

ST. JOHNS RIVER WATER MANAGEMENT DISTRICT

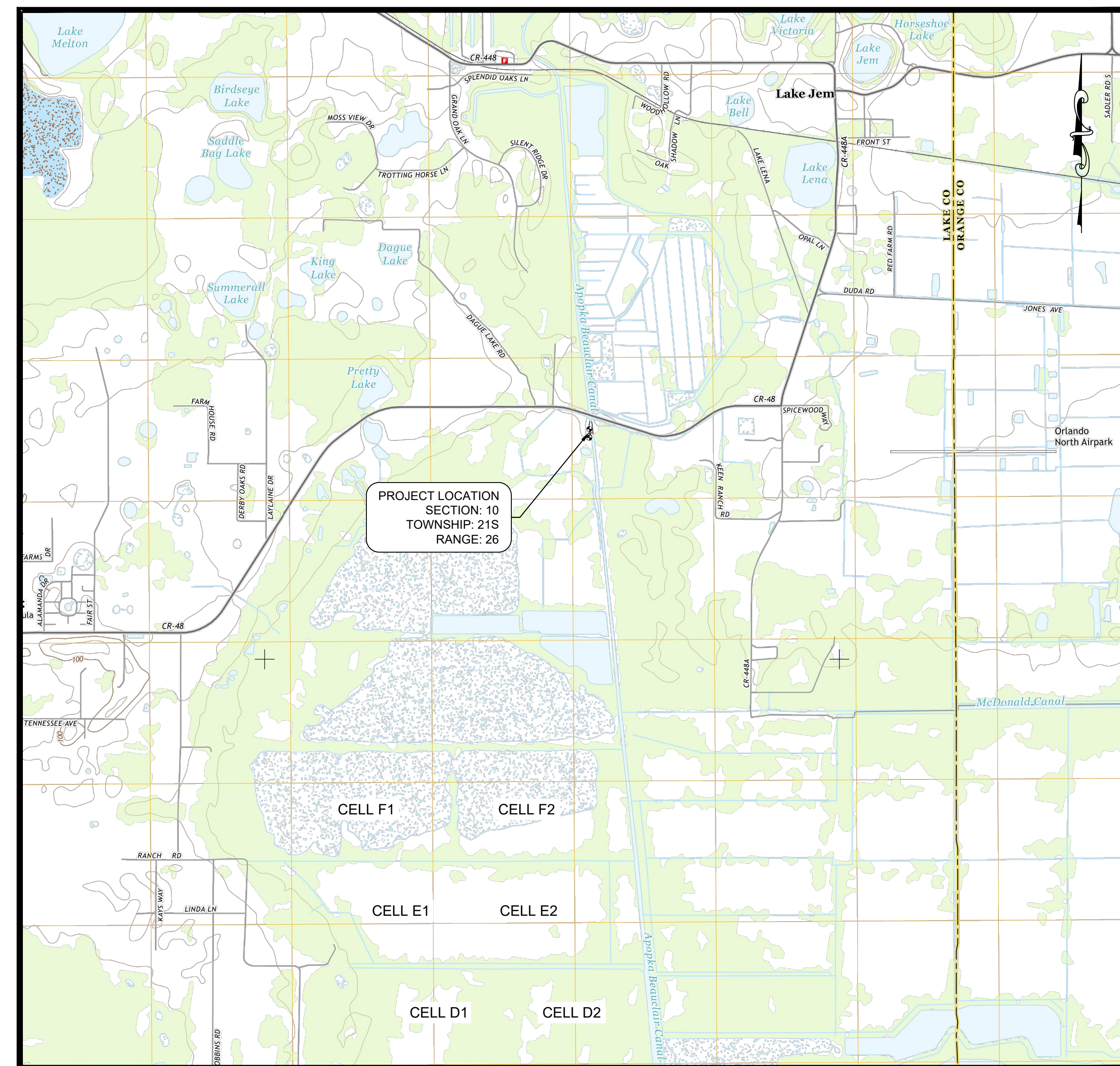
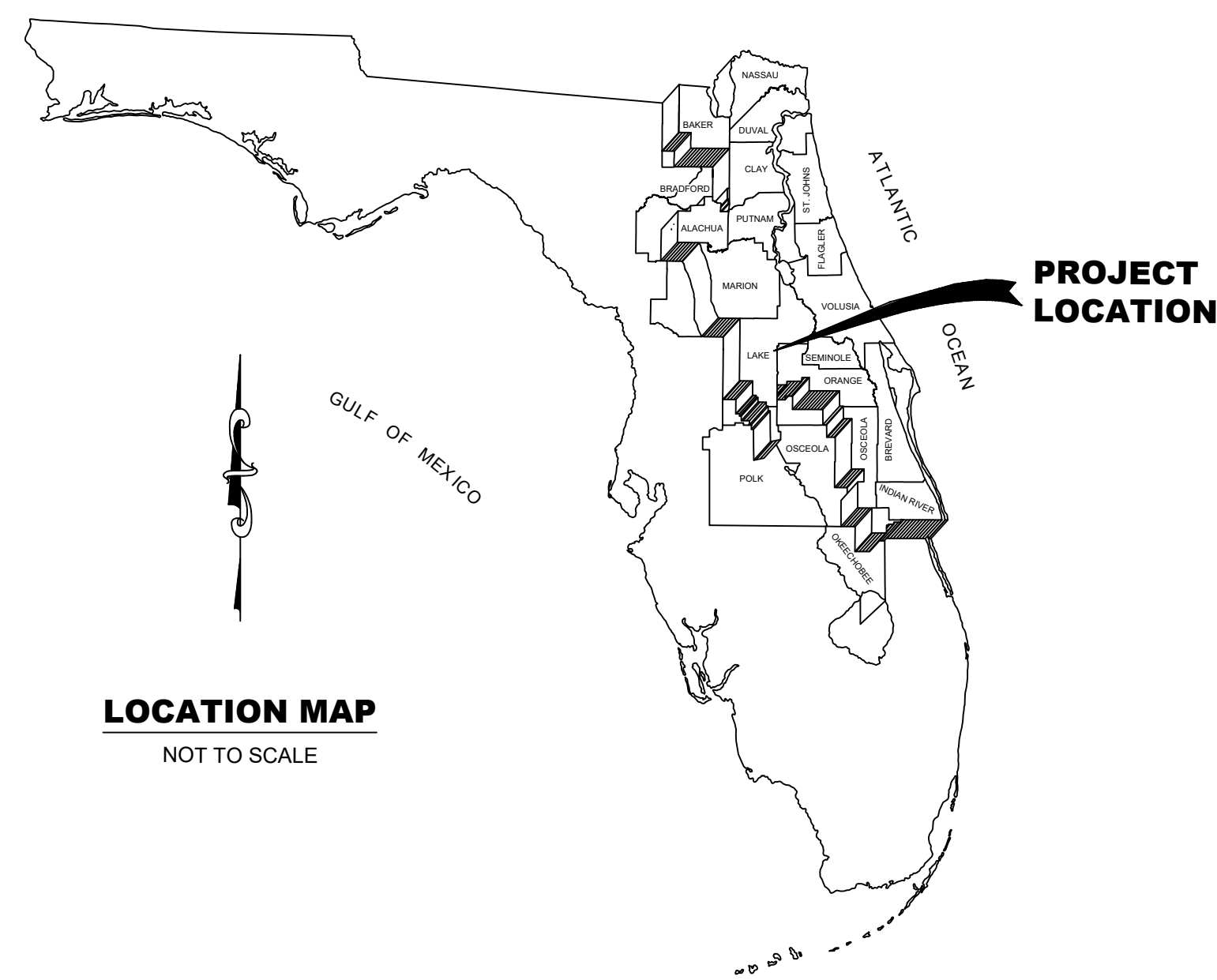
UPPER OCKLAWAHA RIVER BASIN

