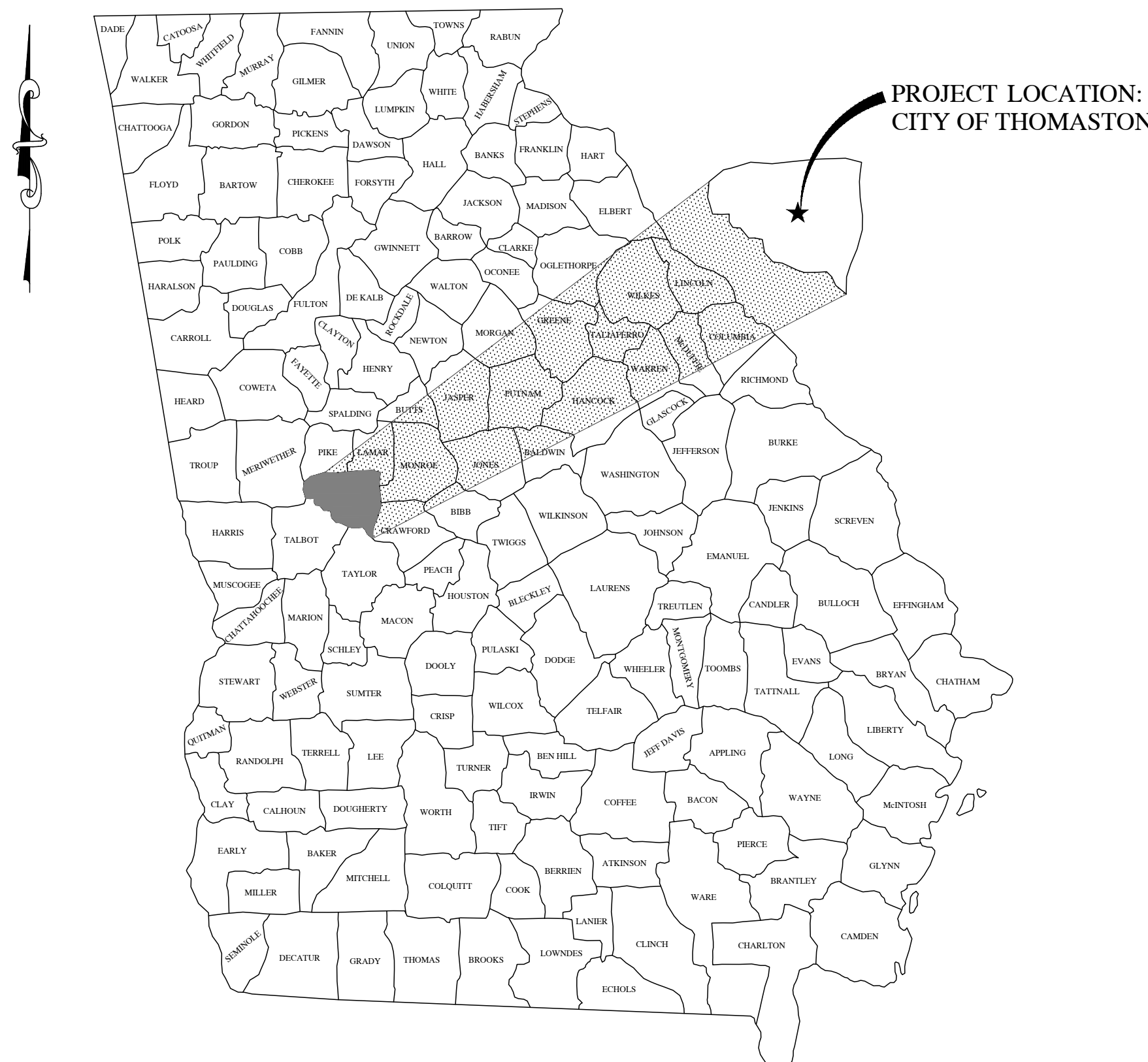


USDA SEWER SYSTEM IMPROVEMENTS - CONTRACT A - WPCP UPGRADES

FOR THE
CITY OF THOMASTON
DECEMBER 2020

CITY COUNCIL

JOHN DAVID STALLINGS	MAYOR
DOUG HEAD	MAYOR PRO-TEM
LAKEITHA REEVES	COUNCIL MEMBER
JEFF MIDDLEBROOKS	COUNCIL MEMBER
RYAN TUCKER	COUNCIL MEMBER
DONALD M. GREATHOUSE	COUNCIL MEMBER
RUSSELL THOMPSON	CITY MANAGER



VICINITY MAP

INDEX TO DRAWINGS

SHEET NO.	TITLE
G0.0	COVER SHEET
G0.1	GENERAL NOTES AND PROJECT VICINITY
C0.0	BELL CREEK WPCP GENERAL PLAN & YARD PIPING
C1.0	TOWN BRANCH DEMOLITION PLAN
C1.1	TOWN BRANCH SITE PLAN
C1.2	TOWN BRANCH GRADING & DRAINAGE PLAN
C1.3	TOWN BRANCH STORM PROFILES
C2.0	TOWN BRANCH HYDRAULIC PROFILE
C2.1	TOWN BRANCH GENERAL PLAN & YARD PIPING
C2.2	TOWN BRANCH YARD PIPING PROFILES
C2.3	TOWN BRANCH SPLITTER BOX & SLUDGE CONTROL STRUCTURES
C2.4	TOWN BRANCH SLUDGE PUMPING SYSTEM
C2.5	TOWN BRANCH CLARIFIER PLAN & SECTION
C2.6-C2.7	TOWN BRANCH CLARIFIER DETAILS
C3.0-C3.2	MISC. DETAILS
S0.0-S0.1	GENERAL STRUCTURAL NOTES & DETAILS
S1.0	TOWN BRANCH WPCP STRUCTURAL LOCATION PLAN
S2.0	BELL CREEK WPCP STRUCTURAL LOCATION PLAN
S2.1	CLARIFIER FOUNDATION PLAN
S2.2	CLARIFIER SECTION & DETAILS
S2.3	CLARIFIER REBAR LAYOUT & DETAILS
S2.4	WET WELL LOCATION PLAN
S2.5	WET WELL SECTION & DETAILS
S2.6	SPLITTER BOX PLAN, SECTION & DETAILS
S2.7	BELL CREEK BELT PRESS PARKING SLAB PLAN & SECTION
S2.8	TOWN BRANCH BELT PRESS PARKING SLAB PLAN & SECTION
E0.0	ELECTRICAL LEGEND & NOTES
E1.0	BELL CREEK WPCP ONE LINE DIAGRAM
E1.1	BELL CREEK WPCP ELECTRICAL SITE PLAN
E1.2	BELL CREEK WPCP SCHEMATIC WIRING DIAGRAMS
E2.0	TOWN BRANCH WPCP ONE LINE DIAGRAM
E2.1	TOWN BRANCH WPCP ELECTRICAL SITE PLAN
E2.2	TOWN BRANCH WPCP SCHEMATIC WIRING DIAGRAMS
E3.0	ELECTRICAL INSTALLATION DETAILS
ES1.0-ES1.8	EROSION & SEDIMENTATION CONTROL SHEETS

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FOR THE
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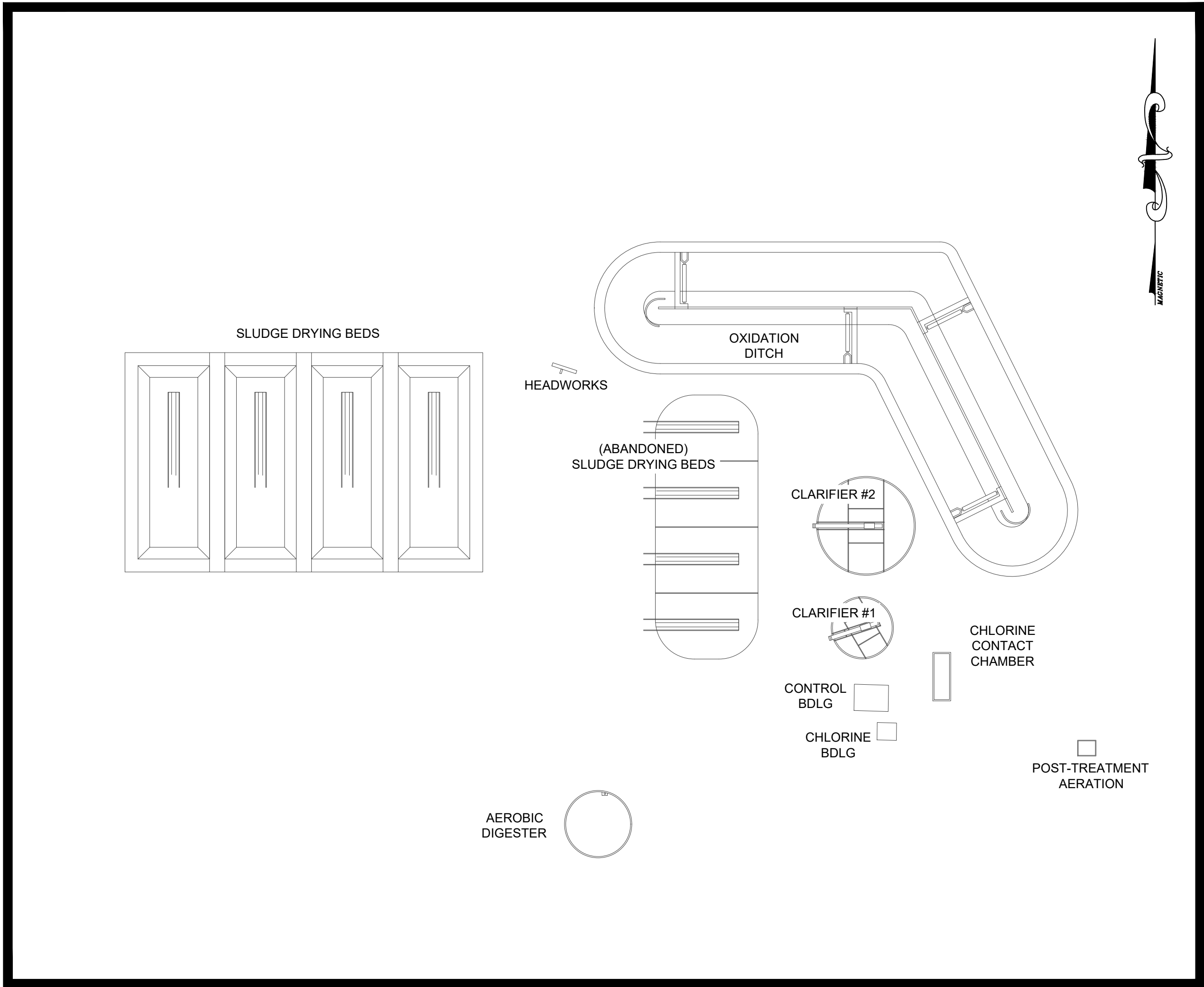
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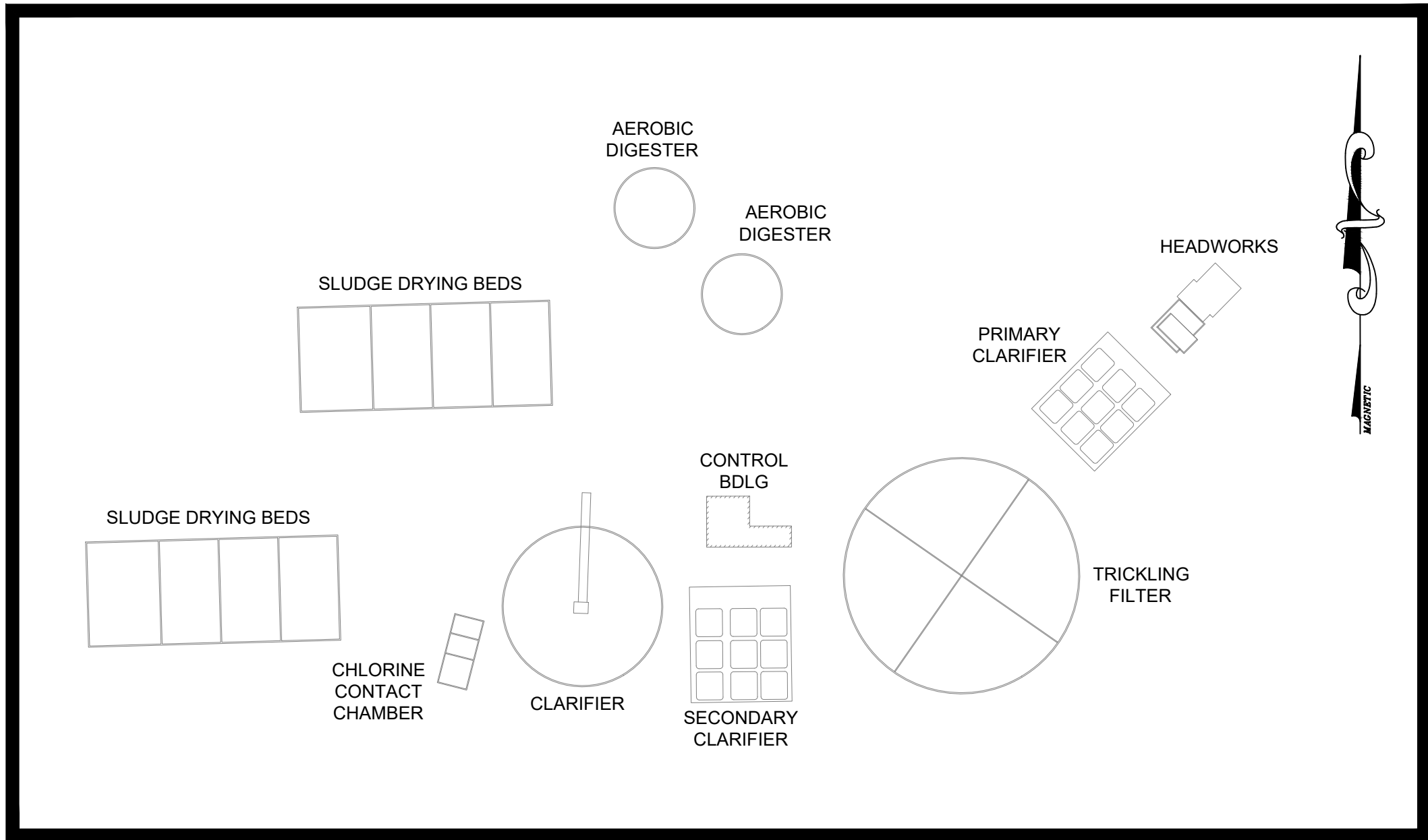
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GENERAL NOTES

1. CONTRACTOR SHALL ADHERE TO ALL LOCAL, STATE, OR FEDERAL REGULATIONS AS THEY SHALL SUPERCEDE THE REQUIREMENTS OF THE CONTRACT DOCUMENTS. SHOULD THERE BE A CONFLICT, IT SHOULD IMMEDIATELY BE BROUGHT TO THE ATTENTION OF THE ENGINEER.
2. THE CONTRACTOR IS SPECIFICALLY CAUTIONED THAT THE LOCATIONS AND/OR ELEVATIONS OF EXISTING INFRASTRUCTURE AS SHOWN ON THESE PLANS ARE BASED ON EXISTING RECORDS AND WHERE POSSIBLE, MEASUREMENTS TAKEN IN THE FIELD. THIS INFORMATION IS NOT TO BE RELIED ON AS BEING EXACT OR COMPLETE. IT SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR TO EVALUATE ALL EXISTING INFRASTRUCTURE WHICH MAY CONFLICT WITH THE PROPOSED IMPROVEMENTS SHOWN ON THE PLANS AND COORDINATE WITH THE ENGINEER FOR ADJUSTMENT OF THE WORK AS NECESSARY TO MAINTAIN ADEQUATE SEPARATION SHOULD A CONFLICT EXIST. CONTRACTOR SHALL FIELD-VERIFY ALL EXISTING ELEVATIONS BEFORE AND DURING (WHILE UNCOVERED) CONSTRUCTION.
3. ALL IN-PLACE IMPROVEMENTS WILL BE PROTECTED BY THE CONTRACTOR DURING CONSTRUCTION. ANY DAMAGES WILL BE REPAIRED TO THE RESPECTIVE OWNER'S SATISFACTION BY THE CONTRACTOR AT NO ADDITIONAL COMPENSATION.
4. THE CONTRACTOR IS RESPONSIBLE FOR THE DESIGN AND IMPLEMENTATION OF ALL SHEETING, SHORING, BRACING, DE-WATERING, AND SPECIAL EXCAVATION MEASURES REQUIRED TO MEET OSHA, FEDERAL, STATE AND LOCAL REGULATIONS PURSUANT TO THE INSTALLATION OF THE WORK INDICATED ON THESE DRAWINGS AS WELL AS SUBSEQUENT WORK AGREED TO BETWEEN THE OWNER AND CONTRACTOR. THE OWNER AND THE DESIGN ENGINEER ACCEPT NO RESPONSIBILITY FOR THE DESIGN(S) TO INSTALL SAID ITEMS.
5. NO WORK SHALL BEGIN ON THIS PROJECT WITHOUT AT LEAST 24 HOURS ADVANCE NOTIFICATION TO THE OWNER AND THE ENGINEER. IN ADDITION, NO WORK IS TO TAKE PLACE WITHOUT AN APPROVED SET OF PLANS AND SPECIFICATIONS ON THE JOB SITE. WORK IS TO BE COORDINATED WITH ALL OTHER OPERATIONS ACTIVITIES.
6. IT IS THE RESPONSIBILITY OF THE CONTRACTOR TO INSURE THAT ALL REQUIRED PERMITS ARE OBTAINED AND IN HAND PRIOR TO THE COMMENCEMENT OF CONSTRUCTION.
7. THE CONTRACTOR SHALL MAKE HIS OWN DETERMINATION OF ALL SURFACE AND SUBSURFACE CONDITIONS. THE CONTRACTOR WITH CONSULTATION WITH THE ENGINEER SHALL TOGETHER DETERMINE WHAT MATERIAL, IF ANY, IS TO BE WASTED.
8. AFTER THE FINAL INSPECTION HAS BEEN PERFORMED AND ALL ITEMS ARE SATISFACTORY TO THE CITY, AS-BUILTS SHALL BE SUBMITTED THE ENGINEER ALONG WITH A LETTER OF TRANSMITTAL. ACCEPTABLE SUBMITTALS WILL BE APPROVED IN WRITING. SUBMITTALS REQUIRING CORRECTIONS BEFORE BEING ACCEPTABLE WILL SO BE NOTED. AS-BUILTS MUST BE RESUBMITTED FOR REVIEW AND APPROVAL PRIOR TO THE LETTER OF ACCEPTANCE BEING ISSUED BY THE ENGINEER(S).
9. ALL FIELD CHANGES SHALL BE AUTHORIZED BY THE OWNER IN WRITING IN ADVANCE OF THE WORK. IF CHANGES ARE MADE BY THE CONTRACTOR WITHOUT PRIOR WRITTEN CONSENT FROM THE OWNER, CONTRACTOR SHALL BEAR FULL RESPONSIBILITY FOR MAKING THE NECESSARY CHANGES TO BRING THE CONSTRUCTION INTO CONFORMANCE WITH APPROVED PLANS AND SPECIFICATIONS AT NO COST TO THE OWNER.
10. THE AREAS DISTURBED BY THE CONTRACTOR SHALL BE RESTORED TO THEIR ORIGINAL CONDITION UNLESS OTHERWISE NOTED ON THE PLANS.
11. ALL CITY WATER UTILIZED DURING CONSTRUCTION SHALL BE METERED THROUGH A CONSTRUCTION WATER METER (OBTAINED FROM THE CITY OF THOMASTON) EQUIPPED WITH AN APPROVED BACK FLOW DEVICE.
12. IT SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR TO FIELD VERIFY ALL PROPOSED CONSTRUCTION FOR FEASIBILITY AND FUNCTION. THE CONTRACTOR SHALL IMMEDIATELY NOTIFY THE ENGINEER OF ANY DISCREPANCIES OR WARRANTED CONCERNS PERTAINING TO DESIGN AND CONSTRUCTION.



TOWN BRANCH WPCP EXISTING STRUCTURES
SCALE: N.T.S.



BELL CREEK WPCP EXISTING STRUCTURES
SCALE: N.T.S.



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FOR THE

CITY OF THOMASTON

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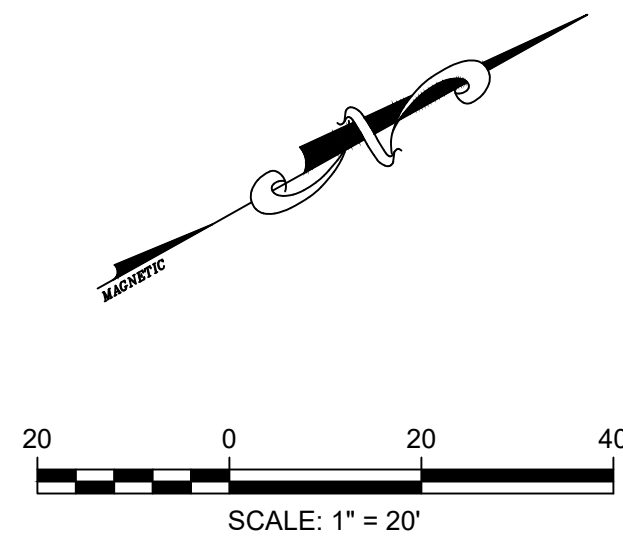
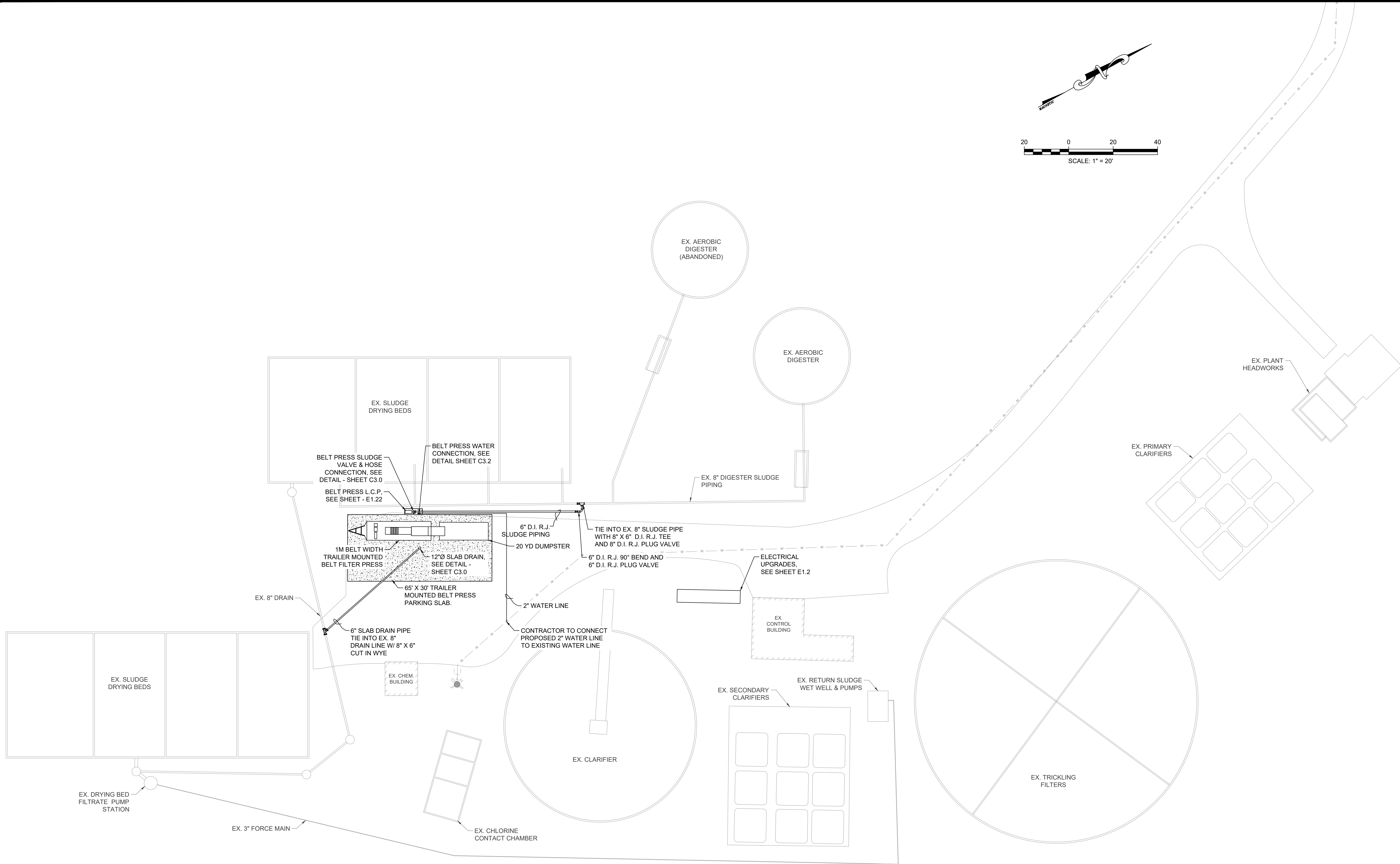
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CONTENT:
GENERAL NOTES &
PROJECT VICINITY

SHEET NO:


G0.1

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CONSTRUCTION NOTES:


1. ONE 1-METER TRAILER MOUNTED BELT PRESS TO BE PROVIDED UNDER THIS PROJECT FOR USE AT BOTH FACILITIES. THE CONTRACTOR SHALL INSTALL AND TEST BELT PRESS AT BOTH FACILITIES PRIOR TO FINAL ACCEPTANCE OF PROJECT.

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**USDA SEWER SYSTEM
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CONTENT:
BELL CREEK WPCP
GENERAL PLAN &
YARD PIPING

SHEET NO:
C0.0

Last Saved By: 032118
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DEMOLITION NOTES:

1. CONTRACTOR SHALL COORDINATE PROPOSED DEMOLITION WORK WITH CITY PERSONNEL AND SCHEDULE WORK TO MAINTAIN OPERATION OF EXISTING FACILITIES.
2. CONTRACTOR SHALL DELIVER ANY SALVAGEABLE VALVES AND/OR PIPING TO THE CITY AT A DESIGNATED LOCATION AT THE PLANT SITE. ALL OTHER MATERIALS SHALL BE PROPERLY DISPOSED OF BY THE CONTRACTOR AT HIS EXPENSE.
3. THE CONTRACTOR SHOULD RECOGNIZE THAT CONSIDERABLE BYPASS PUMPING WILL BE REQUIRED FOR CONSTRUCTION SOME IMPROVEMENTS INCLUDING BUT NOT LIMITED TO: PROPOSED SPLITTER BOX, MH-1, SLUDGE CONTROL STRUCTURES, AND SUBMERSIBLE PUMPS. A BYPASS PUMPING PLAN WILL BE REQUIRED AS A SUBMITTAL TO THE ENGINEER PRIOR TO CONSTRUCTION. THE CONTRACTOR ASSUMES ALL RESPONSIBILITY FOR ANY SEWERAGE SPILLS RELATED TO HIS/HER BYPASS PUMPING INCLUDING ANY AND ALL COORDINATION WITH GA EPD AND PAYMENT OF FINES RESULTING FROM SPILLS.

CONTRACTOR SHALL REMOVE 18" CONCRETE STORM SEWER, HEADWALL, AND JUNCTION BOX AS SHOWN.

CONTRACTOR SHALL DEMOLISH ABANDONED DRYING BEDS BY REMOVAL OF BLOCK WALLS, GRAVEL BED, UNDERDRAIN PIPING AND VALVES AS SHOWN.

CONTRACTOR SHALL REMOVE 6" DIGESTED SLUDGE PIPE AS SHOWN.

(ABANDONED)
DRYING BEDS
AVG. TWALL EL. = 581.50
AVG. BOT. EL. = 579.50

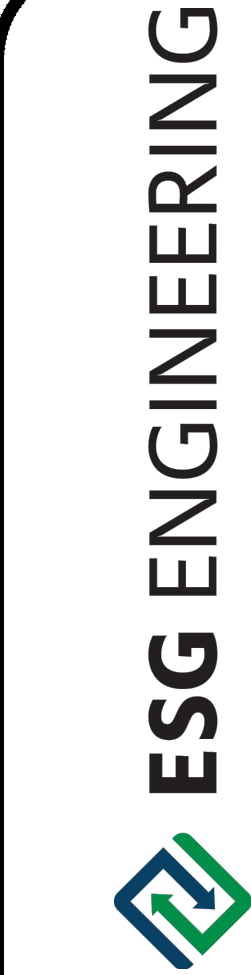
±65' OF EX. 18" D.I. TO BE REMOVED AS REQUIRED TO CONSTRUCT NEW CLARIFIER AND SPLITTER BOX. ANY PIPE REMAINING SHALL BE GROUT FILLED AND CAPPED AT EITHER END. CONSTANT BYPASS PUMPING FROM OX. DITCH TO EX. CLARIFIER WILL BE REQUIRED, SEE CONSTRUCTION NOTE 3.

CONTRACTOR SHALL REMOVE 10" DUCTILE FORCE MAIN AS NEEDED TO CONSTRUCT NEW IMPROVEMENTS. ANY PIPE REMAINING SHALL BE GROUT FILLED AND CAPPED AT EITHER END.

CONTRACTOR SHALL REMOVE 8" SCUM PIPE AS NEEDED TO CONSTRUCT NEW IMPROVEMENTS. ANY PIPE REMAINING SHALL BE GROUT FILLED AND CAPPED AT EITHER END.

EX. SUBMERSIBLE PUMPS, FORCE MAIN AND GUIDE RAILS TO BE REMOVED AFTER COMPLETION OF NEW PUMP STATION. ALL UNUSED WALL PENETRATIONS TO BE HYDRAULICALLY GROUTED.

SCALE: 1" = 20'



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FOR THE

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TOWN BRANCH
DEMOLITION PLAN

SHEET NO:

C1.0

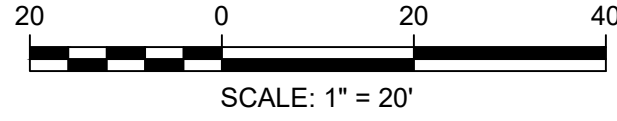
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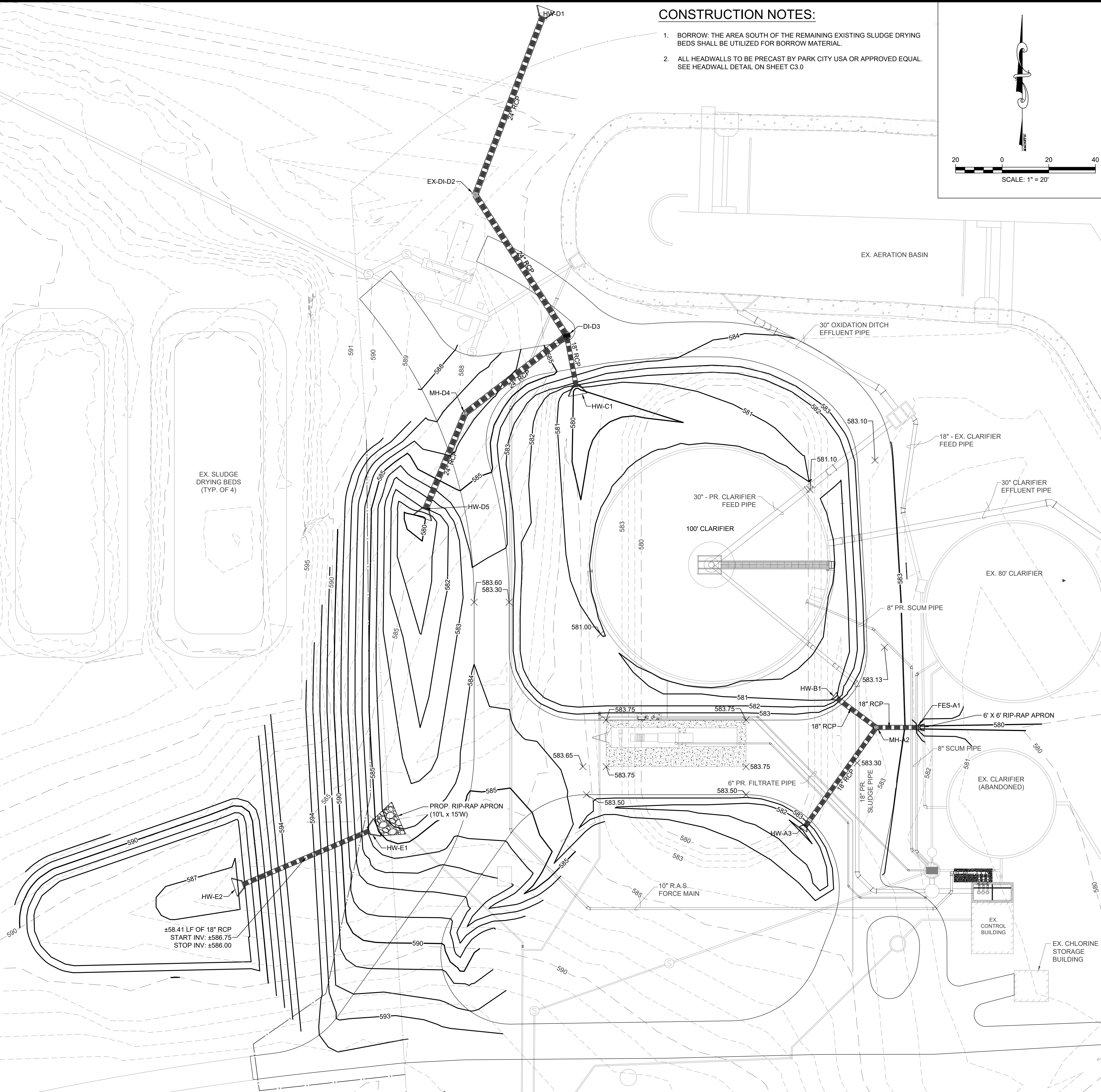
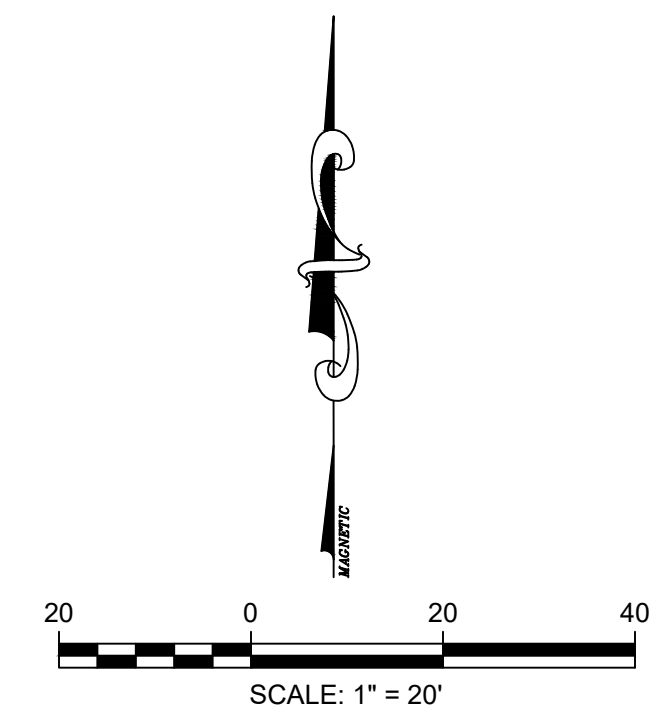
CONTENT:

**TOWN BRANCH
SITE PLAN**

C1.1



1. BORROW: THE AREA SOUTH OF THE REMAINING EXISTING SLUDGE DRYING BEDS SHALL BE UTILIZED FOR BORROW MATERIAL.
2. ALL HEADWALLS TO BE PRECAST BY PARK CITY USA OR APPROVED EQUAL. SEE HEADWALL DETAIL ON SHEET C3.0



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FOR THE

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CONTENT:

**TOWN BRANCH
GRADING &
DRAINAGE PLAN**

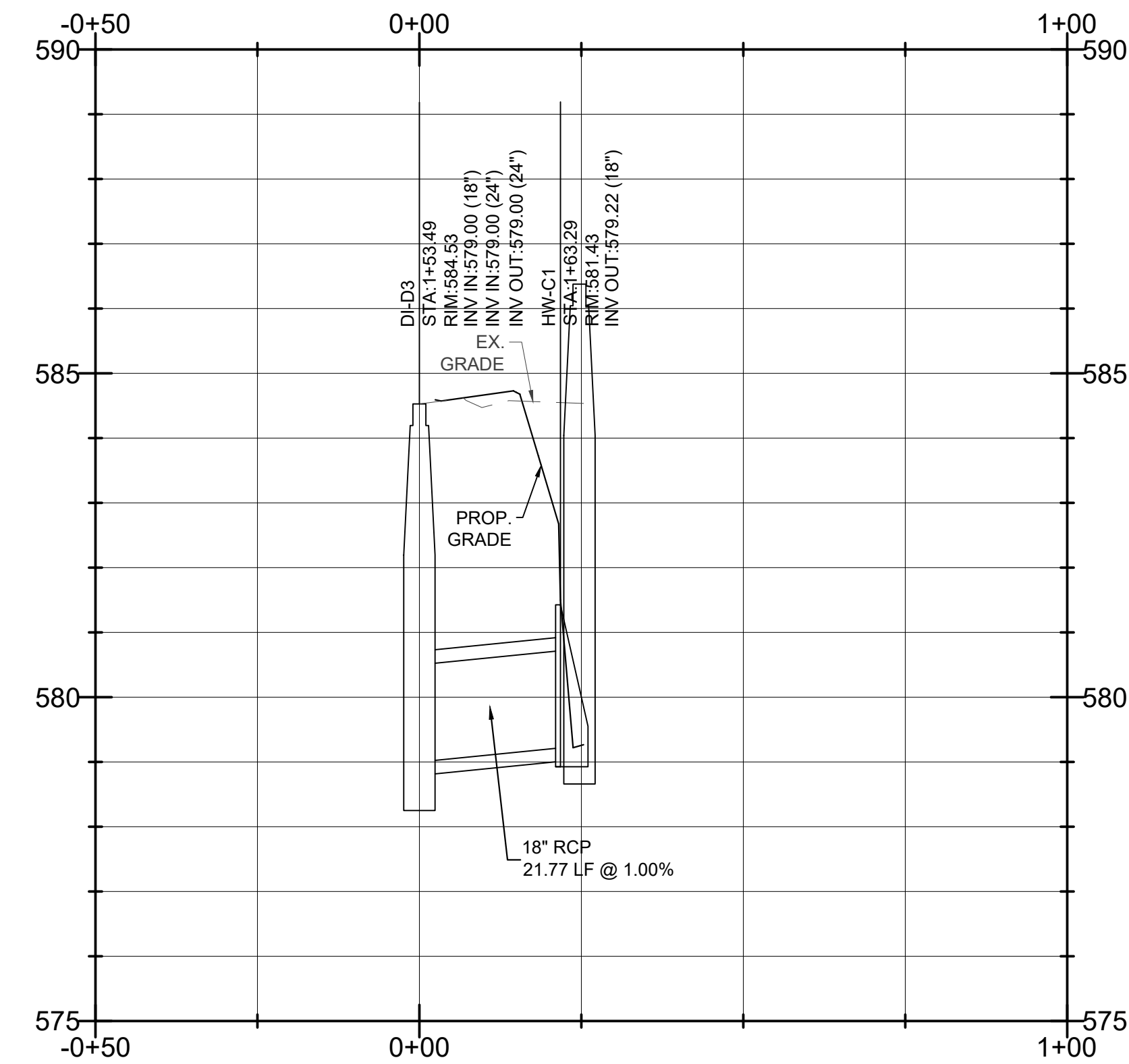
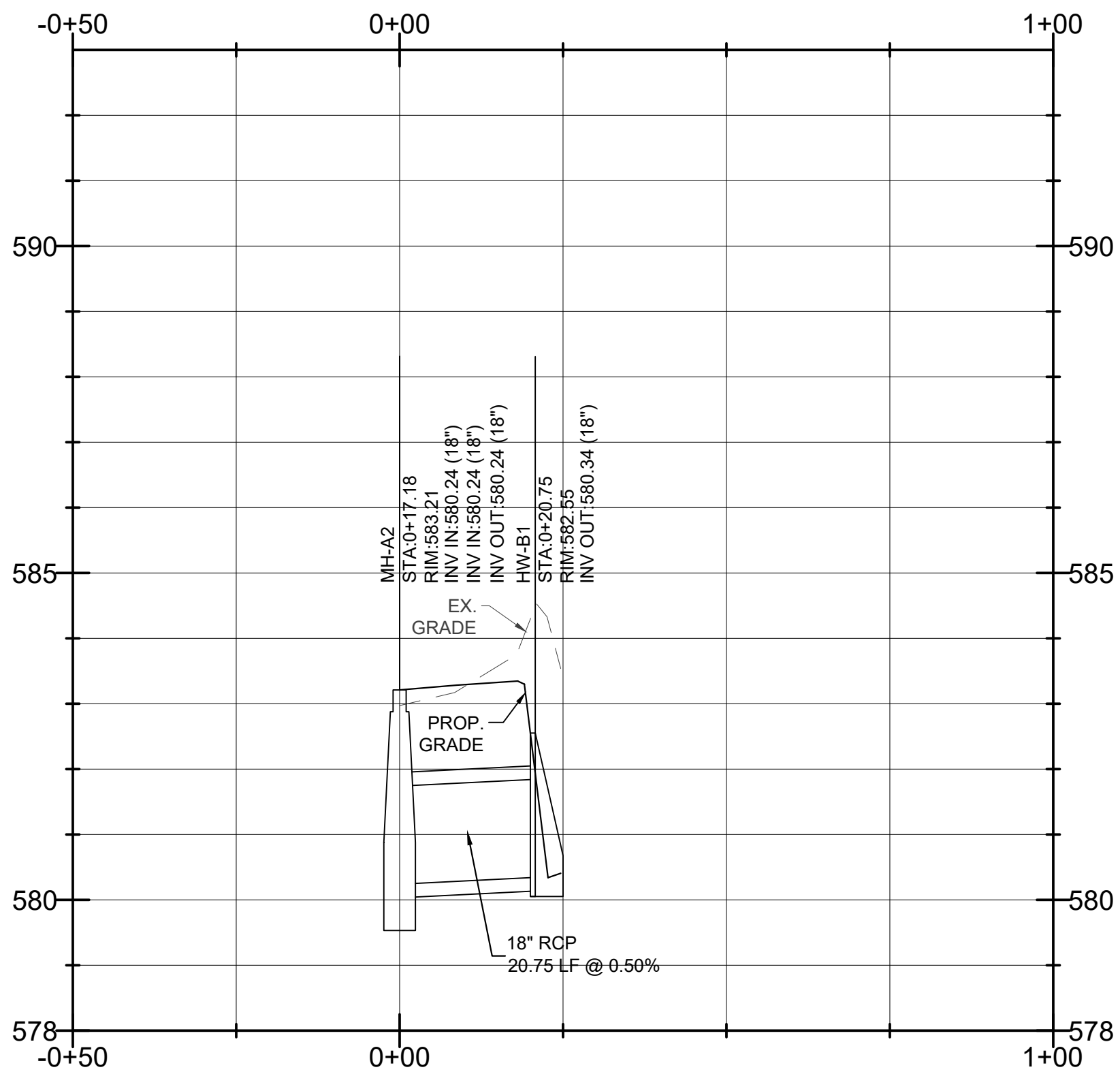
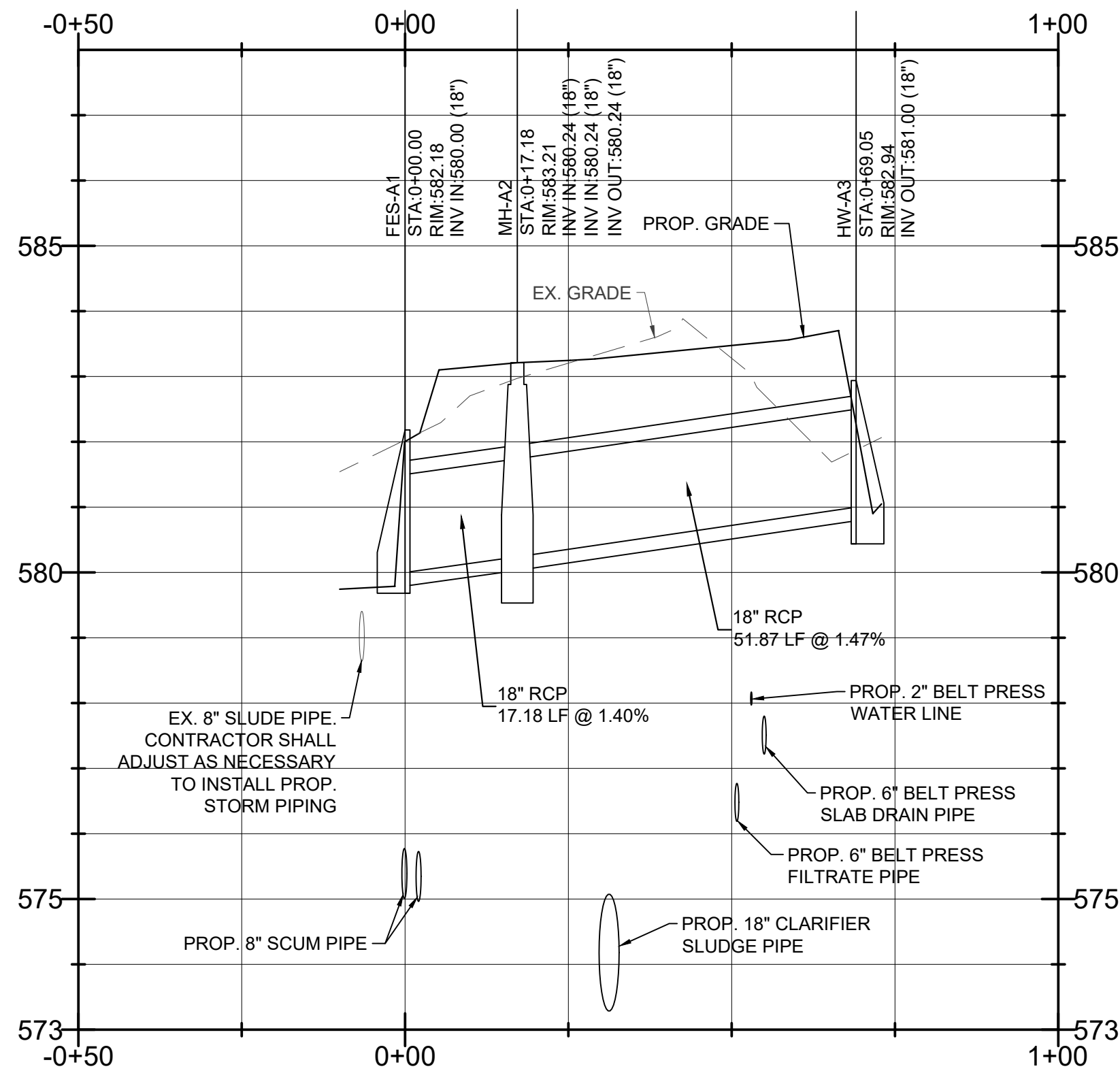
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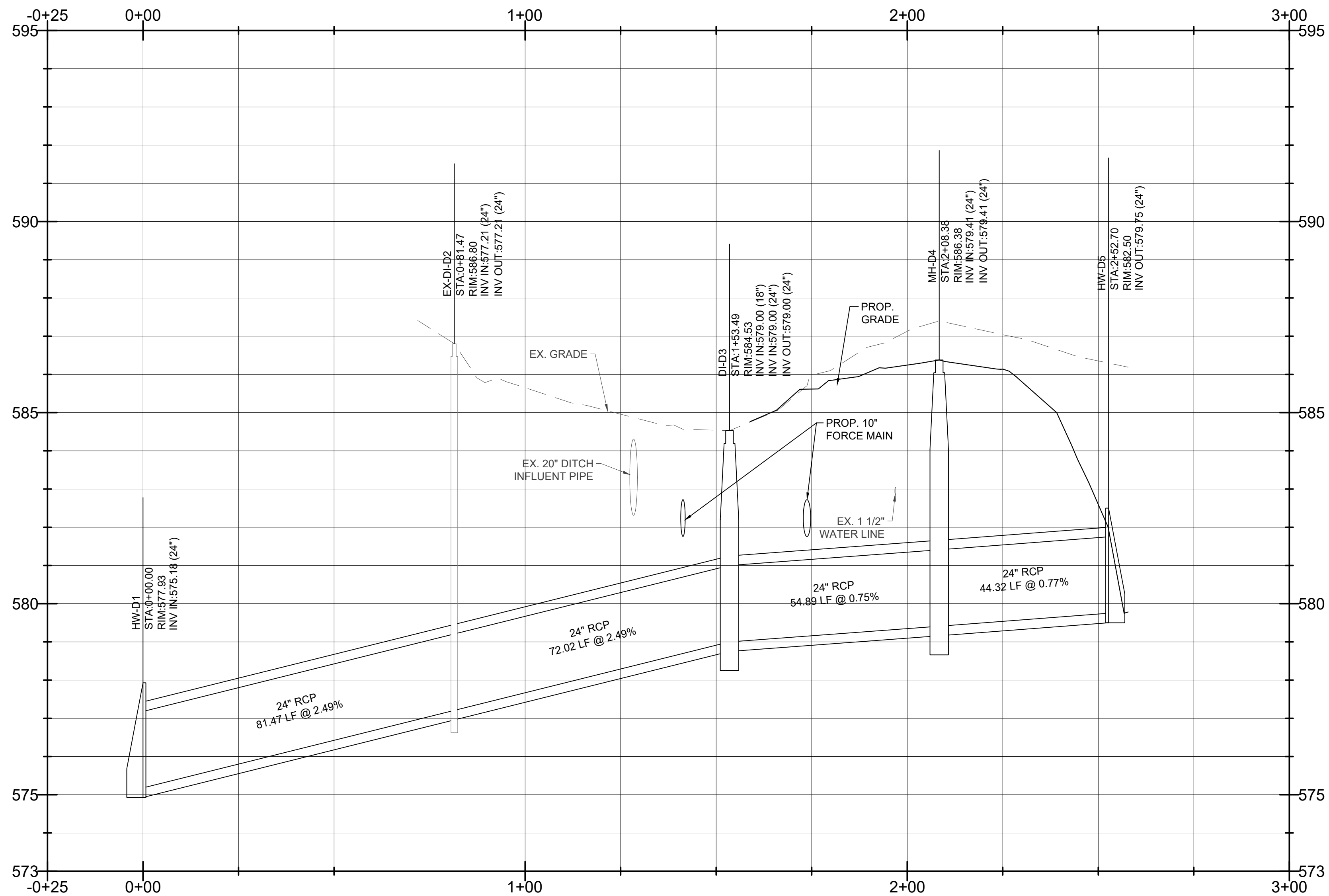
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NOTES:

- ELEVATIONS OF ALL EXISTING AND PROPOSED YARD PIPING ARE APPROXIMATE. REFER TO YARD PIPING PLAN AND PROFILE.



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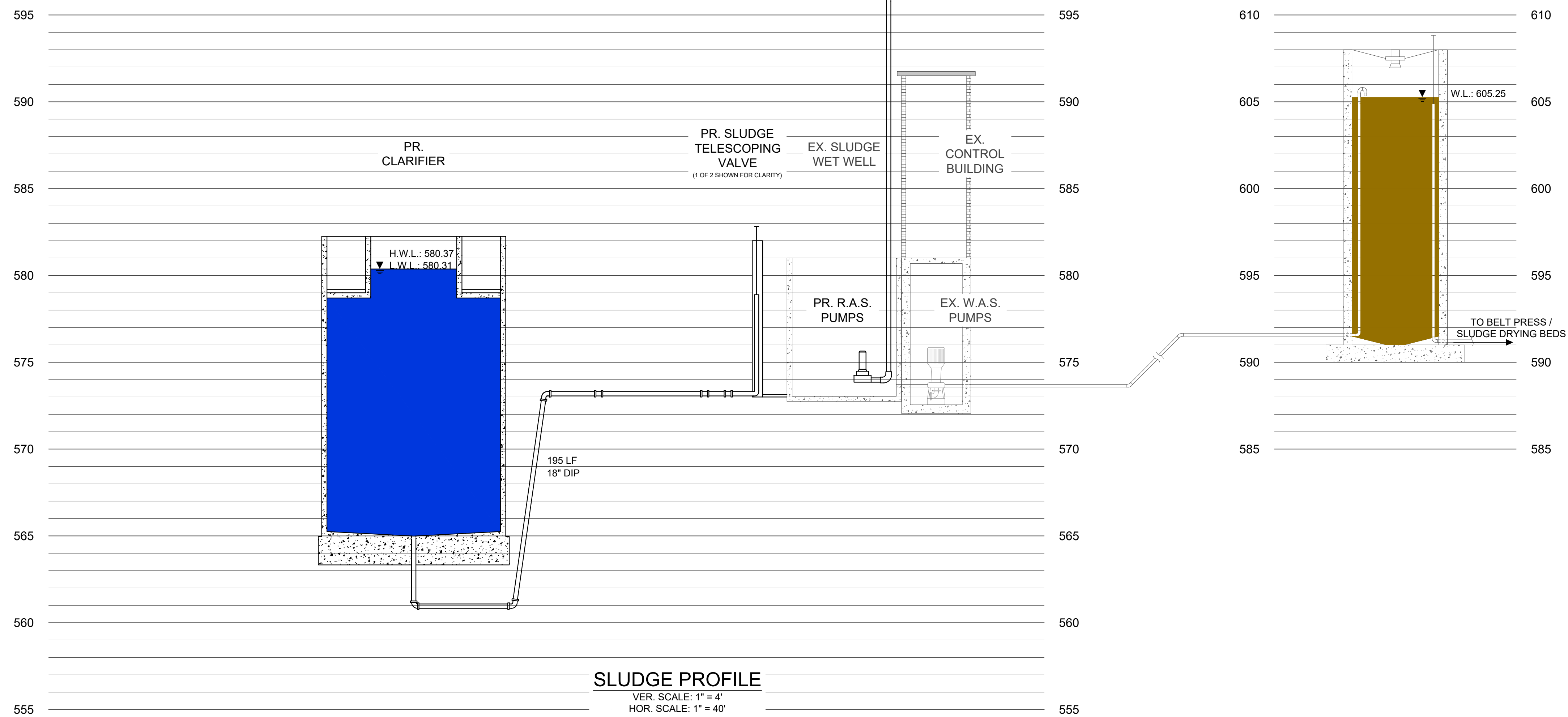
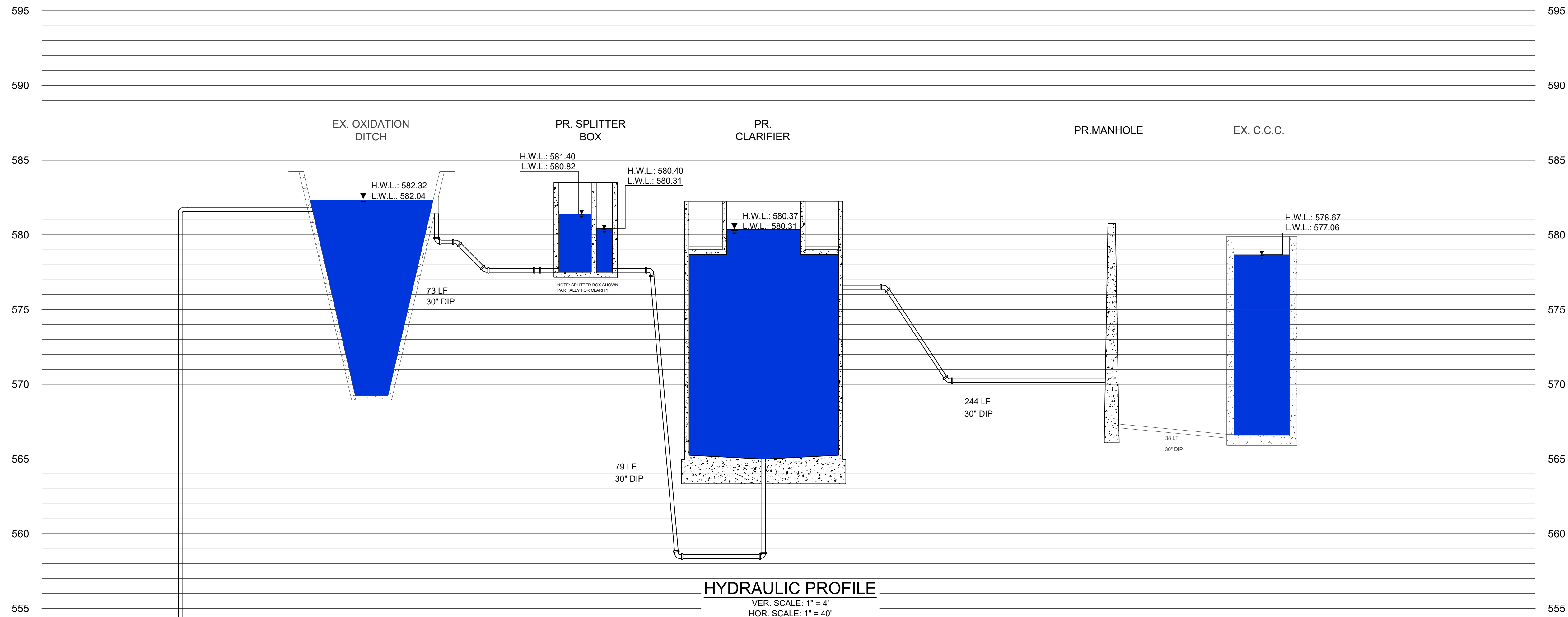
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CONTENT:
TOWN BRANCH
STORM PROFILES

SHEET NO:

C1.3

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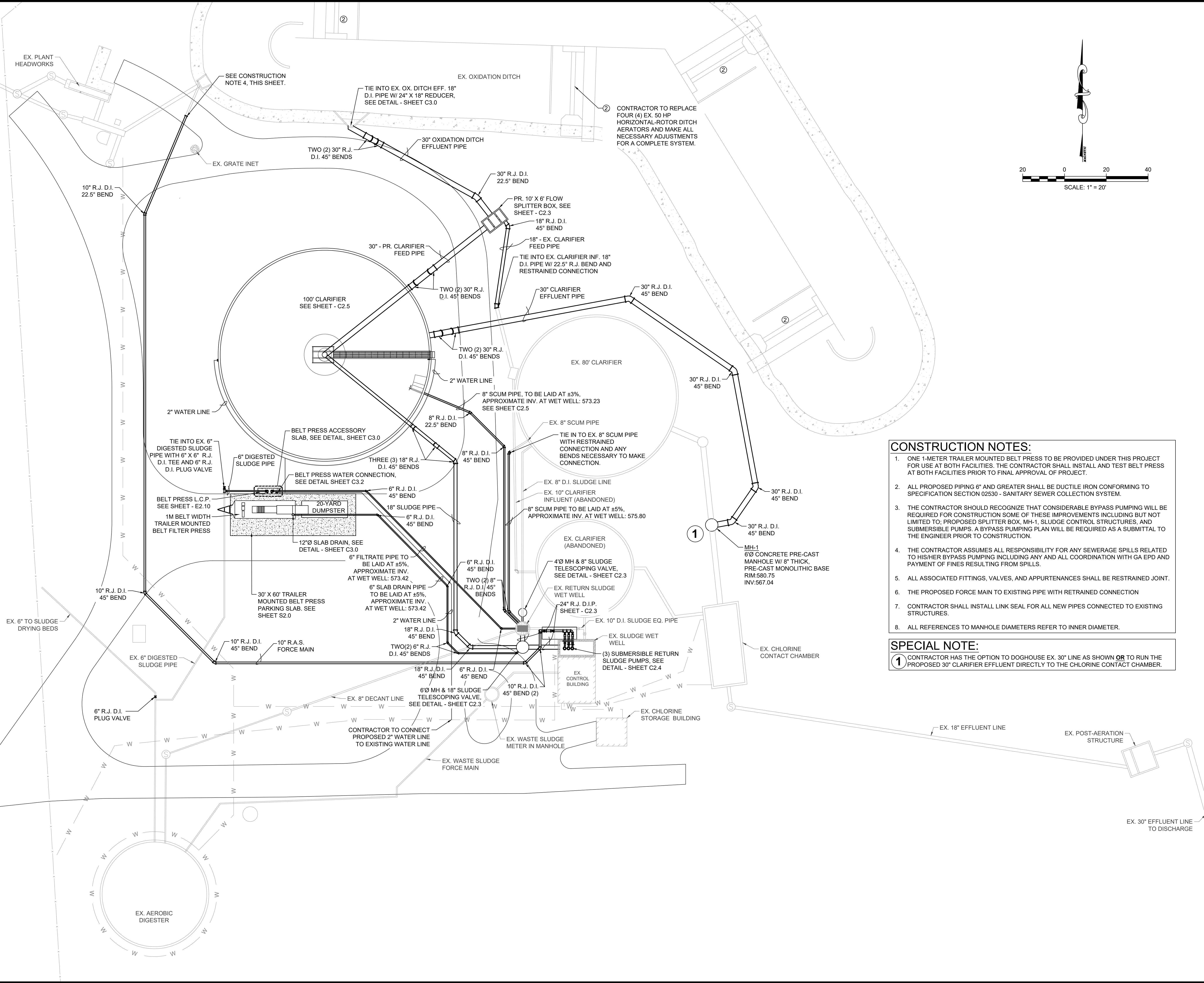
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CONTENT:
TOWN BRANCH
HYDRAULIC PROFILE

SHEET NO:

C2.0


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- CONSTRUCTION NOTES:**
- ONE 1-METER TRAILER MOUNTED BELT PRESS TO BE PROVIDED UNDER THIS PROJECT FOR USE AT BOTH FACILITIES. THE CONTRACTOR SHALL INSTALL AND TEST BELT PRESS AT BOTH FACILITIES PRIOR TO FINAL APPROVAL OF PROJECT.
 - ALL PROPOSED PIPING 6" AND GREATER SHALL BE DUCTILE IRON CONFORMING TO SPECIFICATION SECTION 02530 - SANITARY SEWER COLLECTION SYSTEM.
 - THE CONTRACTOR SHOULD RECOGNIZE THAT CONSIDERABLE BYPASS PUMPING WILL BE REQUIRED FOR CONSTRUCTION SOME OF THESE IMPROVEMENTS INCLUDING BUT NOT LIMITED TO: PROPOSED SPLITTER BOX, MH-1, SLUDGE CONTROL STRUCTURES, AND SUBMERSIBLE PUMPS. A BYPASS PUMPING PLAN WILL BE REQUIRED AS A SUBMITTAL TO THE ENGINEER PRIOR TO CONSTRUCTION.
 - THE CONTRACTOR ASSUMES ALL RESPONSIBILITY FOR ANY SEWERAGE SPILLS RELATED TO HIS/HER BYPASS PUMPING INCLUDING ANY AND ALL COORDINATION WITH GA EPD AND PAYMENT OF FINES RESULTING FROM SPILLS.
 - ALL ASSOCIATED FITTINGS, VALVES, AND APPURTENANCES SHALL BE RESTRAINED JOINT.
 - THE PROPOSED FORCE MAIN TO EXISTING PIPE WITH RETRAINED CONNECTION
 - CONTRACTOR SHALL INSTALL LINK SEAL FOR ALL NEW PIPES CONNECTED TO EXISTING STRUCTURES.
 - ALL REFERENCES TO MANHOLE DIAMETERS REFER TO INNER DIAMETER.

SPECIAL NOTE:

1 CONTRACTOR HAS THE OPTION TO DOGHOUSE EX. 30" LINE AS SHOWN **OR** TO RUN THE PROPOSED 30" CLARIFIER EFFLUENT DIRECTLY TO THE CHLORINE CONTACT CHAMBER.



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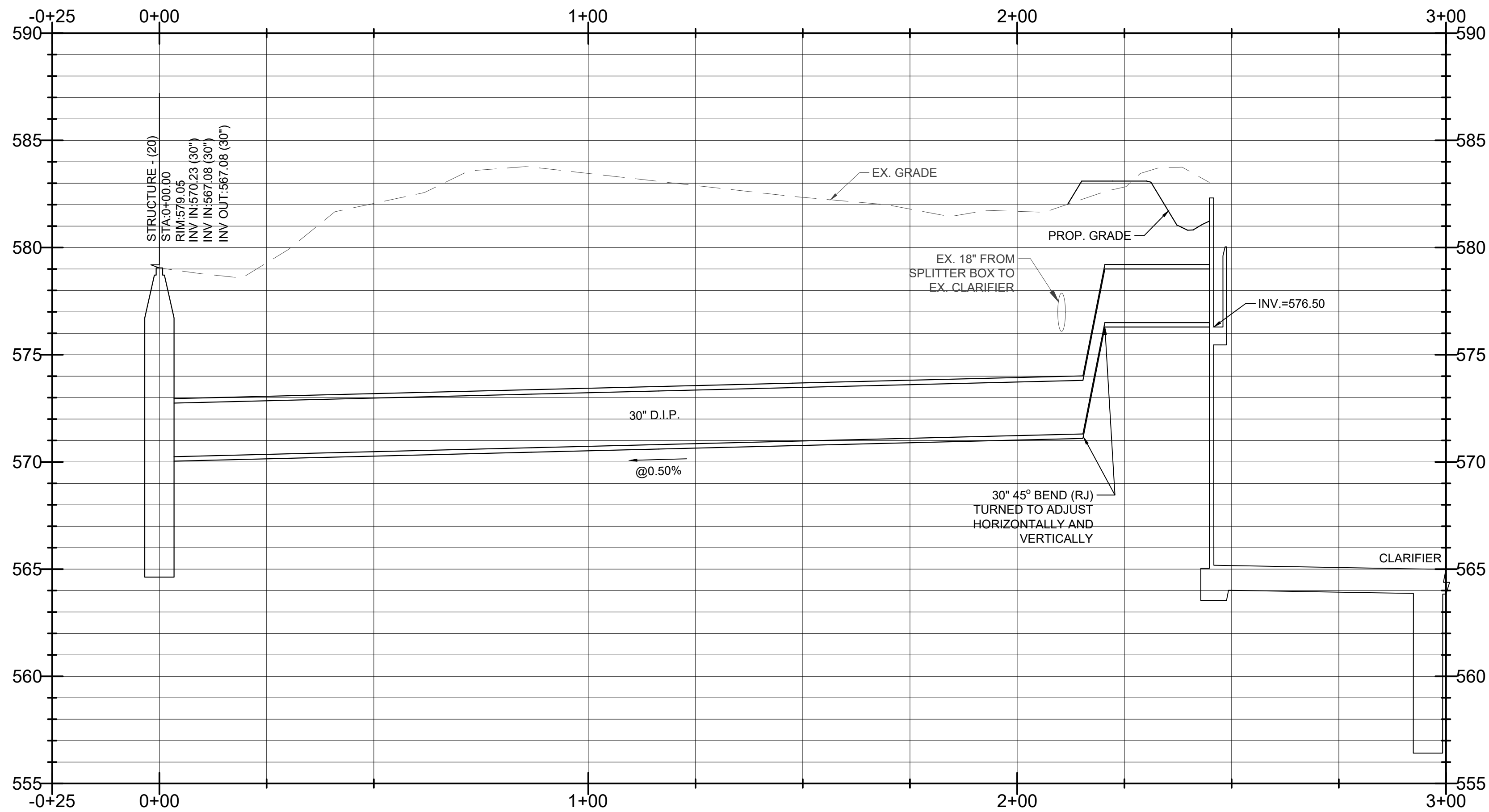
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TOWN BRANCH
GENERAL PLAN &
YARD PIPING

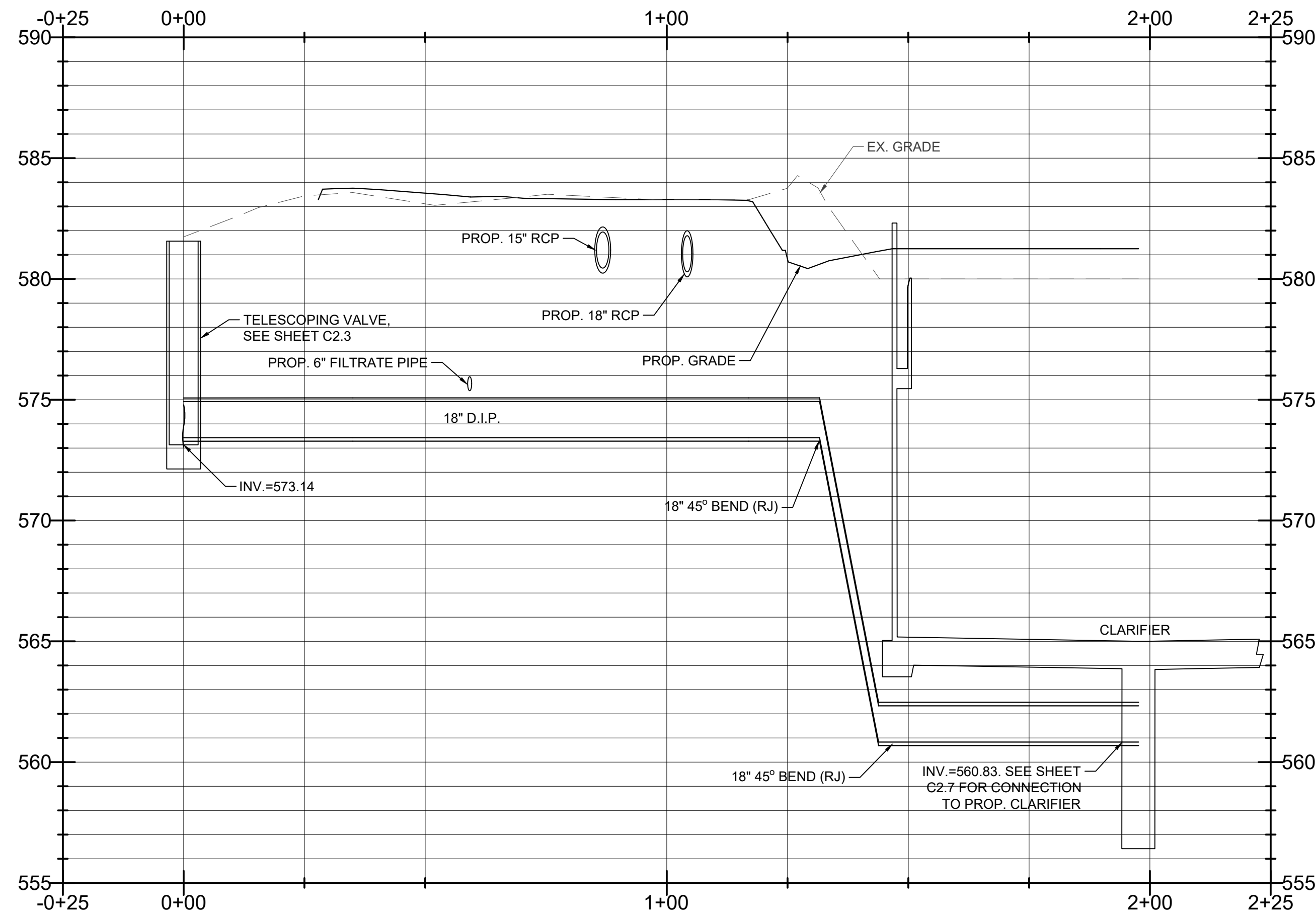
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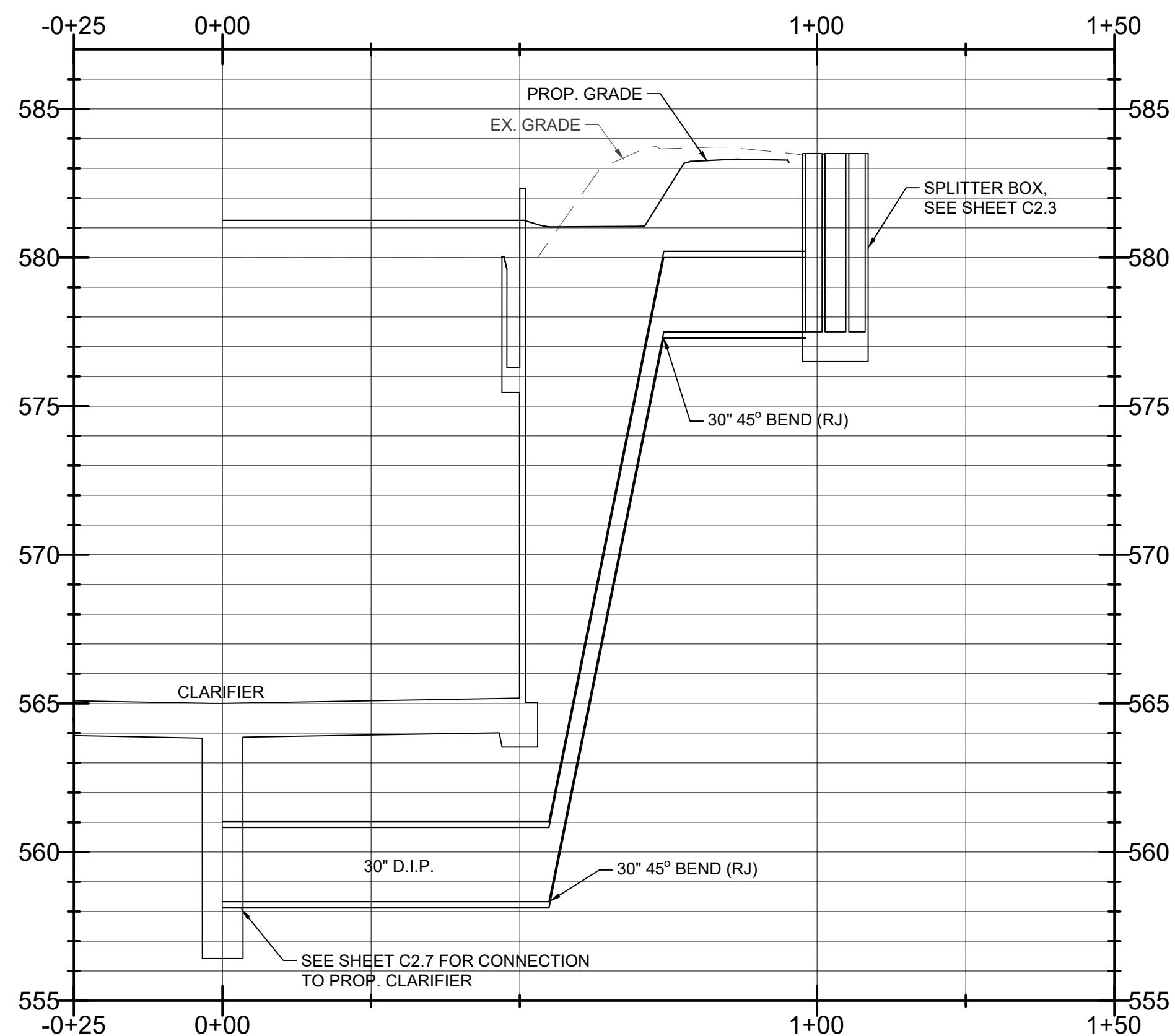
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CLARIFIER EFFLUENT PIPE



CLARIFIER SLUDGE PIPE



SPLITTER BOX TO CLARIFIER

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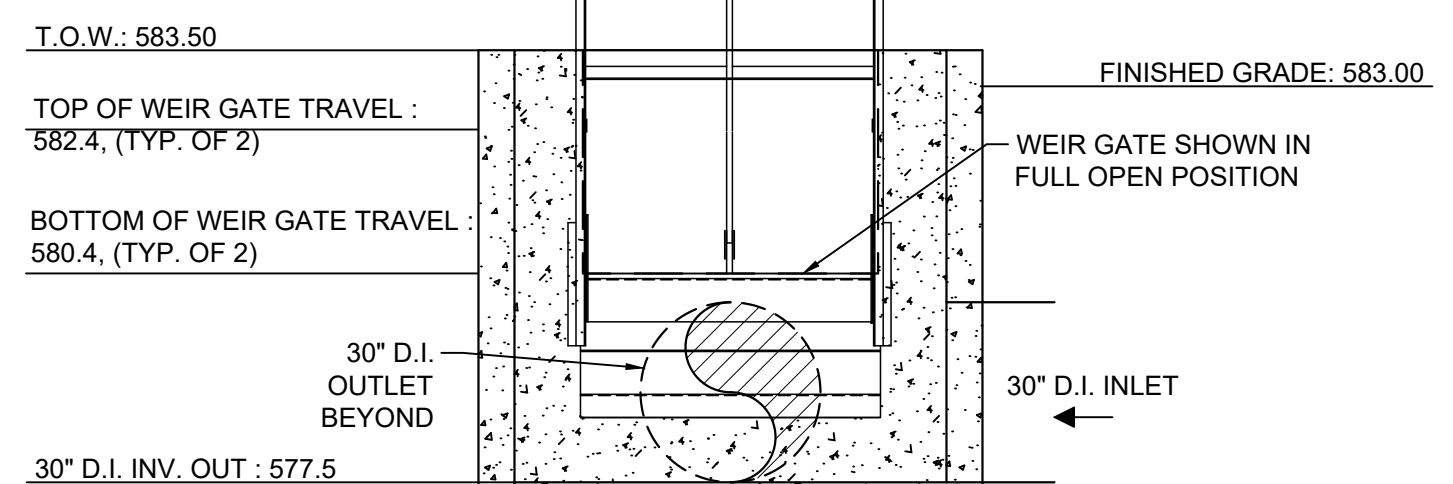
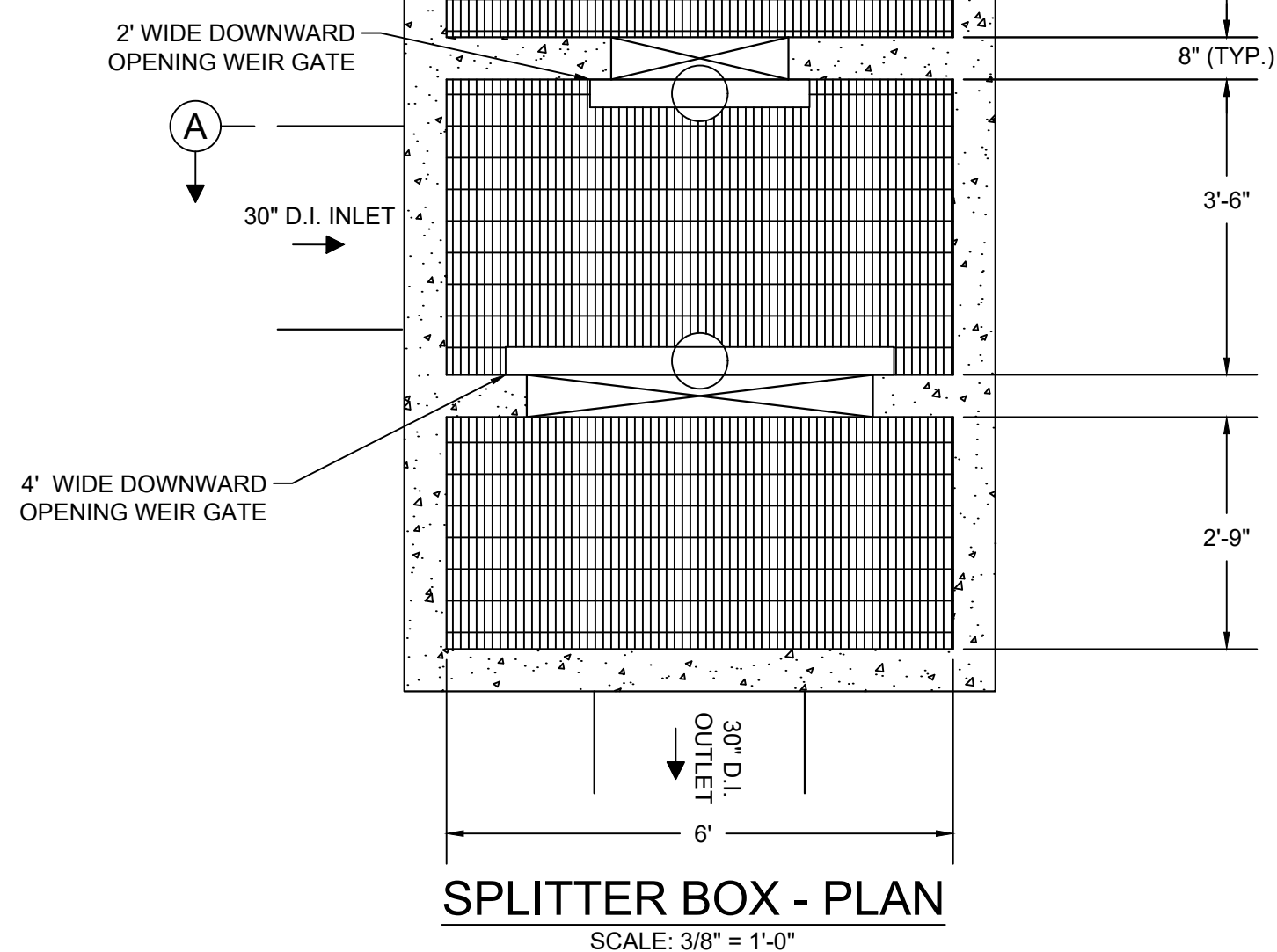
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TOWN BRANCH
YARD PIPING
PROFILES

SHEET NO:

C2.2

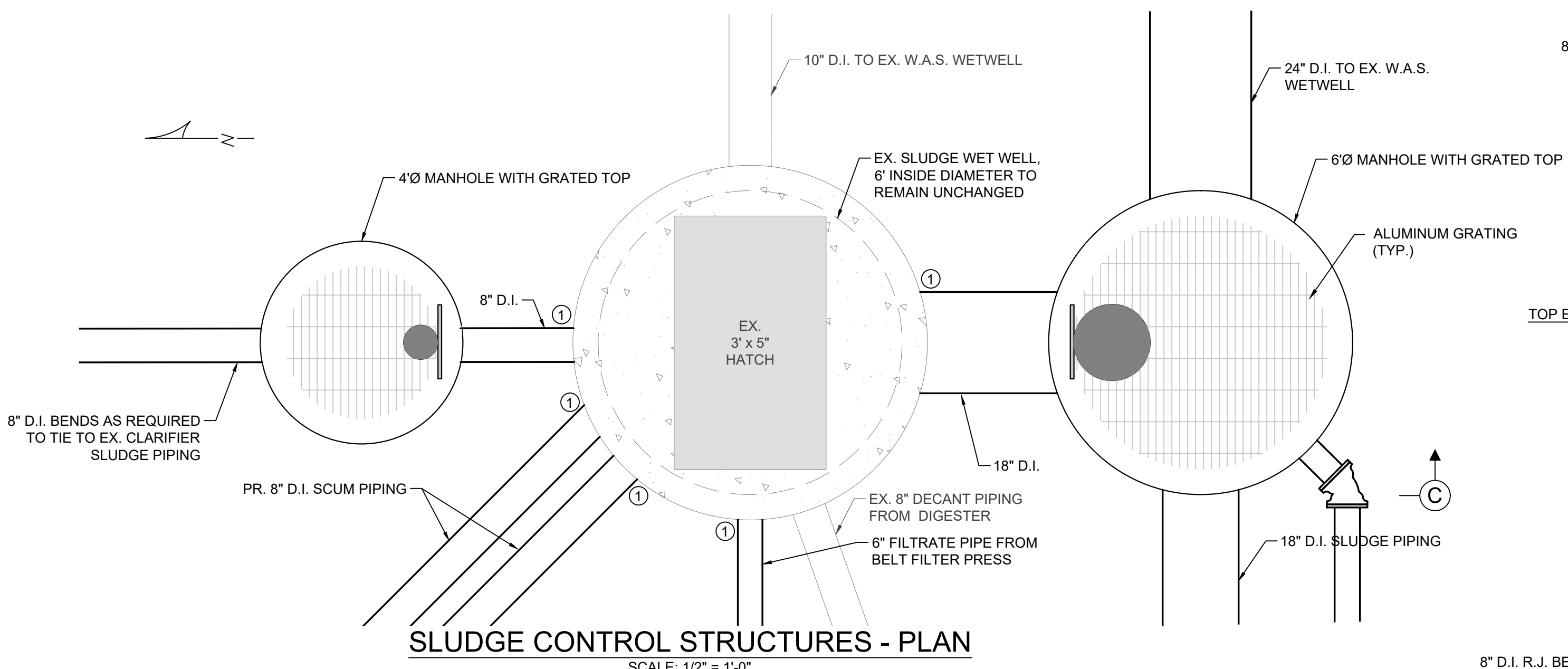
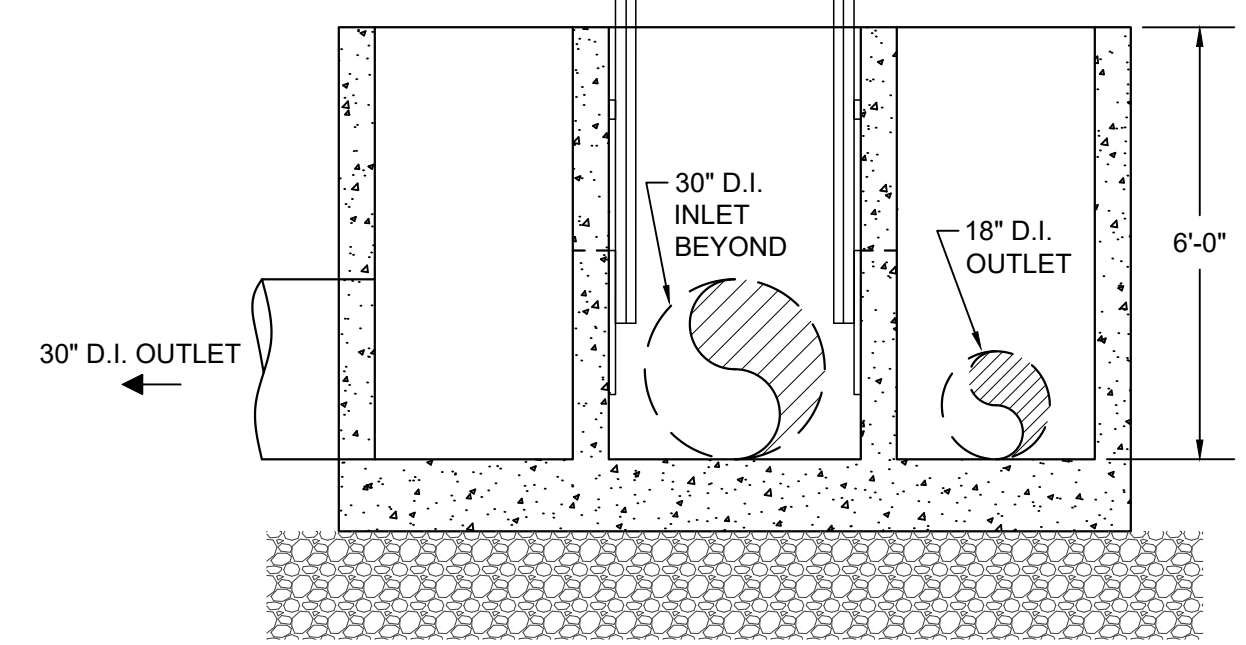
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ALUMINUM GRATING BY CONTRACTOR - MUST BE DESIGNED AND STAMPED BY A PROFESSIONAL ENGINEER REGISTERED IN THE STATE OF GEORGIA. PLANS TO BE SUBMITTED TO ENGINEER PRIOR TO FABRICATION. GRATING TO BE DESIGNED TO ALLOW FOR SEPARATE REMOVAL OVER EACH INDIVIDUAL CHAMBER OF THE STRUCTURE.

