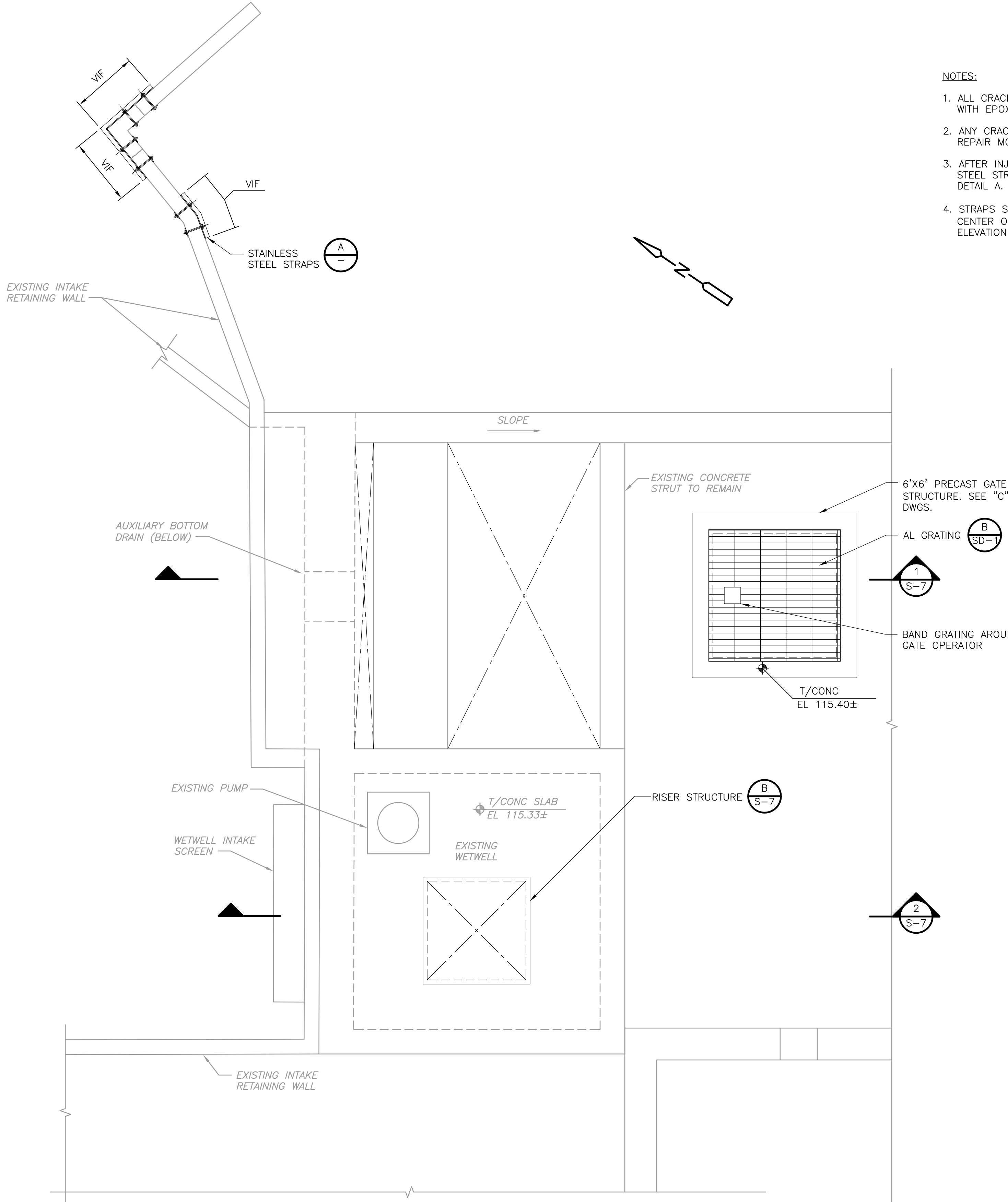
DEMOLITION SECTIONS



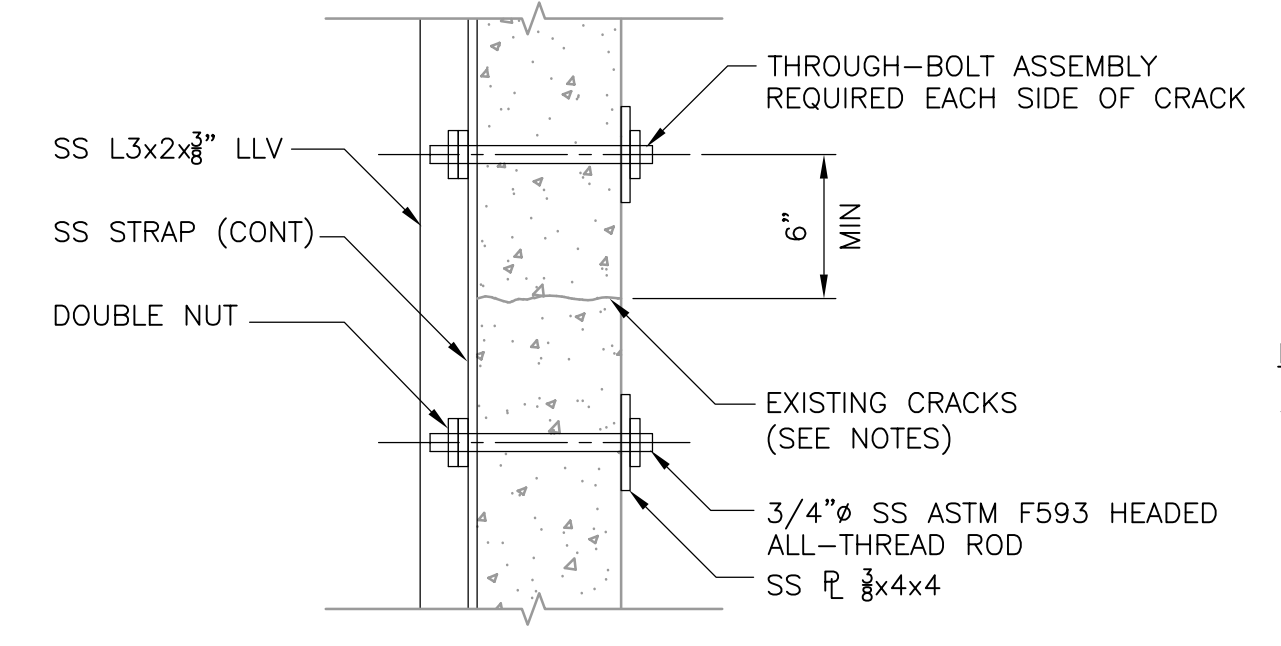
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**S-4**



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- NOTES:**
1. ALL CRACKS IN PARAPET WALL SHALL BE PRESSURE INJECTED WITH EPOXY PER S-1 AND SECTION 030100.61.
  2. ANY CRACKS EXHIBITING SPALL SHALL BE REPAIRED WITH REPAIR MORTAR PER S-1 AND SECTION 030100.61.
  3. AFTER INJECTION AND CONCRETE REPAIRS, INSTALL STAINLESS STEEL STRAPS AT EACH WALL CORNER AS SHOWN IN PLAN PER DETAIL A.
  4. STRAPS SHALL BE INSTALLED 12" FROM TOP OF WALL TO CENTER OF THROUGH-BOLT AND SPACED 2'-0" ON-CENTER TO ELEVATION 115.33±.



- NOTES:**
1. THROUGH-BOLTS SHALL BE INSTALLED IN EXISTING CONCRETE WITH EPOXY ADHESIVE.

**DETAIL**  
 1-1/2" = 1'-0" **A**

**UPPER LEVEL**  
**PLAN**  
 3/8" = 1'-0"

REV. NO.	DATE	DRWN	CHKD	REMARKS

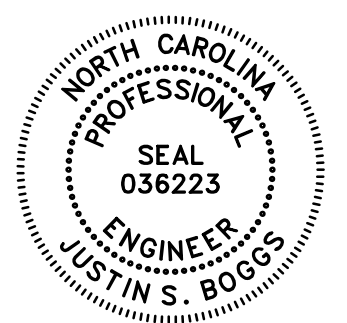
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 DRAWN BY: P. SCHIAVO  
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 DATE: FEBRUARY 2022



PUBLIC WORKS COMMISSION OF FAYETTEVILLE  
 DEMOLITION AND DECOMMISSIONING OF FORMER WTP  
 AT GLENVILLE LAKE DAM (CUMBE-038)  
 FAYETTEVILLE, NC

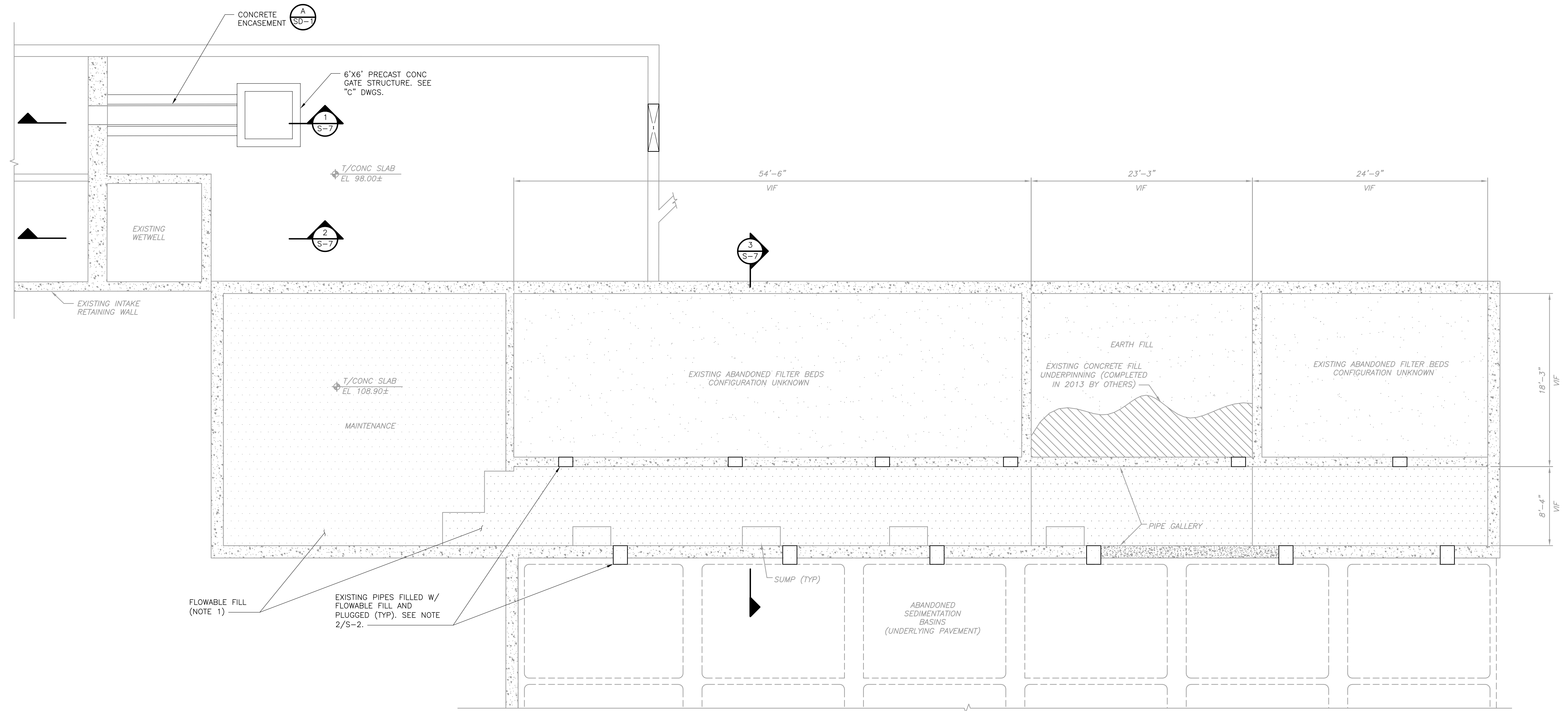
**UPPER LEVEL**  
**MODIFICATION PLAN**

PROJECT NO. 6384-231131  
 FILE NAME: S005ULPL.DWG  
 SHEET NO.  
**S-5**





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- NOTES:**
- BACKFILL EXISTING PIPE GALLERY AND MAINTENANCE ROOM WITH FLOWABLE FILL TO 1-FT ABOVE EXISTING FINISHED FLOOR EL 108.90±. BACKFILL THE REMAINDER TO FINISHED GRADE WITH SELECT FILL.

LOWER LEVEL  
**PLAN**  
 3/16" = 1'-0"

REV. NO.	DATE	DRWN	CHKD	REMARKS

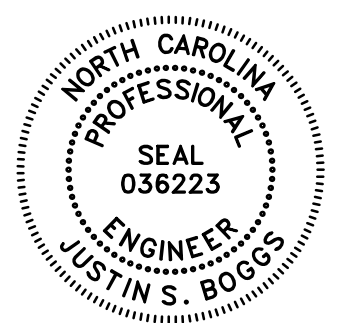
DESIGNED BY: J. ROSENTHAL  
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 APPROVED BY: J. BOGGS  
 DATE: FEBRUARY 2022