APOPKA LOCK AND DAM MANATEE SCREENS

LAKE COUNTY, FLORIDA

NGVD 1929

ALL ELEVATIONS DEPICTED HEREIN
REFERENCE NGVD 1929 UNLESS
OTHERWISE NOTED. THE CONVERSION
FACTOR TO NAVD 1988 IS -1.08.



SHEET NO.	SHEET TITLE
C1	COVER SHEET
C2	SITE PLAN
C3	EROSION AND SEDIMENT CONTROL
S1	DAM PLAN AND NOTES
S2	DAM SECTION AND MANATEE SCREENS
S3	LOCK STRUCTURE PLAN
S4	LOCK STRUCTURE MANATEE SCREENS

ENGINEER'S NOTES:

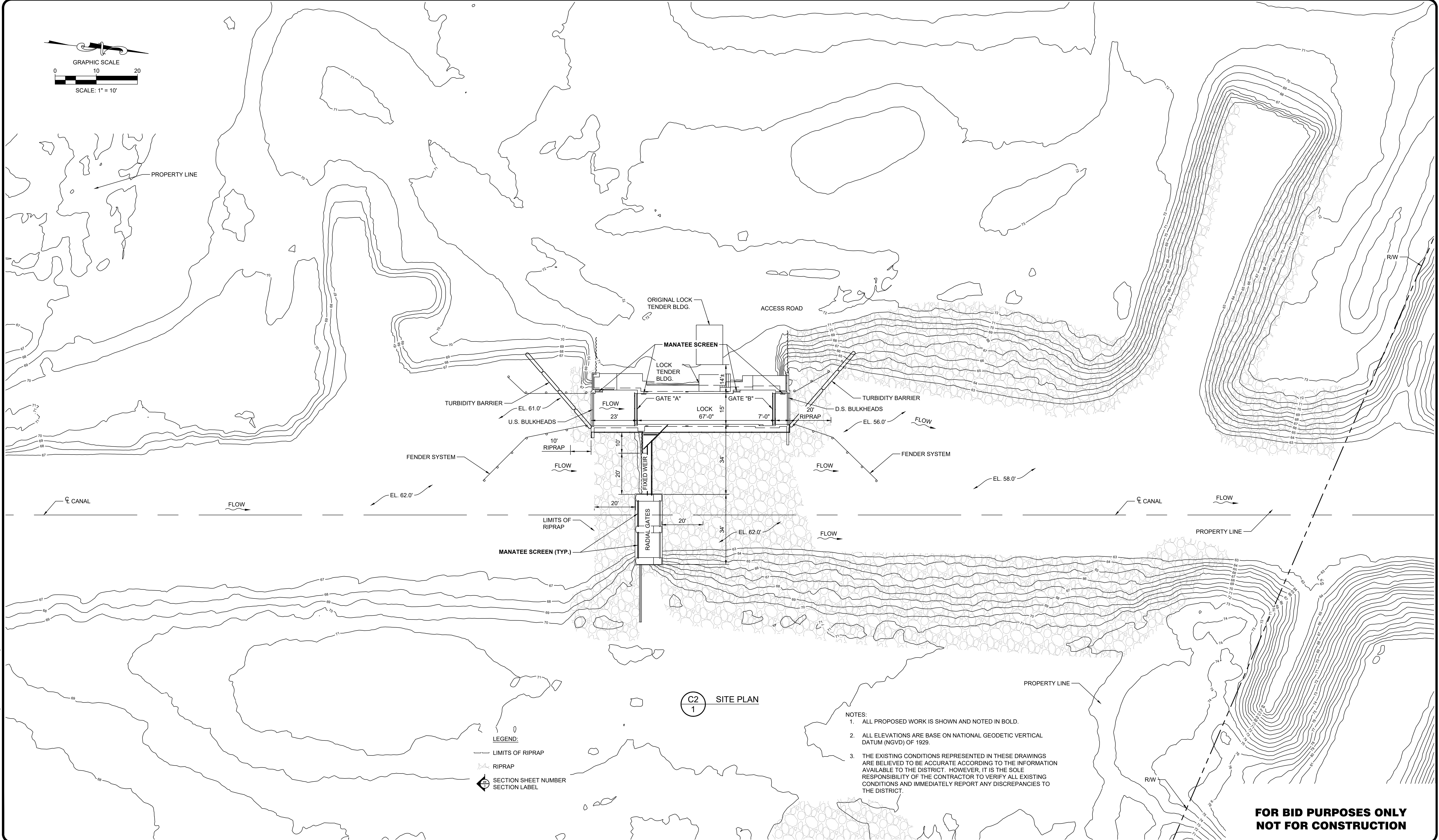
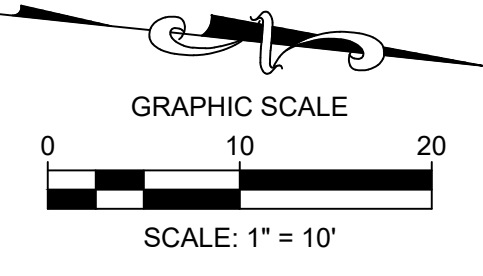
- These drawings are prepared for the sole and exclusive use of the St. Johns River Water Management District and shall not be relied upon by any other entity or individual.
- Reproductions of these drawings are "NOT VALID WITHOUT THE SIGNATURE AND THE ORIGINAL SEAL OF A FLORIDA LICENSED ENGINEER."