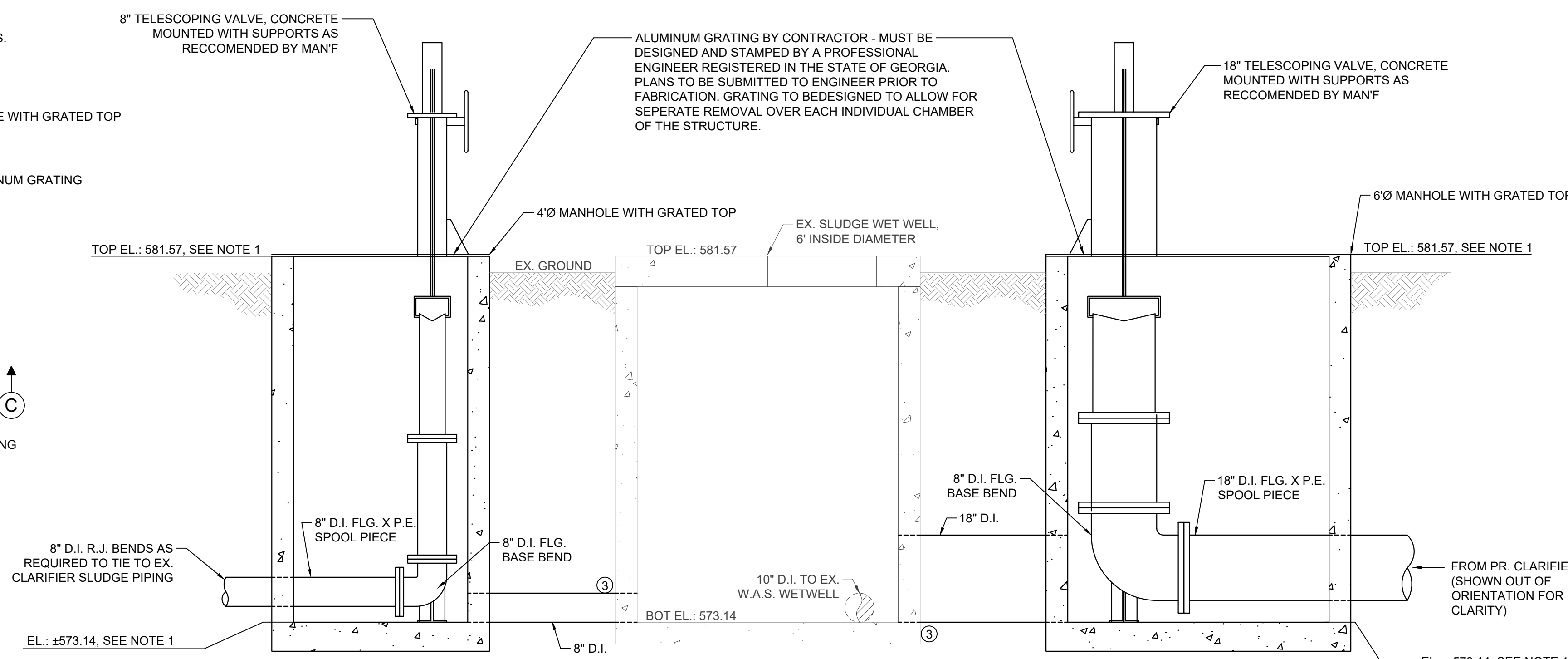


4' WIDE S.S. CONCRETE WALL MOUNTED DOWNWARD OPENING WEIR GATE WITH PEDESTAL MOUNTED GEAR BOX, REMOVABLE CRANK OPERATOR, RISING STEM WITH GRADUATED, CLEAR POLY CARBONATE STEM COVER, S.S. STEM GUIDES AS RECOMMENDED BY MAN'F & S.S. PEDESTAL BRACKET SUPPORT.

2' WIDE S.S. CONCRETE WALL MOUNTED DOWNWARD OPENING WEIR GATE WITH PEDESTAL MOUNTED GEAR BOX, REMOVABLE CRANK OPERATOR, RISING STEM WITH GRADUATED, CLEAR POLY CARBONATE STEM COVER, S.S. STEM GUIDES AS RECOMMENDED BY MAN'F & S.S. PEDESTAL BRACKET SUPPORT.



- NOTES:
- ① CONTRACTOR SHALL CORE ALL HOLES AND INSTALL LINK SEAL AND/OR HYDRAULIC CEMENT TO CREATE A LEAKPROOF SEAL.



- NOTES:
1. THE CONTRACTOR SHALL MATCH THE TOP AND BOTTOM ELEVATIONS TO THAT OF THE EXISTING SLUDGE WET WELL, THE APPROXIMATE ELEVATIONS ARE GIVEN ABOVE BUT SHALL BE FIELD VERIFIED.
2. ALL REFERENCES TO MANHOLE DIAMETERS REFER TO INNER DIAMETER.
- ③ CONTRACTOR SHALL CORE ALL HOLES AND INSTALL LINK SEAL AND/OR HYDRAULIC CEMENT TO CREATE A LEAKPROOF SEAL.

**USDA SEWER SYSTEM
IMPROVEMENTS - CONTRACT A
WPCP UPGRADES**

FOR THE
CITY OF THOMASTON

REVISIONS	NO.	DESCRIPTION	DATE

BID SET

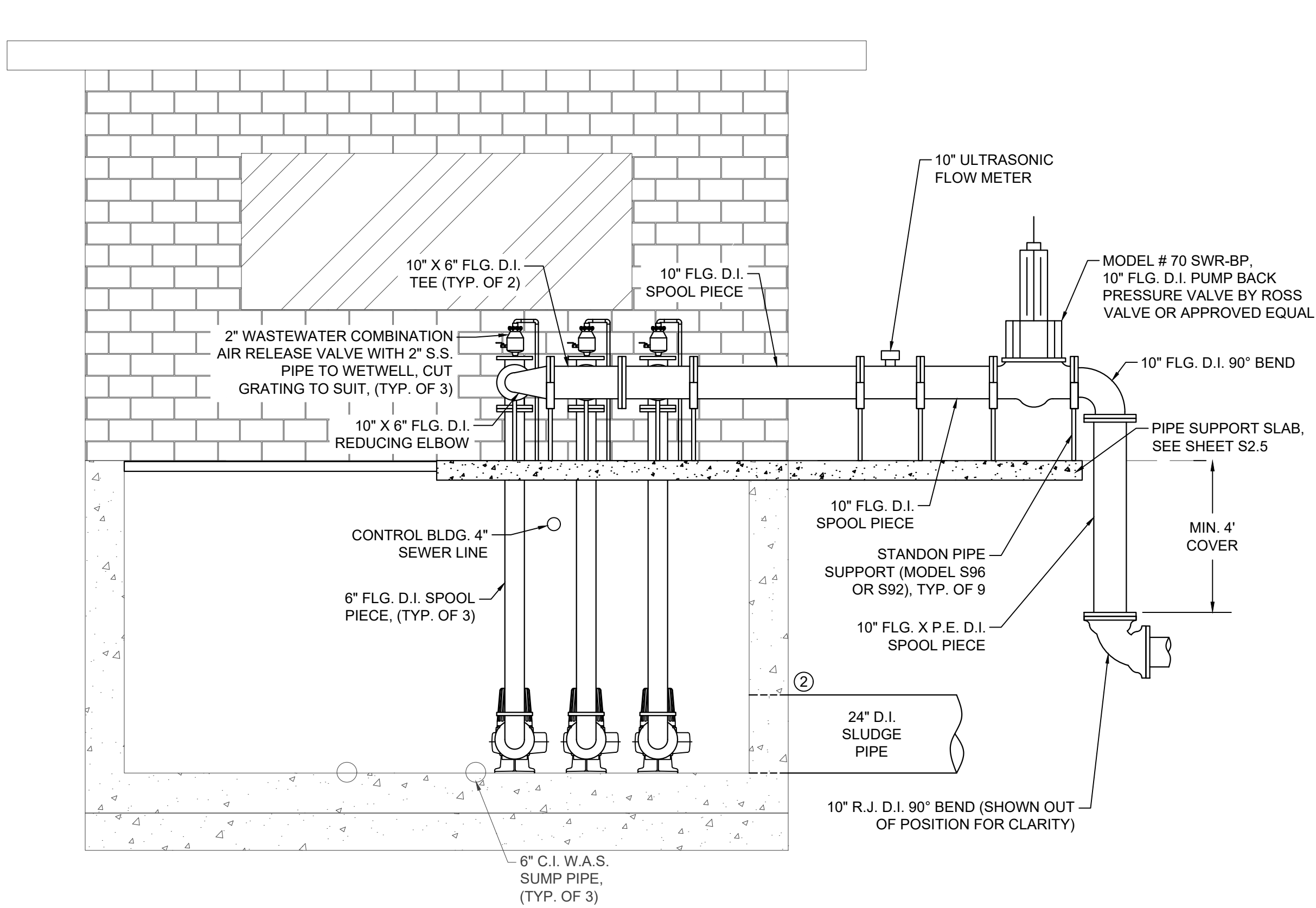


DRAWN BY: WLN
CHECKED BY: ABG
DATE: DEC 2020
SCALE: AS NOTED

CONTENT:
**TOWN BRANCH
SPLITTER BOX &
SLUDGE CONTROL
STRUCTURES**

SHEET NO:
C2.3

Last Saved By: 03/21/18
Plotted: 12/11/2020 2:03 PM
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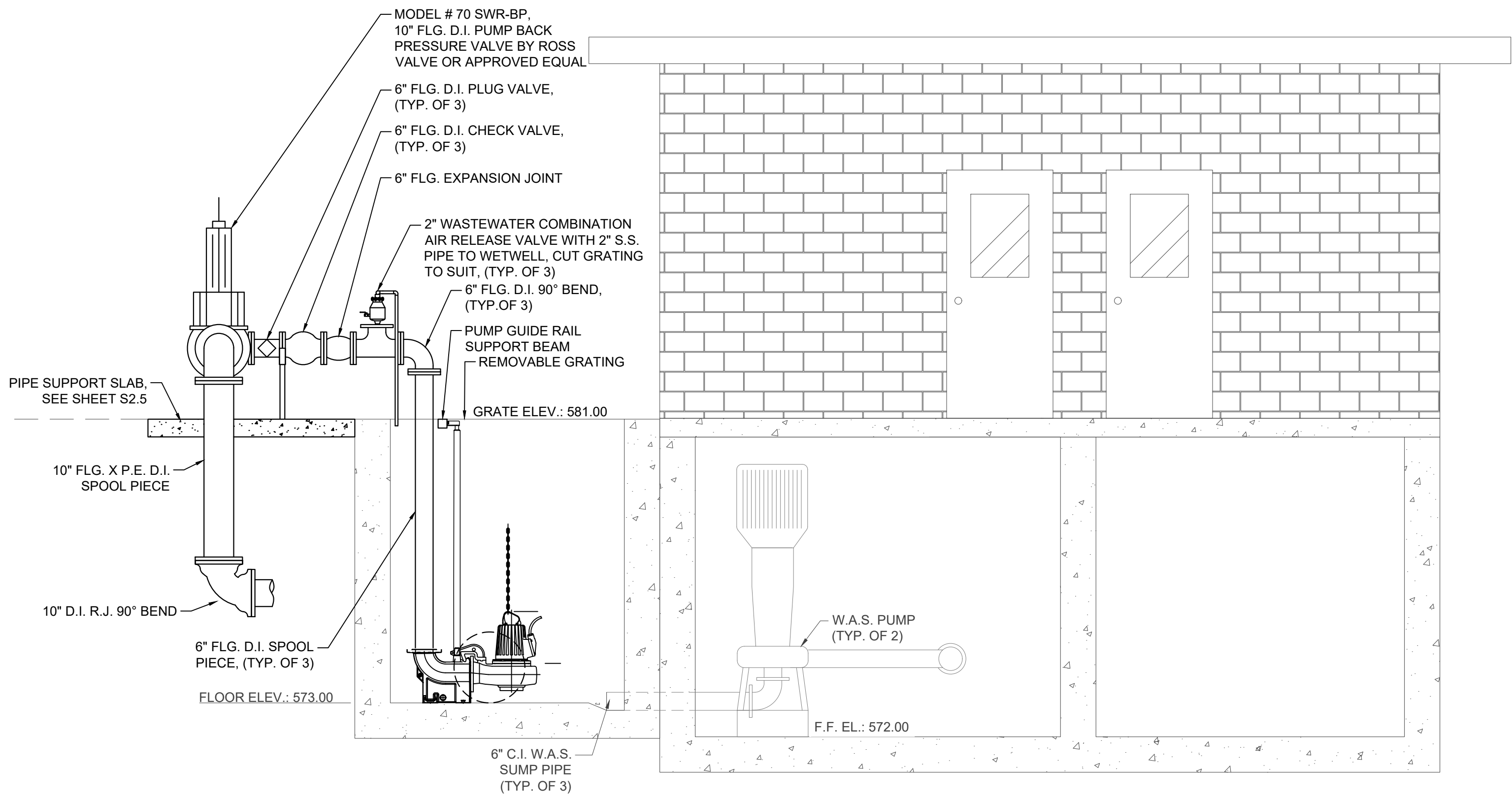


NOTES:

1. FLOW METER SHALL BE 10" ULTRA MAG METER BY MICROMETER.
2. CONTRACTOR SHALL CORE ALL HOLES AND INSTALL LINK SEAL AND/OR HYDRAULIC CEMENT TO CREATE A LEAKPROOF SEAL.

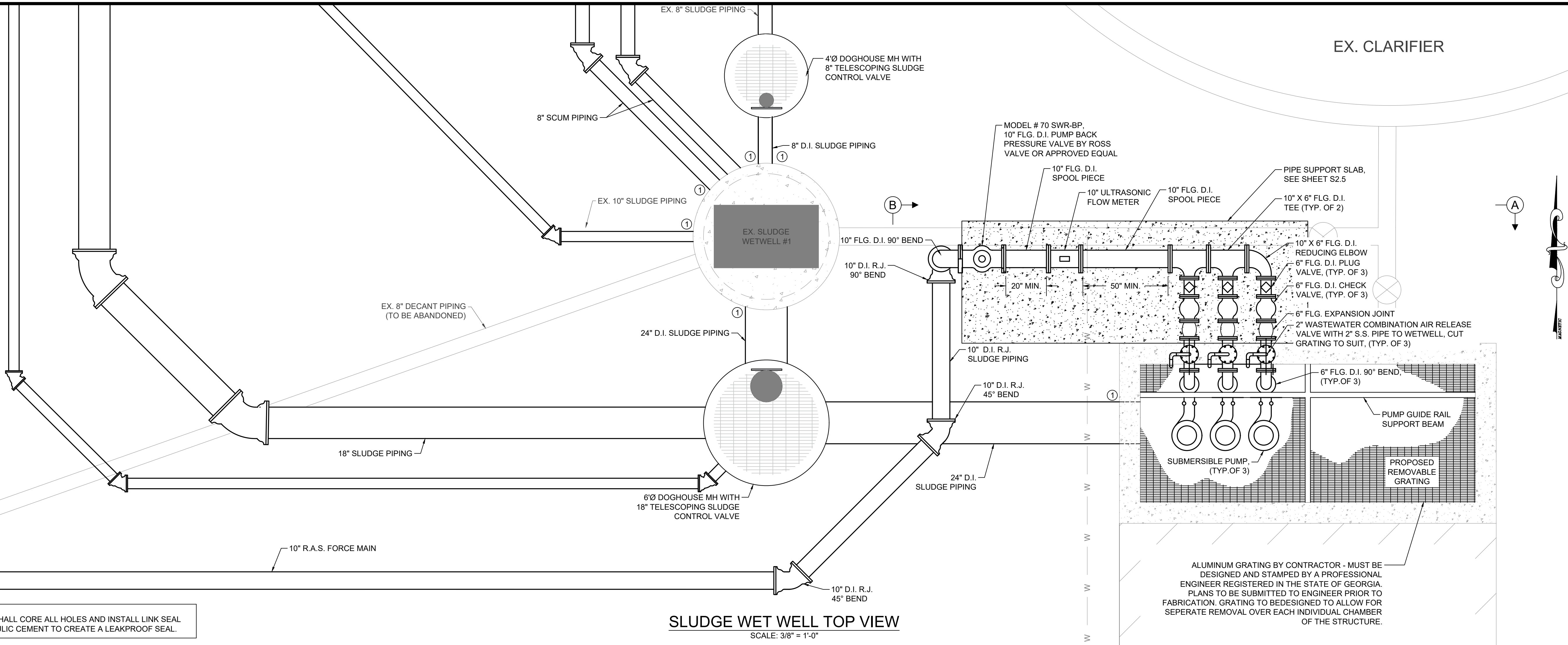
SLUDGE WET WELL - NORTH ELEVATION

SCALE: 3/8" = 1'-0"



SLUDGE WET WELL - WEST ELEVATION

SCALE: 3/8" = 1'-0"



SLUDGE WET WELL TOP VIEW

SCALE: 3/8" = 1'-0"

- NOTE:
1. CONTRACTOR SHALL CORE ALL HOLES AND INSTALL LINK SEAL AND/OR HYDRAULIC CEMENT TO CREATE A LEAKPROOF SEAL.



REVISIONS	NO.	DESCRIPTION	DATE

BID SET

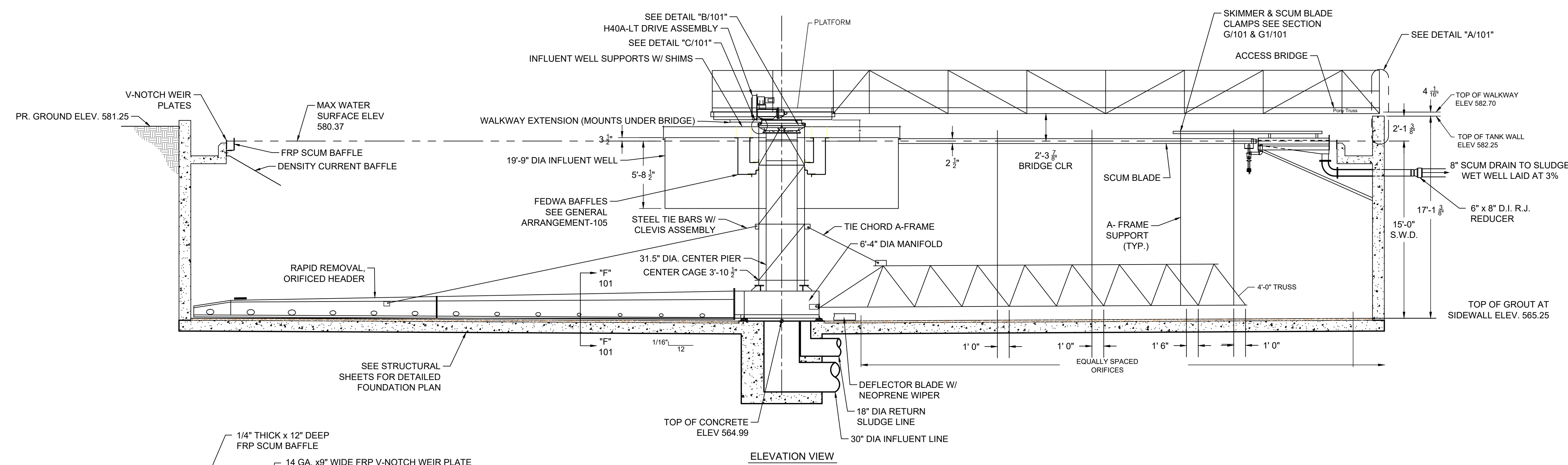
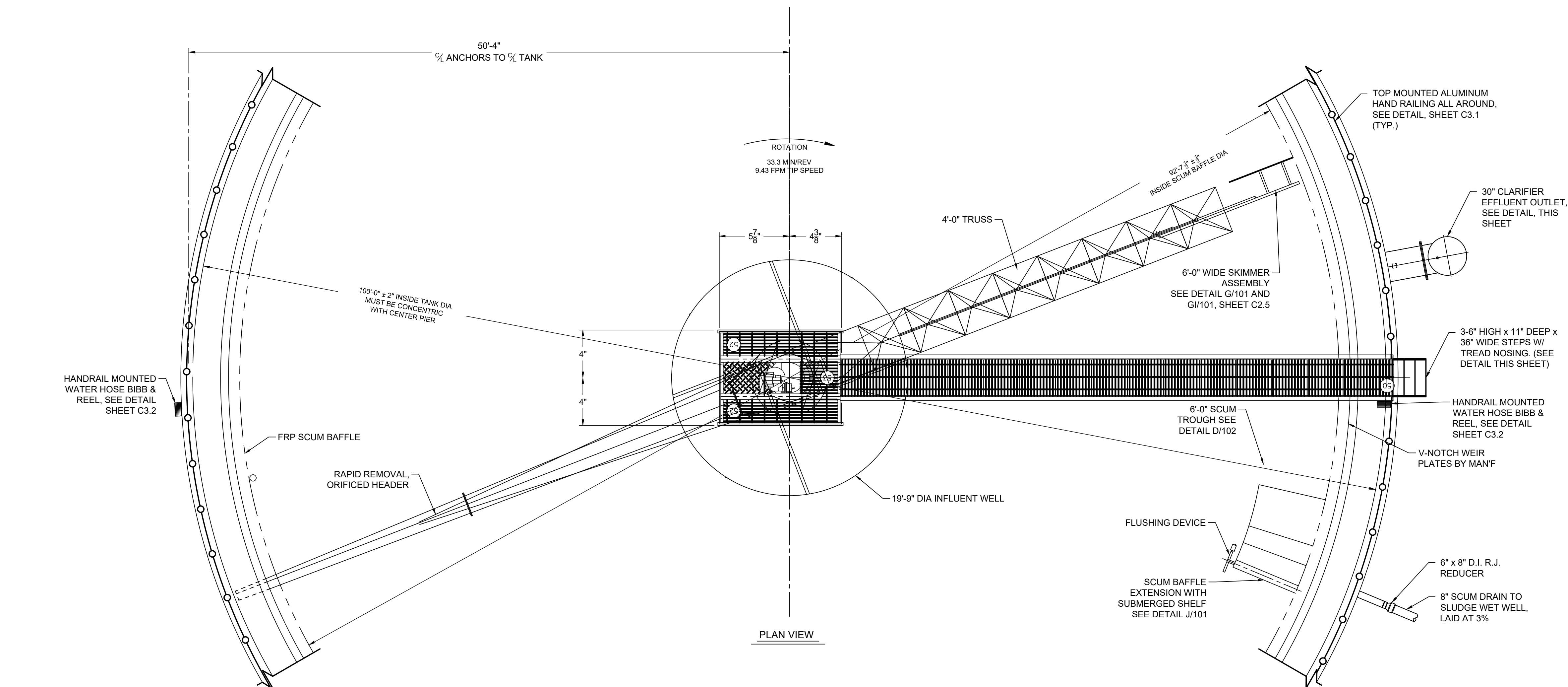


DRAWN BY: WLN
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DATE: DEC 2020
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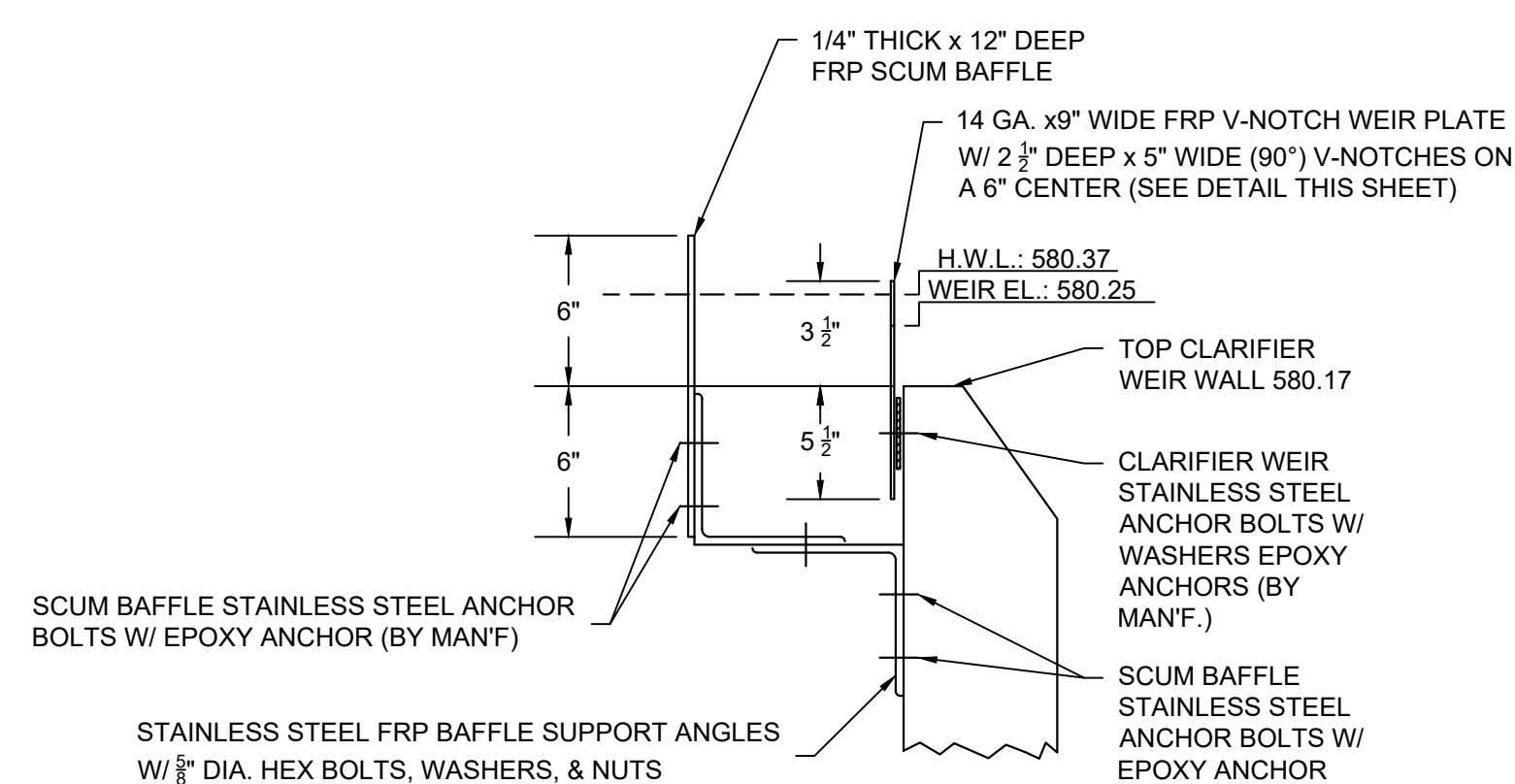
CONTENT:
TOWN BRANCH
SLUDGE PUMPING
SYSTEM

SHEET NO:

C2.4



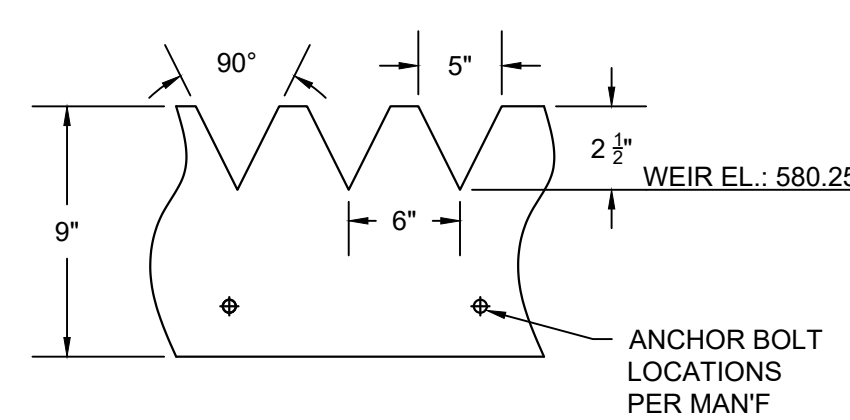
CLARIFIER PLAN & SECTION



V-NOTCH WEIR & SCUM BAFFLE

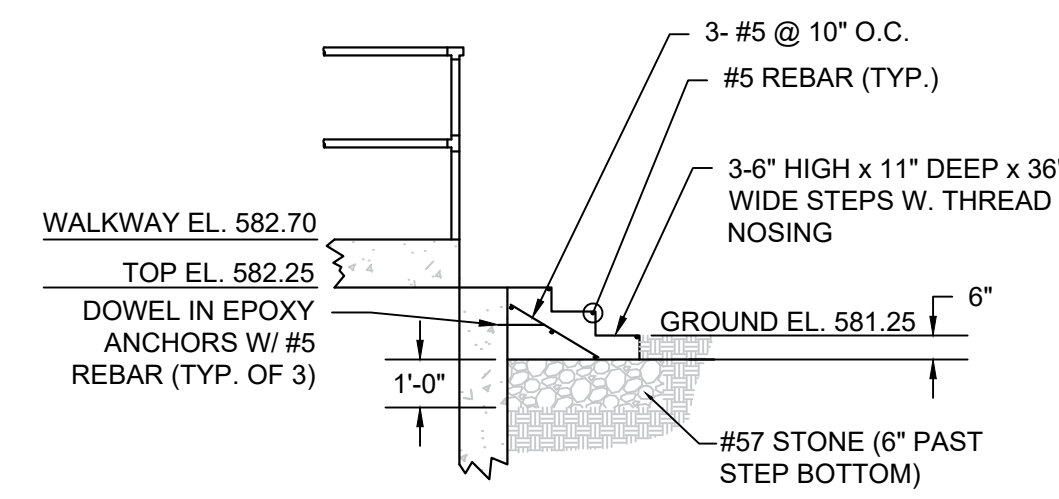
INSTALLATION DETAIL

N.T.S.

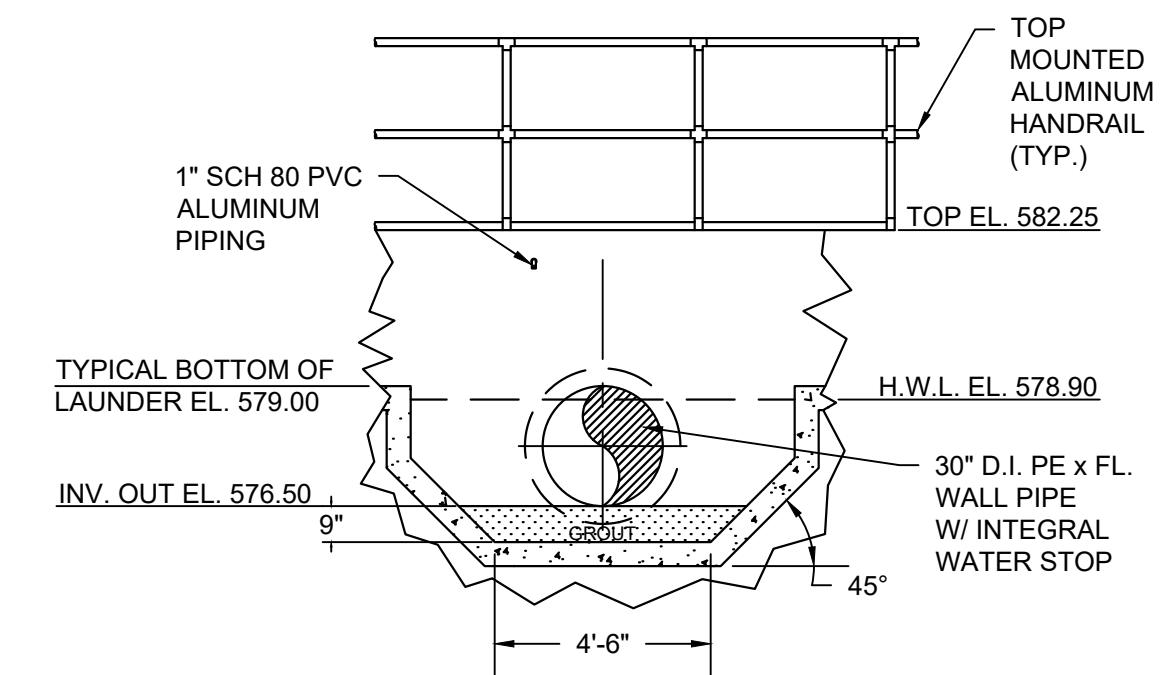


FRP V-NOTCH WEIR DETAIL

N.T.S.

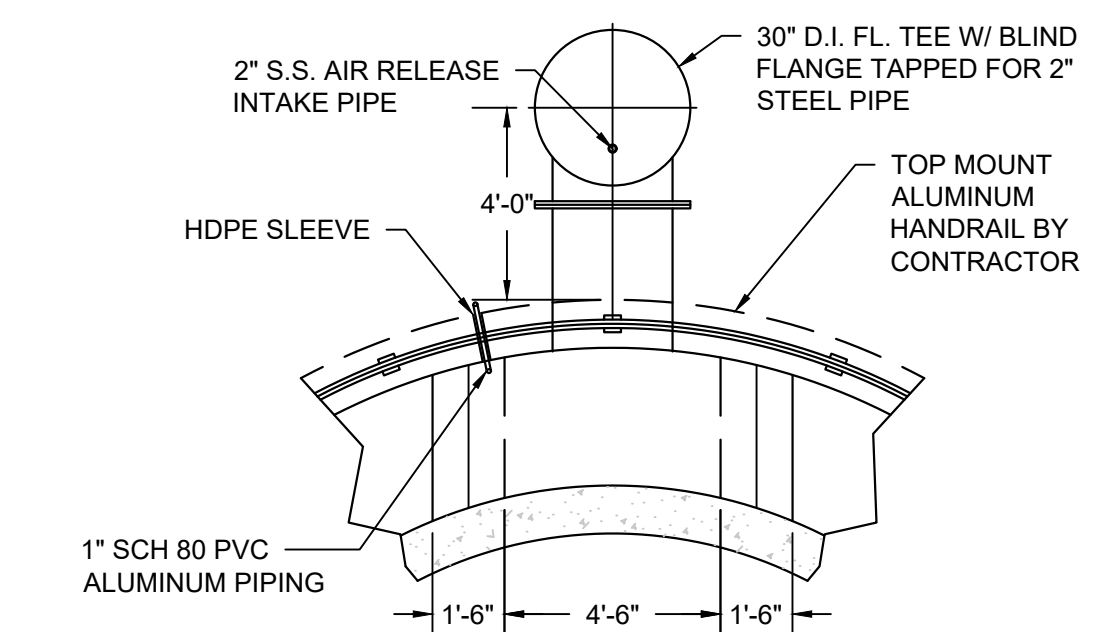


STEPS TO WALKWAY
SCALE: 1/4"=1'



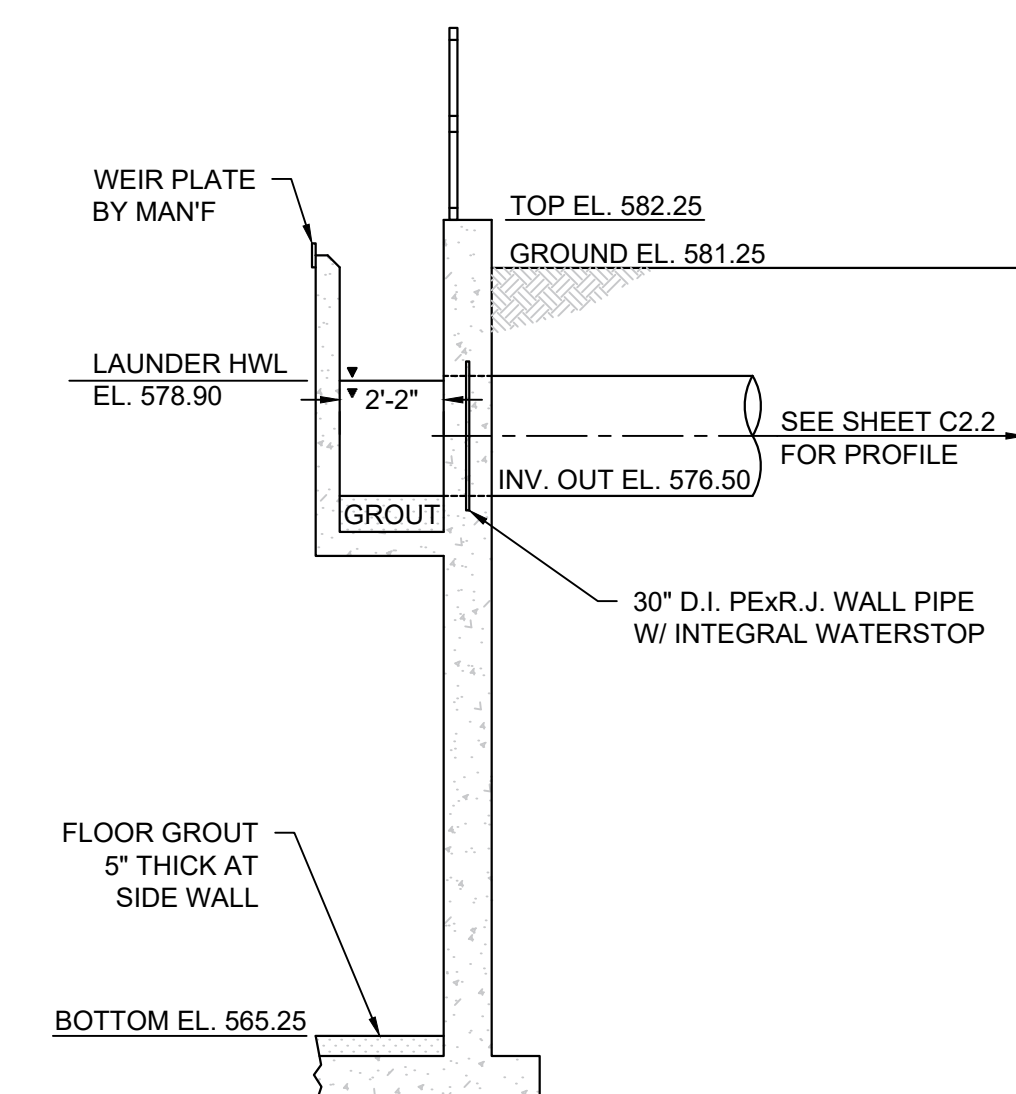
CLARIFIER OUTLET PIPE CROSS-SECTION

SCALE: 1/4"=1'

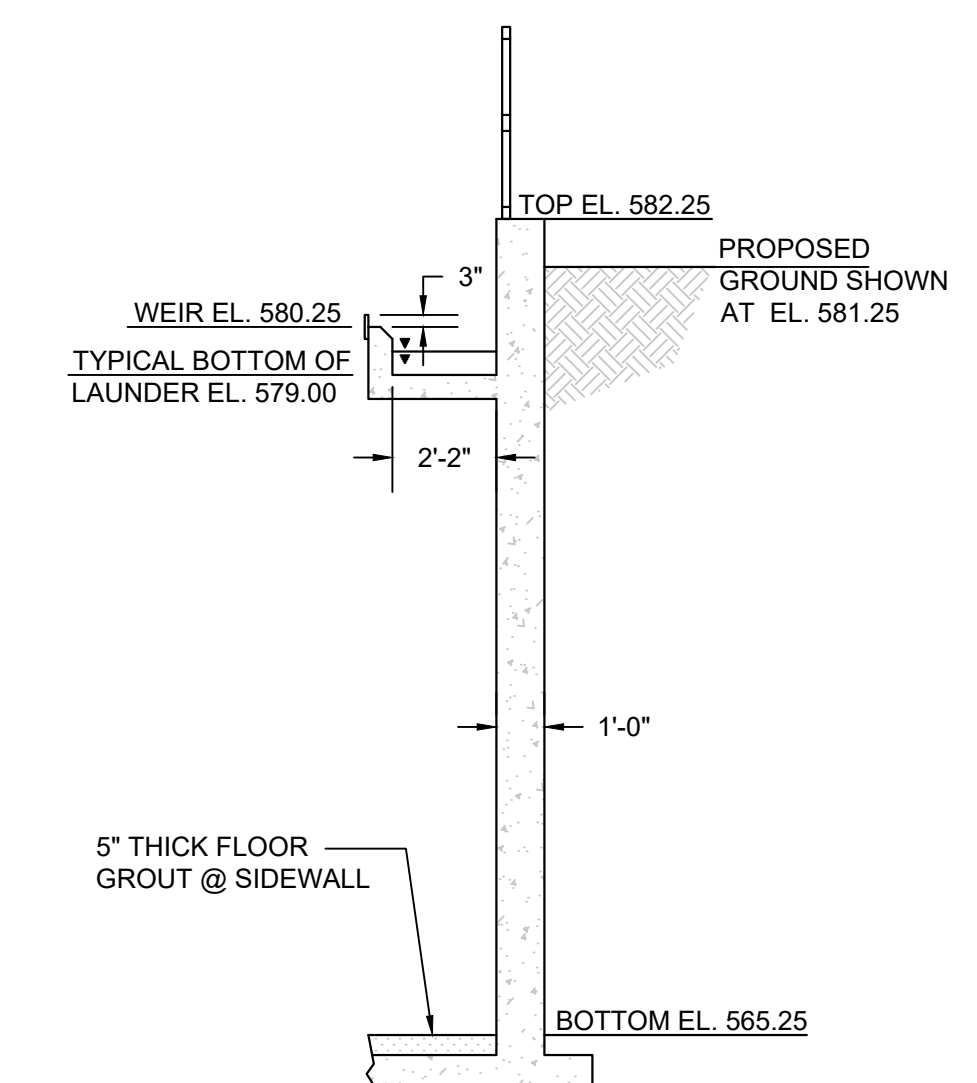


CLARIFIER OUTLET PIPE TOP VIEW

SCALE: 1/4"=1'



CLARIFIER WALL OUTLET PIPE SECTION
SCALE: 1/4"=1'



CLARIFIER WALL TYPICAL SECTION
SCALE: 1/4"=1'

REVISIONS		DATE
NO.	DESCRIPTION	

BID SET



DRAWN BY: WLN
CHECKED BY: ABG
DATE: DEC 2020
SCALE: AS NOTED

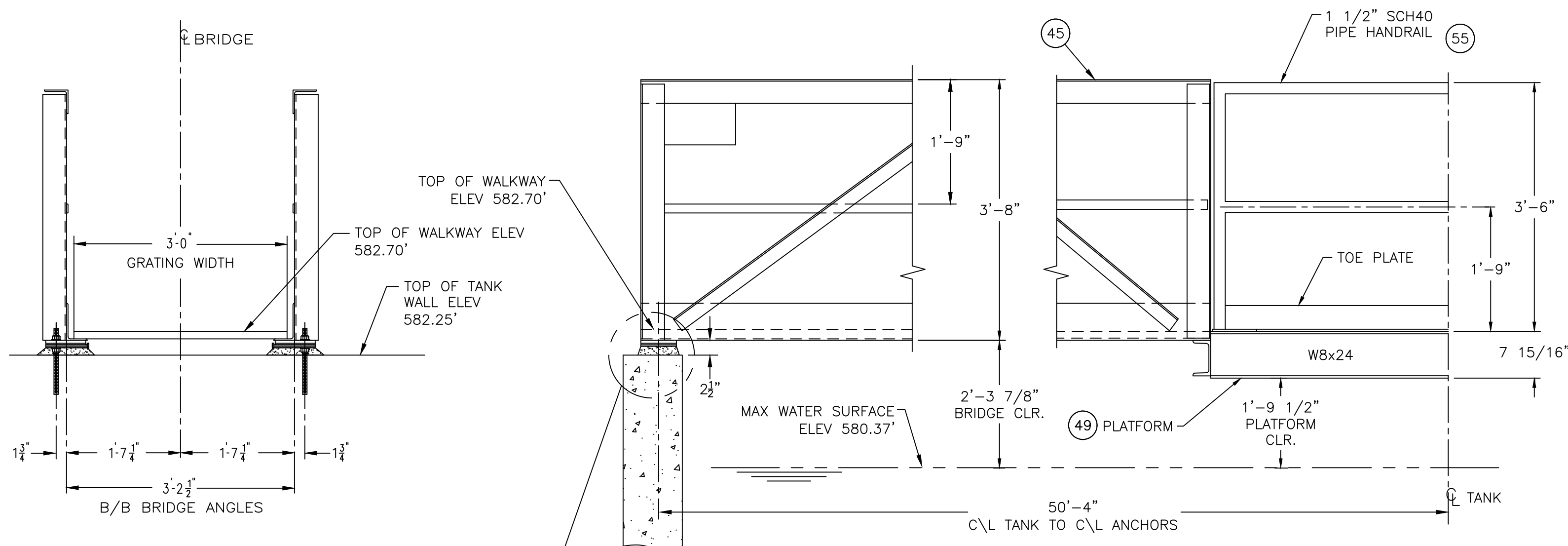
CONTENT:

**TOWN BRANCH
CLARIFIER PLAN
& SECTION**

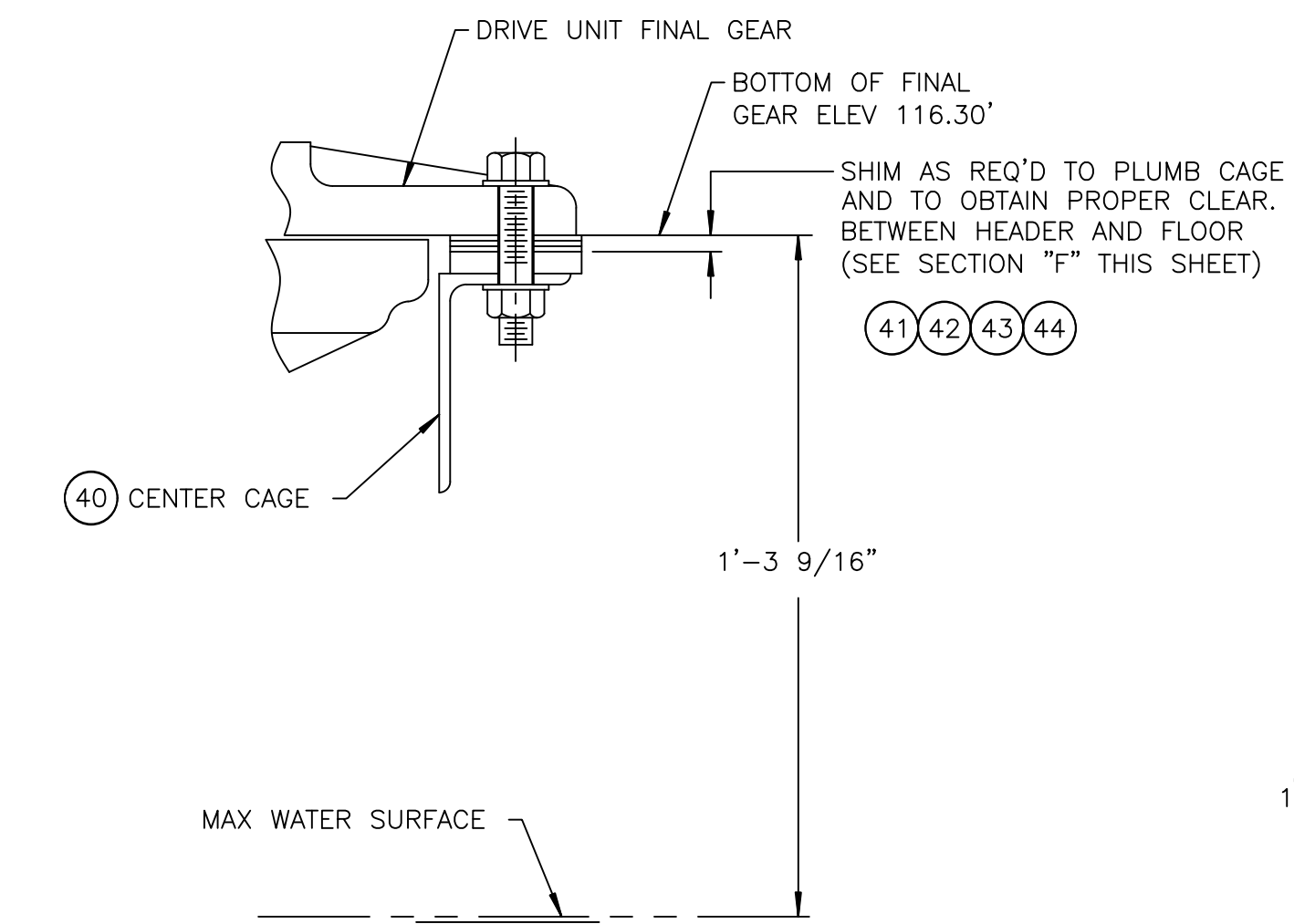
SHEET NO:

C2.5

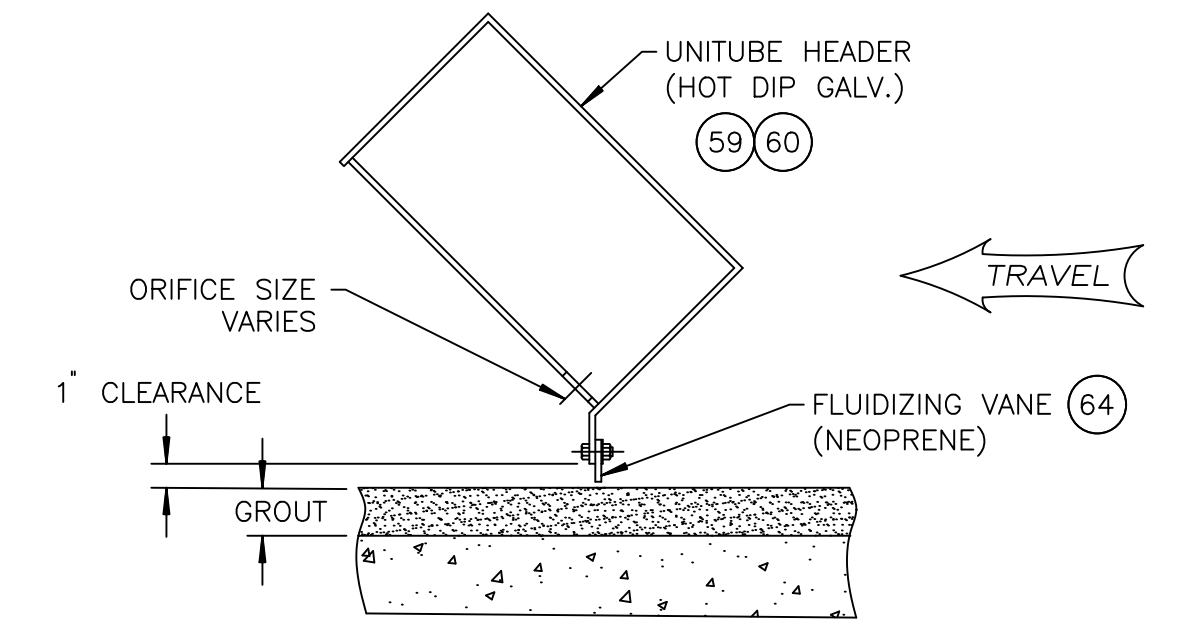
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Plotted: 12/11/2020 2:06 PM



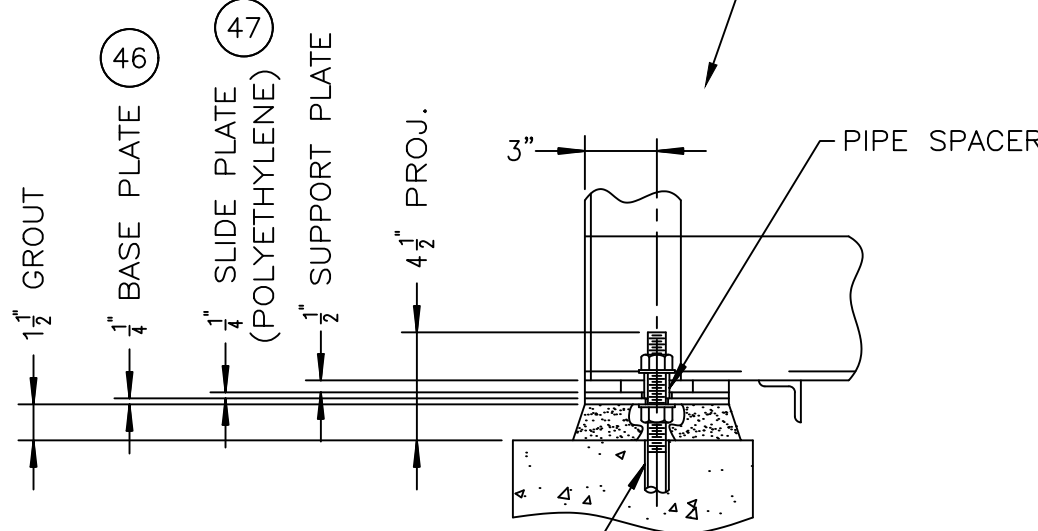
DETAIL "A/101"



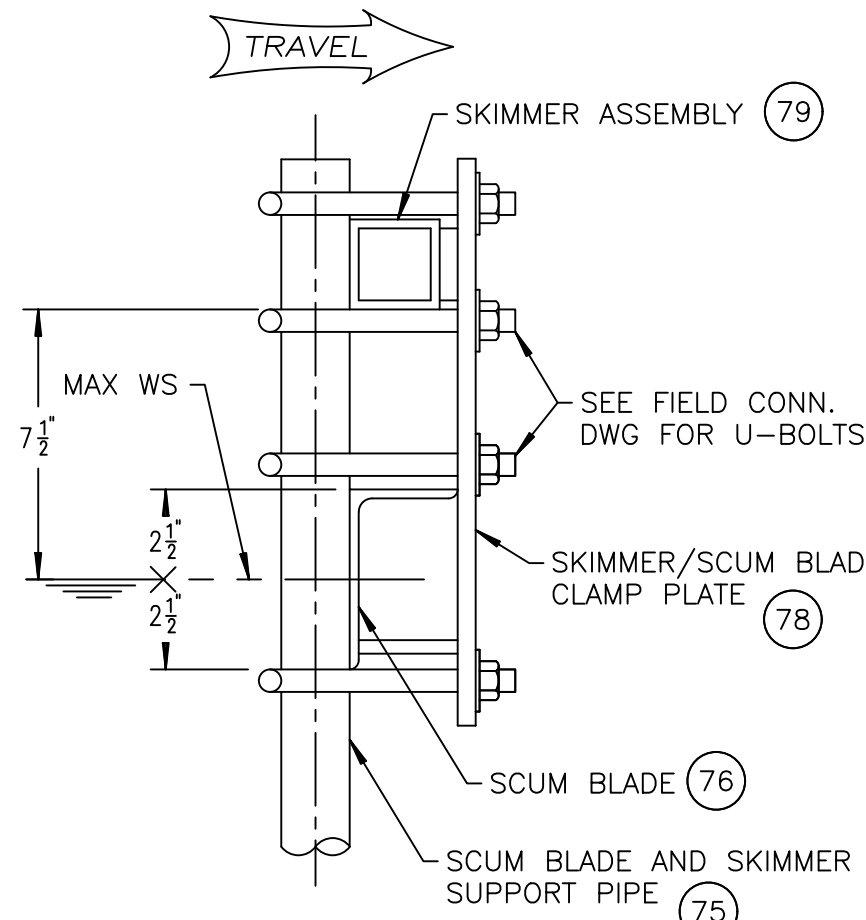
DETAIL "C/101"



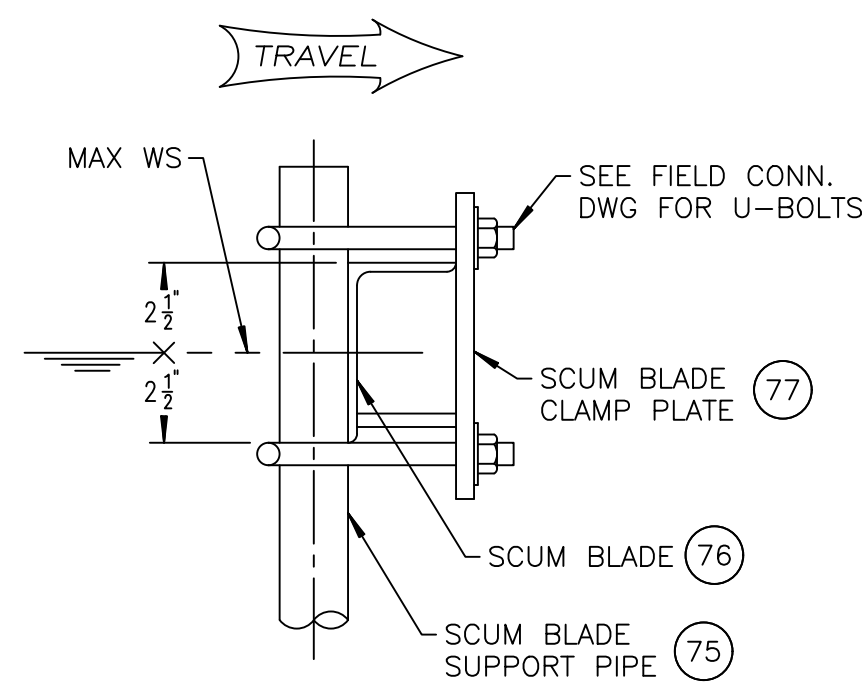
SECTION "F/101"



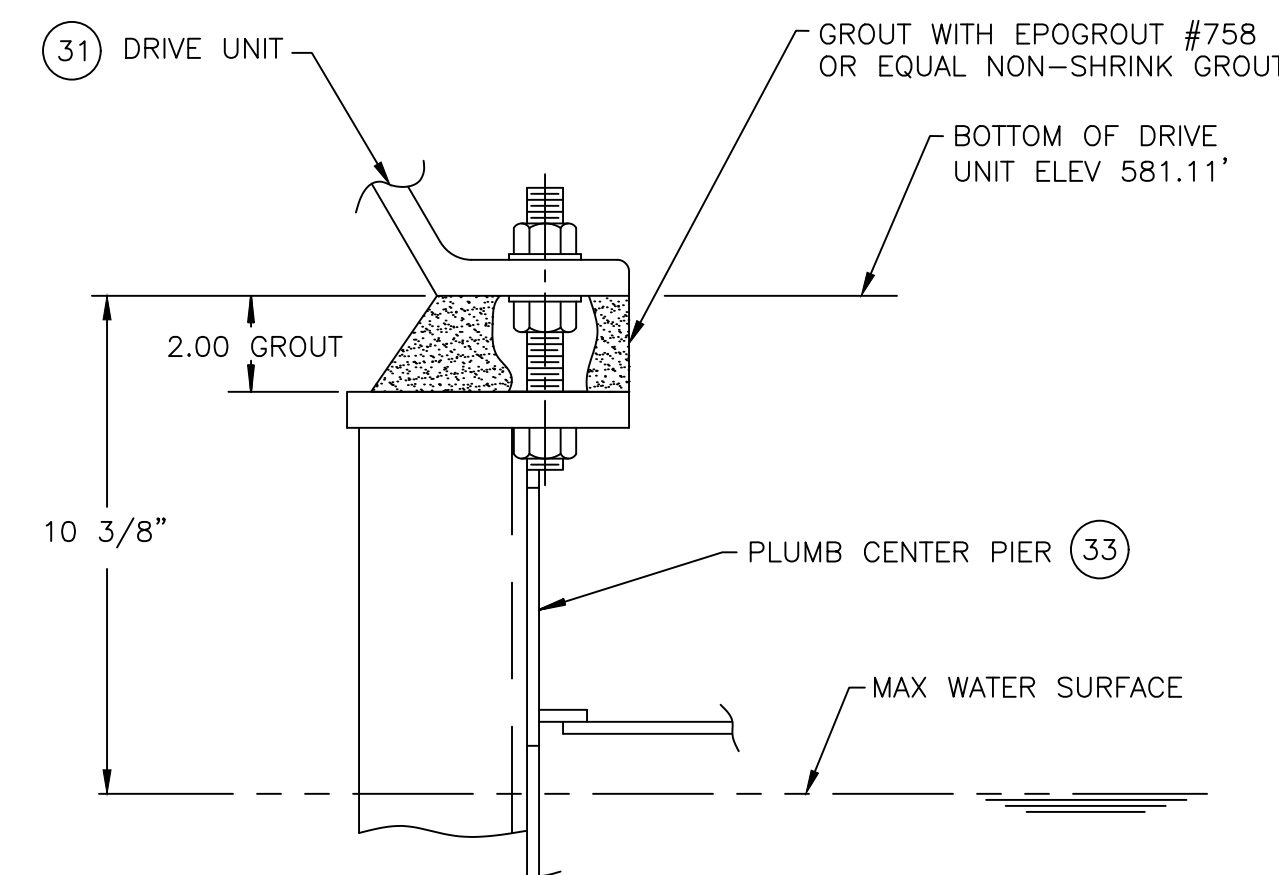
DRILL (2) 7/8" DIA x 6-5/8" DEEP HOLES IN CONCRETE FOR 3/4" DIA x 11-1/8" LG THREADED ROD (316SS) & INJECTION ADHESIVE (FURNISHED BY Evoqua Water Technologies)



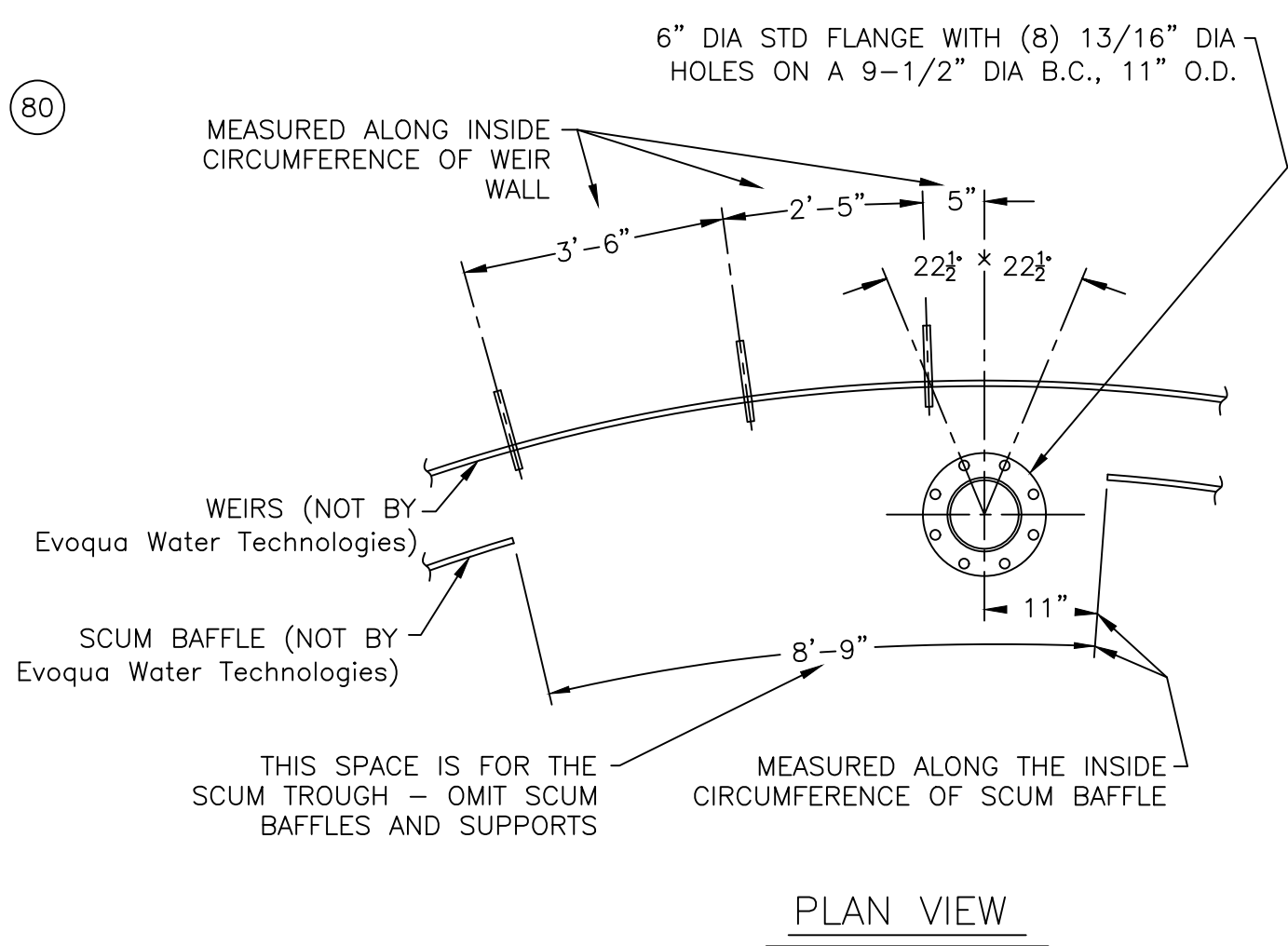
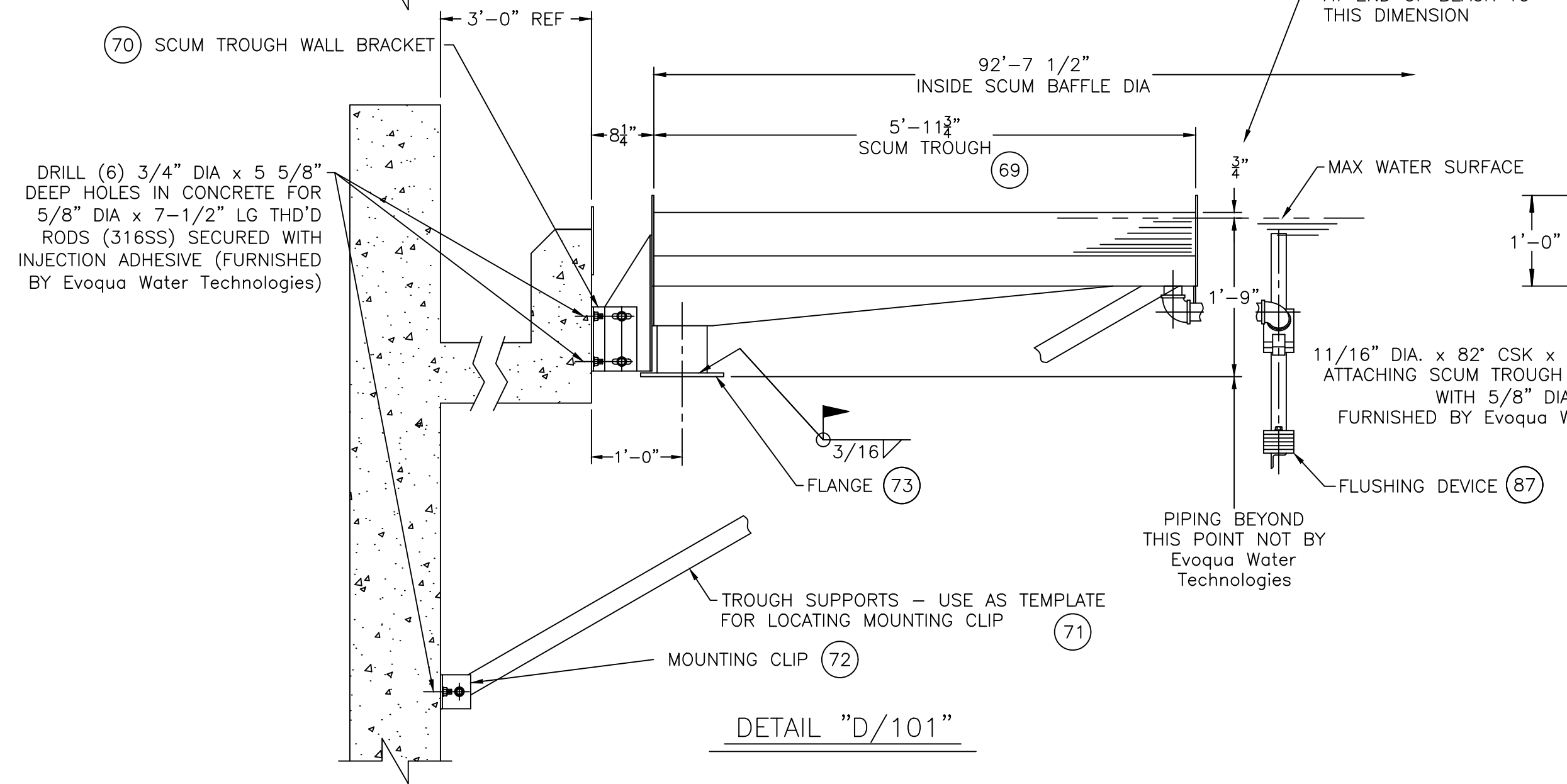
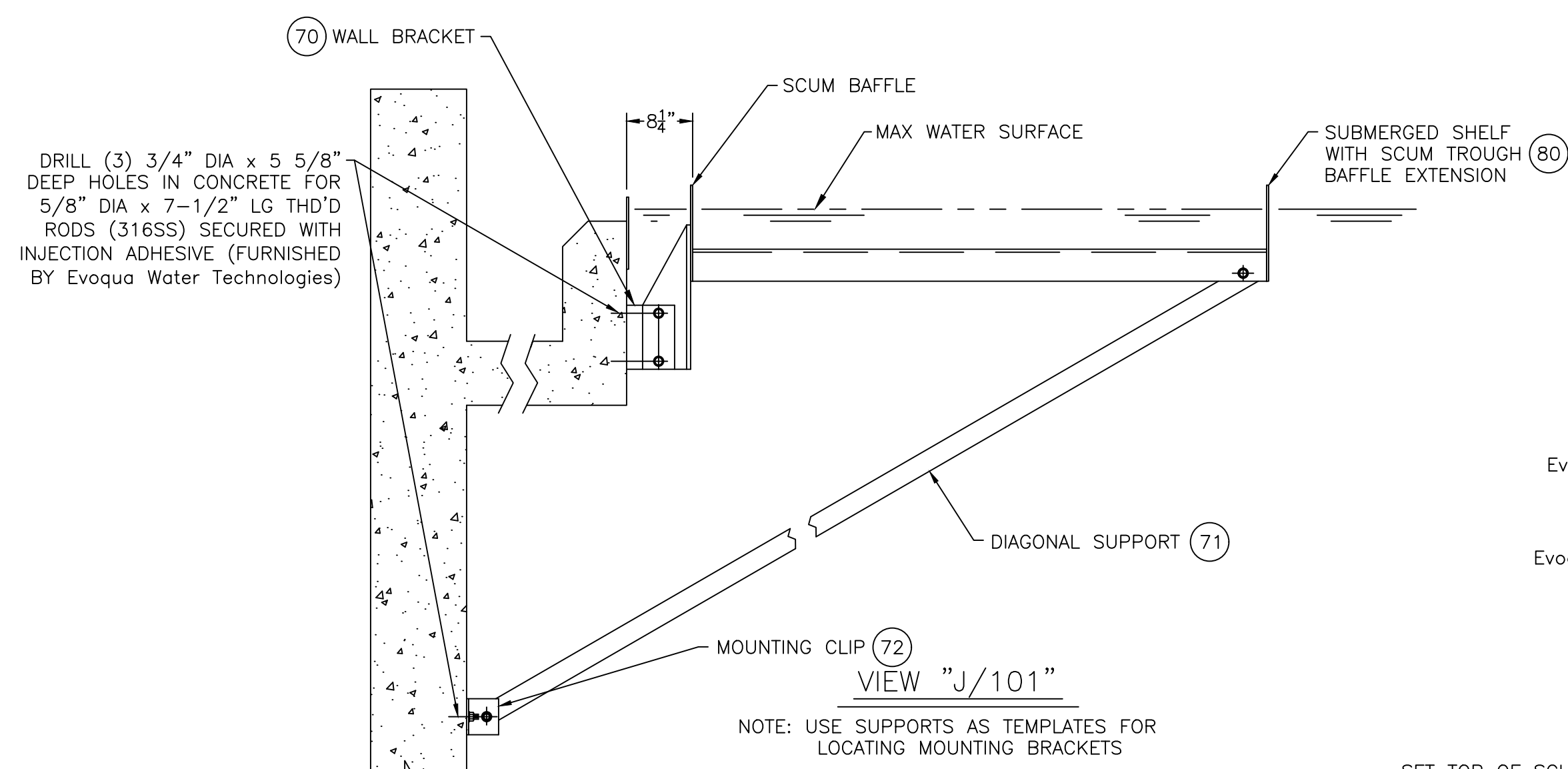
DETAIL "G/101"



DETAIL "G1/101"



DETAIL "B/101"



SIDE VIEW
(TROUGH NOT SHOWN FOR CLARITY)

**USDA SEWER SYSTEM
IMPROVEMENTS - CONTRACT A**

WPCP UPGRADES

FOR THE
CITY OF THOMASTON

REVISIONS	NO.	DESCRIPTION	DATE

BID SET



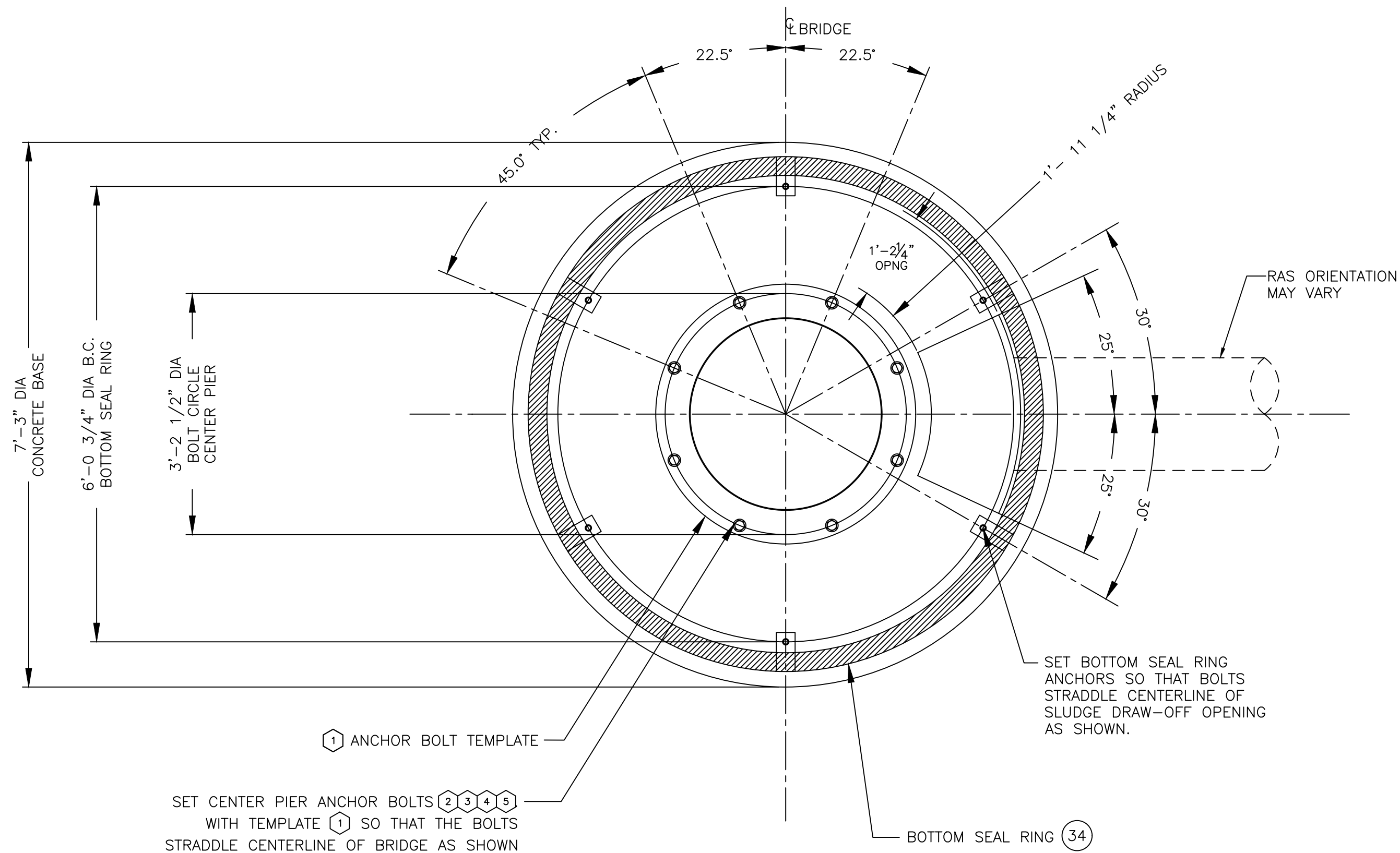
DRAWN BY: WLN
CHECKED BY: ABG
DATE: DEC 2020
SCALE: 3/4" = 1'-0"

CONTENT:
**TOWN BRANCH
CLARIFIER
DETAILS**

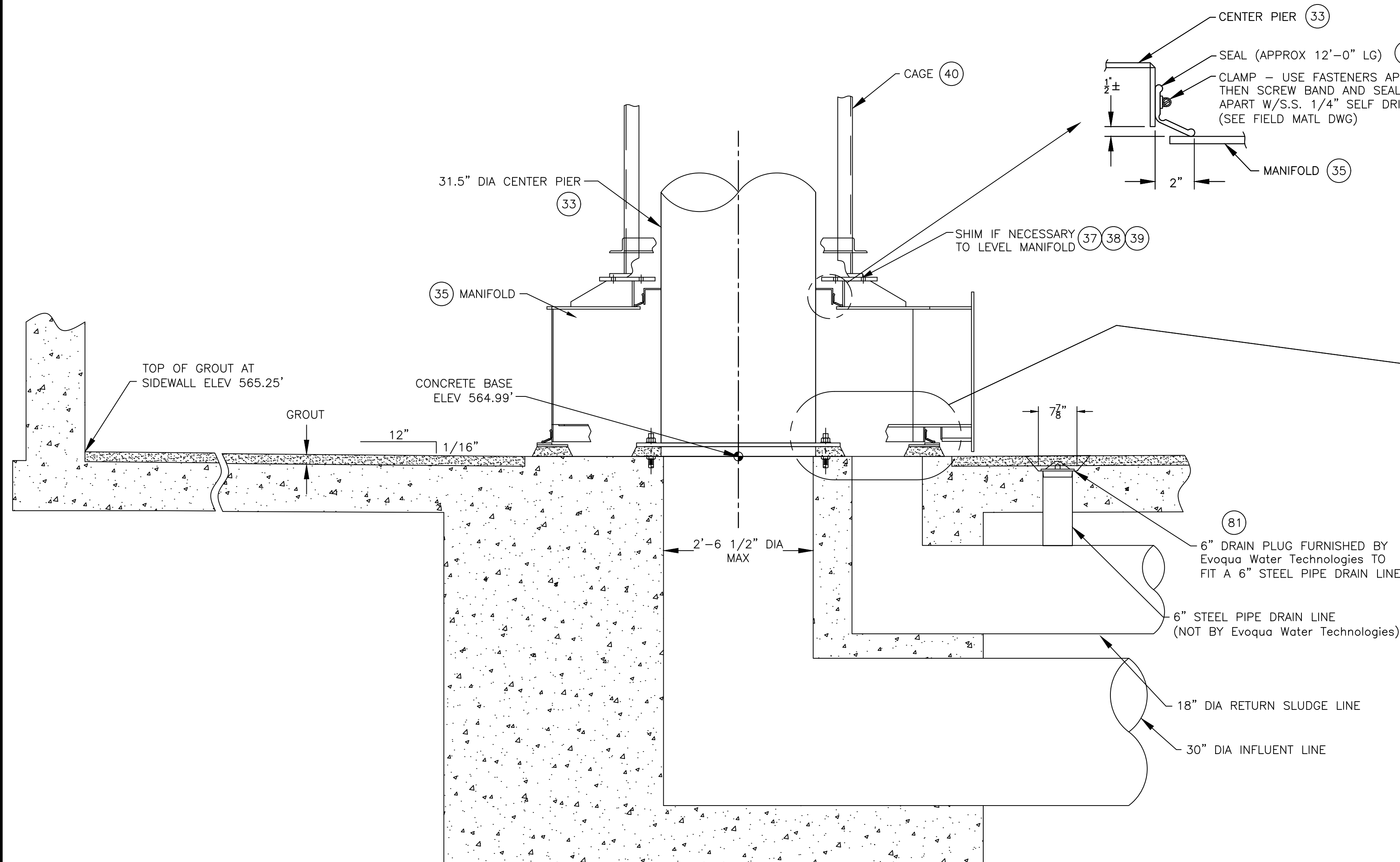
SHEET NO:
C2.6

Plotted: 12/11/2020 2:06 PM
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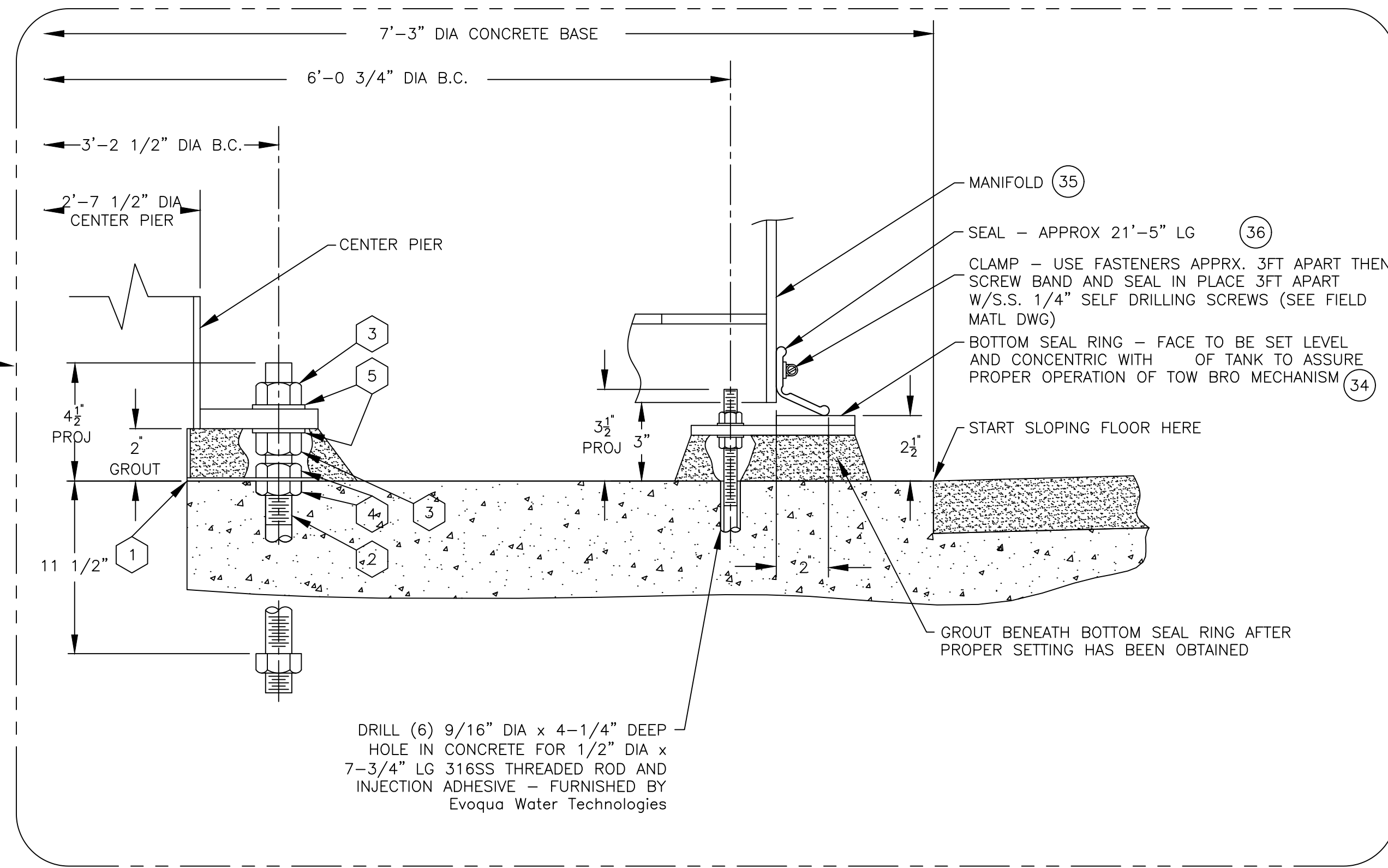
Last Saved By: ESG



ANCHOR BOLT PLAN



CENTER PIER BASE DETAIL



LIST OF COMPONENTS				ESTIMATED FINISHED WEIGHT	DRAWING NUMBER
TITLE				ALL LENGTHS ARE FINAL LENGTHS UNLESS OTHERWISE SPECIFIED	PROJECT NUMBER
ADVANCE ORDER	REF. SYMBOL	QUANTITY	PART NUMBER	DESCRIPTION	
				TEMPLATE & ANCHORS - FURN BY Evoqua Water Technologies, SET BY OTHERS	
	1	1	103-10796-31	CENTER PIER BOLT TEMPLATE	A569
	2	8	103-51664-80	1" DIA x 16" LG HEADED ANCHOR	316SS
	3	16	841-20565	1" HEX NUT	316SS
	4	16	841-21195	1" JAM NUT	316SS
	5	16	841-22225	1" PLAIN WASHER	316SS

USDA SEWER SYSTEM
IMPROVEMENTS - CONTRACT A
WPCP UPGRADES
FOR THE
CITY OF THOMASTON

ESG ENGINEERING
6400 Peake Rd
Macon, GA 31210
PH: (478) 474-4996
Fax: (478) 474-5045

REVISIONS	NO.	DESCRIPTION	DATE

BID SET



DRAWN BY: WLN
CHECKED BY: ABG
DATE: DEC 2020
SCALE: 3/4" = 1'-0"

CONTENT:
TOWN BRANCH
CLARIFIER
DETAILS

SHEET NO:

C2.7



OXIDATION DITCH EFFLUENT DETAIL



TEMPORARY CONSTRUCTION SIGN FOR RURAL DEVELOPMENT PROJECTS

Recommended Fonts: Helvetica, Arial, or Myriad Pro



NOTES:

1. THE CONTRACTOR SHALL ERECT ONE SIGN AT A PROMINENT LOCATION AS DETERMINED BY THE OWNER AT THE PRE-CONSTRUCTION MEETING PRIOR TO THE START OF CONSTRUCTION.
2. THE CONTRACTOR SHALL REMOVE THE TEMPORARY CONSTRUCTION SIGN(S) WHEN ALL CONSTRUCTION HAS BEEN COMPLETED.