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 AT GLENVILLE LAKE DAM (CUMBE-038)  
 FAYETTEVILLE, NC**

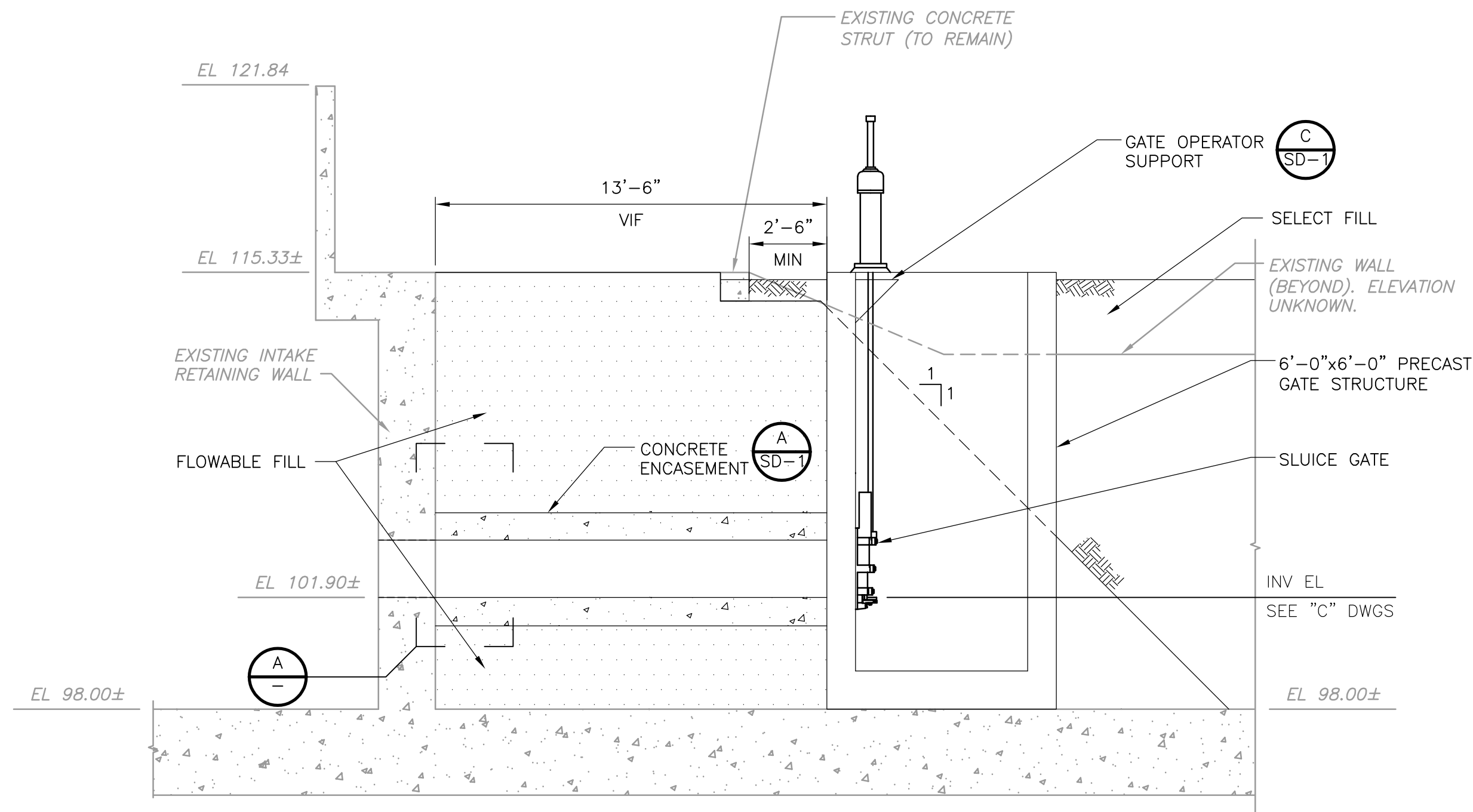
**LOWER LEVEL  
 MODIFICATION PLAN**  
 SHEET NO.  
**S-6**

PROJECT NO. 6384-231131  
 FILE NAME: S006LLPL.DWG  
 SHEET NO.  
**S-6**





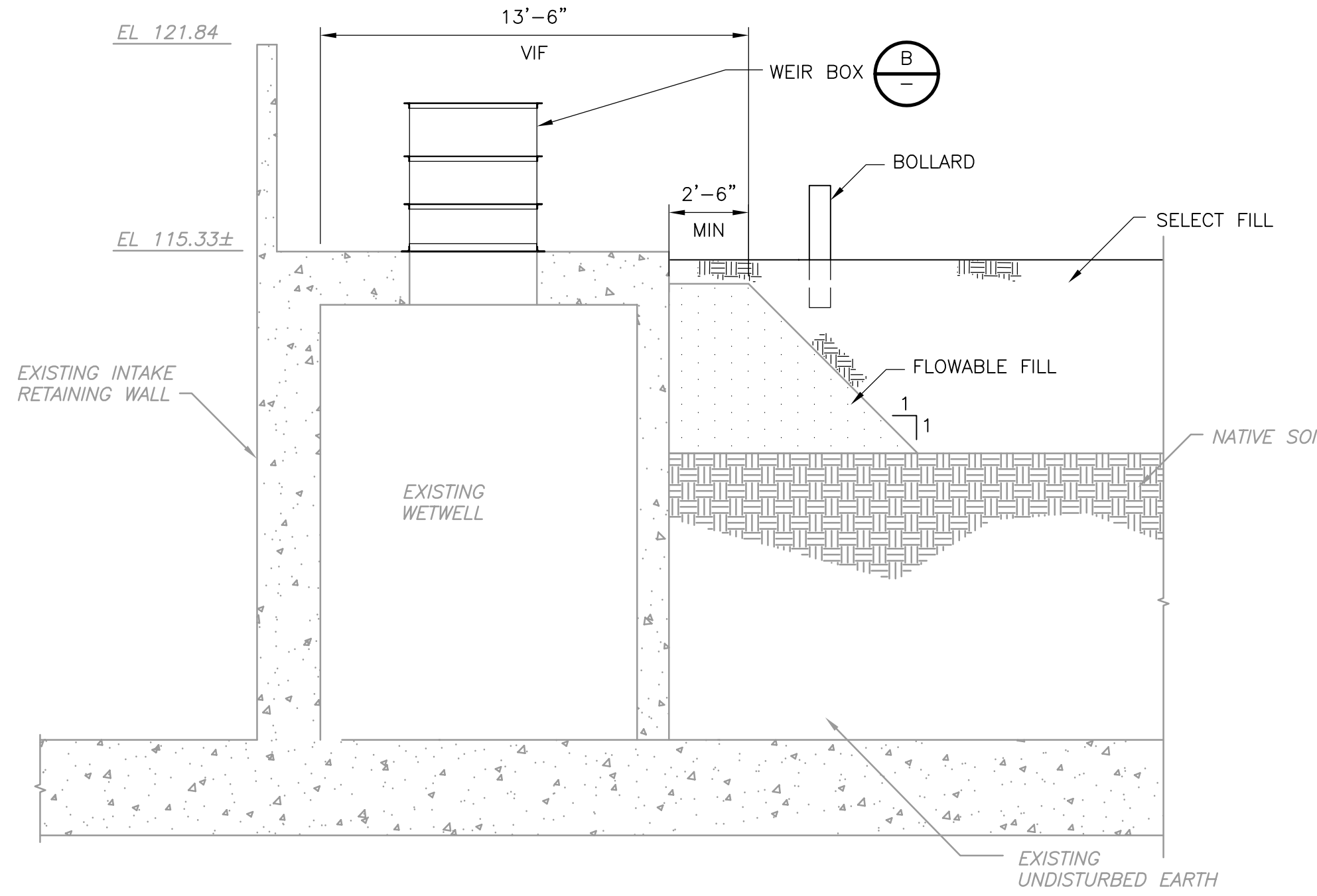
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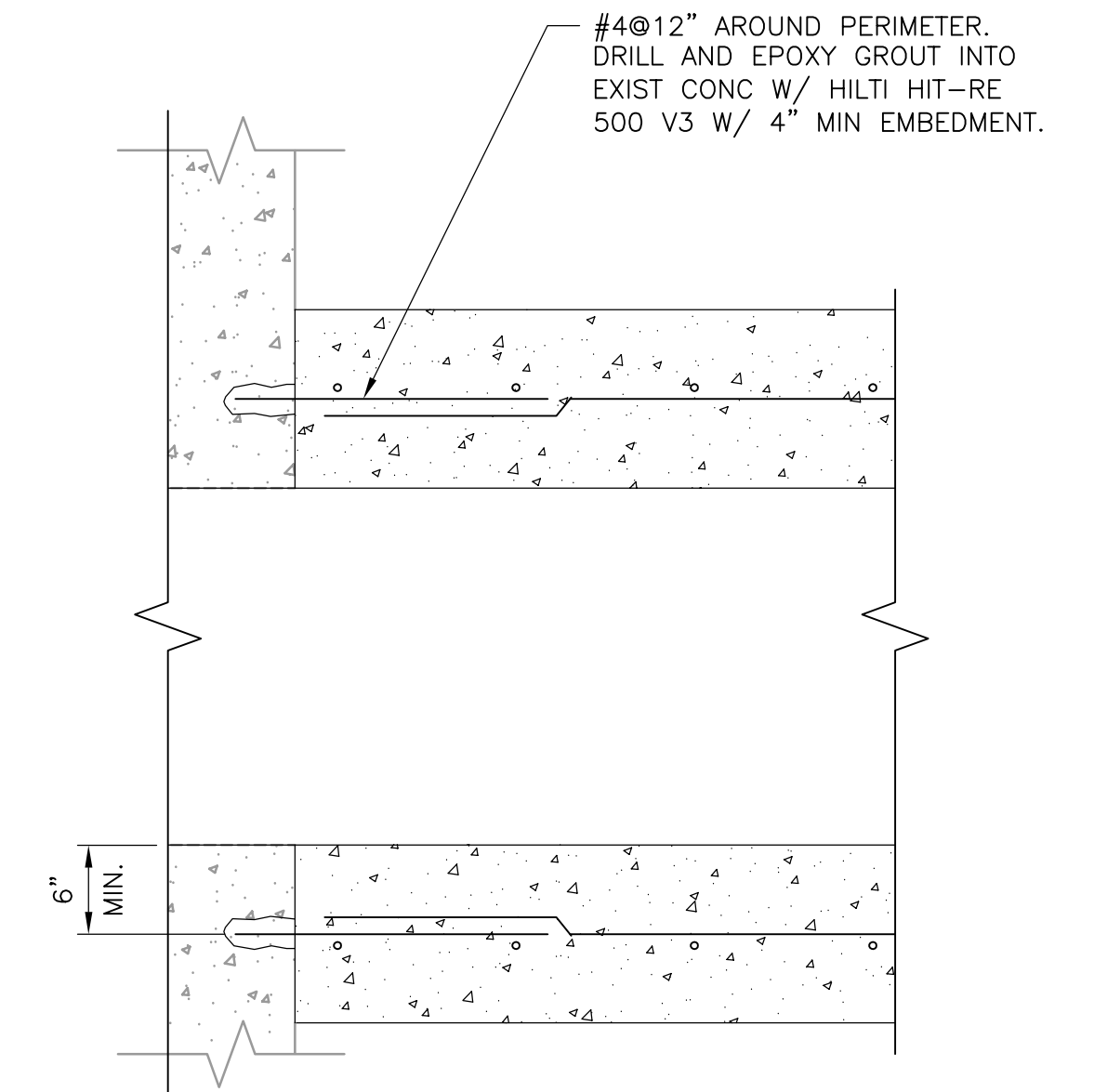
**SECTION 1**  
1/4" = 1'-0"

**SLUICE GATE NOTES:**

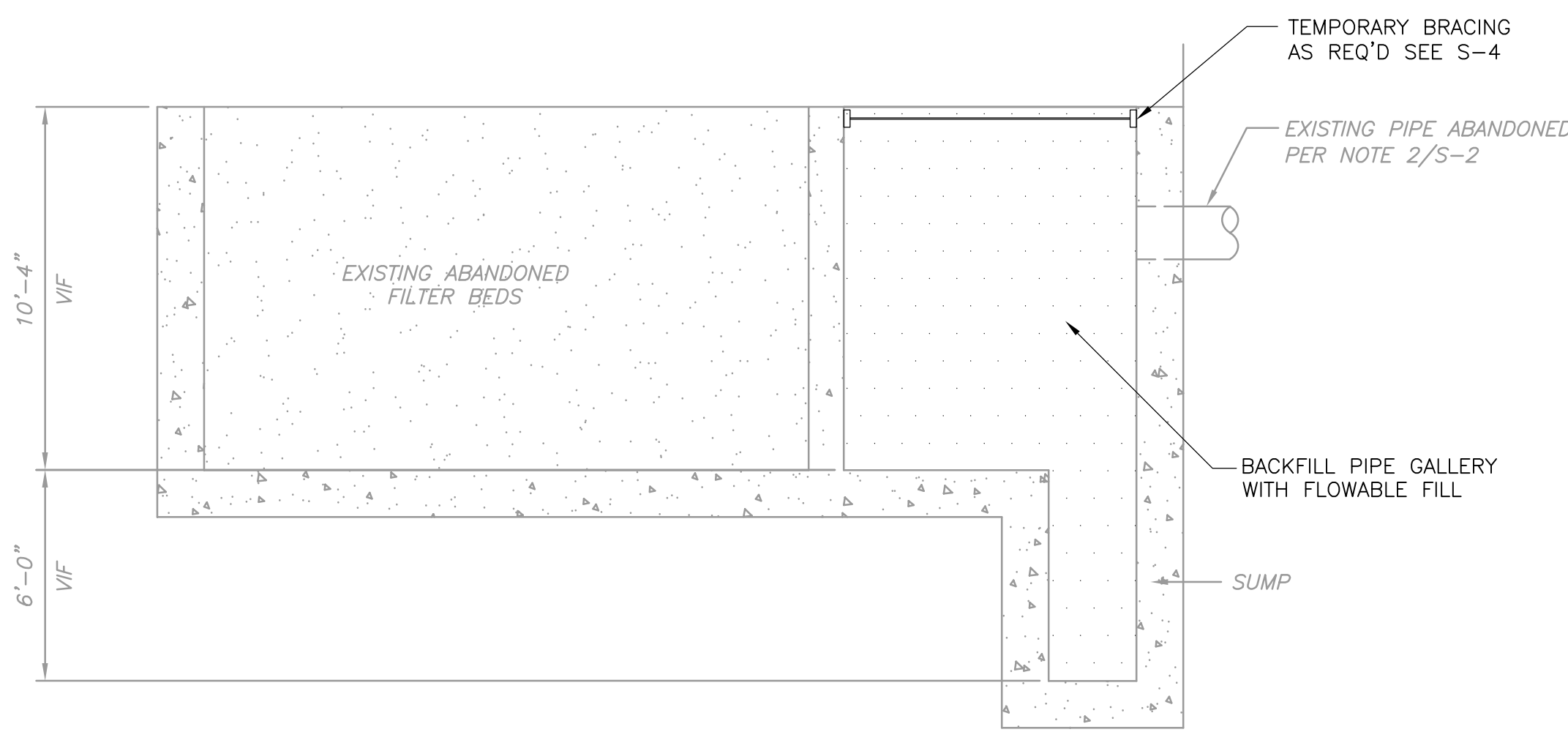
1. SLUICE GATE AND ALL APPURTENANCES SHALL CONFORM TO THE REQUIREMENTS SHOWN ON THE DRAWINGS AND IN THE SPECIFICATIONS.
2. WALL THIMBLE SHALL BE TYPE "F" WITH A MINIMUM DEPTH AS SHOWN ON THE DETAILS.
3. STEM SHALL BE STAINLESS STEEL, CONFORM TO THE SPECIFICATIONS AND HAVE A DIAMETER AS REQUIRED BY THE GATE MANUFACTURERS.
4. STEM GUIDES SHALL BE FULLY ADJUSTABLE WITH A TWO-PIECE COLLAR THAT CAN BE INSTALLED AFTER THE STEM IS IN PLACE. THE REACH FOR THE GUIDES WILL VARY ACCORDING TO THE TOTAL WALL OFFSET AT THE GUIDE.
5. AN APPROPRIATELY SIZED LIFT WITH A CRANK SHALL BE PROVIDED FOR THE MANUAL OPERATION OF GATE. THE HEIGHT OF EACH FLOOR STAND SHALL BE SET SO THAT THE CENTERLINE OF THE CRANK IS APPROXIMATELY 36" ABOVE THE OPERATING FLOOR.



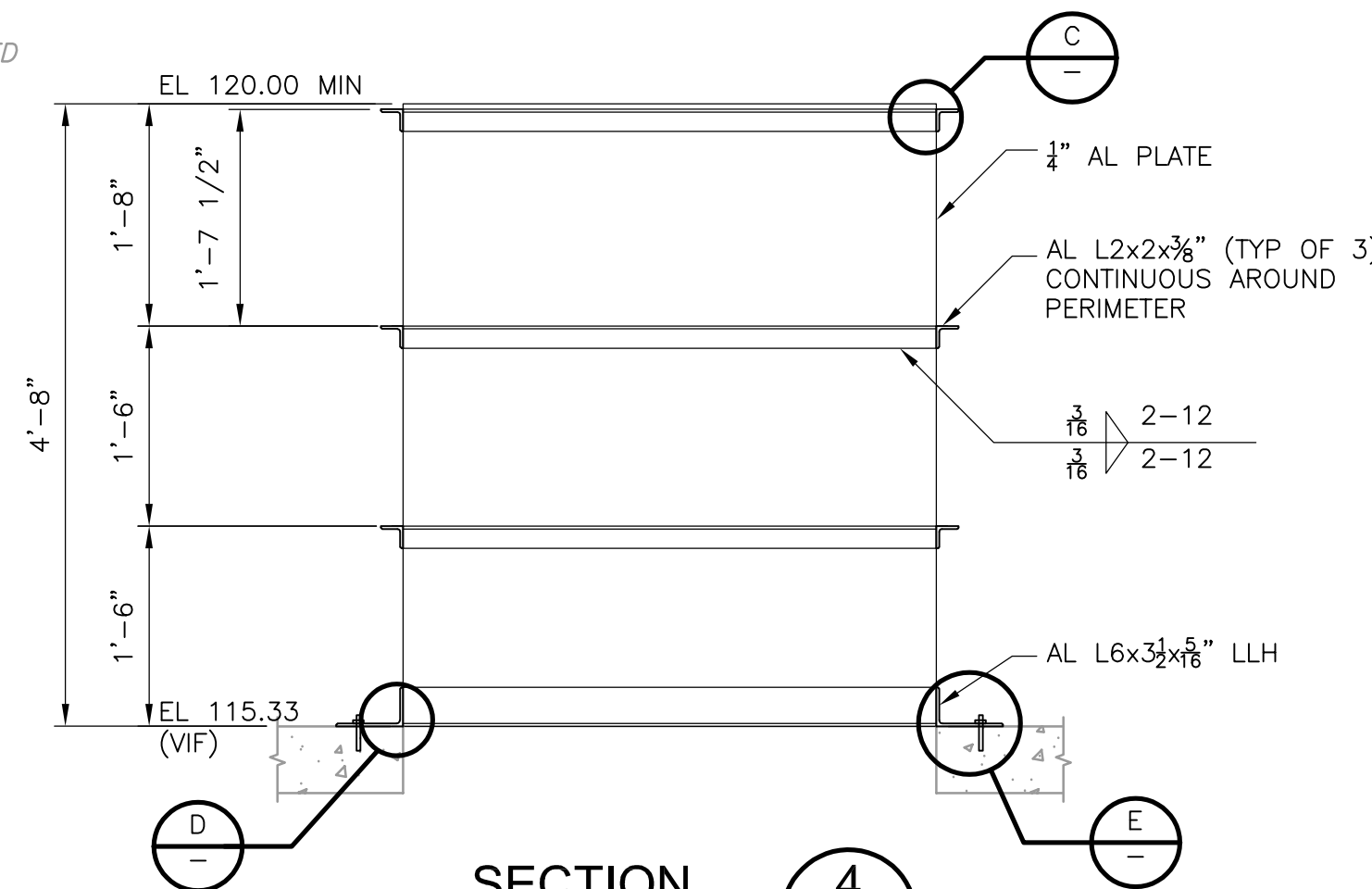
**SECTION 2**  
1/4" = 1'-0"



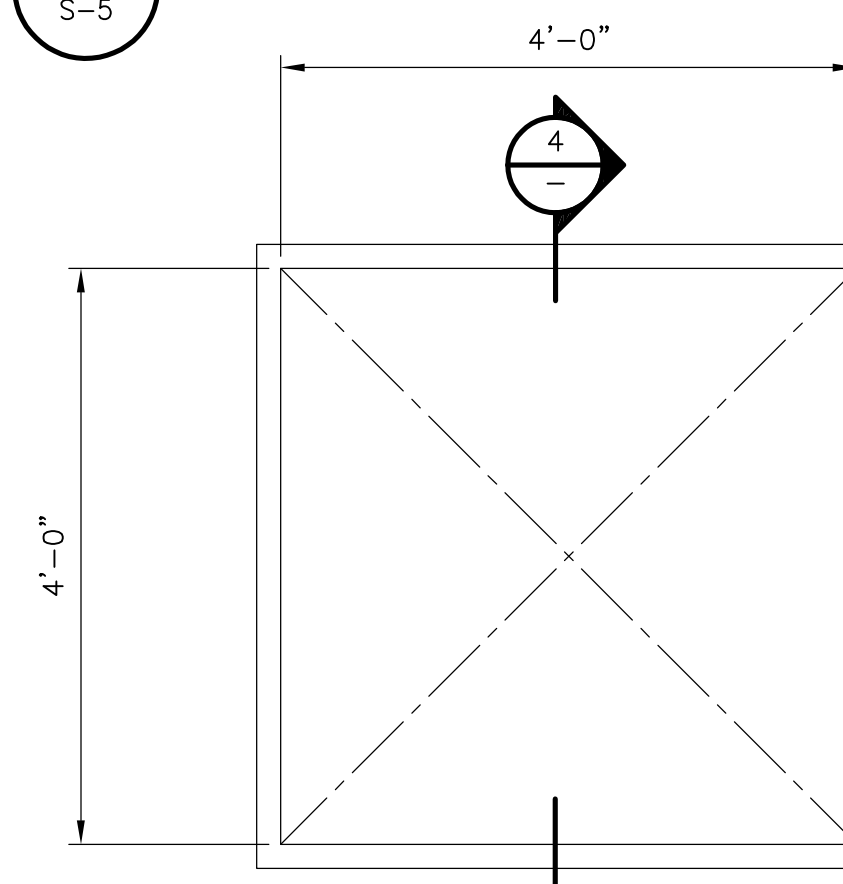
**DETAIL A**  
1" = 1'-0"



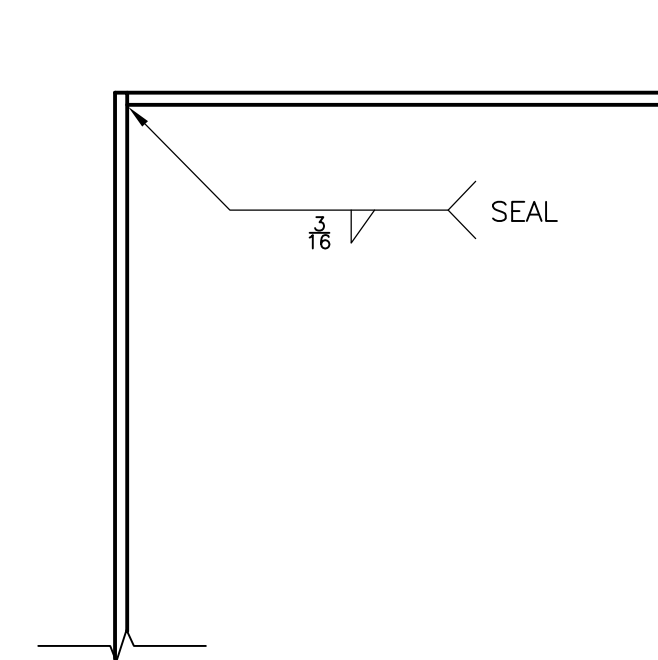
**SECTION 3**  
1/4" = 1'-0"



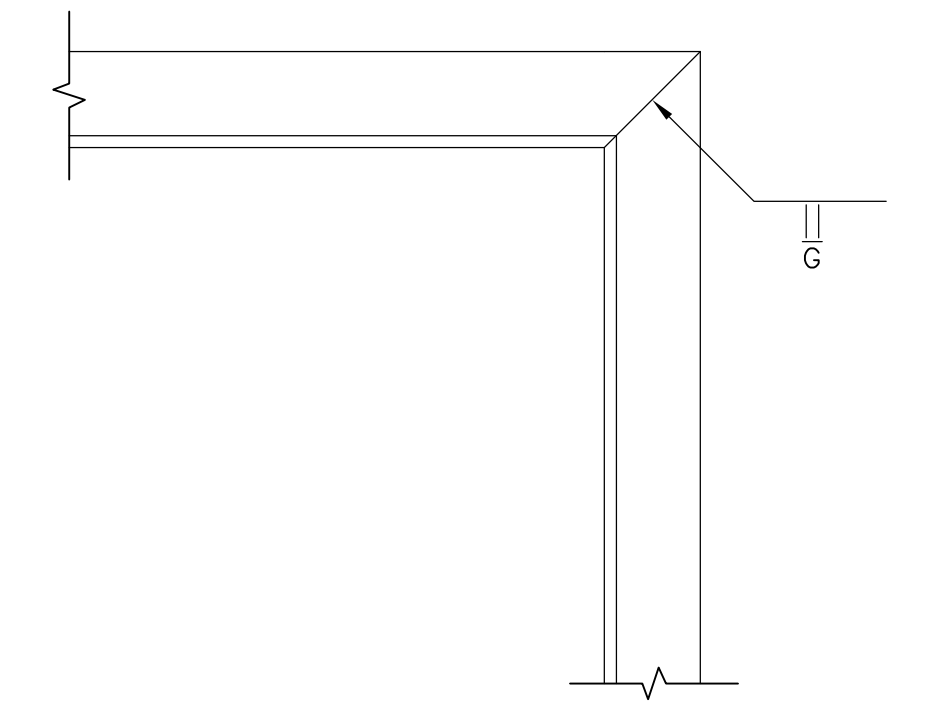
**SECTION 4**  
3/4" = 1'-0"



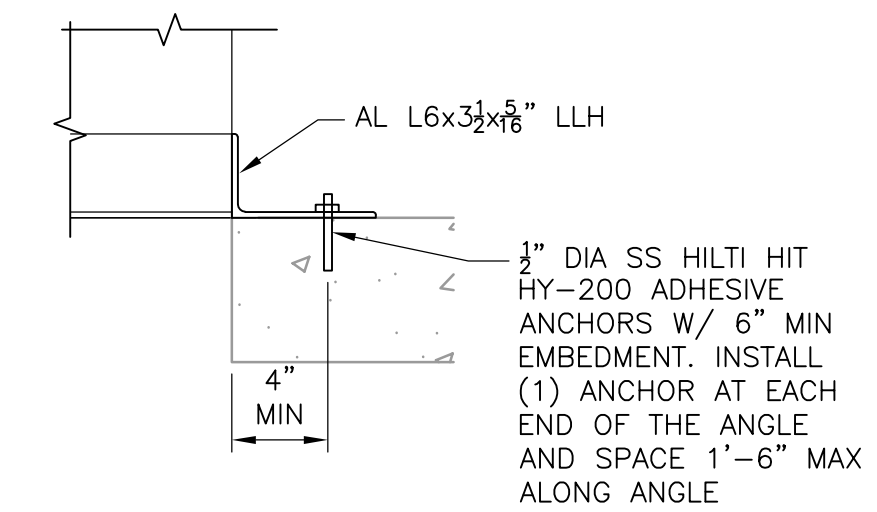
**RISER STRUCTURE PLAN**  
**DETAIL B**  
3/4" = 1'-0"



**ALUMINIUM PLATE WELD**  
**DETAIL D**  
3" = 1'-0"



**STIFFENING ANGLE CORNER WELD**  
**DETAIL C**  
3" = 1'-0"



**RISER STRUCTURE ANCHORAGE**  
**DETAIL E**  
1-1/2" = 1'-0"



REV. NO.	DATE	DRWN	CHKD	REMARKS

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 DRAWN BY: P. SCHIAVO  
 SHEET CHK'D BY: J. BOGGS  
 CROSS CHK'D BY: D. NEAMTU  
 APPROVED BY: J. BOGGS  
 DATE: FEBRUARY 2022