NO.	REVISION	BY	DATE	APPROVED	DATE
1	ISSUED FOR BID	N.J.G.	09/05/23	W.R.C.	09/05/23



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NOT FOR CONSTRUCTION**

CERTIFICATION:	DRAWING FILENAME:
WILLIAM R. COTE	CVR CD.dwg
P.E. NUMBER: 53746	SHEET:
DATE: SEPTEMBER 5, 2023	C1



C2
1
SITE PLAN

- NOTES:
1. ALL PROPOSED WORK IS SHOWN AND NOTED IN BOLD.
 2. ALL ELEVATIONS ARE BASE ON NATIONAL GEODETIC VERTICAL DATUM (NGVD) OF 1929.
 3. THE EXISTING CONDITIONS REPRESENTED IN THESE DRAWINGS ARE BELIEVED TO BE ACCURATE ACCORDING TO THE INFORMATION AVAILABLE TO THE DISTRICT. HOWEVER, IT IS THE SOLE RESPONSIBILITY OF THE CONTRACTOR TO VERIFY ALL EXISTING CONDITIONS AND IMMEDIATELY REPORT ANY DISCREPANCIES TO THE DISTRICT.

LEGEND:
 --- LIMITS OF RIPRAP
 RIPRAP
 SECTION SHEET NUMBER
 SECTION LABEL

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UPPER OCKLAWAHA RIVER BASIN
 APOPKA LOCK AND DAM MANATEE SCREENS
 LAKE COUNTY, FLORIDA

ST. JOHNS RIVER
 WATER MANAGEMENT DISTRICT
 P.O. BOX 1429 PALATKA, FLORIDA

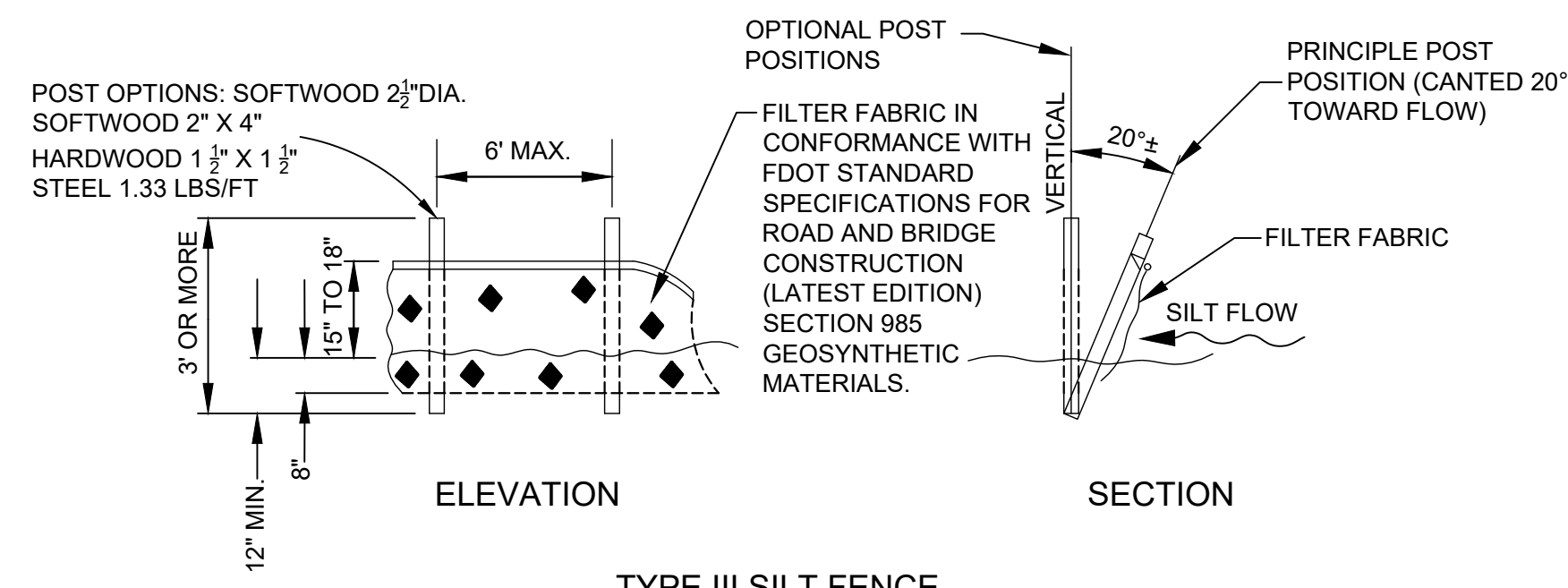
DRAWN: N.J.G. DATE: SEPTEMBER 5, 2023 REVIEWER: W.R.C.
 SCALE: 1" = 20' DESIGNER: W.R.C. SECTION CHIEF: W.R.C.