USDA TEMPORARY CONSTRUCTION SIGN
NTS

MODEL	PIPE DIA	DIMENSIONS					
		H	W	X	Y	Z	WEIGHT (LBS)
HW-12	12"	2'-6"	4'-3"	3'-0"	2'-0"	N/A	2,700
HW-15	15"	2'-6"	4'-3"	3'-0"	2'-0"	N/A	2,700
HW-18	18"	2'-6"	4'-3"	3'-0"	2'-0"	N/A	2,800
HW-21	21"	3'-0"	5'-10"	3'-2"	3'-0"	N/A	4,300
HW-24	24"	3'-0"	5'-10"	3'-2"	3'-0"	N/A	4,200
HW-30	30"	3'-6"	7'-6"	4'-1"	4'-0"	9"	6,200
HW-36	36"	4'-1"	9'-3"	4'-8"	5'-0"	9"	8,100
HW-42	42"	4'-11"	12'-6"	5'-10"	6'-0"	12"	11,000
HW-48	48"	4'-11"	12'-6"	5'-10"	6'-0"	12"	11,000

SPECIFICATIONS

CONCRETE: CLASS II CONCRETE WITH OF DESIGN STRENGTH OF 4500 PSI AT 28 DAYS. UNIT IS OF MONOLITHIC CONSTRUCTION INCLUDING WALLS AND FLOOR.

REINFORCEMENT: GRADE 60 REINFORCED. NO. 4 STEEL REBAR TO CONFORM TO ASTM A615 ON REQUIRED CENTERS OR EQUAL. BAR BENDING AND PLACEMENT SHALL WITH THE LATEST ACI STANDARDS.

REINFORCEMENT:

CONFORM TO ASTM A615 ON REQUIRED CENTERS OR
EQUAL. BAR BENDING AND PLACEMENT SHALL WITH THE
LATEST ACI STANDARDS.

© PARKUSA, ALL RIGHTS RESERVED

PROJECT: _____

CUSTOMER: _____

ENGINEER: _____

ORDER # _____ PROJ # _____

DATE: _____ LOCATION: _____

PARK USA

www.parkusa.com 888-611-PARK

HEADWALL FOR STORMWATER PIPING

MODEL HW 12" THRU 48"

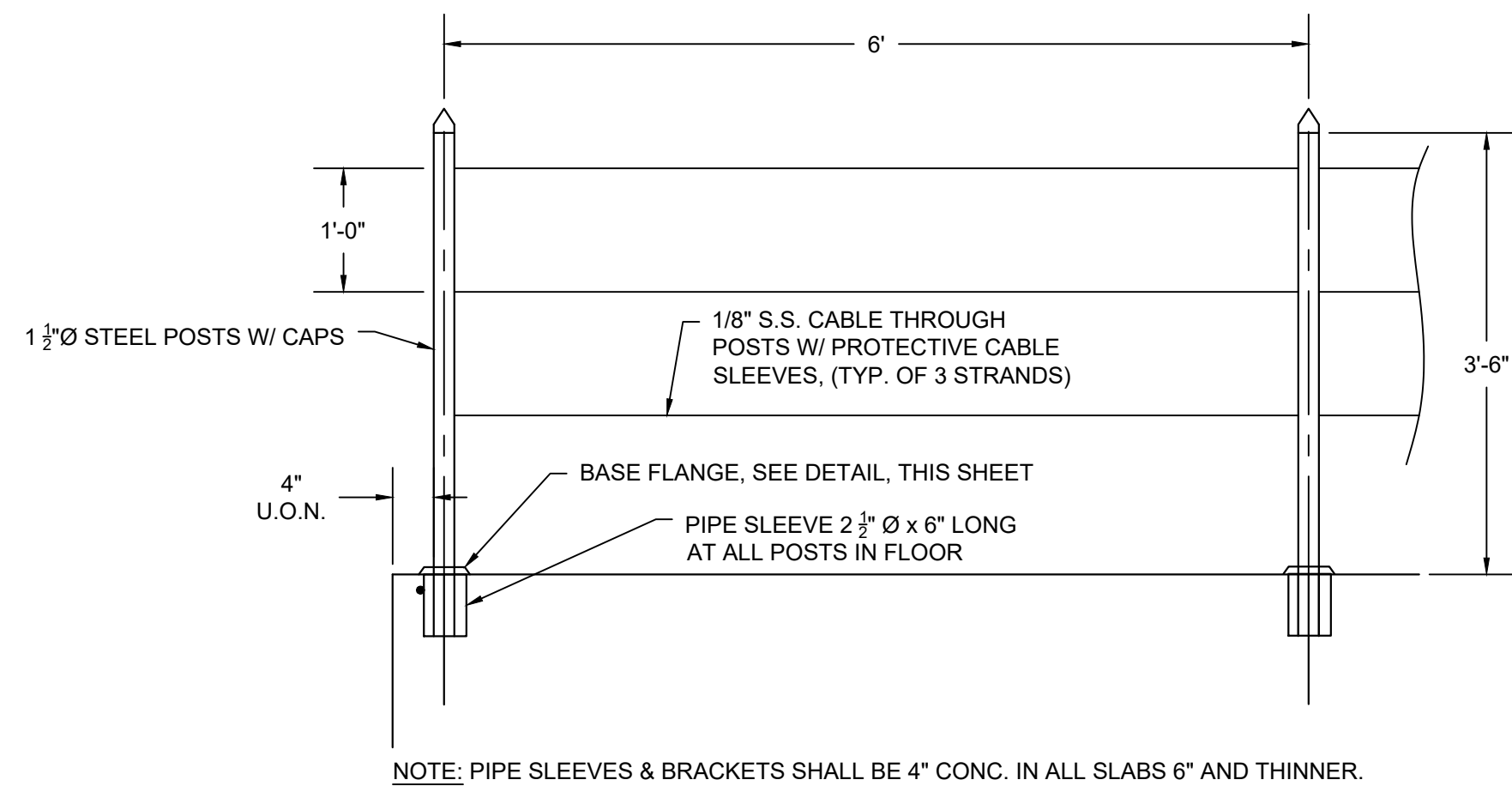
DWG. NO. _____

DATE 01/2019 HW-1

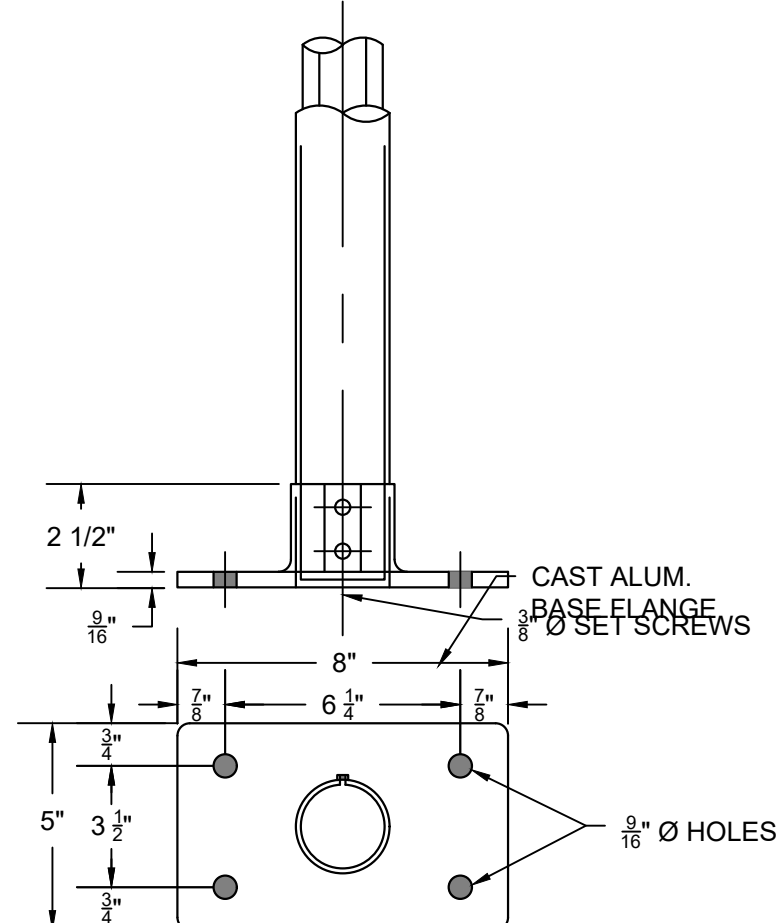
REV _____

PM	PC	DRN	ENG	DWG. NO.	REV
.	.	.	.	HW-1	
DATE 01/2019					

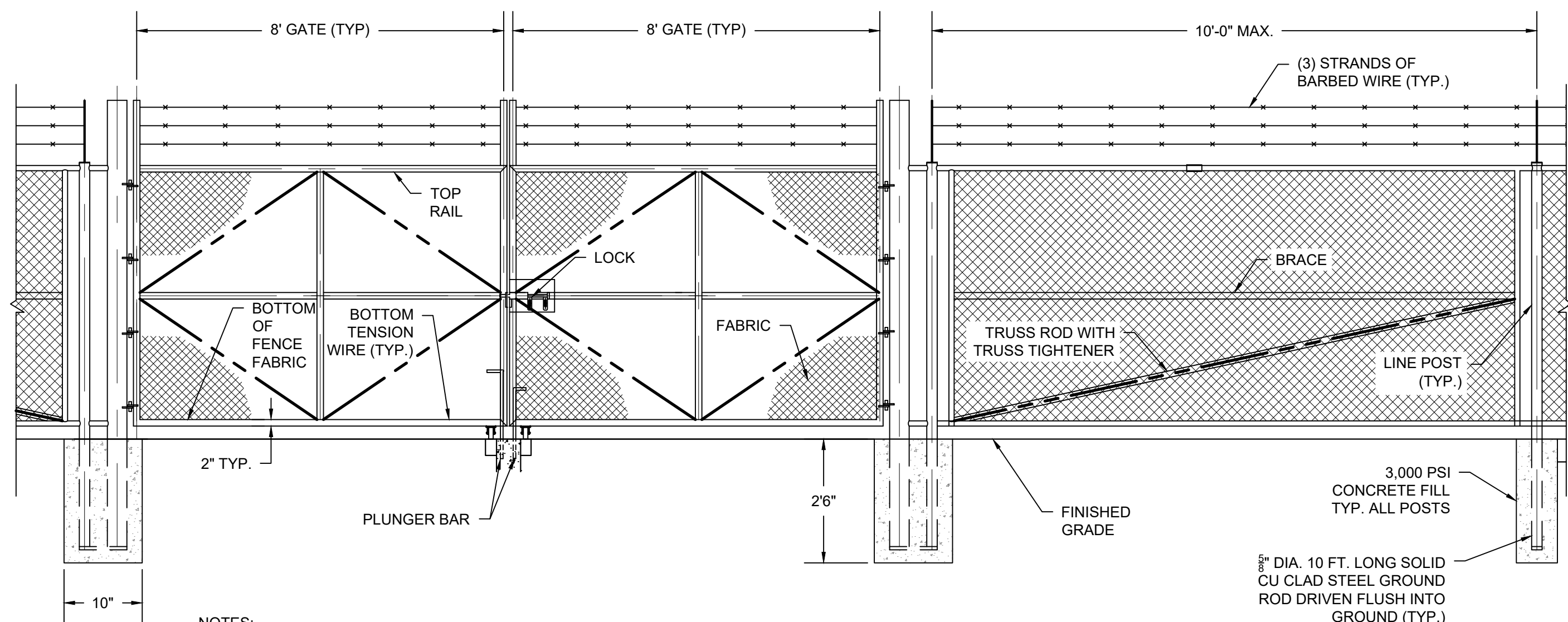
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Plotted: 12/11/2020 2:04 PM
Drawing Path: Z:\Engineer Projects\T3000 - THOMASTON, CITY OF\T3000.115 USDA Sewer System Improvements\CAD\BASE\C2.3,C2.4,C3.0,C3.1.dwg



TYPICAL HANDRAIL DETAIL
SCALE: 3/4"=1"

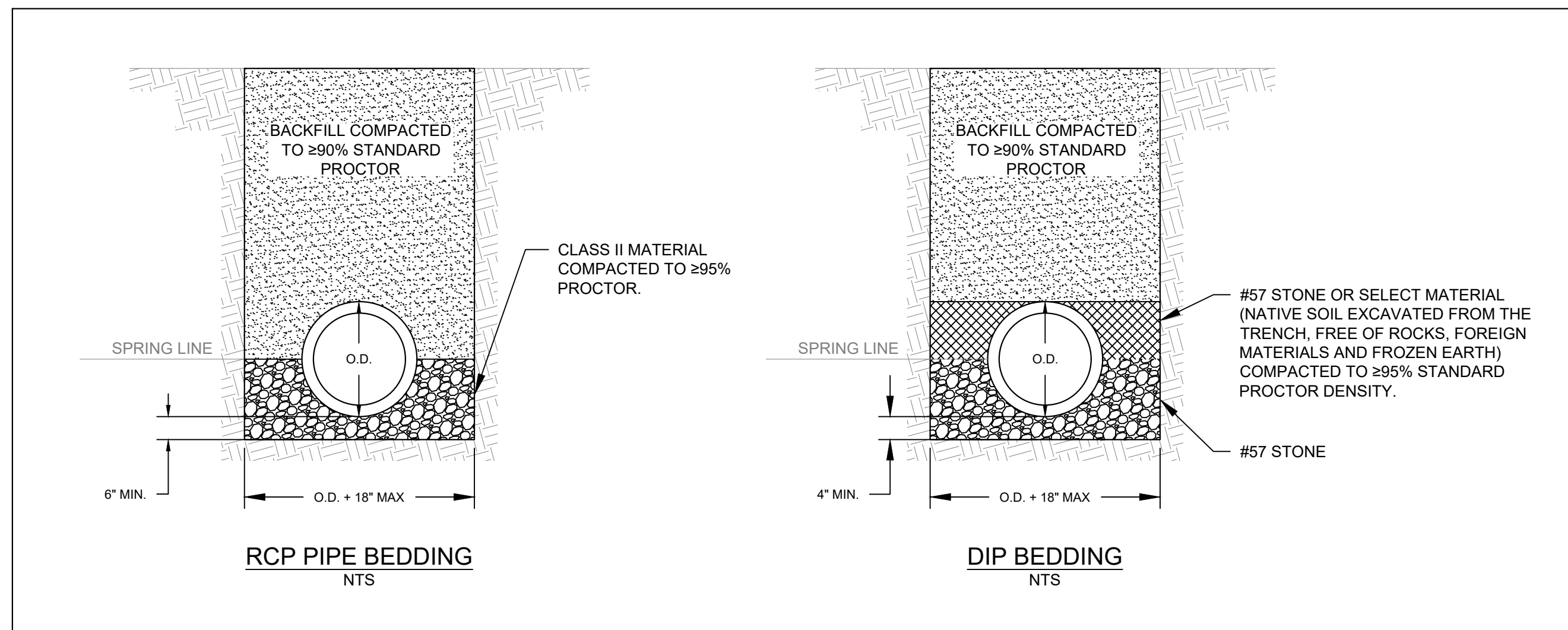


BASE FLANGE DETAIL
N.T.S.

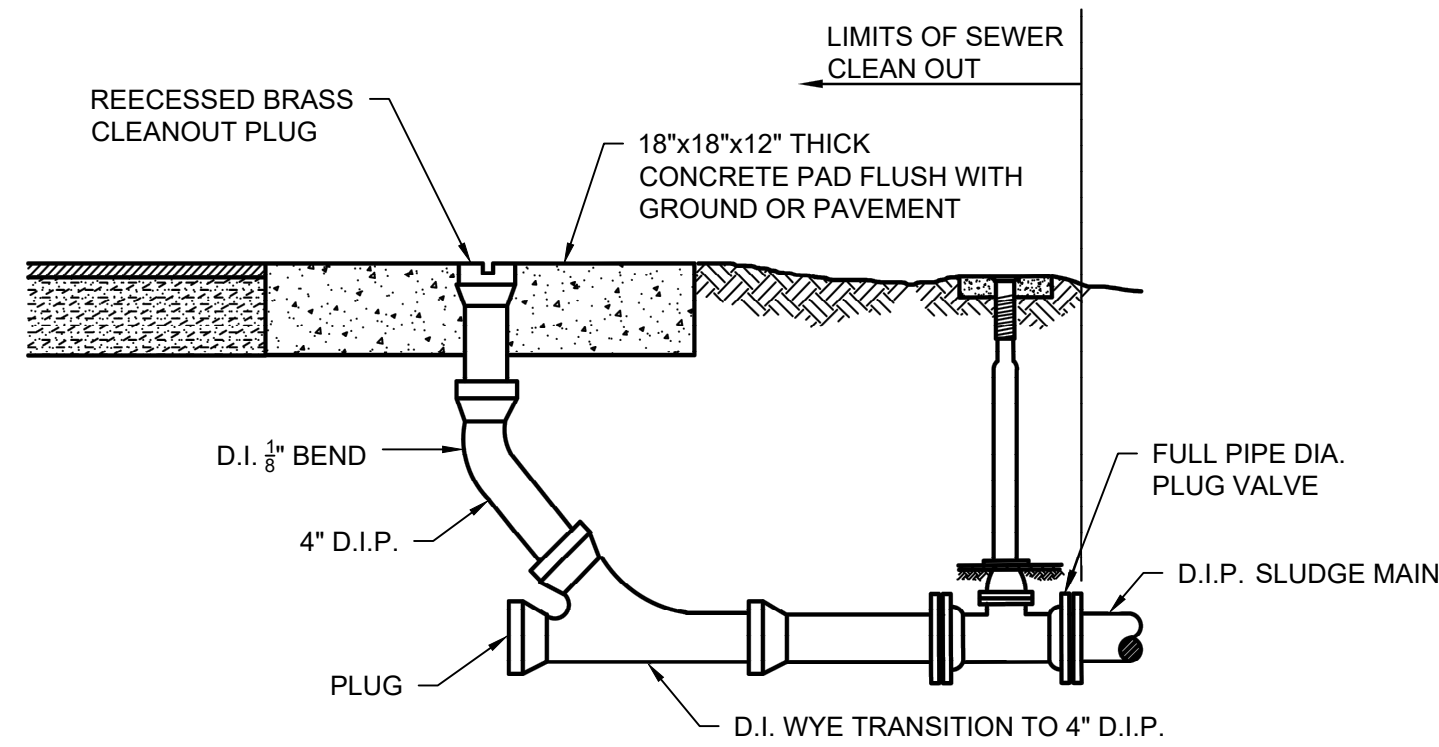


- NOTES:
1. THE TOP OF FENCE SHALL BE LEVEL.
 2. THE FINISHED GRADE UNDER FENCE SHALL BE LEVEL.

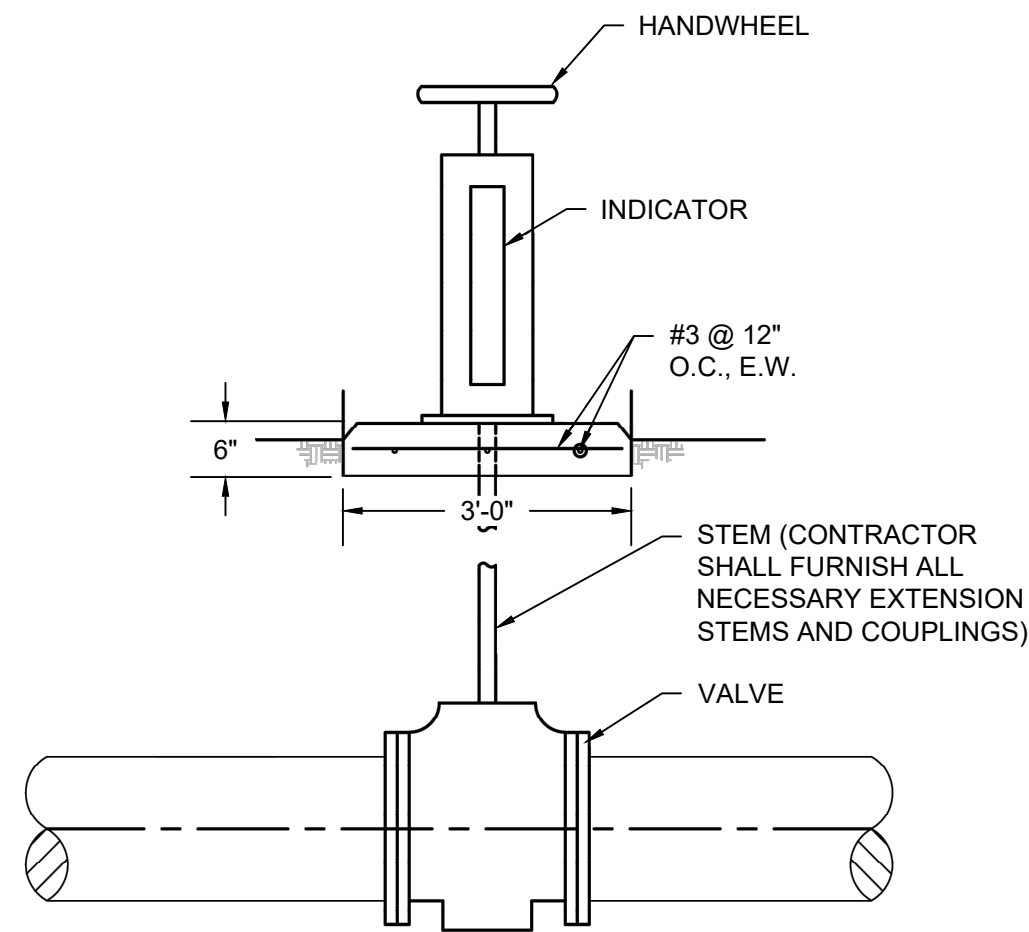
DRIVEWAY GATE AND FENCE DETAIL
N.T.S.



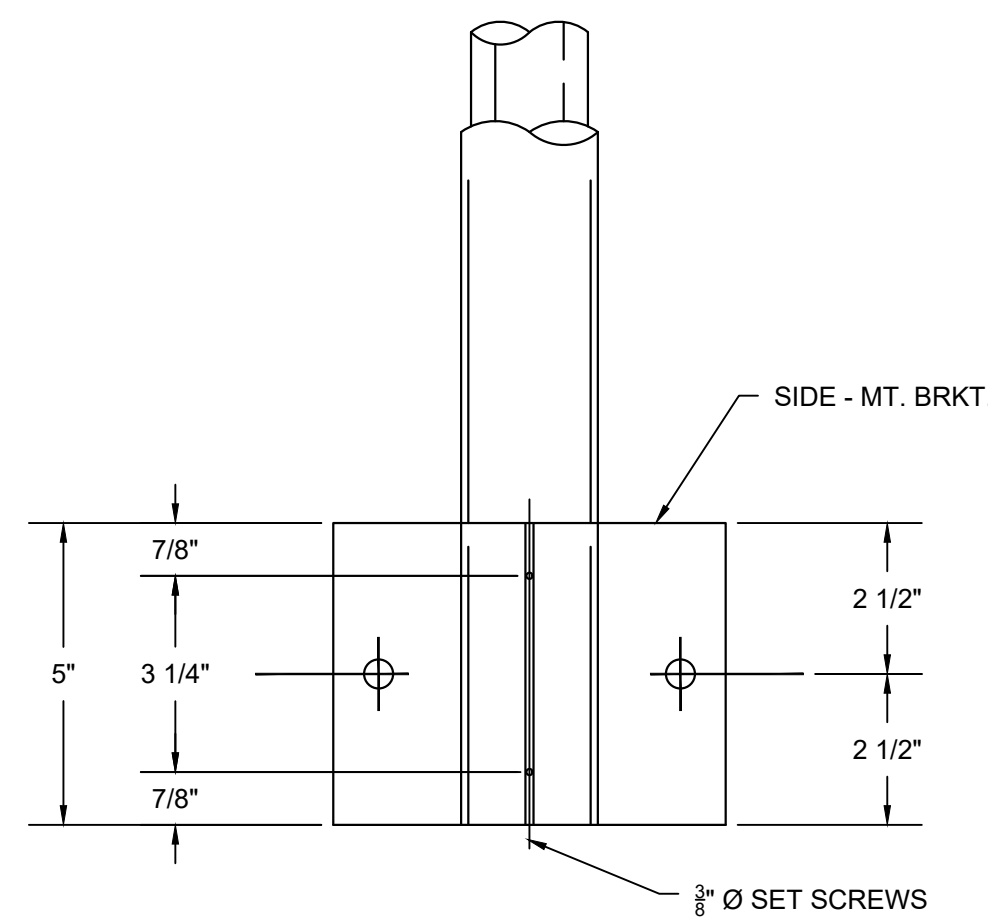
BEDDING & HAUNCHING DETAILS GRAVITY & PRESSURE PIPES
N.T.S.



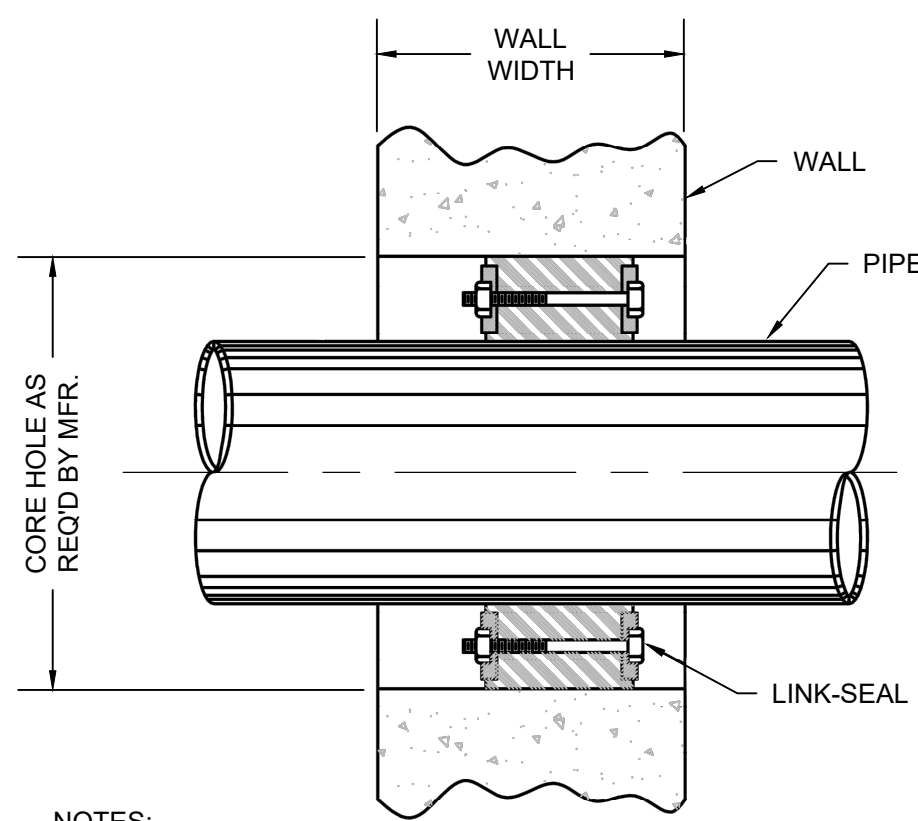
YARD PIPING CLEANOUT
TO GRADE DETAIL
N.T.S.



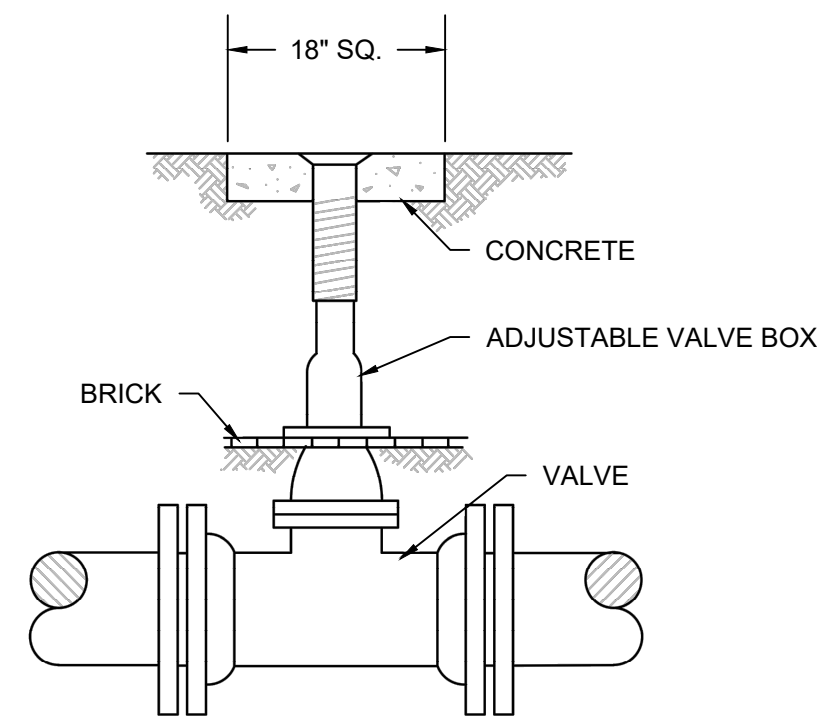
FLOOR STAND VALVE
OPERATOR DETAIL
N.T.S.



TYPE 'C' DETAIL
N.T.S.

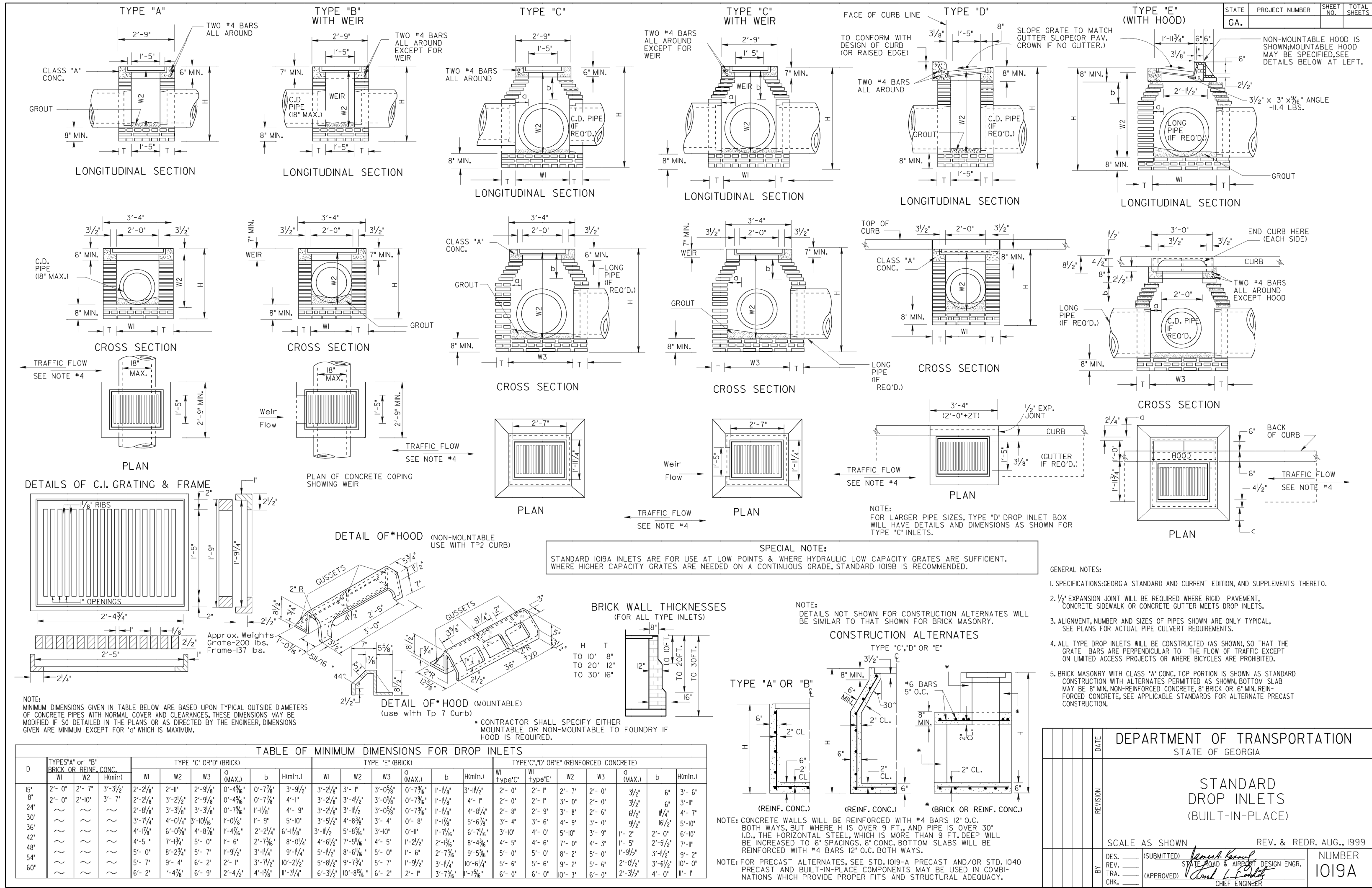


LINK-SEAL DETAIL
N.T.S.

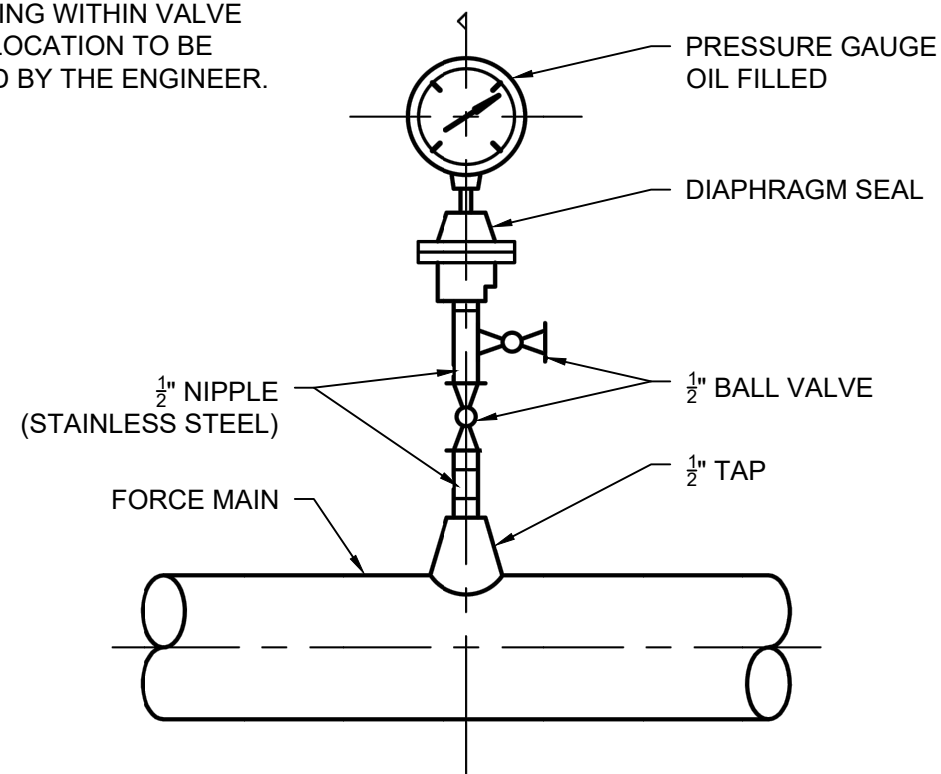


VALVE SETTING & BOX
N.T.S.

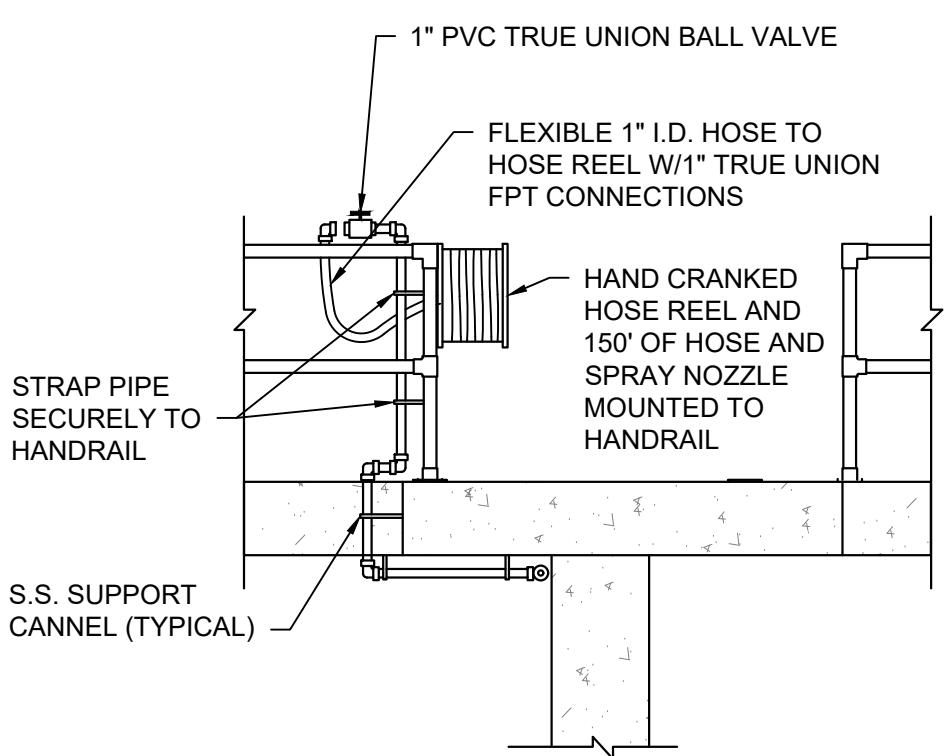
REVISIONS	NO.	DESCRIPTION	DATE



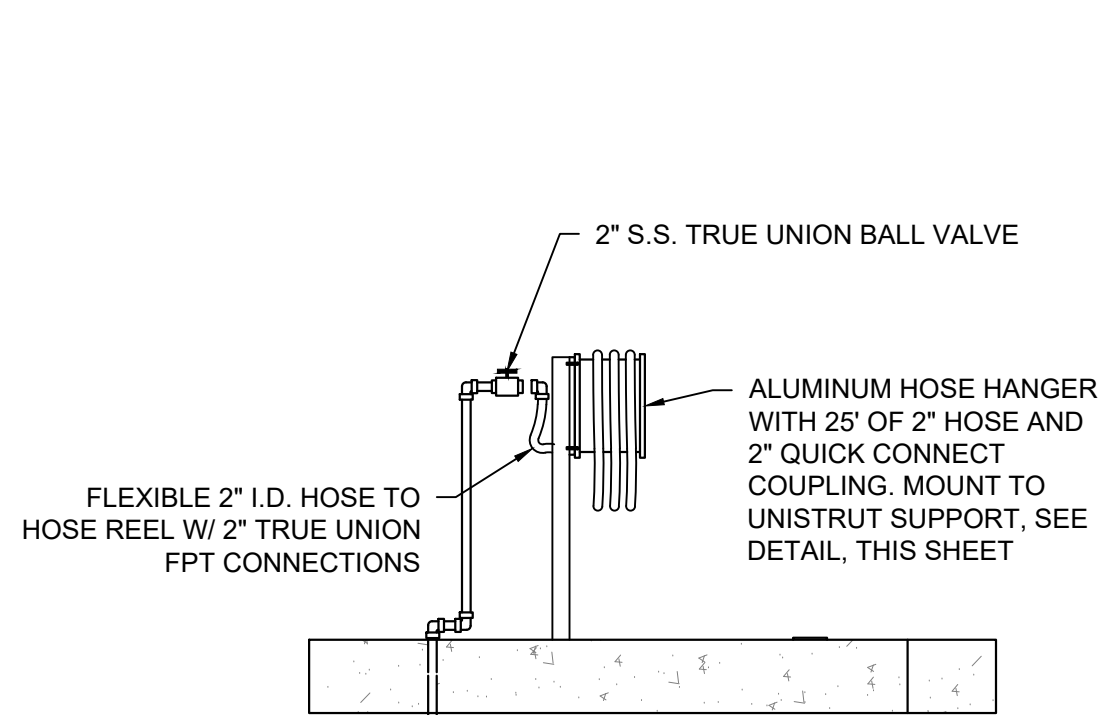
NOTE: PRESSURE GAUGE TO BE INSTALLED ON EACH LEG OF DISCHARGE PIPING WITHIN VALVE VAULT. EXACT LOCATION TO BE FIELD ASSIGNED BY THE ENGINEER.



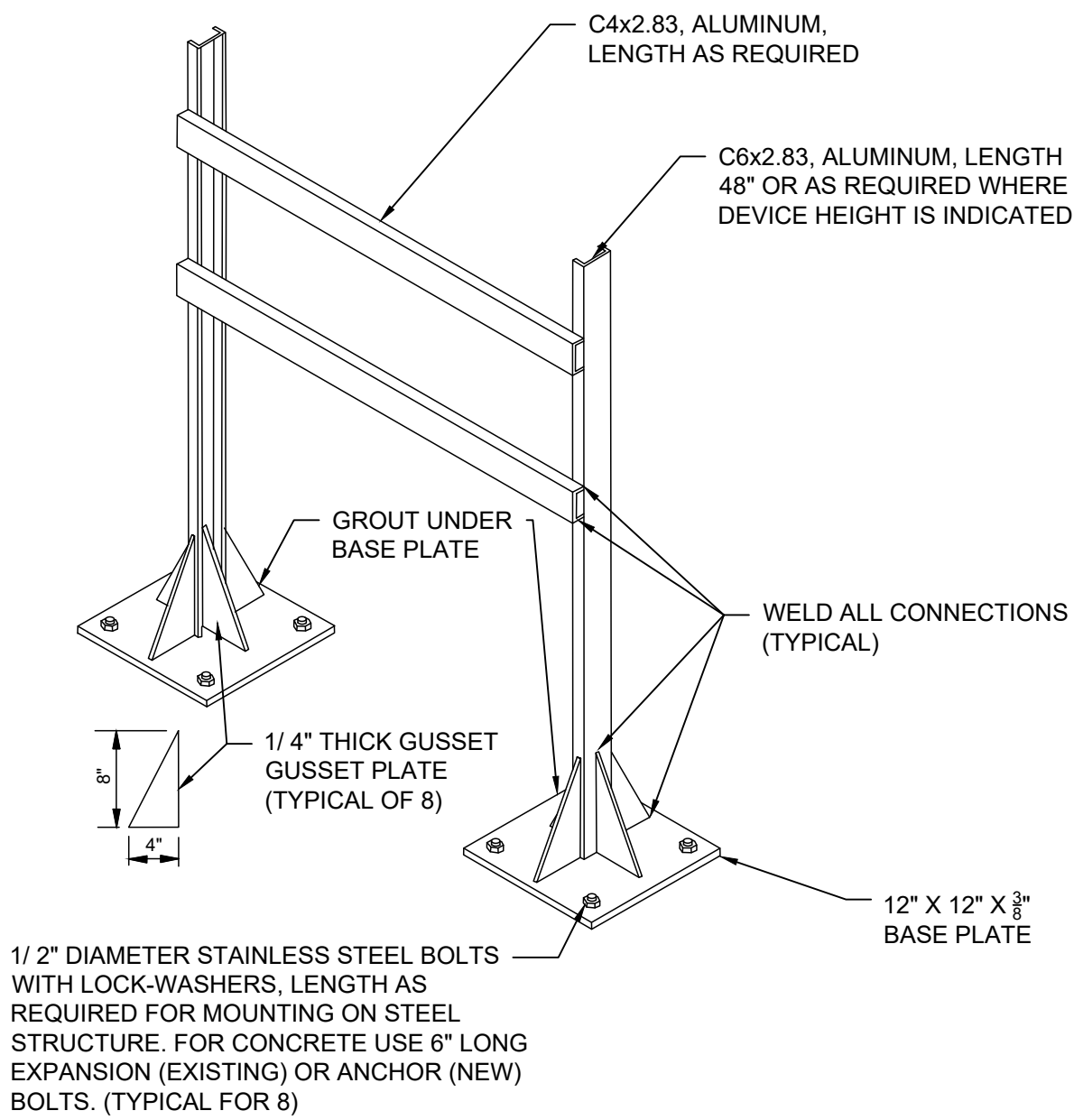
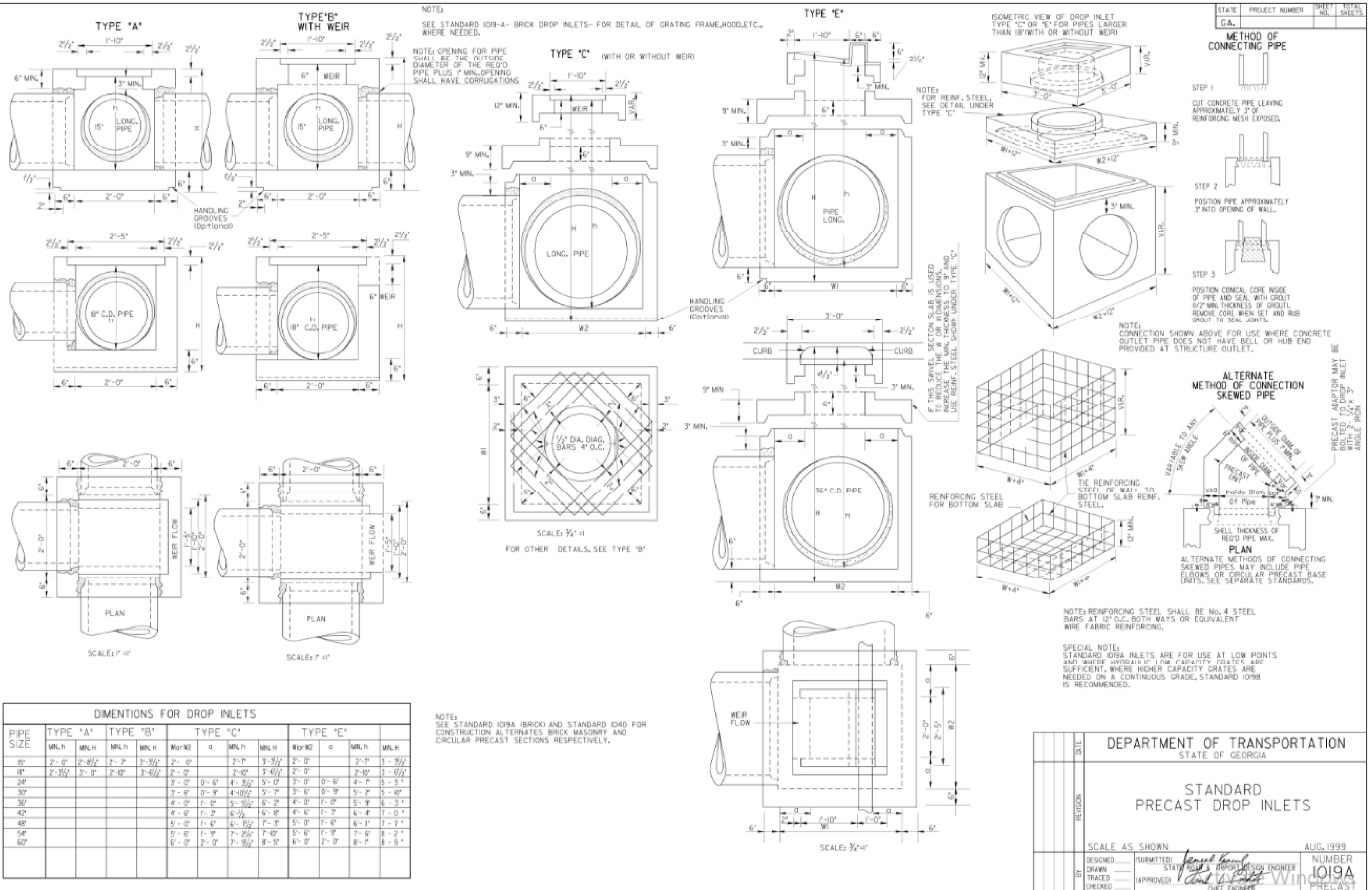
PRESSURE GAUGE MOUNTING
N.T.S.



TYPICAL WATER HOSE BIB AND HOSE REELS
MOUNTED TO HANDRAILS
N.T.S.



TYPICAL BELT PRESS WATER CONNECTION
N.T.S.



DUAL SUPPORT STAND NOTE:

- FOR ALUMINUM STANDS ONLY, PROVIDE BITUMINOUS PROTECTIVE COATING WHERE STAND COMES IN CONTACT WITH CONCRETE.
- ALL HARDWARE TO BE STAINLESS STEEL

UNI-STRUT SUPPORT INSTALLATION DETAIL
N.T.S.

REVISIONS	NO.	DESCRIPTION	DATE

BID SET



DRAWN BY: WLN
CHECKED BY: ABG
DATE: DEC 2020
SCALE: AS NOTED

CONTENT:
MISC. DETAILS
(CONT.)

SHEET NO:

C3.2

Last Saved By: Mstefano, Plotted: 12/11/2020, 10:13 AM
Drawing Path: T:\KEI\CommonFiles\Projects\2020\20-123 ESG Thomaston 100 ft Clarifier Sewer System Improvements\20-123 ESG Thomaston GENERAL NOTES - 10-21-2020.dwg

GENERAL

1. COORDINATE THESE DRAWINGS WITH EXISTING CONDITIONS, AND COORDINATE ALL DIMENSIONS AND WALL LOCATIONS WITH THE PROCESS DRAWINGS. THE GENERAL CONTRACTOR SHALL IMMEDIATELY NOTIFY THE ENGINEER OF ANY DISCREPANCIES WITHIN THE CONSTRUCTION DOCUMENTS.
2. DESIGN AND CONSTRUCTION SHALL BE IN ACCORDANCE WITH THE 2018 INTERNATIONAL BUILDING CODE WITH GEORGIA AMENDMENTS.
3. DESIGN LOADS:
- LIVE LOAD INFORMATION
- A. MAINTENCE PLATFORM LIVE LOAD = *40 PSF*
- EQUIPMENT LOADING INFORMATION
- A. SELF WEIGHT OF STRUCTURE
- B. ACTUAL WEIGHT OF EQUIPMENT:
CENTER PIER BASE REACTION TO CENTER PIER
- 20,700 LBS DEAD AND 7,800 LBS LIVE
- C. BELT PRESS AND TRAILER WEIGHING A TOTAL OF 34,000 LBS
- SNOW LOAD INFORMATION
- A. GROUND SNOW LOAD (PG) = *5 PSF*
- B. FLAT-ROOF SNOW LOAD (PF) = *5 PSF*
- C. SNOW EXPOSURE FACTOR (CE) = *1.0*
- D. SNOW LOAD IMPORTANCE FACTOR(I_S) = *1.1*
- E. THERMAL FACTOR (CT) = *VARIES*
- WIND LOAD INFORMATION
- A. BASIC ULTIMATE WIND SPEED = *115 MPH*
- B. BASIC ASD WIND SPEED = 90 MPH
- C. WIND IMPORTANCE FACTOR (W) = *1.0*
- D. RISK CATEGORY = *III*
- E. WIND EXPOSURE = *C*
- SEISMIC DESIGN INFORMATION
- A. SEISMIC IMPORTANCE FACTOR (I_E) = *1.25*
- B. SEISMIC DESIGN CATEGORY =B
- C. 0.2 SECOND SPECTRAL RESPONSE ACCELERATION (S_S) = 0.14
- D. 1 SECOND SPECTRAL RESPONSE ACCELERATION (S₁) = 0.074
- E. 0.2 DESIGN SPECTRAL RESPONSE ACCELERATION (S_{DS}) = 0.149
- F. 1 DESIGN SECOND SPECTRAL RESPONSE ACCELERATION (S_{D1}) = 0.119
- G. SITE CLASS = *D* (PER GEOTECHNICAL REPORT)
- H. RESPONSE MODIFICATION COEFFICIENT (R) = *2*
- I. SYSTEM OVERSTRENGTH FACTOR = *2*
- J. DEFLECTION AMPLIFICATION FACTOR (CD) = *2*
- K. SEISMIC RESPONSE COEFFICIENT (C_S) = 0.093
- L. DESIGN BASE SHEAR (V_X) = VARIES
- M. BASIC SEISMIC FORCE RESISTING SYSTEM - *FLAT BOTTOM GROUND - SUPPORTED REINFORCED CONCRETE TANK WITH REINFORCED NON-SLIDING BASE.*
- N. ANALYSIS PROCEDURE - EQUIVALENT LATERAL FORCE PROCEDURE
4. ALL THE SAFETY REGULATIONS, METHODS OF CONSTRUCTION AND ERECTION OF STRUCTURAL MATERIAL SHALL BE THE RESPONSIBILITY OF THE GENERAL CONTRACTOR. IT SHALL BE THE GENERAL CONTRACTOR 'S RESPONSIBILITY TO PROVIDE ADEQUATE SHORING, BRACING, AND FRAMEWORK, ETC. AS REQUIRED.
5. DIMENSIONS ARE NOT TO BE DERIVED BY SCALING THESE DRAWINGS. IF THERE IS ANY QUESTION ABOUT DETAILS OR DIMENSIONS, CONTACT THE ARCHITECT AND ENGINEER FOR CLARIFICATION.
6. WHERE A DETAIL IS SHOWN FOR ONE CONDITION, IT SHALL ALSO APPLY FOR ALL LIKE OR SIMILAR CONDITIONS, UNLESS NOTED OTHERWISE.
7. *ISOMETRIC VIEWS* ARE FOR ILLUSTRATIVE PURPOSES ONLY. NO INFORMATION ABOUT THE STRUCTURE OR ITS COMPONENTS SHALL BE TAKEN OR ASSUMED FROM THEM.
8. GENERAL CONTRACTOR TO COORDINATE SIZES AND WEIGHTS OF EQUIPMENT BETWEEN STRUCTURAL AND MANUFACTURERS.
9. GENERAL CONTRACTOR TO FIELD VERIFY ALL DIMENSIONS WITH RESPECT TO EXISTING CONDITIONS PRIOR TO REBAR AND STEEL FABRICATION.

SUBMITTALS

1. THE CONTRACT DOCUMENTS ARE THE STRUCTURAL ENGINEER'S INSTRUMENTS OF SERVICE TO CONVEY DESIGN INTENT. THEY ARE NOT TO BE CONSIDERED FABRICATION OR LAYOUT DRAWINGS.
2. THE FOLLOW ARE REQUIRED SUBMITTALS
- A. *CONCRETE MIX DESIGN(S)*
- B. *REINFORCING BAR DRAWINGS*
- C. *FORM DESIGN DRAWINGS*
- D. *WATERSTOPS, JOINTFILLERS AND OTHER SIMILAR MATERIALS AND COMPONENTS*
- E. SLAB AND WALL POUR SEQUENCE
- F. OTHER SUBMITTALS AS NOTED ON THE DRAWINGS AND SPECIFICATIONS
3. SUBMITTALS SHALL BE REVIEWED BY THE CONTRACTOR PRIOR TO SUBMISSION TO THE ENGINEER AND SHALL BEAR THE CONTRACTOR'S STAMP ATTESTING TO THE SAME. DRAWINGS NOT STAMPED WILL NOT BE REVIEWED. SUBCONTRACTOR'S UNCHECKED SUBMITTAL DRAWINGS WILL NOT BE REVIEWED.
4. THE STRUCTURAL ENGINEER WILL NOT ACCEPT SUBMITTALS DIRECTLY FROM CONTRACTORS WITHOUT THE ENGINEER 'S PRIOR APPROVAL.
5. UPON COMPLETION OF THE STRUCTURAL ENGINEER'S REVIEW, SUBMITTALS WILL BE RETURNED TO THE CIVIL ENGINEER FOR THEIR REVIEW.
6. ANY DEVIATION IN DESIGN, DETAILS, DIMENSIONS, ETC. FROM THE CONSTRUCTION DOCUMENTS SHALL BE CLOUDED ON THE SUBMITTAL AND VERIFICATION OF THE CHANGE SHALL BE REQUESTED.

STRUCTURAL STEEL

1. MATERIALS SHALL MEET THE FOLLOWING MINIMUM REQUIREMENTS:
- A. W-SHAPES = TYPE 316 STAINLESS STEEL
- B. HOLLOW STRUCTURAL SHAPES = TYPE 316 STAINLESS STEEL
- C. PLATES, BARS, ANGLES, C-SHAPES, MC-SHAPES = TYPE 316 STAINLESS STEEL
- ALL ANCHOR BOLTS SHALL BE SIZE AND STRENGTH SPECIFIED ON THESE DRAWINGS.
2. ALL BEAM END CONNECTIONS SHALL BE DOUBLE ANGLE BOLTED-WELDED CONNECTIONS WITH 3/4" DIA. F593 CW 316 BOLTS U.N.O. THE WELD SHALL BE 1/4" WELD FULL LENGTH OF ANGLE PLUS 1" TOP AND BOTTOM. DESIGN SHEAR SHALL BE THE GREATER OF:

- A. THE SHEAR REACTION SHOWN ON DRAWINGS (IF ANY):
- B. THE MINIMUM NUMBER OF BOLTS IN SINGLE SHEAR AS FOLLOWS:

BEAM SHAPE*	# OF 3/4" DIA. A325 BOLTS	LENGTH OF LL
W8 , W10	4	5 1/2
W12 , W14	6	8 1/2
W16 , W18	8	11 1/2
W21	10	14 1/2
W24	12	17 1/2
W27	14	20 1/2
W30	16	23 1/2

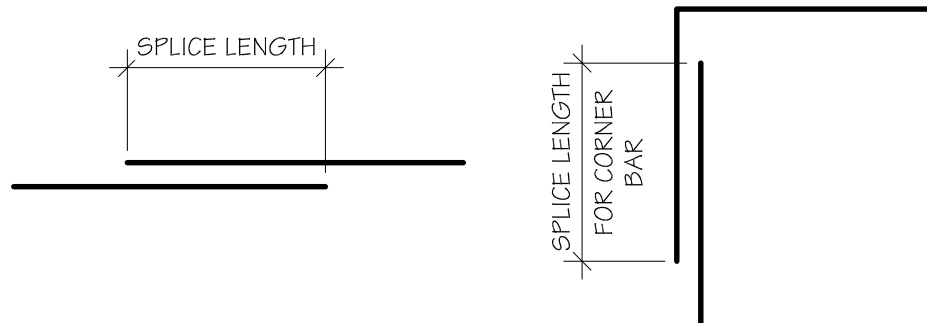
WHERE CONNECTIONS ARE SKEWED OR THE DOUBLE ANGLE CONNECTIONS ABOVE WILL NOT FIT, THE FOLLOWING CONNECTIONS SHALL BE USED:

BEAM SHAPE*	# OF 3/4" DIA. A325 BOLTS	1/2" SHEAR TAB LENGTH**
W8 , W10	2	5 1/2
W12 , W14	3	8 1/2
W16 , W18	4	11 1/2
W21	5	14 1/2
W24	6	17 1/2
W27	7	20 1/2
W30	8	23 1/2

* WHEN THE SHEAR TAB CONNECTION ABOVE DOES NOT FIT IN THE BEAM WEB, USE THE ADJACENT SMALLER CONNECTION AND CLOUD ON SHOP DRAWINGS.

** WELD PLATE TO SUPPORTING MEMBER WITH 5/16" WELD ALL AROUND. SHEAR TAB TO BE 1/2" THICK X 4" WIDE.

3. WELDS SHALL BE MADE ONLY BY OPERATORS CERTIFIED BY THE STANDARD QUALIFICATION PROCEDURE OF THE AMERICAN WELDING SOCIETY FOR THE TYPE OF WELD REQUIRED. WELDER CERTIFICATION SHALL BE SUBMITTED FOR REVIEW.
4. HOLES LARGER THAN 1" DIA. SHALL BE COORDINATED WITH THE STRUCTURAL ENGINEER. HOLES SHALL BE PUNCHED OR DRILLED, EXCEPT AS OTHERWISE PERMITTED THE STRUCTURAL ENGINEER.
5. PROTECT COLUMNS, BASE PLACES, ANCHOR BOLTS, AND ANY STEEL BELOW GRADE WITH AN APPROVED INORGANIC OR EPOXY ANTI-CORROSION COATING, FIELD APPLIED PER MANUFACTURER'S INSTRUCTIONS.
6. THE CONTRACTORS SHALL DETERMINE, FURNISH AND INSTALL ALL TEMPORARY SUPPORTS SUFFICIENT TO SECURE THE STRUCTURAL STEEL FRAMING AGAINST LOADS PRESENT DURING ERECTION. TEMPORARY SUPPORTS SHALL REMAIN IN PLACE UNTIL ALL CONNECTIONS TO THE LATERAL LOAD RESISTING SYSTEM, INCLUDING HORIZONTAL DIAPHRAGMS, ARE COMPLETE.
7. SPLICE CONTINUOUS STEEL ANGLES AND PLATES WITH PARTIAL-JOINT-PENETRATION SQUARE GROOVE WELDS (JOINT DESIGNATION B-PA) U.N.O.



SEE TABLE "CLASS B SPLICE OR CORNER BAR PER ACI 318"
ON NOTES SHEET FOR SPLICE LENGTH IN CONCRETE

1 Corner Bar and Splice Length Detail (in concrete)
3/4" = 1'-0"

1. THE FOLLOWING ARE TYPICAL ABBREVIATIONS USED IN THE STRUCTURAL DRAWINGS:

A.B.	-ANCHOR BOLT	CONC.	-CONCRETE
EQ	-ADDITIONAL	CONST.	-CONSTRUCTION
AFF	-ABOVE FINISHED FLOOR	CONT.	-CONTINUOUS
ARCH	-ARCHITECT/ARCHITECTURAL	COORD.	-COORDINATE
BFF	-BELOW FINISHED FLOOR	DBA.	-DEFORMED BAR ANCHOR
BM	-BEAM	DET.	-DETAIL
BRG	-BEARING	EXP	-EXPANSION
BSMT.	-BASEMENT	EXT	-EXTERIOR
C.I.P.	-CAST IN PLACE	F.F.	-FINISHED FLOOR
C.J	-CONTROL JOINT	FFE	-FINISHED FLOOR ELEVATION
CL OR CL	-CENTER LINE	FIN.	-FINISH(ED)
CLR	-CLEAR	FLR.	-FLOOR
CMU	-CONCRETE MASONRY UNIT	FTG.	-FOOTING
CONN	-CONNECTION	EJ	-EXPANSION JOINT
CONST JT	-CONSTRUCTION JOINT	ENGR	-ENGINEER
COL.	-COLUMN	EOD	-EDGE OF DECK

REINFORCING STEEL

1. REINFORCING STEEL SHALL BE NEW BILLET STEEL, DEFORMED BARS CONFORMING TO ASTM A615, GRADE 60, AND SHALL BE FREE FROM ANY FORM RELEASE AGENTS.
2. WELDED WIRE FABRIC SHALL BE SHEETS OF NEW BILLET STEEL COLD DRAWN, CONFORMING TO ASTM SPECIFICATION A1064, GRADE 60.
3. BAR SUPPORTS, DESIGN, DETAILING, FABRICATION AND PLACING OF REINFORCING STEEL SHALL BE IN ACCORDANCE WITH ACI 318 AND "THE MANUAL OF STANDARD PRACTICE FOR DETAILING REINFORCED CONCRETE STRUCTURES," ACI 315.
4. SPLICES FOR CONTINUOUS BARS SHALL BE CLASS B, UNLESS NOTED OTHERWISE. WELDED WIRE FABRIC SHALL BE LAPPED 12" MINIMUM.
5. PROVIDE BENT HORIZONTAL BARS AT CORNERS AND INTERSECTIONS OF ALL WALLS AND FOOTINGS. BENT BARS ARE TO MATCH THE SIZE AND SPACING OF HORIZONTAL BARS IN WALL OR FOOTING. USE CLASS B SPLICE EACH SIDE.
6. PROVIDE DIAGONAL BARS AT CORNERS OF OPENINGS IN SLABS AND CONCRETE WALLS. *SEE DETAILS "RECTANGULAR OPENING WALL SLAB" AND "CIRCLE OPENING WALL SLAB"*. PROVIDE 2" CLEAR COVER BETWEEN THE OPENING AND THE CORNER REINFORCING BARS.
7. EXTEND ALL FOOTING REINFORCEMENT TO FAR SIDE OF FOOTING. SEE NOTE BELOW FOR CONCRETE COVERAGE.
8. PROVIDE DOWELS IN WALL FOOTING TO MATCH WALL VERTICALS UNLESS NOTED OTHERWISE ON DRAWINGS. PROVIDE CLASS B SPLICE. USE STANDARD ACI 90 DEGREE HOOK WITH 3" CLEAR TO BOTTOM OF FOOTING UNLESS NOTED OTHERWISE. SEE DETAIL "CORNER BAR & SPLICE LENGTH DETAIL (IN CONCRETE)"

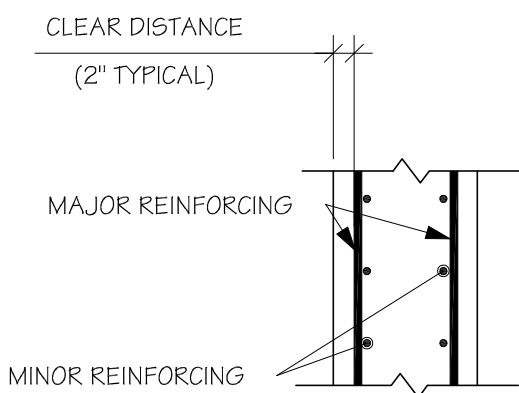
BAR #	4000 PSI CONCRETE	4500 PSI CONCRETE	6000 PSI CONCRETE
	MIN. SPLICE (INCHES)	MIN. SPLICE (INCHES)	MIN. SPLICE (INCHES)
4	25	24	21
5	31	30	26
6	37	35	31
7	54	51	44
8	62	59	51
9	70	66	57
10	78	73	64
11	85	80	71

9. MINIMUM CONCRETE COVERAGE SHALL BE AS FOLLOWS. IF CONSTRUCTION DOCUMENTS INDICATE A LARGER COVERAGE, IT SHALL BE USED. IF STRUTUPS, TIES, OR SPIRALS ARE USED, COVERAGE SHALL BE TO THE OUTERMOST FACE OF THESE ELEMENTS.

- A. FOOTINGS, CAISSONS, AND OTHER MEMBERS WHERE CONCRETE IS DEPOSITED AGAINST SOIL (EXCEPT SLABS ON GRADE) = 3"

- B. CONCRETE EXPOSED TO WEATHER OR SOIL BUT IS NOT DEPOSITED AGAINST SOIL:
#6 BAR AND LARGER = 2"
#5 BAR AND SMALLER = 1 1/2"

- C. CONCRETE NOT EXPOSED TO WEATHER OR SOIL:
SLABS, WALLS, JOISTS #14 BAR AND LARGER = 1 1/2"
SLABS, WALLS, JOISTS #11 BAR AND SMALLER = 3/4"
BEAMS AND COLUMNS = 1 1/2"



CLEAR DISTANCE IS DEFINED AS THE DISTANCE FROM CONCRETE FACE TO THE OUTSIDE FACE OF THE MAJOR REINFORCING.

MAJOR REINFORCING IS DEFINED AS THE REINFORCING NEAREST THE FACE OF CONCRETE WALL OR SLAB.

2 Clear Spacing Details
3/4" = 1'-0"

HSS	-HOLLOW STRUCTURAL SECTIONS
INT	-INTERIOR
JST.	-JOIST
JT.	-JOINT
K	-KIP(S)
KSI	-KIPS PER SQUARE INCH
LLH	-LONG LEG HORIZONTAL
LLV	-LONG LEG VERTICAL
LO	-LOW
LT.	-LIGHT
MAX.	-MAXIMUM
MECH.	-MECHANICAL
MID	-MIDDLE
MFR	-MANUFACTURER
MIN.	-MINIMUM
MISC	-MISCELLANEOUS

NA	-NOT APPLICABLE
NTS	-NOT TO SCALE
O.H.	-OPPOSITE HAND
O.C.	-ON CENTER
OPNG	-OPENING
PL OR R	-PLATE
PREFAB	-PREFABRICATED
PSF	-POUNDS PER SQUARE FOOT
PSI	-POUNDS PER SQUARE INCH
PT	-PRESSURE TREATED
REF.	-REFERENCE
REINF.	-REINFORCEMENT
REQD	-REQUIRED
SECT.	-SECTION
SIM.	-SIMILAR
SPECS	-SPECIFICATIONS

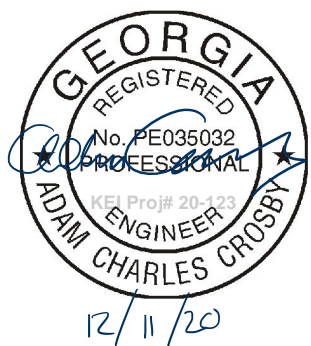
STD	-STANDARD
STL	-STEEL
STRUCT	-STRUCTURAL
T.O.S.	-TOP OF SLAB OR STEEL
T.O.C.	-TOP OF CONCRETE
T.O.F.	-TOP OF FOOTING
T.O.W.	-TOP OF WALL
TYP.	-TYPICAL
U.N.O.	-UNLESS NOTED OTHERWISE
VERT.	-VERTICAL
W.P.	-WORK POINT
WT.	-WEIGHT
W.W.M.	-WELDED WIRE MESH

FOUNDATIONS

1. THE FOUNDATION IS DESIGNED USING AN ALLOWABLE SOIL BEARING CAPACITY OF 2500 PSF PER GEOTECHNICAL REPORT BY GEOTECHNICAL & ENVIRONMENTAL CONSULTANTS, INC. PROJECT NUMBER HN195799, DATED OCT 18, 2019 IF THE BEARING CONDITIONS VARY FROM WHAT IS SHOWN, OR IF THE SOIL BEARING CAPACITY IS QUESTIONABLE, THE ENGINEER IS TO BE NOTIFIED IMMEDIATELY.
2. ALL BUILDING AREAS SHALL BE COMPACTED TO 98% OF MAXIMUM DRY DENSITY AT OPTIMUM MOISTURE CONTENT AS DETERMINED IN ACCORDANCE WITH ASTM D698, CURRENT EDITION OR ASTM D1557, STANDARD PROCTOR DEPENDING UPON SOIL CONTENT.
3. A REGISTERED GEOTECHNICAL ENGINEER REPRESENTING THE OWNER SHALL BE PRESENT TO MONITOR COMPACTION AND SETTLEMENT AND VERIFY THE BEARING CAPACITY. ALL WORK SHALL BE PERFORMED IN ACCORDANCE WITH THE RECOMMENDATIONS OF THE GEOTECHNICAL REPORT AND ON-SITE GEOTECHNICAL ENGINEER.
4. REMOVE ALL TOPSOIL, ROOT SYSTEM OR OTHER DELETERIOUS MATERIAL UNDER PROPOSED SLAB AND COLUMN FOOTINGS AND REPLACE WITH SUITABLE COMPACTED FILL OR CRUSHED STONE. STRUCTURAL ENGINEER'S DECISION ON QUESTIONABLE MATERIAL SHALL BE FINAL.
5. BACKFILLING SHALL BE PERFORMED IN EQUAL LIFTS (NOT TO EXCEED 8" IN THICKNESS PER LIFT) AROUND THE BUILDING PERIMETER TO BALANCE LATERAL EARTH PRESSURE ON THE BUILDING. WALK BEHIND COMPACTION EQUIPMENT IS REQUIRED WITHIN A DISTANCE OF TWO TIMES THE WALL HEIGHT.
6. BACKFILL AGAINST STRUCTURAL WALLS SHALL NOT BE PERFORMED UNTIL WALL AND SLAB ON GRADE HAS OBTAINED SPECIFIED STRENGTH.
7. ALL FOOTINGS TO BE CENTERED UNDER THE COLUMNS OR WALLS THEY SUPPORT, UNLESS NOTED OTHERWISE ON THE DRAWING.
8. UTILITY LINES SHALL NOT BE PLACED THROUGH OR BELOW FOUNDATIONS WITHOUT THE STRUCTURAL ENGINEER 'S APPROVAL IN WRITING. THE CONTRACTOR SHALL LOCATE ANY EXISTING UNDERGROUND UTILITIES PRIOR TO ANY CONSTRUCTION.
9. INSPECTIONS BY GEOTECHNICAL FIRM ARE REQUIRED FOR EXISTING SOILS CONDITIONS, FILL PLACEMENT, AND LOAD BEARING REQUIREMENTS:
- A. SITE PREPARATION: PRIOR TO PLACEMENT OF PREPARED FILL, THE INSPECTOR SHALL DETERMINE THAT THE SITE HAS BEEN PREPARED IN ACCORDANCE WITH THE RECOMMENDATIONS FROM THE GEOTECHNICAL ENGINEER.
- B. FILL PLACEMENT: DURING PLACEMENT AND COMPACTION OF FILL MATERIAL, THE INSPECTOR SHALL DETERMINE THAT THE PROPER FILL MATERIAL IS BEING USED AND THAT THE MAXIMUM LIFT THICKNESS IS FOLLOWED IN ACCORDANCE WITH THE RECOMMENDATIONS FROM THE GEOTECHNICAL ENGINEER.
- C. EVALUATION OF IN-PLACE DENSITY: THE INSPECTOR SHALL DETERMINE, AT THE FREQUENCIES DETERMINED IN THE SOILS REPORT AND PROJECT SPECIFICATIONS, THAT THE IN-PLACE DRY DENSITY OF THE COMPACTED FILL COMPLIES WITH THE RECOMMENDATIONS FROM THE GEOTECHNICAL ENGINEER.
10. AS WITH ANY CONSTRUCTION, ALL FOUNDATION EXCAVATIONS SHOULD BE EVALUATED BY A GEOTECHNICAL ENGINEER, WHO WILL VERIFY THAT THE DESIGN BEARING PRESSURE IS AVAILABLE INTERMEDIATE OF BORING LOCATIONS, AND THAT FOUNDATIONS ARE NOT IMMEDIATELY UNDERLAIN BY WORSE CONDITIONS. IF THE ENGINEER FINDS LOCALIZED CONDITIONS OF WEAK OR ORGANIC SOIL BELOW AN INDIVIDUAL FOOTING, IT SHOULD BE UNDERCUT OR A REDUCED BEARING CAPACITY PROVIDED AS DIRECTED BY THE GEOTECHNICAL ENGINEER. THE STRUCTURAL ENGINEER SHALL BE NOTIFIED OF ANY REDUCED BEARING CAPACITY PROVIDED BY THE GEOTECHNICAL ENGINEER, PRIOR TO CONSTRUCTING FOOTING OR PLACING REINFORCING.
11. THE FOUNDATIONS FOR THESE STRUCTURES MAY BE IMPACTED BY GROUNDWATER AT THE TIME OF CONSTRUCTION. IT IS REQUIRED THAT THE CONTRACTOR SHALL LOWER GROUNDWATER IN ADVANCE OF ANY EXCAVATION WHICH MAY EXTEND TO A DEPTH OF 3 FEET (OR LESS) ABOVE GROUNDWATER LEVELS AT THE TIME OF CONSTRUCTION. THE TEMPORARY DEWATERING SYSTEM SHOULD FUNCTION CONTINUOUSLY (24 HOURS A DAY, 7 DAYS A WEEK) UNTIL THOSE FOUNDATIONS ARE CAST AND/OR AREA BACKFILLED. IT IS ALSO REQUIRED THAT THE DEWATERING SYSTEM SHALL BE USED WHEN THE WATER LEVEL IN THE TANK GETS BELOW 6FT DEEP DURING PLANT OPERATIONS. A DEWATERING PLAN SHALL BE DELIVERED TO THE ENGINEER AS A SUBMITTAL STAMPED BY A REGISTERED PROFESSIONAL ENGINEER IN THE STATE OF GEORGIA. THIS SYSTEM SHALL BE DESIGNED TO FOR CONSTRUCTION DEWATERING AND PERMANENT DEWATERING AFTER INSTALLATION.
12. ALL AREAS TO REGIEVE FILL SHOULD BE EVALUATED PRIOR TO FILL PLACEMENT. THE APPROVAL PROCESS SHOULD INCLUDE PROOFROLLING THE SUBGRADE WITH A FULLY LOADED TANDEM AXLE DUMP TRUCK (20 TONS) DURING A PERIOD OF DRY WEATHER AND UNDER THE OBSERVATION OF THE GEOTECHNICAL ENGINEER. ANY AREAS WHICH "PUMP" OR "RUT" EXCESSIVELY UNDER THE WEIGHT OF THE PROOFROLLING VEHICLE SHOULD BE FURTHER EVALUATED, AND MAY REQUIRE UNDERCUTTING OR OTHER REMEDIATION. THE PROOFROLLING CAN OCCASIONALLY DETECT PITS WHERE STUMPS OR OTHER DEBRIS MAY HAVE BEEN BURIED, OR OTHER AREAS WHERE WEAK SURFACE CONDITIONS EXIST.