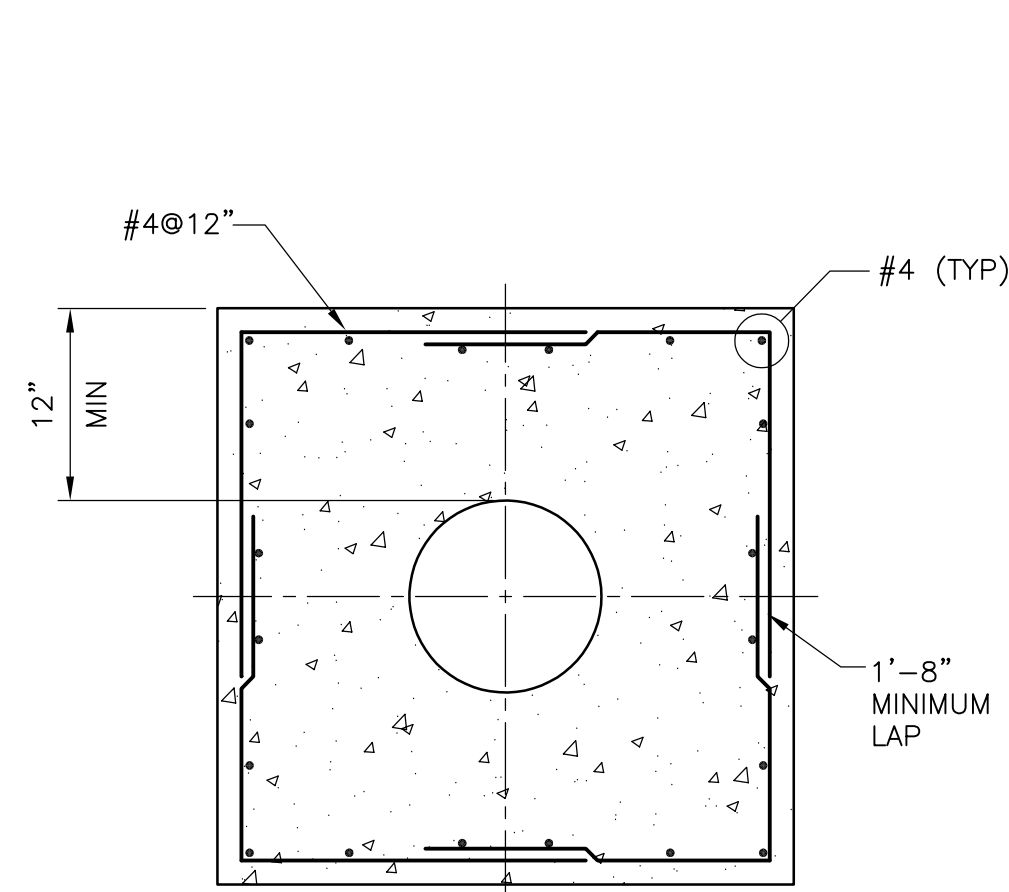
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 DEMOLITION AND DECOMMISSIONING OF FORMER WTP  
 AT GLENVILLE LAKE DAM (CUMBE-038)  
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**SECTIONS AND DETAILS**

PROJECT NO. 6384-231131  
 FILE NAME: S007MDS.DWG  
 SHEET NO. **S-7**

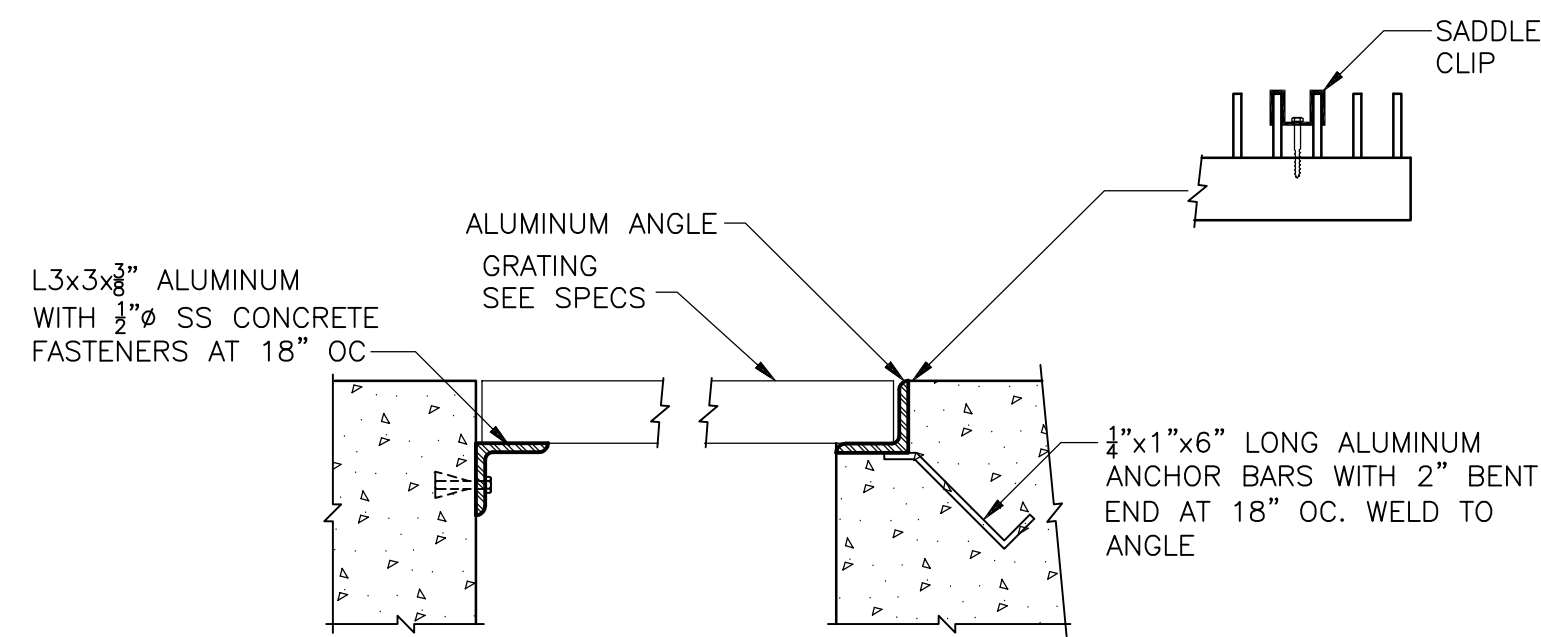




PIPE ENCASUREMENT  
DETAIL A  
NTS

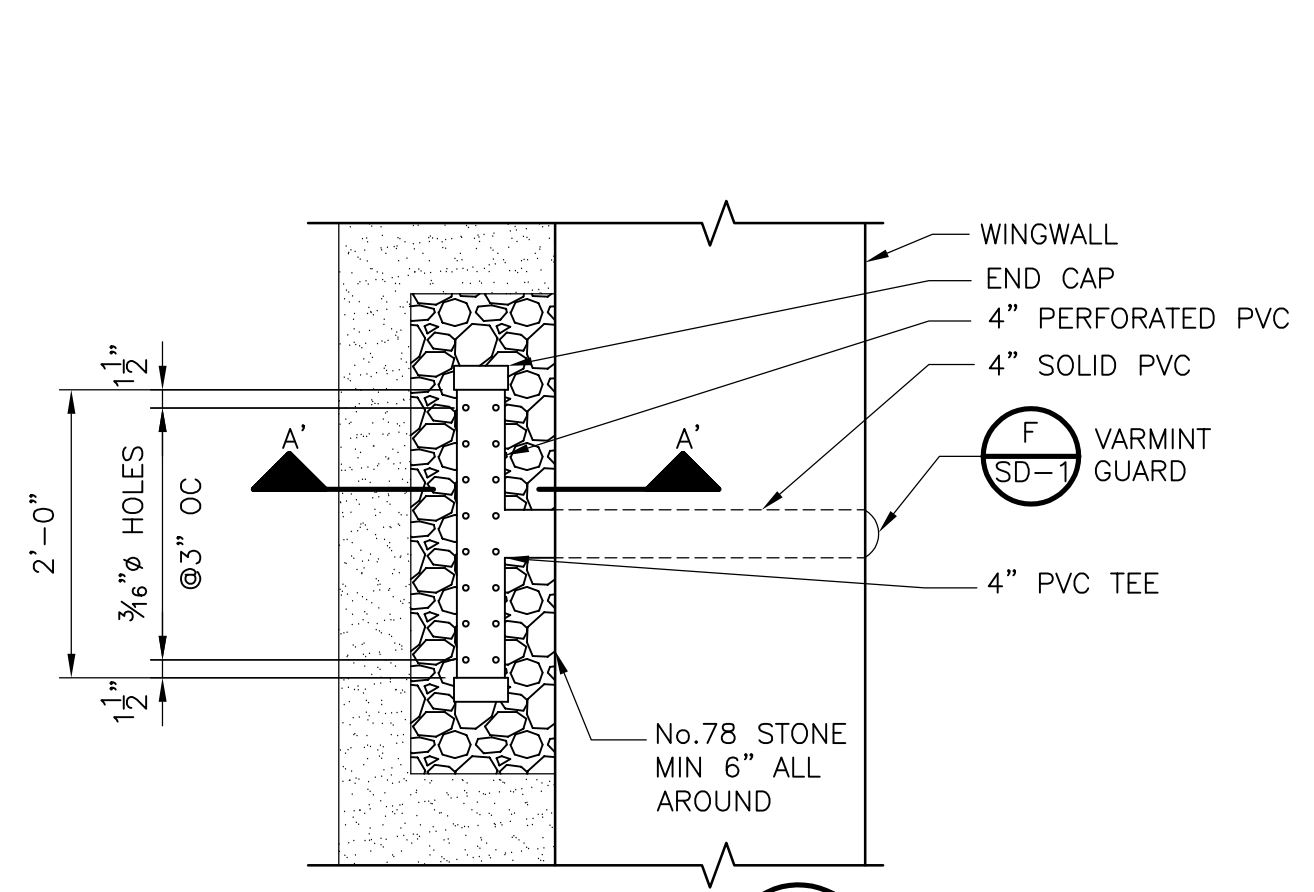
PIPE ENCASUREMENT NOTES:

1. ALL PIPE SHALL BE PRESSURE TESTED BEFORE CONCRETE PLACEMENT.
2. ALL BELOW GRADE PIPES SHALL BE SUPPORTED ON CONCRETE BLOCKS PRIOR TO CASTING OF CONCRETE BEDDING. SIZE AND SPACING OF CONCRETE BLOCK SUPPORTS SHALL BE PER PIPE MANUFACTURER.
3. FOR ALL PIPES 12-INCH DIAMETER AND LARGER, ENCASEMENT SHALL BE CAST IN TWO POURS. INITIAL CAST SHALL BE CURED FOR 12 HOURS BEFORE CASTING THE SECOND POUR.



MAXIMUM SPAN	DEPTH	BEARING BAR	
		THICKNESS	SPACING
3'-0"	1 1/4"	3/16"	1 3/16"
4'-0"	1 1/2"	3/16"	1 3/16"
5'-0"	2"	3/16"	1 3/16"
6'-0"	2 1/4"	3/16"	1 3/16"

GRATING AND GRATING SUPPORT  
DETAIL B  
NTS



DETAIL D  
3/4" = 1'-0"

NOTE:  
1. INSTALL 4"Ø WEEPHOLES ON 6'-0" CENTERS BEDDED IN DRAINAGE STONE AS SHOWN. SAND IS CONTINUOUS BEHIND ENTIRE WINGWALL.

CLASS B TENSION LAP SPLICE LENGTHS IN WALLS AND SLABS (INCHES)

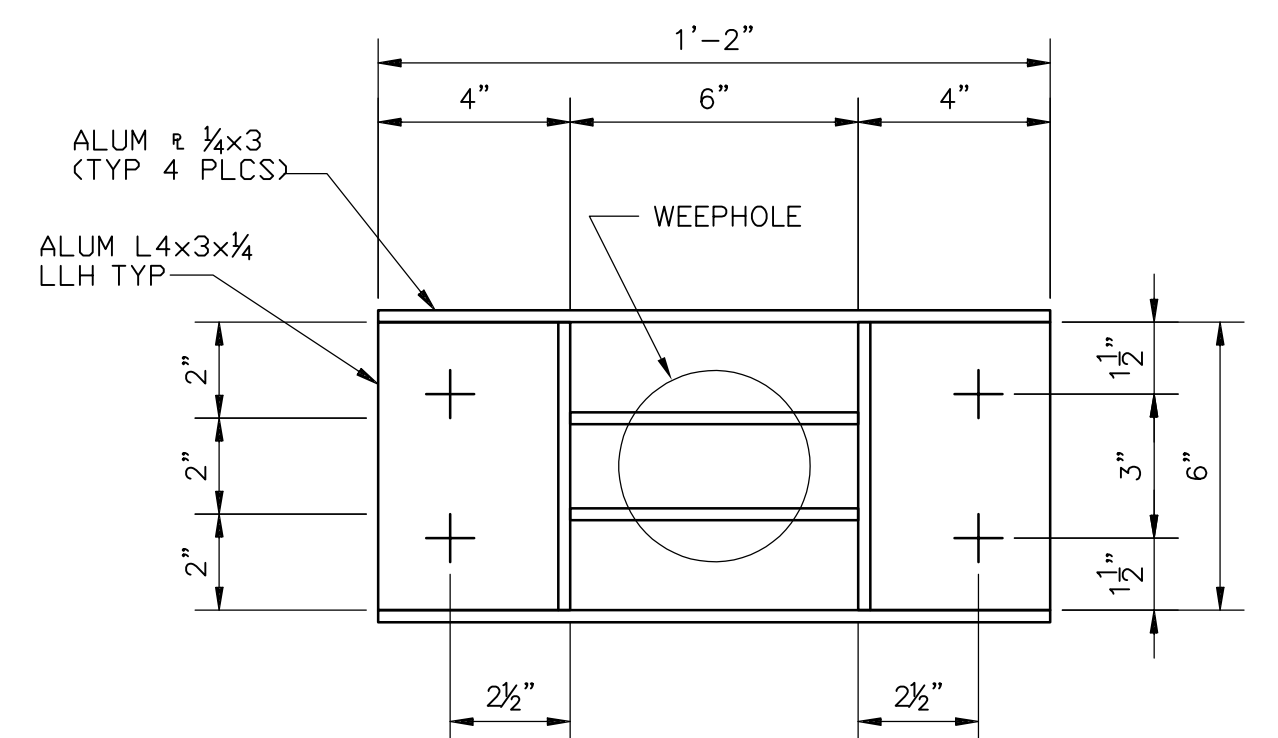
BAR SIZE	BLACK STEEL f <sub>c</sub> =4000 psi	
	TOP BARS	OTHER BARS
3	15	12
4	20	15
5	29	23
6	40	31
7	65	50
8	81	62
8*	49	37
9*	60	46
10*	74	57

TENSION DEVELOPMENT LENGTHS IN WALLS AND SLABS (INCHES)

BAR SIZE	BLACK STEEL f <sub>c</sub> =4000 psi	
	TOP BARS	OTHER BARS
3	12	12
4	15	12
5	22	17
6	31	24
7	50	38
8	62	48
8*	37	29
9*	46	36
10*	57	44

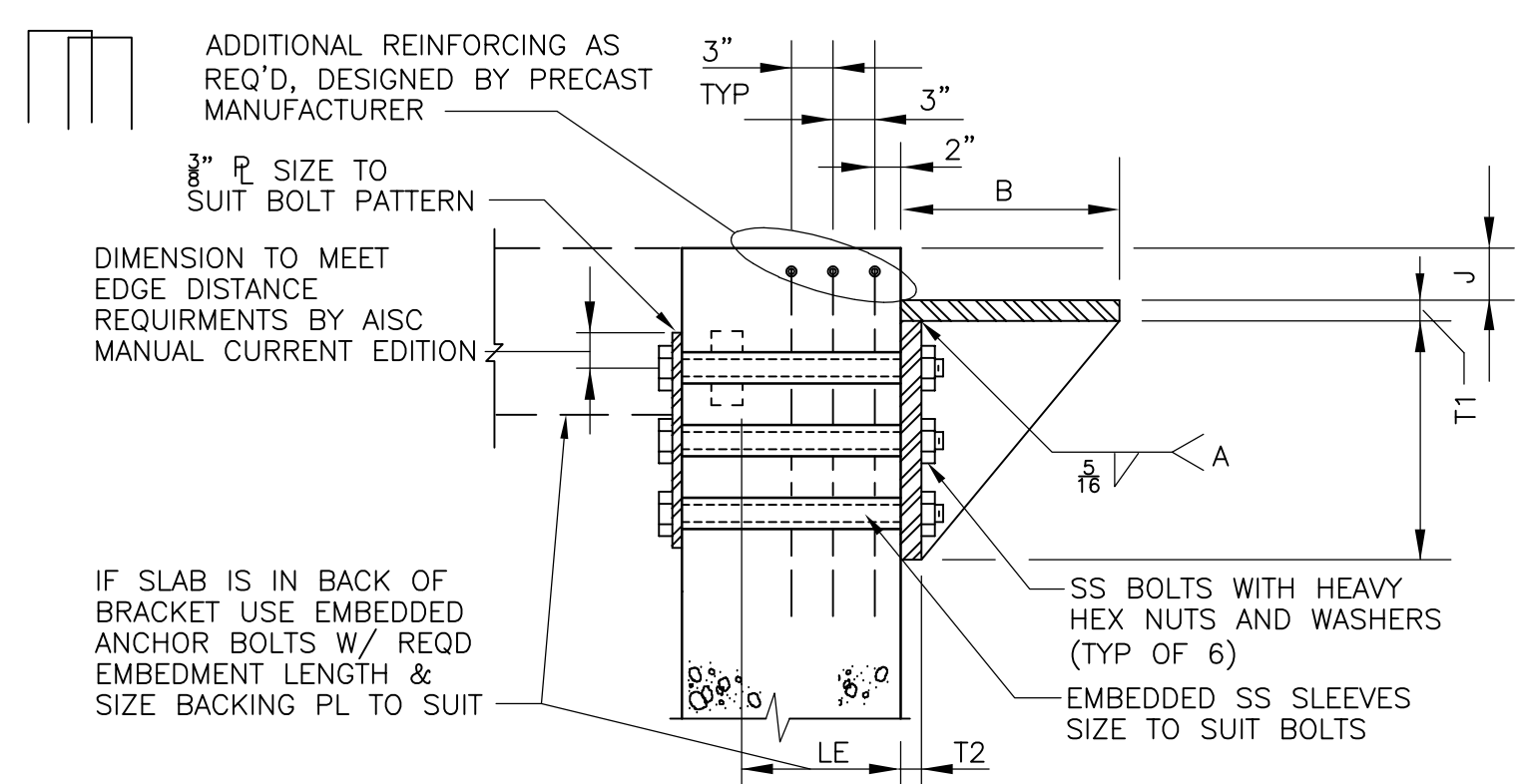
- NOTES:
1. MINIMUM BAR SPACING = 6" INCHES ON CENTER.
  2. MINIMUM CONCRETE COVER = 1", EXCEPT AS NOTED BY \*.  
\* INDICATES MINIMUM CONCRETE COVER= 2".
  3. A TOP BAR IS A HORIZONTAL BAR WHERE MORE THAN 12" OF FRESH CONCRETE IS CAST DIRECTLY BELOW THE BAR. WHERE HORIZONTAL WALL REINFORCEMENT IS UNIFORMLY SPACED IN A VERTICAL PLANE AT 12" MAXIMUM SPACING, LENGTHS MAY BE AS FOR "OTHER BARS".
  4. LENGTHS FOR BEAMS AND COLUMNS SHALL BE AS SHOWN ON THE DRAWINGS.