SITE PLAN

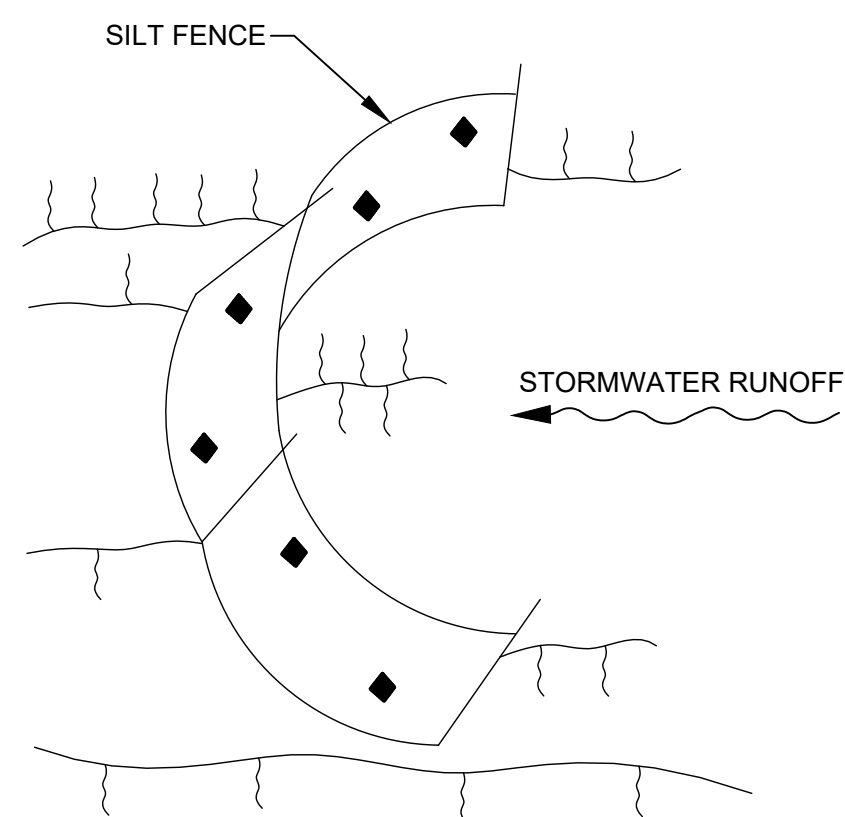
CERTIFICATION:
 WILLIAM R. COTE
 P.E. NUMBER: 53746
 DATE: SEPTEMBER 5, 2023

FILE NAME:
 APL&DAM SPN.dwg
 PROJECT NO.:
 SHEET:
C2

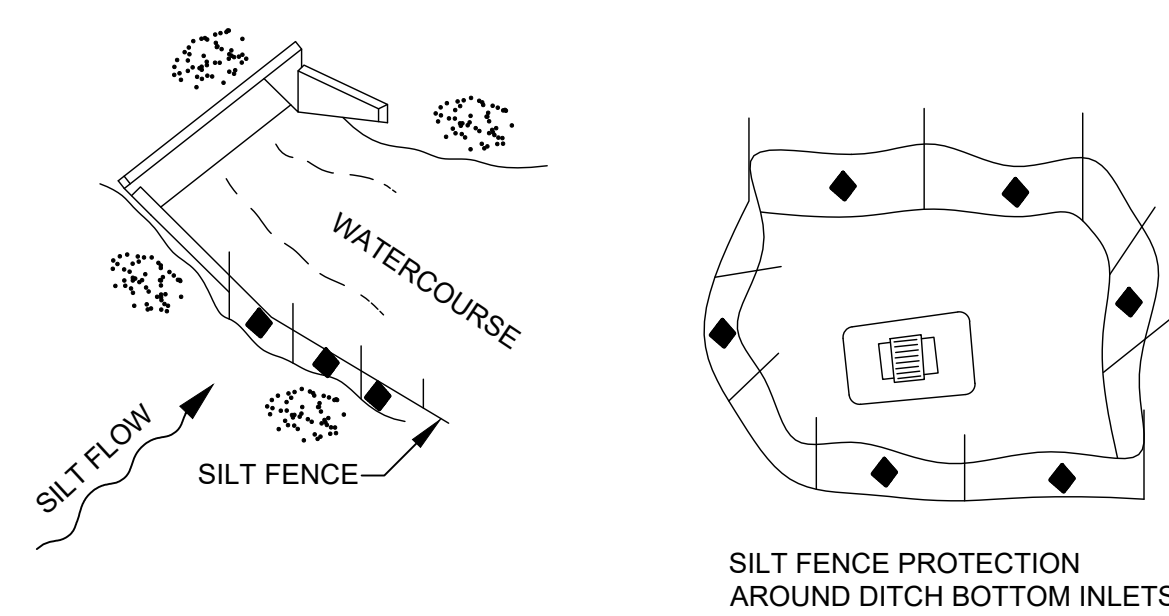
I:\Projects\CADD\APOPKA\APOPKA LOCK AND DAM MANATEE SCREENS\05 Production Drawings\CIVIL\APL&DAM SPN.dwg