NO.	REVISION	DATE	
		DATE	REVISION

BID SET



DRAWN BY: MJS
CHECKED BY: ACC
DATE: DEC 2020
SCALE: AS SHOWN

CONTENT:
GENERAL STRUCTURAL
NOTES & DETAILS 1

SHEET NO:

S0.0

KE
Kornegay
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363 Pierce Avenue
Suite 202
Macon, GA 31204
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Project No: 20-123



USDA SEWER SYSTEM
IMPROVEMENTS - CONTRACT A
WPCP UPGRADES
FOR THE
CITY OF THOMASTON

6400 Peake Rd
Macon, GA 31210
Ph: (478) 474-4996
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Last Saved By: Mstefano Plotted: 12/11/2020 10:13 AM
Drawing Path: T:\KEI\CommonFiles\Projects\2020\20-123 ESG Thomaston 100 ft Clarifier Sewer System Improvements\20-123 ESG Thomaston General NOTES - 10-21-2020.dwg

CONCRETE:

1. ALL CONCRETE WORK TO BE DONE IN ACCORDANCE WITH THE CODE REFERENCED EDITION OF ACI-318; "BUILDING CODE REQUIREMENTS FOR REINFORCED CONCRETE"
2. PROVIDE A 3/4" CHAMFER ON ALL EXPOSED CONCRETE EDGES FOR WALLS AND BEAMS.
3. CONCRETE MIX DESIGN REQUIREMENTS AND COMPRESSIVE STRENGTH AT 28 DAYS.

DESCRIPTION	28 DAY STRENGTH (PSI)	MAX. W/C RATIO	WEIGHT PER CUBIC FOOT (PCF)	CONCRETE CLASSES FOR ACI 318 MIX REQ.	FIBERMESH OR WWM
WALLS AND SLABS	5000	0.45	145	F2, S0, W1, C1	NONE

FLY ASH SHALL NOT BE USED. WATER REDUCING ADMIXTURES MAY BE USED TO ACHIEVE SLUMP REQUIREMENTS.

4. LOCATION OF ALL CONSTRUCTION JOINS SHALL BE COORDINATED WITH STRUCTURAL ENGINEER.

5. SHOP DRAWINGS SHALL BE SUBMITTED TO THE STRUCTURAL ENGINEER SHOWING PROPOSED LOCATIONS OF ANY MATERIAL SUCH AS BUT NOT LIMITED TO CONDUITS, EMBEDMENTS, OR FIXTURES TO BE PLACED INSIDE ANY STRUCTURAL CONCRETE MEMBER SUCH AS BEAMS, WALLS, SLABS, COLUMNS OR FOOTINGS. THIS IS NOT REQUIRED FOR SLABS ON GRADE OF 4" OR LESS IN THICKNESS.

6. UNLESS SPECIFIED OTHERWISE IN THE SPECIFICATION, TESTING OF CONCRETE SHALL BE IN CONFORMANCE WITH THE REQUIREMENTS OF ACI 318 SECTION 5.6 "EVALUATION AND ACCEPTANCE OF CONCRETE".

7. NO WATER SHALL BE ADDED TO CONCRETE MIX IN FIELD.

8. THE FOLLOWING PROCEDURES SHALL MEET THE REQUIREMENTS OF THE REFERENCED CODE SECTIONS:

PROCEDURE	REFERENCE SECTION
PREPARATION	ACI 304 - "GUIDE FOR MEASURING, MIXING, TRANSPORTING AND PLACING CONCRETE"
CONVEYING	ACI 318 SECTION 5.9 - "CONVEYING"
DEPOSITING	ACI 318 SECTION 5.10 - "DEPOSITING"
CONSOLIDATION	ACI 309 - "GUIDE FOR CONSOLIDATION OF CONCRETE"
CURING	ACI 308 - "STANDARD PRACTICE FOR CURING CONCRETE"
HOT WEATHER CONCRETING	ACI 305 - "HOT WEATHER CONCRETING"
COLD WEATHER CONCRETING	ACI 306 "COLD WEATHER CONCRETING"

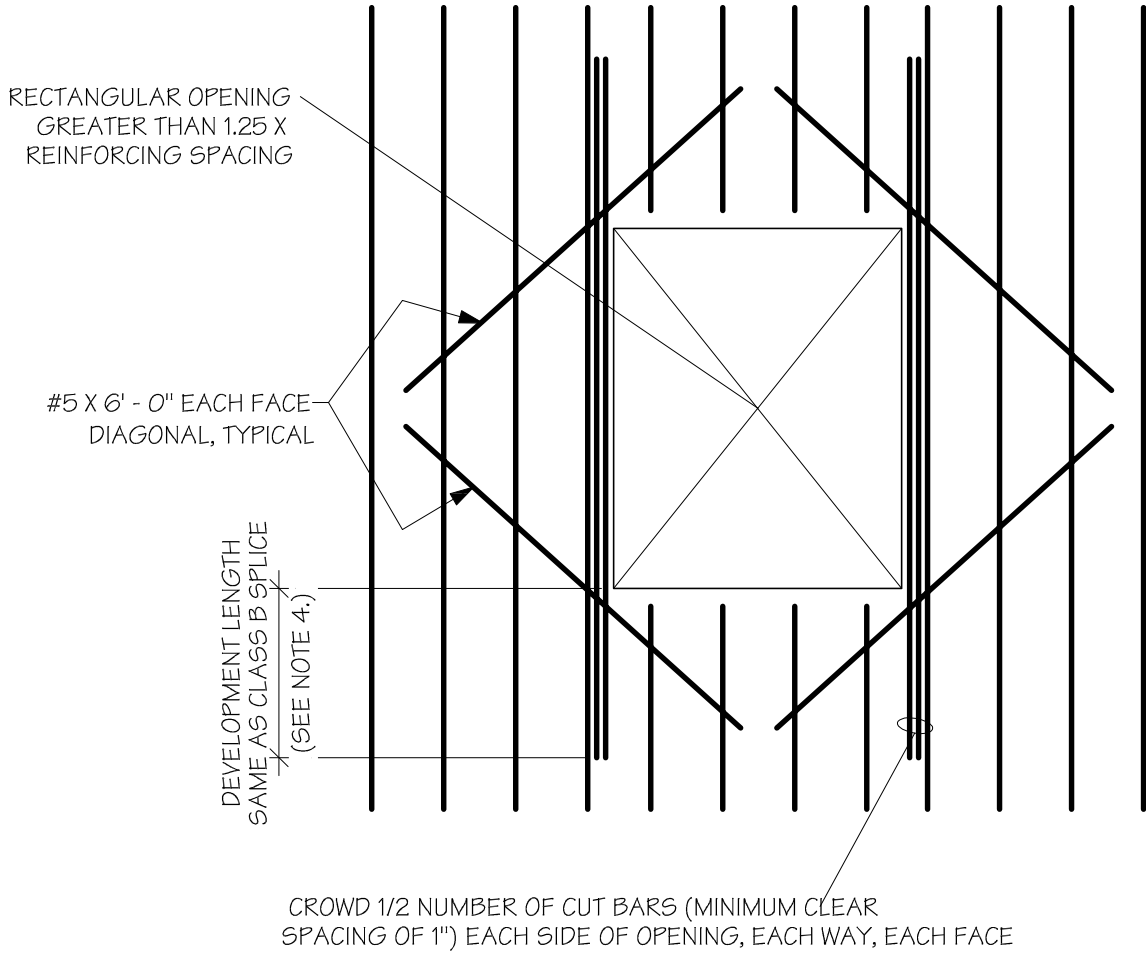
9. PROVIDE A 3/4" CHAMFER ON ALL EXPOSED CONCRETE EDGES FOR WALLS AND BEAMS.

10. SLAB REINFORCING SHALL BE PROPERLY SUPPORTED AT 48" O.C. MAX BY CHAIRS OR CONCRETE BRICKS WITH EQUAL COMPRESSIVE STRENGTH AS SLAB.

11. ALL CONCRETE SHALL BE CURED FOLLOWING AN APPROVED METHOD FROM ACI 308 AND AS APPLICABLE BASED ON TEMPERATURE DURING CURING TIMES. CONCRETE MIX SHALL BE NO GREATER THAN 90 DEGREE FAHRENHEIT AT TIME OF PLACEMENT.

CONSOLIDATING CONCRETE:

1. CONSOLIDATE CONCRETE BY MEANS OF INTERNAL VIBRATORS OPERATED BY COMPETENT WORKERS.
2. USE VIBRATORS HAVING A MINIMUM HEAD DIAMETER OF AT LEAST 2-INCHES, A MINIMUM CENTRIFUGAL FORCE OF 700-POUNDS AND A MINIMUM FREQUENCY OF 8,000 VIBRATIONS PER SECOND.
3. VIBRATORS FOR CONFINED AREAS: IN CONFINED AREAS, USE ADDITIONAL VIBRATORS HAVING A MINIMUM HEAD DIAMETER OF 1 1/2-INCHES, A MINIMUM CENTRIFUGAL FORCE OF 300-POUNDS AND A MINIMUM FREQUENCY OF 9,000 VIBRATIONS PER SECOND.
4. KEEP ONE SPARE VIBRATOR FOR EACH THREE IN USE ON THE SITE DURING ALL CONCRETE PLACING OPERATIONS.
5. INSERT AND WITHDRAW VIBRATORS AT POINTS APPROXIMATELY 18-INCHES APART. AT EACH INSERTION OPERATE VIBRATOR FOR 5 TO 10 SECONDS. DO NOT TRANSPORT CONCRETE IN THE FORMS OR IN SLABS BY MEANS OF VIBRATORS.

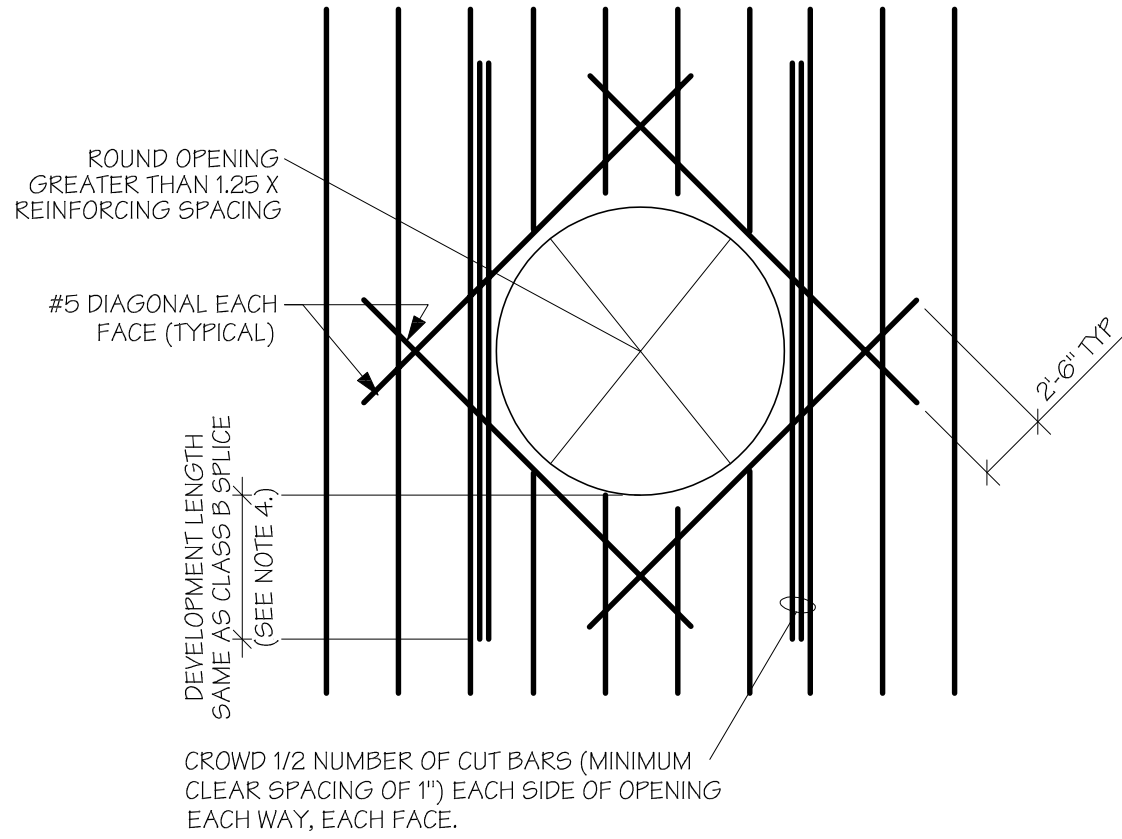


NOTES:

1. BARS SHOWN IN ONE DIRECTION FOR CLARITY. INSTALL BARS IN OTHER DIRECTION IN SAME MANNER.
2. DETAIL TO BE USED AT ALL WALL/SLAB PENETRATIONS MEETING OPENING CRITERIA ABOVE. AT SMALLER OPENINGS, SPREAD REINFORCING AROUND OPENING.
3. CROWDED BARS ARE NOT REQUIRED AT AN OPENING EDGE PARALLEL TO AND WITHIN 6 INCHES OF A WALL OR BEAM.
4. PROVIDE STANDARD HOOK IF FULL DEVELOPMENT LENGTH IS NOT POSSIBLE.
5. REINFORCING STEEL IS TO BE CARRIED ACROSS ALL CONSTRUCTION JOINTS.
6. AT DOORWAYS WHERE OPENING TERMINATES AT BOTTOM OF WALL, PROVIDE 1/2 CROWDED VERTICAL BARS EACH SIDE OF OPENING AND 1/2 CROWDED HORIZONTAL BARS ALONG TOP OF OPENING. PROVIDE DIAGONAL BARS ONLY AT TOP TWO CORNERS OF OPENING.

1 Rectangular Opening in Wall/Slab

S0.1 NOT TO SCALE



NOTES:

1. BARS SHOWN IN ONE DIRECTION FOR CLARITY. INSTALL BARS IN OTHER DIRECTION IN SAME MANNER.
2. DETAIL TO BE USED AT ALL WALL/SLAB PENETRATIONS MEETING OPENING CRITERIA ABOVE. AT SMALL OPENINGS, SPREAD REINFORCING AROUND OPENING.
3. CROWDED BARS ARE NOT REQUIRED AT AN OPENING EDGE PARALLEL TO AND WITHIN 6 INCHES OF A WALL OR BEAM.
4. PROVIDE STANDARD HOOK IF FULL DEVELOPMENT LENGTH IS NOT POSSIBLE.

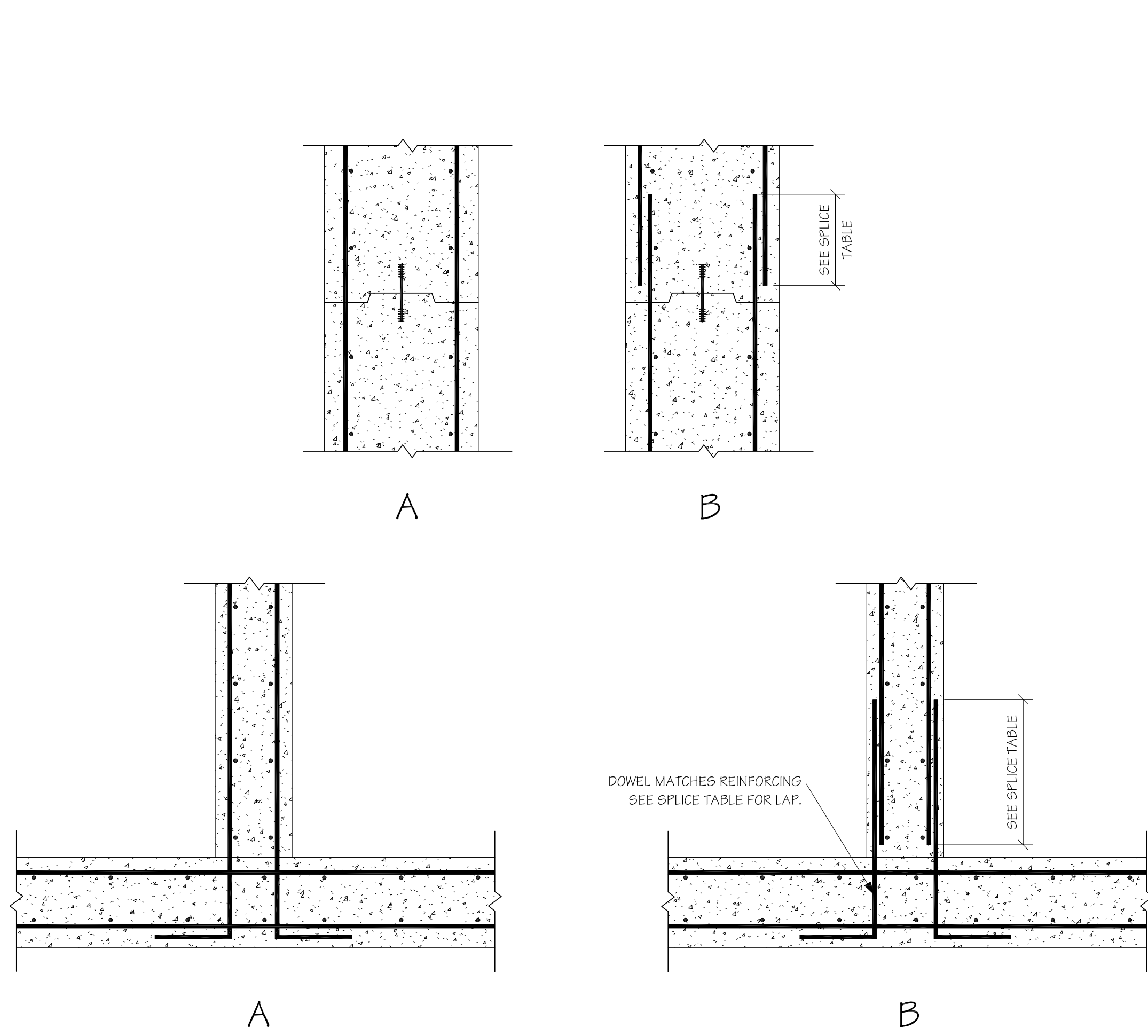
2 Circular Opening in Wall/Slab

S0.1 NOT TO SCALE

WALL OR SLAB THICKNESS	KEYWAY SIZE TABLE	
	KEYWAY DIRECTION	
	UPWARD	DOWNWARD
8"	1 1/2" x 3"	1 1/2" x 3 1/2"
1' - 0"	1 1/2" x 5"	1 1/2" x 3 1/2"
1' - 2"	1 1/2" x 5"	1 1/2" x 5 1/2"
1' - 6"	1 1/2" x 7"	1 1/2" x 7 1/4"
2' - 0"	1 1/2" x 9 1/2"	1 1/2" x 7 1/4"
2' - 6"	1 1/2" x 11 1/2"	1 1/2" x 9 1/4"
3' - 0"	1 1/2" x 13 1/2"	1 1/2" x 11 1/4"

3 Keyway Size Table

S0.1 NOT TO SCALE

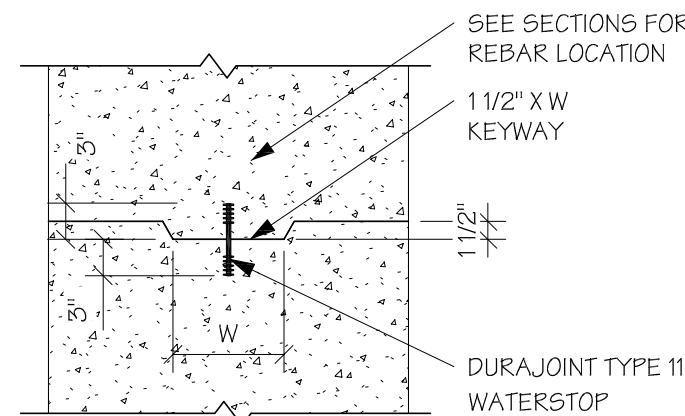


5 Rebar Options

S0.1 NOT TO SCALE

WASTE WATER SPECIFIC NOTES:

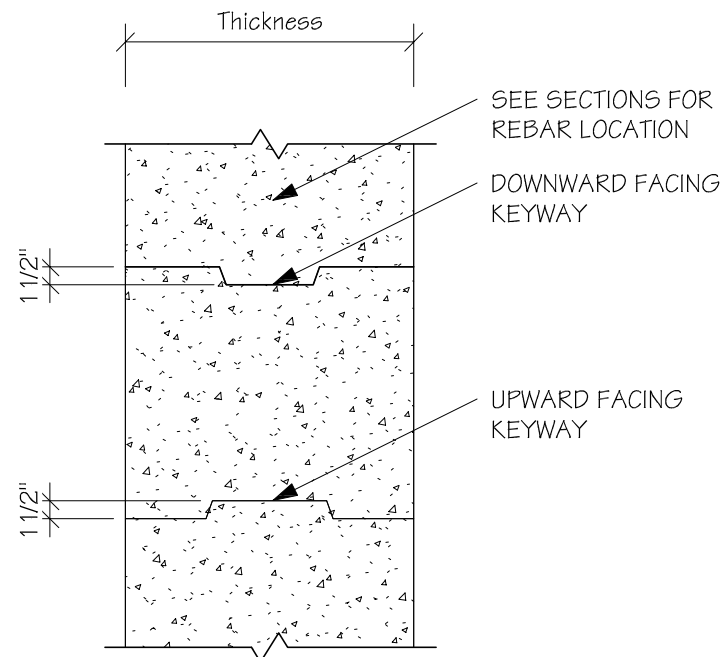
1. ALL WATERSTOP SHALL BE DURAJOINT PVC WATERSTOP AS MANUFACTURED BY DURAJOINT. IT SHALL BE AN EXTRUSION OF VIRGIN POLYVINYL CHLORIDE AND ADDITIONAL RESINS, PLASTICIZERS AND STABILIZERS WHICH MEET OR EXCEED THE REQUIREMENTS OF THE CORPS OF ENGINEERS SPECIFICATIONS. TYPES AND DIMENSIONS OF WATERSTOP SHALL BE THOSE SHOWN IN THE PROJECT SPECIFICATIONS. THE WATERSTOP SHALL BE SECURED TO THE REINFORCING STEEL USING HOG RINGS SPACED AT 12 O.C. TO PREVENT THE WATERSTOP FROM COLLAPSING DURING THE PLACEMENT OF CONCRETE. SPLICES AND CONNECTIONS TO WATERSTOPS SHALL BE EITHER FACTORY MADE OR COMPLETED IN THE FIELD FOLLOWING CONTRACTOR TRAINING. THE CONTRACTOR SHOULD SUBMIT FIELD MADE SPLICES FOR THE ENGINEER'S REVIEW PRIOR TO PLACEMENT.
2. WATERSTOPS SHALL BE USED AT ALL JOINTS FOR WATER HOLDING STRUCTURES.
3. PVC WATERSTOPS SHALL BE TYPE 11 UNLESS NOTED OTHERWISE. TYPE 2 IS USED IN SOME LOCATIONS (WHERE NOTED). TYPE 1F IS USED IN EXPANSION JOINTS. ADEKA HYDROPHILIC WATERSTOPS (MC200MN) IS USED IN SOME LOCATIONS (WHERE NOTED).
4. TAPER TIE HOLE PLUGS SHALL BE P120 X-PLUG BY ELITE PRODUCTS.
5. ALL GRATING SHALL BE MCNICHOLS GW-125, 19-W-4 STAINLESS STEEL SERRATED BAR GRATING



W IS BASED ON WALL THICKNESS, REF 3/50.1

9 Keyway and Waterstop @ Wall

S0.1 3/4" = 1'-0"



NOTE: SEE KEYWAY SIZE TABLE

10 Keyway Detail & Table

S0.1 3/4" = 1'-0"

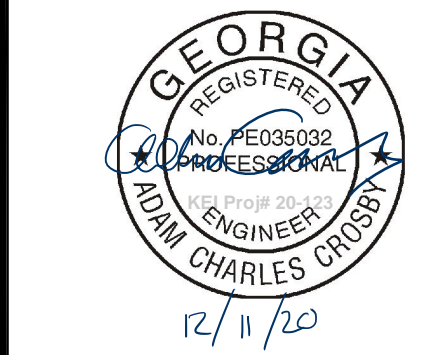
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Project No: 20-123

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**USDA SEWER SYSTEM
IMPROVEMENTS - CONTRACT A**
WPCP UPGRADES
FOR THE
CITY OF THOMASTON

REVISTIONS	DESCRIPTION	DATE
NO.		

BID SET



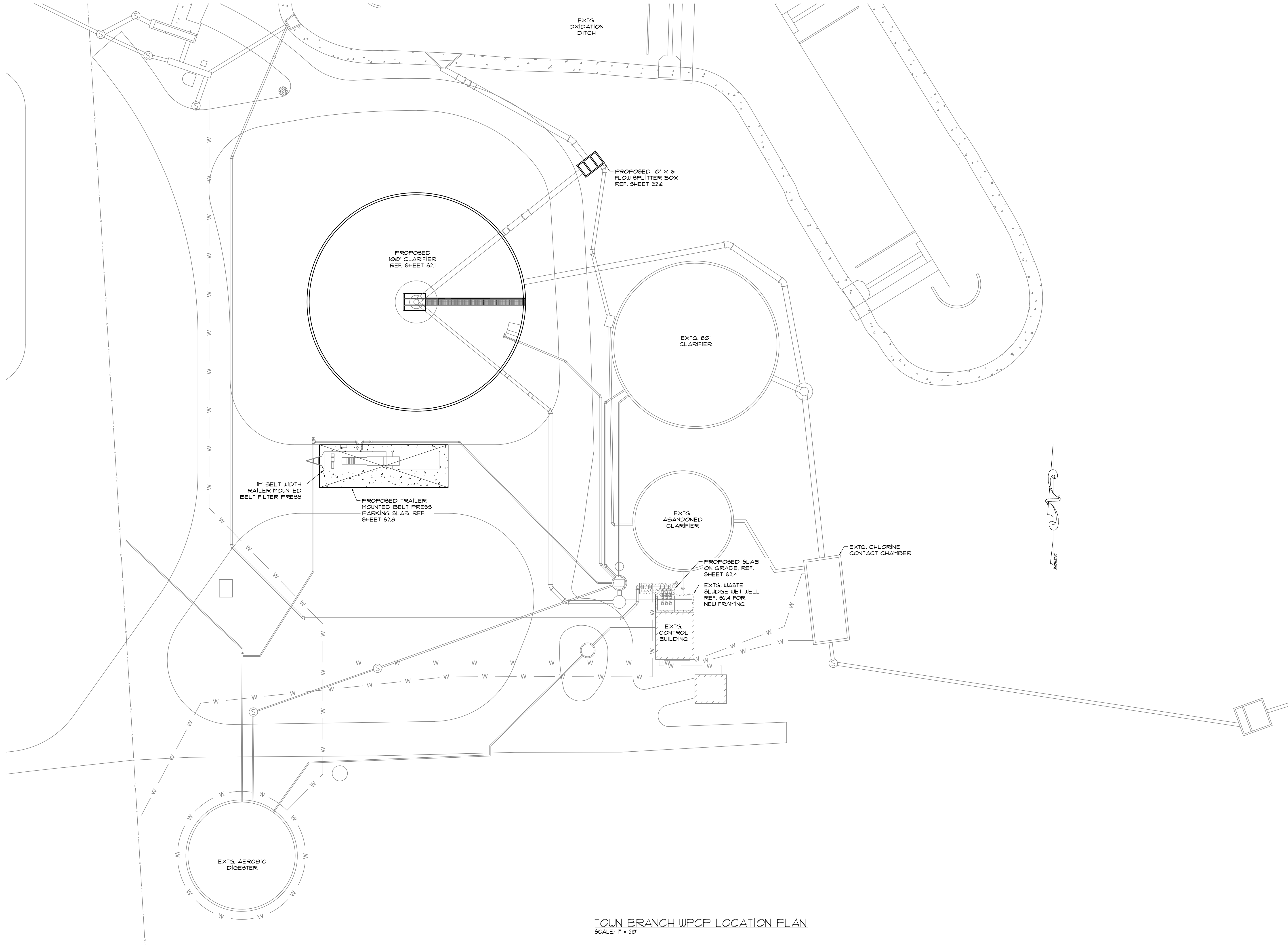
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DATE: DEC 2020
SCALE: AS SHOWN

CONTENT:
**GENERAL STRUCTURAL
NOTES & DETAILS 2**

SHEET NO:

S0.1

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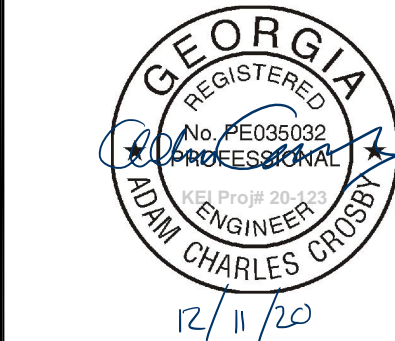


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CONTENT:
**TOWN BRANCH
WPCP STRUCTURAL
LOCATION PLAN**

SHEET NO:
S1.0



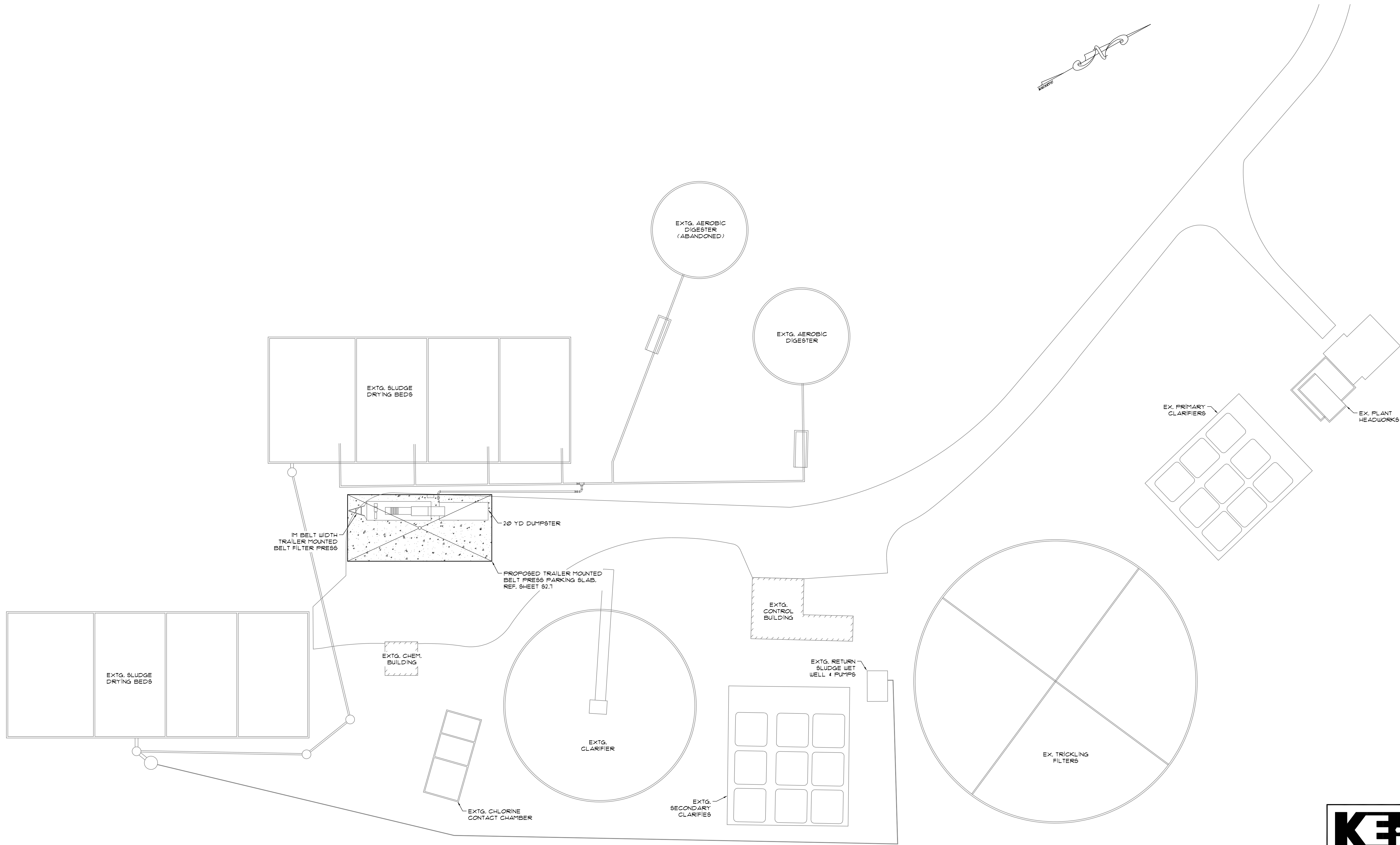
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BELL CREEK WPCP LOCATION PLAN
SCALE: 1" = 20'

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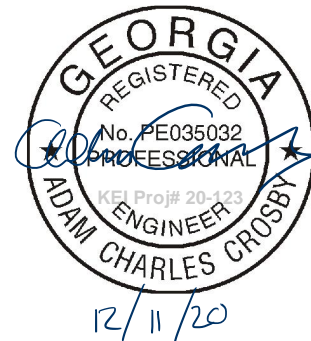
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CONTENT:
BELL CREEK WPCP
STRUCTURAL
LOCATION PLAN

SHEET NO:
S2.0

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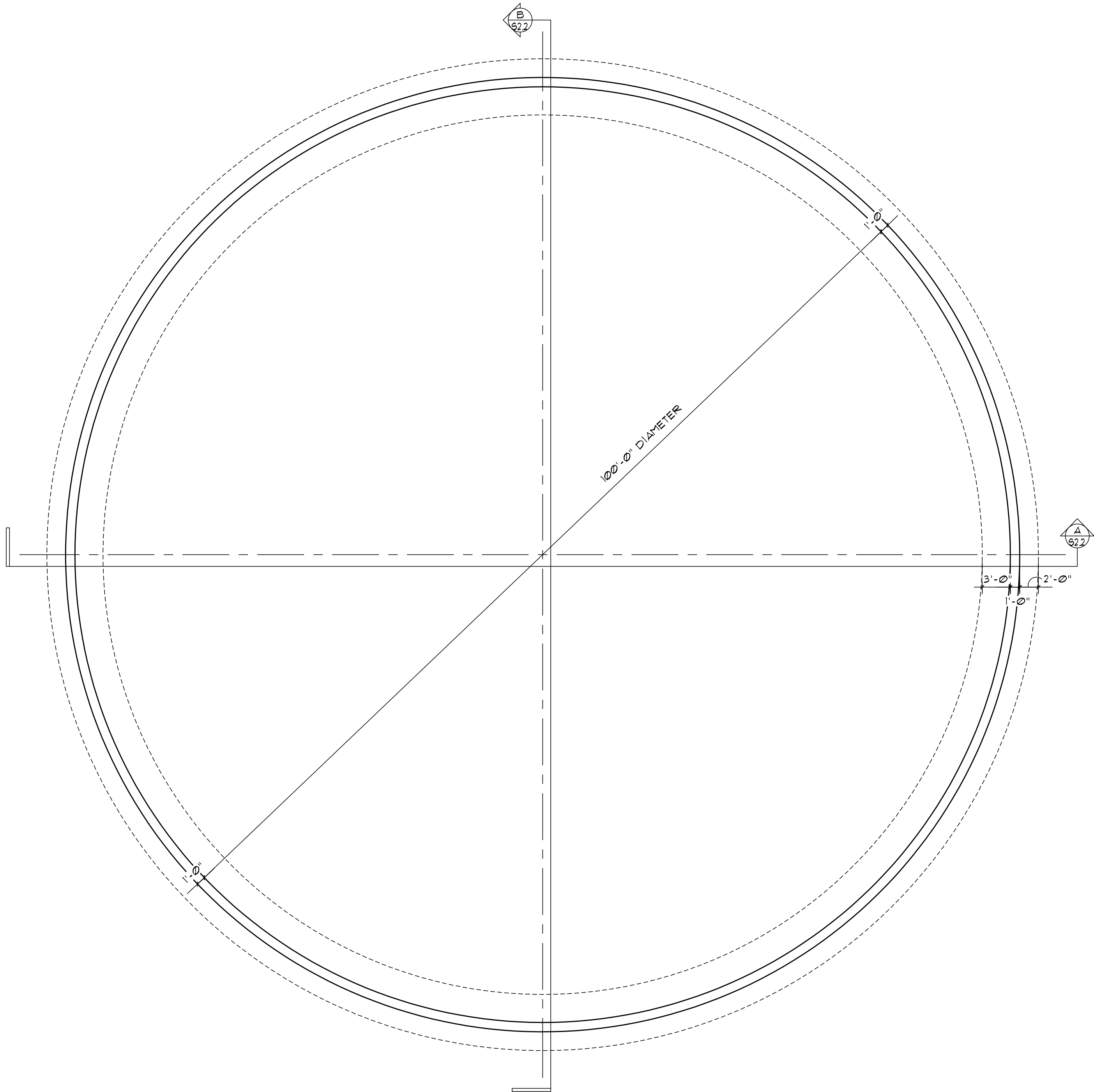
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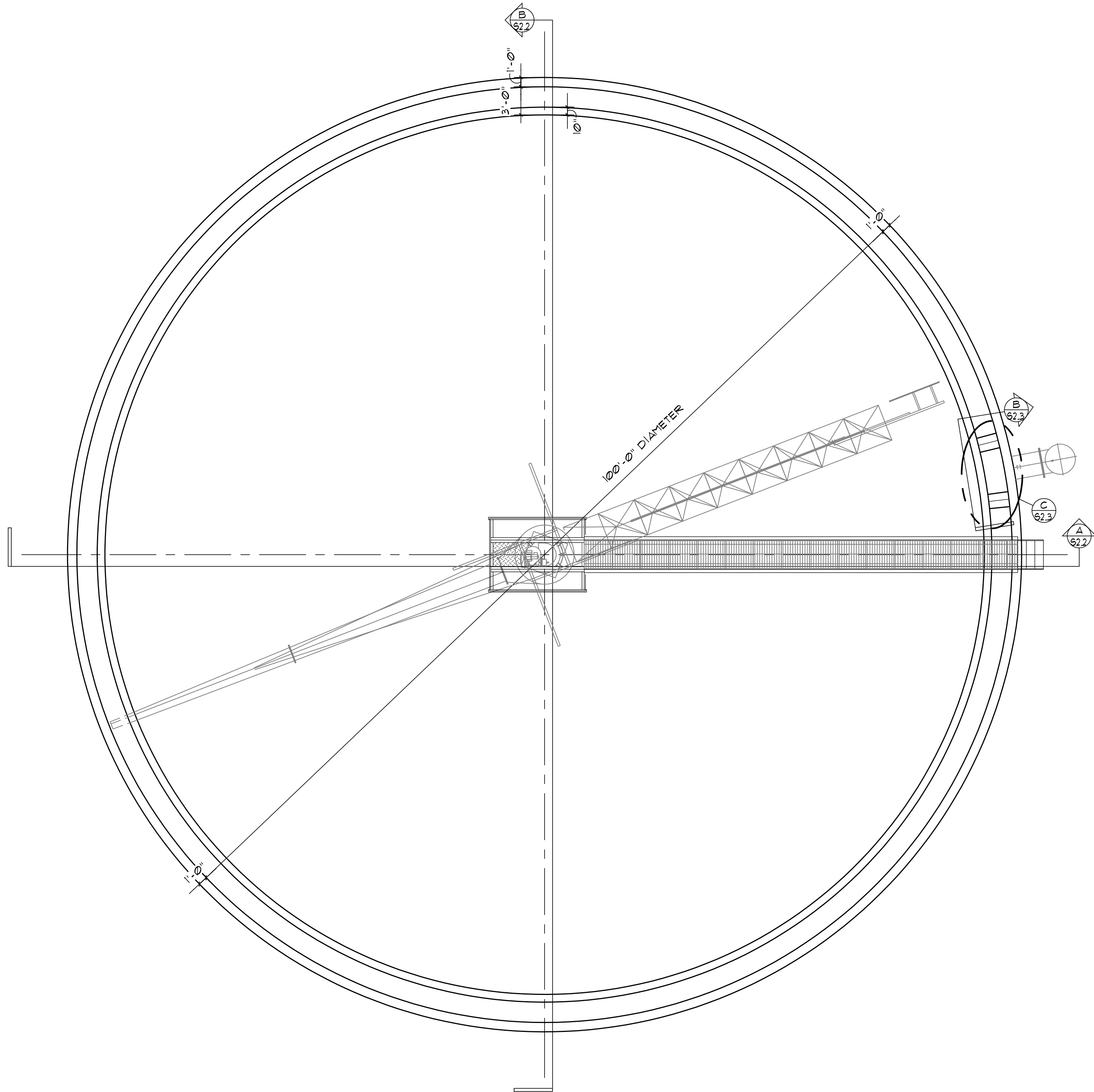
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CLARIFIER FOUNDATION PLAN
SCALE: 1/8" = 1'-0"



CLARIFIER ELEVATED SLAB PLAN
SCALE: 1/8" = 1'-0"

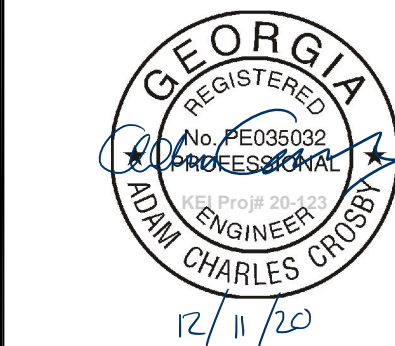
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CONTENT:
CLARIFIER
FOUNDATION PLAN

SHEET NO:

S2.1



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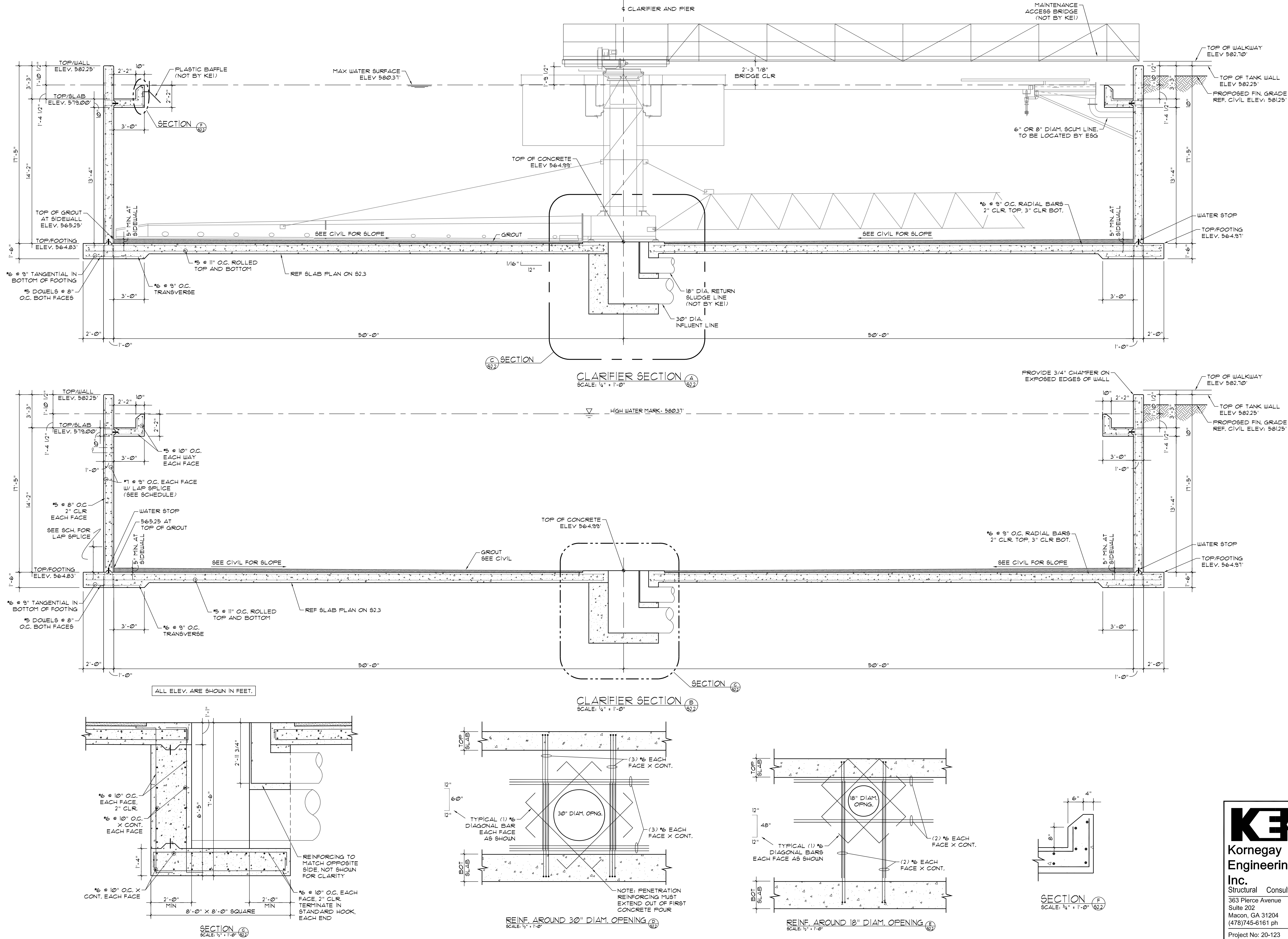
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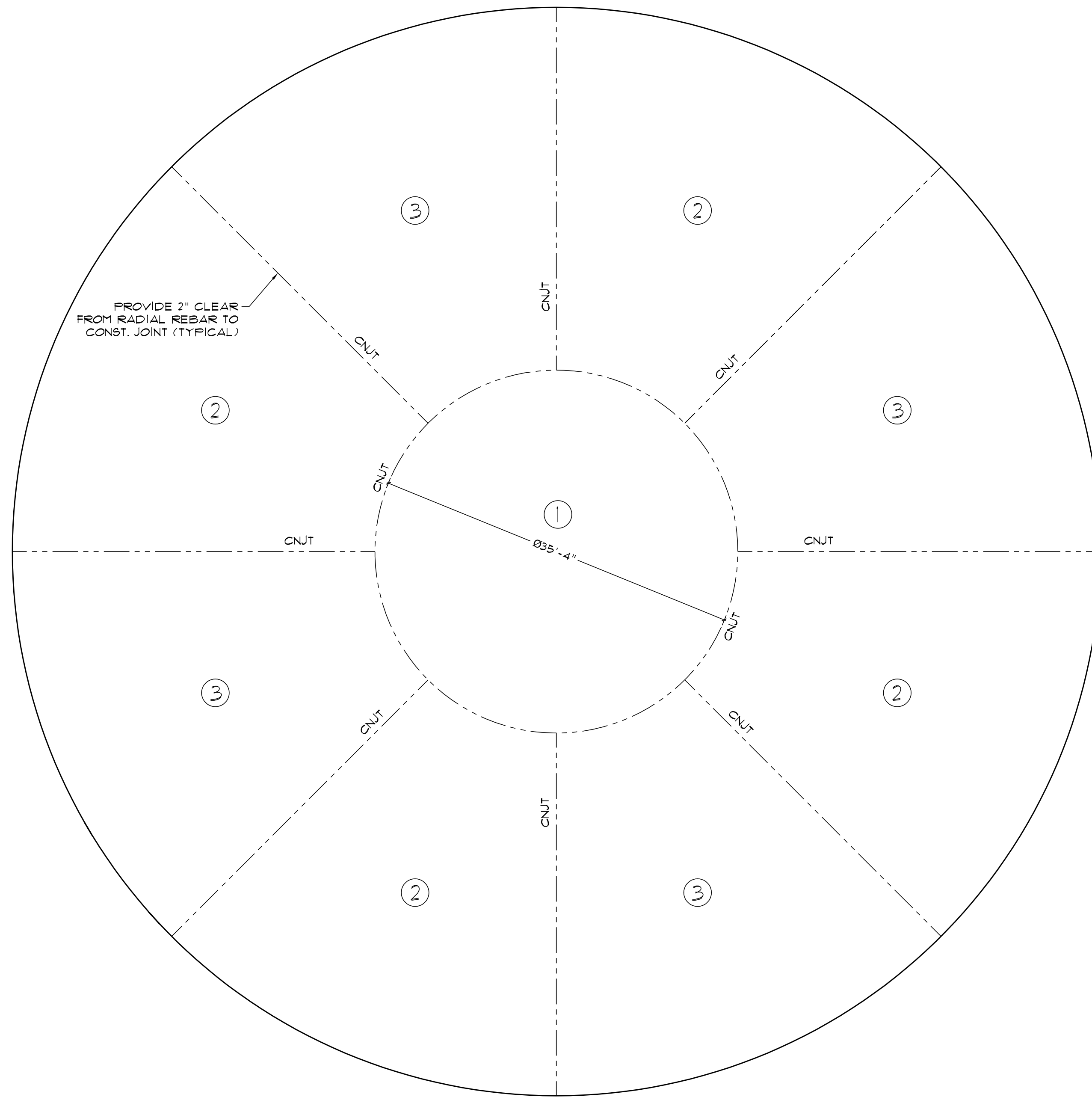
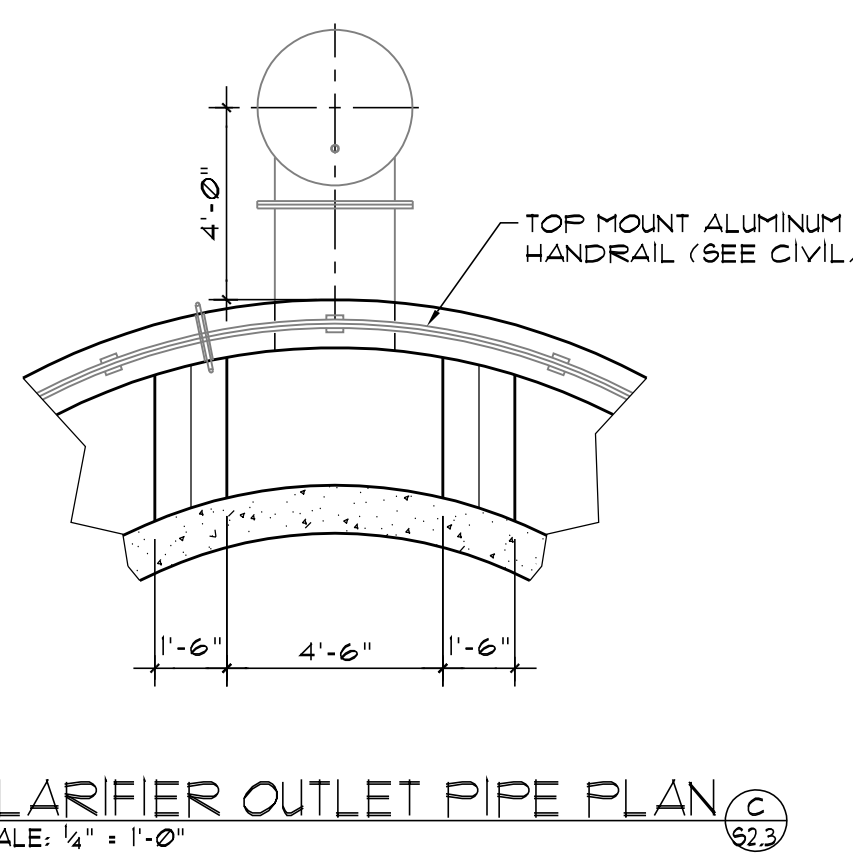
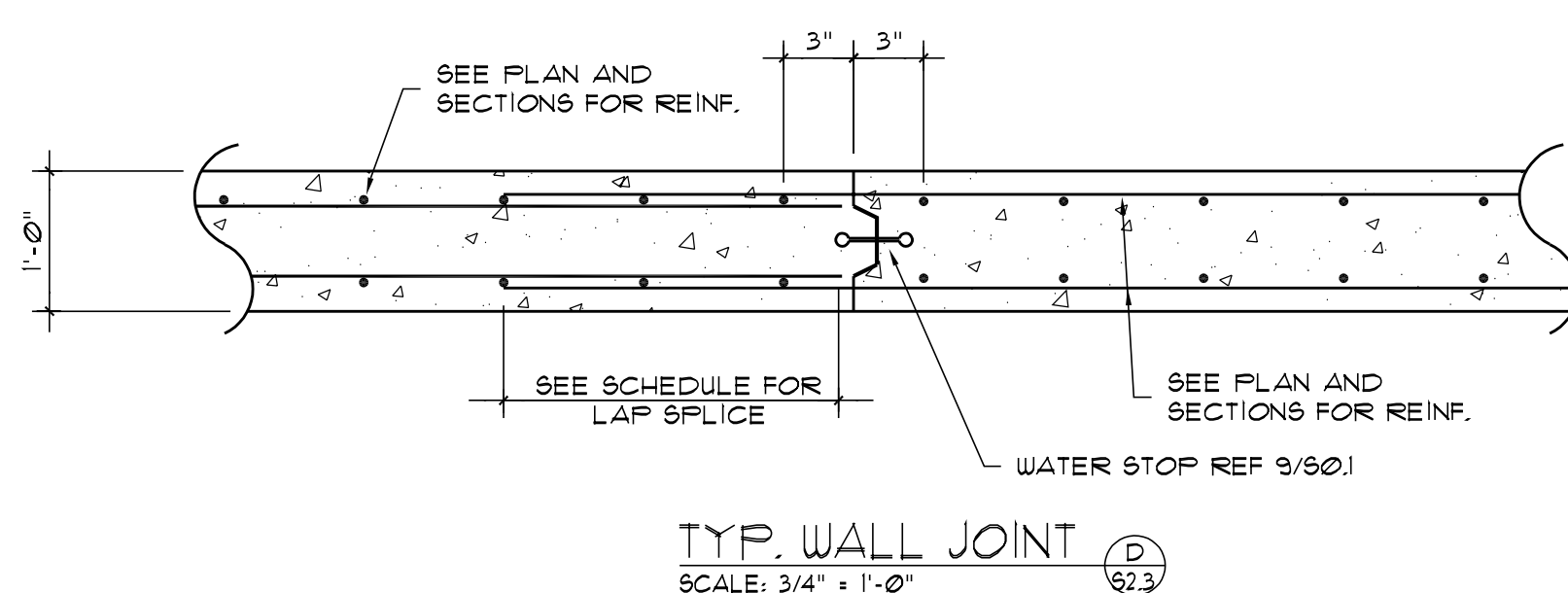
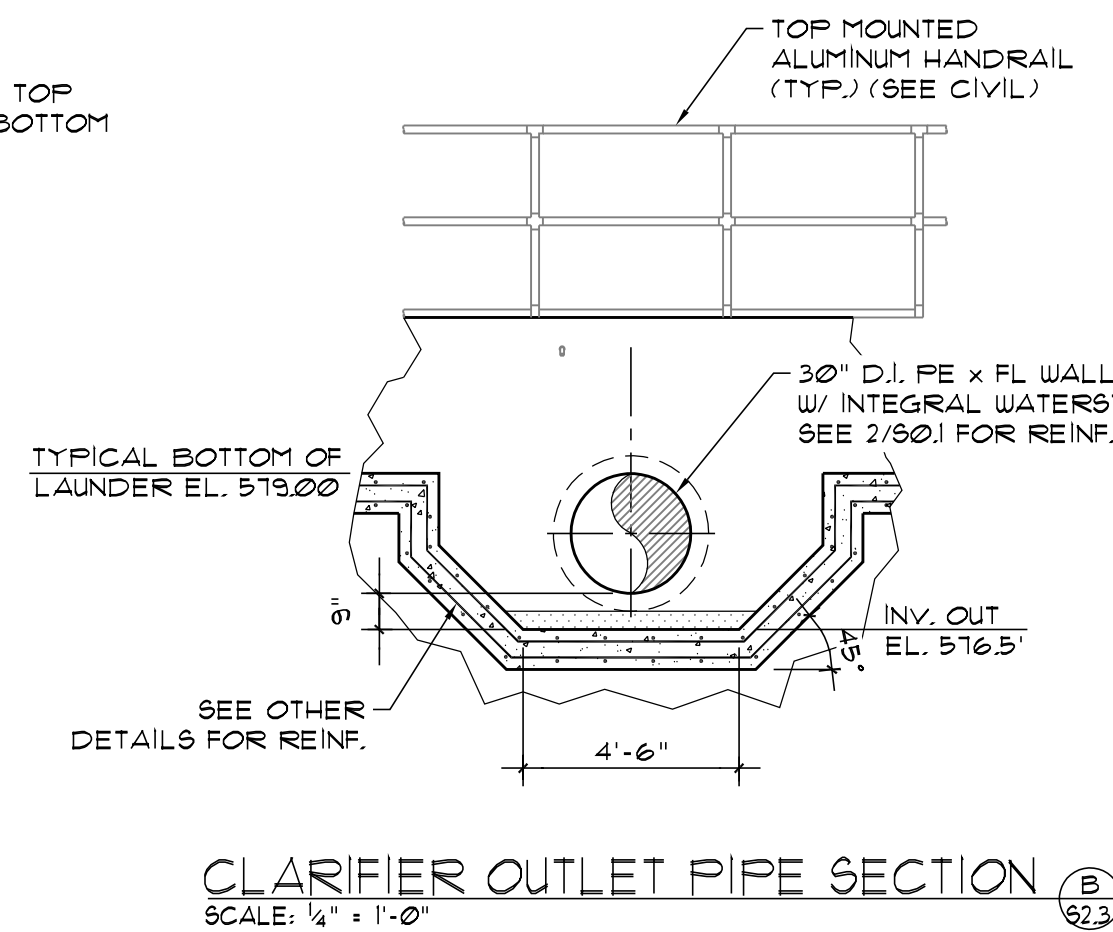
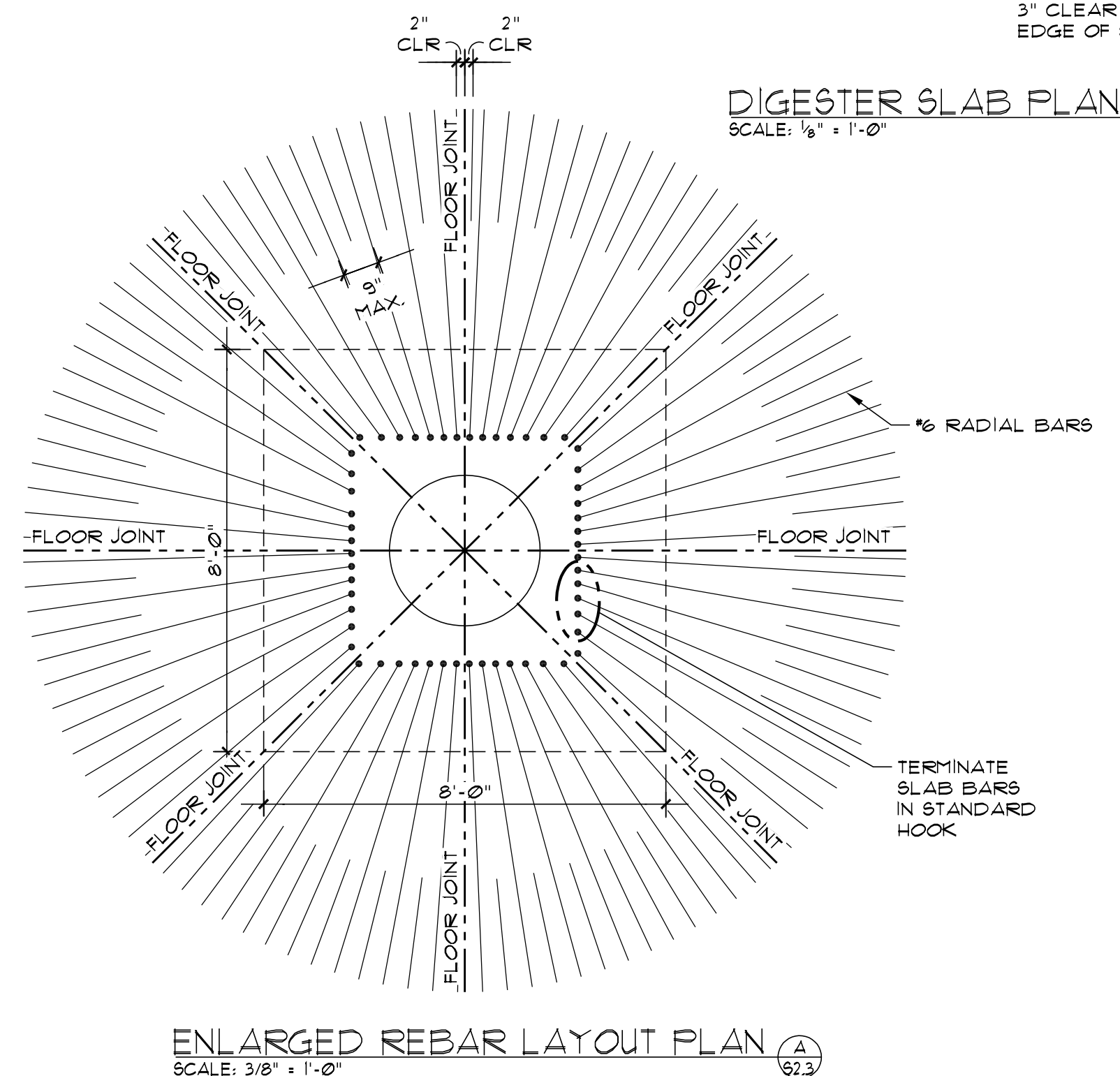
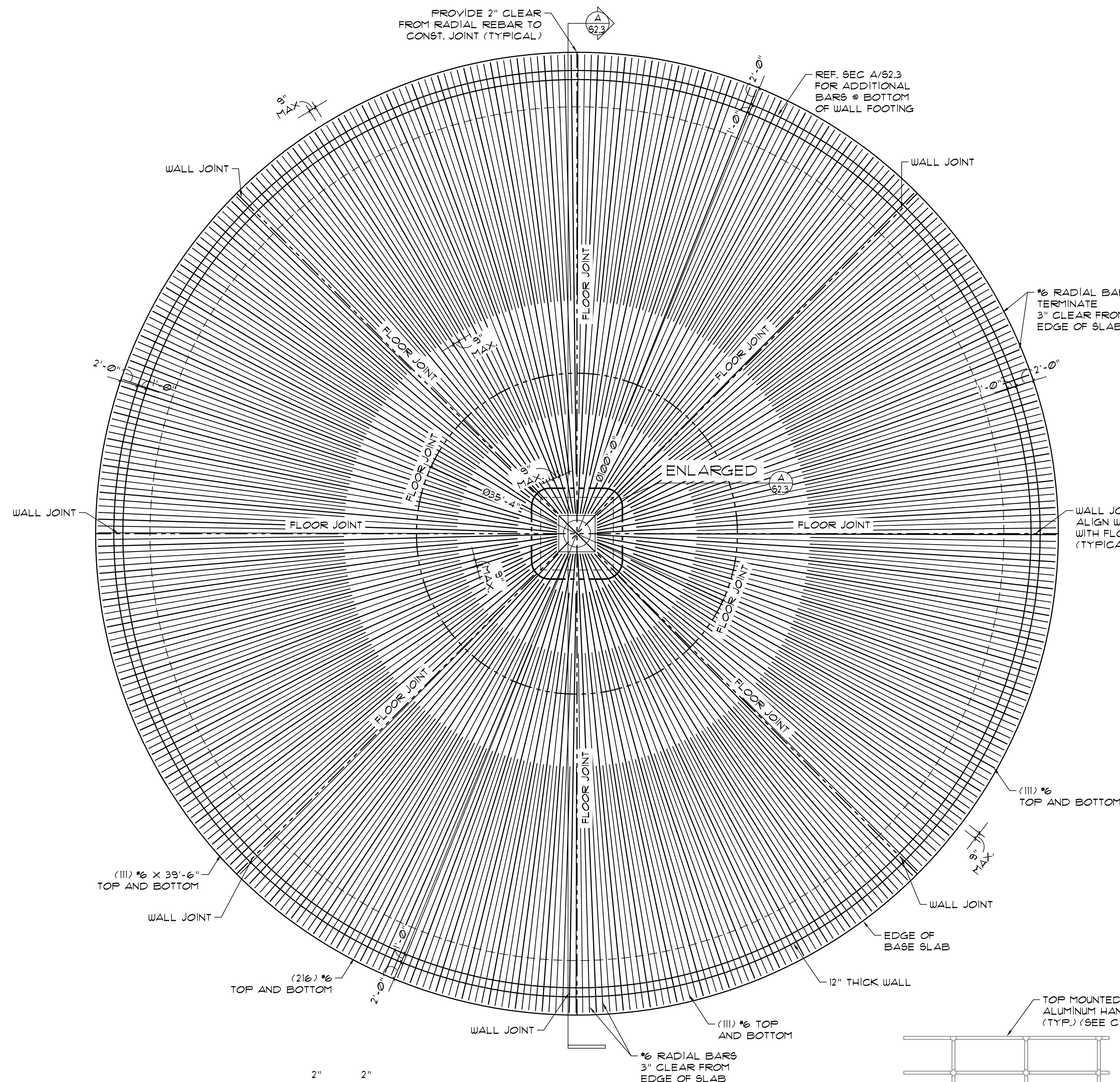
SHEET NO:

S2.2

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- 1: 1ST FOUR
2: 2ND FOUR
3: 3RD FOUR
- ALLOW 3 DAYS BETWEEN ADJACENT FOURS

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CONTENT:
CLARIFIER REBAR LAYOUT AND DETAILS

SHEET NO:

S2.3

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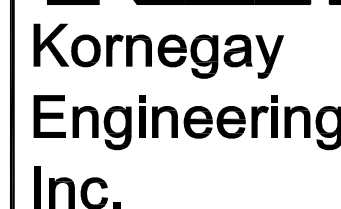


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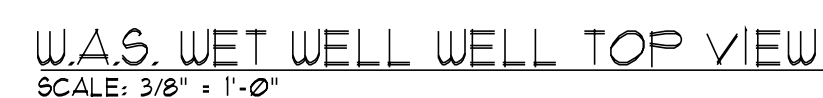
CONTENT:
**WET WELL
LOCATION PLAN**

SHEET NO:

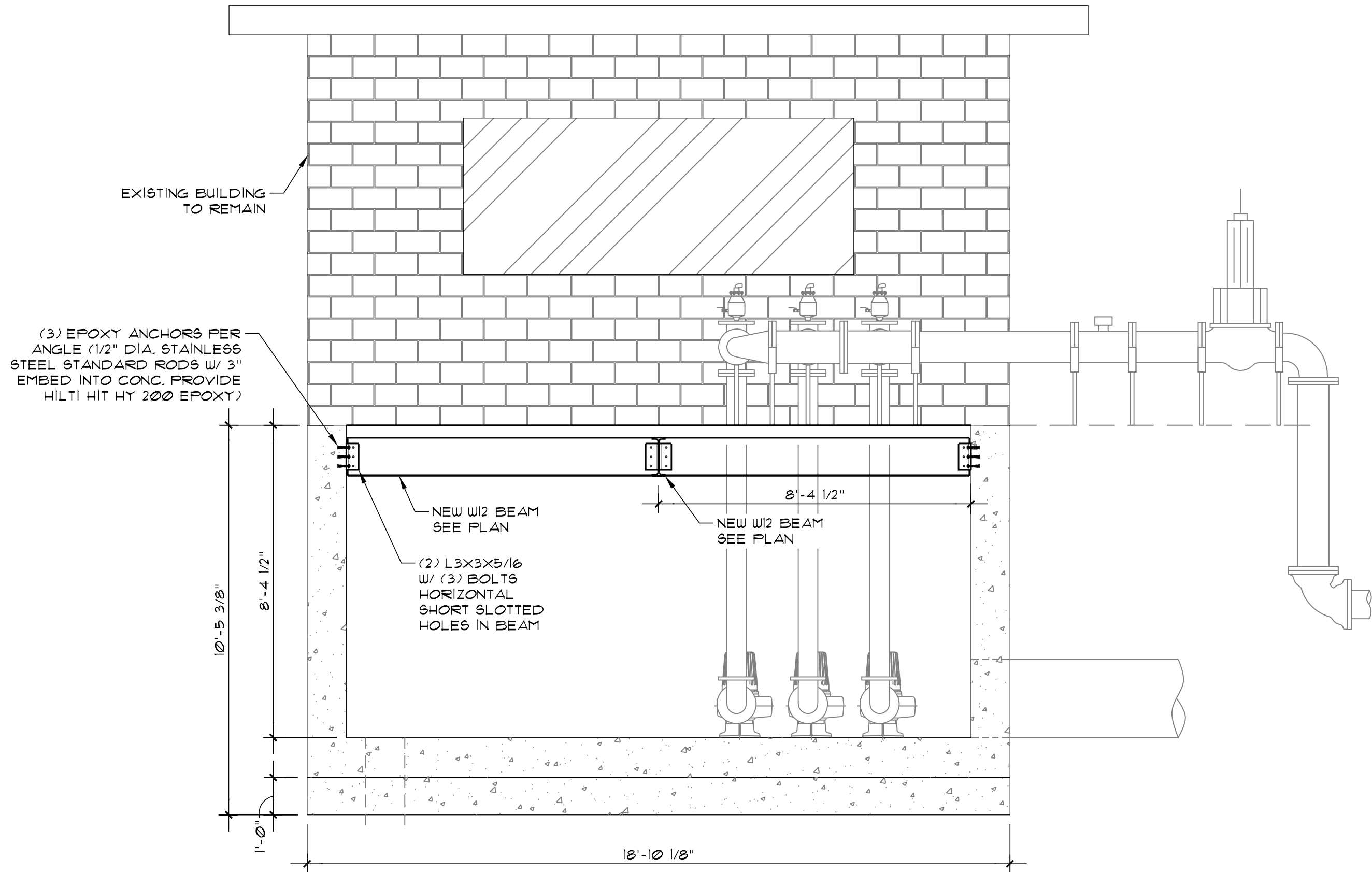
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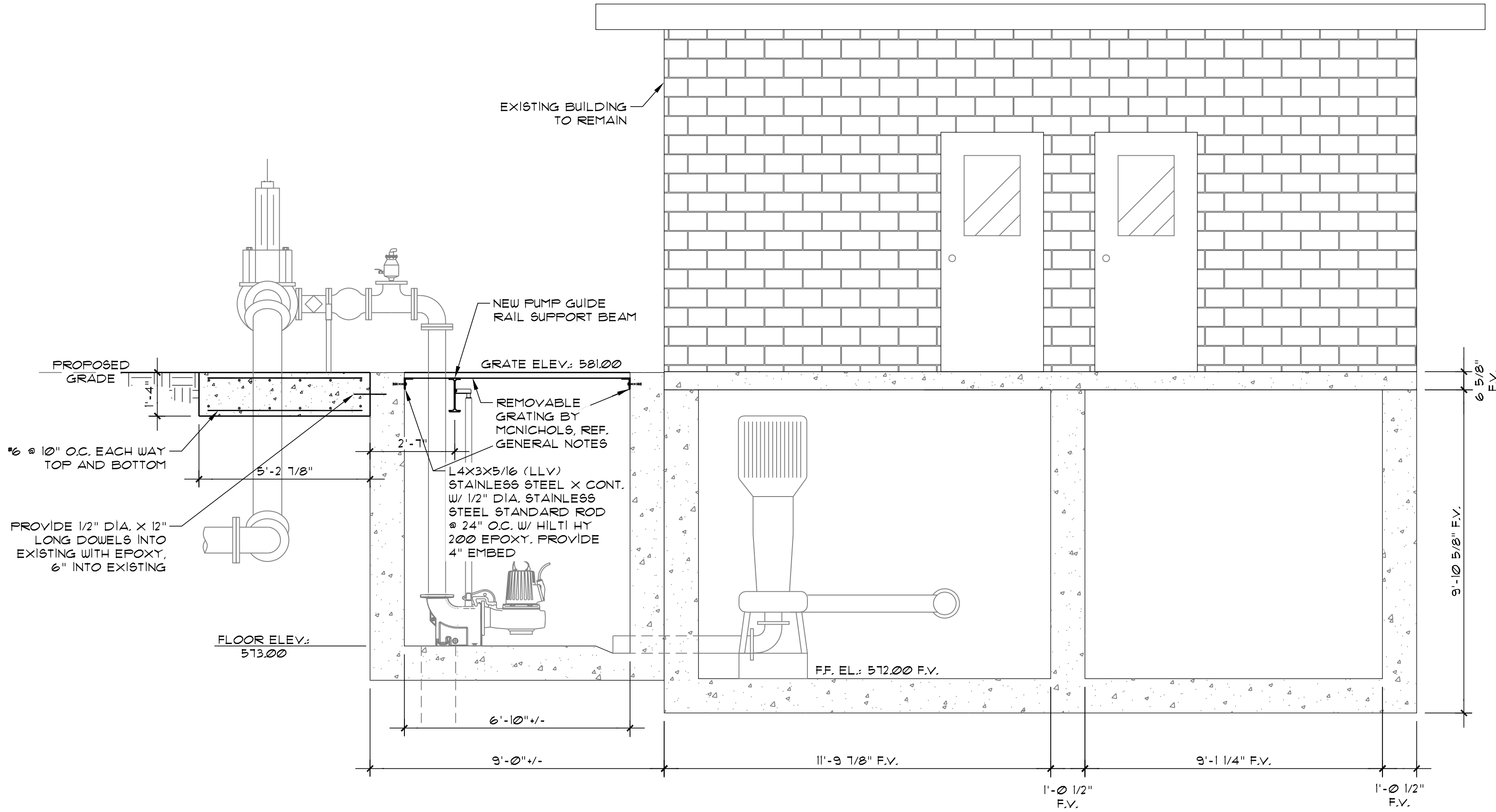
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W.A.S. WET WELL - NORTH ELEVATION A
SCALE: 3/8" = 1'-0"



W.A.S. WET WELL - WEST ELEVATION B
SCALE: 3/8" = 1'-0"

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SCALE: AS SHOWN

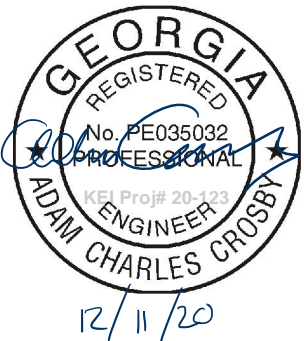
CONTENT:
WET WELL SECTIONS
& DETAILS

SHEET NO:

S2.5

REVISIONS	NO.	DESCRIPTION	DATE

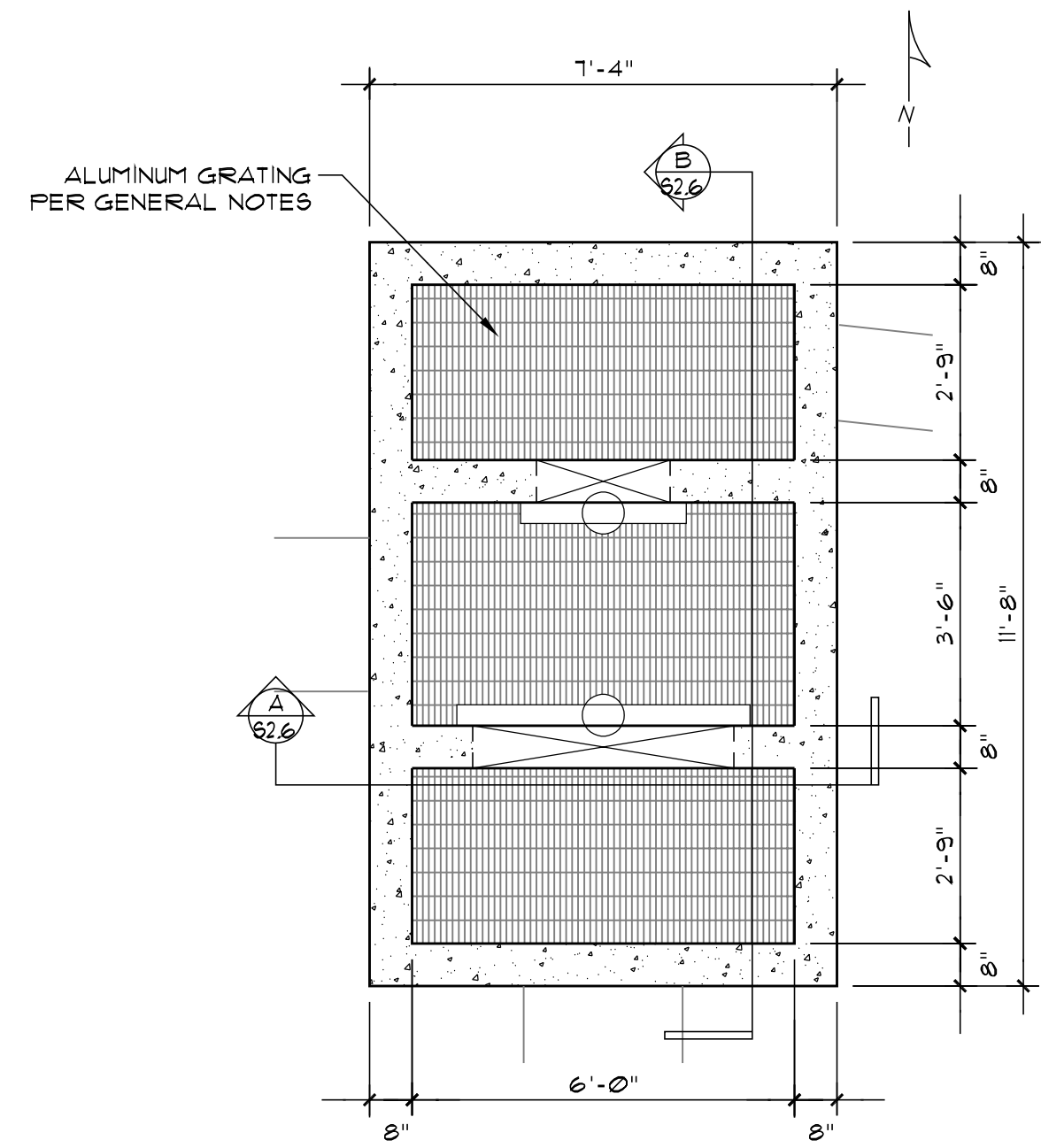
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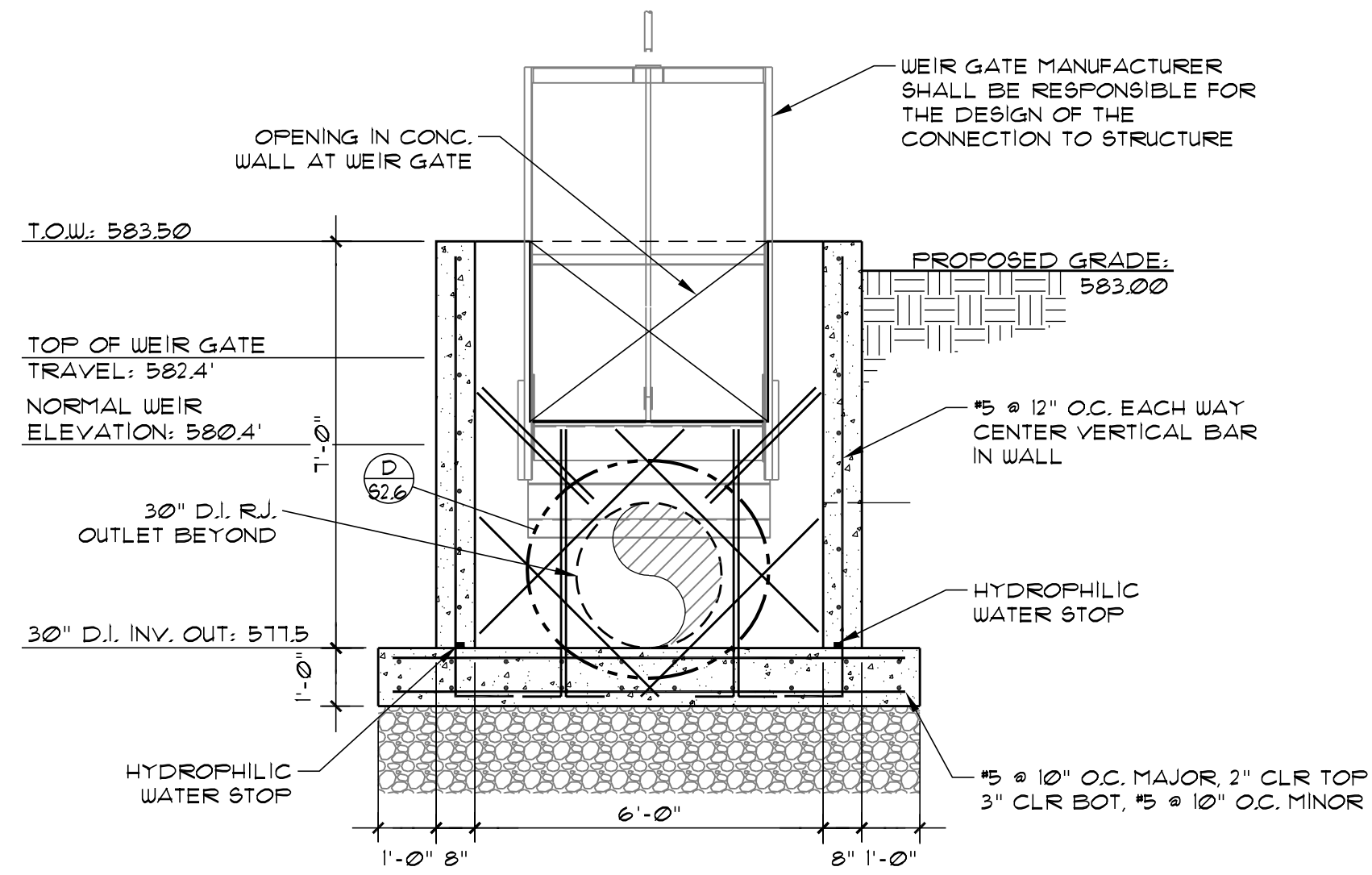
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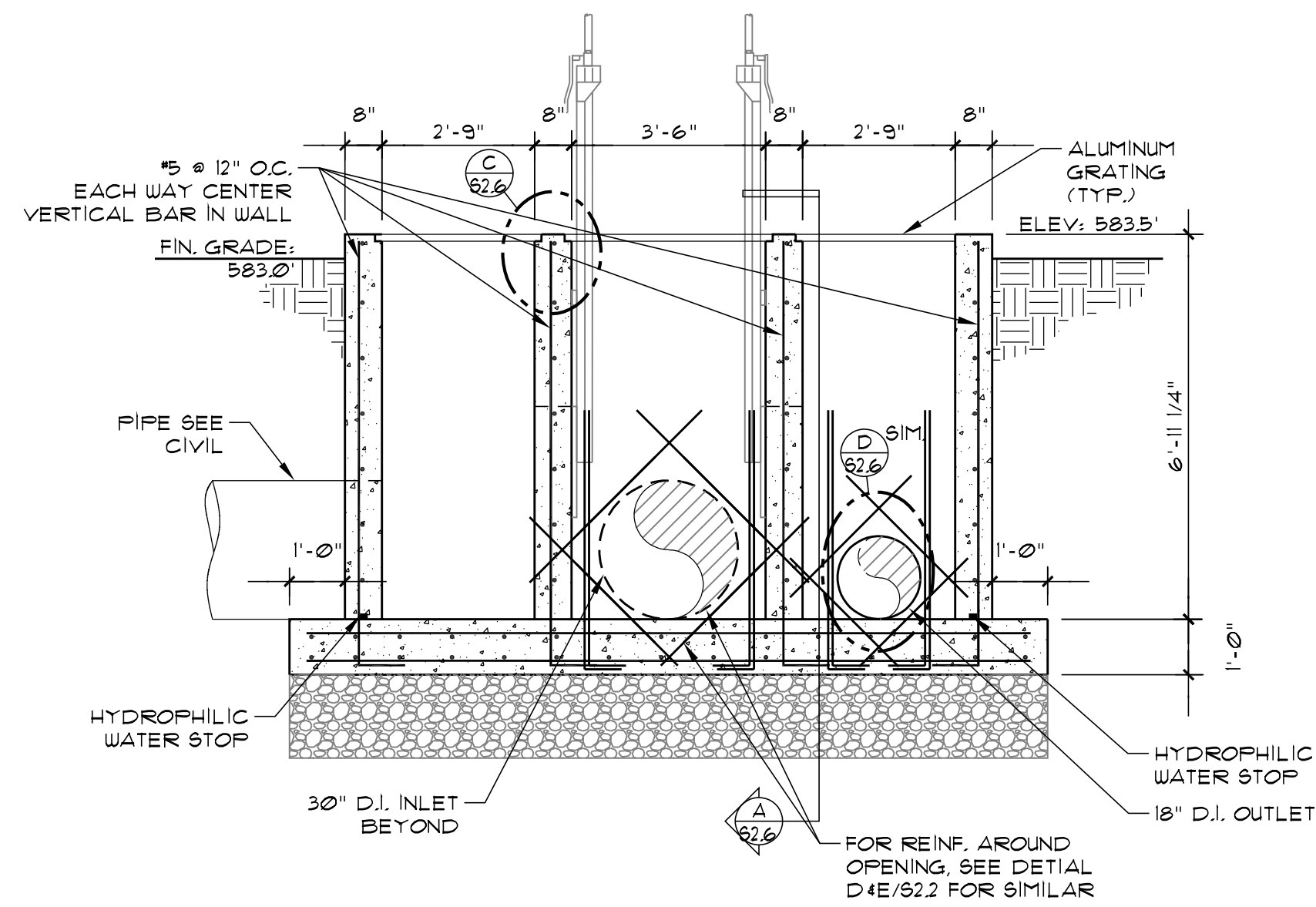
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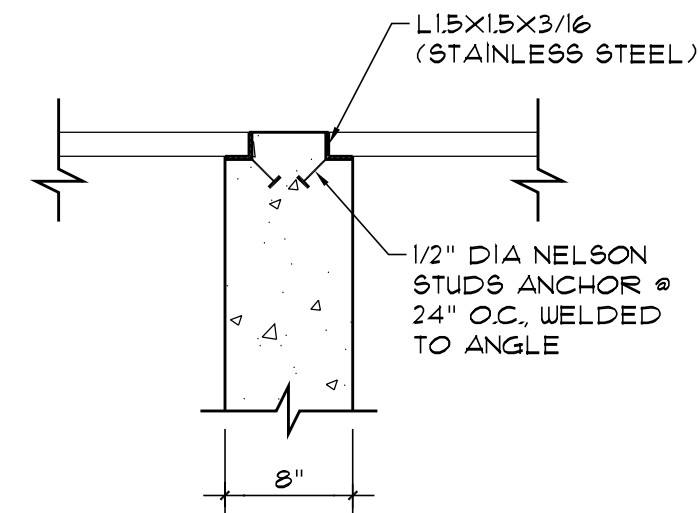
SPLITTER BOX - PLAN
SCALE: $\frac{3}{8}" = 1'-0"$