LAP SPLICE AND DEVELOPMENT LENGTHS BLACK REINFORCING STEEL

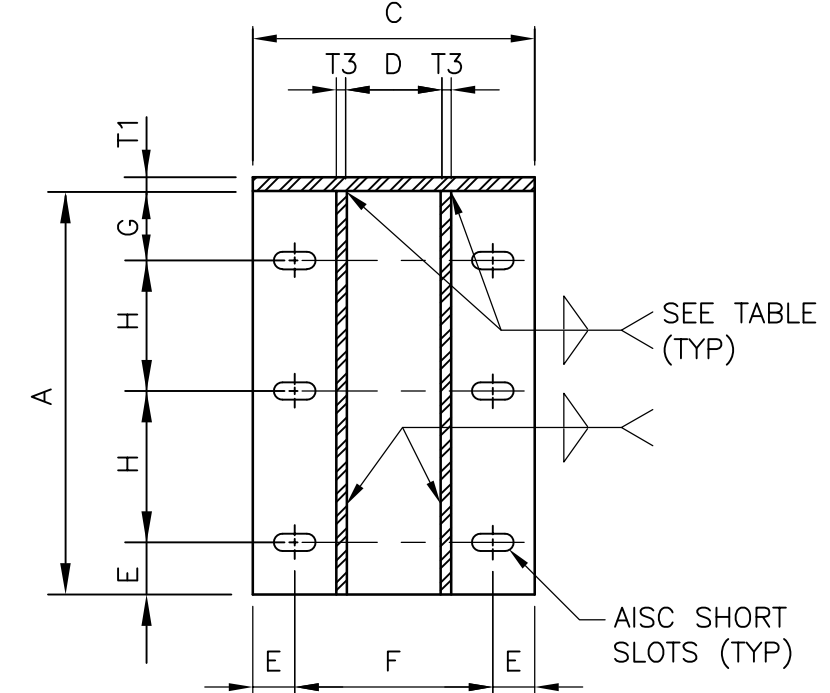


- NOTES:
1. ATTACH GUARD TO STRUCTURE WITH (4)-1/2"Ø SS HILTI HY-150 ADHESIVE ANCHORS OR EQUAL (MIN EMBED 4 1/2")

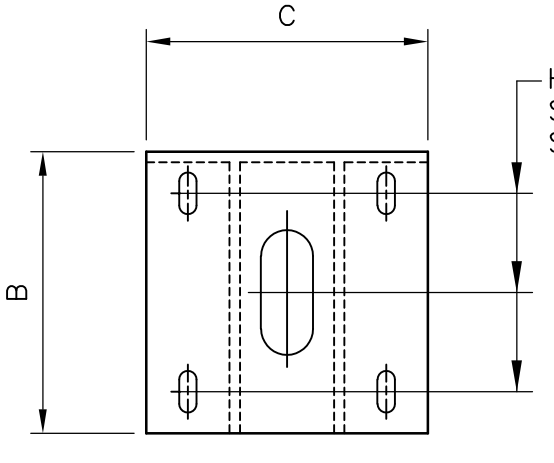
VARMINT GUARD  
DETAIL F  
NTS



SECTION



ELEVATION



PLAN

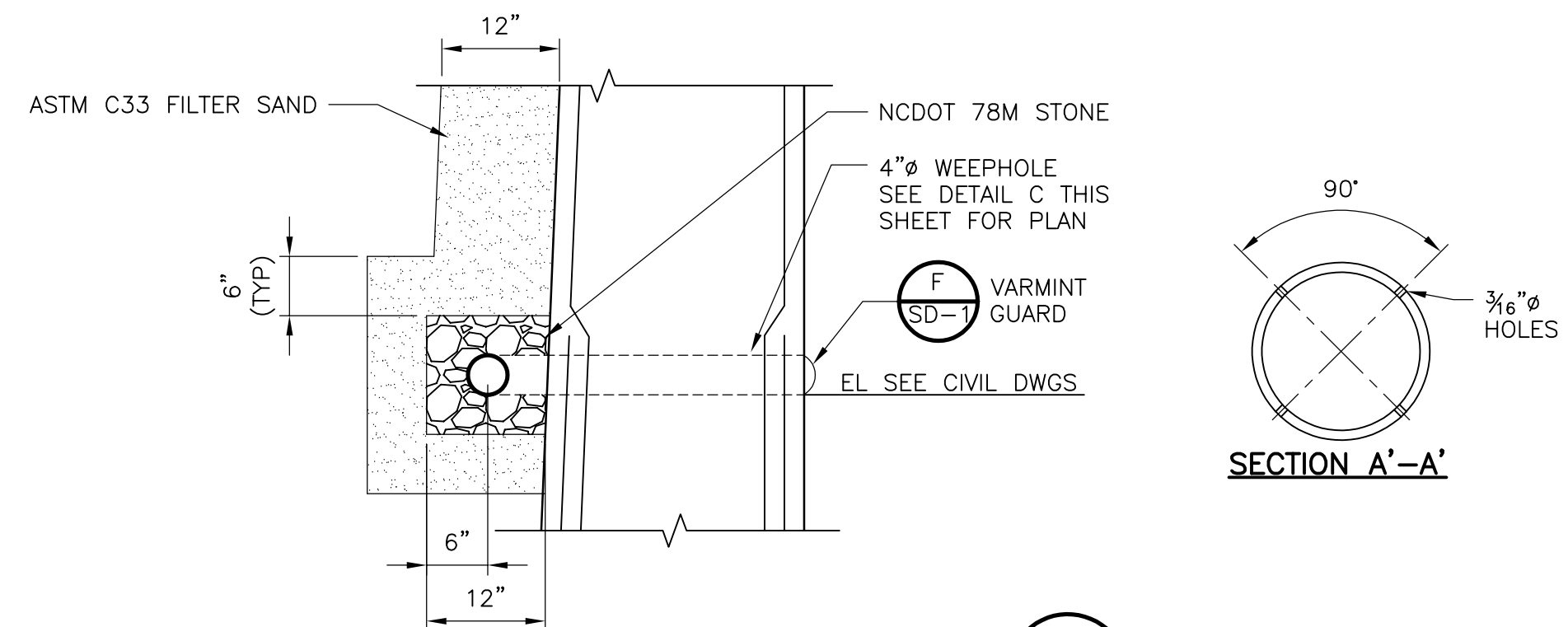
SLUICE GATE STEM DIA	BOLT DIA	DIMENSIONS IN INCHES													WELD SIZE
		A	B	C	D	E	F	G	H	J	LE	T1	T2	T3	
1	3/4	16	16	15	2 1/4	2 1/8	9 3/8	3 3/8	5	0	6	1/2	1 1/8	3/4	5/8
1 1/2	1 1/8	17	16	16	2 3/4	2 7/8	10 1/4	3 3/8	5 1/4	1	8	3/8	1 3/8	7/8	5/8
2	1 1/2	18	16	17	3 1/2	2 7/8	11 1/4	4 1/8	5 1/2	2	10	7/8	1 1/2	1	3/4
2 1/2	1 3/4	21	18	18	4	2 9/16	12 1/8	4 3/8	6 1/4	3	12	1	1 1/2	1 1/8	3/4
3	2	25	18	19	4 3/4	2 5/8	13 1/8	5 1/8	8 1/2	4	14	1 1/8	1 1/2	1 1/4	1/2
3 1/2	2 1/4	29	18	20 1/2	5 1/4	3 1/8	14 1/4	5 3/8	10 1/4	5	16	1 1/4	1 1/2	1 3/8	1/2
4	2 1/2	33	18	22	5 3/4	3 1/8	15 3/8	5 1/2	12	6	18	1 1/2	1 1/2	1 1/2	1/2

SLIDE GATE OPERATOR SUPPORT BRACKET

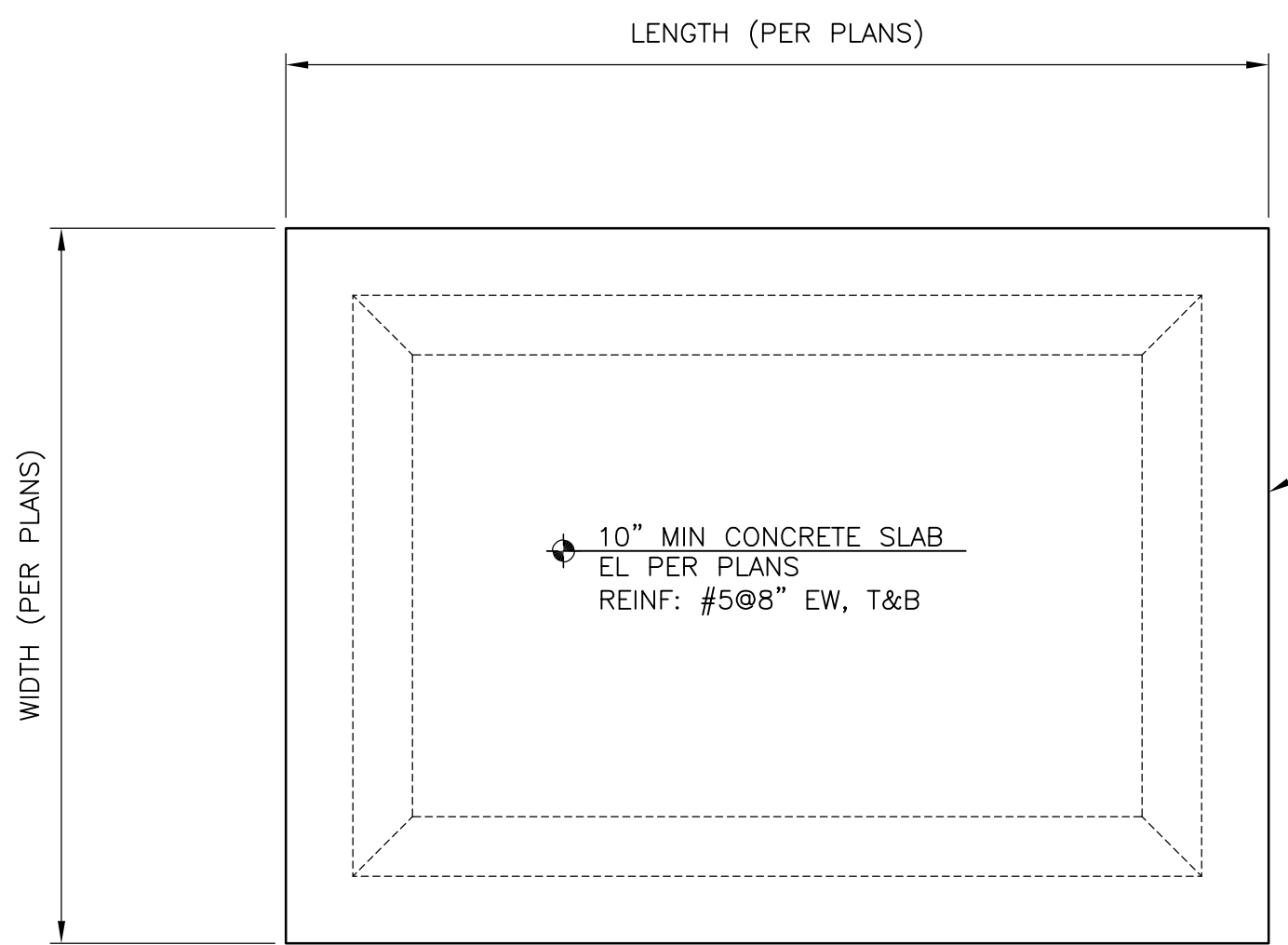
DETAIL C  
NTS

NOTES:

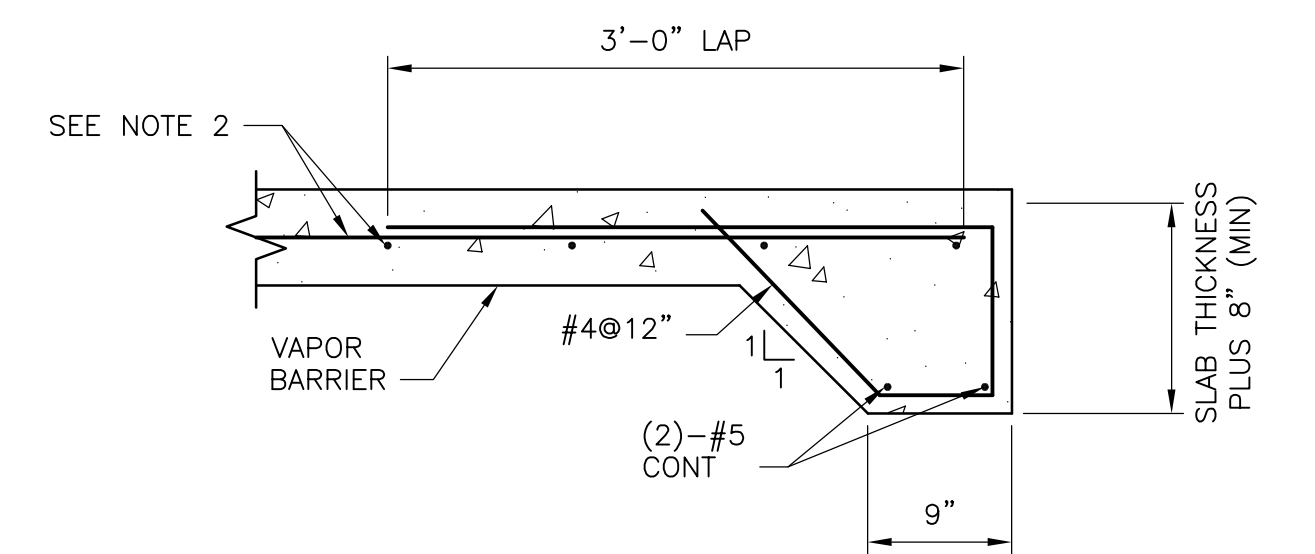
1. SPECIAL ADDITIONAL SHEAR FRICTION REINFORCEMENT, AS REQUIRED, SHOWN ON THIS DRAWING ONLY.
2. ALL PLATES SHALL BE STAINLESS STEEL.
3. PRECAST CONCRETE WALL SHALL BE DESIGNED FOR ALL OPENING AND CLOSING FORCES FOR THE GATE AND OPERATOR.



DETAIL E  
3/4" = 1'-0"



GENERIC SLAB PLAN  
DETAIL G  
NTS



THICKENED EDGE SLAB  
DETAIL H  
NTS

- NOTE:
1. THICKENED DEPTH SHALL EXTEND 18" MINIMUM BELOW GRADE
  2. SLAB REINFORCEMENT AS SHOWN ON DESIGN DRAWINGS.

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REV. NO.	DATE	DRWN	CHKD	REMARKS

DESIGNED BY: J. ROSENTHAL  
 DRAWN BY: P. SCHIAVO  
 SHEET CHK'D BY: J. BOGGS  
 CROSS CHK'D BY: D. NEAMTU  
 APPROVED BY: J. BOGGS  
 DATE: FEBRUARY 2022

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PUBLIC WORKS COMMISSION OF FAYETTEVILLE  
 DEMOLITION AND DECOMMISSIONING OF FORMER WTP  
 AT GLENVILLE LAKE DAM (CUMBE-038)  
 FAYETTEVILLE, NC

STANDARD DETAILS

SHEET NO.  
SD-1

PROJECT NO. 6384-231131  
 FILE NAME: SD01STD.DWG

**SEAL**  
 NORTH CAROLINA PROFESSIONAL ENGINEER  
 JUSTIN S. BOGGS



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ONE LINE OR CONTROL DIAGRAM	PLAN	DESCRIPTION
	CB	LOW VOLTAGE AIR OR MOLDED CASE CIRCUIT BREAKER, 3 POLE UNLESS OTHERWISE NOTED.
		NON-FUSIBLE DISCONNECT SWITCH, 600 VOLT, 3 POLE * AMPERE RATING NOTED IF OTHER THAN 30A (DIAGRAMMATICALLY SHOWN, CONTRACTOR SHALL FIELD LOCATE)
	F	FUSIBLE DISCONNECT SWITCH, 600 VOLT, 3 POLE * AMPERE RATING AND FUSE SIZE AS NOTED * AMPERE RATING NOTED IF OTHER THAN 30A FUSE RATING (DIAGRAMMATICALLY SHOWN, CONTRACTOR SHALL FIELD LOCATE)
	M 2	MANUAL MOTOR STARTER WITH THERMAL OVERLOAD HEATER, 1 POLE UNLESS OTHERWISE NOTED "P" INDICATES WITH PILOT LIGHT "2" INDICATES TWO POLE (DIAGRAMMATICALLY SHOWN, CONTRACTOR SHALL FIELD LOCATE)
	T	TRANSFORMER, RATINGS AND CONNECTIONS AS NOTED. UNLESS OTHERWISE NOTED ON THE SINGLE LINE DIAGRAMS, ALL DRY TYPE TRANSFORMERS SERVICING ADMINISTRATIVE AND LABORATORY SPACES SHALL HAVE A K FACTOR OF 4. ISOLATION TRANSFORMERS SHALL HAVE A K=20 RATING
		CURRENT TRANSFORMER * QUANTITY A = PRIMARY AMPERES
		POTENTIAL TRANSFORMER * QUANTITY V = PRIMARY VOLTAGE
	E	UNIT HEATER - ELECTRIC HEATING COIL AND FAN # - RATING
	U	UNIT HEATER - GAS FIRED, STEAM OR WATER HEATING COIL AND FAN
	M	MOTOR, NUMERAL INDICATES HORSEPOWER
		UTILIZED IN CONJUNCTION WITH OTHER CONTROL SCHEMATIC SYMBOLS TO DEPICT THE PHYSICAL LOCATION OF THE DEVICE # REPRESENTS LOCATION SEE LOCATION LEGEND ON DRAWING
		CONDUCTORS OR CONDUITS CROSSING PATHS BUT NOT CONNECTED
		CONDUCTORS ELECTRICALLY CONNECTED
		FIELD INSTRUMENT, TAG NO. AS INDICATED * INDICATES INSTRUMENT TYPE DEFINED ON LOOP SHEETS OR P & ID ## INDICATES LOOP NO.
		LIGHTNING ARRESTER
		GROUND OR GROUND ROD
		FUSE, AMPERE RATING AS NOTED
	HTR	STRIP HEATER OR HEATING ELEMENT
	DM	DAMPER MOTOR
		CONTACT, NORMALLY OPEN (NO)
		CONTACT, NORMALLY CLOSED (NC)
		OVERLOAD RELAY HEATER
	J	JUNCTION BOX
	P	PULL BOX
	TC	TERMINAL CABINET
		INDICATES LIMITS OF ELECTRICAL EQUIPMENT OR WIRING ENCLOSURE

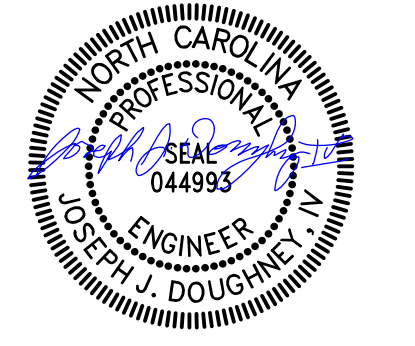
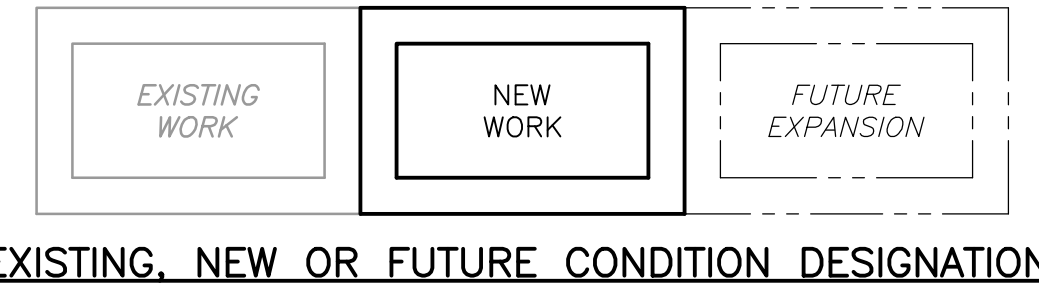
SYMBOL	DESCRIPTION
	INCANDESCENT, COMPACT FLUORESCENT OR H.I.D. TYPE LIGHTING FIXTURE "A" - FIXTURE TYPE (SEE LIGHTING FIXTURE SCHEDULE) "b" - CONTROLLED BY SWITCH "b" "3" - CIRCUIT NUMBER
	FLUORESCENT TYPE LIGHTING FIXTURE, NOTATIONS SAME AS ABOVE
	WALL MOUNTED INCANDESCENT, COMPACT FLUORESCENT OR H.I.D. TYPE LIGHTING FIXTURE, NOTATIONS SAME AS ABOVE
	CROSS HATCH INDICATES LIGHTING FIXTURE THAT IS UNSWITCHED AND SHALL REMAIN ON AT ALL TIMES. NOTATIONS SAME AS ABOVE.
	SHADED AREA INDICATES LIGHTING FIXTURE THAT IS EQUIPPED WITH EMERGENCY BACKUP POWER SOURCE. NOTATIONS SAME AS ABOVE.
	POLE MOUNTED AREA H.I.D. TYPE LIGHTING FIXTURE, NOTATIONS SAME AS ABOVE
	POLE MOUNTED ROADWAY H.I.D. TYPE LIGHTING FIXTURE, NOTATIONS SAME AS ABOVE
	EMERGENCY LIGHTING BATTERY UNIT WITH TWO LAMP HEADS "EM" - FIXTURE TYPE (SEE LIGHTING FIXTURE SCHEDULE) "3" - SUPERVISORY CIRCUIT * - FIXTURE TAG #
	COMBINATION BATTERY UNIT AND EXIT SIGN. FILLED QUADRANT REPRESENTS FACE SIDE OF SIGN.
	Ceiling mounted exit sign, NOTATIONS SAME AS ABOVE. WHEN USED, ARROW INDICATES DIRECTION OF EGRESS. FILLED QUADRANT REPRESENTS FACE SIDE OF SIGN. (DOUBLE FACE DOUBLE CHEVRONS SHOWN)
	WALL MOUNTED EXIT SIGN, NOTATIONS SAME AS ABOVE. WHEN USED, ARROW INDICATES DIRECTION OF EGRESS. FILLED QUADRANT REPRESENTS FACE SIDE OF SIGN.
	GROUND SYSTEM GRID OR LOOP, 36" BELOW FINISHED GRADE UNLESS OTHERWISE NOTED.
	EXOTHERMIC WELD CONNECTION
	3/4" x 10'-0" GROUND ROD. UNLESS SPECIFIED OTHERWISE.
	GROUND ROD TEST WELL STATION (SEE DETAIL SHEET FOR REQUIREMENTS)
	INDICATED EQUIPMENT AND MATERIALS TO BE DEMOLISHED
	HOME RUN TO DESIGNATED EQUIPMENT. BRANCH CIRCUIT CONDUIT WITH 2 NO. 12 AWG BRANCH CIRCUIT CONDUCTORS AND 1 NO. 12 AWG GROUND CONDUCTOR UNLESS OTHERWISE NOTED. NUMBER OF ARROWS INDICATE NUMBER OF CIRCUITS. FOR MINIMUM SIZE CONDUIT PERMITTED REFER TO THE SPECIFICATIONS.
	CONDUIT CONCEALED IN WALL, IN SLAB ABOVE, OR ABOVE CEILING.
	CONDUIT CONCEALED IN OR BELOW FLOOR OR UNDERGROUND.
	CONDUIT RUN EXPOSED. RUN PARALLEL OR PERPENDICULAR TO STRUCTURE OR WALL.
	"X" INDICATES SPLICE AS APPROVED BY ENGINEER
	CONCRETE ENCASED DUCTBANK. WIDTH VARIES, SEE DUCTBANK SECTION/DETAILS FOR REQUIREMENTS AND WIDTH
	CONDUIT STUBBED OUT AND CAPPED
	DENOTES A QUANTITY OF TWO (2) 3-INCH CONDUITS EACH CONTAINING THREE NO. 3/0 AWG CONDUCTORS AND 1 NO. 2 AWG GROUND CONDUCTOR.
	DENOTES A QUANTITY OF TWO INSTRUMENT CABLES. EACH CABLE TO CONSIST OF TWO NO. 16 AWG CONDUCTORS TWISTED TOGETHER AND COVERED WITH A METALLIC SHIELD AND AN OVERALL PROTECTIVE JACKET. REFER TO THE SPECIFICATIONS FOR THE EXACT CABLE TO BE PROVIDED.
	SAME AS ABOVE EXCEPT CABLE TO CONSIST OF THREE NO. 16 AWG CONDUCTORS TWISTED, SHIELDED AND COVERED WITH AN OVERALL PROTECTIVE JACKET. REFER TO THE SPECIFICATIONS FOR THE EXACT CABLE TO BE PROVIDED.
	THREE 4-INCH CONDUITS
	FLEXIBLE METAL CONDUIT "WHIP" (3/4"C., 2#12, 1#12G UNLESS OTHERWISE NOTED) FOR LIQUID TIGHT MOTOR CONNECTIONS
	"X" INDICATES CONDUIT SEAL FITTING IN OTHER THAN CODE REQUIRED LOCATIONS.
	INDICATES MOTOR STARTER AND/OR MOTOR CONTROL EQUIPMENT WITHIN THE ENCLOSURE.