TYPE III SILT FENCE



SILT FENCE PROTECTION IN DITCHES WITH INTERMITTENT FLOW

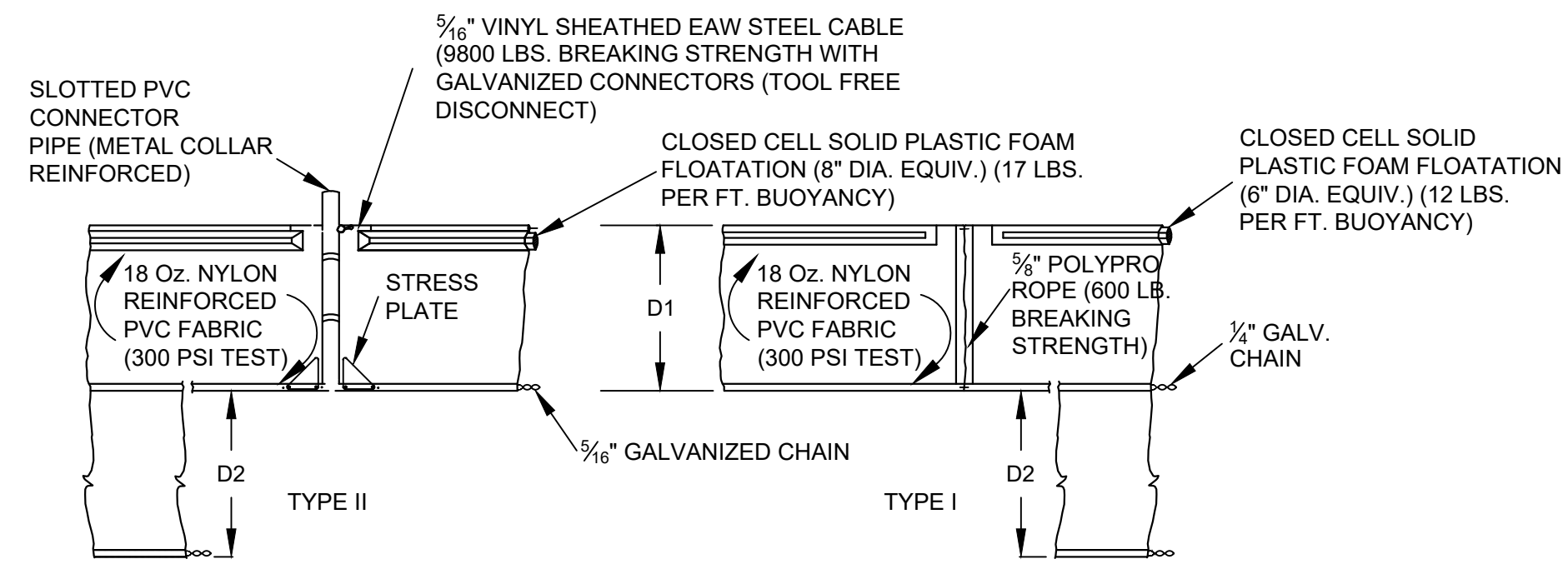


SILT FENCE APPLICATIONS

NOTES FOR SILT FENCES

- TYPE III SILT FENCE TO BE USED AT MOST LOCATIONS. WHERE USED IN DITCHES, THE SPACING FOR TYPE III SILT FENCE SHALL BE IN ACCORDANCE WITH SECTION V OF THE STATE OF FLORIDA EROSION AND SEDIMENT CONTROL DESIGNER AND REVIEWER MANUAL (JULY 2013).
- TYPE IV SILT FENCE TO BE USED WHERE LARGE SEDIMENT LOADS ARE ANTICIPATED. SUGGESTED USE IS WHERE FILL SLOPE IS 1:2 OR STEEPER AND LENGTH OF SLOPE EXCEEDS 25 FEET. AVOID USE WHERE THE DETAINED WATER MAY BACK INTO TRAVEL LANES OR OFF THE RIGHT OF WAY.
- DO NOT CONSTRUCT SILT FENCES ACROSS PERMANENT FLOWING WATERCOURSES. SILT FENCES ARE TO BE AT UPLAND LOCATIONS AND TURBIDITY BARRIERS USED AT PERMANENT BODIES OF WATER.
- WHERE USED AS SLOPE PROTECTION, SILT FENCE IS TO BE CONSTRUCTED ON 0% LONGITUDINAL GRADE TO AVOID CHANNELIZING RUNOFF ALONG THE LENGTH OF THE FENCE.
- SILT FENCE TO BE PAID FOR UNDER THE CONTRACT UNIT PRICE FOR STAKED SILT FENCE, (LF).

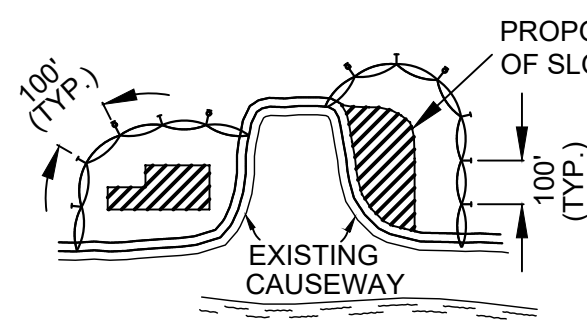
TEMPORARY SILT FENCE DETAIL
NOT TO SCALE



D1= 5' STD. (SINGLE PANEL FOR DEPTHS 5' OR LESS).
D2= 5' STD. (ADDITIONAL PANEL FOR DEPTHS > 5')
CURTAIN TO REACH BOTTOM UP TO DEPTHS OF 10 FEET TWO (2) PANELS TO BE USED FOR DEPTHS GREATER THAN 10 FEET UNLESS SPECIAL DEPTH CURTAINS SPECIFICALLY CALLED FOR IN THE PLANS OR AS DETERMINED BY THE ENGINEER.

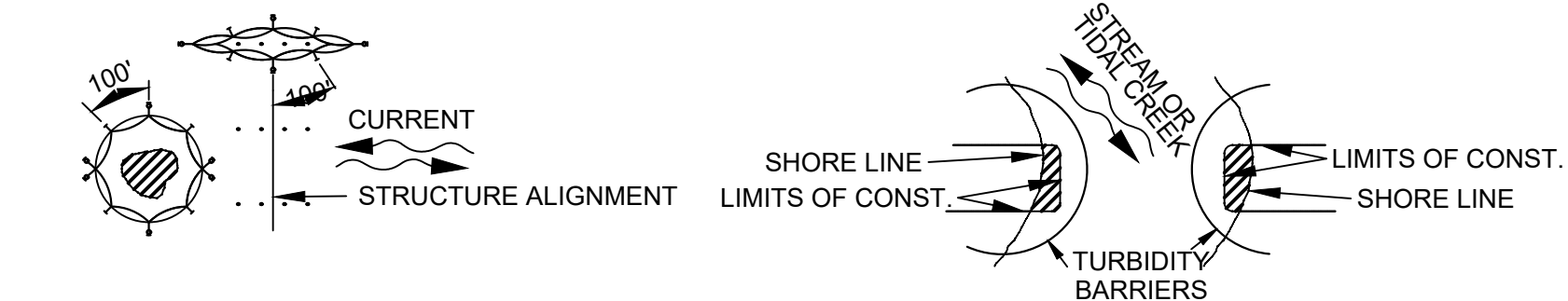
NOTICE: COMPONENTS OF TYPE I AND II MAY BE SIMILAR OR IDENTICAL TO PROPRIETARY DESIGN. ANY INFRINGEMENT ON THE PROPRIETARY RIGHTS OF THE DESIGNER SHALL BE THE SOLE RESPONSIBILITY OF THE USER. SUBSTITUTIONS FOR TYPES I AND II SHALL BE AS APPROVED BY THE ENGINEER.

FLOATING TURBIDITY BARRIERS
NOT TO SCALE



GENERAL NOTES:

- FLOATING TURBIDITY BARRIERS ARE TO BE PAID FOR UNDER THE CONTRACT UNIT PRICE FOR FLOATING TURBIDITY BARRIER, LF.
- STAKED TURBIDITY BARRIERS ARE TO BE PAID FOR UNDER THE CONTRACT UNIT PRICE FOR STAKED TURBIDITY BARRIER, LF.



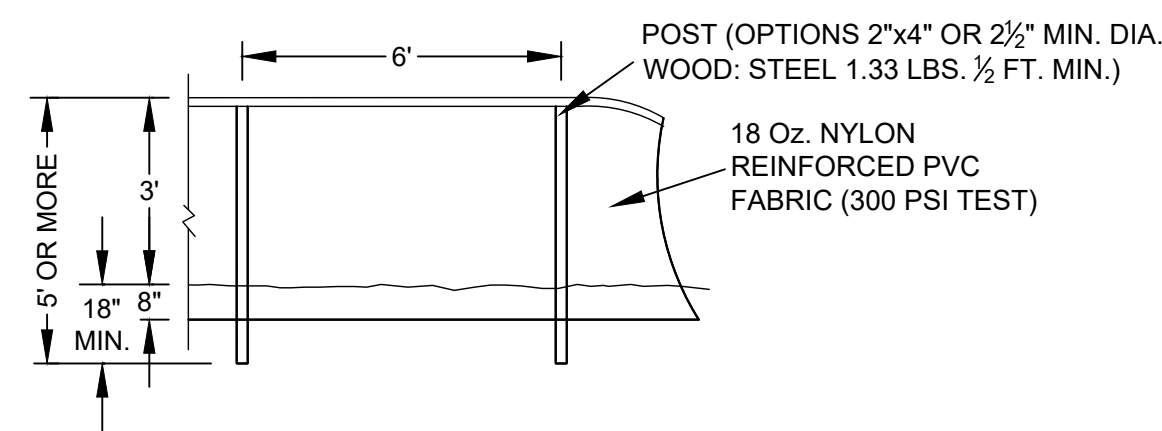
NOTES:

- TURBIDITY BARRIERS ARE TO BE USED IN ALL PERMANENT BODIES OF WATER REGARDLESS OF WATER DEPTH.
- NUMBER AND SPACING OF ANCHORS DEPENDENT ON CURRENT VELOCITIES.
- DEPLOYMENT OF BARRIER AROUND PILE LOCATIONS MAY VARY TO ACCOMMODATE CONSTRUCTION OPERATIONS.
- NAVIGATION MAY REQUIRE SEGMENTING BARRIER DURING CONSTRUCTION OPERATIONS.
- TURBIDITY BARRIERS SHALL CONFORM TO SECTION 104 OF THE FDOT STANDARD SPECIFICATIONS FOR ROAD AND BRIDGE CONSTRUCTION (LATEST EDITION).

LEGEND

- PILE LOCATIONS
- DREDGE OR FILL AREA
- MOORING BUOY/WANCHOR
- ANCHOR
- BARRIER MOVEMENT DUE TO CURRENT ACTION

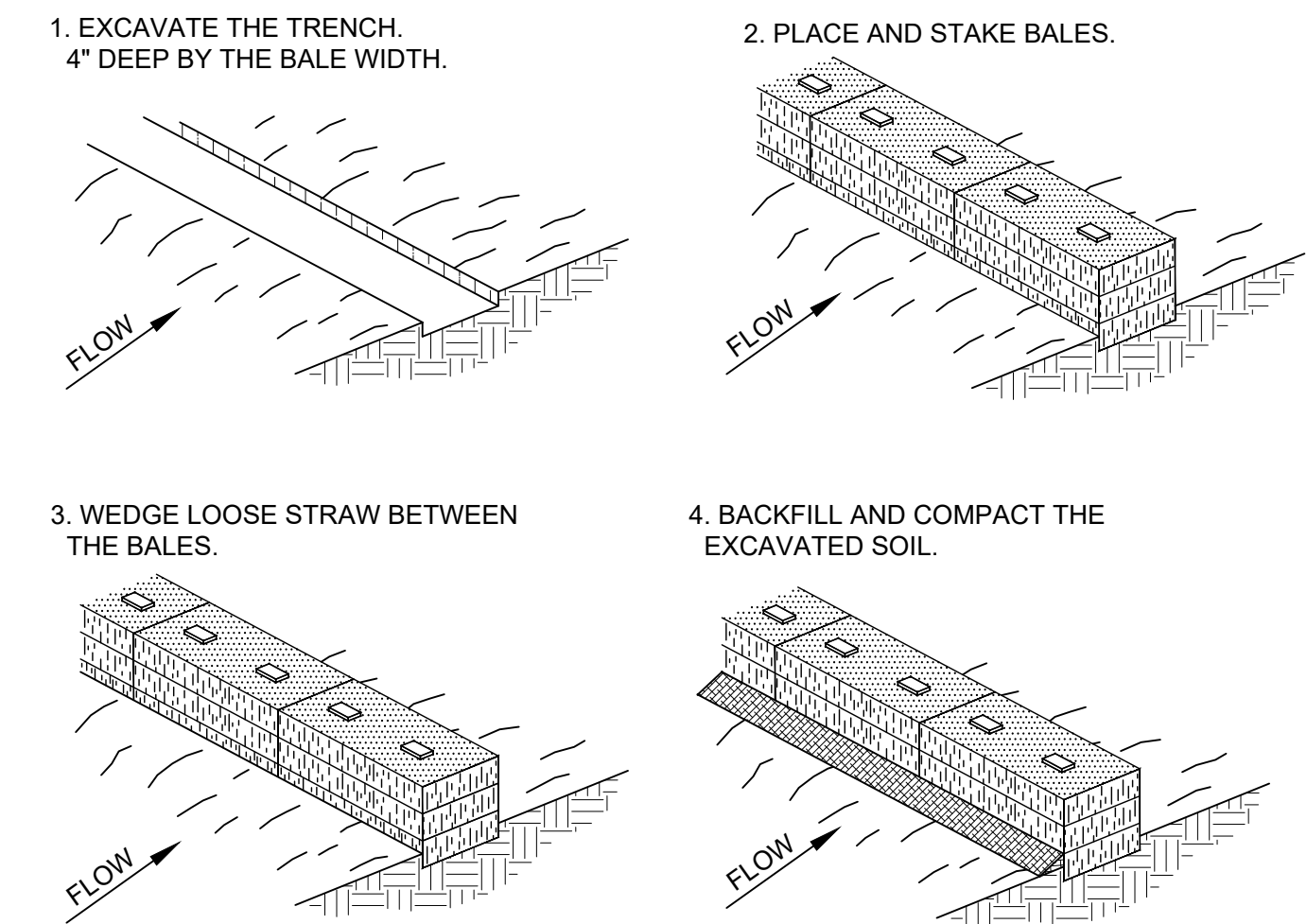
TURBIDITY BARRIER APPLICATIONS
NOT TO SCALE



STAKED TURBIDITY BARRIER
NOT TO SCALE

NOTES:

TURBIDITY BARRIERS FOR FLOWING STREAMS AND TIDAL CREEKS MAY BE EITHER FLOATING, OR STAKED TYPES OR ANY COMBINATIONS OF TYPES THAT WILL SUIT SITE CONDITIONS AND MEET EROSION CONTROL AND WATER QUALITY REQUIREMENTS. THE BARRIER TYPE(S) WILL BE AT THE CONTRACTOR'S OPTION UNLESS OTHERWISE SPECIFIED IN THE PLANS. HOWEVER PAYMENT WILL BE UNDER THE PAY ITEM(S) ESTABLISHED IN THE PLANS FOR FLOATING TURBIDITY BARRIERS TO BE INSTALLED IN VERTICAL POSITION UNLESS OTHERWISE DIRECTED BY THE DISTRICT.