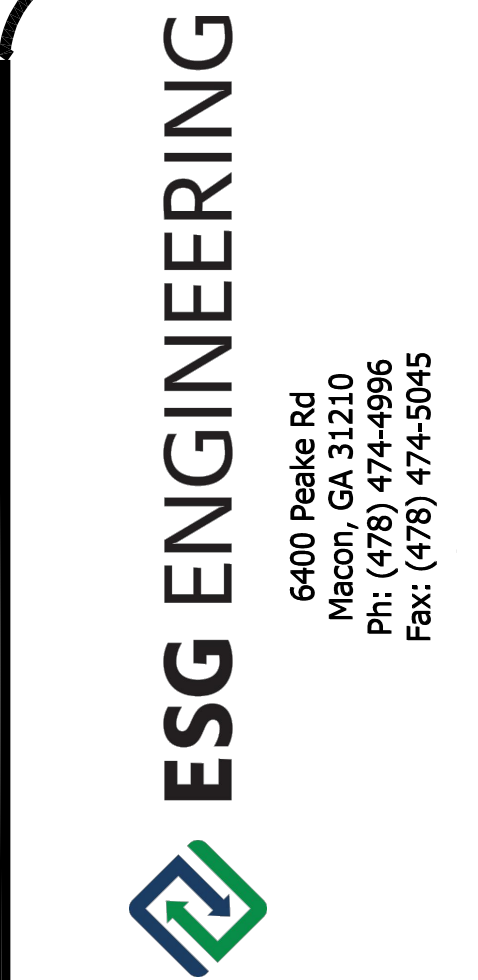
SPLITTER BOX SECTION A
SCALE: $\frac{3}{8}" = 1'-0"$



SPLITTER BOX SECTION B
SCALE: $\frac{3}{8}" = 1'-0"$



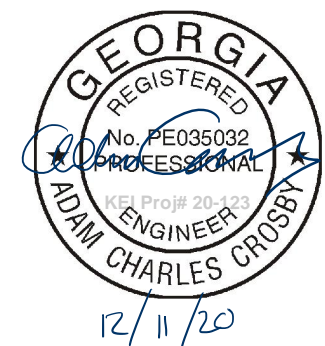
GRATING DETAIL C
SCALE: 1" = 1'-0"



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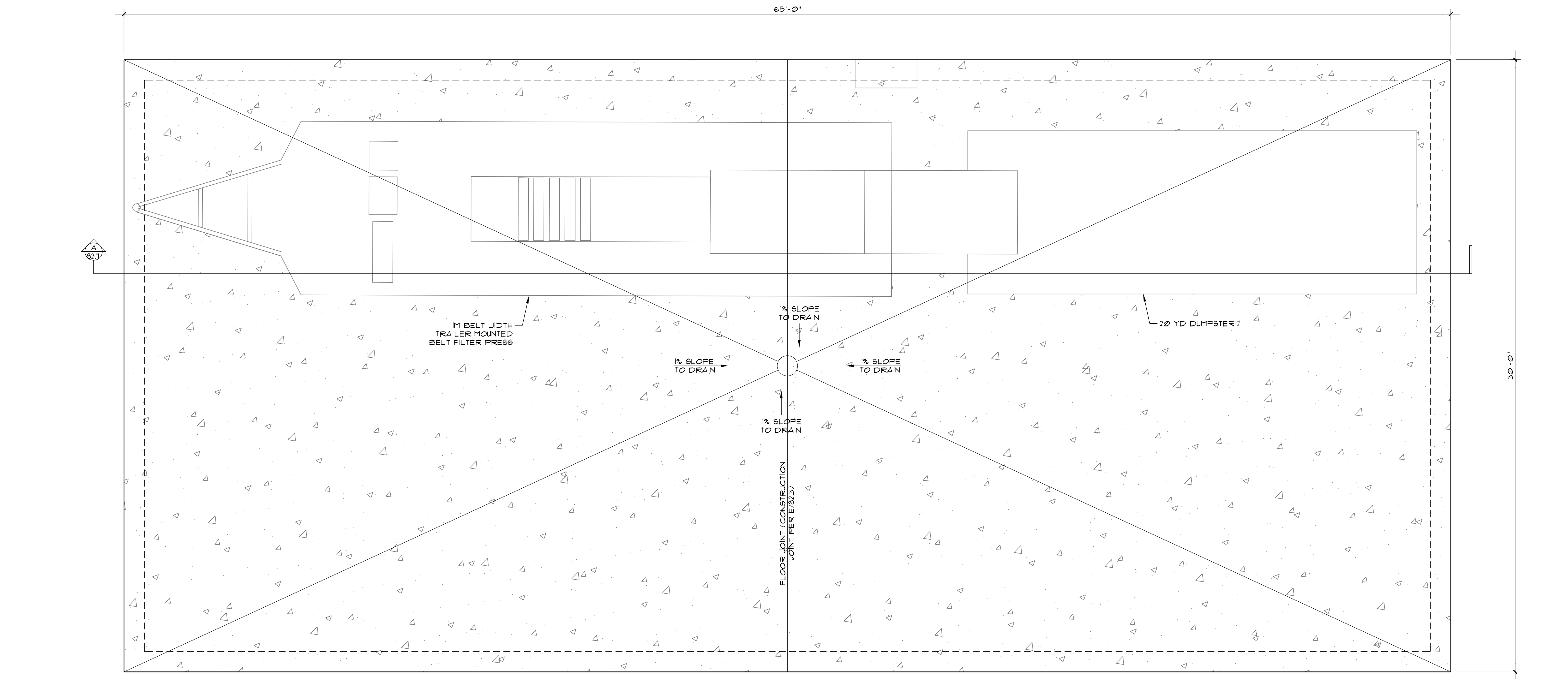
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SPLITTER BOX PLAN,
SECTIONS AND DETAILS

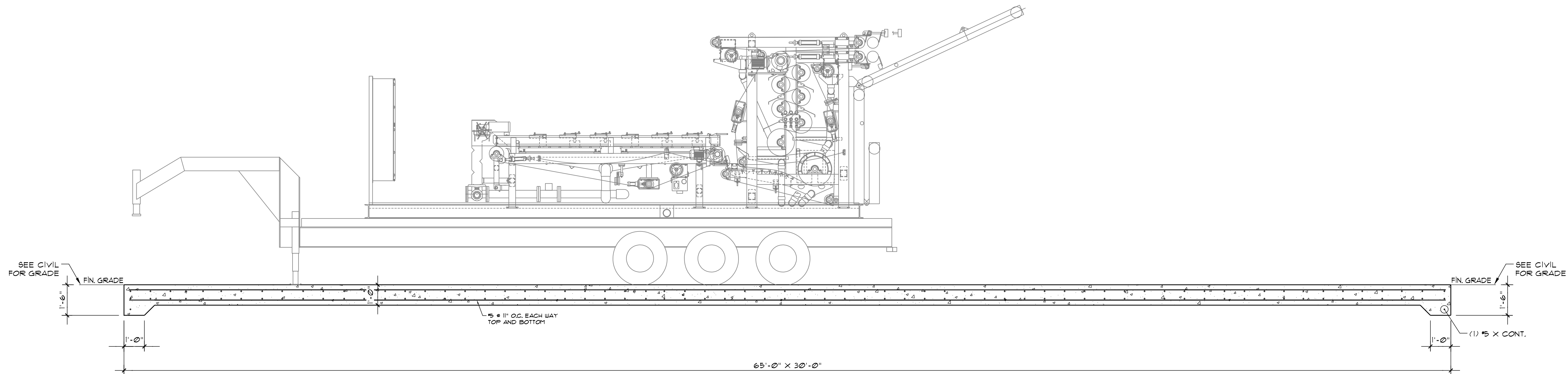
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BELL CREEK BELT PRESS FOUNDATION PLAN
SCALE: 3/8" = 1'-0"



SECTION
SCALE: 3/8" = 1'-0"

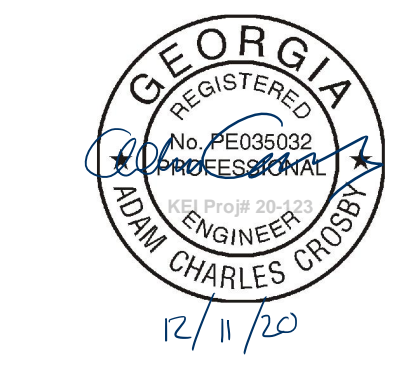
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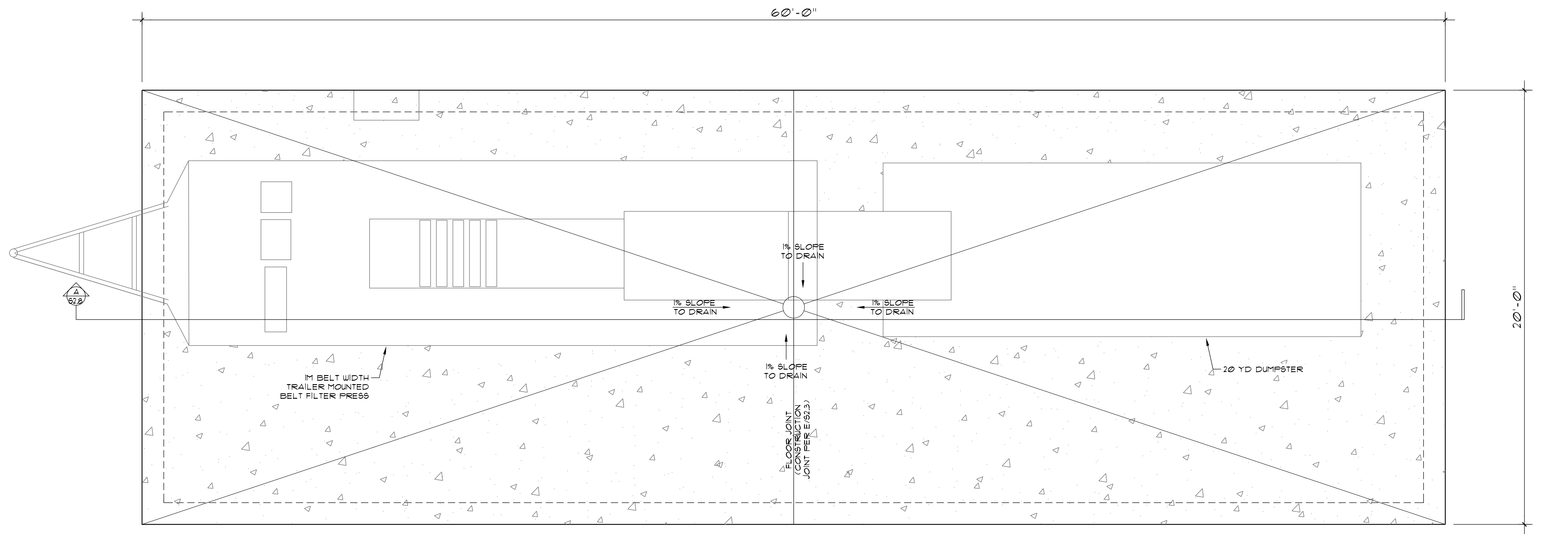
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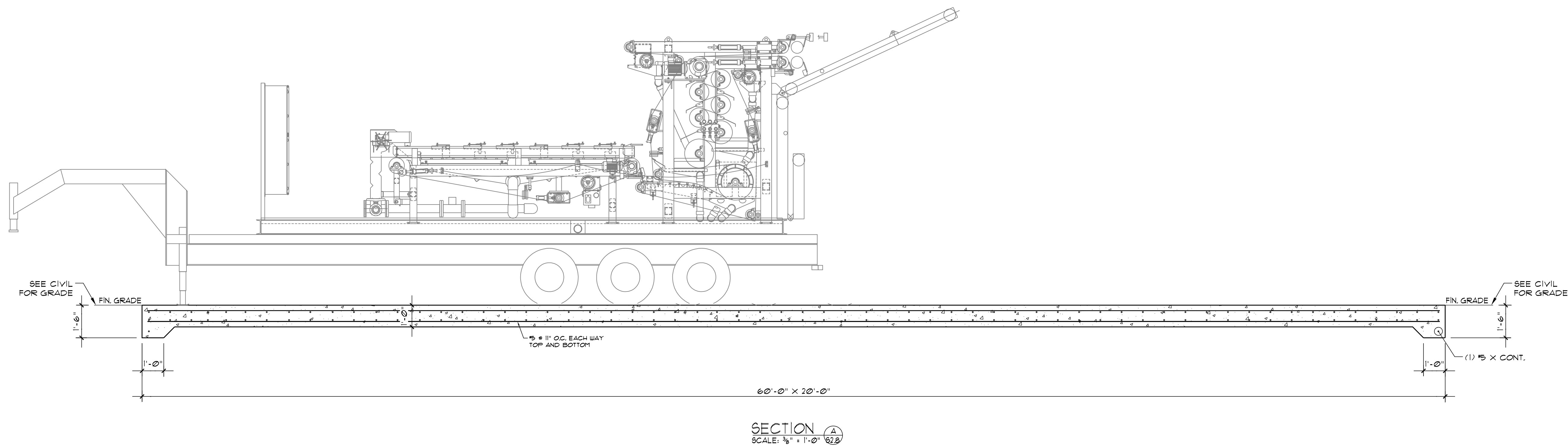
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SCALE: AS SHOWN
CONTENT: BELL CREEK
BELT PRESS PARKING
SLAB PLAN & SECTION

SHEET NO:
S2.7

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TOWN BRANCH BELT PRESS FOUNDATION PLAN
SCALE: 3/8" = 1'-0"



SECTION A
SCALE: 3/8" = 1'-0" 62/2

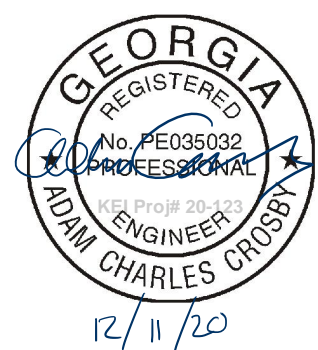
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CONTENT:
TOWN BRANCH
BELT PRESS PARKING
SLAB PLAN & SECTION

SHEET NO:
S2.8

SCHEMATIC DIAGRAM SYMBOLS	
	CONDUCTORS CONNECTED
	CONDUCTORS NOT CONNECTED
	CONNECTION POINT
	TERMINAL POINT FOR OUTGOING CONDUCTORS, WITH IDENTIFICATION. "XX" DENOTES CONTRACTOR ASSIGNED.
	MAGNETIC-ONLY CIRCUIT BREAKER (MCP), WITH CURRENT RATING
	CIRCUIT BREAKER, THERMAL-MAGNETIC UNLESS OTHERWISE NOTED, WITH FRAME SIZE AND TRIP RATING
	FUSE WITH SIZE AND OPTIONAL IDENTIFICATION.
	DISCONNECT SWITCH. RATING OPTIONAL. 30 AMP, 600V RATED MINIMUM UNLESS OTHERWISE NOTED.
	FUSE DISCONNECT SWITCH. RATING OPTIONAL. 30 AMP, 600V MINIMUM UNLESS OTHERWISE NOTED.
	MOTOR (HP AS SHOWN, PHASES AS REQUIRED)
	MOTOR STARTER COIL
	THERMAL MOTOR OVERLOAD
	MOTOR CONTACT
	LIMIT SWITCH NORMALLY CLOSED AND NORMALLY OPEN
	PRESSURE SWITCH NORMALLY CLOSED AND NORMALLY OPEN
	TEMPERATURE SWITCH NORMALLY CLOSED AND NORMALLY OPEN
	FLOW SWITCH NORMALLY CLOSED AND NORMALLY OPEN
	LEVEL SWITCH NORMALLY CLOSED AND NORMALLY OPEN
	PROXIMITY SWITCH NORMALLY CLOSED AND NORMALLY OPEN
	PULLCORD SWITCH NORMALLY CLOSED AND NORMALLY OPEN
	SOLENOID VALVE
	MOMENTARY PUSHBUTTON NORMALLY CLOSED AND NORMALLY OPEN
	SELECTOR SWITCH NORMALLY CLOSED AND NORMALLY OPEN
	TIME DELAY SWITCH NORMALLY CLOSED AND NORMALLY OPEN
	PILOT LIGHT X = LENS COLOR A = AMBER B = BLUE G = GREEN R = RED W = WHITE
	CONTROL RELAY
	CONTROL RELAY CONTACT NORMALLY CLOSED AND NORMALLY OPEN
	ALARM LIGHT
	ALARM HORN
	CONTROL POWER TRANSFORMER, PRIMARY AND SECONDARY VOLTAGE SHOWN. SIZE AS SHOWN OR SPECIFIED.
	CURRENT TRANSFORMER. PRIMARY/SECONDARY TURNS RATIO AS SHOWN.
	MOTOR SPACE HEATER

ONE LINE DIAGRAM SYMBOLS	
	LOW VOLTAGE POWER CIRCUIT AND BREAKER DRAWOUT TYPE, FRAME TRIP SHOWN
	MOLDED CASE CIRCUIT BREAKER, FRAME AND TRIP ID SHOWN
	DISCONNECT OR ISOLATING SWITCH: CONTINUOUS RATING SHOWN
	MAGNETIC-ONLY CIRCUIT BREAKER (MCP), DRAWOUT TYPE, WITH CURRENT RATING
	FUSED SWITCH: FUSE AND SWITCH CONTINUOUS RATINGS SHOWN
	POWER TRANSFORMER: PRIMARY & SECONDARY VOLTAGES, %Z, SIZE SHOWN
	CURRENT TRANSFORMER: RATIO SHOWN (3 INDICATES NO. OF CT'S) METER SWITCH, xS: AS - AMMETER SWITCH VS - VOLTMETER SWITCH FS - FREQUENCY SWITCH
	POTENTIAL TRANSFORMER PRIMARY & SECONDARY VOLTAGES & WINDINGS SHOWN. (x) UNITS
	METER: A - AMMETER W - WATTMETER KWH - WATT-HOUR METER F - FREQUENCY METER VAR - VAR METER V - VOLTMETER
	FULL VOLTAGE, NON-REVERSING MAGNETIC MOTOR STARTER. NEMA SIZE INDICATED
	FULL VOLTAGE, REVERSING MAGNETIC MOTOR STARTER. NEMA SIZE INDICATED
	VARIABLE FREQUENCY DRIVE. NEMA SIZE INDICATED
	REDUCED VOLTAGE SOLID STATE DRIVE (SOFT START). NEMA SIZE INDICATED
	MOTOR (HP AS SHOWN, PHASES AS REQUIRED)
	GENERATOR RECEPTACLE
	MANUAL TRANSFER SWITCH
	CABLE TAG: P - POWER CABLE C - CONTROL CABLE S - SHIELDED SIGNAL CABLE

CIRCUIT AND RACEWAY SYMBOLS	
	RACEWAY OR WIRING SYSTEM ABOVE FLOOR LEVEL BELOW CEILING, EXPOSED. (UNLESS OTHERWISE NOTED)
	RACEWAY OR WIRING SYSTEM BELOW FLOOR LEVEL, ABOVE CEILING, HIDDEN, OR EXISTING CABLE/CONDUIT. (UNLESS OTHERWISE NOTED)
	SCHEMATIC DIAGRAM FIELD WIRING. (UNLESS OTHERWISE NOTED)
	ONE LINE DIAGRAM EQUIPMENT ENCLOSURE. (UNLESS OTHERWISE NOTED)
	GROUNDING CONDUCTOR (CONCEALED), #4/0 AWG BARE COPPER
	GROUNDING CONDUCTOR (EXPOSED), #4/0 AWG INSULATED COPPER
	HOME RUN - SEE PANELBOARD SCHEDULE FOR CIRCUIT INFORMATION EXAMPLE: HOME TO PANELBOARD PBD A, CIRCUITS 1, 3, AND 5

GENERAL ABBREVIATIONS			
AR	ALARM RELAY	MCB	MAIN CIRCUIT BREAKER
AS	AMMETER SELECTOR SWITCH	MCC	MOTOR CONTROL CENTER
A, AMP	AMP(S), AMPERE(S)	MCP	MOTOR CONTROL PANEL/MOTOR CIRCUIT PROTECTOR
AC	ALTERNATING CURRENT	MECH	MECHANICAL
AFF	ABOVE FINISHED FLOOR	MFR	MANUFACTURE(R)
AHAP	AS HIGH AS POSSIBLE	MH	MANHOLE
AIC	AMPS INTERRUPTING CAPACITY, SYMM.	MIC	MICROPHONE
AL	ALUMINUM	MIN	MINIMUM
AT	AMPERE TRIP	MISC	MISCELLANEOUS
AF	AMPERE FRAME	mm	MILLIMETER
AUT	AUTOMATIC	mV	MILLIVOLT
AUX	AUXILIARY	MCM	MILLI CIRCULAR MILLS
AWG	AMERICAN WIRE GAUGE	MOP	MOTOR OPERATOR PANEL
BC	BARE COPPER CONDUCTOR	MPR	MOTOR PROTECTION RELAY
BKR	BREAKER	MCB	MAIN CIRCUIT BREAKER
		MTR	MOTOR
		MVS	MEDIUM VOLTAGE STARTER
C	CONDUCTOR/CONTACTOR	N/A	NOT APPLICABLE
CB	CIRCUIT BREAKER	NC	NORMALLY CLOSED
CJB	CIRCUIT JUNCTION BOX	NEUT,N	NEUTRAL
CKT	CIRCUIT	NT	NOT IN CONTRACT
CLD	CEILING	NO	NORMALLY OPEN
CR	CONTROL RELAY	NOM	NOMINAL
CND	CONDUIT	NP	NAMEPLATE
CONC	CONCRETE	NTS	NOT TO SCALE
CS	CONTROL SWITCH	OC	ON CENTER
CONL	CONTROL	OD	OUTSIDE DIAMETER
CPT	CONTROL POWER TRANSFORMER	OH	OVERHEAD
CT	CURRENT TRANSFORMER	OL's	OVERLOADS
CU	COPPER	OT	OIL TIGHT
D	DIAMETER	P	POLE
DB	DUCT BANK	PA	PUBLIC ADDRESS
DC	DIRECT CURRENT	PB	PUSHBUTTON, PULLBOX
DET	DETAIL	PE	PHOTO ELECTRIC CELL
DIAG	DIAGRAM	PF	POWER FACTOR
DPSH	DIFFERENTIAL PRESSURE SWITCH	PH	PHASE
DS	DISCONNECT SWITCH	PJB	POWER JUNCTION BOX
DWG	DRAWING	PLC	PROGRAMMABLE LOGIC CONTROLLER
EA	EACH	PNL	PANEL
EC	ELECTRICAL CONTRACTOR	PP	POWER PANEL
EF	EXHAUST FAN	PR	PAIR
ELEV	ELEVATION	PRI	PRIMARY
ELEC	ELECTRIC(AL)	PS	PRESSURE SWITCH
EMER	EMERGENCY	PT	POTENTIAL TRANSFORMER
ENCL	ENCLOSURE/ENCLOSED	PVC	POLYVINYL CHLORIDE
EX	EXPLOSION PROOF EQUIP.	PWR	POWER
EX, E	EXISTING	QSH	SHEAR PIN LIMIT SWITCH
FCP	FURNISHED WITH EQUIPMENT PANEL	RCPT	RECEPTACLE
FDR	FEEDER	RCT	REACTOR
FLA	FULL LOAD AMPS	REF	REFERENCE REQ'D REQUIRED
FPP	FIBER OPTIC DISTRIBUTION PANEL	RMS	ROOT MEAN SQUARE
FS	FLOW SWITCH	RTD	RESISTANCE TEMPERATURE DETECTOR
FU	FUSE	SCH	SCHEDULE
FUT	FUTURE	SE	SPEED SENSOR
FVNR	FULL VOLTAGE NON-REVERSING	SEC	SECONDARY
FVR	FULL VOLTAGE REVERSING	SEL	SELECTOR
GALV	GALVANIZED	SER	SERVICE ENTRANCE RATED
GEN	GENERATOR	SPDT	SINGLE POLE DOUBLE THROW
GFR	GROUND FAULT RELAY	SPEC	SPECIFICATION
GRD	GROUND	SPHTR	MOTOR SPACE HEATER
GRS	GALVANIZED RIGID STEEL	SPKR	SPEAKER
H	HIGH	SSL	STAINLESS STEEL
HGT	HEIGHT	SS	SPEED SWITCH
HH	HANDHOLE	STP	SHIELDED TWISTED PAIR
HID	HIGH INTENSITY DISCHARGE	SUB	SUBSTATION
HP	HORSEPOWER	SW	SWITCH
HS	HAND STATION (SWITCH)	SYMM	SYMMETRICAL
HVAC	HEATING, VENTILATION AND AIR CONDITIONING	SYS	SYSTEM
HZ	HERTZ (CYCLES PER SECOND)	SV	SOLENOID OPERATED VALVE
HQ	HAND/OFF/AUTO	SPB	SIGNAL PULL BOX
HOR	HAND/OFF/REVERSE	TB	TERMINAL BOX
HMH	HIGH VOLTAGE MANHOLE	TEL	TELEPHONE
ID	INSIDE DIAMETER	TEMP	TEMPERATURE
IMC	INDIVIDUAL MOTOR CONTROLLER	TFR	TRANSFORMER
INTLK	INTERLOCK	TH	THERMOSTAT
INST	INSTANTANEOUS	TJB	TERMINAL JUNCTION BOX
INSTR	INSTRUMENT	TSH	TEMPERATURE SWITCH HIGH
I/O	INPUT-OUTPUT	TV	TELEVISION
JB	JUNCTION BOX	TYP	TYPICAL
KV	KILOVOLT	TR	TIMING RELAY
KVA	KILOVOLT-AMPERE	TVSS	TRANSIENT VOLTAGE SURGE SUPPRESSOR
KVAR	KILOVOLT-AMPERE REACTIVE	UG	UNDERGROUND
KW	KILOWATT	UH	UNIT HEATER
KWH	KILOWATT-HOUR	UON	UNLESS OTHERWISE NOTED
KAIC	KILO AMPERE INTERRUPTING CURRENT	V	VOLT
L-O-R	LOCAL-OFF-REMOTE	VA	VOLT AMPERE
L	LONG	VAR	VOLT AMPERE REACTIVE
LCP	LIGHTING CONTACTOR	VFD	VARIABLE FREQUENCY DRIVE
LP	LOCAL CONTROL PANEL	VSH	VIBRATION SWITCH
LOS	LOCK-OUT STOP	W	WATT, WIRE, WIDE
LSIG	LONG, SHORT, INSTANTANEOUS TRIP	W/	WITH
	SETTING AND GROUND FAULT PROTECTION	W/O	WITHOUT
LSL	LEVEL SWITCH LOW	WE	WEIGHT LOAD CELL
LSC	LIMIT SWITCH OPEN	WIT	WEIGHT INDICATING TRANSMITTER
LTC	LIMIT SWITCH CLOSED	WP	WEATHERPROOF
LTV	LIGHTING	XL	WARNING HORN/LIGHT
LV	LOW VOLTAGE	XT	ANEMOMETER
LSH	LEVEL SWITCH HIGH	ZS	POSITION (LIMIT) SWITCH
M	MOTOR CONTACTOR	ZSO	POSITION (LIMIT) SWITCH OPEN
mA	MILLIAMPERE	ZSC	POSITION (LIMIT) SWITCH CLOSED
MAX	MAXIMUM	ZT	POSITION TRANSMITTER

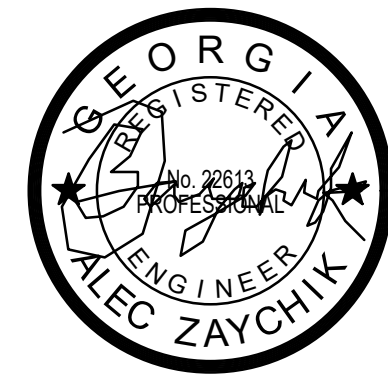
GENERAL NOTES:	
1. SCOPE:	
A. FURNISH ALL LABOR, MATERIAL, EQUIPMENT AND TOOLS REQUIRED TO COMPLETE INSTALLATION OF THE ELECTRICAL SYSTEM INCLUDING BUT NOT LIMITED TO WIRING, BOXES, LIGHT FIXTURES, PANELS, SWITCHES, RECEPTACLES, DISCONNECTS, STARTERS, AND ALL OTHER WORK INDICATED ON THE DRAWINGS OR AS SPECIFIED HEREIN.	
B. OBTAIN ALL PERMITS, INSPECTIONS, AND APPROVALS AS REQUIRED BY THE LOCAL AUTHORITIES HAVING JURISDICTION AND DELIVER CERTIFICATE OF APPROVAL TO THE GENERAL CONTRACTOR. ALL ASSOCIATED FEES SHALL BE PAID BY THE CONTRACTOR.	
C. ALL MATERIALS AND EQUIPMENT OF THE ELECTRICAL SYSTEM NECESSARY FOR ITS PROPER AND SAFE OPERATION OR OTHERWISE REQUIRED BY CODE NFPA 820, BUT NOT SPECIFICALLY MENTIONED OR SHOWN ON THE DRAWINGS, SHALL BE FURNISHED AND INSTALLED WITHOUT ADDITIONAL CHARGE.	
D. WORK SHALL BE INSTALLED IN ACCORDANCE WITH THE LATEST EDITION OF NATIONAL ELECTRICAL CODE, THE LATEST STANDARD BUILDING CODE, ANY OTHER LOCALLY ADOPTED CODES AND LOCAL AUTHORITIES HAVING JURISDICTION.	
2. ALL SUBSTITUTIONS FOR EQUIPMENT AND MATERIAL SHALL BE SUBMITTED TO THE ENGINEER FOR REVIEW PRIOR TO INSTALLATION.	
3. CONTRACTOR SHALL COORDINATE ALL WORK WITH ALL OTHER TRADES. IT IS THE RESPONSIBILITY OF CONTRACTOR TO VERIFY THE ACTUAL LOCATION OF EQUIPMENT, DUCTWORK, PIPING, ETC. AND COORDINATED THE INSTALLATION ACCORDINGLY. THE EQUIPMENT WIRING SHALL INCLUDE ALL NECESSARY CABLES AND CONDUIT REQUIRED FOR THE PROPER AND SAFE EQUIPMENT OPERATION.	
4. ALL CONDUCTORS SHALL BE COPPER #12 AWG MINIMUM CONDUCTOR SIZE FOR POWER AND LIGHTING WIRING. USE #14 AWG MINIMUM CONDUCTOR FOR SIGNAL WIRING. THE INSULATION FOR ALL CONDUCTORS SHALL BE THWN-2. SERVICE ENTRANCE CONDUCTORS SHALL BE XHHW.	
5. POWER WIRES SIZES #12 AWG AND #10 AWG SHALL BE SOLID TYPE. ALL OTHER SIZES SHALL BE STRANDED. CABLES BETWEEN THE VFD AND ASSOCIATED MOTOR SHALL BE SHIELDED POWER VFD RATED CABLES.	
6. ALL EXPOSED CONDUITS SHALL BE ALUMINUM, UNLESS NOTED OTHERWISE ON THE DRAWINGS, MINIMUM OF 3/4". ALL BURIED CONDUIT SHALL BE PVC-40, MINIMUM OF 1". ALL UNDERGROUND CONDUITS SHALL HAVE RIGID STEEL ELBOWS. ALL METALL CONDUITS SHALL BE PROTECTED WITH A BITUMINOUS COATING WHEN INSTALLED UNDERGROUND OR WHEN IN CONTACT WITH CONCRETE.	
7. ALL FITTINGS SHALL BE CAST WITH THREADED HUBS. ALL CONNECTIONS SHALL BE COMPRESSION TYPE.	
8. CONTRACTOR IS RESPONSIBLE FOR COORDINATING ALL CABLES AND EQUIPMENT LUG SIZES. IN CASE THE CABLE IS OF A LARGER SIZE THAN THE EQUIPMENT LUG, CONTRACTOR SHALL PROVIDE THE REQUIRED CONNECTOR AT NO ADDITIONAL CHARGE TO OWNER.	
9. CONTRACTOR SHALL PROVIDE PULL STRING AND IDENTIFICATION LABELS AT EACH CONDUIT END FOR ALL SPARE CONDUITS.	
10. FOR NEW CONSTRUCTION, INSTALLATION AND/OR DEMOLITION THAT INTERRUPTS ANY POWER, CONTROLLER SIGNAL WIRING TO EXISTING EQUIPMENT OR DEVICES THAT SHALL REMAIN IN OPERATION, CONTRACTOR SHALL INCLUDE ALL REQUIRED BREAKERS, CABLES, CONDUITS AND/OR ANY OTHER EQUIPMENT AS REQUIRED TO KEEP THE EXISTING EQUIPMENT FUNCTIONAL.	
11. ALL SCHEMATIC WIRING DIAGRAMS ARE GENERIC IN NATURE. CONTRACTOR SHALL ADJUST NUMBER AND SIZE OF CABLES/CONDUITS BASED ON APPROVED VENDOR DRAWINGS.	

PLAN DRAWING SYMBOLS	
	MOTOR CONNECTION
	MOTOR STARTER, INDIVIDUAL --- NOT LOCATED IN AN MCC OR SIMILAR GROUP ASSEMBLY
	COMBINATION MOTOR STARTER/DISCONNECT INDIVIDUAL --- NOT LOCATED IN AN MCC OR SIMILAR GROUP ASSEMBLY
	DISCONNECT SWITCH. DISCONNECT SWITCHES ARE HEAVY DUTY, SINGLE THROW, WITH NEMA 4X ENCLOSURE UNLESS OTHERWISE NOTED. MOUNT AT 4'-8" TO CENTER OF DISCONNECT.
	FUSED DISCONNECT, NON-FUSED. PROVISION FOR CLASS R FUSES.
	FIELD INSTRUMENT CONNECTION
	START/STOP HAND STATION MOUNTED TO HANDRAIL (NEMA 4X UNLESS OTHERWISE NOTED)
	120V, 20A, 1P TOGGLE SWITCH [BLANK] = 1P TOGGLE SWITCH 2 = 2P TOGGLE SWITCH 3 = 3P TOGGLE SWITCH D = SLIDE DIMMER M = MOTOR RATED S = TOGGLE WITH OCCUPANCY SENSOR
	DUPLEX 120V RECEPTACLE, 120V, 20A, 1P. MOUNT 6" ABOVE COUNTER, DESK, OR CABINET.
	GFCI DUPLEX 120V RECEPTACLE, 120V, 20A, 1P. MOUNT 6" ABOVE COUNTER, DESK, OR CABINET.
	QUADRUPLEX 120V RECEPTACLE, 120V, 20A, 1P. MOUNT 6" ABOVE COUNTER, DESK, OR CABINET.
	TELEPHONE BOX. MOUNT 18" A.F.F., INSTALL A 1/2" CONDUIT FROM BOX TO 6" ABOVE CEILING. PROVIDE PULL CORD FOR FUTURE CONNECTIONS AS REQUIRED.
	JUNCTION BOX
	60A, 480V, 3PH WELDING RECEPTACLE WITH INTERLOCKED 60A (NEMA 4X FUSED DISCONNECT SWITCH UNLESS OTHERWISE NOTED)

GROUNDING SYMBOLS	
	GROUND ROD, 3/4" x 10'-0", COPPERCLAD (UNLESS OTHERWISE NOTED)
	GROUND ROD AND WELL
	COMPRESSION TYPE GROUNDING BOND TO MOTOR CASING OR EQUIPMENT
	EXOTHERMIC TYPE GROUNDING BOND TO MOTOR CASING OR EQUIPMENT

REVISIONS	NO.	DESCRIPTION	DATE
A	1	ISSUED FOR BID	10/26/20

BID SET



DRAWN BY: SP
CHECKED BY: DV
DATE: SEPT. 2020
SCALE: N.T.S.

CONTENT:
ELECTRICAL LEGEND AND GENERAL NOTES

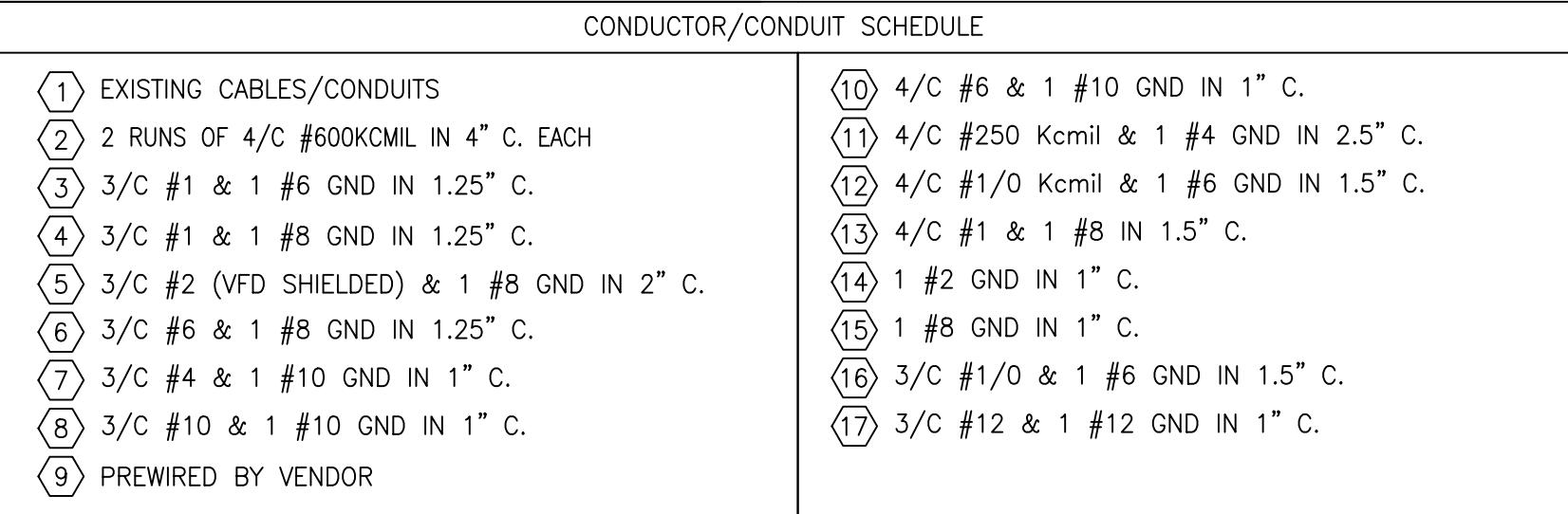
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EDEC, INC.

**4120 CHATTAHOOCHEE TRACE
SUITE A
DULUTH, GEORGIA 30097
TEL. (770) 493-8685**



1. CIRCUIT BREAKER SHALL BE SIZED PER MANUFACTURER'S RECOMMENDATIONS.
2. CONTRACTOR SHALL ATTEND A MANDATORY SITE VISIT PRIOR TO BIDDING TO CONFIRM THE REQUIRED SCOPE OF WORK ASSOCIATED WITH A PROJECT.
3. SEE DWG E1.31 FOR FINAL CLARIFIER PUMP CONTROL PANEL (DETAIL 2) SCHEMATIC WIRING DIAGRAM.
4. SEE DWG E1.30 (DETAIL 3) AND DWG E1.31 (DETAIL 1) FOR RECYCLE PUMP VFD CABINET SCHEMATIC WIRING DIAGRAM.
5. NEW AEROBIC DIGESTER CONTROL PANEL SHALL BE PROVIDED AND INSTALLED IN PLACE OF THE EXISTING PANEL. SEE DWG E1.30 FOR AEROBIC DIGESTER (DETAIL 1 AND 2) CONTROL PANEL SCHEMATIC WIRING DIAGRAM.
6. SEE DWG E1.32 FOR PLANT WATER PUMP MOTOR STARTER (DETAIL 1) SCHEMATIC WIRING DIAGRAM.
7. CONTRACTOR SHALL COORDINATE POWER OUTAGES WITH THE PLANT 48 HOURS PRIOR TO SHUTDOWN FOR PROLONGED OUTAGES, CONTRACTOR SHALL PROVIDE MEANS OF BACKUP POWER SOURCE FOR THE MOST CRITICAL LOADS FOR PLANT OPERATION.
8. CONTRACTOR SHALL SPlice 240V, 3PH POWER CABLES ROUTED FROM ENCLOSED CIRCUIT BREAKER CB-TFR-1 (75KVA 480V-240V TRANSFORMER TFR-1 SECONDARY) LOAD LOGS FOR PROPER CONNECTION TO 240V, 3P CIRCUIT BREAKERS CB-TFR-11 AND CB-TFR-12. CONTRACTOR SHALL INVESTIGATE THE EXISTING INSTALLATION TO MATCH WIRING METHOD/APPROACH DURING CONSTRUCTION.
9. CONTRACTOR SHALL PROVIDE AND INSTALL A #3/0 AWG BARE COPPER CONDUCTOR BETWEEN THE PANELBOARD PP-1 AND EXISTING PLANT GROUNDING GRID.
10. CONTRACTOR SHALL PROVIDE AND INSTALL 240V, 3P ENCLOSED CIRCUIT BREAKERS CB-TRF-11 AND CB-TRF-12 TO REPLACE EXISTING OUTDATED EQUIPMENT. CONTRACTOR SHALL RECONNECT THE EXISTING CONDUCTORS TO THE CIRCUIT BREAKERS LOAD SIDE LUGS TO FEED THE EXISTING LOADS.
11. CONTRACTOR SHALL USE EXISTING JUNCTION BOX JB-1 LOCATED IN BASEMENT AREA FOR POWER CABLES SPLICING AS SHOWN. CONTRACTOR SHALL PROVIDE AND INSTALL COMPRESSION TYPE TERMINALS INSTALLED ON THE BACK PANEL OF JUNCTION BOX FOR CABLE CONNECTION, THE TERMINALS SHALL BE SIZED ADEQUATELY FOR ASSOCIATED CONDUCTORS. PROVIDE IDENTIFICATION LABELS FOR TERMINALS AND CONDUCTORS WITH A DESCRIPTION OF ASSOCIATED LOAD. THE CONTRACTOR SHALL EXTEND EXISTING CABLES/CONDUITS WHERE APPLICABLE TO REACH THE JUNCTION BOX JB-1.
12. CONTRACTOR SHALL REPLACE THE EXISTING SERVICE CONDUCTORS UP TO THE SPLICING POINT WITH THE UTILITY TRANSFORMERS SECONDARY CONDUCTORS, THE NEW CABLES/CONDUITS SHALL BE SIZED AS SHOWN.
13. CONTRACTOR SHALL EXTEND EXISTING CABLE/CONDUIT AS REQUIRED TO MAKE CONNECTION TO PROPOSED EQUIPMENT.
14. TRAILER MOUNTED BELT FILTER PRESS SYSTEM SHALL BE PROVIDED WITH ALL ASSOCIATED COMPONENTS PRE-INSTALLED AND PREWIRED TO MAIN CONTROL PANEL BCP-BFP. CONTRACTOR SHALL COORDINATE THE ACTUAL SETUP AND REQUIRED CONTRACTOR'S SCOPE (IF ANY) FOR BFP SYSTEM INTERNAL COMPONENTS WIRING WITH THE EQUIPMENT VENDOR BASED ON THE ACTUAL AS-PURCHASED EQUIPMENT.
15. THE CONTRACTOR SHALL PROVIDE AND INSTALL INDUSTRIAL TYPE RECEPTACLE FOR CONNECTION OF TRAILER MOUNTED BELT FILTER PRESS EQUIPMENT TO 480V, 3PH POWER SOURCE. THE RECEPTACLE SHALL BE BY EATON "GHG52" SERIES. THE CONTRACTOR SHALL COORDINATE THE ACTUAL RECEPTACLE TYPE AND MODEL WITH THE BFP EQUIPMENT MANUFACTURER TO FIT AS PURCHASED PLUG (COMES PREWIRED WITH BFP CONTROL PANEL).

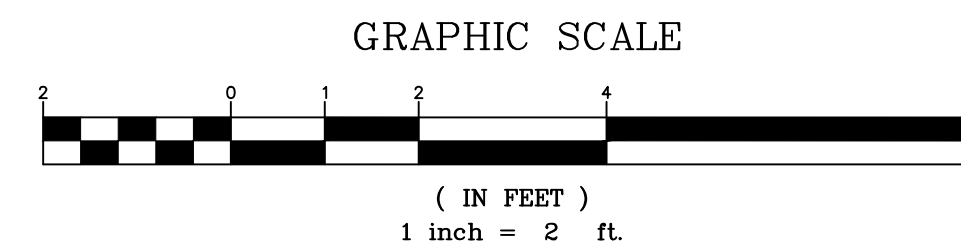
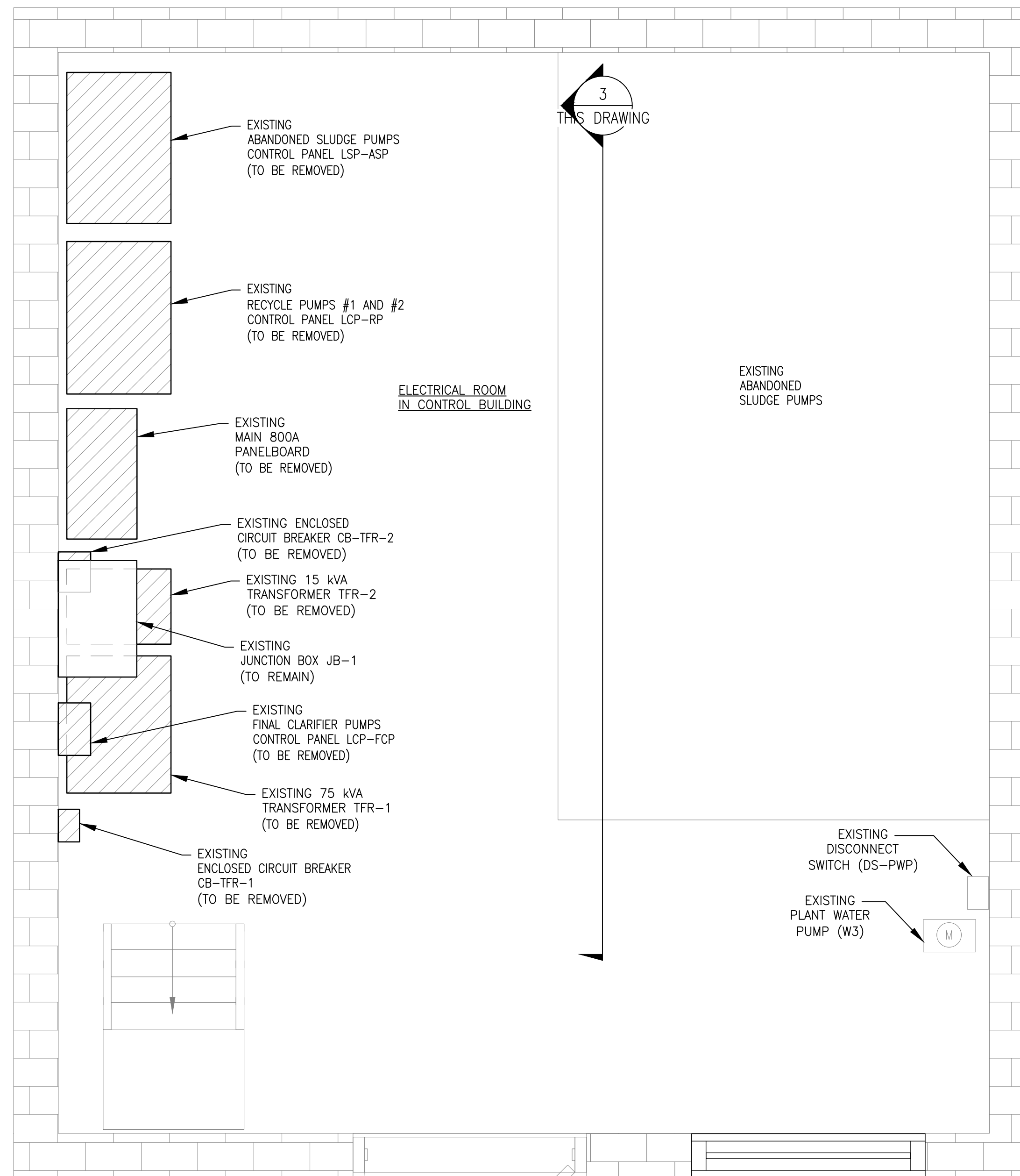
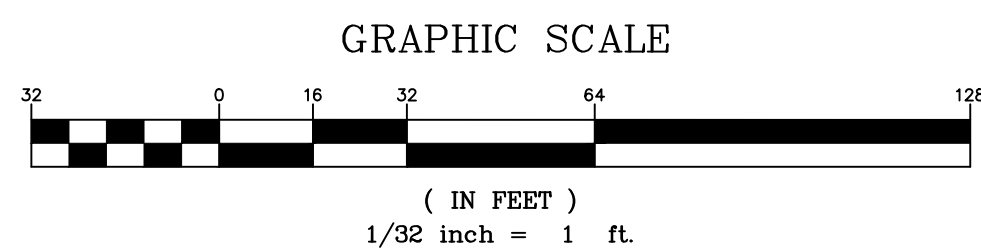
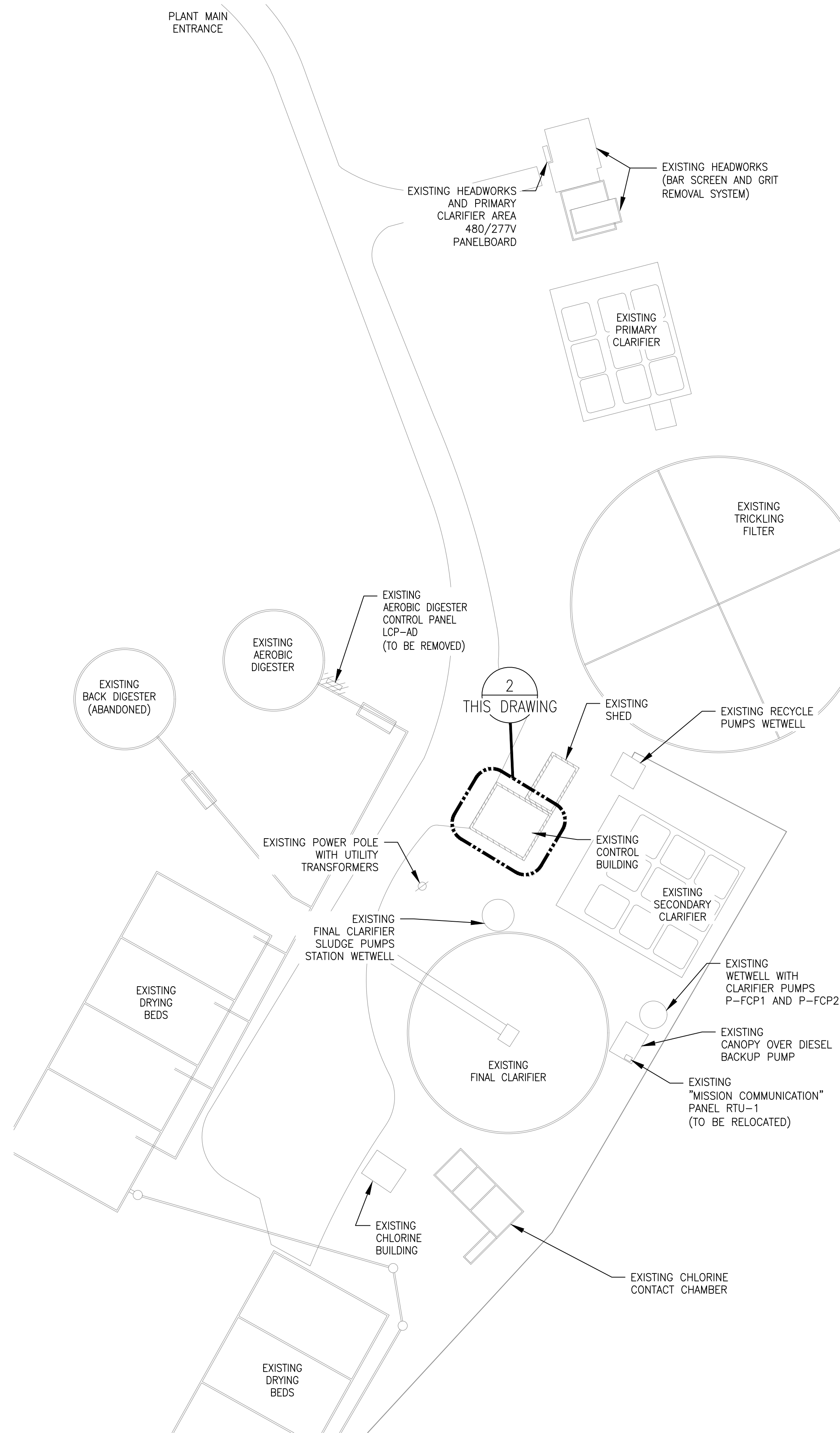
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CONTENT:

**BELL CREEK WPCP
ONE LINE DIAGRAM**

E1.11

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NOTES

- CONTRACTOR SHALL DISCONNECT, REMOVE AND COORDINATE DISPOSAL OR SALVAGE OF THE DEMOLISHED EQUIPMENT WITH THE OWNER.

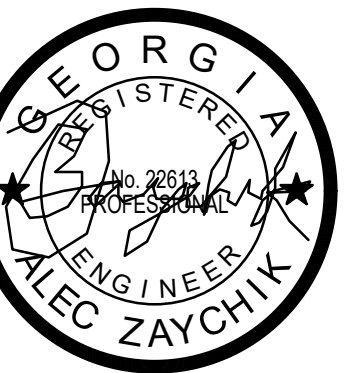
3 EXISTING ELECTRICAL EQUIPMENT (DEMOLITION SCOPE)



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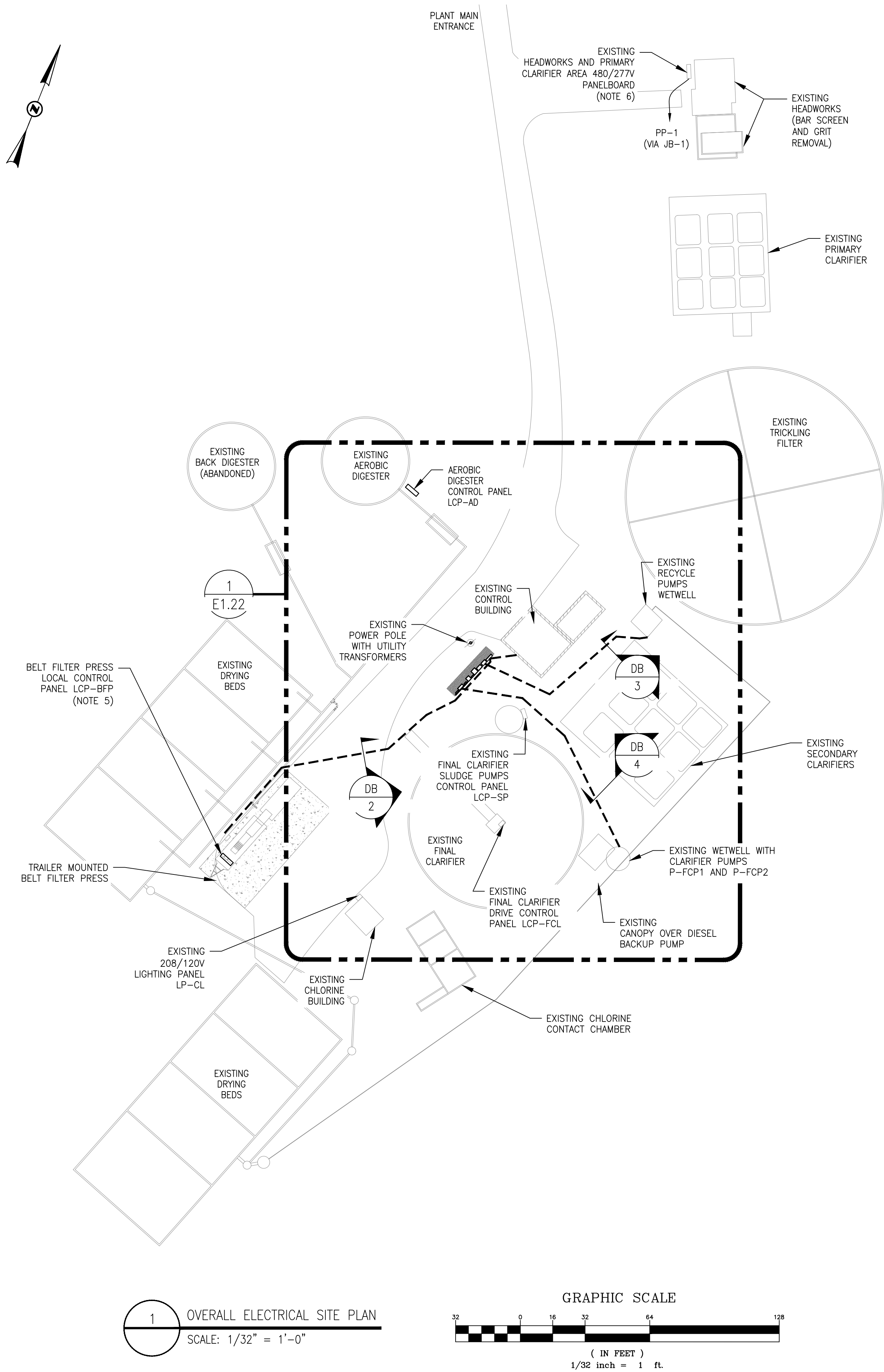
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DATE: SEPT. 2020
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BELL CREEK WPWP
OVERALL ELECTRICAL
SITE PLAN
(DEMOLITION)

SHEET NO:

E1.20

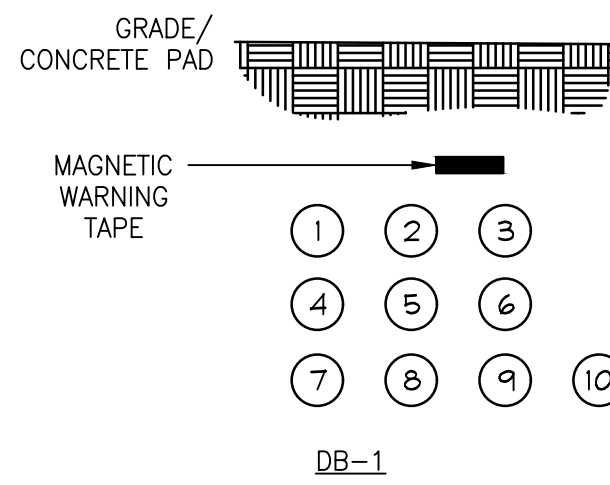
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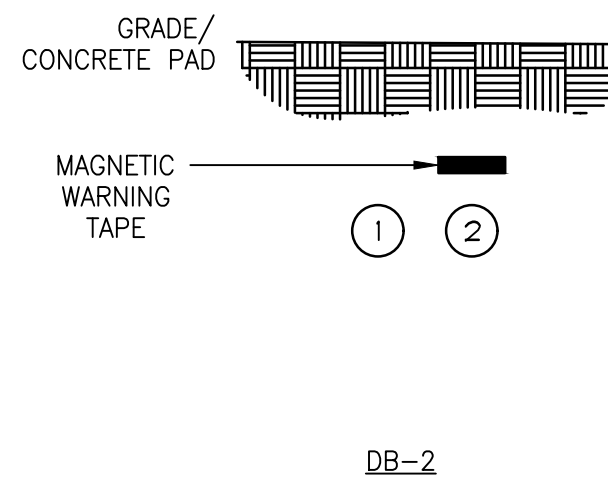
NOTES:

1. ALL UNDERGROUND DUCTBANK ROUTING SHALL BE COORDINATED WITH EXISTING UTILITIES AND ADJUSTED AS NECESSARY. CONTRACTOR SHALL PATHHOLE AND/OR USE GROUND PENETRATING RADAR TO LOCATE CONFLICTS WITH OTHER UNDERGROUND UTILITIES AND EXISTING DUCTBANKS. ADJUST THE DUCTBANK ROUTING AS NEEDED AT NO COST TO THE CITY. THE DUCTBANK CROSSING TRAFFIC AREAS (ROADS, PARKING LOTS, ETC.) SHALL BE CONCRETE ENCASED, SEE DWG E3.00, DETAIL "A".
2. CONTRACTOR SHALL COORDINATE ALL WORK WITH ALL OTHER TRADES. IT IS RESPONSIBILITY OF CONTRACTOR TO VERIFY THE ACTUAL LOCATION OF EQUIPMENT, DUCTWORK, PIPING, ETC. AND COORDINATE INSTALLATION ACCORDINGLY. THE EQUIPMENT WIRING SHALL INCLUDE ALL NECESSARY CABLES AND CONDUITS REQUIRED FOR PROPER AND SAFE EQUIPMENT OPERATION
3. CONTRACTOR SHALL PROVIDE PULL STRING AND IDENTIFICATION LABELS AT EACH CONDUIT END FOR ALL SPARE CONDUITS.
4. THE EXACT EXISTING EQUIPMENT LOCATIONS SHALL BE COORDINATED IN THE FIELD.
5. COORDINATE THE ACTUAL BFP CONTROL PANEL LOCATION ON THE TRAILER BASED ON SELECTED EQUIPMENT VENDOR.
6. REFER TO ONE LINE DIAGRAM DRAWING E1.11 FOR POWER CABLES CONNECTION DETAILS.
7. SEE DWG. E1.22 NOTE 1.

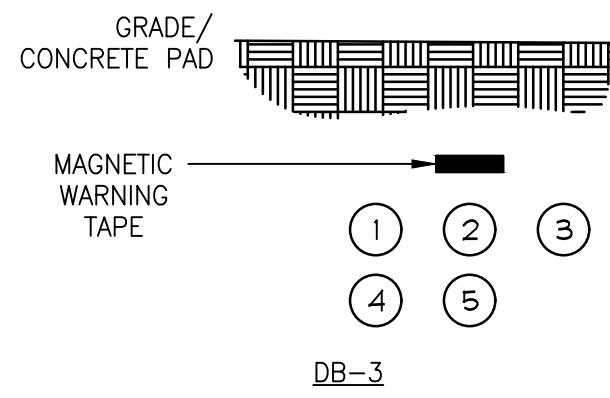
UNDERGROUND DUCTBANKS:



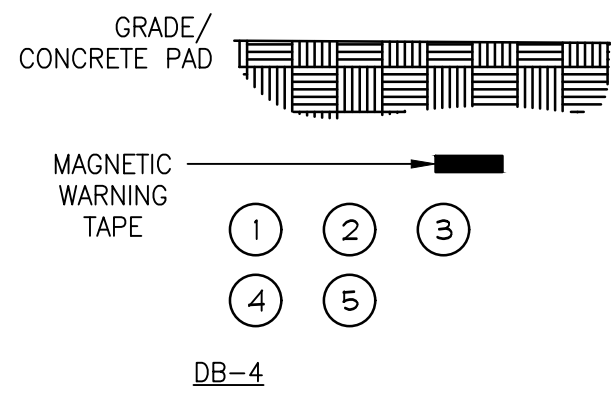
- DB-1
- 1 - 1" C. (480V PLANT WATER PUMP)
 - 2 - 1.5" C. (208/120V TO LP-CL)
 - 3 - 1" C. (480V TO LCP-FCL)
 - 4 - 1" C. (480V TO LCP-SP)
 - 5 - 1.25" C. (480V TO LCP-AD)
 - 6 - 1" C. (480/277V TO HEADWORKS AREA PANELBOARD)
 - 7 - 2.5" C. (240/120V TO CONTROL BOARD 1ST FLOOR)
 - 8 - 1" C. (120V POWER)
 - 9 - 2" C. (SPARE)
 - 10 - 2" C. (SPARE)



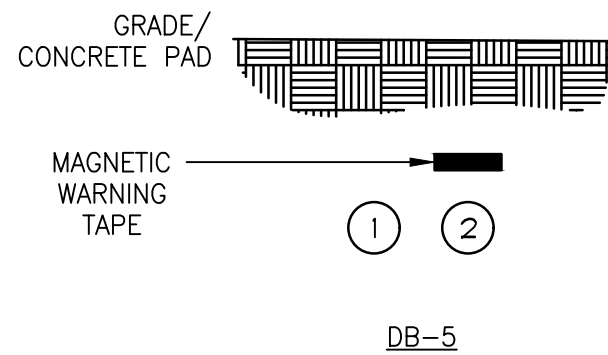
- DB-2
- 1 - 1.25" C. (480V TO CONTROL PANEL LCP-BFP)
 - 2 - 1.25" C. (SPARE)



- DB-3
- 1 - 2" C. (480V TO RECYCLE PUMP #1)
 - 2 - 2" C. (480V TO RECYCLE PUMP #2)
 - 3 - 1.25" C. (RECYCLE PUMP #1 CONTROLS AND MOTOR SPACE HEATER)
 - 4 - 1.25" C. (RECYCLE PUMP #2 CONTROLS AND MOTOR SPACE HEATER)
 - 5 - 2" C. (SPARE) (NOTE 7)



- DB-4
- 1 - 1.25" C. (480V TO EXISTING CLARIFIER PUMP #1)
 - 2 - 1.25" C. (480V TO EXISTING CLARIFIER PUMP #2)
 - 3 - 2" C. (CONTROLS - FLOAT SWITCHES)
 - 4 - 1.5" C. (CONTROLS - TSH, MSH)
 - 5 - 1.25" C. (SPARE)



- DB-5
- 1 - 4" C. (480V TO PANELBOARD PP-1)
 - 2 - 4" C. (480V TO PANELBOARD PP-1)

REVISIONS NO.	DESCRIPTION	DATE	
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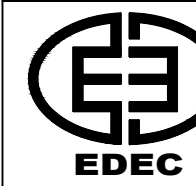
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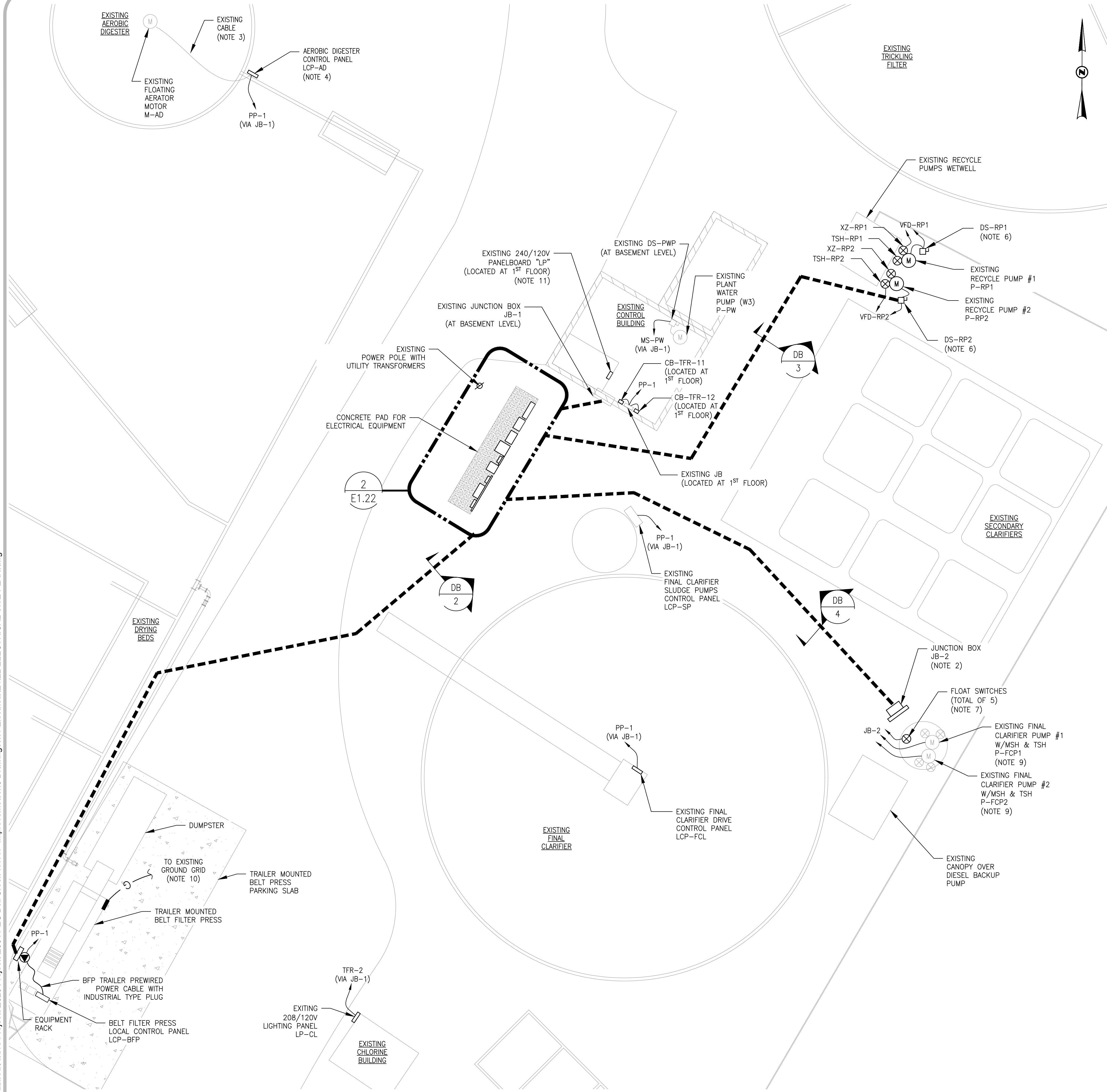
CONTENT:
BELL CREEK WPCP
OVERALL ELECTRICAL
SITE PLAN

SHEET NO:
E1.21

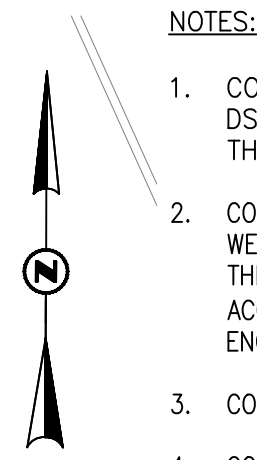
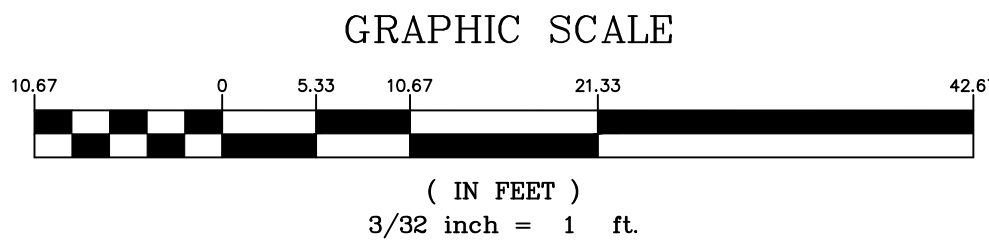


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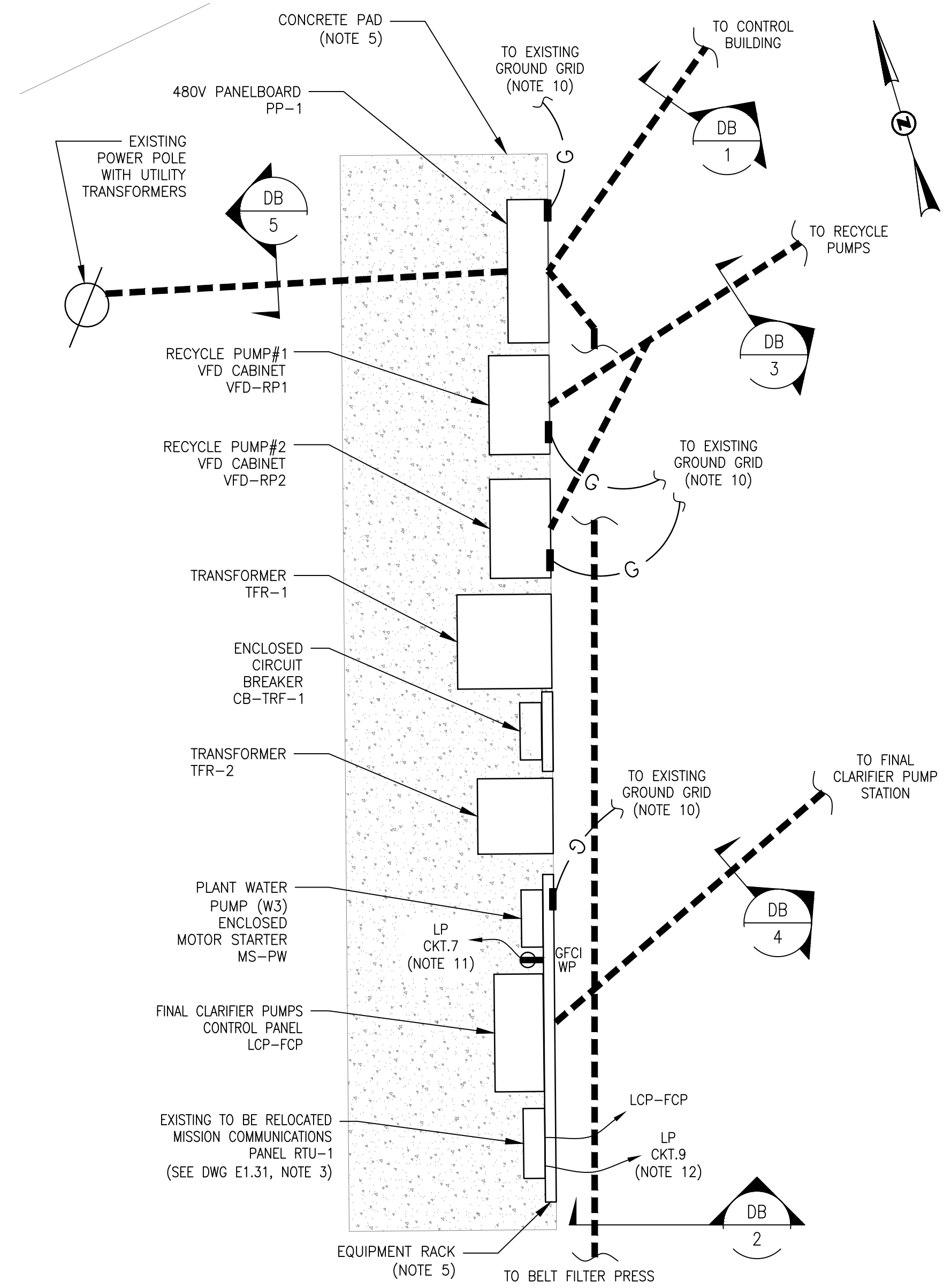


1 PARTIAL PLANT ELECTRICAL PLAN
SCALE: 3/32" = 1'-0"

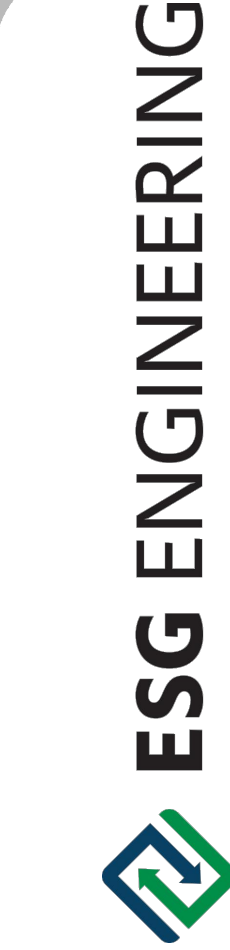
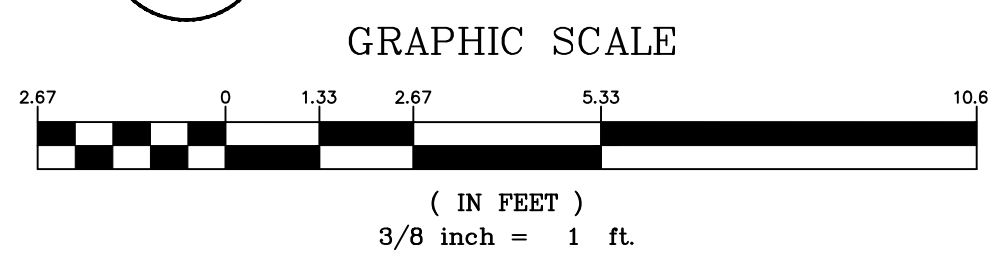


NOTES:

- CONTRACTOR SHALL PROVIDE AND INSTALL 2" SPARE CONDUIT FOR RECYCLE PUMPS. STUB-UP THE CONDUIT UNDER DISCONNECT SWITCH DS-RP2 AT ONE END AND NEXT TO RECYCLE PUMPS VFD CABINET AT THE OTHER END. CONTRACTOR SHALL CAP AND APPROPRIATELY TAG THE SPARE CONDUIT.
- CONTRACTOR SHALL PROVIDE AND INSTALL A NEMA 4X SS JUNCTION BOX JB-2 IN A CLOSE PROXIMITY TO EXISTING FINAL CLARIFIER PUMP STATION WETWELL SO THE EXISTING SUBMERSIBLE PUMPS PRE-WIRED CABLES ARE LONG ENOUGH TO REACH JUNCTION BOX. THE JUNCTION BOX SHALL BE ADEQUATELY SIZED TO ACCOMMODATE ASSOCIATED CABLES/CONDUITS, INSTALL THE JUNCTION BOX ON EQUIPMENT RACK AT LEAST 4 FT ABOVE GRADE TO THE BOTTOM OF THE ENCLOSURE. COORDINATE THE FINAL EQUIPMENT INSTALLATION LOCATION IN THE FIELD.
- CONTRACTOR SHALL RECONNECT EXISTING CABLE FROM THE FLOATING AERATOR MOTOR TO THE CONTROL PANEL LCP-AD.
- CONTRACTOR SHALL INSTALL AEROBIC DIGESTER CONTROL PANEL LCP-AD ON EXISTING EQUIPMENT RACK. CONTRACTOR SHALL INCLUDE ALL THE REQUIRED MODIFICATIONS TO THE EXISTING RACK TO ENSURE SECURE PANEL INSTALLATION. THE CONTRACTOR SHALL EXTEND AND RECONNECT EXISTING GROUNDING CONDUCTOR TO PROPOSED CONTROL PANEL ENCLOSURE AFTER REMOVAL OF THE EXISTING PANEL.
- THE CONTRACTOR SHALL INCLUDE ALL THE REQUIRED CIVIL WORK TO LEVEL THE GROUND FOR EQUIPMENT CONCRETE PAD INSTALLATION AS SHOWN. THE CONCRETE PAD SHALL BE 8" THICK WITH #6 STEEL REBAR REINFORCEMENT. THE CONTRACTOR SHALL INSTALL STANDALONE EQUIPMENT SECURED TO THE CONCRETE SLAB, WALL MOUNTED ENCLOSURES SHALL BE MOUNTED ON EQUIPMENT RACK. REFER TO DWG. E3.01 FOR INSTALLATION DETAILS.
- CONTRACTOR SHALL PROVIDE AND INSTALL A DISCONNECT SWITCH AS PER ONE LINE DIAGRAM (DWG. E1.11) TO FEED ASSOCIATED RECYCLE PUMP MOTOR. CONTRACTOR SHALL PROVIDE AND INSTALL AN EQUIPMENT RACK FOR MOUNTING OF THE DISCONNECT SWITCH.
- THE CONTRACTOR SHALL PROVIDE AND INSTALL TOTAL OF FIVE (5) FLOAT SWITCHES TO OPERATE FINAL CLARIFIER PUMP STATION. LOW LEVEL FLOAT SWITCH SHALL PROVIDE FAIL SAFE OPERATION. THE CABLES PROVIDED WITH FLOATS SHALL BE LONG ENOUGH TO REACH THE JUNCTION BOX JB-2 WITHOUT SPLICING. FLOAT SWITCHES SHALL BE NON-MERCURY TYPE, RATED FOR SEWAGE APPLICATION.
- ONLY MAIN DUCTBANKS ARE SHOWN FOR CLARITY. CONTRACTOR SHALL PROVIDE AND INSTALL CABLES/CONDUITS AS SHOWN ON ONE LINE AND SCHEMATIC WIRING DIAGRAMS.
- THE CONTRACTOR SHALL INTERCEPT EXISTING CABLES/CONDUITS FROM EXISTING CLARIFIER PUMPS #1 AND #2 TO REROUTE TO JUNCTION BOX JB-2.
- CONTRACTOR SHALL PROVIDE AND CONNECT #2 BARE COPPER GROUND WIRE WITH REMOVABLE CLAMP TO TRAILER MOUNTED BFP SYSTEM STEEL FRAME/BASE. CONNECT THE GROUNDING CONDUCTOR TO THE CLOSEST POINT OF PLANT EXISTING GROUND GRID. CONTRACTOR SHALL VERIFY THE EXACT LOCATION OF EXISTING GROUND GRID IN THE FIELD.
- CONTRACTOR SHALL PROVIDE AND INSTALL A 20A,120V,1PH CIRCUIT BREAKER IN EXISTING 240/120V PANELBOARD "LP" TO FEED RECEPTACLE AT THE EQUIPMENT RACK. THE CIRCUIT BREAKER SHALL BE OF THE SAME MANUFACTURER AND SHALL MATCH KAIC RATING OF EXISTING BREAKERS.
- CONTRACTOR SHALL PROVIDE AND INSTALL A 20A,120V,1PH CIRCUIT BREAKER IN EXISTING 240/120V PANELBOARD "LP" TO FEED MISSION COMMUNICATIONS PANEL RTU-1 AT THE EQUIPMENT RACK. THE CIRCUIT BREAKER SHALL BE OF THE SAME MANUFACTURER AND SHALL MATCH KAIC RATING OF EXISTING BREAKERS.
- SEE DWG. E1.11, NOTE 15 FOR MORE DETAILS. THE CONTRACTOR SHALL COORDINATE THE RECEPTACLE INSTALLATION LOCATION IN THE FIELD.