SYMBOL	DESCRIPTION
	SINGLE POLE SWITCH "a" INDICATES FIXTURES CONTROLLED.
	DOUBLE POLE SWITCH "a" INDICATES FIXTURES CONTROLLED.
	THREE WAY SWITCH "c" INDICATES FIXTURES CONTROLLED.
	FOUR WAY SWITCH "a" INDICATES FIXTURES CONTROLLED.
	DIMMER SWITCH "a" INDICATES FIXTURES CONTROLLED
	LIGHTING CONTACTOR WITH NUMBER OF POLES AS INDICATED
	TIME SWITCH
	PUSH BUTTON STATION
	INDICATES ALL LIGHTING FIXTURES WITHIN THE ROOM OR AREA IN WHICH THIS NOTATION APPEARS SHALL BE TYPE "A" UNLESS OTHERWISE NOTED. SEE LIGHTING FIXTURE SCHEDULE FOR TYPES
	LIGHTING PANELBOARD (LP-#) SHOWN ON PLAN PER ACTUAL PANEL DIMENSIONS
	POWER PANELBOARD (PP-#) OR DISTRIBUTION PANELBOARD (DP-#) SHOWN ON PLAN PER ACTUAL PANEL DIMENSIONS
	LIGHTING CONTACTOR PANELBOARD (LCP-#) SHOWN ON PLAN PER ACTUAL PANEL DIMENSIONS
	DUPLEX RECEPTACLE, 20A, 120V, 2P, 3W * GFCI - GROUND FAULT CIRCUIT INTERRUPTER TYPE * WP - WEATHERPROOF * T - TRANSIENT VOLTAGE SURGE SUPPRESSOR * IC - ISOLATED GROUND * 4 - CIRCUIT NUMBER
	DUPLEX RECEPTACLE, 20A, 120V, 2P, 3W MOUNTED ABOVE COUNTER-TOP OR 42" AFF * NOTATIONS SAME AS ABOVE
	MULTI-OUTLET ASSEMBLY, SYMBOL DENOTES RECEPTACLE TYPE
	"C" - DATA INPUT/OUTPUT CABLE OUTLET "P" - PROCESS COMPUTER SYSTEM (CAT6 RJ-45 JACK)
	TEMPERATURE SWITCH OR THERMOSTAT

ABBREVIATIONS	
A	AMPS
AC	ALTERNATING CURRENT
AFF	ABOVE FINISHED FLOOR
AFG	ABOVE FINISHED GRADE
AL	ALUMINUM
AIC	AMPERE INTERRUPTING CAPACITY
AMP	AMPERE
ATS	AUTOMATIC TRANSFER SWITCH
AUTO	AUTOMATIC
AUX	AUXILIARY
AWG	AMERICAN WIRE GAUGE
BKR	BREAKER
BLDG	BUILDING
C	CONDUIT
CB	CIRCUIT BREAKER
CGD	COMBUSTIBLE GAS DETECTOR
CKT	CIRCUIT
CLB	CURRENT LIMITING BREAKER
CLF	CURRENT LIMITING FUSE
CP	CONTROL PANEL
CPT	CONTROL POWER TRANSFORMER
CR	CONTROL RELAY
CS	CONTROL SWITCH/CONTROL STATION
CT	CURRENT TRANSFORMER
CU	COPPER
CWS	CONDUIT WALL SEAL
DC	DIRECT CURRENT
DIA	DIAMETER
DMU	DIGITAL METERING UNIT
DN	DOWN
EC	EMPTY CONDUIT
ELEC	ELECTRICAL

ABBREVIATIONS (CONTINUED)	
ELEV	ELEVATION
EM	EMERGENCY
ENCL	ENCLOSURE OR ENCLOSED
EQUIP	EQUIPMENT
EWC	ELECTRIC WATER COOLER
EW	ELECTRIC WATER HEATER
EX	EXISTING
FO	FIBER OPTIC
FU	FUSE
GCB	GENERATOR CIRCUIT BREAKER
GCP	GENERATOR CONTROL PANEL
GEN	GENERATOR
G, GND	GROUND
GFI	GROUND FAULT INTERRUPTER
GRS	GALVANIZED RIGID STEEL
HACR	HEATING & AIR CONDITIONING RATED
HH	HANDHOLE
HT	HEIGHT
HID	HIGH INTENSITY DISCHARGE
HP	HORSEPOWER
HZ	HERTZ
ID	IDENTIFICATION
INSTR	INSTRUMENT
K	KILO (PREFIX)
kcmil	1000 CIRCULAR MILS
KVA	KILOVOLT AMPERES
KW	KILOWATTS
LA	LIGHTING ARRESTER
LTG	LIGHTING
LP	LIGHTING PANEL
LV	LOW VOLTAGE
MAX	MAXIMUM
MCB	MAIN CIRCUIT BREAKER
MCC	MOTOR CONTROL CENTER
MCP	MOTOR CIRCUIT PROTECTOR
MDP	MAIN DISTRIBUTION PANEL
MFR	MANUFACTURER
MH	MANHOLE
MIN	MINIMUM
MLO	MAIN LUGS ONLY
MS	MOISTURE SWITCH
MTD	MOUNTED
MTS	MANUAL TRANSFER SWITCH
N	NEUTRAL
NC	NORMALLY CLOSED
NO	NORMALLY OPEN OR NUMBER
NTS	NOT TO SCALE
OH	OVERHEAD
OL	OVERLOAD
PB	PULL BOX
PCP	PUMP CONTROL PANEL
PH	PHASE
PMH	POWER MANHOLE
PNL	PANEL OR PANELBOARD
PR	PAIR
PRI	PRIMARY
PT	POTENTIAL TRANSFORMER
PVC	POLYVINYL CHLORIDE
RECP	RECEPTACLE
REQD	REQUIRED
QTY	QUANTITY
SA	SURGE ARRESTER
SEC	SECONDS OR SECONDARY
SH	SHIELDED OR SPACE HEATER
SHH	SIGNAL HANDHOLE
SPD	SURGE PROTECTIVE DEVICE
SS	STAINLESS STEEL
SV	SOLENOID VALVE
SW	SWITCH
SWBD	SWITCHBOARD
SWGR	SWITCHGEAR
TC	TIME TO CLOSE OR TRAY CABLE
TEL	TELEPHONE
TO	TIME TO OPEN
TS	TWISTED SHIELDED OR THERMAL SWITCH
TYP	TYPICAL
UG	UNDERGROUND
UPS	UNINTERRUPTIBLE POWER SUPPLY
V	VOLTS
VA	VOLT AMPS
VFD	VARIABLE FREQUENCY DRIVE
W	WATTS, WIDTH, WITH, WIRE
WP	WEATHERPROOF WHILE IN USE
XFMR	TRANSFORMER

**GENERAL NOTE**  
THIS IS A STANDARD LEGEND. SOME SYMBOLS MAY NOT APPEAR ON THE DRAWINGS.



REV. NO.	DATE	DRWN	CHKD	REMARKS

DESIGNED BY: T. ROSCHEN  
 DRAWN BY: T. ROSCHEN  
 SHEET CHK'D BY: J. DOUGHNEY  
 CROSS CHK'D BY: D. NEAMTU  
 APPROVED BY: J. DOUGHNEY  
 DATE: FEBRUARY 2022



PUBLIC WORKS COMMISSION OF FAYETTEVILLE  
 DEMOLITION AND DECOMMISSIONING OF FORMER WTP  
 AT GLENVILLE LAKE DAM (CUMBE-038)  
 FAYETTEVILLE, NC

**ELECTRICAL LEGEND**

PROJECT NO. 6384-231131  
 FILE NAME: E001NFLG.DWG  
 SHEET NO. E-1



**SCOPE OF WORK:**

- PROJECT PROVIDES ELECTRICAL EQUIPMENT RELOCATION AT THE GLENVILLE WATER TREATMENT PLANT AS SHOWN ON THE DRAWINGS AND INCLUDED IN THE SPECIFICATIONS.

**GENERAL NOTES:**

- ELECTRICAL DRAWINGS ARE INTENDED TO SHOW THE GENERAL LAYOUT OF WORK TO BE INSTALLED UNDER THIS CONTRACT WITHOUT ATTEMPTING TO SHOW ALL DETAILS. FURNISH LABOR, MATERIALS, EQUIPMENT AND INCIDENTALS REQUIRED FOR A COMPLETE AND OPERATIONAL ELECTRICAL SYSTEM AS SHOWN ON THE CONTRACT DOCUMENTS.
- COORDINATE WORK WITH OTHER TRADES AND THE OWNER.
- MAINTAIN EXISTING PROCESS OPERATIONS. POWER INTERRUPTIONS TO ELECTRICAL EQUIPMENT SHALL BE AT OWNER'S CONVENIENCE WITH 72 HOURS MINIMUM NOTICE. EACH INTERRUPTION SHALL HAVE PRIOR WRITTEN APPROVAL.
- FIELD VERIFY EXISTING UNDERGROUND ELECTRICAL CONDUIT, CONCRETE DUCT BANKS, MANHOLES, PULL BOXES, ETC. AND MECHANICAL PIPING. CONTRACTOR SHALL INCLUDE IN BID COSTS ASSOCIATED WITH RELOCATION OR REMOVAL OF UNDERGROUND EQUIPMENT AS REQUIRED BY THIS CONTRACT. USE DUE CARE IN CONGESTED AREAS TO AVOID DAMAGE TO EXISTING UNDERGROUND UTILITIES.
- CONTRACTOR'S WORK SHALL INCLUDE COMPLETE TESTING OF EQUIPMENT AND WIRING INCLUDING MAKING MINOR CORRECTIONS, CHANGES, OR ADJUSTMENTS NECESSARY FOR THE PROPER FUNCTIONING OF THE SYSTEM AND EQUIPMENT. WORKMANSHIP SHALL BE OF THE HIGHEST QUALITY; SUBSTANDARD WORK WILL BE REJECTED.
- DO NOT SCALE ELECTRICAL DRAWINGS. REFER TO MECHANICAL, STRUCTURAL DRAWINGS, AND APPROVED MANUFACTURER'S SHOP DRAWINGS FOR EXACT LOCATION OF EQUIPMENT. EXCEPT WHERE DIMENSIONS ARE SHOWN, LOCATIONS OF EQUIPMENT, FIXTURES, OUTLETS, AND SIMILAR DEVICES ARE APPROXIMATE.
- WORK SHALL COMPLY WITH NEC AND LOCAL CODES.
- DO NOT SPLICE CONDUCTORS EXCEPT AS NOTED.
- POWER AND CONTROL CONDUITS SHALL HAVE AN EQUIPMENT GROUNDING CONDUCTOR WIRE SIZED PER TABLE 250.122 OF THE NEC (UON).
- COORDINATE SEQUENCE OF CONSTRUCTION WITH CIVIL, MECHANICAL, AND STRUCTURAL DISCIPLINES. PROVIDE TEMPORARY POWER AND CONTROL CIRCUITS AS REQUIRED TO MAINTAIN FACILITY OPERATION. VERIFY EXISTING UTILITIES IN AREA OF CONSTRUCTION. REFER TO CIVIL DRAWINGS FOR ADDITIONAL UNDERGROUND INFORMATION.
- REPAIR, IN ACCORDANCE WITH SPECIFICATIONS, SIDEWALKS, WALLS, ROADWAYS, ETC. DISTURBED BY CONSTRUCTION ACTIVITIES WHETHER OR NOT SHOWN FOR REPAIR/REPAVING ON CIVIL DRAWINGS.
- CONCEAL CONDUITS TO GREATEST EXTENT PRACTICABLE. CONDUITS RUN AT EXISTING STRUCTURES SHALL BE RUN EXPOSED.
- WHERE LOCAL DISCONNECTS AND CONTROL PANELS ARE SHOWN ON PLAN VIEWS, LOCATIONS ARE APPROXIMATE. ADJUST LOCATION AS REQUIRED TO COMPLY WITH NEC ARTICLE 110 FOR WORKING CLEARANCES.
- DO NOT INSTALL MAJOR CONDUIT RUNS THROUGH AREAS DESIGNATED FOR FUTURE STRUCTURES.
- DO NOT SUPPORT CONDUITS FROM HANDRAILS OR GUARDRAILS.
- RUN CONDUITS IN A MANNER THAT DOES NOT CREATE A TRIP HAZARD AND DOES NOT IMPEDE WALKWAYS/PATHS. WHERE THIS IS NOT POSSIBLE, NOTIFY ENGINEER AND PROVIDE ANTI-TRIP COVER OVER CONDUITS IF APPROVED.
- SEE ADDITIONAL NOTES ON ELECTRICAL LEGEND SHEET.
- SIZE ALL JUNCTION BOXES AND PULLBOXES AS REQUIRED PER NEC.

**SUBMITTALS:**

- SUBMIT SHOP DRAWINGS FOR EQUIPMENT, MATERIALS AND OTHER ITEMS FURNISHED UNDER DIVISION 26.
- SUBMIT OPERATION AND MAINTENANCE MANUALS FOR EQUIPMENT FURNISHED UNDER DIVISION 26.
- SUBMIT STARTUP/COMMISSIONING PLANS FOR EQUIPMENT FURNISHED UNDER DIVISION 26.
- SUBMIT TESTING AND SERVICE REPORTS FOR EQUIPMENT AND MATERIALS FURNISHED UNDER DIVISION 26.
- SUBMIT TRAINING PLANS FOR EQUIPMENT FURNISHED UNDER DIVISION 26.
- SUBMIT RECORD DOCUMENTATION TO ACCURATELY SHOW COMPLETED INSTALLATION. INCLUDE MODIFICATIONS TO CONTRACT DOCUMENTS (ONE LINE POWER DIAGRAMS, EQUIPMENT ELEVATIONS, PANEL SCHEDULES, ELEMENTARY CONTROL DIAGRAMS, RISER DIAGRAMS, PLANS, CONDUIT AND DUCTBANK ROUTING, ETC) ALONG WITH ADDITIONAL DRAWINGS OR SKETCHES CREATED TO CONVEY COMPLETED INSTALLATION.

**INTERPRETATION OF CONTRACT DOCUMENTS:**

- IF DURING PERFORMANCE OF WORK, THERE IS A CONFLICT, ERROR, OR DISCREPANCY BETWEEN OR AMONG CONTRACT DOCUMENTS AND LAWS AND REGULATIONS, PROVIDE THE HIGHER PERFORMANCE STANDARD UNLESS OTHERWISE DIRECTED BY ENGINEER.
- PRIORITY OF DOCUMENTS: FIGURED DIMENSIONS GOVERN OVER SCALED DIMENSIONS, DETAILED DRAWINGS GOVERN OVER GENERAL DRAWINGS, LARGER SCALE DRAWINGS TAKE PRECEDENCE OVER SMALLER SCALE DRAWINGS, CHANGE ORDER DRAWINGS SUPERCEDE ORIGINAL CONTRACT DRAWINGS, AND CONTRACT DRAWINGS GOVERN SHOP DRAWINGS.
- IN GENERAL, DRAWINGS DO NOT SHOW CONDUIT ROUTING. PLAN AND ROUTE CONDUITS IN COMPLIANCE WITH SPECIFICATIONS AND DRAWING DETAILS. COORDINATE INSTALLATION WITH OTHER TRADES AND ACTUAL SUPPLIED EQUIPMENT.
- DUCTBANK ROUTING SHOWN ON ELECTRICAL SITE PLANS IS DIAGRAMMATIC IN NATURE AND MAY NOT INCLUDE INTERFERENCES THAT MAY BE PRESENT.
- SEE ADDITIONAL NOTES ON ELECTRICAL LEGEND I SHEET.

**ENCLOSURE TYPES:**

PROVIDE THE FOLLOWING NEMA TYPE ELECTRICAL ENCLOSURES, UNLESS OTHERWISE NOTED:

- NEMA 1 IN DRY, NON-PROCESS INDOOR LOCATIONS.
- NEMA 12 IN "DUST" LOCATIONS SHOWN ON THE DRAWINGS.
- NEMA 4X IN OUTDOOR LOCATIONS, PROCESS AREAS, ROOMS BELOW GRADE INCLUDING BASEMENTS AND BURIED VAULTS AND "DAMP" OR "WET" LOCATIONS SHOWN ON THE DRAWINGS.
- NEMA 4X IN "CORROSIVE" LOCATIONS SHOWN ON THE DRAWINGS.
- NEMA 7 AND LISTED FOR THE SPECIFIC NEC HAZARDOUS AREA CLASSIFICATION AS SHOWN ON THE DRAWINGS.

**MATERIALS AND EQUIPMENT:**

- PROVIDE NEW MATERIALS AND EQUIPMENT UNLESS SPECIFICALLY NOTED OTHERWISE.
- ELECTRICAL EQUIPMENT AND MATERIALS SHALL BE LISTED BY UNDERWRITER'S LABORATORIES, INC., AND SHALL BEAR APPROPRIATE UL LISTING MARK OR CLASSIFICATION MARKING. EQUIPMENT, MATERIALS, ETC. UTILIZED NOT BEARING A UL CERTIFICATION SHALL BE FIELD OR FACTORY UL CERTIFIED PRIOR TO EQUIPMENT ACCEPTANCE AND USE.
- PROVIDE MAJOR ELECTRICAL EQUIPMENT BY A SINGLE MANUFACTURER: I.E. UNIT SUBSTATIONS, SWITCHGEAR, MOTOR CONTROL CENTERS, DISCONNECT SWITCHES, TRANSFORMERS, PANELBOARDS, ETC.