2 ELECTRICAL EQUIPMENT RACK PROPOSED LAYOUT
SCALE: 3/8" = 1'-0"



6400 Peaks Rd
Macon, GA 31210
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USDA SEWER SYSTEM IMPROVEMENTS - CONTRACT A

FOR THE
CITY OF THOMASTON

REVISIONS	NO.	DESCRIPTION	DATE
A	ISSUED FOR BID		10/26/20

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DRAWN BY: SP
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CONTENT:
BELL CREEK WPCP
ELECTRICAL SITE PLAN

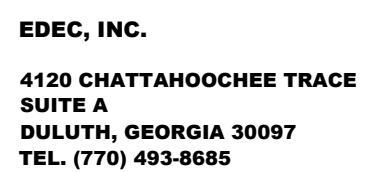
SHEET NO:

E1.22



3 RECYCLE PUMPS VFD CABINET SCHEMATIC
TYPICAL FOR 2

- △ - LOCAL CONTROL PANEL TERMINAL
- - VFD CABINET CONTROL TERMINAL
- - VFD CABINET POWER TERMINAL
- - DEVICE TERMINAL
- * - PANEL FRONT MOUNTED

USDA SEWER SYSTEM
IMPROVEMENTS - CONTRACT A

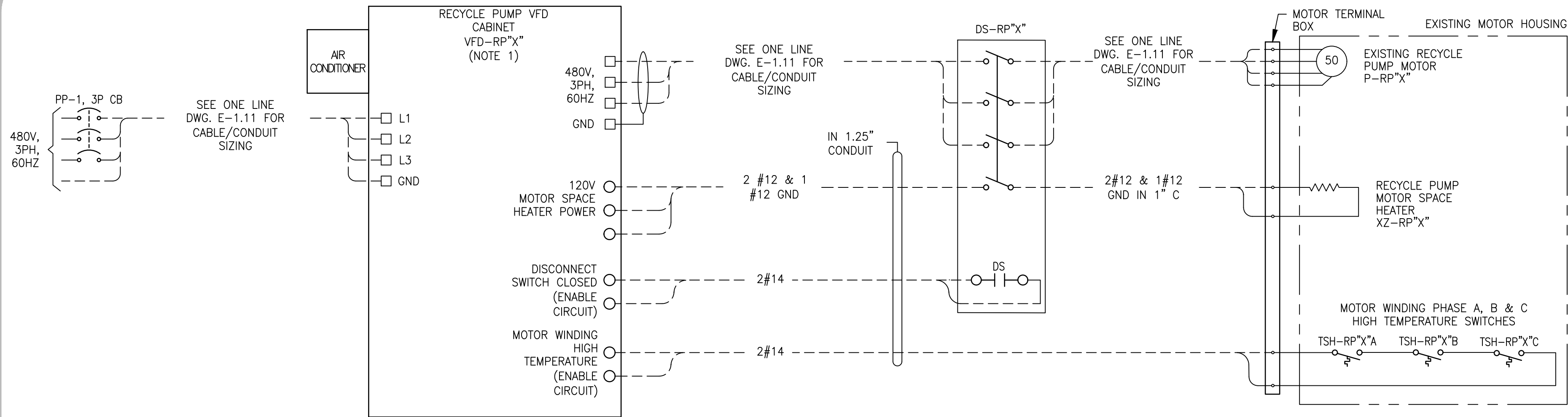
FOR THE
CITY OF THOMASTON

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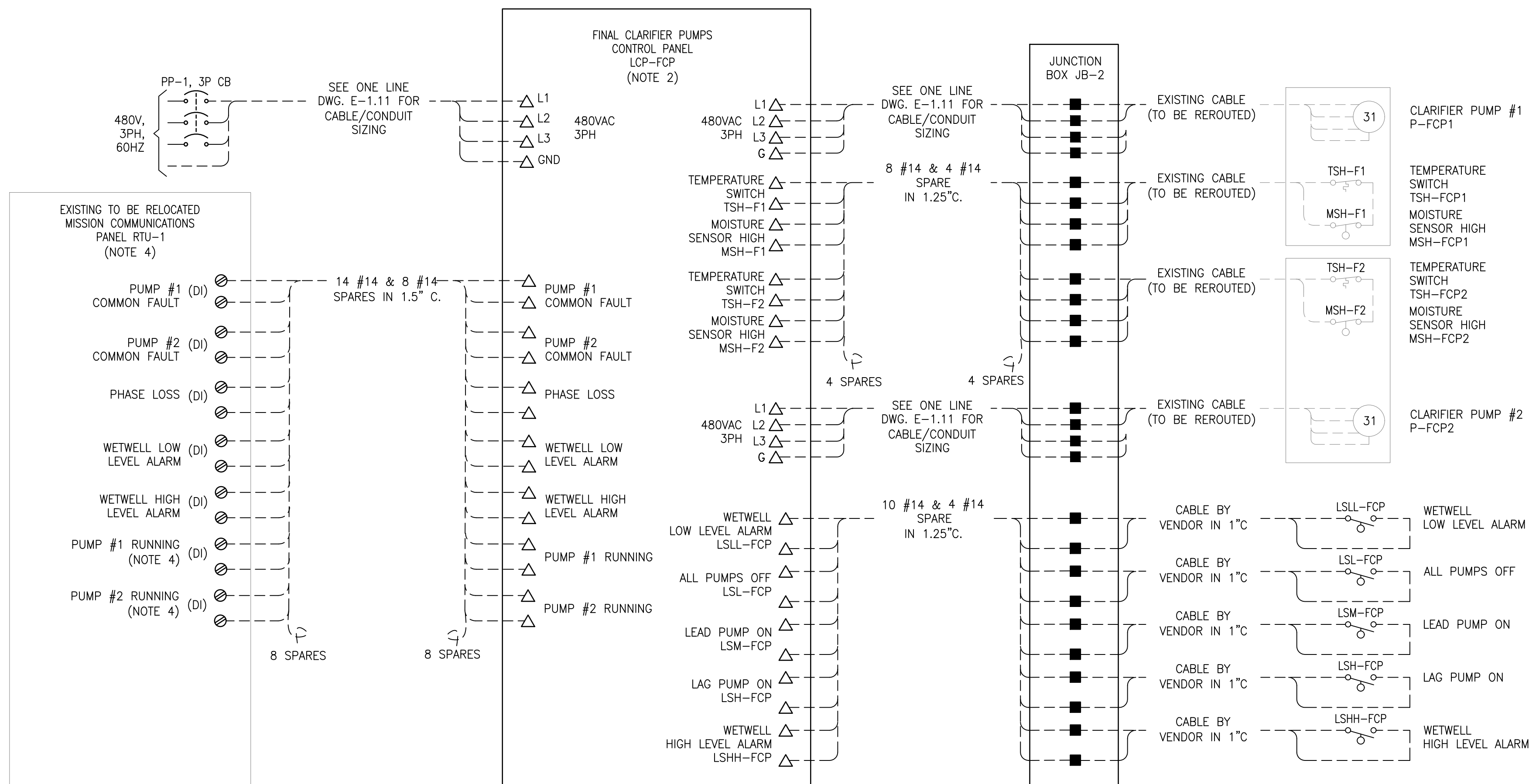
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#	DESCRIPTION	VFD-RP"x"	DS-RP"x"	XZ-RP"x"	TSH-RP"x"
1	RECYCLE PUMP #1 VFD CABINET	VFD-RP1	DS-RP1	XZ-RP1	TSH-RP1
2	RECYCLE PUMP #2 VFD CABINET	VFD-RP2	DS-RP2	XZ-RP2	TSH-RP2

1 RECYCLE PUMPS VFD CABINET RISER DIAGRAM
TYPICAL FOR 2



2 FINAL CLARIFIER PUMPS CONTROL PANEL SCHEMATIC

LEGEND:

- △ - LOCAL CONTROL PANEL TERMINAL
- - SCADA PANEL TERMINAL
- - DEVICE TERMINAL
- - VFD CABINET CONTROL TERMINAL
- - VFD CABINET POWER TERMINAL

NOTES:

- CONTRACTOR SHALL PROVIDE AND INSTALL RECYCLE PUMP VFD CABINET FOR EACH RECYCLE PUMP. EACH RECYCLE PUMP VFD CABINET SHALL INCLUDE AS A MINIMUM THE FOLLOWING:
 - NEMA 4X STAINLESS STEEL ENCLOSURE.
 - VARIABLE FREQUENCY DRIVE SIZED FOR 50HP PUMP INCLUDING 3% LINE REACTORS. VFD SHALL BE BY AMTECH, DANFOSS, EATON, SQUARE D, OR ENGINEER APPROVED EQUAL WITH ASSOCIATED MCP'S.
 - VFD GENERATED HARMONIC LEVELS SHALL MEET IEEE 519 TOTAL HARMONIC DISTORTION LIMITATION REQUIREMENTS. PROVIDE HARMONIC ANALYSIS TO CONFIRM THE HARMONIC LEVELS OF THE SUBMITTED VFDs.
 - AUXILIARY DRY CONTACTS (120VAC, 5 AMP RATED):
 - VFD RUNNING
 - VFD IN AUTO MODE
 - VFD FAULT
 - HIGH MOTOR WINDING TEMPERATURE ALARM
 - INDICATING LIGHTS FOR:
 - PUMP RUNNING (RED)
 - PUMP STOPPED (GREEN)
 - VFD FAULT (AMBER)
 - 1 KVA 480/120V CONTROL POWER TRANSFORMER (CPT) SIZED TO ACCOMMODATE ALL REQUIRED 120V LOADS OF THE VFD SYSTEM.
 - RELAYS, FUSES, TERMINALS, "HAND-OFF-AUTO" SELECTOR SWITCH AND ALL OTHER COMPONENTS AS REQUIRED FOR PROPER PUMP OPERATION.
 - AIR CONDITIONER SIZED TO PROVIDE COOLING INSIDE THE CABINET FOR THE CABINET INTERNAL TEMPERATURE NOT TO EXCEED VFD TEMPERATURE RATING. VFD CABINET FABRICATOR SHALL SIZE THE AIR CONDITIONING FEEDER BREAKER AND WIRES BASED ON THE SELECTED COOLING FAN MOTOR.
 - FRONT DOOR MOUNTED POTENTIOMETER FOR SPEED ADJUSTMENT IN "HAND" MODE
 - INCLUDE PROVISIONS FOR FUTURE SCADA CONTROL IN "AUTO" MODE SUCH AS:
 - CALL TO RUN
 - SPEED CONTROL
 - AND AUX. CONTACTS AS LISTED ABOVE (ITEM D)
 - ALL CONNECTIONS TO REMOTE DEVICES/EQUIPMENT SHALL BE DONE THROUGH FIELD TERMINALS.

THE SCHEMATIC WIRING DIAGRAM IS CONCEPTUAL IN NATURE. CONTRACTOR SHALL SUBMIT THE DETAILED WIRING DIAGRAM AND VFD CABINET BILL OF MATERIALS FOR ENGINEER'S APPROVAL PRIOR TO FABRICATION.

- CONTRACTOR SHALL FURNISH AND INSTALL FINAL CLARIFIER PUMPS CONTROL PANEL IN NEMA 4X SS ENCLOSURE WHICH INCLUDES, BUT NOT LIMITED TO THE FOLLOWING:

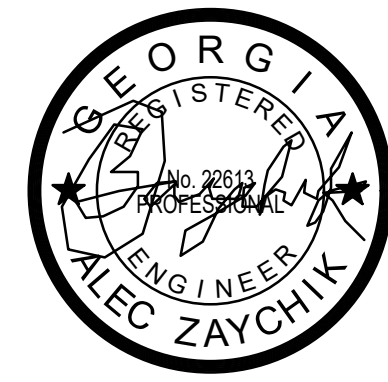
- H-O-A SWITCHES, START/STOP PUSH BUTTONS FOR "HAND" MODE.
- PUMPS ELAPSED TIME METERS.
- TWO FULL VOLTAGE NON-REVERSING, 480V, 3PH STARTERS RATED FOR 31HP MOTORS WITH ASSOCIATED MCP'S.
- LOCKABLE MAIN 150A, 480V, 3P THERMAL MAGNETIC CIRCUIT BREAKER.
- 0.5 KVA, 480/120V CONTROL POWER TRANSFORMER.
- MOISTURE/TEMPERATURE PROTECTION RELAY FOR EACH PUMP.
- SURGE PROTECTION DEVICE.
- STRIP HEATER AND THERMOSTAT.
- POWER DISTRIBUTION BLOCKS, RELAYS, TERMINALS, ETC. AS REQUIRED FOR PROPER SYSTEM OPERATION.
- PHASE MONITOR.
- PUMP ALTERNATOR
- AUXILIARY DRY CONTACTS (120VAC, 5AMP RATED):
 - PUMP 1 RUNNING
 - PUMP 2 RUNNING
 - PUMP 1 COMMON FAULT (COMBINATION OF SEAL FAILURE, OVERTEMP. AND OL FAULT)
 - PUMP 2 COMMON FAULT (COMBINATION OF SEAL FAILURE, OVERTEMP. AND OL FAULT)
 - PUMP 1 IN AUTO
 - PUMP 2 IN AUTO
 - PHASE LOSS
 - WETWELL HIGH LEVEL ALARM
 - WETWELL LOW LEVEL ALARM
- INDICATING LIGHTS FOR:
 - PUMP 1 RUNNING (RED)
 - PUMP 2 RUNNING (RED)
 - PUMP 1 STOPPED (GREEN)
 - PUMP 2 STOPPED (GREEN)
 - PUMP 1 OVERTEMP (AMBER)
 - PUMP 2 OVERTEMP (AMBER)
 - PUMP 1 SEAL FAILURE (AMBER)
 - PUMP 2 SEAL FAILURE (AMBER)
 - WETWELL HIGH LEVEL (AMBER)
 - WETWELL LOW LEVEL (AMBER)
- PANEL SHALL INCLUDE ALL NECESSARY COMPONENTS FOR PUMPS SAFE AND RELIABLE OPERATION.

CONTRACTOR SHALL SUBMIT THE DETAILED WIRING DIAGRAM AND BILL OF MATERIALS FOR ENGINEER'S APPROVAL PRIOR TO FABRICATION.

- CONTRACTOR SHALL RELOCATE EXISTING RTU PANEL LOCATED NEAR FINAL CLARIFIER PUMP STATION TO THE NEW LOCATION AS SHOW ON DWG E1.22. CONTRACTOR SHALL CONNECT THE EXISTING RTU TO THE FINAL CLARIFIED PUMPS CONTROL PANEL FOR STATUSES MONITORING AS SHOWN ON THIS DRAWING, DETAIL 2; INCLUDE ALL THE REQUIRED MODIFICATIONS ASSOCIATED WITH RTU REPROGRAMMING AND MISSION COMMUNICATIONS WEB PAGE SCREENS UPDATE AS NEEDED.
- CONTRACTOR SHALL PROGRAM EXISTING MISSION COMMUNICATIONS RTU TO CALCULATE FINAL CLARIFIER PUMPS RUNNING TIME AND NUMBER OF RUNNING CYCLES TO BE AVAILABLE FOR MONITORING THROUGH MISSION COMMUNICATIONS WEB PAGE.

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CONTENT:
BELL CREEK WPCP
SCHEMATIC WIRING
DIAGRAMS

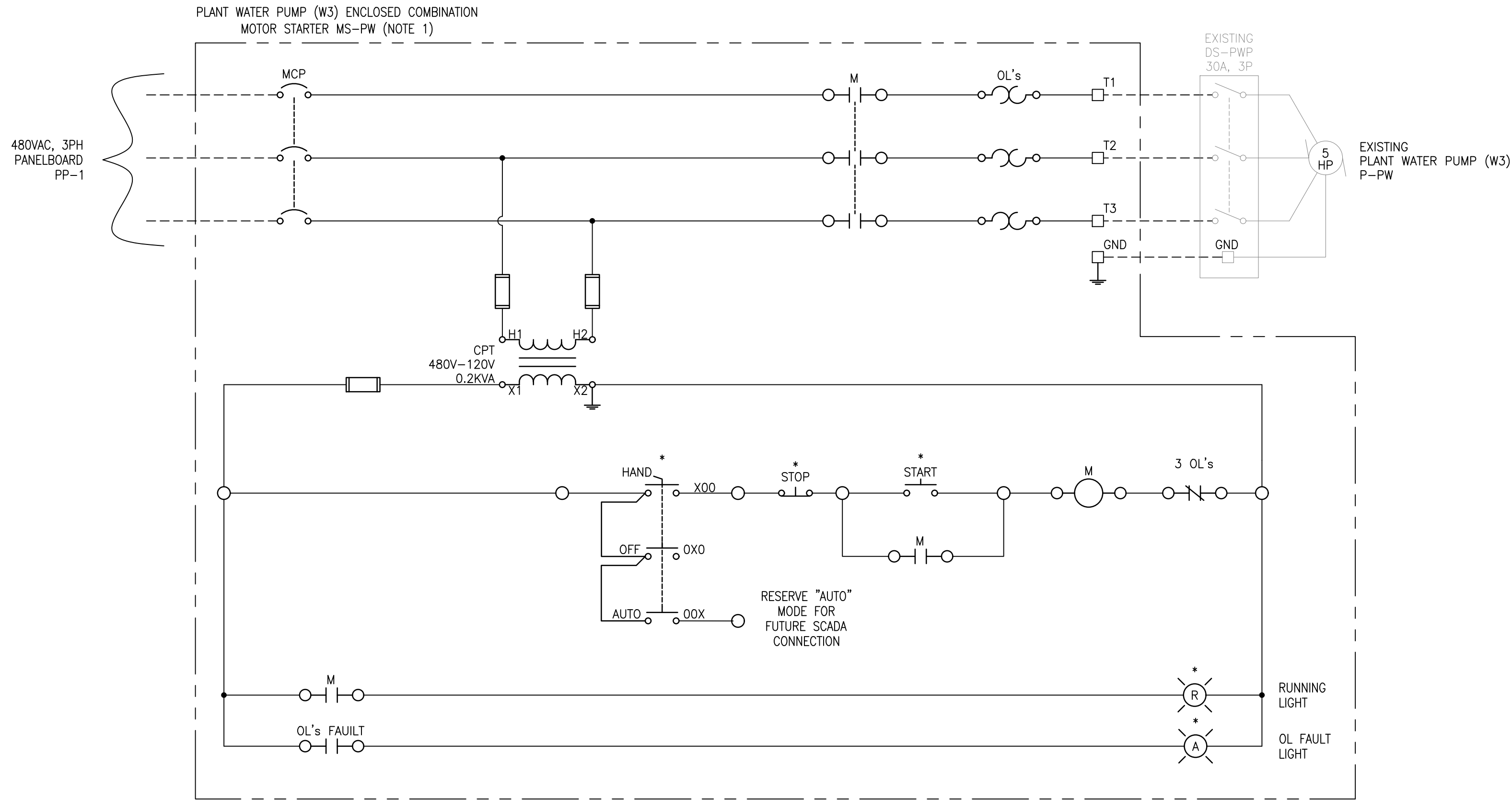
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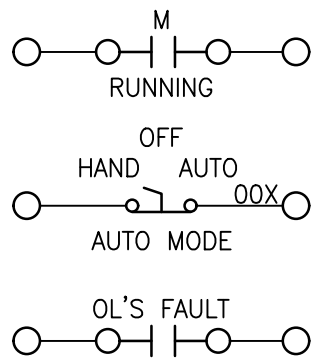


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AUXILIARY CONTACTS:



LEGEND:

* - PANEL FRONT MOUNTED



NOTES:

- THE CONTRACTOR SHALL FURNISH AND INSTALL PLANT WATER PUMP (W3) ENCLOSED MOTOR STARTER IN NEMA 4X STAINLESS STEEL ENCLOSURE WHICH INCLUDES ALL NECESSARY CONTROLS INCLUDING, BUT NOT LIMITED TO THE FOLLOWING:
 - H-O-A SWITCH, START, STOP AND OVERLOAD RESET PUSHBUTTONS.
 - 0.2 KVA, 480/120V CONTROL POWER TRANSFORMER.
 - STRIP HEATER & THERMOSTAT.
 - ONE (1) FULL VOLTAGE NON REVERSE (FVNR), 480V, 3P STARTER RATED FOR 5HP MOTOR AND ASSOCIATED MCP
 - AUXILIARY DRY CONTACTS (120VAC, 5AMP RATED):
 - RUNNING
 - OL FAULT
 - IN AUTO
 - INDICATING LIGHTS:
 - RUNNING (R)
 - OL FAULT (A)
 - IN "HAND" MODE, THE MOTOR SHALL START AND STOP FROM LOCAL START AND STOP PUSHBUTTONS. "AUTO" MODE OF OPERATION SHALL BE RESERVED FOR FUTURE SCADA CONNECTION.

THE CONTRACTOR SHALL SUBMIT A COMPLETE DETAILED WIRING DIAGRAM AND BILL OF MATERIAL FOR ENGINEER'S APPROVAL PRIOR TO FABRICATION.

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CONTENT:
BELL CREEK WPCP
SCHEMATIC WIRING
DIAGRAMS

SHEET NO:

E1.32



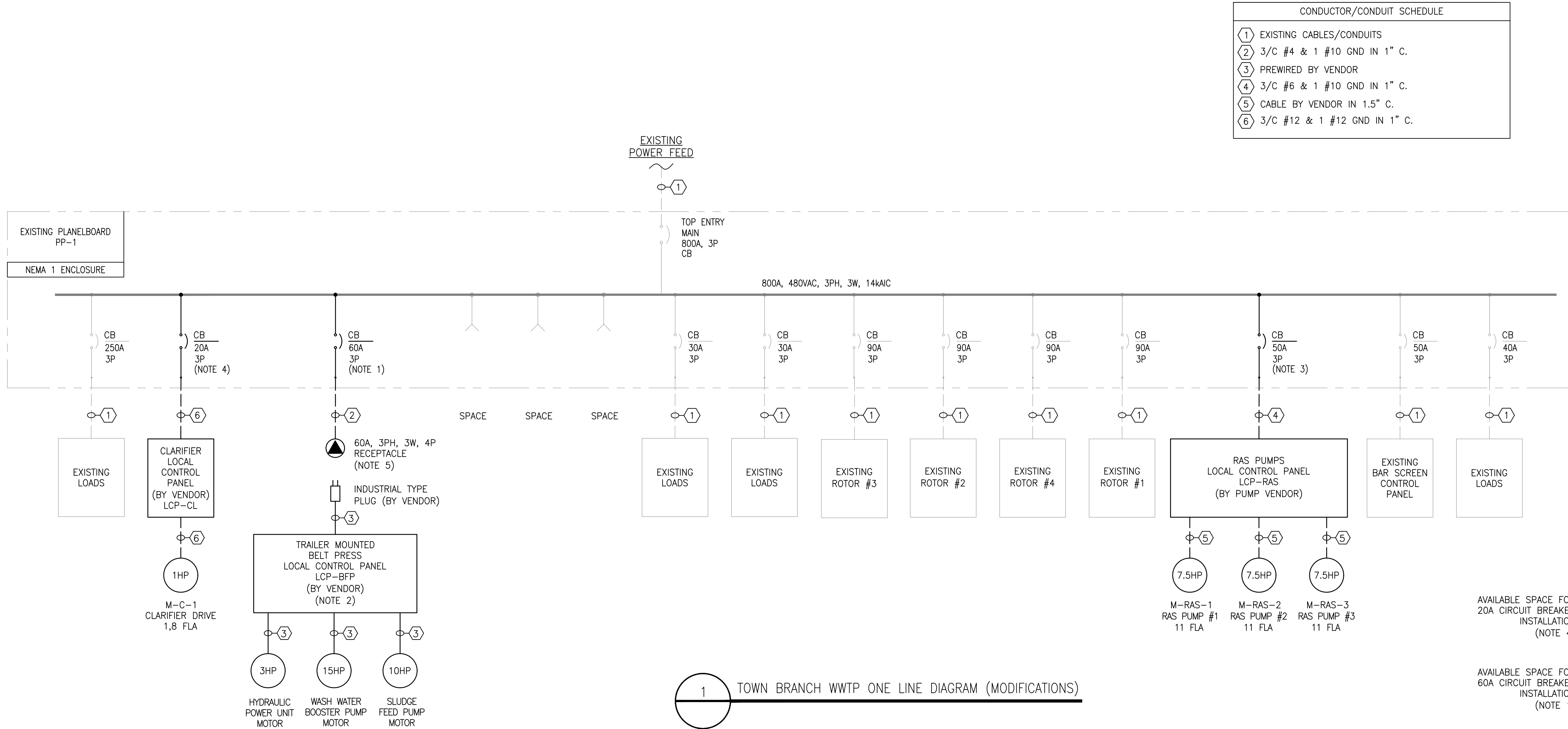
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USDA SEWER SYSTEM
IMPROVEMENTS - CONTRACT A

FOR THE
CITY OF THOMASTON



CONDUCTOR/CONDUIT SCHEDULE	
1	EXISTING CABLES/CONDUITS
2	3/C #4 & 1 #10 GND IN 1" C.
3	PREWIRED BY VENDOR
4	3/C #6 & 1 #10 GND IN 1" C.
5	CABLE BY VENDOR IN 1.5" C.
6	3/C #12 & 1 #12 GND IN 1" C.

NOTES

- CONTRACTOR SHALL PROVIDE AND INSTALL ONE (1) 60A, 480V, 3P CIRCUIT BREAKER IN AVAILABLE PLACE TO FEED TRAILER MOUNTED BELT FILTER PRESS SYSTEM. THE NEW CIRCUIT BREAKER SHALL BE OF THE SAME MANUFACTURER AS THE EXISTING PANELBOARD AND SHALL MATCH EXISTING CIRCUIT BREAKERS KAIC RATING.
- TRAILER MOUNTED BELT FILTER PRESS SYSTEM SHALL BE PROVIDED WITH ALL ASSOCIATED COMPONENTS PRE-INSTALLED AND PREWIRED TO MAIN CONTROL PANEL LCP-BFP. CONTRACTOR SHALL COORDINATE THE ACTUAL SETUP AND REQUIRED CONTRACTOR'S SCOPE (IF ANY) FOR BFP SYSTEM INTERNAL COMPONENTS WIRING WITH THE EQUIPMENT VENDOR BASED ON THE ACTUAL AS-PURCHASED EQUIPMENT.
- CONTRACTOR SHALL REPLACE THE EXISTING 30A, 3P CIRCUIT BREAKER FEEDING EXISTING RETURN PUMP STATION WITH 50A, 480V, 3P CIRCUIT BREAKER. THE NEW CIRCUIT BREAKER SHALL BE OF THE SAME MANUFACTURER AS THE EXISTING PANELBOARD AND SHALL MATCH EXISTING CIRCUIT BREAKERS KAIC RATING.
- CONTRACTOR SHALL PROVIDE AND INSTALL ONE (1) 20A, 480V, 3P CIRCUIT BREAKER IN AVAILABLE PLACE TO FEED CLARIFIER CONTROL PANEL LCP-CL. THE NEW CIRCUIT BREAKER SHALL BE OF THE SAME MANUFACTURER AS THE EXISTING PANELBOARD AND SHALL MATCH EXISTING CIRCUIT BREAKERS KAIC RATING.
- THE CONTRACTOR SHALL PROVIDE AND INSTALL INDUSTRIAL TYPE RECEPTACLE FOR CONNECTION OF TRAILER MOUNTED BELT FILTER PRESS EQUIPMENT TO 480V, 3PH POWER SOURCE. THE RECEPTACLE SHALL BE BY EATON "GHC52" SERIES. THE CONTRACTOR SHALL COORDINATE THE ACTUAL RECEPTACLE TYPE AND MODEL WITH THE BFP EQUIPMENT MANUFACTURER TO FIT AS PURCHASED PLUG (COMES PREWIRED WITH BFP CONTROL PANEL).



2 EXISTING PANELBOARD PP-1 (PROPOSED MODIFICATIONS)
(WESTINGHOUSE PANELBOARD, CAT# AT41254 IT1; TYPE CDP)



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USDA SEWER SYSTEM IMPROVEMENTS - CONTRACT A

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CONTENT:
TOWN BRANCH WPCP
ONE LINE DIAGRAM

SHEET NO:


E2.00



-
- UNDERGROUND DUCTBANKS:**
- DUCTBANK DB-1**
- GRADE
- MAGNETIC WARNING TAPE (TYP.)
- ① ② ③
- DB-1
- 1 - 1" C. (480V. 3PH SERVICE TO CLARIFIER LOCAL CONTROL PANEL LCP-CL)
2 - 1" C. (480V. 3PH SERVICE TO BFP)
3 - 1" C. (SPARE)
- DUCTBANK DB-2**
- GRADE
- ①
- DB-2
- 1 - 1" C. (480V. 3PH SERVICE TO BFP)
- DUCTBANK DB-3**
- GRADE
- ①
- DB-3
- 1 - 1" C. (480V. 3PH SERVICE TO CLARIFIER LOCAL CONTROL PANEL LCP-CL)
2 - 1" C. (SPARE)
- MAGNETIC FLOWMETER FE-1 (NOTE 9)
- FIT-1
- FLOW METER INDICATING TRANSMITTER FIT-1 W/ SURGE SUPPRESSOR SS-FIT-1
- CONCRETE PAD (NOTE 14)
- EQUIPMENT RACK (NOTE 13)
- PP-1
- LSL-RAS (NOTE 11)
- PT-RAS (NOTE 12)
- LCP-RAS
- RAS PUMPS LOCAL CONTROL PANEL LCP-RAS
- RAS PUMP #1 M-RAS-1 W/MSH & TSH
- RAS PUMP #2 M-RAS-2 W/MSH & TSH
- WETWELL (NOTE 10)
- RAS PUMP #3 M-RAS-3 W/MSH & TSH
- PULL BOX PB-1 (NOTE 6)
- TO CLARIFIER (SEE DETAIL 1)
- EXISTING 480V PANELBOARD PP-1
- EXISTING CONTROL BUILDING
- GRAPHIC SCALE**
- 2 0 1 2 4 6
- (IN FEET)
- 1/2 inch = 1 ft.
- 2 RAS PUMP STATION ELECTRICAL PLAN**
- SCALE: 1/2" = 1'-0"

LIGHTING/POLE SCHEDULE				
SYMBOL/TYPE		DESCRIPTION	LAMP/VOLTAGE	MOUNTING
 A1		INDUSTRIAL STANCHION MOUNTED LIGHT (CORROSION RESISTANT) WITHOUT PHOTOCCELL CROUSE-HINDS #VMV3LJR3/UNV1S890 STANCHION #V65H-SC AND MHK AND JMS OR ENGINEER ACCEPTED EQUAL	LED 120/277V, 1PH 33WATTS	STANCHION

NOTE:
 DESIGN IS BASED ON THE EQUIPMENT SHOWN IN THE ABOVE SCHEDULE. LIGHTS AND
 POLES SHALL BE PROVIDED AND INSTALLED BY CONTRACTOR PER SCHEDULE.
 CONTRACTOR SHALL ADJUST MOUNTING HARDWARE FOR PROPER LIGHTING FIXTURE
 INSTALLATION IF REQUIRED AT NO COST TO THE OWNER.



ESG ENGINEERING

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**USDA SEWER SYSTEM
IMPROVEMENTS - CONTRACT A**

FOR THE

CITY OF THOMASTON

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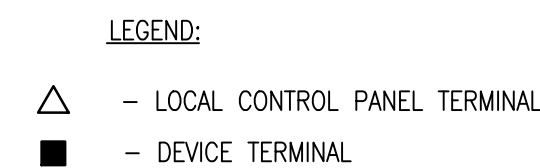
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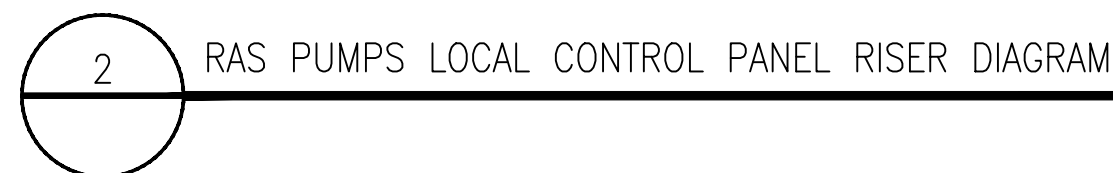
**TOWN BRANCH WPCP
ELECTRICAL SITE PLAN**

SHEET NO:

E2.10



A. THREE (3) H—O—A SWITCHES, START/STOP PUSH BUTTONS, FUSES, RELAYS, TERMINALS ETC.
B. 2KVA, 480/120V CONTROL POWER TRANSFORMER SIZED TO ACCOMMODATE ALL THE REQUIRED 120V LOADS
C. ONE (1) 50A, 3P, 480V MAIN CIRCUIT BREAKER
D. MOTORCIRCUIT PROTECTORS, VFDs RATED FOR ASSOCIATED PUMP MOTORS AND REQUIRED FOR PROPER SYSTEM OPERATION. VFD'S SHALL BE BY DANFOSS, EATON, SQUARE D, OR ENGINEER APPROVED EQUAL
E. HARMONIC LEVELS SHALL MEET IEEE 519 TOTAL HARMONIC DISTORTION LIMITATION REQUIREMENTS. PROVIDE HARMONIC ANALYSIS TO CONFIRM THE HARMONIC LEVELS OF THE SUBMITTED VFD'S



- PLANT AND GAS FLOW RATES
- WETWELL LEVEL
- PUMP RUNNING
- PUMP FAULTS (SEAL FAILURE AND OVERTEMP)



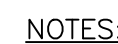
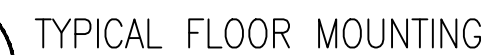
1. ALL DUCT BANKS CROSSING ROADS OR HEAVY TRAFFIC AREAS SHALL BE REINFORCED WITHIN 5 (FIVE) FEET OF TRAFFIC AREAS.
2. CONTRACTOR SHALL FIELD COORDINATE EXACT DUCT BANK ROUTING WITH PROCESS PIPING



1. PULL BOX TO BE "HUBBELL" QUAZITE BOX MADE WITH PRECAST POLYMER CONCRETE FIBERGLASS REINFORCED, STACKABLE WITH SELF-ALIGNING, REPLACEABLE EZ-NUT.
2. CONTRACTOR SHALL SIZE THE PULL BOXES BASED ON THE NUMBER OF CONDUITS. USE MANHOLES WHERE PULL BOX WIDTH/HEIGHT IS NOT SUFFICIENT TO ACCEPT ALL ENTERING/EXITING CONDUITS.



- NOTES:
1. IF SLAB IS LESS THAN 12" THICK, ANCHOR BOLTS SHALL EXTEND THROUGH SLAB AND BE BACKED UP WITH 4" X 3/16" (MIN) SQUARE WASHERS.
 2. CHANNELS SHALL BE LEVELED AT TIME CONCRETE IS CAST.

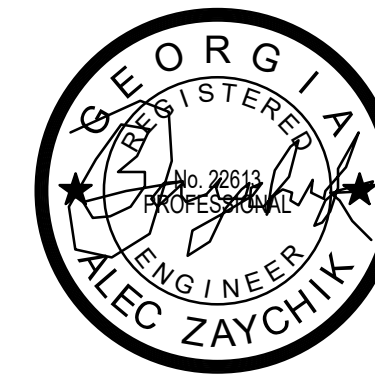


1. ALL EXPOSED EDGES TO BE GRIND SMOOTH AND BURR FREE.
2. MOUNT RAIN HOOD BETWEEN INSTRUMENT AND STANCHION.
USE STAINLESS STEEL BOLTS AND INSULATING WASHERS AND SLEEVES.



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CONTENT:

**ELECTRICAL
INSTALLATION DETAILS**

SHEET NO:

E3.00




Technical drawing of a Stanchion Fixture. The left view is a side elevation showing a vertical post (1) with a handrail (2) attached. A weld (3) is shown at the base of the post. A dimension of 8'-0" is indicated for the height of the post. A detail view of the base is shown with a dimension of 3" MIN. The right view is a detail of the base, showing a cross-section of the post (1) with a weld (2) and a base plate (3). A dimension of 3" MIN. is indicated for the base plate. A detail view of the base is shown with a dimension of 3" MIN. The drawing includes the following labels: HANDRAIL, WELD, 8'-0", 3" MIN., and DETAIL.

STANCHION FIXTURE NOTE:

1. ALL FIELD WELDS TO BE 1/4" FILLET

A/R=AS
REQUIRED



REVISIONS	NO.	DESCRIPTION

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CONTENT:

**ELECTRICAL
INSTALLATION DETAILS**

SHEET NO:

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USDA SEWER SYSTEM IMPROVEMENTS - CONTRACT A

FOR THE
CITY OF THOMASTON

ESG ENGINEERING

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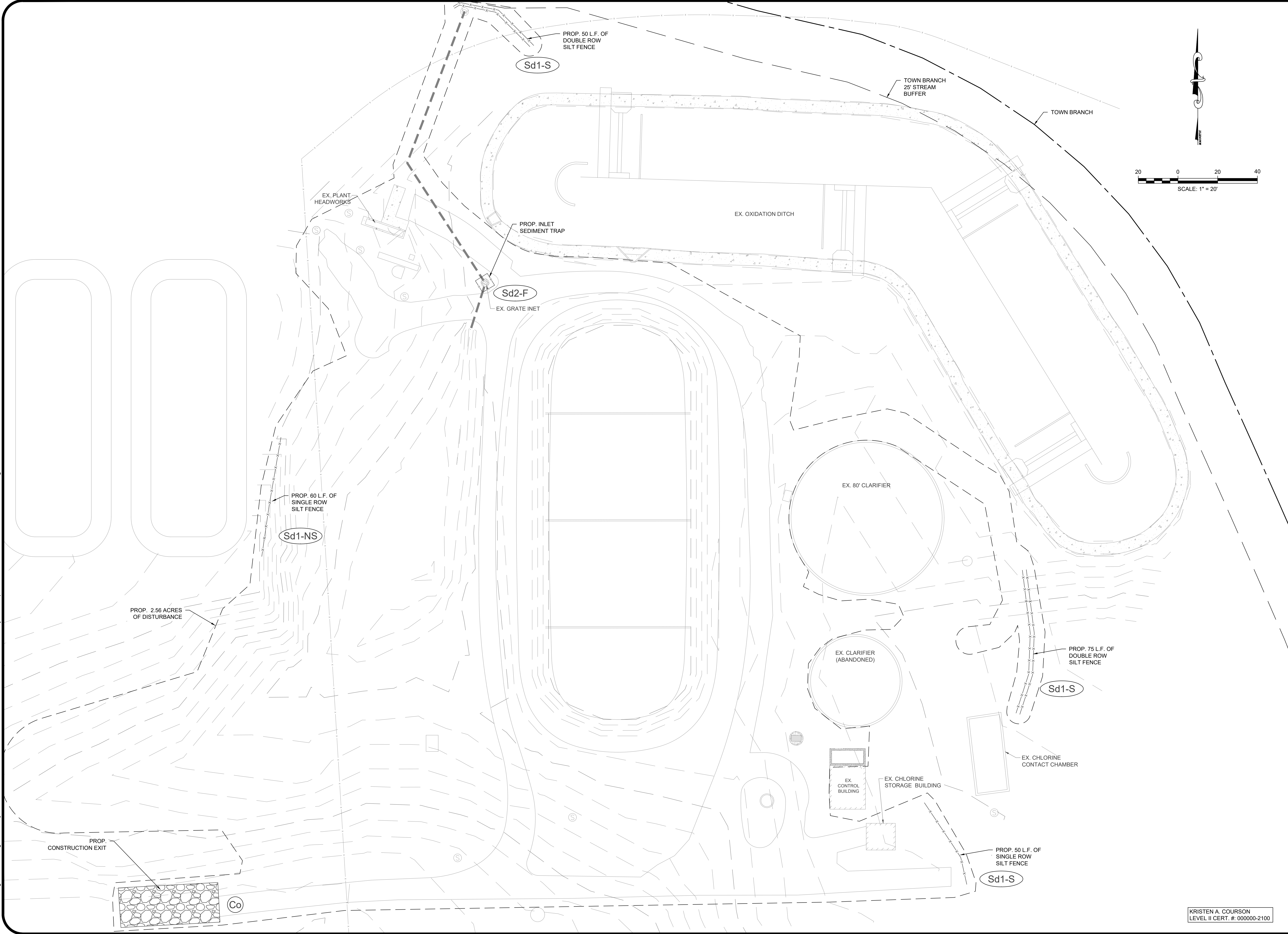
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USDA SEWER SYSTEM
IMPROVEMENTS - CONTRACT A
WPCP UPGRADES

FOR THE

CITY OF THOMASTON

REVISIONS	NO.	DESCRIPTION	DATE

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DATE: DEC 2020
SCALE: 1"=20'

CONTENT:
EROSION AND
SEDIMENTATION
CONTROL PLAN -
INITIAL

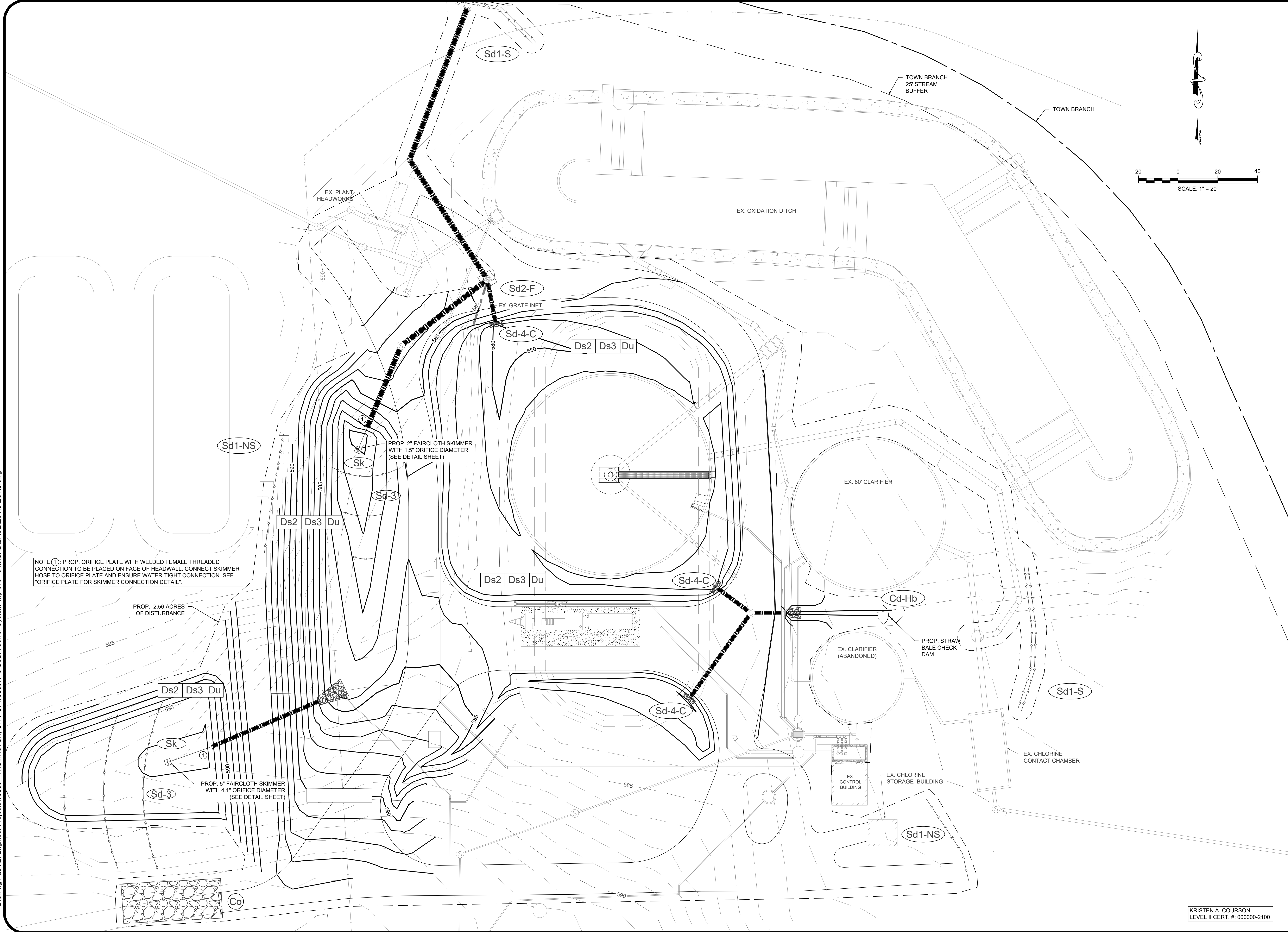
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NOTE(1): PROP. ORIFICE PLATE WITH WELDED FEMALE THREADED CONNECTION TO BE PLACED ON FACE OF HEADWALL. CONNECT SKIMMER HOSE TO ORIFICE PLATE AND ENSURE WATER-TIGHT CONNECTION. SEE "ORIFICE PLATE FOR SKIMMER CONNECTION DETAIL".

PROP. 2.56 ACRES OF DISTURBANCE

PROP. 5" FAIRCLOTH SKIMMER WITH 4.1" ORIFICE DIAMETER (SEE DETAIL SHEET)

PROP. 2" FAIRCLOTH SKIMMER WITH 1.5" ORIFICE DIAMETER (SEE DETAIL SHEET)

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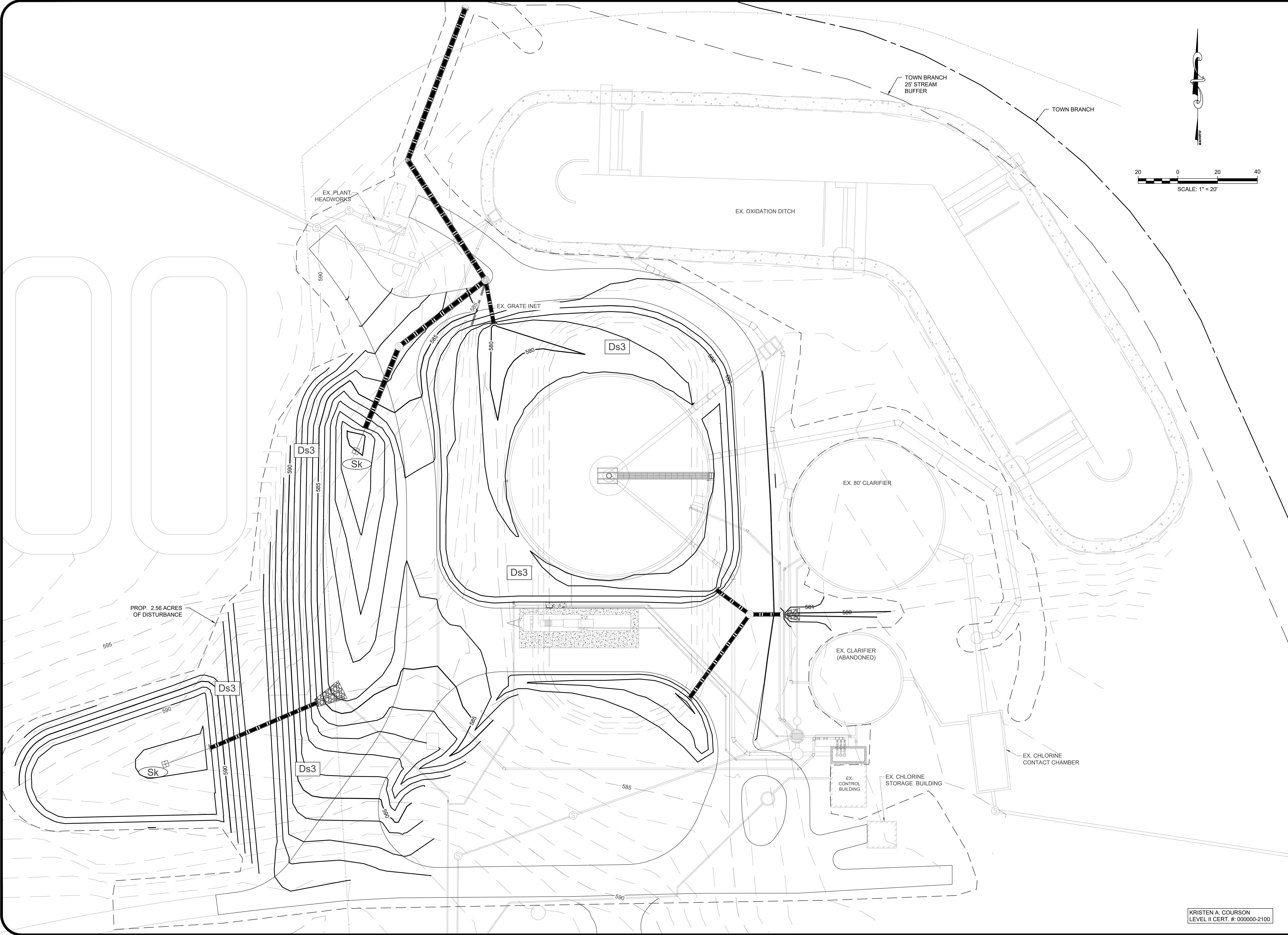
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DATE:	DEC 2020
SCALE:	1"=20'


CONTENT:
EROSION AND
SEDIMENTATION
CONTROL PLAN -
INTERMEDIATE

SHEET NO:
ESC 1.1

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**USDA SEWER SYSTEM
IMPROVEMENTS - CONTRACT A**
WPCP UPGRADES
FOR THE
CITY OF THOMASTON

REVISIONS	NO.	DESCRIPTION	DATE

BID SET



DRAWN BY: WLN
CHECKED BY: ABG
DATE: DEC 2020
SCALE: 1"=20'

CONTENT:
**EROSION AND
SEDIMENTATION
CONTROL PLAN -
FINAL**

SHEET NO:
ESC 1.2

PROJECT NARRATIVE:

THIS PROJECT CONSISTS OF REHABILITATION OF TWO WATER POLLUTION CONTROL PLANTS IN THOMASTON, GA (UPSON COUNTY). THE PLANTS ARE BELL CREEK WPCP AND TOWN BRANCH WPCP. AT BELL CREEK WPCP, THE PROJECT WILL CONSIST OF UPGRADING ELECTRONIC SYSTEMS, AND CONSTRUCTION OF A BELT PRESS PAD WITH ASSOCIATED CONNECTIONS. THERE WILL BE VERY LITTLE DISTURBED ACREAGE AT BELL CREEK (<0.5 ACRES). AT TOWN BRANCH WPCP, THE PROJECT WILL CONSIST OF DEMOLISHING UNNEEDED EXISTING SITE FEATURES, AND CONSTRUCTION OF A NEW CLARIFIER, BELT PRESS PAD GRADING, NEW FENCING AND AN ASPHALT DRIVE. THESE E & S CONTROL PLANS RELATE TO DISTURBED AREA AT TOWN BRANCH. THE RECEIVING WATER FOR TOWN BRANCH WWTP RUNOFF IS TOWN BRANCH CREEK, WHICH IS IMPAIRED FOR BIO. F.

GPS COORDINATES FOR PROJECT :
32.852931, -84.353812

GPS COORDINATES OF CONSTRUCTION EXIT:
INITIAL: 32.852418, -84.354109

DISTURBED AREA:
TOTAL DISTURBED AREA: 2.56 ACRES
TOTAL IMPERVIOUS AREA: 0.33 ACRES
TOTAL PLANT SITE ACREAGE: 50 ACRES. THERE ARE NO WETLANDS, MARSHLANDS, RESIDENTIAL, OR OTHER SENSITIVE AREAS THAT WILL BE AFFECTED BY CONSTRUCTION. THERE ARE NO BUFFER ENCROACHMENTS REQUIRED.

24-HOUR LOCAL CONTACT RESPONSIBLE FOR E&S CONTROLS
KRISTEN COURSON
6400 PEAKE RD.
MACON, GA
(478) 474-4996

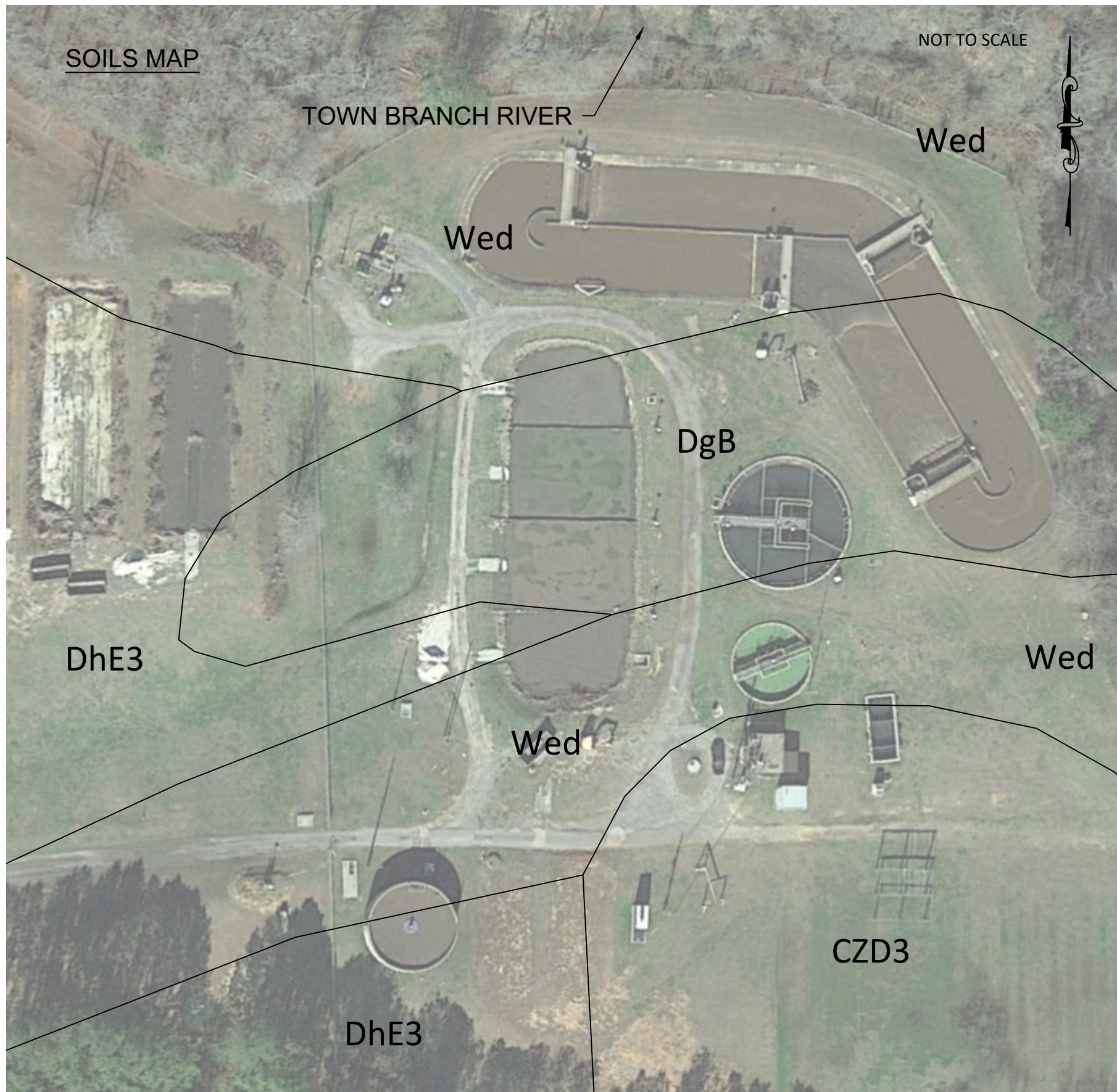
PRIMARY PERMITTEE
THE CITY OF THOMASTON
106 E LEE STREET
THOMASTON, GA
1 (706) 647-4242

INITIAL, INTERMEDIATE AND FINAL BMP'S:

- INITIAL BMP'S CONSIST OF SILT FENCES, INLET SEDIMENT TRAPS, AND CONSTRUCTION EXITS.
- INTERMEDIATE BMP'S WILL CONSIST OF TEMPORARY GRASSING, SEDIMENT PONDS, SKIMMERS, AND TEMP. SEDIMENT TRAPS, TO PREVENT THE ESCAPE OF SEDIMENT FROM THE LOCATION OF DISTURBANCE. SILT FENCE WILL REMAIN IN SPECIFIC AREAS OF SHEET FLOW.
- FINAL BMP'S WILL INCLUDE PERMANENT GRASSING & FINAL STABILIZATION. THESE WILL HELP REDUCE SOLIDS LOADING TO THE CREEK AFTER CONSTRUCTION IS COMPLETE.

SEDIMENT STORAGE

- SEDIMENT WILL BE STORED ON SITE BEHIND SILT FENCE, AND AT INLET SEDIMENT PONDS AND TRAPS. NEW GRADES ARE PROPOSED AND INDICATED IN SHEET ESC 1.2.



Map Unit Symbol	Map Unit Name	Acres in AOI	Percent of AOI
CZD3	Cecil sandy clay loam, 6 to 15 percent slopes, severely eroded	2.6	11.7%
DgB	Davidson loam, 2 to 6 percent slopes	1.8	8.1%
DhE3	Davidson clay loam, 10 to 25 percent slopes, severely eroded	8.7	39.4%
Wed	Wahadkee soils, 0 to 2 percent slopes, frequently flooded	9.0	40.9%
Totals for Area of Interest		22.0	100.0%

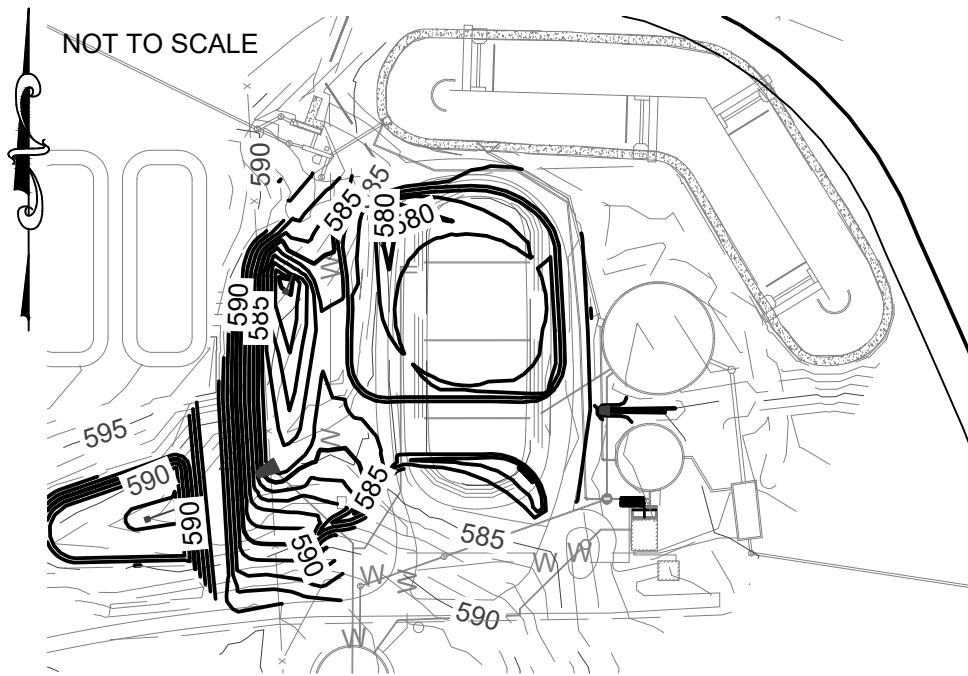
VICINITY MAP



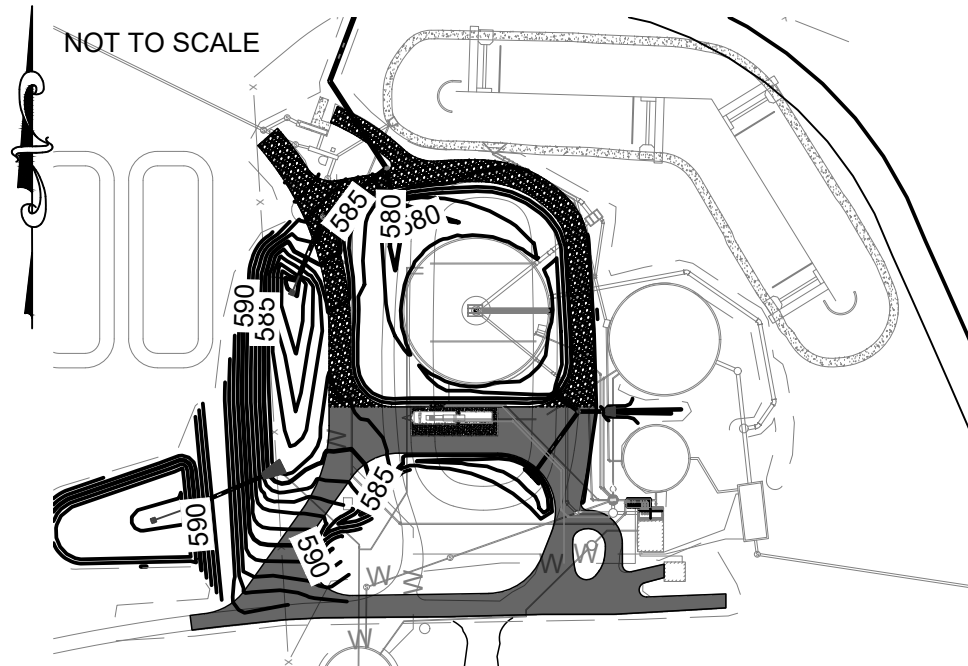
DELINEATION OF CONTRIBUTING BASINS TO THE PROJECT SITE

NTU VALUES - APPENDIX B RATIONALE

NPDES Sampling Point #1
Site Size: 1-10 Acres
Surface Water Drainage Area = 0.49 sq. miles
NTU Value = 75



PRE-DEVELOPMENT



POST-DEVELOPMENT

SCS Peak Discharge Data		
	Pre-Dev	Post-Dev
Area (Ac)	4.36	4.36
CN	75	90
25-Yr Q	34.17	21.46

NOTES:

- (CO) CONSTRUCTION EXIT: A STONE PAD SHALL BE CONSTRUCTED WHERE INDICATED AT DESIGNATED EXITS TO PAVED STREETS TO ELIMINATE TRANSFER OF MUD TO PUBLIC STREETS. THE STONE SHALL BE IN ACCORDANCE WITH ASTM D448, SIZE 9 (1.5" - 3.5" STONE). THE EXIT SHALL BE MAINTAINED IN A CONDITION WHICH WILL PREVENT TRACKING OR FLOW OF MUD ONTO PUBLIC RIGHTS-OF-WAY. AS CONDITIONS DEMAND, PERIODIC TOP DRESSING WITH ADDITIONAL STONE OR REPAIR OF THE STONE PAD SHALL BE PERFORMED. ALL MATERIALS SPILLED, DROPPED, WASHED OR TRACKED FROM VEHICLES OR SITE ONTO ROADWAYS MUST BE REMOVED IMMEDIATELY.
- (SD2-B, SD2-D OR SD2-P) SEDIMENT TRAPS: A TEMPORARY PROTECTIVE DEVICE FORMED AT OR AROUND AN INLET TO A STORM DRAIN TO TRAP SEDIMENT.
- (SD1-NS OR SD1-S) SEDIMENT BARRIER: SILT FENCE SHALL BE INSTALLED WHERE INDICATED ON PLANS TO CONTROL SEDIMENT CARRIED BY RUNOFF. THE FENCE MUST PROPERLY INSTALLED ACCORDING TO THE DETAILS PROVIDED IN THE "MANUAL FOR EROSION & SEDIMENT CONTROL IN GEORGIA", LATEST EDITION. THE FENCE FABRIC MUST MEET GDOT SPECIFICATIONS.
- (DS2) TEMPORARY VEGETATION: SHALL BE ESTABLISHED ON ALL DISTURBED AREAS AS SOON AS POSSIBLE AFTER CONSTRUCTION.
- (DS3) PERMANENT VEGETATION: SHALL BE ESTABLISHED ON ALL DISTURBED AREAS NOT TO BE PAVED AS SOON AS POSSIBLE AFTER CONSTRUCTION.
- (DU) DUST CONTROL: CONTROLLING SURFACE AND AIR MOVEMENT OF DUST ON CONSTRUCTION SITES, ROADS, AND DEMOLITION SITES.
- PLANTING NOTES:
 - SEED PREPARATION - SCARIFY THE SOIL TO A DEPTH OF 1/4" TO EXPOSE FRESH SOIL.
 - HAND PLANTING - SEED & FERTILIZER SHOULD BE BROADCAST UNIFORMLY OVER SOIL SURFACE. LIGHTLY COVER SEED BY DISKING OR RAKING. MULCH ALL SEEDED AREAS IMMEDIATELY USING WHEAT STRAW AT A RATE OF 1 BAIL PER 500 SQUARE FEET.
 - APPLY FERTILIZER AT THE RATES SHOWN PER VEGETATION SCHEDULE ON DETAIL SHEET AND RAKE INTO THE SOIL.
 - WATERING - WATER IMMEDIATELY AFTER MULCHING.
- DISTURBED AREAS AND THE DURATION OF EXPOSURE TO EROSION ELEMENTS SHALL BE KEPT TO A PRACTICABLE MINIMUM.
- TEMPORARY VEGETATION OR MULCHING SHALL BE EMPLOYED TO PROTECT EXPOSED CRITICAL AREAS DURING DEVELOPMENT. STABILIZATION MEASURES SHALL BE INITIATED AS SOON AS PRACTICABLE IN PORTIONS OF THE SITE WHERE CONSTRUCTION ACTIVITIES HAVE TEMPORARILY CEASED, BUT IN NO CASE MORE THAN 14 DAYS AFTER THE CONSTRUCTION ACTIVITY IN THAT PORTION OF THE SITE HAS TEMPORARILY OR PERMANENTLY CEASED.
- THE PRIMARY PERMITTEE MUST RETAIN THE DESIGN PROFESSIONAL WHO PREPARED THE EROSION, SEDIMENTATION AND POLLUTION CONTROL PLAN EXCEPT WHEN THE PRIMARY PERMITTEE HAS REQUESTED, IN WRITING AND EPD HAS AGREED TO, AN ALTERNATE DESIGN PROFESSIONAL TO INSPECT THE INSTALLATION OF THE CONTROL MEASURES (BMPs) WHICH THE DESIGN PROFESSIONAL DESIGNED WITH SEVEN (7) DAYS AFTER THE INITIAL CONSTRUCTION ACTIVITIES COMMENCE.
- INSPECTIONS OF THE PROJECT SHALL BE PERFORMED IN ACCORDANCE WITH PART IV SECTION D.4 OF GENERAL PERMIT NO. GAR 100001.
- STORM WATER SAMPLING SHALL BE PERFORMED AT THE LOCATION(S) SHOWN ON THE PLANS IN ACCORDANCE WITH PART IV SECTION D.6 OF GENERAL PERMIT NO. GAR 100001.
- THE PRE-DEVELOPMENT ESTIMATED CURVE NUMBER IS 75 AND THE POST-DEVELOPMENT ESTIMATED CURVE NUMBER IS 90.
- THE ONLY POTENTIAL POLLUTANT SOURCE ANTICIPATED IS PETROLEUM PRODUCTS ASSOCIATED WITH THE CONSTRUCTION EQUIPMENT AND VEHICLES. VEHICLES SHALL BE CHECKED REGULARLY FOR PETROLEUM LEAKS. ALL PETROLEUM PRODUCTS STORED ONSITE SHALL BE TIGHTLY SEALED IN CONTAINERS AND SHOULD BE STORED UNDER COVER. THE CONTRACTOR'S ONSITE SUPERINTENDANT SHALL REVIEW THE SITE DAILY DURING DAYS OF CONSTRUCTION TO VERIFY THAT GOOD HOUSEKEEPING PRACTICES ARE BEING PRACTICED. IF A SPILL OCCURS, IT SHALL BE REMOVED FROM THE SITE IMMEDIATELY AND PROPERLY DISPOSED. IF ANY PETROLEUM PRODUCTS SPILL INTO A DITCH OR STREAM DIRECTLY OR INDIRECTLY, SAMPLING UPSTREAM AND DOWNSTREAM OF THAT POINT SHALL BE PERFORMED IMMEDIATELY. THE SAMPLES SHALL BE ANALYZED WITH RESULTS REPORTED TO GA EPD.
- APPROVED EROSION AND SEDIMENT CONTROL MEASURES SHALL BE INSTALLED PRIOR TO, OR CONCURRENT WITH, LAND DISTURBING ACTIVITIES. SILT FENCE AND CHECK DAMS WHICH INTERFERE WITH STORM DRAIN INSTALLATION SHALL BE INSTALLED WITH 7 DAYS OF BACKFILL BEING PLACED OVER THE INSTALLED PIPE. TEMPORARY OR PERMANENT GRASSING SHALL ALSO BE COMPLETED CONCURRENTLY WITH STORM DRAIN INSTALLATION, BUT IN NO CASE LATER THAN 14 DAYS AFTER BACKFILL.
- EROSION AND SEDIMENT CONTROL MEASURES SHALL BE INSTALLED AND MAINTAINED IN ACCORDANCE WITH THE APPROVED PLANS AND SPECIFICATIONS AS WELL AS LOCAL AND STATE REQUIREMENTS. STORM DRAINAGE SYSTEM COMPONENTS SHALL BE KEPT CLEAN AND FREE OF SILT AND DEBRIS.
- IMMEDIATELY AFTER THE ESTABLISHMENT OF CONSTRUCTION EXITS, ALL PERIMETER EROSION AND SEDIMENT CONTROL MEASURES AND STORM WATER MANAGEMENT DEVICES SHALL BE INSTALLED PRIOR TO ANY OTHER CONSTRUCTION. THE LOCATIONS OF CERTAIN EROSION AND SEDIMENT CONTROL MEASURES MAY HAVE TO BE ADJUSTED TO FIT FIELD CONDITIONS AND TO ACCOMMODATE DRAINAGE PATTERNS DIFFERENT FROM THE GRADING PLANS. IT IS THE CONTRACTOR'S RESPONSIBILITY TO BRING ANY NEEDED CHANGES TO THE ATTENTION OF THE ENGINEER IMMEDIATELY IF LOCATION OR BMP CHANGES ARE NECESSARY.
- ADDITIONAL EROSION AND SEDIMENTATION CONTROL MEASURES WILL BE INSTALLED IF DEEMED NECESSARY BY ONSITE INSPECTION. IT IS THE CONTRACTOR'S RESPONSIBILITY TO ACCOMPLISH EROSION CONTROL FOR ALL DRAINAGE PATTERNS CREATED AT VARIOUS STAGES DURING CONSTRUCTION.
- DUST CONTROL MEASURES SHALL BE IMPLEMENTED WHEN NEEDED DURING CONSTRUCTION BY USE OF WATER TRUCKS, ETC. WATER SHALL BE MADE AVAILABLE TO THE CONTRACTOR AT A FEE THROUGH A CITY OF THOMASTON HYDRANT METER.
- IF FINES OR PENALTIES ARE LEVIED AGAINST THE PROPERTY OR THE DEVELOPER/OWNER BECAUSE OF LACK OF EROSION OR SEDIMENTATION CONTROL, THE CONTRACTOR SHALL BE RESPONSIBLE FOR PAYMENT OF SUCH FINES OR PENALTIES, OR THE COST OF SUCH FINES OR PENALTIES SHALL BE DEDUCTED FROM THE CONTRACT AMOUNT.
- THE CONTRACTOR SHALL NOT ALLOW SILT TO ACCUMULATE IN SILT FENCE OR ADJACENT TO HAYBALES ABOVE 1/2 OF THE ORIGINAL HEIGHT OF EITHER BMP. THE CONTRACTOR SHALL REMOVE SILT AS NEEDED TO PREVENT EXCESS ACCUMULATION.
- TEMPORARY EROSION AND SEDIMENTATION CONTROL MEASURES INCLUDING SILT FENCE AND CHECK DAMS SHALL BE REMOVED AND DISPOSED OF BY THE CONTRACTOR AFTER A STAND OF PERMANENT VEGETATION HAS BEEN ESTABLISHED AND THE ENGINEER DEEMS THE SITE IS STABILIZED.
- DURING PERIODS OF PRECIPITATION, THE CONTRACTOR SHALL COVER THE BUILDING MATERIALS AND BUILDING PRODUCTS ON SITE AT THEIR DISCRETION. IT IS RECOMMENDED THAT MEASURES SUCH AS PLASTIC SHEETING OR TEMPORARY ROOFS BE USED TO COVER BUILDING MATERIALS, BUILDING PRODUCTS, CONSTRUCTION WASTES, TRASH, LANDSCAPE MATERIALS, FERTILIZERS, PESTICIDES, HERBICIDES, DETERGENTS, SANITARY WASTE, AND OTHER MATERS IN ORDER TO MINIMIZE EXPOSURE TO PRECIPITATION AND TO STORMWATER. IF THE PRECIPITATION PERIOD IS ANTICIPATED TO BE OR IS GREATER THAN 14 DAYS, PROPER EROSION CONTROL SHOULD BE FOLLOWED, WITH ANY DISTURBED AREA STABILIZED WITH MULCH OR TEMPORARY SEEDING.

EROSION CONTROL STATEMENTS

- THE DESIGN PROFESSIONAL WHO PREPARED THE ES&PC PLAN IS TO INSPECT THE INSTALLATION OF THE INITIAL SEDIMENT STORAGE REQUIREMENTS, PERIMETER BMP'S, AND SEDIMENT BASINS IN ACCORDANCE WITH PART IV.A.5 WITHIN 7 DAYS AFTER INSTALLATION.
- NON-EXEMPT ACTIVITIES SHALL NOT BE CONDUCTED WITHIN THE 25-FOOT UNDISTURBED STREAM BUFFERS AS MEASURED FROM THE POINT OF WRESTED VEGETATION WITHOUT FIRST ACQUIRING THE NECESSARY VARIANCES AND PERMITS.
- AMENDMENTS/REVISIONS TO THE ES&PC PLAN WHICH HAVE A SIGNIFICANT EFFECT ON BMP'S WITH A HYDRAULIC COMPONENT MUST BE CERTIFIED BY THE DESIGN PROFESSIONAL.
- WASTE MATERIALS SHALL NOT BE DISCHARGED TO WATERS OF THE STATE, EXCEPT AS AUTHORIZED BY A SECTION 404 PERMIT.
- THE ESCAPE OF SEDIMENT FROM THE SITE SHALL BE PREVENTED BY THE INSTALLATION OF EROSION AND SEDIMENT CONTROL MEASURES AND PRACTICES PRIOR TO, OR CONCURRENT WITH, LAND DISTURBING ACTIVITIES.
- EROSION CONTROL MEASURES WILL BE MAINTAINED AT ALL TIMES. IF FULL IMPLEMENTATION OF THE APPROVED PLAN DOES NOT PROVIDE FOR EFFECTIVE EROSION CONTROL, ADDITIONAL EROSION AND SEDIMENT CONTROL MEASURES SHALL BE IMPLEMENTED TO CONTROL OR TREAT THE SEDIMENT SOURCE.
- ANY DISTURBED AREA LEFT EXPOSED FOR A PERIOD GREATER THAN 14 DAYS SHALL BE STABILIZED WITH MULCH OR TEMPORARY SEEDING.

STRUCTURAL PRACTICES				
CODE	PRACTICE	DETAIL	MAP SYMBOL	DESCRIPTION
Cd	CHECKDAM			A small temporary barrier or dam constructed across a roadside drainage ditch or area of concentrated flow.
Ch	CHANNEL STABILIZATION			Improving, controlling or stabilizing an open channel, existing stream, or dry ditch.
Cg	CONSTRUCTION EXIT			A curved stone pad located at the construction site exit to provide a place for removing mud from tires thereby protecting public streets.
Cr	CONSTRUCTION ROAD STABILIZATION			A towaway constructed as part of a construction plan including streets, roads, subdivision roads, parking areas and other on-site vehicle transportation routes.
Dc	STORM DRAINAGE CHANNEL			A temporary channel constructed to convey flow around a construction site while a permanent structure is being constructed.
Di	DIVERSION			An earth channel or dike located above, below, or across a slope to divert runoff. This may be a temporary or permanent structure.
On1	TEMPORARY STABILIZATION OF SLOPE			A flexible cord of heavy-duty fabric or other material intended to safely conduct surface runoff down a slope. This is temporary and inexpensive.
On2	PERMANENT STABILIZATION OF SLOPE			A porous stone pile, sectional conduit or similar material designed to safely conduct surface runoff down a slope.
Fr	FILTER RIVER			A temporary stone barrier constructed at storm drain inlets and pond outlets.
Ga	GARDEN			Rock filter baskets which are hand-placed into position forming and stabilizing structures.
Gr	GRADE STABILIZATION STRUCTURES			Permanent structures installed to protect channels or waterways where otherwise the slope would be sufficient for the running water to form gullies.
Lv	LEVEL SPREADER			A storm flow outlet device constructed at zero grade across the slope whereby concentrated runoff may be discharged at a non-erosive velocity onto undisturbed areas stabilized by existing vegetation.
Rd	ROCK FILTER DRAIN			A temporary stone filter dam installed across drainageways or in conjunction with a temporary sediment trap.
Re	RETAINING WALL			A wall installed to stabilize cut and fill slopes where maximum permissible slopes are not obtainable. Each situation will require special design.
Rt	RETRO FITTING			A device or structure placed in front of a permanent stormwater detention pond outlet structure to serve as a temporary sediment filter.
Sd1	SEDIMENT BARRIER			A barrier to prevent sediment from leaving the construction site. It may be sandbags, bales of straw or hay, straw, logs and poles, or a silt fence.
Sd2	INLET SEDIMENT TRAP			A temporary protective device formed at or around an inlet to a storm drain to trap sediment.
Sd3	TEMPORARY SEDIMENT BASIN			A bank created by excavation or a dam across a waterway. The surface water runoff is temporarily stored allowing the bulk of the sediment to drop out.
Sd4	TEMPORARY SEDIMENT TRAP			A small temporary pond that slows a disturbed area so that sediment can settle out. The principle feature distinguishing a temporary sediment trap from a temporary sediment basin is the size of a job or rise.
Sk	FLASING SURFACE DRAINAGE			A bypass device used to release/drains water from the surface of sediment ponds, traps, or basins at a controlled rate of flow.
SpB	SEED BERM			A linear control device constructed on a diversion perpendicular to the direction of the runoff to enhance deposition and infiltration of runoff, while creating multiple sedimentation chambers with the employment of intermediate dikes.

STRUCTURAL PRACTICES				
CODE	PRACTICE	DETAIL	MAP SYMBOL	DESCRIPTION
Sr	TEMPORARY STREAM CROSSING			A temporary bridge or culvert-type structure protecting a stream or watercourse from damage by existing construction equipment.
St	STORMWATER OUTLET PROTECTION			A paved or short section of ramp, chute at the outlet of a storm drain system preventing erosion from the concentrated runoff.
Su	SURFACE ROUGHENING			A rough soil surface with horizontal depressions or a surface of stone or other material to roughen the surface after grading.
Tc	TURBIDITY CURTAIN			A floating or slotted barrier installed within the water (it may also be referred to as a floating boom, silt barrier, or silt curtain).
Tp	TURBIDITY CURTAIN			The practice of draping off the more fertile soil, storing it, then spreading it over the disturbed area after completion of construction activities.
Tr	TREE PROTECTION			To protect desirable trees from injury during construction activity.
Wt	WATER TREATMENT OF STORMWATER			Paved or vegetative water outlets for diversions, terraces, berms, dikes or similar structures.

VEGETATIVE PRACTICES				
CODE	PRACTICE	DETAIL	MAP SYMBOL	DESCRIPTION
Bf	BUFFER ZONE			Strip of undisturbed original vegetation, wooded or wooded, where otherwise the slope would be sufficient for the running water to form gullies.
Cs	CUTSLOPE			Planting vegetation on dunes that are denuded, artificially constructed, or re-wooded.
Ds1	DESIGNATED AREA STABILIZATION (WITH MULCH)			Establishing temporary protection for disturbed areas where seedlings may not have a suitable growing season to produce an erosion retarding cover.
Ds2	DESIGNATED AREA STABILIZATION (WITH SEEDS)			Establishing a temporary vegetative cover with fast growing seedlings on disturbed areas.
Ds3	DESIGNATED AREA STABILIZATION (WITH MULCH AND SEEDS)			Establishing a permanent vegetative cover such as trees, shrubs, vines, grasses, or legumes on disturbed areas.
Ds4	DESIGNATED AREA STABILIZATION (WITH MULCH AND SEEDS)			A permanent vegetative cover using seeds on highly erodible or critically eroded lands.
Du	DUST CONTROL			Controlling surface and air movement of dust on construction sites, roadways and similar sites.
Fl-C	FLOODING AND DRAINAGE			Substance formulated to assist in the stable/liquid separation of suspended particles in solution.
Sb	SEEDING			The use of readily available native plant materials to maintain and enhance streambanks, or to prevent, or reduce and repair small streambank erosion problems.
Ss	SLOPE STABILIZATION			A protective covering used to prevent erosion and stabilize temporary or permanent exposures on steep slopes, where trees, or shrubs, or vines.
Tac	TERRACE AND CHECK DAM			Substance used to anchor stone or hay mat by coating the organic material to bind together.

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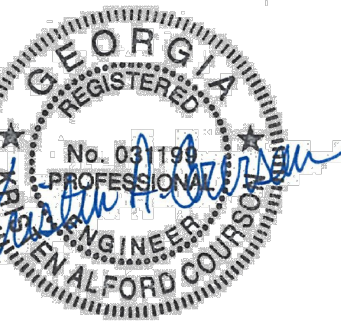
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USDA SEWER SYSTEM
IMPROVEMENTS - CONTRACT A
WPCP UPGRADES

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CITY OF THOMASTON

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BID SET



DRAWN BY: WLN
CHECKED BY: ABG
DATE: DEC 2020
SCALE: NTS

CONTENT:
EROSION AND
SEDIMENTATION
CONTROL PLAN -
NOTES

SHEET NO:

ESC 1.3

EROSION, SEDIMENTATION AND POLLUTION CONTROL PLAN

- A. KEEPING PLANS CURRENT.** THE PRIMARY PERMITEE(S) SHALL AMEND THEIR PLAN WHENEVER THERE IS A CHANGE IN DESIGN, CONSTRUCTION, OPERATION, OR MAINTENANCE, WHICH HAS A SIGNIFICANT EFFECT ON BMPs WITH HYDRAULIC COMPONENT (I.E., THOSE BMPs WHERE THE DESIGN IS BASED UPON RAINFALL INTENSITY, DURATION AND RETURN FREQUENCY OF STORMS) OR IF THE PLAN PROVES TO BE INEFFECTIVE IN ELIMINATING OR SIGNIFICANTLY MINIMIZING POLLUTANTS FROM SOURCES IDENTIFIED UNDER PART IV.D.3. OF THIS PERMIT. AMENDMENTS TO THE PLAN MUST BE CERTIFIED BY A DESIGN PROFESSIONAL AS PROVIDED IN THIS PERMIT.
- B. CONTENTS OF PLAN.** THE ES&PC PLAN SHALL INCLUDE, AS A MINIMUM, BEST MANAGEMENT PRACTICES, INCLUDING SOUND CONSERVATION AND ENGINEERING PRACTICES TO PREVENT AND MINIMIZE EROSION AND RESULTANT SEDIMENTATION, WHICH ARE CONSISTENT WITH, AND NO LESS STRINGENT THAN, THOSE PRACTICES CONTAINED IN THE "MANUAL FOR EROSION AND SEDIMENT CONTROL IN GEORGIA" (MANUAL) PUBLISHED BY THE STATE SOIL AND WATER CONSERVATION COMMISSION AS OF JANUARY 1 OF THE YEAR IN WHICH LAND DISTURBING ACTIVITY WAS PERMITTED, AS WELL AS THE FOLLOWING:
- CHECKLIST.** A COPY OF THE COMPLETED ES&PC PLAN CHECKLIST IS PROVIDED ON SHEET ESC 1.6.
 - SITE DESCRIPTION.**
 - THIS PROJECT INVOLVES THE REHABILITATION OF TWO WATER POLLUTION CONTROL PLANTS, DURING THE COURSE OF THE PROJECT CREWS WILL INSTALL EROSION CONTROL MEASURES, INSTALL PIPES/STRUCTURES, GRADE SITE, CONSTRUCT A CLARIFIER, ESTABLISH PERMANENT VEGETATION AND PERFORM FINAL CLEAN UP OF THE SITE.
 - AN ACTIVITY SCHEDULE HAS BEEN PREPARED AND IS PROVIDED ON THE ATTACHED DETAIL SHEET(S). THIS CHART SHOWS DESCRIPTION AND TIMELINE OF THE INTENDED SEQUENCE OF MAJOR ACTIVITIES THAT DISTURB SOILS FOR MAJOR PORTIONS OF THE SITE (I.E., INITIAL PERIMETER BMPs, CLEARING AND GRUBBING ACTIVITIES, EXCAVATION ACTIVITIES, GRADING ACTIVITIES, INFRASTRUCTURE ACTIVITIES, IMMEDIATE AND FINAL STABILIZATION ACTIVITIES).
 - TOTAL PROJECT AREA IS APPROXIMATELY 2.56 ACRES. TOTAL DISTURBED AREA IS APPROXIMATELY 2.56 ACRES.
 - THE ANTICIPATED INCREASE IN PEAK FLOW WILL BE MITIGATED BY AN ONSITE STORMWATER POND.**
 - SEE PLAN SHEETS FOR OVERALL SLOPES, AREAS OF DISTURBANCE AND ADJACENT AREAS.
 - THE RECEIVING WATERS IS TOWN BRANCH CREEK. THERE ARE NO WETLANDS ONSITE.
 - CONTROLS.** EACH PLAN SHALL INCLUDE A DESCRIPTION OF APPROPRIATE CONTROLS AND MEASURES THAT WILL BE IMPLEMENTED AT THE CONSTRUCTION SITE INCLUDING: (1) INITIAL PERIMETER CONTROL BMPs, (2) INTERMEDIATE GRADING AND DRAINAGE BMPs, AND (3) FINAL BMPs. THE PLAN WILL INCLUDE APPROPRIATE STAGING AND ACCESS REQUIREMENTS FOR CONSTRUCTION EQUIPMENT. THE PLAN WILL CLEARLY DESCRIBE FOR EACH MAJOR ACTIVITY IDENTIFIED IN PART IV.D.2.8. APPROPRIATE CONTROL MEASURES AND THE TIMING DURING THE CONSTRUCTION PROCESS THAT THE MEASURES WILL BE IMPLEMENTED. THE DESCRIPTION AND IMPLEMENTATION OF CONTROLS SHALL ADDRESS THE FOLLOWING MINIMUM COMPONENTS:
 - EROSION AND SEDIMENT CONTROLS:
 - STABILIZATION MEASURES. SEE ATTACHED PLANS FOR A DESCRIPTION OF INTERIM AND PERMANENT STABILIZATION MEASURES, INCLUDING SITE-SPECIFIC SCHEDULING OF THE IMPLEMENTATION OF THE MEASURES. CONTRACTOR SHALL ENSURE THAT EXISTING VEGETATION IS PRESERVED AND THAT DISTURBED PORTIONS OF THE SITE ARE STABILIZED. STABILIZATION MEASURES MAY INCLUDE: TEMPORARY SEEDING, PERMANENT SEEDING, MULCHING, GEOTEXTILES, SOD STABILIZATION, VEGETATIVE BUFFER STRIPS, PROTECTION OF TREES, PRESERVATION OF MATURE VEGETATION, AND OTHER APPROPRIATE MEASURES. A RECORD OF THE DATES WHEN MAJOR GRADING ACTIVITIES OCCUR, WHEN CONSTRUCTION ACTIVITIES TEMPORARILY OR PERMANENTLY CEASE ON A PORTION OF THE SITE, AND WHEN STABILIZATION MEASURES ARE INITIATED SHALL BE INCLUDED IN THE PLAN. STABILIZATION MEASURES SHALL BE INITIATED AS SOON AS PRACTICABLE IN PORTIONS OF THE SITE WHERE CONSTRUCTION ACTIVITIES HAVE TEMPORARILY OR PERMANENTLY CEASED, BUT IN NO CASE MORE THAN 14 DAYS AFTER THE CONSTRUCTION ACTIVITY IN THAT PORTION OF THE SITE HAS TEMPORARILY OR PERMANENTLY CEASED.
 - WHERE THE INITIATION OF STABILIZATION MEASURES BY THE 14TH DAY AFTER CONSTRUCTION ACTIVITY TEMPORARILY OR PERMANENTLY CEASES IS PRECLUDED BY SNOW COVER OR OTHER ADVERSE WEATHER CONDITIONS, STABILIZATION MEASURES SHALL BE INITIATED AS SOON AS PRACTICABLE.
 - WHERE CONSTRUCTION ACTIVITY WILL RESUME ON A PORTION OF THE SITE WITHIN 21 DAYS FROM WHEN ACTIVITIES CEASED, (E.G. THE TOTAL TIME PERIOD THAT CONSTRUCTION ACTIVITY IS TEMPORARILY CEASED IS LESS THAN 21 DAYS) THEN STABILIZATION MEASURES DO NOT HAVE TO BE INITIATED ON THAT PORTION OF SITE BY THE 14TH DAY AFTER CONSTRUCTION ACTIVITY TEMPORARILY CEASED.
 - STRUCTURAL PRACTICES. SEE ATTACHED PLANS FOR A DESCRIPTION OF STRUCTURAL PRACTICES TO DIVERT FLOWS FROM EXPOSED SOILS, STORE FLOWS OR OTHERWISE LIMIT RUNOFF AND THE DISCHARGE OF POLLUTANTS FROM EXPOSED AREAS OF THE SITE TO THE DEGREE ATTAINABLE. SUCH PRACTICES INCLUDE SILT FENCES, BRUSH BARRIERS, DRAINAGE SWALES, SEDIMENT TRAPS, CHECK DAMS, SUBSURFACE DRAINS, STORM DRAIN INLET PROTECTION, ROCK OUTLET PROTECTION, REINFORCED SOIL RETAINING SYSTEMS, AND TEMPORARY SEDIMENT BASINS. STRUCTURAL PRACTICES SHOULD BE PLACED ON UPLAND SOILS TO THE DEGREE ATTAINABLE. THE INSTALLATION OF THESE DEVICES MAY BE SUBJECT TO SECTION 404 OF THE CWA.
 - SEDIMENT BASINS. SILT FENCES WILL BE UTILIZED AT ALL SIDE SLOPE AND DOWN SLOPE BOUNDARIES OF THE CONSTRUCTION AREA SEDIMENT PONDS, SEDIMENT TRAPS, SILT FENCE AND INLET SEDIMENT TRAPS WILL BE USED FOR TEMPORARY SEDIMENT STORAGE DURING CONSTRUCTION. THE PROPOSED STORMWATER POND WILL BE UTILIZED FOR TEMPORARY SEDIMENT STORAGE. ANY COLLECTED SEDIMENT MUST BE PROPERLY DISPOSED OF.
 - ALTERNATIVE BMPs. THE USE OF ALTERNATIVE BMPs WHOSE PERFORMANCE HAS BEEN DOCUMENTED TO BE EQUIVALENT OR SUPERIOR TO CONVENTIONAL BMPs AS CERTIFIED BY A DESIGN PROFESSIONAL MAY BE ALLOWED (UNLESS DISAPPROVED BY EPD OR THE STATE SOIL AND WATER CONSERVATION COMMISSION).
 - HIGH PERFORMANCE BMPs. THE USE OF INFILTRATION TRENCHES, SEEP BERMS, SAND FILTERS, DRY WELLS, POLYACRYLAMIDE, ETC. FOR MINIMIZING POINT-SOURCE DISCHARGES EXCEPT FOR LARGE RAINFALL EVENTS IS ENCOURAGED.
 - STORM WATER MANAGEMENT. SEE SHEETS ESC01.0-1.2, ESC 1.7-1.8 FOR A DESCRIPTION OF MEASURES THAT WILL BE INITIATED DURING THE CONSTRUCTION PROCESS TO CONTROL POLLUTANTS IN STORM WATER DISCHARGES THAT WILL OCCUR AFTER CONSTRUCTION OPERATIONS HAVE BEEN COMPLETED. THE INSTALLATION OF THESE DEVICES MAY BE SUBJECT TO SECTION 404 OF THE CWA. THIS PERMIT ONLY ADDRESSES THE INSTALLATION OF STORM WATER MANAGEMENT MEASURES, AND NOT THE ULTIMATE OPERATION AND MAINTENANCE OF SUCH STRUCTURES AFTER THE CONSTRUCTION ACTIVITIES HAVE BEEN COMPLETED AND THE SITE HAS UNDERGONE FINAL STABILIZATION.

OPERATORS ARE ONLY RESPONSIBLE FOR THE INSTALLATION AND MAINTENANCE OF STORM WATER MANAGEMENT MEASURES PRIOR TO FINAL STABILIZATION OF THE SITE, AND ARE NOT RESPONSIBLE FOR MAINTENANCE AFTER STORM WATER DISCHARGES ASSOCIATED WITH CONSTRUCTION ACTIVITY HAVE BEEN ELIMINATED FROM THE SITE.

 - THE DISTURBED AREA WILL HAVE PERMANENT VEGETATION AND VEGETATION REINFORCEMENT MATTING AS REQUIRED TO CONTROL THE DISCHARGES THAT OCCUR AFTER CONSTRUCTION IS COMPLETE. FLOW ATTENUATION WILL BE PROVIDED BY USE OF OPEN VEGETATED SWALES AND NATURAL DEPRESSIONS TO PROMOTE INFILTRATION OF RUNOFF ON-SITE.
 - VELOCITY DISSIPATION DEVICES SHALL BE PLACED AT DISCHARGE LOCATIONS AND ALONG THE LENGTH OF ANY OUTFALL CHANNEL FOR THE PURPOSE OF PROVIDING A NON-EROSIVE VELOCITY FLOW FROM THE STRUCTURE TO A WATER COURSE. THESE MEASURES WILL INCLUDE STONE OUTLET PROTECTION AT ALL PIPE DISCHARGE LOCATIONS, STONE CHECK DAMS IN EXISTING SWALES TO PROMOTE RETENTION AND INFILTRATION AND A RIP-RAP OUTLET BASIN ON THE PRIMARY CREEK CULVERT.
 - OTHER CONTROLS.
 - WASTE DISPOSAL. SOLID MATERIALS, INCLUDING BUILDING MATERIALS, SHALL NOT BE DISCHARGED TO WATERS OF THE STATE, EXCEPT AS AUTHORIZED BY A SECTION 404 PERMIT.
 - OFF-SITE VEHICLE TRACKING OF DIRT, SOILS, AND SEDIMENTS AND THE GENERATION OF DUST SHALL BE MINIMIZED OR ELIMINATED TO THE MAXIMUM EXTENT PRACTICAL. CONSTRUCTION EXIT PADS SHALL BE USED AT ALL ACCESS POINTS TO THE PROJECT FROM EXISTING ROADWAYS.
 - ALL PERMITTEES SHALL ENSURE AND DEMONSTRATE THAT THEIR PLAN IS IN COMPLIANCE WITH APPLICABLE STATE AND/OR LOCAL WASTE DISPOSAL, SANITARY SEWER OR SEPTIC SYSTEM REGULATIONS.
 - CONTRACTOR IS RESPONSIBLE FOR CLEANING AND CORRECTING ALL PETROLEUM SPILLS AND LEAKS AS APPROPRIATE. ONSITE FUEL TANKS MUST HAVE PROPER SPILL PROTECTION MEASURES AS REQUIRED BY APPLICABLE CODES. EQUIPMENT AND SERVICE TRUCKS MUST BE INSPECTED DAILY AND LEAKS REPAIRED OR EQUIPMENT REMOVED FROM THE PROJECT.
 - SEE PLAN FOR LOCATION OF CONCRETE WASHOUT PIT, AS REQUIRED. WASHOUT OF THE DRUM AT THE CONSTRUCTION SITE IS PROHIBITED.
 - INSPECTIONS.**
 - PERMITEE REQUIREMENTS.
 - EACH DAY WHEN ANY TYPE OF CONSTRUCTION ACTIVITY HAS TAKEN PLACE AT A PRIMARY PERMITEE'S SITE, CERTIFIED PERSONNEL PROVIDED BY THE PRIMARY PERMITEE SHALL INSPECT: (A) ALL AREAS AT THE PRIMARY PERMITEE'S SITE WHERE PETROLEUM PRODUCTS ARE STORED, USED, OR HANDLED FOR SPILLS AND LEAKS FROM VEHICLES AND EQUIPMENT; (B) ALL LOCATIONS AT THE PRIMARY PERMITEE'S SITE WHERE VEHICLES ENTER OR EXIT THE SITE FOR EVIDENCE OF OFF-SITE SEDIMENT TRACKING; AND (C) MEASURE RAINFALL ONCE EACH TWENTY-FOUR HOUR PERIOD AT THE SITE. THESE INSPECTIONS MUST BE CONDUCTED UNTIL A NOTICE OF TERMINATION IS SUBMITTED.
 - CERTIFIED PERSONNEL (PROVIDED BY THE PRIMARY PERMITEE) SHALL INSPECT AT LEAST ONCE EVERY FOURTEEN (14) CALENDAR DAYS AND WITHIN 24 HOURS OF THE END OF A STORM THAT IS 0.5 INCHES OR GREATER THE FOLLOWING: (A) DISTURBED AREAS OF THE PRIMARY PERMITEE'S CONSTRUCTION SITE THAT HAVE NOT UNDERGONE FINAL STABILIZATION; (B) AREAS USED BY THE PRIMARY PERMITEE FOR STORAGE OF MATERIALS THAT ARE EXPOSED TO PREVENT UNDERGONE FINAL STABILIZATION; AND (C) STRUCTURAL CONTROL MEASURES. EROSION AND SEDIMENT CONTROL MEASURES IDENTIFIED IN THE PLAN APPLICABLE TO THE PRIMARY PERMITEE'S SITE SHALL BE OBSERVED TO ENSURE THAT THEY ARE OPERATING CORRECTLY. WHERE DISCHARGE LOCATIONS OR POINTS ARE ACCESSIBLE, THEY SHALL BE INSPECTED TO ASCERTAIN WHETHER EROSION CONTROL MEASURES ARE EFFECTIVE IN PREVENTING SIGNIFICANT IMPACTS TO RECEIVING WATER(S). FOR AREAS OF A SITE THAT HAVE UNDERGONE FINAL STABILIZATION, THE PERMITEE MUST COMPLY WITH PART IV.D.4.(3). THESE INSPECTIONS MUST BE CONDUCTED UNTIL A NOTICE OF TERMINATION IS SUBMITTED.
 - CERTIFIED PERSONNEL (PROVIDED BY THE PRIMARY PERMITEE) SHALL INSPECT AT LEAST ONCE PER MONTH DURING THE TERM OF THIS PERMIT (I.E., UNTIL A NOTICE OF TERMINATION IS RECEIVED BY EPD) THE AREAS OF THE SITE THAT HAVE UNDERGONE FINAL STABILIZATION. THESE AREAS SHALL BE INSPECTED FOR EVIDENCE OF, OR THE POTENTIAL FOR, POLLUTANTS ENTERING THE DRAINAGE SYSTEM AND THE RECEIVING WATER(S). EROSION AND SEDIMENT CONTROL MEASURES IDENTIFIED IN THE PLAN SHALL BE OBSERVED TO ENSURE THAT THEY ARE OPERATING CORRECTLY. WHERE DISCHARGE LOCATIONS OR POINTS ARE ACCESSIBLE, THEY SHALL BE INSPECTED TO ASCERTAIN WHETHER EROSION CONTROL MEASURES ARE EFFECTIVE IN PREVENTING SIGNIFICANT IMPACTS TO RECEIVING WATER(S).
 - BASED ON THE RESULTS OF EACH INSPECTION, THE SITE DESCRIPTION AND THE POLLUTION PREVENTION AND CONTROL MEASURES IDENTIFIED IN THE EROSION, SEDIMENTATION AND POLLUTION CONTROL PLAN SHALL BE REVISED AS APPROPRIATE NOT LATER THAN SEVEN (7) CALENDAR DAYS FOLLOWING EACH INSPECTION. IMPLEMENTATION OF SUCH CHANGES SHALL BE MADE AS SOON AS PRACTICAL BUT IN NO CASE LATER THAN SEVEN (7) CALENDAR DAYS FOLLOWING EACH INSPECTION.
 - A REPORT SUMMARIZING THE SCOPE OF EACH INSPECTION AND THE NAME(S) OF PERSONNEL MAKING EACH INSPECTION, THE DATE(S) OF EACH INSPECTION, MAJOR OBSERVATIONS RELATING TO THE IMPLEMENTATION OF THE EROSION, SEDIMENTATION AND POLLUTION CONTROL PLAN AND ACTIONS TAKEN IN ACCORDANCE WITH PART IV.D.4.(4) OF THE PERMIT SHALL BE MADE AND RETAINED AT THE SITE OR BE READILY AVAILABLE AT A DESIGNATED ALTERNATE LOCATION UNTIL THE ENTIRE SITE OR THAT PORTION OF A CONSTRUCTION PROJECT THAT HAS BEEN PHASED HAS UNDERGONE FINAL STABILIZATION AND A NOTICE OF TERMINATION IS SUBMITTED TO EPD. SUCH REPORTS SHALL IDENTIFY ANY INCIDENTS OF NON-COMPLIANCE. WHERE THE REPORT DOES NOT IDENTIFY ANY INCIDENTS OF NON-COMPLIANCE, THE REPORT SHALL CONTAIN A CERTIFICATION THAT THE FACILITY IS IN COMPLIANCE WITH THE EROSION, SEDIMENTATION AND POLLUTION CONTROL PLAN AND THIS PERMIT. THE REPORT SHALL BE SIGNED IN ACCORDANCE WITH PART V.G. OF THIS PERMIT.
 - MAINTENANCE. CONTRACTOR SHALL PERFORM DAILY INSPECTIONS OF EROSION CONTROL MEASURES WHILE PROJECT IS ACTIVE AND AT LEAST WEEKLY WHILE PROJECT IS INACTIVE UNLESS AN NOT HAS BEEN SUBMITTED. DEFICIENCIES SHALL BE NOTED AND CORRECTED AS SOON AS PRACTICABLE.
 - SAMPLING REQUIREMENTS.** THIS PERMIT REQUIRES THE MONITORING OF NEPHELOMETRIC TURBIDITY IN RECEIVING WATER(S) OR OUTFALLS IN ACCORDANCE WITH THIS PERMIT. THE FOLLOWING PROCEDURES CONSTITUTE EPD'S GUIDELINES FOR SAMPLING TURBIDITY.
 - SAMPLING REQUIREMENTS:
 - OUTFALL SAMPLING WILL BE EMPLOYED AT THE PROPOSED STORMWATER POND LOCATED ON THE SOUTHERN PORTION OF THE SITE.
 - SAMPLING METHODOLOGY MUST COMPLY WITH EPA 180.1. THE SAMPLING CONTRACTOR MUST MAINTAIN SATISFACTORY QUALITY CONTROL/QUALITY ASSURANCE PROCEDURES.
 - OUTFALL SAMPLING WILL BE EMPLOYED ON THIS PROJECT.
 - PERMITEE WILL PROVIDE ANY ADDITIONAL INFORMATION EPD DETERMINES NECESSARY TO BE PART OF THE PLAN. EPD WILL PROVIDE WRITTEN NOTICE TO THE PERMITEE OF THE INFORMATION NECESSARY AND THE TIME LINE FOR SUBMITTAL.

- b. SAMPLE TYPE. ALL SAMPLING SHALL BE COLLECTED BY "GRAB SAMPLES" AND THE ANALYSIS OF THESE SAMPLES MUST BE CONDUCTED IN ACCORDANCE WITH METHODOLOGY AND TEST PROCEDURES ESTABLISHED BY 40 CFR PART 136 (UNLESS OTHER TEST PROCEDURES HAVE BEEN APPROVED); THE GUIDANCE DOCUMENT TITLED "NPDES STORM WATER SAMPLING GUIDANCE DOCUMENT, EPA 833-B-92-001" AND GUIDANCE DOCUMENTS THAT MAY BE PREPARED BY THE EPD.
- SAMPLE CONTAINERS SHOULD BE LABELED PRIOR TO COLLECTING THE SAMPLES.
 - SAMPLES SHOULD BE WELL MIXED BEFORE TRANSFERRING TO A SECONDARY CONTAINER.
 - LARGE MOUTH, WELL-CLEANED AND RINSED GLASS OR PLASTIC JARS SHOULD BE USED FOR COLLECTING SAMPLES. THE JARS SHOULD BE CLEANED THOROUGHLY TO AVOID CONTAMINATION.
 - MANUAL, AUTOMATIC OR RISING STAGE SAMPLING MAY BE UTILIZED. SAMPLES REQUIRED BY THIS PERMIT SHOULD BE ANALYZED IMMEDIATELY, BUT IN NO CASE LATER THAN 48 HOURS AFTER COLLECTION. HOWEVER, SAMPLES FROM AUTOMATIC SAMPLERS MUST BE COLLECTED NO LATER THAN THE NEXT BUSINESS DAY AFTER THEIR ACCUMULATION, UNLESS FLOW THROUGH AUTOMATED ANALYSIS IS UTILIZED. DILUTION OF SAMPLES IS NOT REQUIRED. SAMPLES MAY BE ANALYZED DIRECTLY WITH A PROPERLY CALIBRATED TURBIDIMETER. SAMPLES ARE NOT REQUIRED TO BE COOLED.
 - SAMPLING AND ANALYSIS OF THE RECEIVING WATER(S) OR OUTFALLS BEYOND THE MINIMUM FREQUENCY STATED IN THIS PERMIT MUST BE REPORTED TO EPD AS SPECIFIED IN PART IV.E.
- c. SAMPLING POINTS
- SAMPLES TAKEN FOR THE PURPOSE OF COMPLIANCE WITH THIS PERMIT SHALL BE REPRESENTATIVE OF THE MONITORED ACTIVITY AND REPRESENTATIVE OF THE WATER QUALITY OF THE RECEIVING WATER(S) AND/OR THE STORM WATER OUTFALLS USING THE FOLLOWING MINIMUM GUIDELINES:
 - THE UPSTREAM SAMPLE FOR EACH RECEIVING WATER(S) MUST BE TAKEN IMMEDIATELY UPSTREAM OF THE CONFLUENCE OF THE FIRST STORM WATER DISCHARGE FROM THE PERMITTED ACTIVITY (I.E., THE DISCHARGE FARTHEST UPSTREAM AT THE SITE) BUT DOWNSTREAM OF ANY OTHER STORM WATER DISCHARGES NOT ASSOCIATED WITH THE PERMITTED ACTIVITY. WHERE APPROPRIATE, SEVERAL UPSTREAM SAMPLES FROM ACROSS THE RECEIVING WATER(S) MAY NEED TO BE TAKEN AND THE ARITHMETIC AVERAGE OF THE TURBIDITY OF THESE SAMPLES USED FOR THE UPSTREAM TURBIDITY VALUE.
 - THE DOWNSTREAM SAMPLE FOR EACH RECEIVING WATER(S) MUST BE TAKEN DOWNSTREAM OF THE CONFLUENCE OF THE LAST STORM WATER DISCHARGE FROM THE PERMITTED ACTIVITY (I.E., THE DISCHARGE FARTHEST DOWNSTREAM AT THE SITE) BUT UPSTREAM OF ANY OTHER STORM WATER DISCHARGE NOT ASSOCIATED WITH THE PERMITTED ACTIVITY. WHERE APPROPRIATE, SEVERAL DOWNSTREAM SAMPLES FROM ACROSS THE RECEIVING WATER(S) MAY NEED TO BE TAKEN AND THE ARITHMETIC AVERAGE OF THE TURBIDITY OF THESE SAMPLES USED FOR THE DOWNSTREAM TURBIDITY VALUE.
 - IDEALLY THE SAMPLES SHOULD BE TAKEN FROM THE HORIZONTAL AND VERTICAL CENTER OF THE RECEIVING WATER(S) OR THE STORM WATER OUTFALL CHANNEL(S).
 - CARE SHOULD BE TAKEN TO AVOID STIRRING THE BOTTOM SEDIMENTS IN THE RECEIVING WATER(S) OR IN THE OUTFALL STORM WATER CHANNEL.
 - THE SAMPLING CONTAINER SHOULD BE HELD SO THAT THE OPENING FACES UPSTREAM.
 - THE SAMPLES SHOULD BE KEPT FREE FROM FLOATING DEBRIS.
 - PERMITEES DO NOT HAVE TO SAMPLE SHEET FLOW THAT FLOWS ONTO UNDISTURBED NATURAL AREAS OR AREAS STABILIZED BY THE PROJECT, FOR PURPOSES OF THIS SECTION; STABILIZED SHAL MEAN, FOR UNPAVED AREAS AND AREAS NOT COVERED BY PERMANENT STRUCTURES. 100% OF THE SOIL SURFACE IS UNIFORMLY COVERED IN PERMANENT VEGETATION WITH A DENSITY OF 70% OR GREATER, OR EQUIVALENT PERMANENT STABILIZATION MEASURES (SUCH AS THE USE OF RIP RAP, GABIONS, PERMANENT MULCHES OR GEOTEXTILES) HAVE BEEN USED. PERMANENT VEGETATION SHALL CONSIST OF: PLANTED TREES, SHRUBS, PERENNIAL VINES, A CROP OF PERENNIAL VEGETATION APPROPRIATE FOR THE TIME OF YEAR AND REGION; OR A CROP OF ANNUAL VEGETATION AND A SEEDING OF TARGET CROP PERENNIALS APPROPRIATE FOR THE REGION. FOR INFRASTRUCTURE CONSTRUCTION PROJECTS ON LAND USED FOR AGRICULTURAL OR SILVICULTURAL PURPOSES, FINAL STABILIZATION MAY BE ACCOMPLISHED BY STABILIZING THE DISTURBED LAND FOR ITS AGRICULTURAL OR SILVICULTURAL USE. FINAL STABILIZATION APPLIES TO EACH PHASE OF CONSTRUCTION.
 - ALL SAMPLING PURSUANT TO THIS PERMIT MUST BE DONE IN SUCH A WAY (INCLUDING GENERALLY ACCEPTED SAMPLING METHODS, LOCATIONS, TIMING, AND FREQUENCY) AS TO ACCURATELY REFLECT WHETHER STORM WATER RUNOFF FROM THE FACILITY/SITE IS IN COMPLIANCE WITH THE STANDARD SET FORTH IN PARTS II.C.3 OR II.C.4., WHICHEVER IS APPLICABLE.
 - SAMPLING FREQUENCY
 - THE PRIMARY PERMITEE MUST SAMPLE IN ACCORDANCE WITH THE PLAN AT LEAST ONCE FOR EACH RAINFALL EVENT DESCRIBED BELOW. FOR A QUALIFYING EVENT, SAMPLES MUST BE TAKEN WITHIN FORTY-FIVE (45) MINUTES OF:
 - THE ACCUMULATION OF THE MINIMUM AMOUNT OF RAINFALL FOR THE QUALIFYING EVENT, IF THE STORM WATER DISCHARGE TO A MONITORED RECEIVING WATER OR FROM A MONITORED OUTFALL HAS BEGUN AT OR PRIOR TO THE ACCUMULATION, OR
 - THE BEGINNING OF ANY STORM WATER DISCHARGE TO A MONITORED RECEIVING WATER OR FROM A MONITORED OUTFALL, IF THE DISCHARGE BEGINS AFTER THE ACCUMULATION OF THE MINIMUM AMOUNT OF RAINFALL FOR THE QUALIFYING EVENT.
 - HOWEVER, WHERE MANUAL AND AUTOMATIC SAMPLING ARE IMPOSSIBLE (AS DEFINED IN THIS PERMIT), OR ARE BEYOND THE PERMITEE'S CONTROL, THE PERMITEE SHALL TAKE SAMPLES AS SOON AS POSSIBLE, BUT IN NO CASE MORE THAN TWELVE (12) HOURS AFTER THE BEGINNING OF THE STORM WATER DISCHARGE.
 - SAMPLING BY THE PERMITEE SHALL OCCUR FOR THE FOLLOWING EVENTS:
 - FOR EACH AREA OF THE SITE THAT DISCHARGES TO A RECEIVING STREAM, THE FIRST RAIN EVENT THAT REACHES OR EXCEEDS 0.5 INCH AND ALLOWS FOR MONITORING DURING NORMAL BUSINESS HOURS* (MONDAY THRU FRIDAY, 8:00 AM TO 5:00 PM AND SATURDAY 8:00 AM TO 5:00 PM WHEN CONSTRUCTION ACTIVITY IS BEING CONDUCTED BY THE PRIMARY PERMITEE) THAT OCCURS AFTER ALL CLEARING AND GRUBBING OPERATIONS HAVE BEEN COMPLETED IN THE DRAINAGE AREA OF THE LOCATION SELECTED AS THE REPRESENTATIVE SAMPLING LOCATION;
 - IN ADDITION TO (A) ABOVE, FOR EACH AREA OF THE SITE THAT DISCHARGES TO A RECEIVING STREAM, THE FIRST RAIN EVENT THAT REACHES OR EXCEEDS 0.5 INCH AND ALLOWS FOR MONITORING DURING NORMAL BUSINESS HOURS* THAT OCCURS EITHER 90 DAYS AFTER THE FIRST SAMPLING EVENT OR AFTER ALL MASS GRADING OPERATIONS HAVE BEEN COMPLETED IN THE DRAINAGE AREA OF THE LOCATION SELECTED AS THE REPRESENTATIVE SAMPLING LOCATION, WHICHEVER COMES FIRST;
 - AT THE TIME OF SAMPLING PERFORMED PURSUANT TO (A) AND (B) ABOVE, IF BMPs ARE FOUND TO BE PROPERLY DESIGNED, INSTALLED AND MAINTAINED, NO FURTHER ACTION IS REQUIRED. IF BMPs IN ANY AREA OF THE SITE THAT DISCHARGES TO A RECEIVING STREAM ARE NOT PROPERLY DESIGNED, INSTALLED AND MAINTAINED, CORRECTIVE ACTION SHALL BE DEFINED AND IMPLEMENTED WITHIN 2 BUSINESS DAYS, AND TURBIDITY SAMPLES SHALL BE TAKEN FROM DISCHARGES FROM THAT AREA OF THE SITE FOR EACH SUBSEQUENT RAIN EVENT THAT REACHES OR EXCEEDS 0.5 INCH DURING NORMAL BUSINESS HOURS* UNTIL THE SELECTED TURBIDITY STANDARD IS ATTAINED, OR UNTIL POST-STORM EVENT INSPECTIONS DETERMINE THAT BMPs ARE PROPERLY DESIGNED, INSTALLED AND MAINTAINED.
- *NOTE THAT THE PERMITEE MAY CHOOSE TO MEET THE REQUIREMENTS OF (A) AND (B) ABOVE BY COLLECTING TURBIDITY SAMPLES FROM ANY RAIN EVENT THAT REACHES OR EXCEEDS 0.5 INCH AND ALLOWS FOR MONITORING AT ANY TIME OF THE DAY OR WEEK.
- 7. NON-STORM WATER DISCHARGES.** EXCEPT FOR FLOWS FROM FIRE FIGHTING ACTIVITIES, SOURCES OF NON-STORM WATER LISTED IN PART III.A.2. OF THIS PERMIT THAT ARE COMBINED WITH STORM WATER DISCHARGES ASSOCIATED WITH CONSTRUCTION ACTIVITY MUST BE IDENTIFIED IN THE PLAN. THE PLAN SHALL IDENTIFY AND ENSURE THE IMPLEMENTATION OF APPROPRIATE POLLUTION PREVENTION MEASURES FOR THE NON-STORM WATER COMPONENT(S) OF THE DISCHARGE.
- C. REPORTING**
- THE APPLICABLE PERMITEES ARE REQUIRED TO SUBMIT A SUMMARY OF THE MONITORING RESULTS TO THE EPD AT THE ADDRESS SHOWN IN PART II.C. BY THE FIFTEENTH DAY OF THE MONTH FOLLOWING THE REPORTING PERIOD. REPORTING PERIODS ARE MONTHS DURING WHICH SAMPLES ARE TAKEN IN ACCORDANCE WITH THIS PERMIT. SAMPLING RESULTS SHALL BE IN A CLEARLY LEGIBLE FORMAT. UPON WRITTEN NOTIFICATION, EPD MAY REQUIRE THE APPLICABLE PERMITEE TO SUBMIT THE SAMPLING RESULTS ON A MORE FREQUENT BASIS. SAMPLING AND ANALYSIS OF ANY STORM WATER DISCHARGE(S) OR THE RECEIVING WATER(S) BEYOND THE MINIMUM FREQUENCY STATED IN THIS PERMIT MUST BE REPORTED IN A SIMILAR MANNER TO THE EPD. THE SAMPLING REPORTS MUST BE SIGNED IN ACCORDANCE WITH PART V.G. SAMPLING REPORTS MUST BE SUBMITTED TO EPD UNTIL SUCH TIME AS A NOT IS SUBMITTED IN ACCORDANCE WITH PART VI.
 - ALL WRITTEN CORRESPONDENCE REQUIRED BY THIS PERMIT SHALL BE SUBMITTED BY RETURN RECEIPT REQUESTED CERTIFIED MAIL, (OR SIMILAR SERVICE) TO THE APPROPRIATE DISTRICT OFFICE OF THE EPD ACCORDING TO THE SCHEDULE IN APPENDIX A OF THIS PERMIT. THE PERMITEE SHALL RETAIN A COPY OF THE PROOF OF SUBMITTAL AT THE CONSTRUCTION SITE OR THE PROOF OF SUBMITTAL SHALL BE READILY AVAILABLE AT A DESIGNATED LOCATION FROM COMMENCEMENT OF CONSTRUCTION UNTIL SUCH TIME AS A NOT IS SUBMITTED IN ACCORDANCE WITH PART VI.
 - ALL MONITORING RESULTS SHALL INCLUDE THE FOLLOWING INFORMATION:
 - THE DATE, EXACT PLACE, AND TIME OF SAMPLING OR MEASUREMENTS;
 - THE NAME(S) OF THE INDIVIDUAL(S) WHO PERFORMED THE SAMPLING AND MEASUREMENTS;
 - THE DATE(S) ANALYSES WERE PERFORMED;
 - THE TIME(S) ANALYSES WERE INITIATED;
 - THE NAME(S) OF THE INDIVIDUAL(S) WHO PERFORMED THE ANALYSES;
 - REFERENCES AND WRITTEN PROCEDURES, WHEN AVAILABLE, FOR THE ANALYTICAL TECHNIQUES OR METHODS USED;
 - THE RESULTS OF SUCH ANALYSES, INCLUDING THE BENCH SHEETS, INSTRUMENT READOUTS, COMPUTER DISKS OR TAPES, ETC., USED TO DETERMINE THESE RESULTS; AND
 - RESULTS WHICH EXCEED 1000 NTU SHALL BE REPORTED AS "EXCEEDS 1000 NTU."
- D. RETENTION OF RECORDS**
- THE PRIMARY PERMITEE SHALL RETAIN THE FOLLOWING RECORDS AT THE CONSTRUCTION SITE OR THE RECORDS SHALL BE READILY AVAILABLE AT A DESIGNATED LOCATION FROM COMMENCEMENT OF CONSTRUCTION UNTIL SUCH TIME AS A NOT IS SUBMITTED IN ACCORDANCE WITH PART VI:
 - A COPY OF ALL NOTICES OF INTENT SUBMITTED TO EPD;
 - A COPY OF THE EROSION, SEDIMENTATION AND POLLUTION CONTROL PLAN REQUIRED BY THIS PERMIT;
 - THE DESIGN PROFESSIONAL'S REPORT OF THE RESULTS OF THE INSPECTION CONDUCTED IN ACCORDANCE WITH PART IV.A.5 OF THIS PERMIT;
 - A COPY OF ALL MONITORING INFORMATION, RESULTS, AND REPORTS REQUIRED BY THIS PERMIT;
 - A COPY OF ALL INSPECTION REPORTS GENERATED IN ACCORDANCE WITH PART IV.D.4 OF THIS PERMIT;
 - REFERENCES AND WRITTEN PROCEDURES, WHEN AVAILABLE, FOR THE ANALYTICAL TECHNIQUES OR METHODS USED;
 - THE RESULTS OF SUCH ANALYSES, INCLUDING THE BENCH SHEETS, INSTRUMENT READOUTS, COMPUTER DISKS OR TAPES, ETC. USED TO DETERMINE THESE RESULTS; AND
 - RESULTS WHICH EXCEED 1000 NTU SHALL BE REPORTED AS "EXCEEDS 1000 NTU."
 - COPIES OF ALL NOTICES OF INTENT, NOTICES OF TERMINATION, REPORTS, PLANS, MONITORING REPORTS, MONITORING INFORMATION, INCLUDING ALL CALIBRATION AND MAINTENANCE RECORDS AND ALL ORIGINAL STRIP CHART RECORDINGS FOR CONTINUOUS MONITORING INSTRUMENTATION, EROSION, SEDIMENTATION AND POLLUTION CONTROL PLANS, RECORDS OF ALL DATA USED TO COMPLETE THE NOTICE OF INTENT TO BE COVERED BY THIS PERMIT AND ALL OTHER RECORDS REQUIRED BY THIS PERMIT SHALL BE RETAINED BY THE PERMITEE WHO EITHER PROVIDED OR OBTAINED IT FOR A PERIOD OF AT LEAST THREE YEARS FROM THE DATE THAT THE SITE IS FINALLY STABILIZED. THESE RECORDS MUST BE MAINTAINED AT THE PERMITEE'S PRIMARY PLACE OF BUSINESS ONCE THE CONSTRUCTION ACTIVITY HAS CEASED AT THE PERMITTED SITE. THIS PERIOD MAY BE EXTENDED BY REQUEST OF THE EPD AT ANY TIME UPON WRITTEN NOTIFICATION TO THE PERMITEE.

STANDARD PERMIT CONDITIONS

DUTY TO COMPLY.

- EACH PERMITEE MUST COMPLY WITH ALL APPLICABLE CONDITIONS OF THIS PERMIT. ANY PERMIT NONCOMPLIANCE CONSTITUTES A VIOLATION OF THE GEORGIA WATER QUALITY CONTROL ACT AND IS GROUNDS FOR ENFORCEMENT ACTION; FOR PERMIT TERMINATION; OR FOR DENIAL OF A PERMIT RENEWAL APPLICATION.
- EACH PERMITEE MUST DOCUMENT IN THEIR RECORDS ANY AND ALL KNOWN VIOLATIONS OF THIS PERMIT AT HIS/HER SITE WITHIN SEVEN (7) DAYS OF HIS/HER KNOWLEDGE OF THE VIOLATION. A SUMMARY OF VIOLATIONS MUST BE SUBMITTED TO EPD BY THE PERMITEE AT THE ADDRESSES SHOWN IN PART II.C. WITHIN FOURTEEN (14) DAYS OF HIS/HER DISCOVERY OF THE VIOLATION.

DUTY TO MITIGATE. THE PERMITEE SHALL TAKE ALL REASONABLE STEPS TO MINIMIZE OR PREVENT ANY DISCHARGE IN VIOLATION OF THIS PERMIT WHICH HAS A REASONABLE LIKELIHOOD OF ADVERSELY AFFECTING HUMAN HEALTH OR THE ENVIRONMENT.

DUTY TO PROVIDE INFORMATION. THE PERMITEE SHALL FURNISH TO THE DIRECTOR, A STATE AGENCY APPROVING SOIL EROSION AND SEDIMENTATION CONTROL PLANS, GRADING PLANS OR STORM WATER MANAGEMENT PLANS; OR IN THE CASE OF A STORM WATER DISCHARGE ASSOCIATED WITH CONSTRUCTION ACTIVITY WHICH DISCHARGES THROUGH A MUNICIPAL, SEPARATE STORM SEWER SYSTEM WITH AN NPDES PERMIT, TO THE LOCAL GOVERNMENT OPERATING THE MUNICIPAL SEPARATE STORM SEWER SYSTEM, ANY INFORMATION WHICH IS REQUESTED TO DETERMINE COMPLIANCE WITH THIS PERMIT. IN THE CASE OF INFORMATION SUBMITTED TO THE EPD SUCH INFORMATION SHALL BE CONSIDERED PUBLIC INFORMATION AND AVAILABLE UNDER THE GEORGIA OPEN RECORDS ACT.

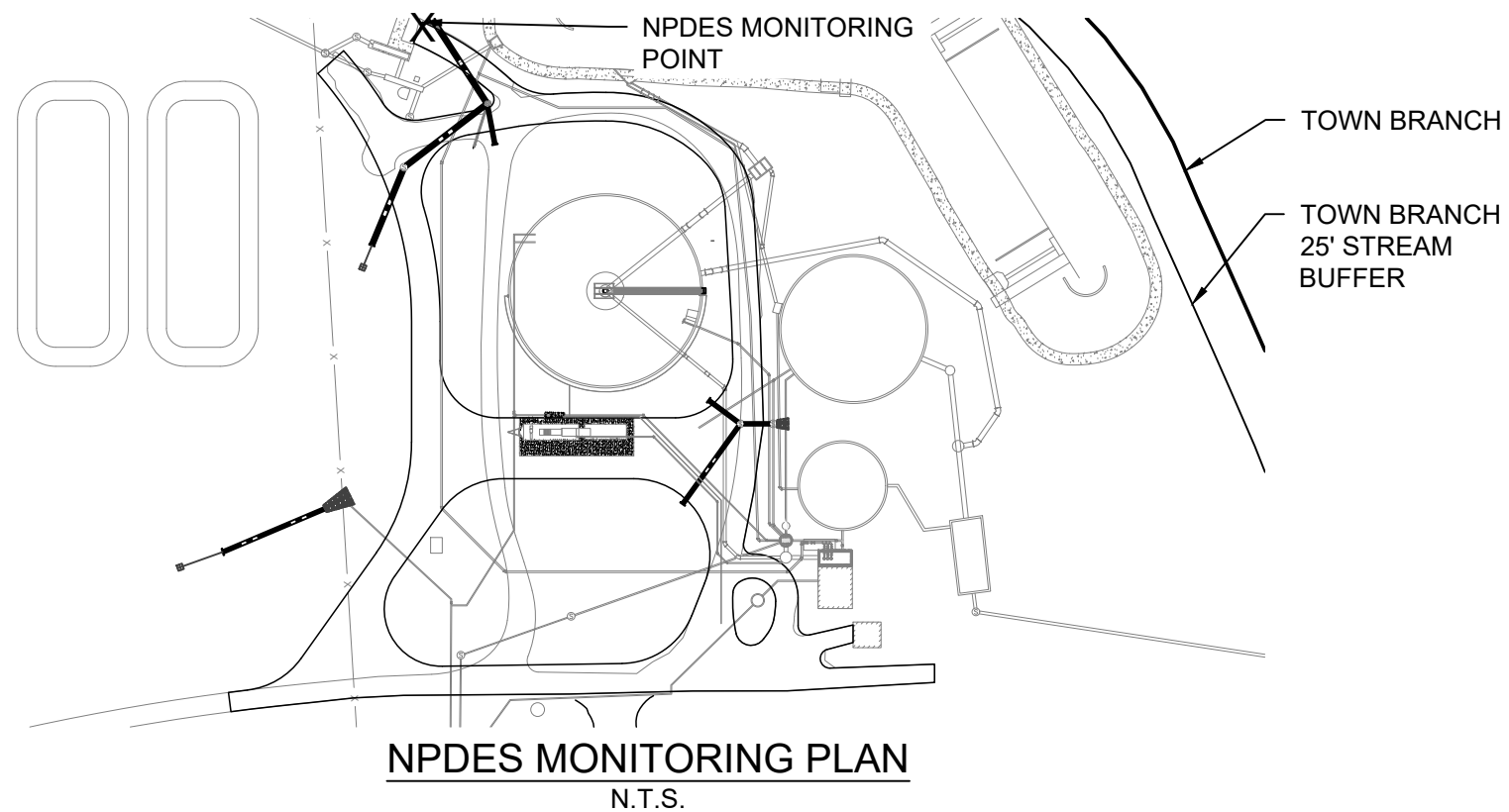
OIL AND HAZARDOUS SUBSTANCES LIABILITY. NOTHING IN THIS PERMIT SHALL BE CONSTRUED TO PRECLUDE THE INSTITUTION OF ANY LEGAL ACTION OR RELIEVE THE PERMITEE FROM ANY RESPONSIBILITIES, LIABILITIES, OR PENALTIES TO WHICH THE PERMITEE IS OR MAY BE SUBJECT UNDER THE GEORGIA HAZARDOUS WASTE MANAGEMENT ACT (O.C.G.A. §§12-8-60, ET SEQ. OR UNDER CHAPTER 14 OF TITLE 12 OF O.C.G.A.; NOR IS THE OPERATOR RELIEVED FROM ANY RESPONSIBILITIES, LIABILITIES, OR PENALTIES TO WHICH THE PERMITEE IS OR MAY BE SUBJECT UNDER SECTION 311 OF THE CLEAN WATER ACT OR SECTION 106 OF THE COMPREHENSIVE ENVIRONMENTAL RESPONSE COMPENSATION AND LIABILITY ACT.

PROPER OPERATION AND MAINTENANCE. THE PERMITEE SHALL AT ALL TIMES PROPERLY OPERATE AND MAINTAIN ALL FACILITIES AND SYSTEMS OF TREATMENT AND CONTROL (AND RELATED APPURTENANCES) WHICH ARE INSTALLED OR USED BY THE PERMITEE TO ACHIEVE COMPLIANCE WITH THE CONDITIONS OF THIS PERMIT AND WITH THE REQUIRED PLANS. PROPER OPERATION AND MAINTENANCE ALSO INCLUDES ADEQUATE LABORATORY CONTROLS AND APPROPRIATE QUALITY ASSURANCE PROCEDURES. PROPER OPERATION AND MAINTENANCE REQUIRES THE OPERATION OF BACKUP OR AUXILIARY FACILITIES OR SIMILAR SYSTEMS, INSTALLED BY A PERMITEE ONLY WHEN NECESSARY TO ACHIEVE COMPLIANCE WITH THE CONDITIONS OF THE PERMIT.

INSPECTION AND ENTRY. THE PERMITEE SHALL ALLOW THE DIRECTOR OR AN AUTHORIZED REPRESENTATIVE OF EPA OR EPD OR, IN THE CASE OF A CONSTRUCTION SITE WHICH DISCHARGES THROUGH A MUNICIPAL SEPARATE STORM SEWER SYSTEM WITH AN NPDES PERMIT, AN AUTHORIZED REPRESENTATIVE OF THE MUNICIPAL OPERATOR OF THE SEPARATE STORM SEWER SYSTEM RECEIVING THE DISCHARGE, UPON THE PRESENTATION OF CREDENTIALS AND OTHER DOCUMENTS AS MAY BE REQUIRED BY LAW, TO:

- ENTER UPON THE PERMITEE'S PREMISES WHERE A REGULATED FACILITY OR ACTIVITY IS LOCATED OR CONDUCTED OR WHERE RECORDS MUST BE KEPT UNDER THE CONDITIONS OF THIS PERMIT;
- HAVE ACCESS TO AND COPY AT REASONABLE TIMES, ANY RECORDS THAT MUST BE KEPT UNDER THE CONDITIONS OF THIS PERMIT; AND
- INSPECT AT REASONABLE TIMES ANY FACILITIES OR EQUIPMENT (INCLUDING MONITORING AND CONTROL EQUIPMENT).

THE CONTRACTOR SHALL BE RESPONSIBLE FOR ALL NPDES MONITORING. THE CONTRACTOR SHALL BE RESPONSIBLE FOR PREPARATION AND SUBMITTAL OF THE NOTICE OF INTENT AND PAYMENT OF LAND DISTURBANCE ACTIVITY FEES PRIOR TO BEGINNING CONSTRUCTION. THE NOTICE OF INTENT MUST BE RECEIVED BY THE GEORGIA ENVIRONMENTAL PROTECTION DIVISION FOURTEEN DAYS PRIOR TO THE START OF PROPOSED ACTIVITIES. THE CONTRACTOR SHALL ALSO BE RESPONSIBLE FOR FILING OF THE NOTICE OF TERMINATION ONCE CONSTRUCTION IS COMPLETE AND A PERMANENT STAND OF GRASS HAS BEEN ESTABLISHED. THE CONTRACTOR SHALL COPY BOTH THE CITY AND THE ENGINEER ON ALL EPD CORRESPONDENCE RELATION TO COMPLIANCE WITH THE PERMIT.



NOTES:

- SAMPLING DESIGNATED ON MAP WITH AN "X"
- RECEIVING WATERS IS A TOWN BRANCH CREEK.
- TOTAL CONTRIBUTING DRAINAGE BASIN: 33.7 AC.
- TOTAL PROJECT AREA: 2.56 AC.

NON-STORMWATER DISCHARGES

NON-STORMWATER DISCHARGES AS DEFINED IN PART III.A.2 OF THE NPDES PERMIT WILL BE IDENTIFIED AFTER CONSTRUCTION HAS COMMENCED AND SHALL BE SUBJECT TO THE SAME REQUIREMENTS AS STORMWATER DISCHARGES AS REQUIRED BY THE GEORGIA EROSION AND SEDIMENTATION CONTROL ACT, THE NPDES PERMIT, THE CLEAN WATER ACT, THE MANUAL FOR EROSION AND SEDIMENT CONTROL IN GEORGIA, DEPARTMENT STANDARDS, DEPARTMENT SPECIFICATIONS, AND DEPARTMENT SPECIAL PROVISIONS.

PETROLEUM SPILLS AND LEAKS

ANY LEAKS OR SPILLS OF PETROLEUM PRODUCTS WILL BE THE RESPONSIBILITY OF THE CONTRACTOR TO CONTAIN, CONTROL, AND REMEDIATE IN ACCORDANCE WITH ALL LOCAL, STATE, AND FEDERAL GUIDELINES, ORDINANCES, AND LAWS. CONTROL OF POLLUTANTS: POLLUTANTS OR POTENTIALLY HAZARDOUS MATERIALS, SUCH AS FUELS, LUBRICANTS, LEAD PAINT, CHEMICALS OR BATTERIES, SHALL BE TRANSPORTED, STORED, AND UTILIZED IN A MANNER TO PREVENT AND LEGAL DISPOSAL OF ALL SUCH MATERIALS.

OFF-SITE VEHICLE TRACKING AND WASHDOWN

CONTRACTOR SHALL NOT BE PERMITTED TO LEAVE SITE WITHOUT PROPER SEDIMENT REMOVAL FROM VEHICLE TRACKS. EQUIPMENT, ESPECIALLY CONCRETE OR ASPHALT TRUCKS, CONCRETE MIXER CHUTES, HOPPERS, AND TOOLS SHALL NOT BE WASHED OR CLEANED OUT IN THE PROJECT AREA EXCEPT IN AREAS WHERE UNUSED PRODUCT CONTAMINANTS CAN BE PREVENTED FROM ENTERING WATERWAYS. WASHOUT OF THE DRUM AT THE CONSTRUCTION SITE IS PROHIBITED.

SANITARY WASTES

A MINIMUM OF ONE PORTABLE SANITARY UNIT MUST BE PROVIDED PER TEN WORKERS ON THE PROJECT SITE. ALL SANITARY WASTE WILL BE COLLECTED FROM THE PORTABLE UNITS A MINIMUM OF ONE TIME PER WEEK BY A LICENSED PORTABLE FACILITIES PROVIDER IN COMPLIANCE WITH LOCAL AND STATE REGULATIONS. ALL SANITARY WASTE UNITS SHOULD BE LOCATED IN AN AREA WHERE THE LIKELIHOOD OF THE UNIT CONTRIBUTING TO STORMWATER DISCHARGE IS NEGLIGIBLE.

GENERAL NOTES:

- THE MONITORING AT THE PROJECT LOCATION IS A REPRESENTATION OF THE CONTAMINATION TO THE STATE RECEIVING WATERS AS A RESULT OF CONSTRUCTION AND TOPOGRAPHY WITH AREAS ARE SIMILAR. THE PROPOSED MONITORING LOCATION IS A REPRESENTATION OF THE CONTAMINATION THAT IS INFILUENT TO THE STATE RECEIVING WATERS.
- MONITORING AT THE LOCATION SHOULD START IN CORRESPONDENCE TO THE BEGINNING OF CONSTRUCTION ACTIVITIES IN THE DRAINAGE BASIN.
- FOR RETENTION OF RECORDS, THE PRIMARY PERMITEE IS RESPONSIBLE FOR COMPLYING WITH ALL REQUIREMENTS AS PER GENERAL NPDES PERMIT GAR100001 PART IV.F. INCLUDING SUBMITTING N.O.I. (NOTICE OF INTENT), MONITORING, INSPECTION, AND N.O.T. (NOTICE OF TERMINATION) DOCUMENTS, ETC. PRIMARY PERMITEE SHALL PROVIDE A LIST OF NAMES AND ADDRESSES OF ALL SECONDARY PERMITEES IF APPLICABLE TO THE OWNER.
- ES&PC PLAN SHALL BE IN COMPLIANCE WITH WASTE DISPOSAL, SANITARY SEWER, AND SEPTIC TANK REGULATIONS DURING AND AFTER CONSTRUCTION ACTIVITIES.
- BEFORE PRIMARY PERMITEE BEGINS CONSTRUCTION, PRIMARY PERMITEE SHALL COMPLY WITH ITEM 35 OF ES&PC PLAN CHECKLIST ACCORDING TO SECTION v.G.2.d OF THE GENERAL PERMIT.

"I certify under penalty of law that this document and all attachments were prepared under my direction or supervision in accordance with a system designed to assure that certified personnel properly gather and evaluate the information submitted. The information submitted is, to the best of my knowledge and belief, true, accurate, and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment for knowing violations."

"I certify under penalty of law that this plan was prepared after a site visit to the locations described herein by myself or my authorized agent, under my direct supervision."

"I certify that the permittee's Erosion, Sedimentation and Pollution Control Plan provides for an appropriate and comprehensive system of best management practices required by the Georgia Water Quality Control Act and the document "Manual for Erosion and Sediment Control in Georgia" (Manual) published by the State Soil and Water Conservation Commission as of January 1 of the year in which the land-disturbing activity was permitted, provides for the sampling of the receiving water(s) or the sampling of the storm water outfalls and that the designed system of best management practices and sampling methods is expected to meet the requirements contained in the General NPDES Permit No. GAR 100001."

Kristen A. Courson, P.E.
Level II Certification #0000002100

12/10/2020
DATE

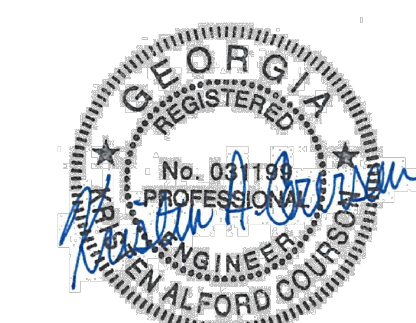
ESG ENGINEERING



USDA SEWER SYSTEM
IMPROVEMENTS - CONTRACT A
WPCP UPGRADES
FOR THE
CITY OF THOMASTON

NO.	REVISIONS	DESCRIPTION	DATE

BID SET



DRAWN BY: WLN
CHECKED BY: ABG
DATE: DEC 2020
SCALE: NTS

CONTENT:
EROSION AND
SEDIMENTATION
CONTROL PLAN -
NPDES NOTES

SHEET NO:

ESC 1.4

STORM WATER SAMPLING ANALYSIS

STORM WATER SAMPLES ARE TO BE ANALYZED IN ACCORDANCE WITH METHODOLOGY AND TEST PROCEDURES ESTABLISHED BY 40CFR PART 136 AND THE GUIDANCE DOCUMENT TITLES NPDES STORM WATER SAMPLING GUIDANCE DOCUMENT EPA 833-B-92-001.

STORM WATER IS TO BE SAMPLED FOR NEPHELOMETRIC TURBIDITY UNITS (NTU) AT ONE OUTFALL LOCATIONS INDICATED ON SHEET ESC 1.4. A DISCHARGE OF STORM WATER RUNOFF FROM DISTURBED AREAS WHERE BEST MANAGEMENT PRACTICES HAVE NOT BEEN PROPERLY DESIGNED, INSTALLED, AND MAINTAINED SHALL CONSTITUTE A SEPARATE VIOLATION FOR EACH DAY ON WHICH SUCH CONDITION RESULTS IN THE TURBIDITY OF THE DISCHARGE **EXCEEDING 400**, THE VALUE THAT WAS SELECTED FROM APPENDIX B IN PERMIT NUMBER GAR 100001. THE NTU IS BASED UPON THE TOTAL DISTURBED AREA OF 2.03 ACRES OF THE PROJECT SITE, THE SURFACE WATER DRAINAGE AREA BETWEEN **0.0 AND 4.99 SQUARE MILES**, AND RECEIVING WATER WHICH SUPPORTS WARM WATER FISHERIES.

SAMPLING POINTS

THERE IS ONE SAMPLING LOCATION LOCATED AT THE PROPOSED STORM DRAIN OUTLET INDICATED ON SHEET ESC 1.4. PER NPDES PERMIT GAS 100001, FOR CONSTRUCTION ACTIVITIES, THE PRIMARY PERMITTEE MUST COMPLETE ALL SAMPLING. CARE SHOULD BE TAKEN TO AVOID STIRRING THE BOTTOM SEDIMENTS IN THE RECEIVING WATER(S) OR IN THE OUTFALL STREAM WATER CHANNEL. THE SAMPLING CONTAINER SHOULD BE HELD SO THAT THE OPENING FACES UPSTREAM. THE SAMPLINGS SHOULD BE KEPT FREE FROM FLOATING DEBRIS. THE PRIMARY PERMITTEE DOES NOT HAVE TO SAMPLE SHEET FLOW INTO UNDISTURBED NATURAL AREAS OR AREAS STABILIZED BY THE PROJECT.

COMPLIANCE WITH FEDERAL, STATE AND LOCAL REGULATIONS

THE CONTRACTOR WILL OBTAIN COPIES OF ANY AND ALL LOCAL AND STATE REGULATIONS THAT ARE APPLICABLE TO STORM WATER MANAGEMENT, EROSION CONTROL, AND POLLUTION MINIMIZATION AT THIS JOB SITE AND WILL COMPLY FULLY WITH SUCH REGULATIONS. THE CONTRACTOR WILL SUBMIT WRITTEN EVIDENCE OF SUCH COMPLIANCE IF REQUESTED BY THE OWNER OR ANY AGENT OF A REGULATORY BODY. THE CONTRACTOR WILL COMPLY WITH ALL CONDITIONS OF ANY AND ALL LOCAL, STATE AND FEDERAL AGENCIES HAVE JURISDICTION AUTHORITY, INCLUDING THE CONDITIONS RELATED TO MAINTAINING THE ESPCP AND EVIDENCE OF COMPLIANCE WITH THE ESPCP AT THE JOB SITE AND ALLOWING REGULATORY PERSONNEL ACCESS TO THE JOB SITE AND TO RECORDS IN ORDER TO DETERMINE COMPLIANCE.

THIS VEGETATIVE PLAN WILL BE CARRIED OUT ON ROAD CUT AND FILL SLOPES, SHOULDERS AND CRITICAL AREAS CREATED BY CONSTRUCTION. SEEDING WILL BE DONE AS SOON AS CONSTRUCTION IN AN AREA IS COMPLETED. PLANTINGS WILL BE MADE TO CONTROL EROSION, TO REDUCE DAMAGES FROM SEDIMENT AND RUNOFF TO DOWNSTREAM AREAS AND TO IMPROVE THE SAFETY AND BEAUTY OF THE DEVELOPMENT AREA.

SOIL CONDITIONS

DUE TO GRADING AND CONSTRUCTION, THE AREAS TO BE TREATED ARE MAINLY SUBSOIL SUBSTRATA. FERTILITY IS LOW AND THE PHYSICAL CHARACTERISTICS OF THE EXPOSED MATERIAL AREA UNFAVORABLE TO ALL BUT THE MOST HARDY PLANTS.

CONVENTIONAL SEEDING EQUIPMENT

GRADE, SHAPE AND SMOOTH WHERE NEEDED TO PROVIDE FOR SAFE EQUIPMENT OPERATION AT SEEDING TIME AND FOR MAINTENANCE PURPOSES. THE LIME AND FERTILIZER IN DRY FORM WILL BE SPREAD UNIFORMLY OVER THE AREA IMMEDIATELY BEFORE SEEDBED PREPARATION. A SEEDBED WILL BE PREPARED BY SCARIFYING TO A DEPTH OF 1 TO 4 INCHES AS DETERMINED ON SITE. THE SEEDBED MUST BE WELL FLATTENED, SMOOTHED AND FIRMED. SEEDING WILL BE DONE WITH CULTIPACKER-SEEDER, DRILL, ROTARY SEEDER OR OTHER MECHANICAL OR HAND SEEDER. SEED WILL BE DISTRIBUTED UNIFORMLY OVER A FRESHLY PREPARED SEEDBED AND COVERED LIGHTLY. WITHIN 24 HOURS AFTER SEEDING, STRAW OR HAY MULCH WILL BE SPREAD UNIFORMLY OVER THE AREA, LEAVING ABOUT 25 PERCENT OR THE GROUND SURFACE EXPOSED. MULCH WILL BE SPREAD WITH BLOWER-TYPE MULCH EQUIPMENT OR BY HAND AND ANCHORED IMMEDIATELY AT IT IS SPREAD. A DISK HARROW WITH THE DISK SET OR A SPECIAL PACKER DISK MAY BE USED TO PRESS THE MULCH INTO THE SOIL.

HYDRAULIC SEEDING EQUIPMENT

WHEN HYDRAULIC SEEDING AND FERTILIZING EQUIPMENT IS USED, NO GRADING AND SHAPING OR SEEDBED PREPARATION WILL BE REQUIRED. THE FERTILIZER, SEED AND WOOD CELLULOSE FIBER WILL BE MIXED WITH WATER AND APPLIED IN A SLURRY. ALL SLURRY INGREDIENTS MUST BE COMBINED TO FORM A HOMOGENEOUS MIXTURE, AND SPREAD UNIFORMLY OVER THE AREA WITHIN ONE HOUR AFTER MIXTURE IS MADE. STRAW OR HAY MULCH AND ASPHALT EMULSION WILL BE APPLIED WITH BLOWER-TYPE MULCH SPREADING EQUIPMENT WITHIN 24 HOURS AFTER SEEDING. THE MULCH WILL BE SPREAD UNIFORMLY OVER THE AREA, LEAVING ABOUT 25 PERCENT OF THE GROUND SURFACE EXPOSED. THE PER ACRE APPLICATION RATES ARE AS FOLLOWS:

SEEDING WITH MULCH: (HYDRAULIC SEEDING EQUIPMENT ON SLOPES LESS THAN 3:1 AND STEEPER)

AGRICULTURAL LIMESTONE #75	4000 LBS./ACRE	
FERTILIZER, 5-10-15	15000 LBS./ACRE	
MULCH (STRAW OR HAY)	5000 LBS./ACRE	
WOOD CELLULOSE FIBER MULCH	1000 LBS./ACRE	
SEEDING SPECIES	APPLICATION RATE/ACRE	PLANTING DATES
SERICEA LESPEDEZA, SCARIFIED	60 LBS	
WEeping GRASS	4 LBS.	3/1-6/15
COMMON BERMUDA, HULLED	6 LBS	
FESCUE	40 LBS	9/1-10/31
SERICEA LESPEDEZA, UNSCARIFIED	60 LBS	
FESCUE	40 LBS	
SERICEA LESPEDEZA, UNSCARIFIED	75 LBS	11/1-2/28
RYE	50 LBS	
HAY MULCH FOR TEMPORARY COVER	5000 LBS	6/15-8/31

TOP DRESSING: APPLY WHEN PLANTS ARE 2 TO 4 INCHES TALL FERTILIZER (AMMONIUM NITRATE 33.5%) 3000 LBS./ACRE C. SECOND-YEAR FERTILIZER: (0-20-20 OR EQUIVALENT) 500 LBS./ACRE

MAINTENANCE & INSPECTION OF EROSION & SEDIMENT CONTROLS

THE FOLLOWING BEST MANAGEMENT PRACTICE MAINTENANCE CRITERIA ARE TAKEN FORM THE "MANUAL FOR EROSION AND SEDIMENT CONTROL IN GEORGIA", 2016 EDITION.

CONSTRUCTION EXITS SHALL BE MAINTAINED IN A CONDITION THAT WILL PREVENT TRACKING OR FLOW OF MUD ONTO PUBLIC RIGHTS-OF-WAY. THIS MAY REQUIRE PERIODIC TOP DRESSING WITH 1.5-3.5 INCH STONE, AS CONDITIONS DEMAND, AND REPAIR AND/OR CLEANOUT OF ANY STRUCTURES TO STOP SEDIMENT. ALL MATERIALS SPILLED, DROPPED, WASHED, OR TRACKED FROM VEHICLES OR SITE ONTO ROADWAYS OR INTO STORM DRAINS MUST BE REMOVED IMMEDIATELY.

DETENTION POND OUTLET STRUCTURES SHALL BE KEPT CLEAR OF TRASH AND DEBRIS. THIS WILL REQUIRE CONTINUOUS MONITORING AND MAINTENANCE, WHICH INCLUDES SEDIMENT REMOVAL WHEN ONE-THIRD OF THE SEDIMENT STORAGE CAPACITY HAS BEEN LOST.

SEDIMENT SHALL BE REMOVED FROM SILT FENCES ONCE IT HAS BEEN ACCUMULATED TO ONE-HALF THE ORIGINAL HEIGHT OF THE BARRIER. FILTER FABRIC SHALL BE REPLACES WHENEVER IT HAS DETERIORATED TO SUCH AN EXTENT THAT THE EFFECTIVENESS OF THE FABRIC IS REDUCED (APPROXIMATELY SIX MONTHS).

SEDIMENT SHALL BE REMOVED FROM TRAPS WHEN THE SEDIMENT HAS ACCUMULATED TO ONE-HALF THE HEIGHT OF THE TRAP. SEDIMENT SHALL BE REMOVED FROM CURB INLET PROTECTION IMMEDIATELY. FOR EXCAVATED INLET SEDIMENT TRAPS, SEDIMENT SHALL BE REMOVED WHEN ON-HALF OF THE SEDIMENT STORAGE CAPACITY HAS BEEN LOST TO SEDIMENT ACCUMULATION.

SEDIMENT SHALL NOT BE WASHED INTO THE INLET. IT SHALL BE REMOVED FROM THE SEDIMENT TRAP AND DISPOSED OF AND STABILIZED SO THAT IT WILL NOT INTER THE INLET AGAIN.

WHEN THE CONTRIBUTING DRAINAGE AREA HAS BEEN PERMANENTLY STABILIZED, ALL MATERIALS AND ANY SEDIMENT SHALL BE REMOVED AND EITHER SALVAGED OR DISPOSED OF PROPERLY. THE DISTURBED AREA SHALL BE BROUGHT TO PROPER GRADE, THEN SMOOTHED AND COMPACTED. APPROPRIATELY STABILIZE ALL DISTURBED AREAS AROUND THE INLET.

REPAIR ALL DAMAGES CAUSED TO TEMPORARY SEDIMENT BASINS BY SOIL EROSION OR CONSTRUCTION EQUIPMENT AT OR BEFORE THE END OF EACH WORKING DAY. SEDIMENT SHALL BE REMOVED FROM THE BASIN WHEN IT REACHES THE SPECIFIED DISTANCE BELOW THE TOP OF THE RISER. SEDIMENT SHALL NOT ENTER ADJACENT STREAMS OR DRAINAGE WAYS DURING SEDIMENT REMOVAL OR DISPOSAL. THE SEDIMENT SHALL NOT BE DEPOSITED DOWNSTREAM FROM THE EMBANKMENT ADJACENT TO A STREAM OR FLOODPLAIN.

INSPECT RIP RAP OUTLET STRUCTURES AFTER HEAVY RAINS TO SEE IF ANY EROSION AROUND OR BELOW THE RIP RAP HAS TAKEN PLACE OR IF STONES HAVE BEEN DISLODGED. IMMEDIATELY MAKE ALL NEEDED REPAIRS TO PREVENT FURTHER DAMAGE.

ROUGHENED AREAS SHALL BE SEEDED AND MULCHED AS SOON AS POSSIBLE TO OBTAIN OPTIMUM SEED GERMINATION AND SEEDING GROWTH. MULCH OR TEMPORARY GRASSING SHALL BE APPLIED TO ALL EXPOSED AREAS WITHIN 14 DAYS OF DISTURBANCE. MULCH CAN BE USED AS A SINGULAR EROSION CONTROL DEVICE FOR UP TO SIX MONTHS BUT IT SHALL BE APPLIED AT THE APPROPRIATE DEPTH, DEPENDING ON THE MATERIAL USED, ANCHORED, AND HAVE A CONTINUOUS 90% COVER OR GREATER OF THE SOIL SURFACE. MAINTENANCE SHALL BE REQUIRED TO MAINTAIN APPROPRIATE DEPTH AND 90% COVER. TEMPORARY VEGETATION MAY BE EMPLOYED INSTEAD OF MULCH IF THE AREA WILL REMAIN UNDISTURBED FOR LESS THAN SIX MONTHS. IF AN AREA WILL REMAIN UNDISTURBED FOR GREATER THAN SIX MONTHS, PERMANENT VEGETATIVE TECHNIQUES SHALL BE EMPLOYED.

PERMANENT VEGETATION SHALL BE APPLIED IMMEDIATELY TO ROUGH GRADED AREAS THAT WILL BE UNDISTURBED FOR LONGER THAN SIX MONTHS. FINAL GRADE SHALL BE APPLIED IMMEDIATELY TO ALL AREAS AT FINAL STABILIZATION MEANS THAT ALL SOIL DISTURBING ACTIVITIES AT THE SITE HAVE BEEN COMPLETED AND THAT FOR UNPAVED AREAS AND AREAS NOT COVERED BY PERMANENT STRUCTURES. AT LEAST 70% OF THE SOIL SURFACE IS UNIFORMLY COVERED IN PERMANENT VEGETATION OR EQUIVALENT PERMANENT STABILIZATION MEASURES HAVE BEEN EMPLOYED. PERMANENT VEGETATION SHALL CONSIST OF: PLANTED TREES, SHRUBS, PERENNIAL VINES, A CROP OF PERENNIAL VEGETATION APPROPRIATE FOR THE REGIONS, SUCH THAT WITHIN THE GROWING SEASON 70% COVERAGE BY PERENNIAL VEGETATION SHALL BE ACHIEVED. FINAL STABILIZATION APPLIES TO EACH PHASE OF CONSTRUCTION. UNTIL THIS STANDARD IS SATISFIED AND PERMANENT CONTROL MEASURES AND FACILITIES ARE OPERATIONAL, INTERIM STABILIZATION MEASURES AND TEMPORARY EROSION AND SEDIMENTATION CONTROL MEASURES SHALL NOT BE REMOVED

ESPCP INSPECTIONS

- EACH DAY WHEN ANY TYPE OF CONSTRUCTION ACTIVITY HAS TAKEN PLACE AT A PRIMARY PERMITTEE'S SITE, CERTIFIED PERSONNEL PROVIDED BY THE PRIMARY PERMITTEE SHALL INSPECT: (A) ALL AREAS AT THE PRIMARY PERMITTEE'S SITE WHERE PETROLEUM PRODUCTS ARE STORED, USED, OR HANDLED FOR SPILL AND LEAKS FROM VEHICLES AND EQUIPMENT; (B) ALL LOCATIONS AT THE PRIMARY PERMITTEE'S SITE WHERE VEHICLES ENTER OR EXIT THE SITE FOR EVIDENCE OF OFF-SITE SEDIMENT TRACKING. THESE INSPECTIONS MUST BE CONDUCTED UNTIL A NOTICE OF TERMINATION IS SUBMITTED.
- MEASURE RAINFALL ONCE EVERY 24 HOURS EXCEPT ANY NON-WORKING SATURDAY, NON-WORKING SUNDAY AND NON-WORKING FEDERAL HOLIDAY UNTIL A NOTICE OF TERMINATION IS SUBMITTED. MEASUREMENT OF RAINFALL MAY BE SUSPENDED IF ALL AREAS OF THE SITE HAVE UNDERGONE FINAL STABILIZATION OR ESTABLISHED A CROP OF ANNUAL VEGETATION AND A SEEDING OF TARGET PERENNIALS APPROPRIATE FOR THE REGION.
- CERTIFIED PERSONNEL (PROVIDED BY THE PRIMARY PERMITTEE) SHALL INSPECT AT LEAST ONCE EVERY FOURTEEN (14) CALENDAR DAYS AND WITHIN 24 HOURS OF THE END OF A STORM THAT IS 0.5 INCHES OR GREATER(UNLESS SUCH STORM ENDS AFTER 5:00 PM ON ANY FRIDAY OR ON ANY NON-WORKING SATURDAY, NON-WORKING SUNDAY, OR ANY NON-WORKING FEDERAL HOLIDAY IN WHICH CASE THE INSPECTION SHALL BE COMPLETED BY THE END OF THE NEXT BUSINESS DAY AND/OR WORKING DAY, WHICHEVER OCCURS FIRST). (A) DISTURBED AREAS OF THE PRIMARY PERMITTEE'S CONSTRUCTION SITE; (B) AREA USED BY THE PRIMARY PERMITTEE FOR THE STORAGE OF MATERIALS THAT ARE EXPOSED TO PRECIPITATION; AND (C) STRUCTURAL CONTROL MEASURES. EROSION AND SEDIMENT CONTROL MEASURES IDENTIFIED IN THE PLAN APPLICABLE TO THE PRIMARY PERMITTEE'S SITE SHALL BE OBSERVED TO ENSURE THAT THEY ARE OPERATING CORRECTLY. WHERE DISCHARGE LOCATIONS OR POINTS ARE ACCESSIBLE, THEY SHALL BE INSPECTED TO ASCERTAIN WHETHER EROSION CONTROL MEASURES ARE EFFECTIVE IN PREVENTING SIGNIFICANT IMPACTS TO RECEIVING WATER(S). FOR AREAS OF A SITE THAT HAVE UNDERGONE FINAL STABILIZATION OR ESTABLISHED A CROP OF ANNUAL VEGETATION AND A SEEDING OF TARGET PERENNIALS APPROPRIATE FOR THE REGION, THE PERMITTEE MUST COMPLY WITH PART IV.D.4.(3). THESE INSPECTIONS MUST BE CONDUCTED UNTIL A NOTICE OF TERMINATION IS SUBMITTED.

- CERTIFIED PERSONNEL (PROVIDED BY THE PRIMARY PERMITTEE) SHALL INSPECT AT LEAST ONCE PER MONTH DURING THE TERM OF THIS PERMIT I.E., UNTIL A NOTICE OF TERMINATION IS SUBMITTED TO EPD) THE AREAS OF THE SITE THAT HAVE UNDERGONE FINAL STABILIZATION OR ESTABLISHED A CROP OF ANNUAL AND A SEEDING OF TARGET PERENNIALS APPROPRIATE FOR THE REGION. THESE AREAS SHALL BE INSPECTED FOR EVIDENCE OF, OR THE POTENTIAL FOR, POLLUTANTS ENTERING THE DRAINAGE SYSTEM AND THE RECEIVING WATER(S). EROSION AND SEDIMENT CONTROL MEASURES IDENTIFIED IN THE PLAN SHALL BE OBSERVED TO ENSURE THAT THEY ARE OPERATING CORRECTLY. WHERE DISCHARGE LOCATIONS OR POINTS ARE ACCESSIBLE, THEY SHALL BE INSPECTED TO ASCERTAIN WHETHER EROSION CONTROL MEASURES ARE EFFECTIVE IN PREVENTING SIGNIFICANT IMPACTS TO RECEIVING WATER(S).

- BASED ON THE RESULTS OF EACH INSPECTION, THE SITE DESCRIPTION AND THE POLLUTION PREVENTION AND CONTROL MEASURES IDENTIFIED IN THE EROSION, SEDIMENTATION AND POLLUTION CONTROL PLAN, THE PLAN SHALL BE REVISED AS APPROPRIATE NOT LATER THAN SEVEN (7) CALENDAR DAYS FOLLOWING EACH INSPECTION. IMPLEMENTATION OF SUCH CHANGES SHALL BE MADE AS SOON AS PRACTICAL BUT IN NO CASE LATER THAN SEVEN (7) CALENDAR DAYS FOLLOWING THE INSPECTION.

- A REPORT OF EACH INSPECTION THAT INCLUDES THE NAME(S) OF CERTIFIED PERSONNEL MAKING EACH INSPECTION, THE DATE(S) OF EACH INSPECTION, CONSTRUCTION PHASE (I.E., INITIAL, INTERMEDIATE OR FINAL), MAJOR OBSERVATIONS RELATING TO THE IMPLEMENTATION OF THE EROSION, SEDIMENTATION AND POLLUTION CONTROL PLAN, AND ACTIONS TAKEN IN ACCORDANCE WITH PART IV.D.4.A.(5). OF THE PERMIT SHALL BE MADE AND RETAINED AT THE SITE OR BE READILY AVAILABLE AT A DESIGNATED ALTERNATE LOCATION UNTIL THE ENTIRE SITE OR THAT PORTION OF A CONSTRUCTION PROJECT THAT HAS BEEN PHASED HAS UNDERGONE FINAL STABILIZATION AND A NOTICE OF TERMINATION IS SUBMITTED TO EPD. SUCH REPORTS SHALL BE READILY AVAILABLE BY THE END OF THE SECOND BUSINESS DAY AND/OR WORKING DAY AND SHALL BE IDENTIFY ALL INCIDENTS OF BEST MANAGEMENT PRACTICES THAT HAVE NOT BEEN PROPERLY INSTALLED AND/OR MAINTAINED AS DESCRIBED IN THE PLAN, WHERE THE REPORT DOES NOT IDENTIFY ANY INCIDENTS, THE INSPECTION REPORT SHALL CONTAIN A STATEMENT THAT THE BEST MANAGEMENT PRACTICES ARE IN COMPLIANCE WITH THE EROSION, SEDIMENTATION AND POLLUTION CONTROL PLAN. THE REPORT SHALL BE SIGNRD IN ACCORDANCE WITH PART V.G.2. OF THIS PERMIT.

CORRESPONDENCE

ALL WRITTEN CORRESPONDENCE REQUIRED BY THIS PERMIT SHALL BE SUBMITTED BY RETURN RECEIPT CERTIFIED MAIL (OR SIMILAR SERVICE) TO THE APPROPRIATE DISTRICT OFFICE OF THE EPD ACCORDING TO THE SCHEDULE IN APPENDIX A OF THIS PERMIT. THE PERMITTEE SHALL RETAIN A COPY OF THE PROOF OF SUBMITTAL AT THE CONSTRUCTION SITE OR THE PROOF OF SUBMITTAL SHALL BE READILY AVAILABLE AT A DESIGNATED LOCATION FROM COMMENCEMENT OF CONSTRUCTION UNTIL SUCH TIME AS A NOT IS SUBMITTED IN ACCORDANCE WITH PART VI. IF AN ELECTRONIC SUBMITTAL PROVIDED BY EPD THEN THE WRITTEN CORRESPONDENCE MAY BE SUBMITTED ELECTRONICALLY; IF REQUIRED, A PAPER COPY MUST ALSO BE SUBMITTED BY RETURN RECEIPT CERTIFIED MAIL OR SIMILAR SERVICE.

NOTE: A MONTHLY SUMMARY OF THE MONITORING RESULTS SHALL BE SENT TO THE OWNER/DEVELOPER OF THIS PROJECT AND ESG ENGINEERING, INC., 6400 PEAKE RD., MACON, GA 31210. THE REPORT SHALL BE POSTMARKED OR HAND-DELIVERED NO LATER THAN THE 5TH OF THE MONTH FOLLOWING THE REPORTING MONTH.