**EQUIPMENT SIZE, HANDLING AND STORAGE:**

- COORDINATE WITH EQUIPMENT MANUFACTURER SHIPPING SPLITS TO PERMIT SAFE HANDLING AND PASSAGE OF EQUIPMENT TO FINAL INSTALLATION LOCATION.
- COMPLY WITH MANUFACTURER'S INSTRUCTIONS FOR UPRIGHT EQUIPMENT ORIENTATION DURING TRANSPORTATION.
- PROTECT EQUIPMENT FROM MECHANICAL INJURY, OR EXPOSURE TO MOISTURE, CHEMICALS, OR CORROSIVE GASES. DO NOT STORE ELECTRICAL EQUIPMENT OUTDOORS.
- PROVIDE AND ENERGIZE TEMPORARY SPACE HEATERS IF REQUIRED TO CONTROL MOISTURE DURING STORAGE.

**CUTTING AND PATCHING:**

- CUT AND PATCH IN A WORKMANLIKE MANNER AS REQUIRED TO INSTALL ELECTRICAL WORK.
- CUTTING OF STRUCTURAL MEMBERS SUCH AS JOISTS, BEAMS, GIRDERS OR COLUMNS IS PROHIBITED.
- PATCH SURFACES TO RESTORE TO ORIGINAL INTEGRITY (WATERPROOF OR FIREPROOF AS REQUIRED) AND APPEARANCE.

**SERVICE AND METERING:**

- ELECTRIC POWER COMPANY SERVING THIS PROJECT IS FAYETTEVILLE PUBLIC WORKS COMMISSION, PWC. POWER COMPANY CONTACT IS WESLEY JACOBS, TELEPHONE 910-223-4528, EMAIL WESLEY.JACOBS@FAYPWC.COM. COMPLY WITH POWER COMPANY STANDARDS.
- PAY FOR FEES AND CHARGES AS REQUIRED FOR TEMPORARY/CONSTRUCTION POWER FOR CONTRACTOR'S USE.
- PAY FEES AND CHARGES FOR PERMANENT SERVICE VIA BID ALLOWANCE AND SUBMIT POWER COMPANY INVOICES TO OWNER FOR SUBSTANTIATION.
- POWER COMPANY WORK:
  - FURNISH CONDUIT MATERIALS FOR UNDERGROUND SERVICE TO UTILITY TRANSFORMER(S).
  - PROVIDE PRIMARY CONDUCTORS (OVERHEAD AND UNDERGROUND) TO UTILITY TRANSFORMER(S).
  - PROVIDE UTILITY TRANSFORMER(S).
  - TERMINATE UNDERGROUND PRIMARY CABLES AT THE UTILITY TRANSFORMER(S).
  - TERMINATE UNDERGROUND SECONDARY CABLES AT THE UTILITY TRANSFORMER(S).
  - PROVIDE METERING CURRENT TRANSFORMERS (CT'S), METER(S) AND METER WIRING.
- CONTRACTOR WORK:
  - ARRANGEMENTS WITH POWER COMPANY TO OBTAIN SERVICE, PAY POWER COMPANY FEES, AND PROVIDE LABOR AND MATERIALS REQUIRED FOR ELECTRICAL SERVICE.
  - INSTALL PRIMARY UNDERGROUND CONDUITS AT A DEPTH OF 48" TO TOP OF CONDUIT(S).
  - PROVIDE SECONDARY UNDERGROUND CONDUITS AND CABLE FROM UTILITY TRANSFORMER(S) TO SERVICE ENTRANCE EQUIPMENT.
  - PROVIDE POWER COMPANY APPROVED METERING CURRENT TRANSFORMER (CT) ENCLOSURE.
  - INSTALL METER BASE ENCLOSURE.
  - PROVIDE EMPTY CONDUIT WITH PULL LINE FROM THE METERING CT ENCLOSURE TO THE METER BASE ENCLOSURE.
  - PROVIDE UTILITY TRANSFORMER PAD AND GROUNDING PER PWC'S SPECIFICATIONS.

**DEMOLITION AND DISPOSITION OF EQUIPMENT:**

- DRAWING PLANS SHOWING REMOVAL OF MAJOR MECHANICAL AND ELECTRICAL EQUIPMENT IS NOT INTENDED TO SHOW ALL COMPONENTS TO BE DEMOLISHED. NOT ALL PIPING, CONDUITS, DUCTS, EQUIPMENT, ANCILLARY DEVICES, ETC. ARE SHOWN. THE CONTRACTOR IS TO FIELD VERIFY EXISTING CONDITIONS PRIOR TO BID.
- UNLESS OTHERWISE SPECIFICALLY NOTED, REMOVE UNUSED EXPOSED CONDUIT AND SUPPORT SYSTEMS BACK TO SOURCE AND/OR POINT OF CONCEALMENT INCLUDING ABOVE ACCESSIBLE CEILING FINISHES. WIRING SHALL BE REMOVED.
- CUT FLUSH WITH SLAB, CEILING, OR WALL ABANDONED CONCEALED CONDUIT. SUITABLY PLUG CONDUITS.
- REPAIR AND RESTORE ADJACENT CONSTRUCTION AND FINISHES AFTER DEMOLITION IS COMPLETE.
- MATERIAL AND EQUIPMENT INDICATED FOR REMOVAL OR DEMOLITION IS TO BECOME CONTRACTOR'S PROPERTY UPON REMOVAL, UNLESS NOTED OTHERWISE. REMOVED MATERIAL TO BE PROPERLY HANDLED AND DISPOSED.
- CLEAN AND SWAB EXISTING CONDUITS PRIOR TO RE-USE.

**CLEANING:**

- REMOVE ALL RUBBISH AND DEBRIS FROM INSIDE AND AROUND ELECTRICAL EQUIPMENT AND ENCLOSURES.
- REMOVE DIRT, DUST OR CONCRETE SPATTER FROM INTERIOR AND EXTERIOR OF EQUIPMENT USING BRUSHES, VACUUM CLEANER OR CLEAN LINT-FREE RAGS. DO NOT USE COMPRESSED AIR.

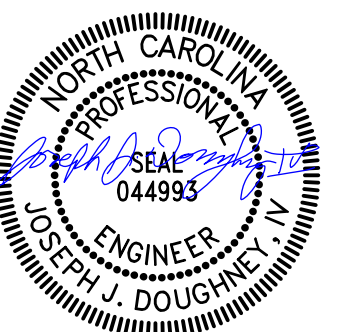
**DELEGATED DESIGN / PROFESSIONAL ENGINEERING SERVICES:**

- WHEN ENGINEERING SERVICES ARE SPECIFIED TO BE PROVIDED BY CONTRACTOR, CONTRACTOR SHALL RETAIN A LICENSED PROFESSIONAL ENGINEER TO PERFORM THE SERVICES. ENGINEER SHALL BE LICENSED AT THE TIME SERVICES ARE PERFORMED AND LICENSED IN THE STATE IN WHICH PROJECT IS LOCATED. IF THE STATE ISSUES DISCIPLINE SPECIFIC LICENSES, ENGINEER SHALL BE LICENSED IN THE APPLICABLE DISCIPLINE. ENGINEER SHALL BE EXPERIENCED IN THE TYPE OF WORK BEING PERFORMED.
- ENGINEERING WORK SHALL BE DONE ACCORDING TO THE APPLICABLE REGULATIONS FOR PROFESSIONAL ENGINEERS TO INCLUDE SIGNING, SEALING AND DATING DOCUMENTS.

**MAJOR ELECTRICAL SEQUENCE OF CONSTRUCTION:**

THE FOLLOWING SEQUENCE IS RECOMMENDED TO MAINTAIN THE PLANT IN OPERATION. ADDITIONAL INFORMATION CAN BE FOUND IN SECTION 01 00 10.

- COORDINATE WITH THE POWER COMPANY TO DE-ENERGIZE THE TRANSFORMER'S PRIMARY FEEDERS. COORDINATE LENGTH OF DOWNTIME WITH OWNER.
- PULL BACK THE EXISTING PRIMARY CONDUCTORS TO THE NEAREST UPSTREAM PULLBOX.
- RELOCATE TRANSFORMER AND ELECTRICAL PANELS.
- INTERCEPT AND REROUTE PRIMARY CONDUITS TO NEW TRANSFORMER LOCATION.
- RE-PULL PRIMARY CONDUCTORS TO RELOCATED TRANSFORMER.
- INSTALL NEW SECONDARY CONDUCTORS AND CONDUITS.
- RECONNECT EXISTING PANELS, PUMP MOTOR, AND MISCELLANEOUS LOADS.
- PROVIDE TEMPORARY GENERATOR POWER WHERE DEEMED NECESSARY BY OWNER.



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REV. NO.	DATE	DRWN	CHKD	REMARKS

DESIGNED BY: E. GACHARICH  
 DRAWN BY: L. VANG  
 SHEET CHK'D BY: J. DOUGHNEY  
 CROSS CHK'D BY: D. NEAMTU  
 APPROVED BY: J. DOUGHNEY  
 DATE: FEBRUARY 2022



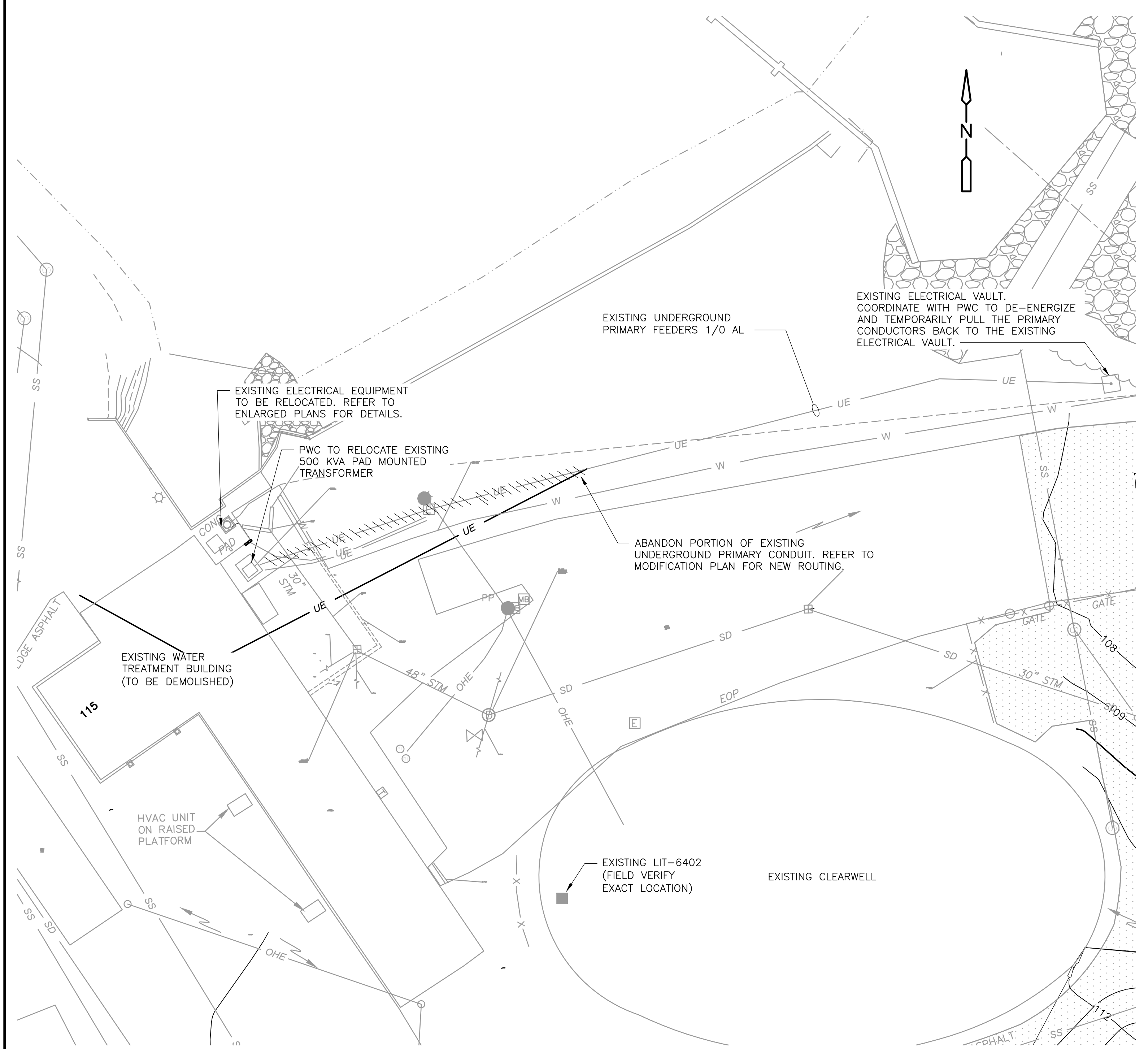
PUBLIC WORKS COMMISSION OF FAYETTEVILLE  
 DEMOLITION AND DECOMMISSIONING OF FORMER WTP  
 AT GLENVILLE LAKE DAM (CUMBE-038)  
 FAYETTEVILLE, NC

GENERAL ELECTRICAL NOTES

PROJECT NO. 6384-231131  
 FILE NAME: EO02NFNT.DWG  
 SHEET NO. E-2



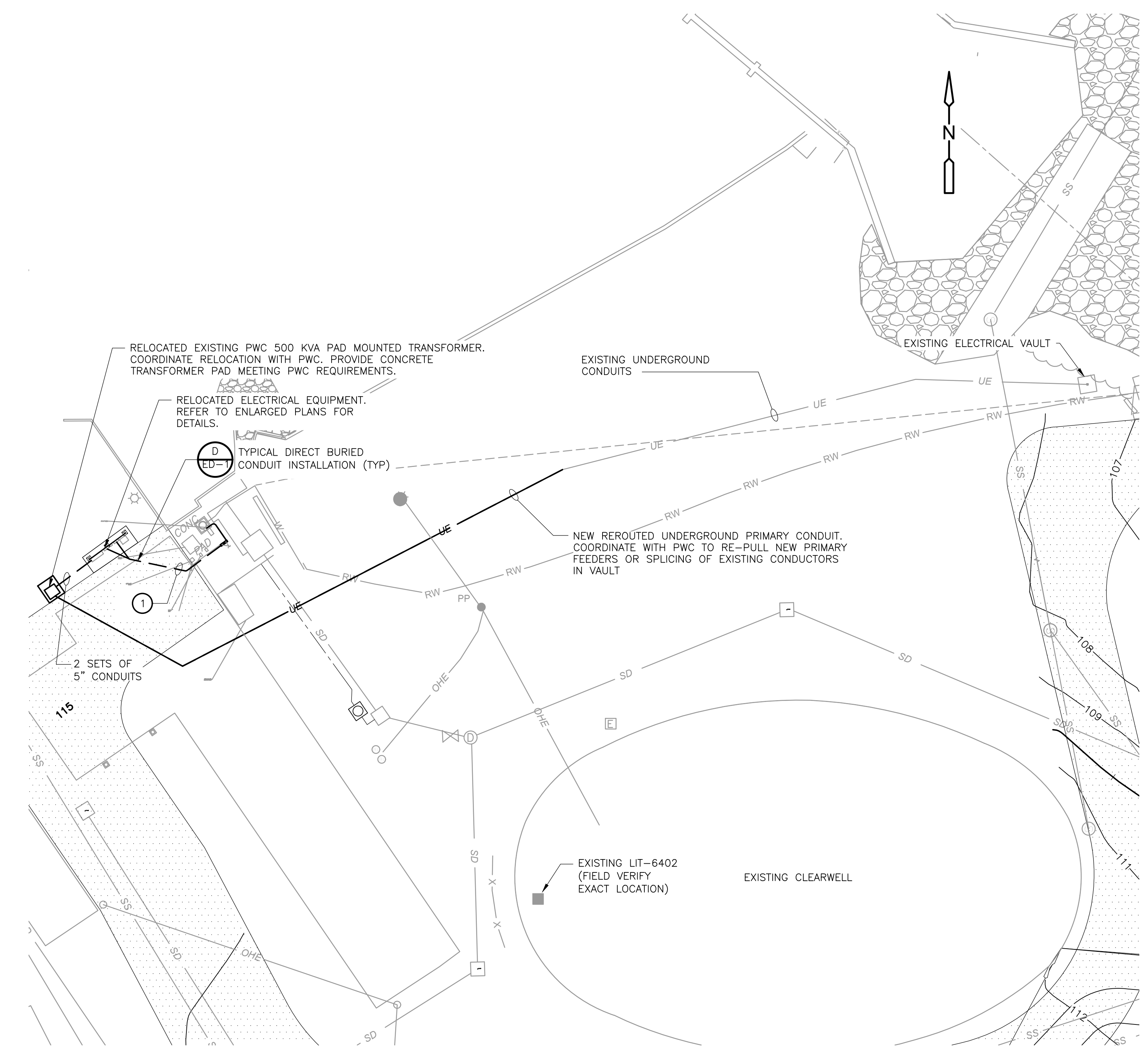
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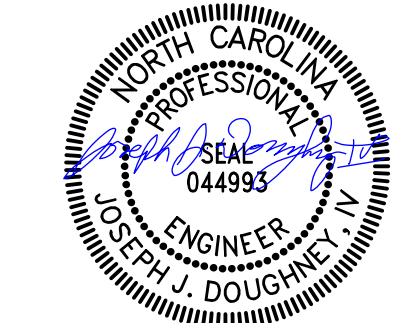
DEMOLITION PLAN  
1" = 20'

- KEYED NOTES:**
- DUCTBANK CONTAINS THE FOLLOWING:
    - 1" C. FROM LIGHTING PANEL PPR TO POWER JUNCTION BOX
    - 1" C. FROM STARTER RWP-2010-MR TO LEVEL SWITCH
    - 1" C. FROM RADIO TO ANALOG JUNCTION BOX
    - 2" C. FROM STARTER RWP-2010-MR TO RAW WATER PUMP

- GENERAL NOTES:**
- DO NOT SCALE THE ELECTRICAL DRAWINGS REFER TO THE CIVIL, MECHANICAL, STRUCTURAL DRAWINGS, AND APPROVED MANUFACTURER'S SHOP DRAWINGS FOR THE EXACT LOCATION OF ALL EQUIPMENT.
  - ALL WORK SHALL COMPLY WITH NEC AND LOCAL CODES.
  - CONDUCTORS SHALL NOT BE SPLICED EXCEPT AS NOTED IN SPECIFICATIONS.
  - ALL CONDUITS SHALL HAVE A BOND WIRE SIZED PER TABLE 250.122 OF THE NEC (UNLESS OTHERWISE NOTED).
  - CONTRACTOR SHALL FIELD VERIFY EXISTING UNDERGROUND UTILITIES, PIPING, ETC. REROUTE NEW CONDUITS, DUCTBANK, PULL BOXES, ETC., AS REQUIRED AT NO ADDITIONAL COST TO THE OWNER.
  - MATCH NEW CONDUIT AND CABLE SIZES TO EXISTING SIZES. FOR BIDDING PURPOSES, SIZES OF CONDUIT AND CABLES ARE LABELED IN RISER DIAGRAM.
  - MAINTAIN 12 INCH SEPARATION BETWEEN POWER/CONTROL CONDUITS AND ANALOG CONDUITS.



MODIFICATION PLAN  
1" = 20'



REV. NO.	DATE	DRWN	CHKD	REMARKS

DESIGNED BY: E. GACHARICH  
 DRAWN BY: L. VANG  
 SHEET CHK'D BY: J. DOUGHNEY  
 CROSS CHK'D BY: D. NEAMTU  
 APPROVED BY: J. DOUGHNEY  
 DATE: FEBRUARY 2022



PUBLIC WORKS COMMISSION OF FAYETTEVILLE  
 DEMOLITION AND DECOMMISSIONING OF FORMER WTP  
 AT GLENVILLE LAKE DAM (CUMBE-038)  
 FAYETTEVILLE, NC

ELECTRICAL SITE PLAN  
 SHEET NO. E-3

PROJECT NO. 6384-231131  
 FILE NAME: E003STPL.DWG  
 BID SET



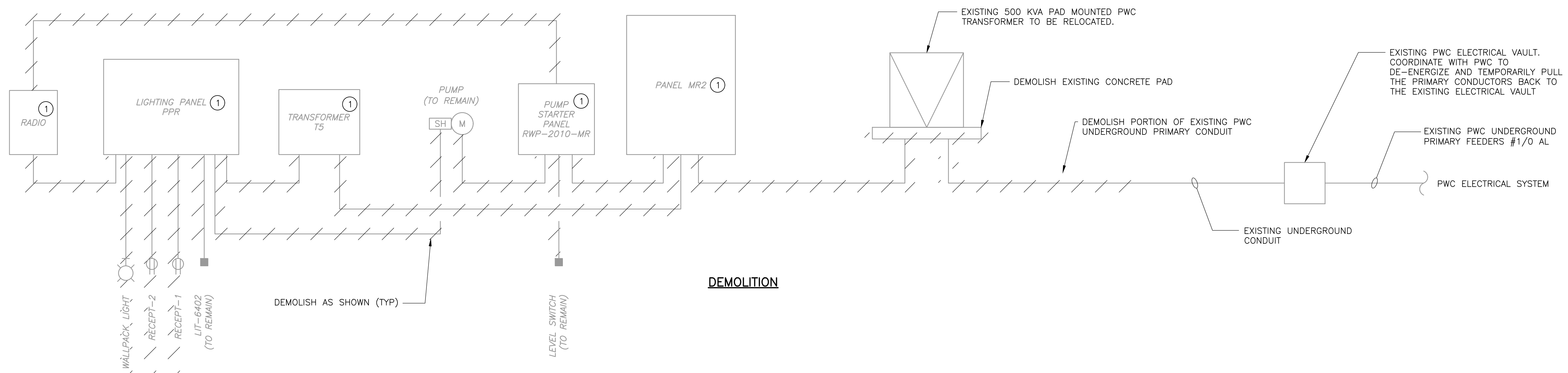
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**KEYED NOTE:**

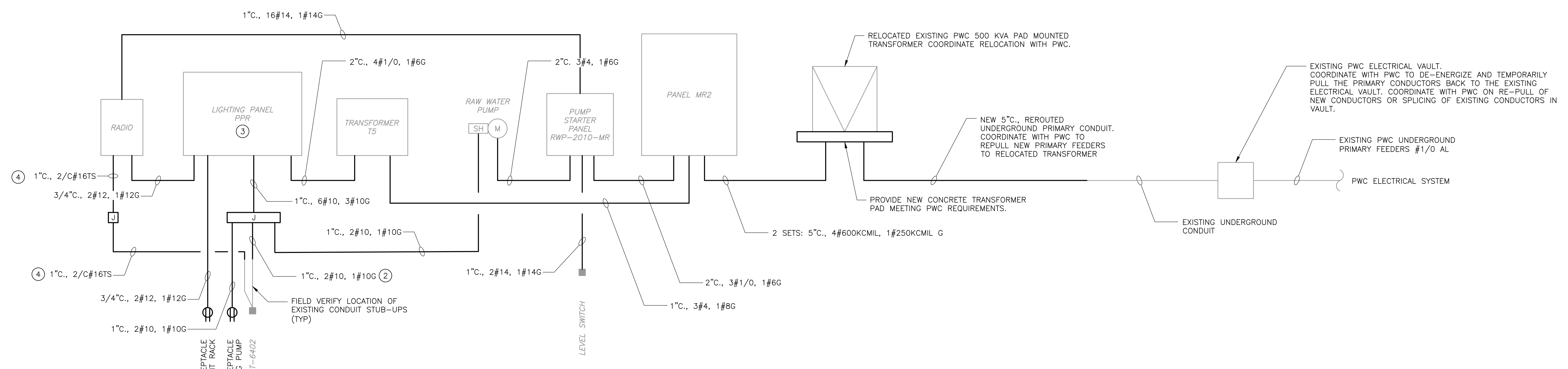
- ① EXISTING ELECTRICAL EQUIPMENT TO BE RELOCATED. REFER TO ELECTRICAL PLANS FOR NEW LOCATION.
- ② PROVIDE NEW CONDUIT TO EXISTING CONDUIT AT WETWELL AND TRANSITION INTO EXISTING CONDUIT FROM WETWELL TO CLEARWELL.
- ③ REUSE EXISTING CIRCUIT BREAKERS IN LIGHTING PANEL PPR FOR LOADS SHOWN. PROVIDE UPDATED DIRECTORY.
- ④ WHERE EXISTING SIGNAL DOES NOT ROUTE TO RADIO, THIS CONDUIT AND WIRE CAN BE REMOVED FROM SCOPE.

**GENERAL NOTES:**

- A. MATCH NEW CONDUIT AND CABLE SIZES TO EXISTING SIZES. FOR BIDDING PURPOSES, SIZES OF CONDUIT AND CABLES ARE LABELED IN RISER DIAGRAM.
- B. WHERE EXISTING CONDUITS ARE SHOWN FOR RE-USE, FIELD VERIFY CONDITION OF EXISTING CONDUITS. WHERE CONDUITS ARE IN BAD CONDITION, PROVIDE NEW CONDUIT FOR ENTIRE LENGTH.



**DEMOLITION**



**MODIFICATIONS**



DESIGNED BY:	E. GACHARICH
DRAWN BY:	L. VANG
SHEET CHK'D BY:	J. DOUGHNEY
CROSS CHK'D BY:	D. NEAMTU
APPROVED BY:	J. DOUGHNEY
DATE:	FEBRUARY 2022

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PUBLIC WORKS COMMISSION OF FAYETTEVILLE  
 DEMOLITION AND DECOMMISSIONING OF FORMER WTP  
 AT GLENVILLE LAKE DAM (CUMBE-038)  
 FAYETTEVILLE, NC

**OVERALL ONE LINE POWER DIAGRAM**

PROJECT NO.	6384-231131
FILE NAME:	E004NFOL.DWG
SHEET NO.	E-4

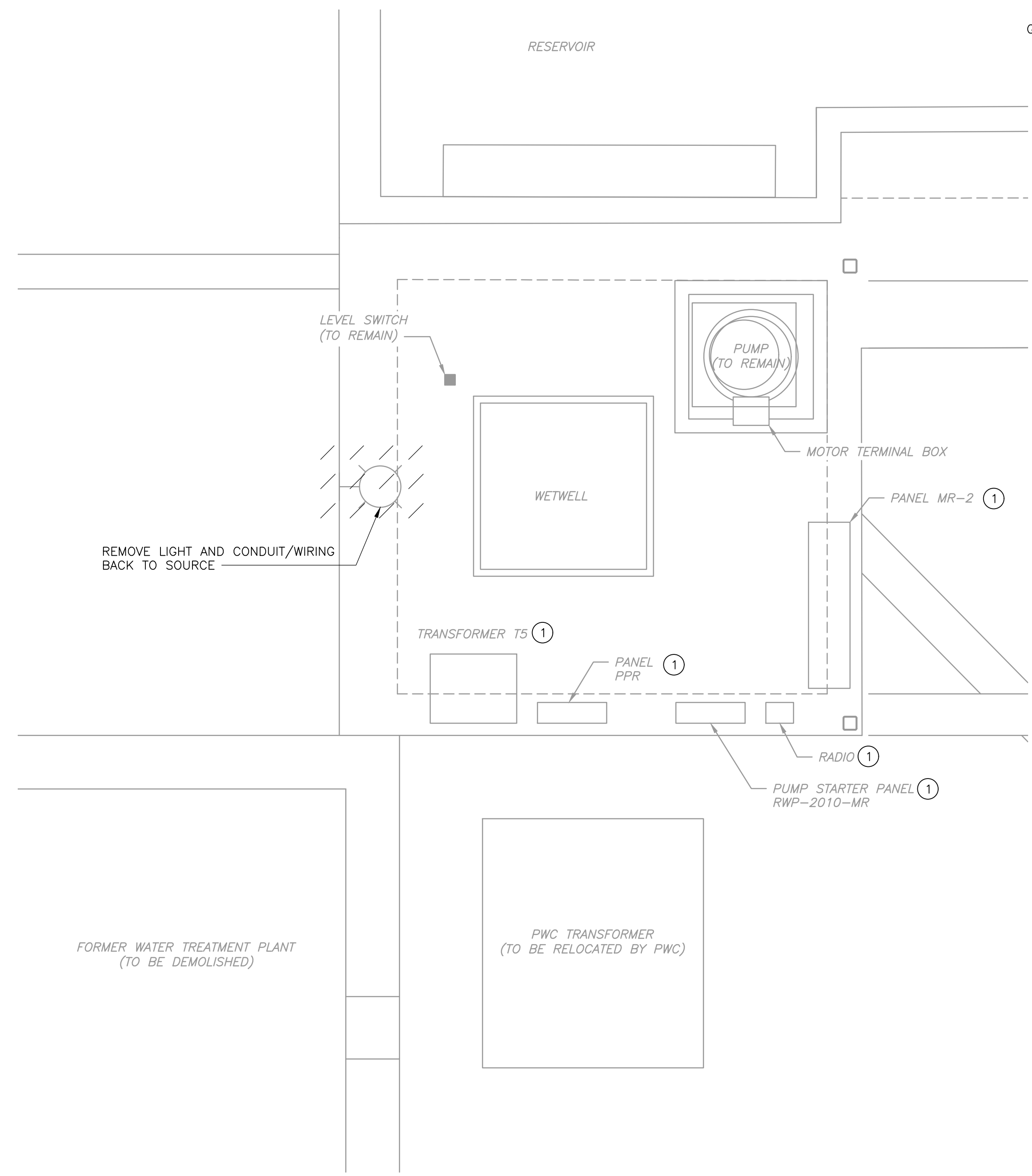


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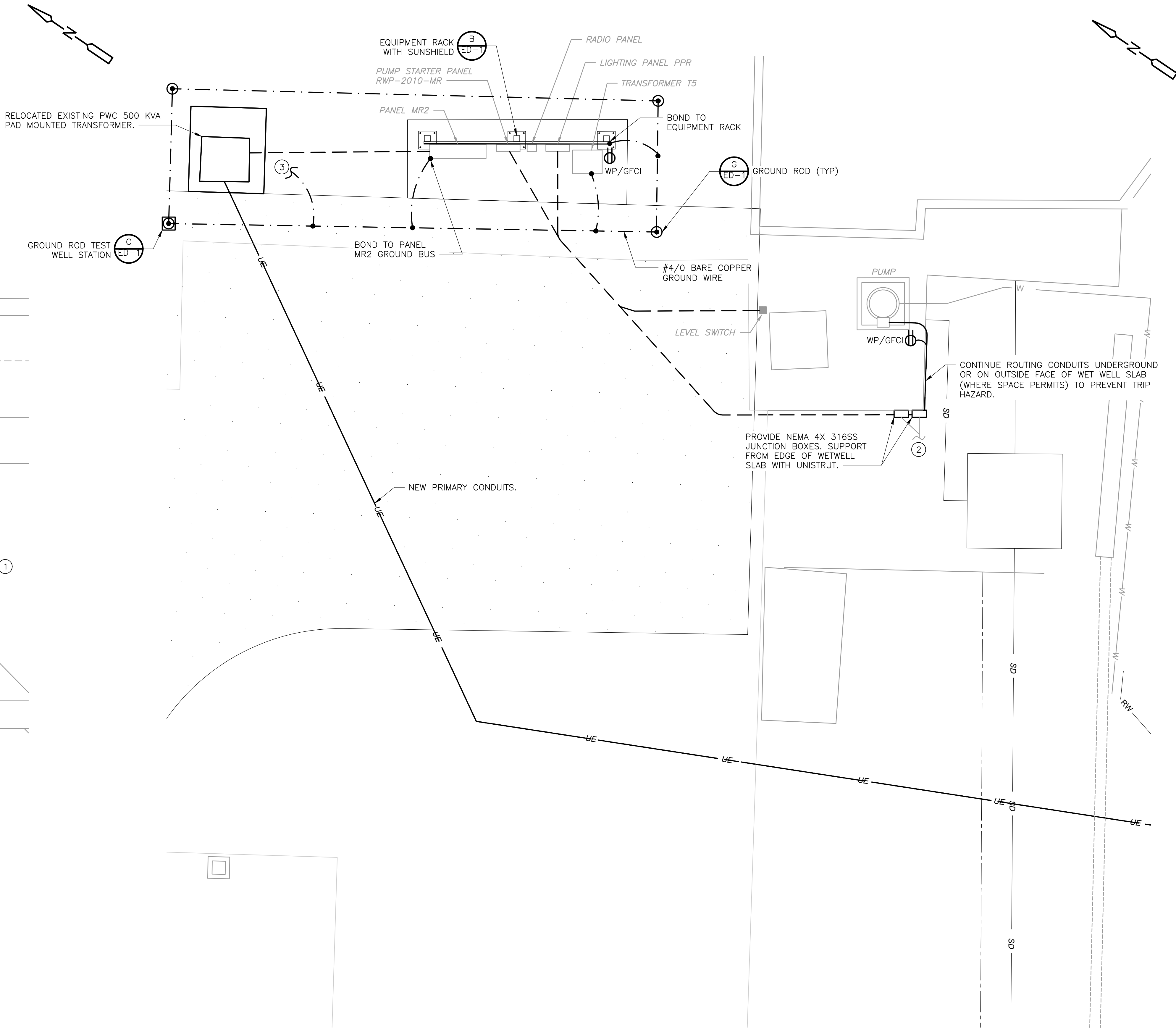
- ① EXISTING ELECTRICAL EQUIPMENT TO BE RELOCATED. NEW LOCATIONS NOTED ON PUMP STATION ELECTRICAL MODIFICATION PLAN.
- ② NEW WIRING IN EXISTING CONDUIT TO EXISTING LIT-6402 ON CLEARWELL. REFER TO SITE PLAN FOR LOCATION.
- ③ GROUND TRANSFORMER IN ACCORDANCE WITH PWC REQUIREMENTS.

**GENERAL NOTES:**

- A. MATCH NEW CONDUIT AND CABLE SIZES TO EXISTING SIZES. FOR BIDDING PURPOSES, SIZES OF CONDUIT AND CABLES ARE LABELED IN ELECTRICAL ONE LINE DIAGRAM.



**WETWELL ELELCTRICAL DEMOLITION  
PLAN**  
1/2" = 1'-0"



**WETWELL ELECTICAL MODIFICATION  
PLAN**  
1/4" = 1'-0"



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REV. NO.	DATE	DRWN	CHKD	REMARKS

DESIGNED BY: L. VANG  
 DRAWN BY: L. VANG  
 SHEET CHK'D BY: J. DOUGHNEY  
 CROSS CHK'D BY: D. NEAMTU  
 APPROVED BY: J. DOUGHNEY  
 DATE: FEBRUARY 2022

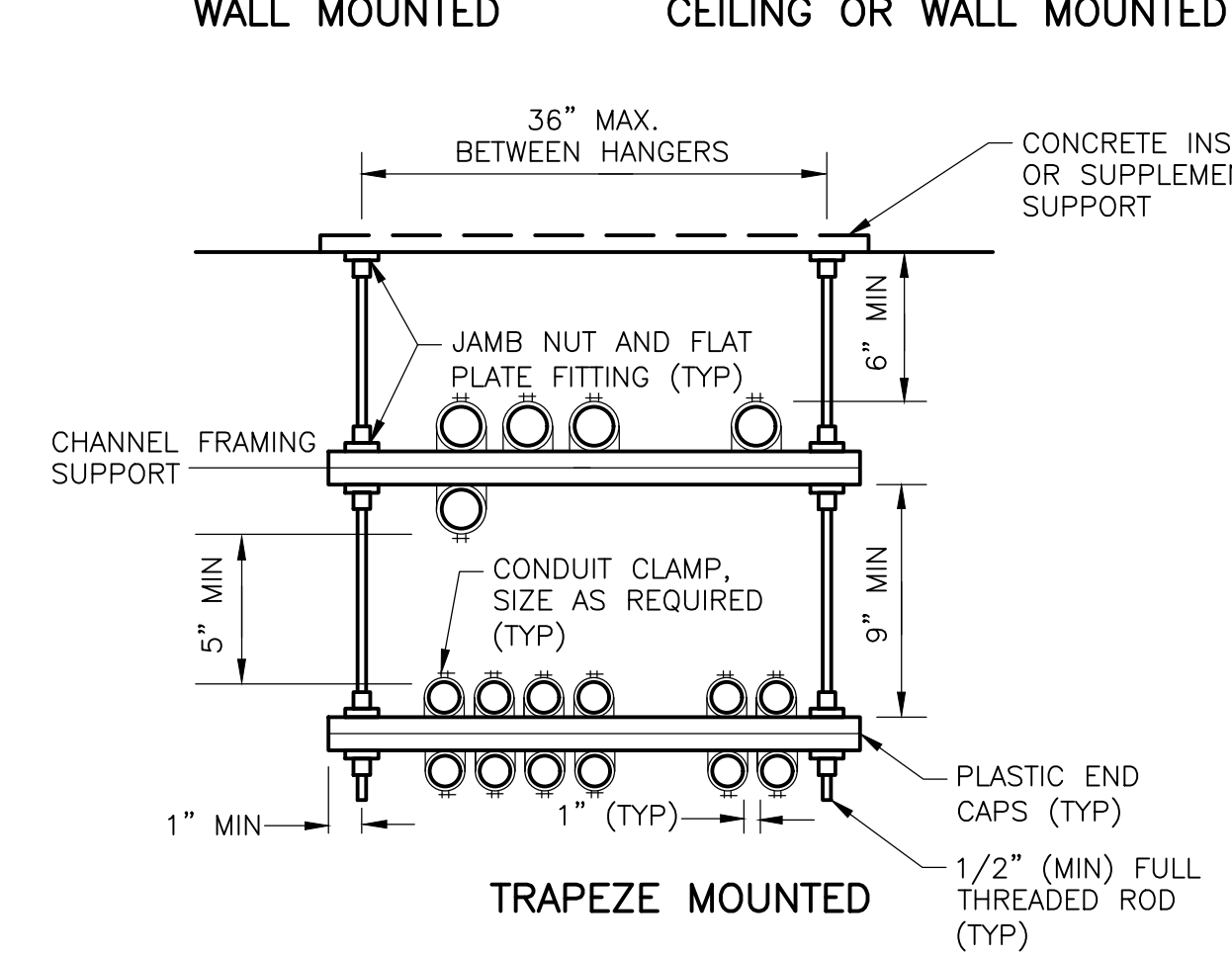
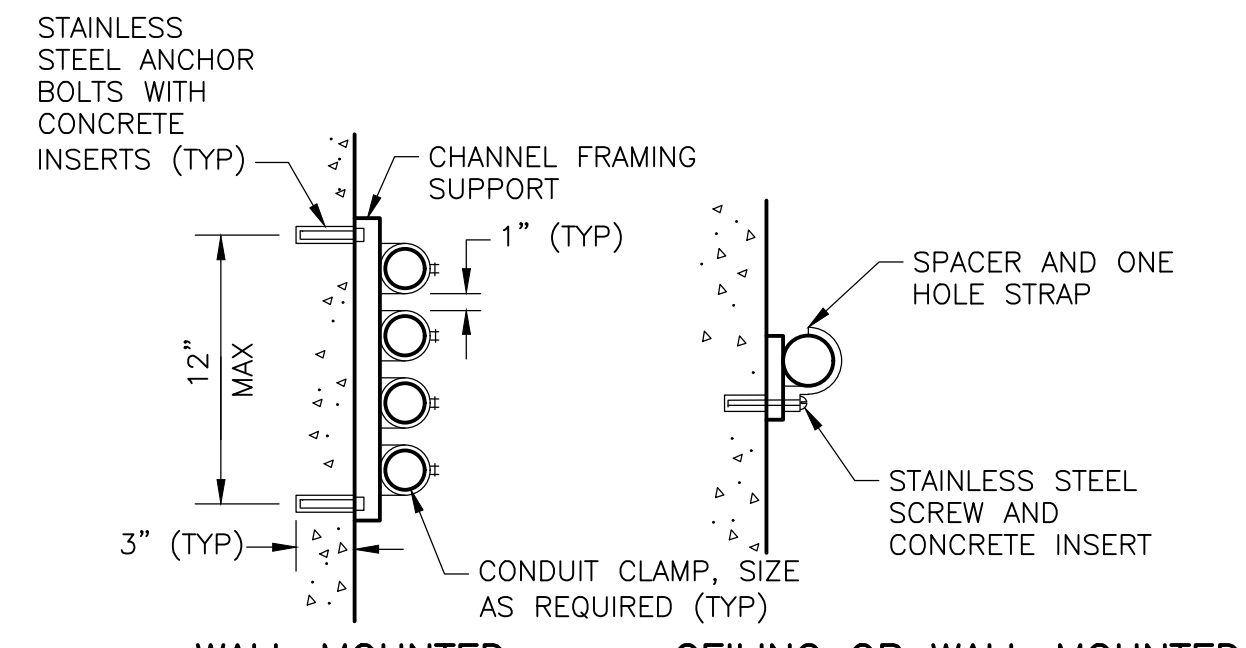


PUBLIC WORKS COMMISSION OF FAYETTEVILLE  
 DEMOLITION AND DECOMMISSIONING OF FORMER WTP  
 AT GLENVILLE LAKE DAM (CUMBE-038)  
 FAYETTEVILLE, NC