RETENTION OF RECORDS

- THE PRIMARY PERMITTEE SHALL RETAIN THE FOLLOWING RECORDS AT THE CONSTRUCTION SITE OR THE RECORDS SHALL BE READILY AVAILABLE AT A DESIGNATED ALTERNATE LOCATION FROM COMMENCEMENT OF CONSTRUCTION UNTIL SUCH TIME AS A NOT IS SUBMITTED IN ACCORDANCE WITH PART VI:

- A COPY OF ALL NOTICES OF INTENT SUBMITTED TO EPD;
- A COPY OF THE EROSION, SEDIMENTATION AND POLLUTION CONTROL PLAN REQUIRED BY THIS PERMIT;
- THE DESIGN PROFESSIONAL'S REPORT OF THE RESULTS OF THE INSPECTION CONDUCTED IN ACCORDANCE WITH PART IV.A.5. OF THIS PERMIT;
- A COPY OF ALL MONITORING INFORMATION, RESULTS, AND REPORTS REQUIRED BY THIS PERMIT;
- A COPY OF ALL INSPECTION REPORTS GENERATED IN ACCORDANCE WITH PART IV.D.4.A. OF THIS PERMIT;
- A COPY OF ALL VIOLATION SUMMARIES AND VIOLATION SUMMARY REPORTS GENERATED IN ACCORDANCE WITH PART II.D.2. OF THIS PERMIT; AND
- DAILY RAINFALL INFORMATION COLLECTED IN ACCORDANCE WITH PART IV.D.4.A.(2) OF THIS PERMIT.

- COPIES OF ALL NOTICES OF INTENT, NOTICES OF TERMINATION, REPORTS, PLANS, SAMPLING REPORTS (INCLUDING ALL CALIBRATION AND MAINTENANCE RECORDS AND ALL ORIGINAL STRIP CHART RECORDINGS FOR CONTINUOUS MONITORING INSTRUMENTATION), OR OTHER REPORTS REQUESTED BY THE EPD, EROSION, SEDIMENTATION AND POLLUTION CONTROL PLANS, RECORDS OF ALL DATA USED TO COMPLETE THE NOTICE OF INTENT TO BE COVERED BY THIS PERMIT AND ALL OTHER RECORDS REQUIRED BY THIS PERMIT SHALL BE RETAINED BY THE PERMITTEE WHO EITHER PRODUCED OR USED IT FOR A PERIOD OF AT LEAST THREE YEARS FROM THE DATE THAT THE NOT IS SUBMITTED IN ACCORDANCE WITH PART VI OF THIS PERMIT. THESE RECORDS MUST BE MAINTAINED AT THE PERMITTEE'S PRIMARY PLACE OF BUSINESS OR AT A DESIGNATED ALTERNATIVE LOCATION ONCE THE CONSTRUCTION ACTIVITY HAS CEASED AT THE PERMITTED SITE. THIS PERIOD MAY BE EXTENDED BY REQUEST OF THE EPD AT ANY TIME UPON WRITTEN NOTIFICATION TO THE PERMITTEE.

REPORTING REQUIREMENTS

- THE APPLICABLE PERMITTEES ARE REQUIRED TO SUBMIT THE SAMPLING RESULTS TO THE EPD AT THE ADDRESS SHOWN IN PART II.C. BY THE FIFTEENTH DAY OF THE MONTH FOLLOWING THE REPORTING PERIOD. REPORTING PERIODS ARE MONTHS DURING WHICH SAMPLES ARE TAKEN IN ACCORDANCE WITH THIS PERMIT. SAMPLING RESULTS SHALL BE IN A CLEARLY LEGIBLE FORMAT. UPON WRITTEN NOTIFICATION, EPD MAY REQUIRE THE APPLICABLE PERMITTEE TO SUBMIT THE SAMPLING RESULTS ON A MORE FREQUENT BASIS. SAMPLING AND ANALYSIS OF ANY STORM WATER DISCHARGE(S) OR THE RECEIVING WATER(S) BEYOND THE MINIMUM FREQUENCY STATED IN THIS PERMIT MUST BE REPORTED IN A SIMILAR MANNER TO THE EPD. THE SAMPLING REPORTS MUST BE SIGNED IN ACCORDANCE WITH PART V.G.2. SAMPLING REPORTS MUST BE SUBMITTED TO EPD UNTIL SUCH TIME AS A NOT IS SUBMITTED IN ACCORDANCE WITH PART VI.

- ALL SAMPLING REPORTS SHALL INCLUDE THE FOLLOWING INFORMATION:

- THE RAINFALL AMOUNT, DATE, EXACT PLACE AND TIME OF SAMPLING OR MEASUREMENTS;
- THE NAME(S) OF THE CERTIFIED PERSONNEL WHO PERFORMED THE SAMPLING AND MEASUREMENTS;
- THE DATE(S) ANALYSES WERE PERFORMED;
- THE TIME(S) ANALYSES WERE INITIATED;
- THE NAME(S) OF THE INDIVIDUAL(S) WHO PERFORMED THE ANALYSES;
- REFERENCES AND WRITTEN PROCEDURES, WHEN AVAILABLE, FOR THE ANALYTICAL TECHNIQUES OR METHODS USED;
- THE RESULTS OF SUCH ANALYSES, INCLUDING THE BENCH SHEETS, INSTRUMENT READOUTS, COMPUTER DISKS OR TAPES, ETC., USED TO DETERMINE THESE RESULTS;
- RESULTS WHICH EXCEED 1000 NTU SHALL BE REPORTED AS "EXCEEDS 1000 NTU"; AND
- CERTIFICATION STATEMENT THAT SAMPLING WAS CONDUCTED AS PER THE PLAN.

- ALL WRITTEN CORRESPONDENCE REQUIRED BY THIS PERMIT SHALL BE SUBMITTED BY RETURN RECEIPT CERTIFIED MAIL (OR SIMILAR SERVICE) TO THE APPROPRIATE DISTRICT OFFICE OF THE EPD ACCORDING TO THE SCHEDULE IN APPENDIX A OF THIS PERMIT. THE PERMITTEE SHALL RETAIN A COPY OF THE PROOF OF SUBMITTAL AT THE CONSTRUCTION SITE OR THE PROOF OF SUBMITTAL SHALL BE READILY AVAILABLE AT A DESIGNATED LOCATION FROM COMMENCEMENT OF CONSTRUCTION UNTIL SUCH TIME AS A NOT IS SUBMITTED IN ACCORDANCE WITH PART VI. IF AN ELECTRONIC SUBMITTAL PROVIDED BY EPD THEN THE WRITTEN CORRESPONDENCE MAY BE SUBMITTED ELECTRONICALLY; IF REQUIRED, A PAPER COPY MUST ALSO BE SUBMITTED BY RETURN RECEIPT CERTIFIED MAIL OR SIMILAR SERVICE.

NOTE: A MONTHLY SUMMARY OF THE MONITORING RESULTS SHALL BE SENT TO THE OWNER/DEVELOPER OF THIS PROJECT AND ESG ENGINEERING, INC., 6400 PEAKE RD., MACON, GA 31210. THE REPORT SHALL BE POSTMARKED OR HAND-DELIVERED NO LATER THAN THE 5TH OF THE MONTH FOLLOWING THE REPORTING MONTH.

WASTE DISPOSAL

WHERE ATTAINABLE, LOCATE WASTE COLLECTION AREAS, DUMPSTERS, TRASH CANS AND PORTABLE TOILETS AT LEAST 50 FEET AWAY FROM STREETS, GUTTERS, WATERCOURSES AND STORM DRAINS. SECONDARY CONTAINMENT SHALL BE PROVIDED AROUND LIQUID WASTE COLLECTION AREAS TO MINIMIZE THE LIKELIHOOD OF CONTAMINATED DISCHARGES. THE CONTRACTOR SHALL COMPLY WITH APPLICABLE STATE AND LOCAL WASTE STORAGE AND DISPOSAL REGULATIONS AND OBTAIN ALL NECESSARY PERMITS. SOLID MATERIALS, INCLUDING BUILDING MATERIALS, SHALL NOT BE DISCHARGED TO WATERS OF THE STATE, UNLESS AUTHORIZED BY A SECTION 404 PERMIT.

HAZARDOUS WASTE

ALL HAZARDOUS WASTE MATERIALS WILL BE DISPOSED OF IN THE MANNER SPECIFIED BY LOCAL, STATE AND/OR FEDERAL REGULATIONS AND BY THE MANUFACTURER OF SUCH PRODUCTS. THE JOB SITE SUPERINTENDENT, WHO WILL ALSO BE RESPONSIBLE FOR SEEING THAT THESE PRACTICES ARE FOLLOWED, WILL INSTRUCT SITE PERSONNEL IN THESE PRACTICES. MATERIAL SAFETY DATA SHEETS (MSDS'S) FOR EACH SUBSTANCE WITH HAZARDOUS PROPERTIES THAT IS USED ON THE JOB SITE WILL BE OBTAINED AND USED FOR THE PROPER MANAGEMENT OF POTENTIAL WASTES THAT MAY RESULT FROM THESE PRODUCTS. AN MSDS WILL BE POSTED IN THE IMMEDIATE AREA WHERE SUCH A PRODUCT IS STORED AND/OR USED AND ANOTHER COPY OF EACH MSDS WILL BE MAINTAINED IN THE ESPCP FILE AT THE JOB SITE CONSTRUCTION TRAILER OFFICE. EACH EMPLOYEE WHO MUST HANDLE A SUBSTANCE WITH HAZARDOUS PROPERTIES WILL BE INSTRUCTED ON THE USE OF MSDS SHEETS AND THE SPECIAL INFORMATION IN THE APPLICABLE MSDS FOR THE PRODUCT HE/SHE IS USING PARTICULARLY REGARDING SPILL CONTROL TECHNIQUES. THE CONTRACTOR WILL IMPLEMENT THE SPILL PREVENTION CONTROL AND COUNTERMEASURES (SPCC) PLAN FLOW WITHIN THIS ESPCP AND WILL TRAIN ALL PERSONNEL IN THE PROPER CLEANUP AND HANDLING OF SPILLED MATERIALS. NO SPILLED HAZARDOUS MATERIALS OR HAZARDOUS WASTES WILL BE ALLOWED TO COME IN CONTACT WITH STORM WATER DISCHARGES. IF SUCH OCCURS, THE STORM WATER DISCHARGE WILL BE CONTAINED ON SITE UNTIL APPROPRIATE MEASURES IN COMPLIANCE WITH STATE AND FEDERAL REGULATIONS ARE TAKEN TO DISPOSE OF SUCH CONTAMINATED STORM WATER. IT SHALL BE THE RESPONSIBILITY OF THE JOB SITE SUPERINTENDENT TO PROPERLY TRAIN ALL PERSONNEL IN THE USE OF THE SPCC PLAN.

SANITARY WASTES

A MINIMUM OF ONE PORTABLE SANITARY UNIT WILL BE PROVIDED FOR EVERY TEN (10) WORKERS ON THE SITE. ALL SANITARY WASTE MUST BE COLLECTED FROM THE PORTABLE UNITS A MINIMUM OF ONE TIME PER WEEK BY A LICENSED PORTABLE FACILITY PROVIDER IN COMPLETE COMPLIANCE WITH LOCAL AND STATE REGULATIONS. ALL SANITARY WASTE UNITS WILL BE LOCATED IN AN AREA WHERE THE LIKELIHOOD OF THE UNIT CONTRIBUTING TO STORM WATER DISCHARGE IS NEGLIGIBLE. ADDITIONAL CONTAINMENT BMP'S MUST BE IMPLEMENTED, SUCH AS GRAVEL BAGS OR SPECIALLY DESIGNED PLASTIC SKID CONTAINERS AROUND THE BASE, TO PREVENT WASTE FROM CONTRIBUTING TO STORM WATER DISCHARGES. THE LOCATION OF ANY PORTABLE SANITARY UNIT MUST BE IDENTIFIED ON THE EROSION CONTROL PLAN GRADING PHASE, BY THE CONTRACTOR ONCE THE LOCATIONS HAVE BEEN DETERMINED.

CONCRETE WASHDOWN

THE WASHING OF READY-MIX CONCRETE DRUMS AND DUMP TRUCK BODIES USED IN THE DELIVERY OF PORTLAND CEMENT CONCRETE IS PROHIBITED ON THIS SITE.

ONLY THE DISCHARGE CHUTE UTILIZED IN THE DELIVERY OF PORTLAND CEMENT CONCRETE MAY BE RINSED FREE OF FRESH CONCRETE REMAINS. THE CONTRACTOR SHALL EXCAVATE A PIT OUTSIDE OF STATE WATER BUFFERS, AT LEAST 25 FEET FROM ANY STORM DRAIN AND OUTSIDE OF THE TRAVELLED WAY, INCLUDING SHOULDERS, FOR A WASH-DOWN PIT. THE PIT SHALL BE LARGE ENOUGH TO STORE ALL WASH-DOWN WATER WITHOUT OVERTOPPING. IMMEDIATELY AFTER THE WASH-DOWN OPERATIONS ARE COMPLETED AND AFTER THE MATCH-DOWN WATER HAS SOAKED INTO THE GROUND, THE PIT SHALL BE FILLED IN, AND THE GROUND ABOVE SHALL BE GRADED TO MATCH THE ELEVATION OF SURROUNDING AREAS. ALTERNATE WASH-DOWN PLANS MUST BE APPROVED BY THE PROJECT ENGINEER.

WASH-DOWN PROCEDURE SHALL PREVENT ALL WASH-DOWN WATER WATER FROM ENTERING STREAMS AND RIVERS. NEVER DISPOSE OF WASH-DOWN WATER DOWN A STORM DRAIN. ESTABLISH A WASH-DOWN PIT THAT INCLUDES THE FOLLOWING:

- A LOCATION AWAY FROM ANY STORM DRAIN, STREAM, OR RIVER,
- ACCESS TO THE VEHICLE BEING USED FOR WASH-DOWN,
- SUFFICIENT VOLUME FOR WASH-DOWN WATER, AND
- PERMISSION TO USE THE AREA FOR WASH DOWN.

ON SITES WHERE PERMISSION OR ACCESS TO EXCAVATE A WASH-DOWN PIT IS UNAVAILABLE, THE CONTRACTOR MAY HAVE TO WASH-DOWN INTO A SEALABLE 55-GALLON DRUM OR OTHER SUITABLE CONTAINER AND THEN TRANSPORT THE CONTAINER TO A PROPER DISPOSAL SITE. FOR ADDITIONAL INFORMATION, REFER TO THE GEORGIA SMALL BUSINESS ENVIRONMENTAL ASSISTANCE PROGRAM'S "A GUIDE FOR MIX CHUTE-HOPPER WASH-DOWN".

SPILL REMEDIATION

PROPER ON-SITE MANAGEMENT OF HAZARDOUS MATERIALS IS THE SOLE RESPONSIBILITY OF THE CONTRACTOR. THE CONTRACTOR SHALL, AT A MINIMUM, PROVIDE AN ACTION PLAN AND KEEP THE NECESSARY MATERIALS ON-SITE FOR CAPTURE, CLEAN-UP, AND DISPOSAL OF ANY PETROLEUM PRODUCT ASSOCIATED WITH OPERATION WITH ANY EQUIPMENT UTILIZED ON SITE.

- LOCAL, STATE, AND MANUFACTURER'S SUGGESTED METHODS FOR SPILL REMEDIATION SHALL BE POSTED ON SITE AND EXPLAINED TO PERSONNEL
- MATERIALS AND EQUIPMENT FOR SPILL CLEANUP SHALL BE KEPT IN THE MATERIAL STORAGE AREA (I.E. BROOMS, MOPS, RAGS, GOGGLES, GLOVES, CAT LITTER, ETC.)
- ALL SPILLS SHALL BE ADDRESSED IMMEDIATELY
- ANY SPILL THAT IMPACTS SURFACE WATER REQUIRES THE NRC (NATIONAL RESPONSE CENTER) TO BE CONTACTED WITHIN 24 HRS 800-426-2675.
- SPILLS GREATER THAN 25 GALLONS WITH NO SURFACE WATER IMPACTS REQUIRE THE GEORGIA EPD TO BE CONTACTED WITHIN 24 HRS.
- SPILLS LESS THAN 25 GALLONS WITH NO SURFACE WATER IMPACTS REQUIRE LOCAL AUTHORITIES TO BE CONTACTED AS REQUIRED.
- THE CONTRACTOR SHALL NOTIFY THE ENGINEER IF MORE THAN 1320 GALLONS OF OIL/FUEL WILL BE STORED ONSITE OR IF ANY PIECE OF EQUIPMENT HAS A OIL/FUEL CAPACITY GREATER THAN 660 GALLONS SO THAT A SPILL PREVENTION CONTAINMENT AND COUNTERMEASURES PLAN CAN BE PREPARED BY THE ENGINEER.

PRODUCT SPECIFIC PRACTICES

PETROLEUM BASED PRODUCTS - CONTAINERS FOR PRODUCTS SUCH AS FUELS, LUBRICANTS AND TARS WILL BE INSPECTED DAILY FOR LEAKS AND SPILLS. THIS INCLUDES ON-SITE VEHICLE AND MACHINERY DAILY INSPECTIONS AND REGULAR PREVENTATIVE MAINTENANCE OF SUCH EQUIPMENT. EQUIPMENT MAINTENANCE AREAS WILL BE LOCATED AWAY FROM STATE WATER, NATURAL DRAINS AND STORM WATER DRAINAGE INLETS. IN ADDITION, TEMPORARY FUELING TANKS SHALL HAVE A SECONDARY CONTAINMENT LINER TO PREVENT/MINIMIZE SITE CONTAMINATION. DISCHARGE OF OILS, FILLS AND LUBRICANTS IS PROHIBITED. PRIOR DISPOSAL METHODS WILL INCLUDE COLLECTION IN A SUITABLE CONTAINER AND DISPOSAL AS REQUIRED BY LOCAL AND STATE REGULATIONS.

PAINTS/FINISHES/SOLVENTS - ALL PRODUCTS WILL BE STORED IN TIGHTLY SEALED ORIGINAL CONTAINERS WHEN NOT IN USE. EXCESS PRODUCT WILL NOT BE DISCHARGED TO THE STORM WATER COLLECTION SYSTEM. EXCESS PRODUCT, MATERIALS USED WITH THESE PRODUCTS AND PRODUCT CONTAINERS WILL BE DISPOSED OF ACCORDING TO MANUFACTURERS SPECIFICATIONS AND RECOMMENDATIONS.

FERTILIZER/HERBICIDES - THESE PRODUCTS WILL BE APPLIED AT RATES THAT DO NOT EXCEED THE MANUFACTURER'S SPECIFICATIONS OR ABOVE THE GUIDELINES SET FORTH IN THE CROP ESTABLISHMENT OR IN THE GSWCC MANUAL FOR EROSION AND SEDIMENT CONTROL IN GEORGIA. ANY STORAGE OF THESE MATERIALS WILL BE UNDER ROOF IN SEALED CONTAINERS.

BUILDING MATERIALS - NO BUILDING OR CONSTRUCTION MATERIALS WILL BE BURIED OR DISPOSED OF ONSITE. ALL SUCH MATERIAL WILL BE DISPOSED OF IN PROPER WASTE DISPOSAL PROCEDURES.

CONTROLS

ALL PERIMETER SILT FENCES AND CONSTRUCTION EXITS SHALL BE IN PLACE PRIOR TO ANY LAND DISTURBING ACTIVITIES. EXISTING VEGETATION SHALL BE LEFT IN PLACE UNTIL SUCH TIME THAT LAND DISTURBING ACTIVITIES ARE TO TAKE PLACE UPON THAT PORTION OF THE SITE. WHEN CONSTRUCTION ACTIVITIES HAVE CEASED IN AN AREA, THAT AREA SHALL BE STABILIZED WITHIN 14 DAYS. IF THE AREA IS NOT YET TO FINAL GRADE, IT SHALL BE MULCHED. IF THE AREA IS TO FINAL GRADE AND WILL EVENTUALLY CONTAIN SITE IMPROVEMENTS SUCH AS THE STRUCTURES OR SIDEWALKS, IT SHALL BE TEMPORARY SEEDED. AREAS BROUGHT TO FINAL GRADE THAT WILL REMAIN PERVIOUS ARE TO BE PERMANENTLY SEEDED. ALLOWABLE EXCEPTIONS FROM THE NPDES GENERAL PERMIT, GAR 100001, ARE NOTED BELOW. "WHERE THE INITIATION OF STABILIZATION MEASURES BY THE 14TH DAY AFTER CONSTRUCTION, ACTIVITY TEMPORARY OR PERMANENTLY CEASE IS PRECLUDED BY SNOW COVER OR OTHER ADVERSE WEATHER CONDITIONS, STABILIZATION MEASURES SHALL BE INITIATED AS SOON AS PRACTICABLE. " WHERE CONSTRUCTION ACTIVITY WILL RESUME ON A PORTION OF THE SITE WITHIN 21 DAYS FROM WHEN ACTIVITIES CEASED, (E.G. THE TOTAL TIME PERIOD THAT CONSTRUCTION ACTIVITY IS TEMPORARILY CEASED IS LESS THAN 21 DAYS) THEN STABILIZATION MEASURES DO NOT HAVE TO BE INITIATED ON THAT PORTION OF THE SITE BY THE 14TH DAY AFTER CONSTRUCTION ACTIVITY TEMPORARILY CEASED." PLEASE REFER TO DETAIL SHEETS FOR THE LAND DISTURBANCE CONSTRUCTION SCHEDULE AND TEMPORARY AND PERMANENT GRASSING SCHEDULES.

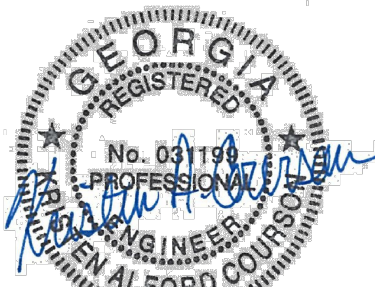
NON-STORM WATER DISCHARGES

ALL NON-STORM WATER DISCHARGES WILL BE ROUTED THROUGH ON SITE BMP'S AND THE STORM WATER MANAGEMENT SYSTEM WHERE POSSIBLE. THESE DISCHARGES INCLUDE FLUSHING OF WATER AND FIRE LINES, IRRIGATION WATER, GROUND WATER, DEWATERING OR PITS OR DEPRESSIONS WITHIN THE CONSTRUCTION SITE AND RINSE ALL WATER OF NON-TOXIC MATERIALS.NO WASTE WILL BE DISPOSED OF INTO STORM WATER INLETS OR WATERS OF THE STATE.



REVISIONS	NO.	DESCRIPTION	DATE				

BID SET



DRAWN BY: WLN
CHECKED BY: ABG
DATE: DEC 2020
SCALE: NTS

CONTENT:

EROSION AND
SEDIMENTATION
CONTROL PLAN -
NOTES

SHEET NO:

ESC 1.5

KRISTEN A. COURSON
LEVEL II CERT. #: 000000-2100

EROSION, SEDIMENTATION & POLLUTION CONTROL PLAN CHECKLIST
STAND ALONE CONSTRUCTION PROJECTS

SWCD: TOWALIGA REGION 4

Project Name: THOMASTON USDA SEWER SYSTEM IMPROVEMENTS - CONTRACT A (NPDES UPGRADES) Address: GOSHEN ROAD, THOMASTON, GA 30286
City/Country: THOMASTON CITY, UPSON COUNTY Date on Plans: DECEMBER 2020
Name & email of person filling out checklist: ARIEL DORNISCH - ADORNISCH@ESGENGINEERING.COM

Plan Included
Page # Y/N TO BE SHOWN ON ES&PC PLAN

- ESC 1.6 Y 1 The applicable Erosion, Sedimentation and Pollution Control Plan Checklist established by the Commission as of January 1 of the year in which the land-disturbing activity was permitted.
(The completed Checklist must be submitted with the ES&PC Plan or the Plan will not be reviewed)
- ESC 1.6.1.7 Y 2 Level II certification number issued by the Commission, signature and seal of the certified design professional.
(Signature, seal and Level II number must be on each sheet pertaining to ES&PC plan or the Plan will not be reviewed)
- N/A 3 Limits of disturbance shall be no greater than 50 acres at any one time without prior written authorization from the EPD District Office. If EPD approves the request to disturb 50 acres or more at any one time, the Plan must include at least 4 of the BMPs listed in Appendix 1 of this checklist. *
(A copy of the written approval by EPD must be attached to the plan for the Plan to be reviewed.)
- ESC 1.3 Y 4 The name and phone number of the 24-hour local contact responsible for erosion, sedimentation and pollution controls.
- ESC 1.3 Y 5 Provide the name, address, email address, and phone number of primary permittee.
- ESC 1.3 Y 6 Note total and disturbed acreage of the project or phase under construction.
- ESC 1.3 Y 7 Provide the GPS location of the construction exit for the site. Give the Latitude and Longitude in decimal degrees.
- ESC 1.6.1.7 Y 8 Initial date of the Plan and the dates of any revisions made to the Plan including the entity who requested the revisions.
- ESC 1.3 Y 9 Description of the nature of construction activity.
- ESC 1.3 Y 10 Provide vicinity map showing site's relation to surrounding areas. Include designation of specific phase, if necessary.
- ESC 1.4 Y 11 Identify the project receiving waters and describe all sensitive adjacent areas including streams, lakes, residential areas, wetlands, marshlands, etc. which may be affected.
- ESC 1.4 Y 12 Design professional's certification statement and signature that the site was visited prior to development of the ES&PC Plan as stated on Part IV page 19 of the permit.
- ESC 1.4 Y 13 Design professional's certification statement and signature that the permittee's ES&PC Plan provides for an appropriate and comprehensive system of BMPs and sampling to meet permit requirements as stated on Part IV page 19 of the permit. *
- ESC 1.3 Y 14 Clearly note the statement that "The design professional who prepared the ES&PC Plan is to inspect the installation of the initial sediment storage requirements and perimeter control BMPs within 7 days after installation." in accordance with Part IV.A.5 page 25 of the permit. *
- ESC 1.3 Y 15 Clearly note the statement that "Non-exempt activities shall not be conducted within the 25 or 50-foot undisturbed stream buffers as measured from the point of wrested vegetation or within 25-feet of the coastal marshland buffer as measured from the Jurisdictional Determination Line without first acquiring the necessary variances and permits."
- ESC 1.3 Y 16 Provide a description of any buffer encroachments and indicate whether a buffer variance is required.
- ESC 1.3 Y 17 Clearly note the statement that "Amendments/revisions to the ES&PC Plan which have a significant effect on BMPs with a hydraulic component must be certified by the design professional." *
- ESC 1.3 Y 18 Clearly note the statement that "Waste materials shall not be discharged to waters of the State, except as authorized by a Section 404 permit." *
- ESC 1.3 Y 19 Clearly note statement that "The escape of sediment from the site shall be prevented by the installation of erosion and sediment control measures and practices prior to land disturbing activities."
- ESC 1.3 Y 20 Clearly note statement that "Erosion control measures will be maintained at all times. If full implementation of the approved Plan does not provide for effective erosion control, additional erosion and sediment control measures shall be implemented to control or treat the sediment source."
- ESC 1.3 Y 21 Clearly note the statement "Any disturbed area left exposed for a period greater than 14 days shall be stabilized with mulch or temporary seeding."
- ESC 1.6 Y 22 Any construction activity which discharges storm water into an Impaired Stream Segment, or within 1 linear mile upstream of and within the same watershed as, any portion of an Biota Impaired Stream Segment must comply with Part III. C. of the permit. Include the completed Appendix 1 listing all the BMPs that will be used for those areas of the site which discharge to the Impaired Stream Segment. *
- ESC 1.6 Y 23 If a TMDL Implementation Plan for sediment has been finalized for the Impaired Stream Segment (identified in Item 22 above) at least six months prior to submittal of NOI, the ES&PC Plan must address any site-specific conditions or requirements included in the TMDL Implementation Plan. *
- ESC 1.5 Y 24 BMPs for concrete washdown of tools, concrete mixer chutes, hoppers and the rear of the vehicles. Washout of the drum at the construction site is prohibited. *
- ESC 1.5 Y 25 Provide BMPs for the remediation of all petroleum spills and leaks.
- ESC 1.3 Y 26 Description of the measures that will be installed during the construction process to control pollutants in storm water that will occur after construction operations have been completed. *
- ESC 1.3 Y 27 Description of practices to provide cover for building materials and building products on site. *
- ESC 1.3 Y 28 Description of the practices that will be used to reduce the pollutants in storm water discharges. *
- ESC 1.3 Y 29 Description and chart or timeline of the intended sequence of major activities which disturb soils for the major portions of the site (i.e., initial perimeter and sediment storage BMPs, clearing and grubbing activities, excavation activities, utility activities, temporary and final stabilization).
- ESC 1.4 Y 30 Provide complete requirements of inspections and record keeping by the primary permittee. *
- ESC 1.4 Y 31 Provide complete requirements of sampling frequency and reporting of sampling results. *
- ESC 1.4 Y 32 Provide complete details for retention of records as per Part IV.F. of the permit. *
- ESC 1.4 Y 33 Description of analytical methods to be used to collect and analyze the samples from each location. *
- ESC 1.3 Y 34 Appendix B rationale for NTU values at all outfall sampling points where applicable. *
- ESC 1.4 Y 35 Delineate all sampling locations, perennial and intermittent streams and other water bodies into which storm water is discharged. *
- ESC 1.3 Y 36 A description of appropriate controls and measures that will be implemented at the construction site including:
(1) initial sediment storage requirements and perimeter control BMPs, (2) intermediate grading and drainage BMPs, and (3) final BMPs. For construction sites where there will be no mass grading and the initial perimeter control BMPs, intermediate grading and drainage BMPs, and final BMPs are the same, the Plan may combine all of the BMPs into a single phase. *

- ESC 1.6.1.7 Y 37 Graphic scale and North arrow.
- ESC 1.6.1.7 Y 38 Existing and proposed contour lines with contour lines drawn at an interval in accordance with the following:
- | Map Scale | Ground Slope | Contour Intervals, ft. |
|--------------------------------|---|---------------------------------|
| 1 inch = 100ft or larger scale | Flat 0 - 2%
Rolling 2 - 8%
Steep 8% + | 0.5 or 1
1 or 2
2.5 or 10 |
- N/A 39 Use of alternative BMPs whose performance has been documented to be equivalent to or superior to conventional BMPs as certified by a Design Professional (unless disapproved by EPD or the Georgia Soil and Water Conservation Commission). Please refer to the Alternative BMP Guidance Document found at www.gaswcc.org.
- N/A 40 Use of alternative BMP for application to the Equivalent BMP List. Please refer to Appendix A-2 of the Manual for Erosion & Sediment Control in Georgia 2016 Edition. *
- ESC 1.6.1.7 Y 41 Delineation of the applicable 25-foot or 50-foot undisturbed buffers adjacent to state waters and any additional buffers required by the Local Issuing Authority. Clearly note and delineate all areas of impact.
- ESC 1.3 Y 42 Delineation of on-site wetlands and all state waters located on and within 200 feet of the project site.
- ESC 1.3 Y 43 Delineation and acreage of contributing drainage basins on the project site.
- ESC 1.3 Y 44 Provide hydrology study and maps of drainage basins for both the pre- and post-developed conditions. *
- ESC 1.3 Y 45 An estimate of the runoff coefficient or peak discharge flow of the site prior to and after construction activities are completed.
- ESC 1.3.1.7 Y 46 Storm-drain pipe and weir velocities with appropriate outlet protection to accommodate discharges without erosion. Identify/Delineate all storm water discharge points.
- ESC 1.3 Y 47 Soil series for the project site and their delineation.
- ESC 1.3 Y 48 The limits of disturbance for each phase of construction.
- ESC 1.6.1.7 Y 49 Provide a minimum of 67 cubic yards of sediment storage per acre drained using a temporary sediment basin, retrofitted detention pond, and/or excavated inlet sediment traps for each common drainage location. Sediment storage volume must be in place prior to and during all land disturbance activities until final stabilization of the site has been achieved. A written justification explaining the decision to use equivalent controls when a sediment basin is not attainable must be included in the Plan for each common drainage location in which a sediment basin is not provided. A written justification as to why 67 cubic yards of storage is not attainable must also be given. Worksheets from the Manual included for structural BMPs and all calculations used by the storage design professional to obtain the required sediment when using equivalent controls. When discharging from sediment basins and impoundments, permittees are required to utilize outlet structures that withdraw water from the surface, unless infeasible. If outlet structures that withdraw water from the surface are not feasible, a written justification explaining this decision must be included in the Plan.
- ESC 1.6.1.7 Y 50 Location of Best Management Practices that are consistent with and no less stringent than the Manual for Erosion and Sediment Control in Georgia. Use uniform coding symbols from the Manual, Chapter 6, with legend.
- ESC 1.7 Y 51 Provide detailed drawings for all structural practices. Specifications must, at a minimum, meet the guidelines set forth in the Manual for Erosion and Sediment Control in Georgia.
- ESC 1.7 Y 52 Provide vegetative plan, noting all temporary and permanent vegetative practices. Include species, planting dates and seeding, fertilizer, lime and mulching rates. Vegetative plan shall be site specific for appropriate time of the year that seeding will take place and for the appropriate geographic region of Georgia.
- * If using this checklist for a project that is less than 1 acre and not part of a common development but within 200 ft of a perennial stream, the * checklist items would be N/A.

Effective January 1, 2020

NOTES FOR APPENDIX 1:

- TOWN BRANCH (HEADWATERS TO BELL CREEK) IN THOMASTON HAS BEEN IDENTIFIED AS AN IMPAIRED STREAM SEGMENT NOT SUPPORTING DESIGNATED USES IN THE GEORGIA 2018 305(B) / 303(D) LIST DOCUMENTS (FINAL) AND DRAFT 2020 INTEGRATED 305(B)/303(D) LIST- STREAMS AND HAS BEEN LISTED FOR THE CRITERION VIOLATED, BIO F. A TMDL IMPLEMENTATION PLAN FOR SEDIMENT (BIOTA IMPACTED) FOR TOWN BRANCH IN UPSON COUNTY WAS FINALIZED IN JANUARY 2003. COMPLIANCE WITH THE GEORGIA EROSION AND SEDIMENTATION ACT (GESA) WILL ENSURE THAT POLLUTANT LOADINGS FROM LAND-DISTURBING ACTIVITIES WILL BE AT OR BELOW THE APPLICABLE TMDL TARGETS FOR SEDIMENT.
- CONTRACTOR SHALL POST A SIGN IN ACCORDANCE WITH APPENDIX 1 ITEM "D", SEE THIS SHEET
- THE DISTURBANCE OF THIS PROJECT WILL COVER ~2.23 ACRES OF PERVIOUS AREA. THE TOTAL IMPERVIOUS SITE DISTURBANCE IS 0.33 ACRES THEREFORE IMPERVIOUS AREA IS LESS THAN 50% OF THE TOTAL DISTURBED AREA. SEE APPENDIX 1 ITEM "H".
- THE PRIMARY PERMITTEE SHALL RETAIN THE DESIGN PROFESSIONAL WHO PREPARED THE PLAN TO CONDUCT INSPECTIONS DURING THE INTERMEDIATE GRADING AND DRAINAGE BMP PHASE AND DURING THE FINAL BMP PHASE.

APPENDIX 1

THE ES&PC PLAN MUST INCLUDE AT LEAST FOUR (4) OF THE FOLLOWING BMPS FOR THOSE AREAS OF THE SITE WHICH DISCHARGE TO A IMPAIRED STREAM SEGMENT AND FOR SITES WHICH EPD HAS APPROVED IN WRITING A REQUEST TO DISTURB 50 ACRES OR MORE AT ANY ONE TIME.

The four items chosen must be appropriate for the site conditions.

- Plan Included
Page # Y/N
- ESC 1.3.1.7 Y a. During construction activities, double the width of the 25 foot undisturbed vegetated buffer along all State waters requiring a buffer and the 50 foot undisturbed vegetated buffer along all State waters classified as "trout streams" requiring a buffer. During construction activities, EPD will not grant variances to any such buffers that are increased in width.
- N b. Increase all temporary sediment basins and retrofitted storm water management basins to provide sediment storage of at least 3600 cubic feet (134 cubic yards) per acre drained.
- N c. Use baffles in all temporary sediment basins and retrofitted storm water management basins to at least double the conventional flow path length to the outlet structure.
- ESC 1.6 Y d. A large sign (minimum 4 feet x 8 feet) must be posted on site by the actual start date of construction. The sign must be visible from a public roadway. The sign must identify the following: (1) construction site, (2) the permittee(s), (3) the contact person(s) and telephone number(s), and (4) the permittee-hosted website where the Plan can be viewed must be provided on the submitted NOI. The sign must remain on site and the Plan must be available on the provided website until a NOI has been submitted.
- N e. Use flocculants or coagulants and/or mulch to stabilize areas left disturbed for more than seven (7) calendar days in accordance with Section III, D.1. of the NPDES Permit.
- N f. Conduct turbidity sampling after every rain event of 0.5 inch or greater within any 24 hour period, recognizing the exceptions specified in Section IV.D.6.d. of the NPDES Permits.
- N g. Comply with the applicable end-of-pipe turbidity effluent limit, without the "BMP defense" as provided for in O.C.G.A. 12-7-6 (a)(1).
- ESC 1.3.1.7 Y h. Reduce the total planned site disturbance to less than 50% impervious surfaces (excluding any State-mandated buffer areas from such calculations). All calculations must be included on the Plan.
- N i. Limit the amount of disturbed area at any one time to no greater than 25 acres or 50% of the total planned site, whichever is less. All calculations must be included on the Plan.
- N j. Use "Dirf II" techniques available on the EPD website to model and manage construction storm water runoff (including sheet flow). All calculations must be included on the Plan. (https://epd.georgia.gov/erosion-and-sedimentation)
- N k. Add appropriate organic soil amendments (e.g., compost) and conduct pre- and post-construction soil sampling to a depth of six (6) inches to document improved levels of soil carbon after final stabilization of the construction site.
- N l. Use mulch filter berms, in addition to a silt fence, on the site perimeter wherever construction storm water (including sheet flow) may be discharged. Mulch filter berms cannot be placed in waterways or areas of concentrated flow.
- N m. Use appropriate erosion control slope stabilization instead of concrete in all construction storm water ditches and storm drainages designed for a 25 year, 24 hour rainfall event.
- N n. Use flocculants or coagulants under a passive dosing method (e.g., flocculant blocks) within construction storm water ditches and storm drainages that feed into temporary sediment basins and retrofitted management basins.
- N o. Install sod for a minimum 20 foot width (in lieu of seeding) after final grade has been achieved, along the site perimeter wherever storm water (including sheet flow) may be discharged.
- N p. Conduct soil tests to identify and to implement site-specific fertilizer needs.
- N q. Certified personnel for primary permittees shall conduct inspections at least twice every seven (7) calendar days and within 24 hours of the end of the storm that is 0.5 inches rainfall or greater in accordance with Section IV.D.4.a.(3)(a) – (c); secondary permittees, Section IV.D.4.b.(3)(a) – (c); and tertiary permittees Section IV.D.4.c.(3)(a) – (c) *
- N r. Apply the appropriate compost blankets (minimum depth 1.5 inches) to protect soil surfaces until vegetation is established during the final stabilization phase of the construction activity.
- N s. Use alternative BMPs whose performance has been documented to be superior to conventional BMPs as certified by a Design Professional (unless disapproved by EPD or the Georgia Soil and Water Conservation Commission). (If using this item please refer to the Alternative BMP guidance document found at www.gaswcc.georgia.gov)
- ESC 1.6 Y t. Limit the total planned site disturbance to less than 15% impervious surfaces (excluding any state mandated buffer areas from such calculations). All calculations must be included in the Plan.
- N u. Conduct inspections during the intermediate grading and drainage BMP phase and during the final BMP phase of the project by the design professional who prepared the Plan in accordance with Section IV.A.5 of the permit.
The Plan must include a statement that the primary permittee must retain the design professional who prepared the Plan to conduct inspections during the intermediate grading and drainage BMP phase and during the final BMP phase.
- N v. Install Post Construction BMPs (e.g., runoff reduction BMPs) which remove 80% TSS as outlined in the Georgia Stormwater Management Manual known as the Blue Book or an equivalent or more stringent design manual.

* This requirement is different for infrastructure projects:
Certified personnel for primary permittees shall conduct inspections at least once every seven (7) calendar days and within 24 hours of the end of the storm that is 0.5 inches rainfall or greater in accordance with Section IV.D.4.a.(3)(a) – (c) of the permit.



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USDA SEWER SYSTEM
IMPROVEMENTS - CONTRACT A
WPCP UPGRADES

FOR THE
CITY OF THOMASTON

REVISONS	NO.	DESCRIPTION	DATE			

BID SET



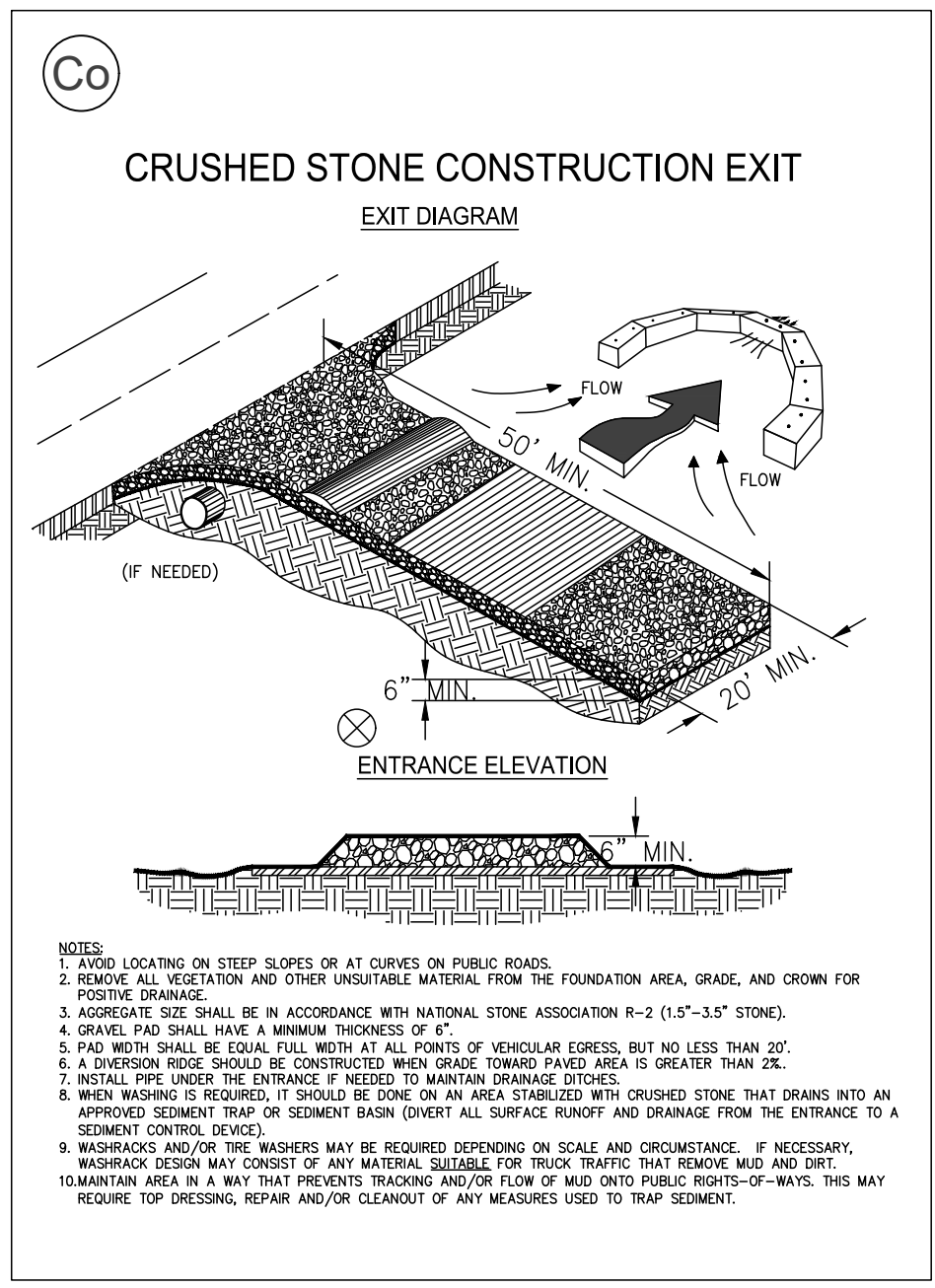
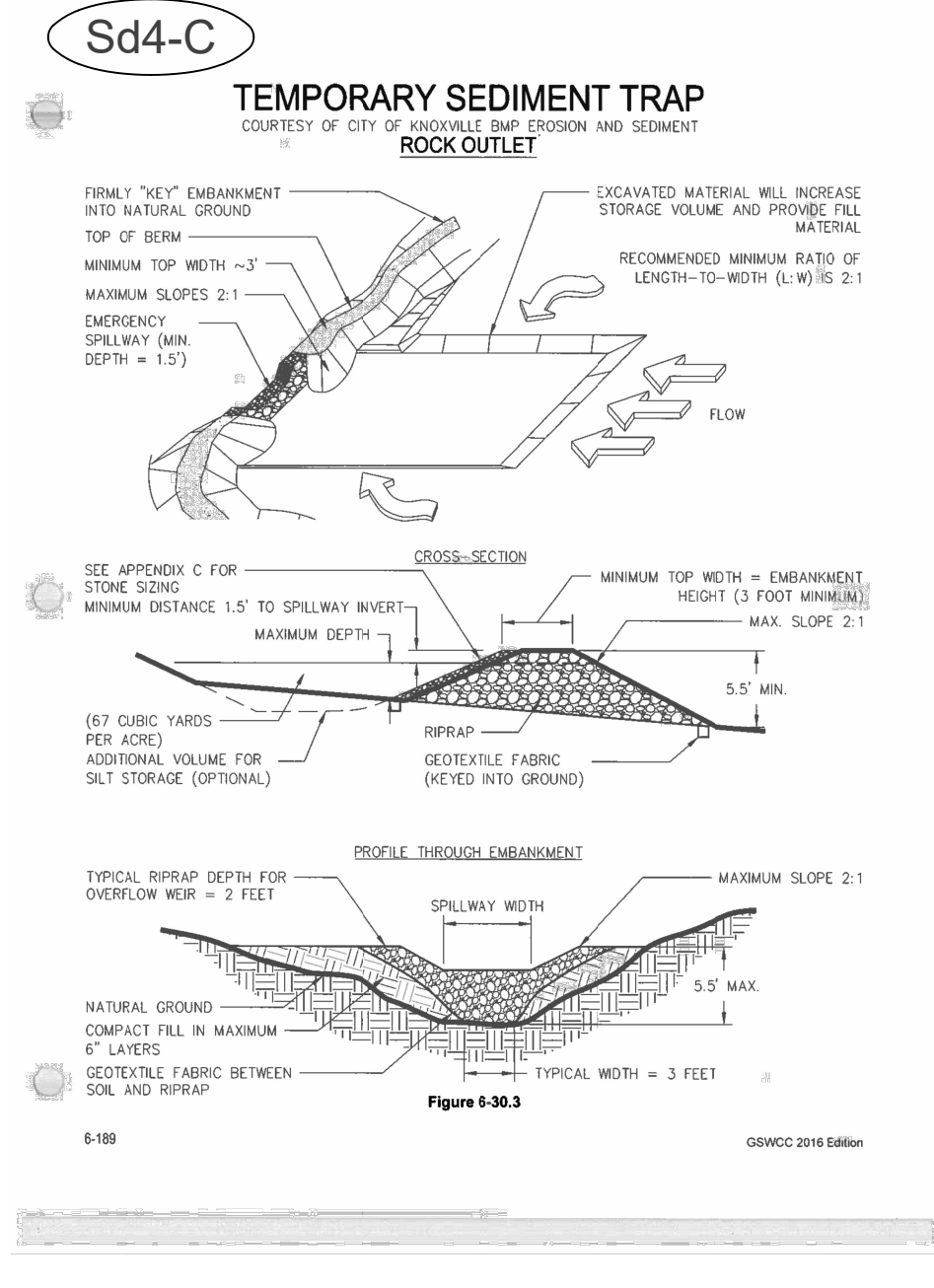
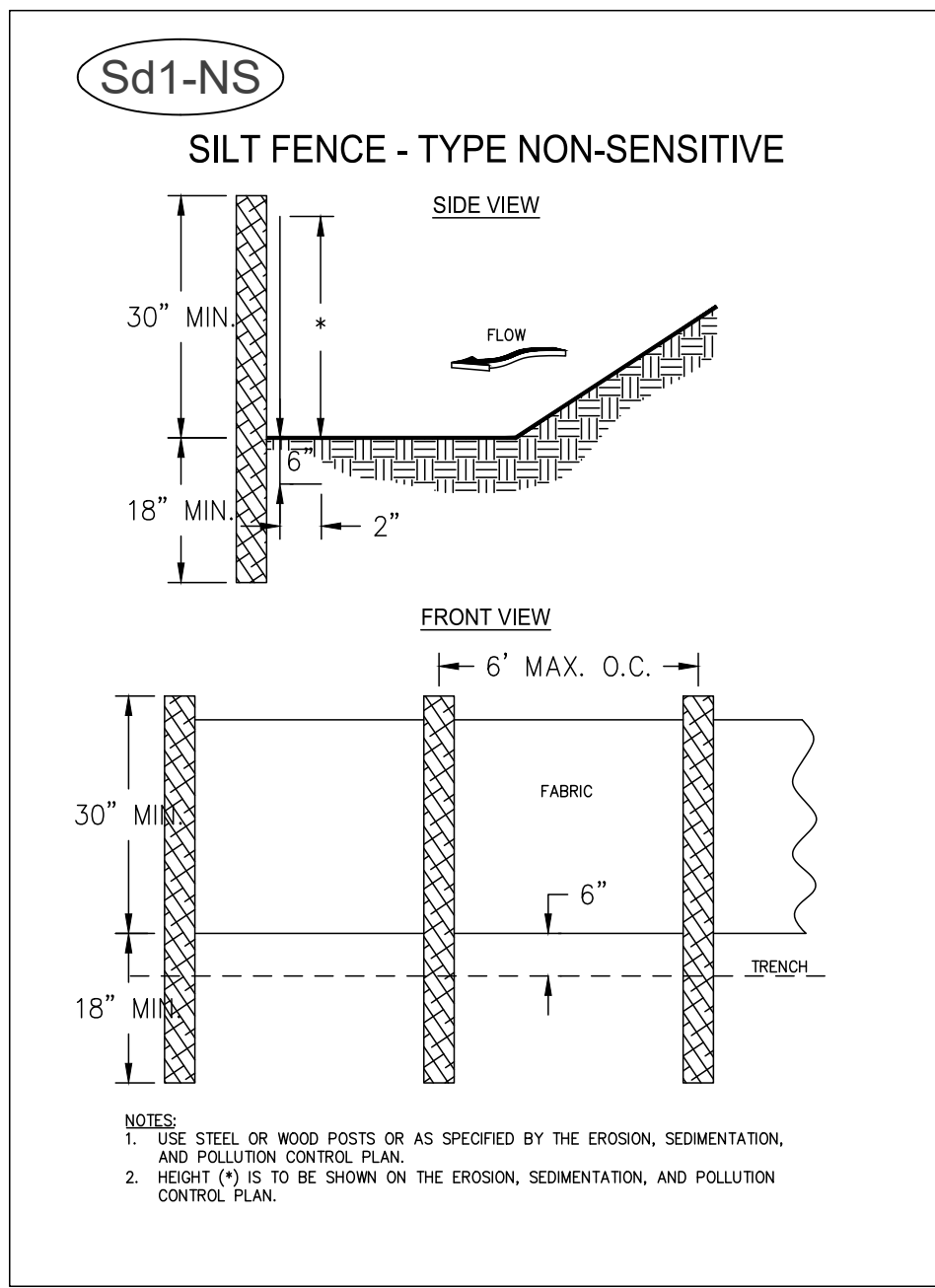
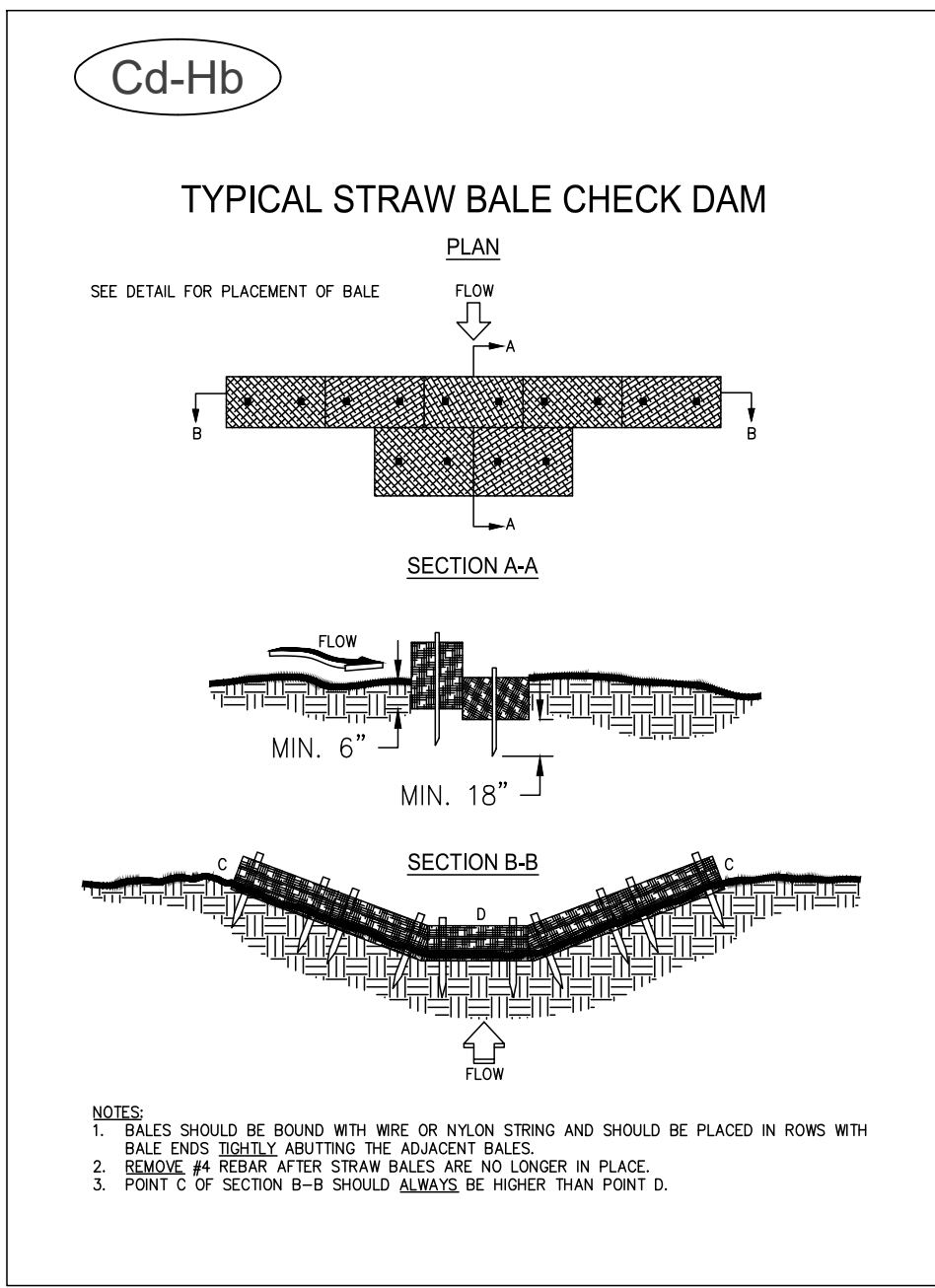
DRAWN BY: WLN
CHECKED BY: ABG
DATE: DEC 2020
SCALE: NTS

CONTENT:
EROSION AND
SEDIMENTATION
CONTROL PLAN -
CHECKLIST

SHEET NO:

ESC 1.6

KRISTEN A. COURSON
LEVEL II CERT. #: 000000-2100



TEMPORARY VEGETATION SCHEDULE

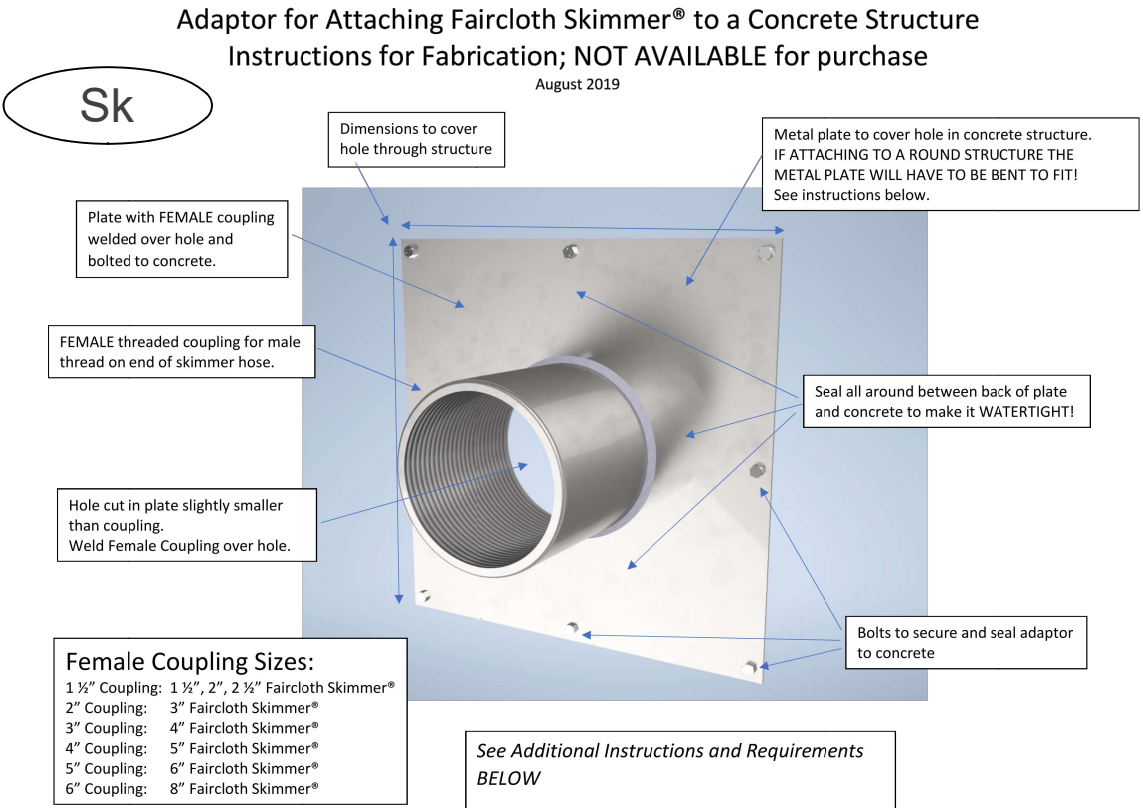
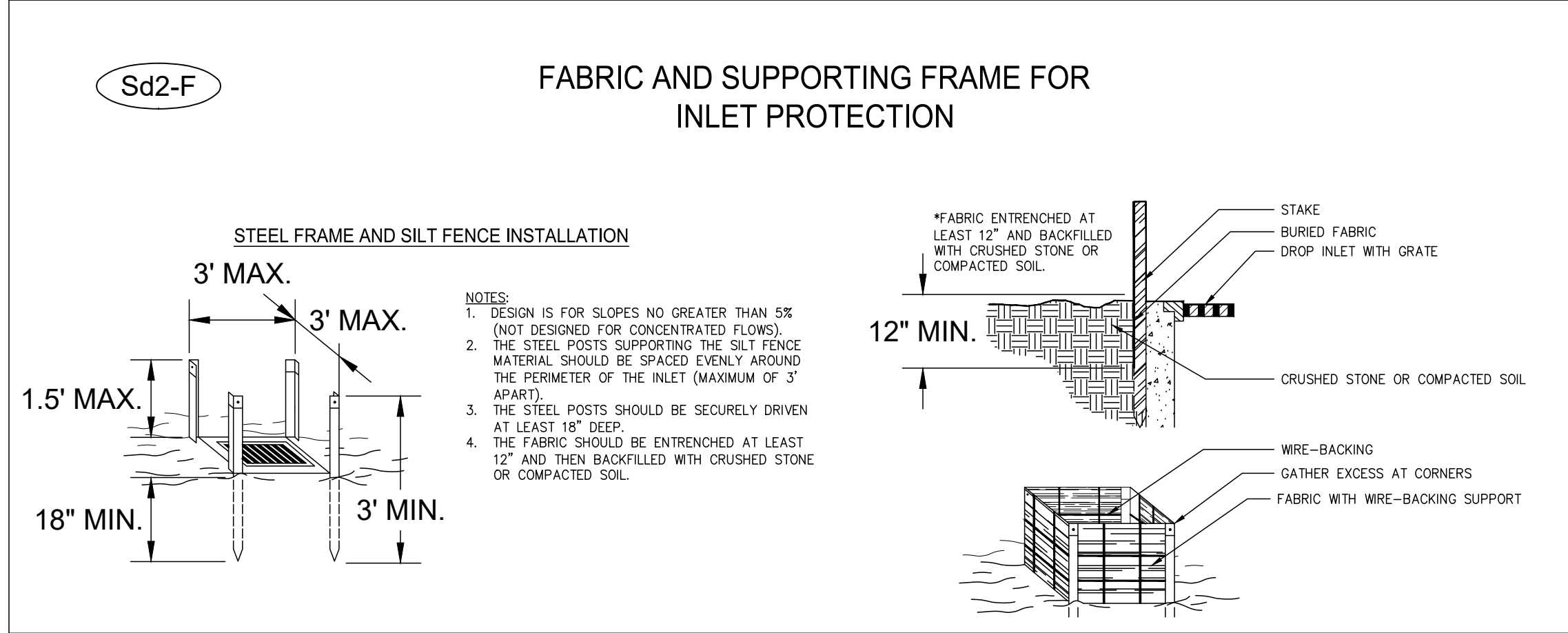
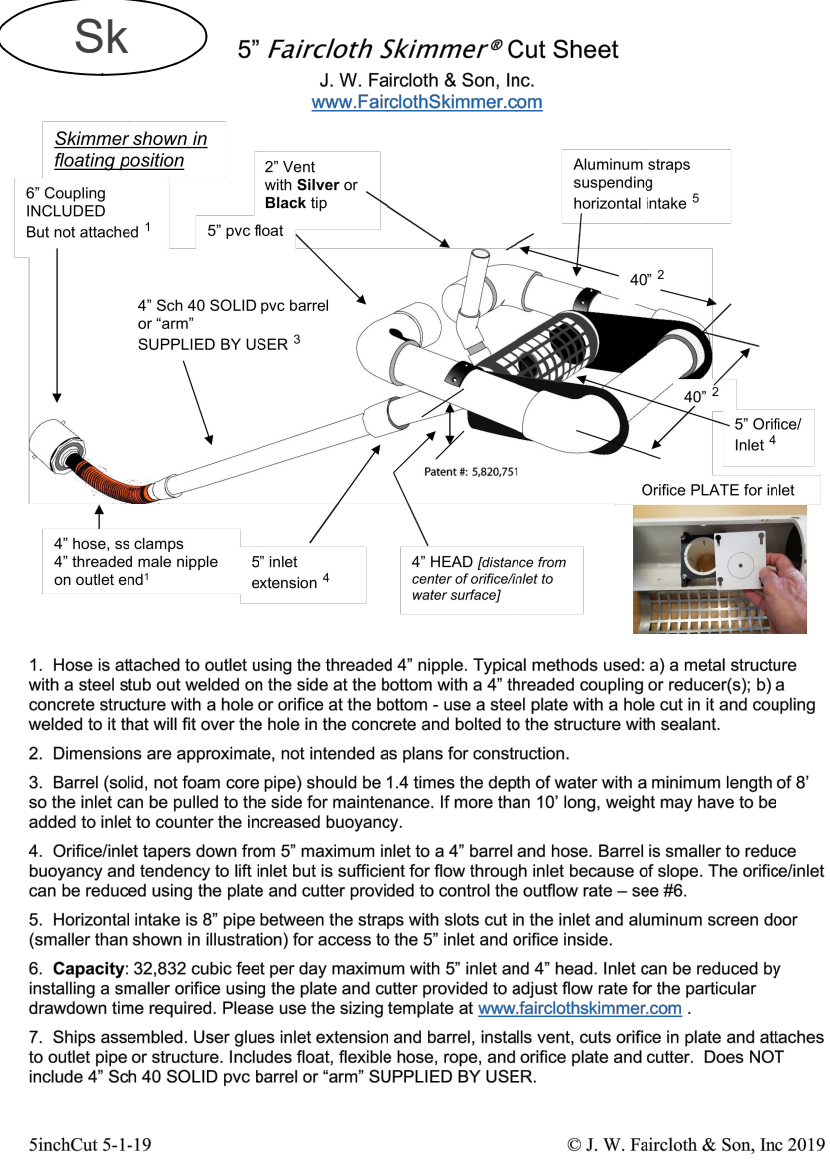
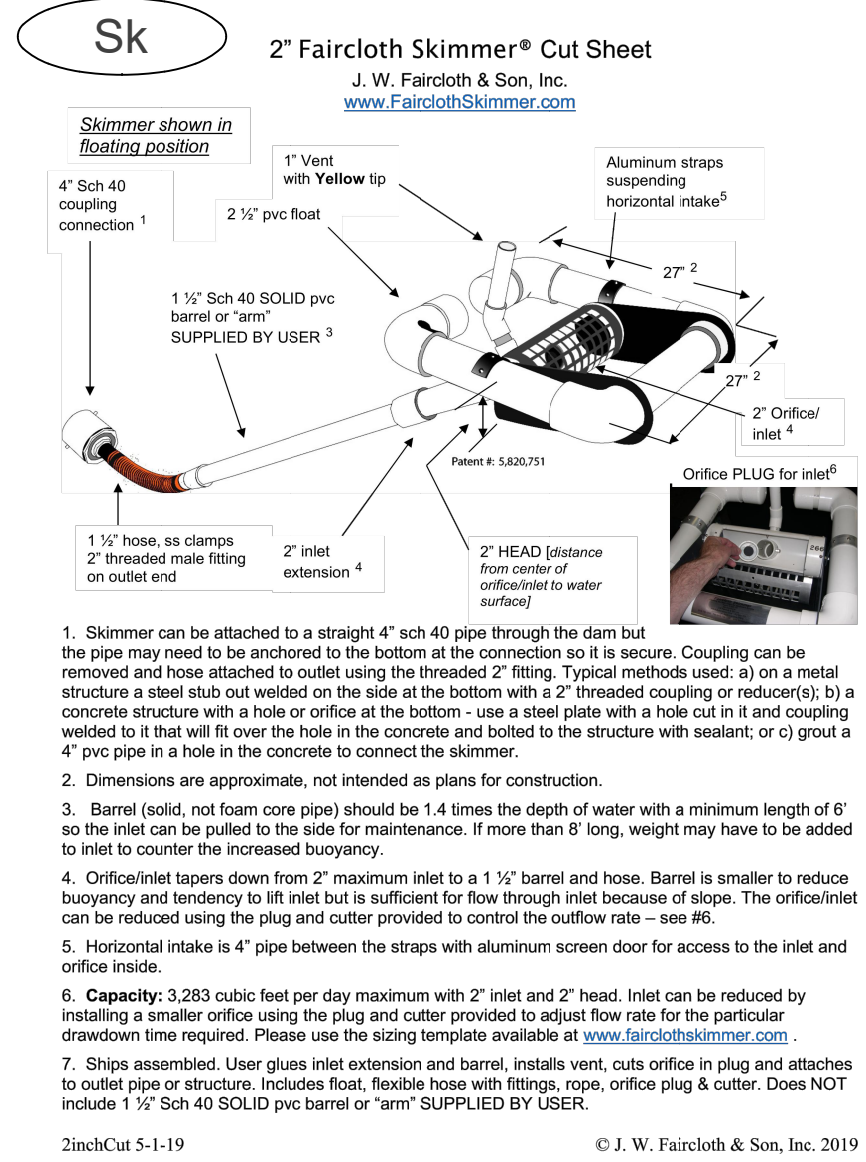
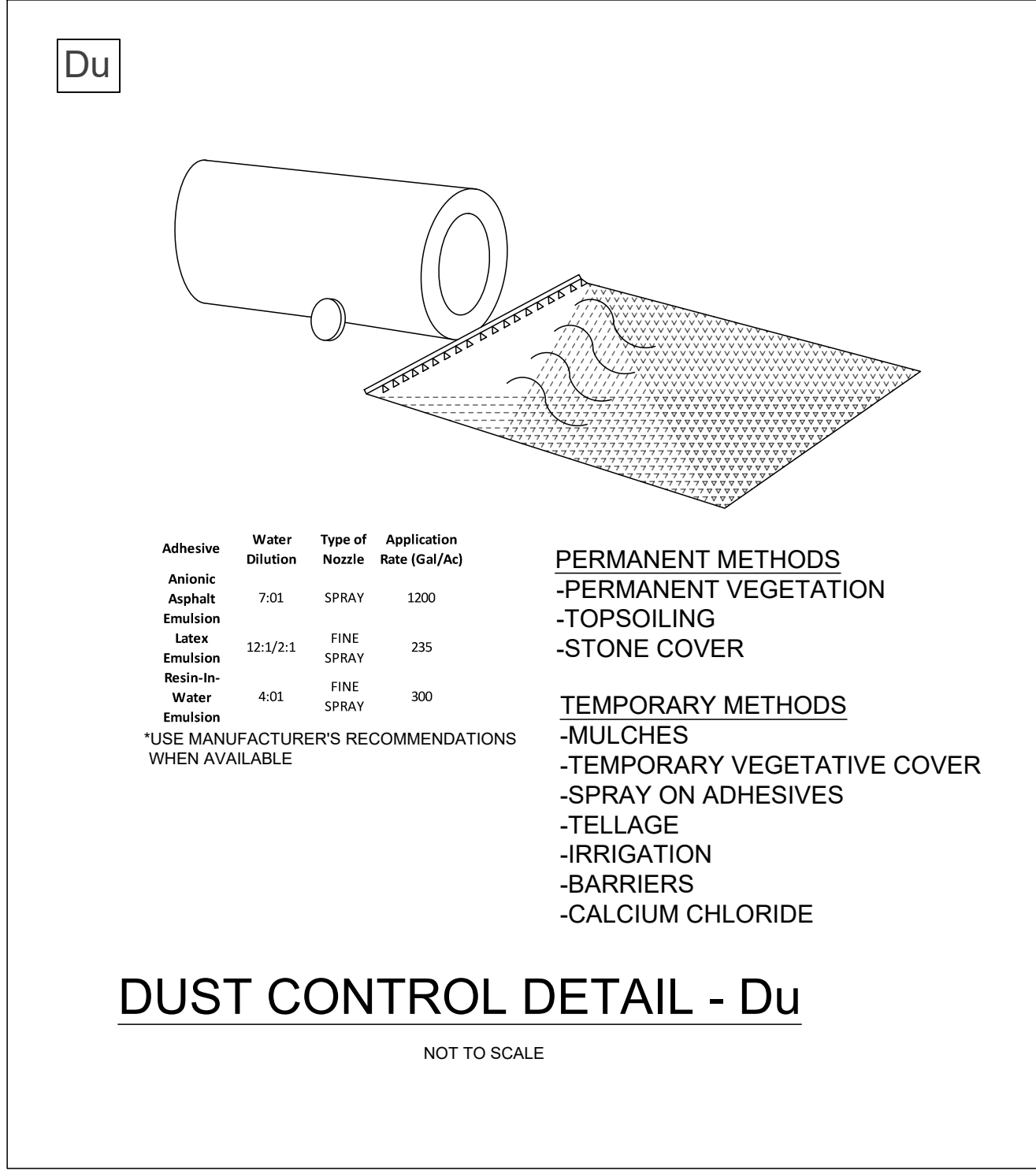
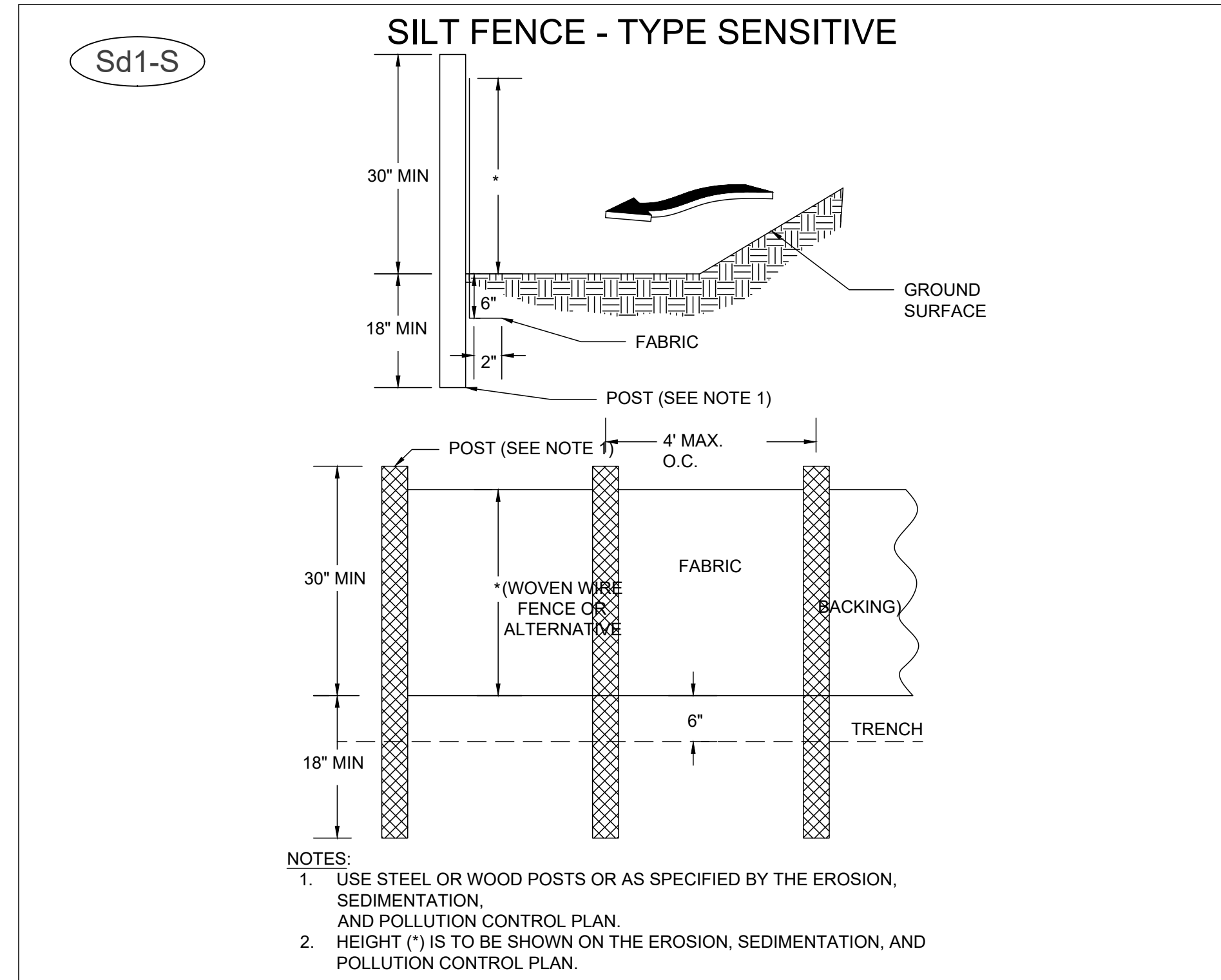
Terrain	Planting Season	Grass Species	Application Rate	Fertilizer (6-12-12)	Lime (per ac.)	Maintenance 10/10/10 (per ac.)
All Slopes	8/1-3/1	Reygrass	40 lbs/ac.	1500 lbs/ac.	1 ton	500 lbs
Slopes > 3:1	2/1-7/31	Weeping Lovegrass	4 lbs/ac.	1500 lbs./ac.	1 ton	500 lbs
All Slopes	4/1-8/1	Browntop Millet	40 lbs/ac.	1500 lbs./ac.	1 ton	500 lbs
All Slopes	4/1-9/1	Pearl Millet	50 lbs/ac.	1500 lbs./ac.	1 ton	500 lbs

PERMANENT VEGETATION SCHEDULE

Terrain	Planting Season	Grass Species	Application Rate	Fertilizer (6-12-12)	Lime (per ac.)	Maintenance 10/10/10 (per ac.)
Slopes < 3:1	2/15-8/31	Common Bermuda (Fulled)	6 lbs/ac.	1500 lbs./ac.	1 ton	500 lbs.
Slopes < 3:1	2/15-8/31	Common Bermuda (Unhulled)	6 lbs./ac.	1500 lbs./ac.	1 ton	500 lbs.
Slopes < 3:1	9/1-2/14	Common Bermuda (Unhulled)	10 lbs./ac.	1500 lbs./ac.	1 ton	500 lbs.
Slopes > 3:1	2/1-7/31	Weeping Lovegrass	2 lbs./ac.	1500 lbs./ac.	1 ton	500 lbs.
Slopes > 3:1	8/1-1/31	Common Bermuda (Unhulled)	6 lbs./ac.	1500 lbs./ac.	1 ton	500 lbs.

SODDING VEGETATION SCHEDULE

Grass	Varieties	Resource Area	Growing Season	Fertilizer Rate (N-P-K of 6-12-12) (lbs/acre)	Nitrogen Top Dressing Rate (lbs/acre)	Maintenance Fertilizer (N-P-K of 10-10-10) (lbs/acre)
Bahiagrass	Pensacola	P,C	Warm Weather	1500	50-100	400
Centipede	-	P,C	Warm Weather	1500	50-100	400
Tall Fescue	Kentucky	M-L, P	Cool Weather	1500	50-100	400



KRISTEN A. COURSON
LEVEL II CERT. #: 000000-2100

REVISIONS	DATE	DESCRIPTION
NO.		

BID SET



DRAWN BY: WLN
CHECKED BY: ABG
DATE: DEC 2020
SCALE: NTS

CONTENT:
**EROSION AND
SEDIMENTATION
CONTROL PLAN -
DETAILS**

SHEET NO:

ESC 1.7



1. (CO) Construction Exit: A stone pad shall be constructed where indicated at designated exits to paved streets to eliminate transfer of mud to public streets. The stone shall be in accordance with ASTM D448, Size 9 (1.5" - 3.5" stone). The exit shall be maintained in a condition which will prevent tracking or flow of mud onto public rights-of-way. As conditions demand, periodic top dressing with additional stone or repair of the stone pad shall be performed. All materials spilled, dropped, washed or tracked from vehicles or site onto roadways must be removed immediately.
2. (Sd2-F) Sediment Traps: A temporary protective device formed at or around an inlet to a storm drain to trap sediment.
3. (Sd1-NS or Sd1-S) Sediment Barrier: Silt fence shall be installed where indicated on plans to control sediment carried by runoff. The fence must properly installed according to the details provided in the "Manual for Erosion & Sediment Control in Georgia", latest edition. The fence fabric must meet GDOT Specifications.
4. (Ds2) Temporary Vegetation: Shall be established on all disturbed areas as soon as possible after construction.
5. (Ds3) Permanent Vegetation: Shall be established on all disturbed areas not to be paved as soon as possible after construction.
6. (Du) Dust Control: Controlling surface and air movement of dust on construction sites, roads, and demolition sites.
7. Planting Notes:
 - a. Seed Preparation - scarify the soil to a depth of ¼" to expose fresh soil.
 - b. Hand Planting - Seed & fertilizer should be broadcast uniformly over soil surface. Lightly cover seed by disking or raking. Mulch all seeded areas immediately using wheat straw at a rate of 1 bail per 500 square feet.
 - c. Apply fertilizer at the rates shown per vegetation schedule on detail sheet and rake into the soil.
 - d. Watering - Water immediately after mulching.

8. The estimated disturbed area for this work is .10 acres.
9. There are no wetlands present on this site.
10. Disturbed areas and the duration of exposure to erosive elements shall be kept to a practicable minimum.
11. Temporary vegetation or mulching shall be employed to protect exposed critical areas during development. Stabilization measures shall be initiated as soon as practicable in portions of the site where construction activities have temporarily ceased, but in no case more than 14 days after the construction activity in that portion of the site has temporarily or permanently ceased.
12. Erosion and sediment control measures shall be installed and maintained in accordance with the approved plans and specifications as well as local and state requirements. Storm drainage system components shall be kept clean and free of silt and debris.
13. Immediately after the establishment of construction exits, all perimeter erosion and sediment control measures and storm water management devices shall be installed prior to any other construction. The locations of certain erosion and sediment control measures may have to be adjusted to fit field conditions and to accommodate drainage patterns different from the grading plans. It is the contractor's responsibility to bring any needed changes to the attention of the Engineer immediately if location or BMP changes are necessary.
14. Additional erosion and sedimentation control measures will be installed if deemed necessary by onsite inspection. It is the contractor's responsibility to accomplish erosion control for all drainage patterns created at various stages during construction.
15. Dust control measures shall be implemented when needed during construction by use of water trucks, etc. Water shall be made available to the contractor at a fee through a City of Thomaston hydrant meter.
16. The contractor shall not allow silt to accumulate in silt fence or adjacent to haybales above ½ of the original height of either BMP. The contractor shall remove silt as needed to prevent excess accumulation.
17. Temporary erosion and sedimentation control measures including silt fence and check dams shall be removed and disposed of by the contractor after a stand of permanent vegetation has been established and the Engineer deems the site is stabilized.

Terrain	Planting Season	Grass Species	Application Rate	Fertilizer (6-12-12)	Lime (per ac.)	Maintenance (10/10/10) (per ac.)
All Slopes	8/1-3/1	Raygrass	40 lbs/ac.	1500	1 ton	500 lbs
All Slopes > 3:1	2/1-7/31	Weeping Lovegrass	40 lbs/ac.	1500	1 ton	500 lbs
All Slopes	4/1-8/31	Bromow Millet	40 lbs/ac.	1500	1 ton	500 lbs
All Slopes 4/1-9/1		Pearl Millet	50 lbs/ac.	1500	1 ton	500 lbs

PERMANENT VEGETATION SCHEDULE						
Terrain	Planting Season	Grass Species	Application Rate	Fertilizer (0-12-12)	Lime (per ac)	Mo/10/10 (per ac)
Slopes < 3:1	2/15	Common Bermuda (Hulled)	6 lbs/ac	1500 lbs/ac	1 ton	500 lbs.
Slopes < 3:1	2/15	Common Bermuda (Unhulled)	6 lbs./ac.	1500 lbs./ac	1 ton	500 lbs.
Slopes < 3:1	9/13-2/14	Common Bermuda (Unhulled)	10 lbs./ac.	1500 lbs./ac	1 ton	500 lbs.
Slopes > 3:1	2/17-7/31	Wiering Lovegrass	2 lbs./ac.	1500 lbs/ac	1 ton	500 lbs.
Slopes > 3:1	8/1-1/31	Common Bermuda (Unhulled)	6 lbs./ac.	1500 lbs/ac	1 ton	500 lbs.

ESG ENGINEERING

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USDA SEWER SYSTEM
IMPROVEMENTS - CONTRACT A
WPCP UPGRADES
FOR THE
CITY OF THOMASTON

[illegible]

BID SET



DRAWN BY: WLN
CHECKED BY: ABG
DATE: DEC 2020
SCALE: AS NOTED

CONTENT:

**BELL CREEK WPCP
EROSION &
SEDIMENTATION
CONTROL PLAN**

SHEET NO:

ES1.0