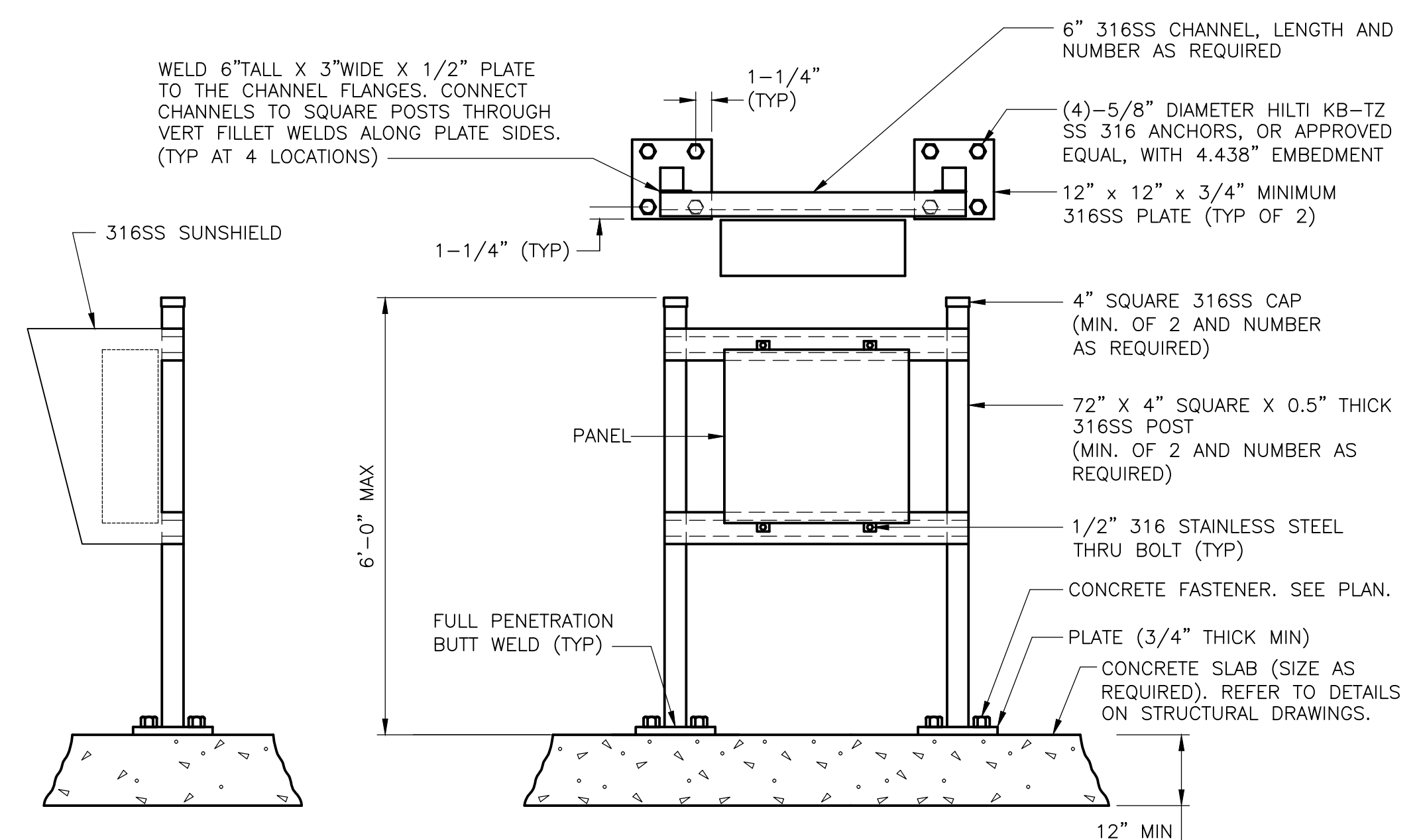
WETWELL DEMOLITION AND  
 MODIFICATION PLANS  
 SHEET NO. E-5

PROJECT NO. 6384-231131  
 FILE NAME: E005ULPL.DWG  
 SHEET NO. E-5



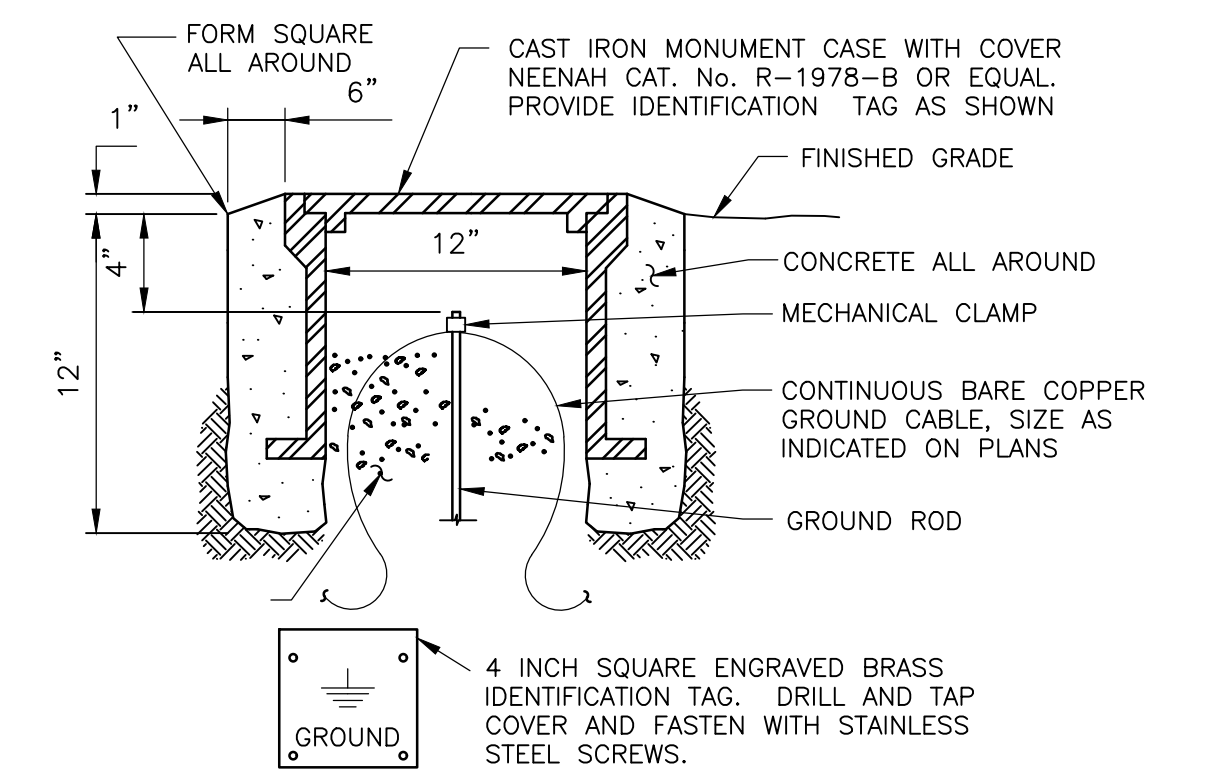


CONDUIT MOUNTING  
DETAIL A  
NTS

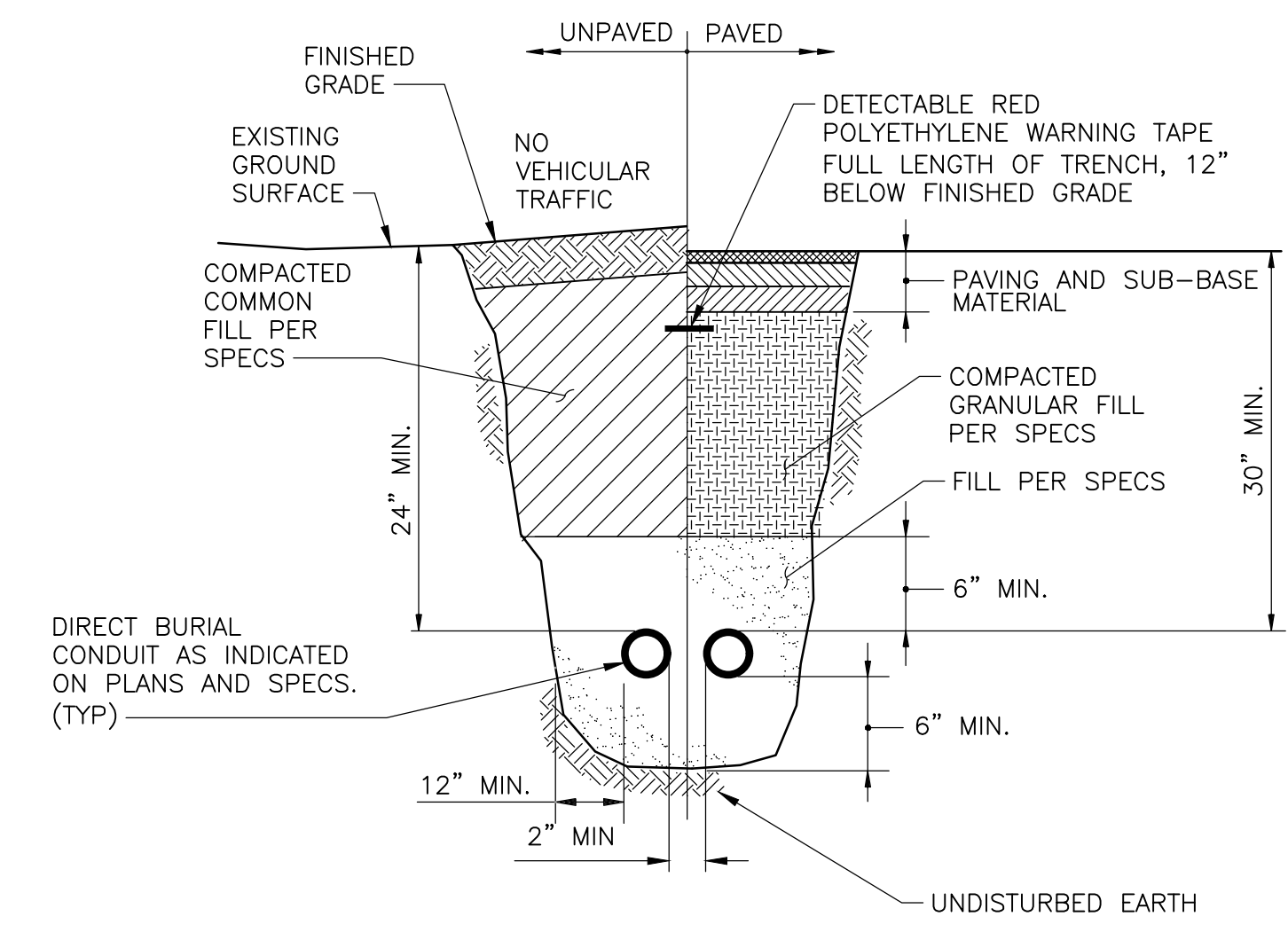


- NOTE:**
1. ALL HARDWARE SHALL BE 316 STAINLESS STEEL.
  2. FOR EQUIPMENT RACKS OVER 6FT WIDE PROVIDE ADDITIONAL VERTICAL 4\"/>

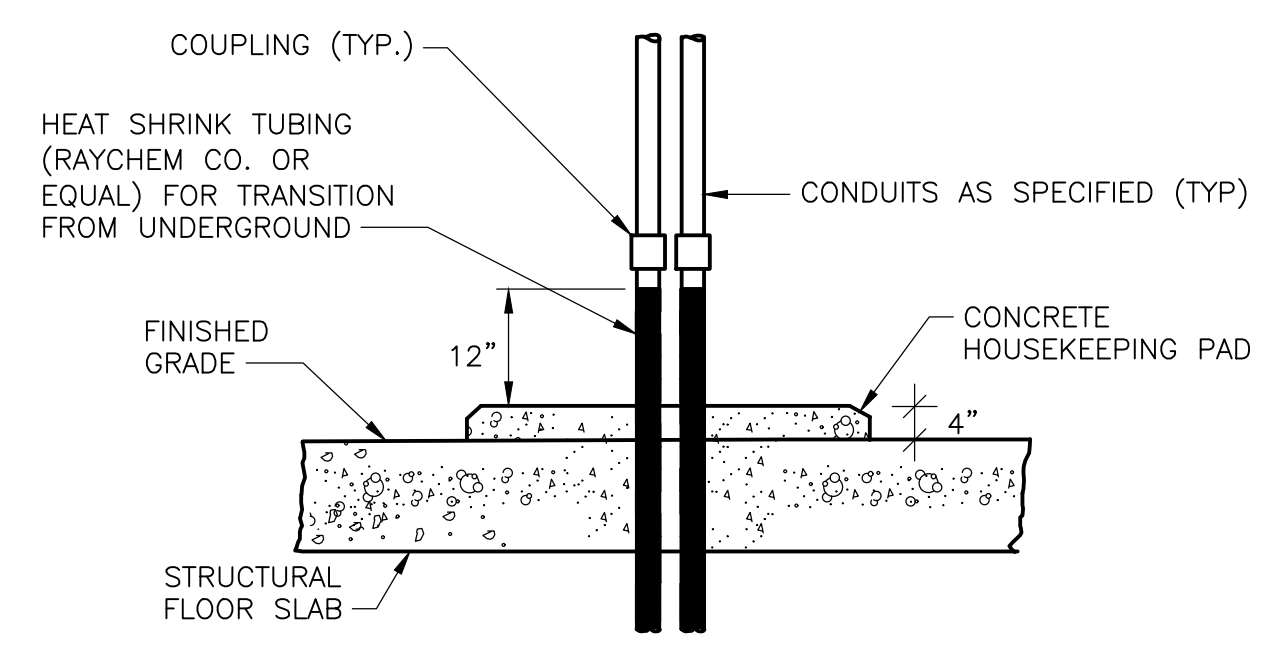
EQUIPMENT RACK WITH SUNSHIELD  
DETAIL B  
NTS



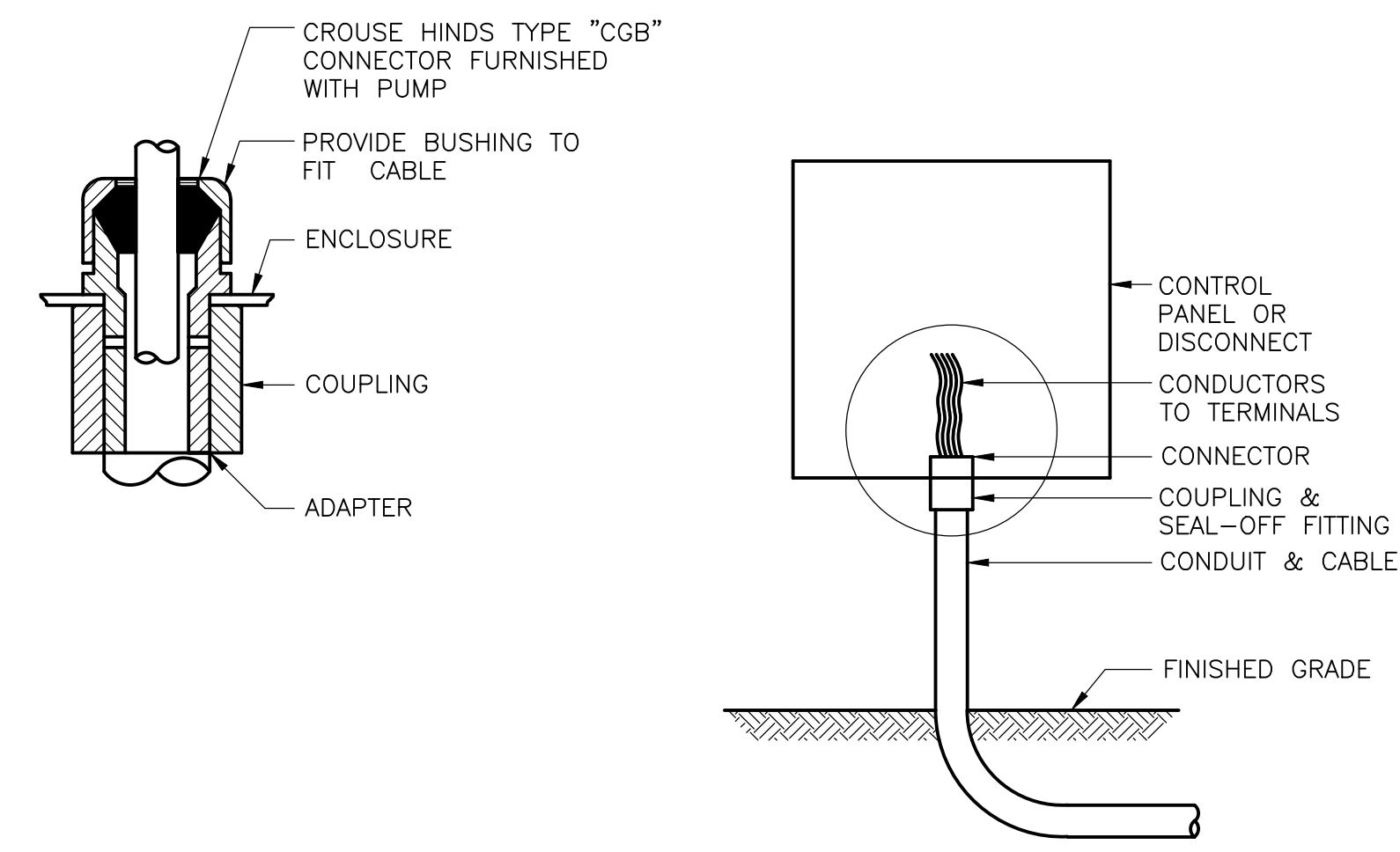
GROUND ROD TEST WELL STATION  
DETAIL C  
NTS



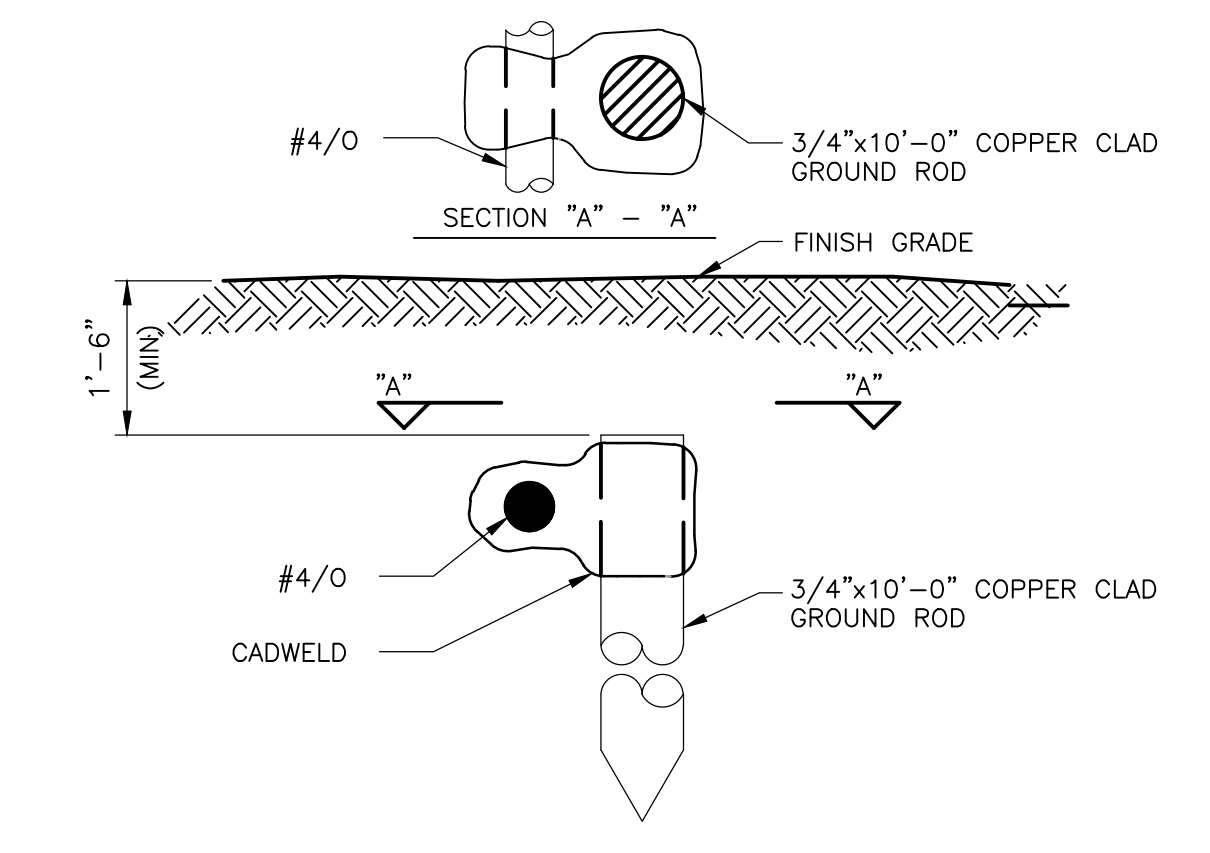
TYPICAL DIRECT BURIED CONDUIT INSTALLATION  
DETAIL D  
NTS



TYPICAL CONDUIT STUB-UP  
DETAIL E  
NTS



WATER-TIGHT CONNECTION  
DETAIL F  
NTS



GROUND ROD  
DETAIL G  
NTS

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DESIGNED BY:	T. ROSCHEN
DRAWN BY:	T. ROSCHEN
SHEET CHK'D BY:	J. DOUGHNEY
CROSS CHK'D BY:	D. NEAMTU
APPROVED BY:	J. DOUGHNEY
DATE:	FEBRUARY 2022

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 FAYETTEVILLE, NC

ELECTRICAL DETAILS

PROJECT NO.	6384-231131
FILE NAME:	ED01NFD1.DWG
SHEET NO.	ED-1