NOTES:

- INSPECTION SHALL BE FREQUENT AND REPAIR OR REPLACEMENT SHALL BE MADE PROMPTLY AS NEEDED.
- BALES SHALL BE REMOVED WHEN THEY HAVE SERVED THEIR USEFULNESS SO AS NOT TO BLOCK OR IMPEDE STORM FLOW OR DRAINAGE.

HAY BALE BARRIER
NOT TO SCALE

EROSION AND SEDIMENT CONTROL NOTES:

- THE CONTRACTOR IS RESPONSIBLE FOR REMOVING SILT FROM SITE IF NOT REUSABLE ON-SITE AND ASSURING PLAN ALIGNMENT AND GRADE IN ALL WORK AT COMPLETION OF CONSTRUCTION.
- ON-SITE PROTECTION IN ADDITION TO THE ABOVE MUST BE PROVIDED THAT WILL NOT PERMIT SILT TO LEAVE THE PROJECT CONFINES DUE TO UNSEEN CONDITIONS OR ACCIDENTS.
- THE FILTER BARRIER SHALL BE ENTRENCHED AND BACKFILLED. A TRENCH SHALL BE EXCAVATED TO A MINIMUM DEPTH OF 8 INCHES. THE EXCAVATED SOIL SHALL BE BACKFILLED AND COMPACTED AGAINST THE FILTER BARRIER.
- SILT FENCES AND FILTER BARRIERS SHALL BE INSPECTED IMMEDIATELY AFTER EACH RAINFALL AND AT LEAST DAILY DURING PROLONGED RAINFALL. ANY REQUIRED REPAIRS SHALL BE MADE IMMEDIATELY.
- SHOULD THE FABRIC ON A SILT FENCE OR FILTER BARRIER DECOMPOSE OR BECOME INEFFECTIVE PRIOR TO THE END OF THE EXPECTED USABLE LIFE AND THE BARRIER STILL BE NECESSARY, THE FABRIC SHALL BE REPLACED IMMEDIATELY.
- ANY SEDIMENT DEPOSITS REMAINING IN PLACE AFTER THE SILT FENCE OR FILTER BARRIER IS NO LONGER REQUIRED SHALL BE DRESSED TO CONFORM WITH THE EXISTING GRADE, PREPARED AND GRASSED.
- THE CONTRACTOR IS RESPONSIBLE FOR FOLLOWING THE BEST EROSION AND SEDIMENT CONTROL PRACTICES AS OUTLINED IN THE PLANS, SPECIFICATIONS, PERMITS, AND ST. JOHNS RIVER WATER MANAGEMENT DISTRICT CRITERIA.
- FOR ADDITIONAL INFORMATION ON SEDIMENT AND EROSION CONTROL REFER TO STATE OF FLORIDA EROSION AND SEDIMENT CONTROL DESIGNER AND REVIEWER MANUAL (LATEST EDITION).
- ALL DISTURBED AREAS SHALL BE GRASSED, FERTILIZED, WATERED AND MAINTAINED UNTIL A PERMANENT VEGETATIVE COVER IS ESTABLISHED. GRASSING SHALL CONFORM TO THE REQUIREMENTS OF SECTIONS 570 AND 981 THRU 983 OF THE FDOT STANDARD SPECIFICATIONS FOR ROAD AND BRIDGE CONSTRUCTION (LATEST EDITIONS). NOTE THAT OTHER GRASSING ALTERNATIVES MAY BE USED WITH PRIOR DISTRICT APPROVAL.

PERMIT CONDITIONS FOR MANATEE PROTECTION:

- MANATEES ARE EXPECTED TO BE PRESENT AT THIS SITE DURING CONSTRUCTION. THE CONTRACTOR SHALL COMPLY WITH ALL STANDARD MANATEE CONDITIONS IN THE PERMIT.
- SILTATION OR TURBIDITY BARRIERS SHALL BE MADE OF MATERIAL IN WHICH MANATEES CANNOT BECOME ENTANGLED, SHALL BE PROPERLY SECURED, AND SHALL BE REGULARLY MONITORED TO AVOID MANATEE ENTANGLEMENT OR ENTRAPMENT. BARRIERS MUST NOT IMPEDE MANATEE MOVEMENT.
- CONTRACTOR SHALL PROVIDE MANATEE PROTECTION SCREENS WITH A MAXIMUM 8-INCH OPENING FOR ANY AND ALL DEWATERING OUTLET PIPES.

**FOR BID PURPOSES ONLY
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NO.	REVISION	BY	DATE	APPROVED	DATE
1	ISSUED FOR BID	N.J.G.	09/05/23	W.R.C.	09/05/23

UPPER OCKLAWAHA RIVER BASIN
APOPKA LOCK AND DAM MANATEE SCREENS
LAKE COUNTY, FLORIDA

ST. JOHNS RIVER WATER MANAGEMENT DISTRICT P.O. BOX 1429 PALATKA, FLORIDA		
DRAWN: N.J.G.	DATE: SEPTEMBER 5, 2023	REVIEWER: W.R.C.
SCALE: AS NOTED	DESIGNER: W.R.C.	SECTION CHIEF: W.R.C.

EROSION AND SEDIMENT CONTROL

CERTIFICATION:	
WILLIAM R. COTE	
P.E. NUMBER: 53746	
DATE: SEPTEMBER 5, 2023	

FILE NAME: EROSION AND SEDIMENT.dwg
PROJECT NO.:
SHEET: C3

GENERAL NOTES:

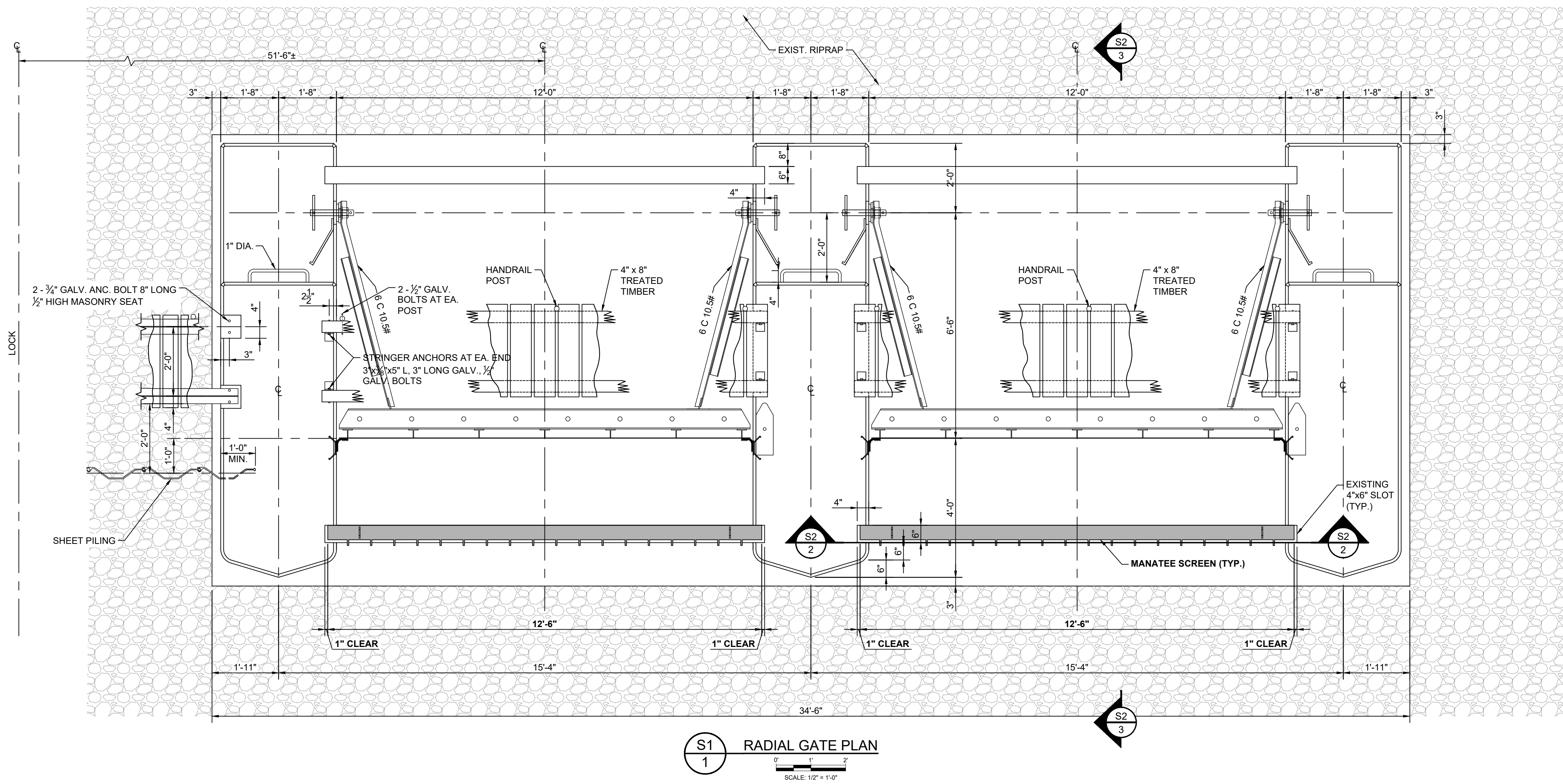
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MANATEE SCREEN NOTES:

1. STRUCTURAL STEEL DESIGN, FABRICATION, AND ERECTION SHALL BE IN ACCORDANCE WITH THE AMERICAN INSTITUTE OF STEEL CONSTRUCTION (AISC) SPECIFICATION FOR THE DESIGN, FABRICATION AND ERECTION OF STRUCTURAL STEEL FOR BUILDINGS, LATEST EDITION.
2. WELDING SHALL BE IN ACCORDANCE WITH THE AMERICAN WELDING SOCIETY (AWS) STRUCTURAL WELDING CODE AWS D1.1.
3. ALL STRUCTURAL AND MISCELLANEOUS STEEL SHALL BE NEW AND CONFORM TO THE REQUIREMENTS OF THE AMERICAN SOCIETY OF TESTING AND MATERIALS (ASTM) STANDARD A36 UNLESS NOTED OTHERWISE.
4. ALL BOLTS, NUTS AND WASHERS SHALL BE STAINLESS STEEL CONFORMING TO ASTM A276, TYPE 304, UNLESS NOTED OTHERWISE. THE SIZE AND LOCATION OF REPLACEMENT BOLTS SHALL MATCH EXISTING.
5. ALL WELDING SHALL UTILIZE E70XX LOW-HYDROGEN ELECTRODES UNLESS NOTED OTHERWISE.
6. THE CONTRACTOR SHALL FIELD VERIFY ALL DIMENSIONS PRIOR TO FABRICATION OF THE SCREENS AND SUBMIT SHOP DRAWINGS TO THE DISTRICT FOR REVIEW AND APPROVAL.
7. THE SCREEN ASSEMBLIES SHALL BE GALVANIZED IN ACCORDANCE WITH ASTM A123 STANDARD SPECIFICATION FOR ZINC (HOT-DIP GALVANIZED) COATINGS ON IRON AND STEEL PRODUCTS.
8. ALL UNDERWATER CONCRETE ANCHORS SHALL UTILIZE THE HILTI HIT-RE 500-SD EPOXY ADHESIVE ANCHORING SYSTEM, OR EQUAL. THREADED ANCHOR RODS, SHALL BE 3/4" DIA. X 8-1/2" LONG HAS-R 316 STAINLESS STEEL WITH A MINIMUM EMBEDMENT DEPTH OF 6-3/4". NUTS AND WASHERS SHALL ALSO BE SS-316.
9. FIELD CORRECTING OF FABRICATED STEEL SHALL NOT BE PERMITTED ON STRUCTURAL MEMBERS WITHOUT PRIOR APPROVAL OF THE ENGINEER.

STEEL BULKHEAD NOTES:


1. THE CONTRACTOR SHALL INSTALL UPSTREAM AND DOWNSTREAM STEEL BULKHEADS PRIOR TO INSTALLING LOCK BARRIERS. THE BULKHEADS ARE CURRENTLY STORED ONSITE ADJACENT TO THE LOCK. THE UPSTREAM BULKHEAD IS 16'-2" WIDE X 10'-0" TALL. THE DOWNSTREAM BULKHEAD IS 15'-6" WIDE X 12'-0" TALL.
2. THE CONTRACTOR SHALL BE RESPONSIBLE FOR SEALING THE JOINTS FOR DEWATERING THE LOCK. THE USE OF DIVERS WILL BE REQUIRED FOR SEALING THE JOINTS AND CLEANING OUT THE LOCK BOTTOM SLOTS OF ANY SEDIMENT AND DEBRIS.
3. UPON COMPLETION OF CONSTRUCTION, THE CONTRACTOR SHALL REMOVE THE BULKHEADS AND REPLACE THEM TO THEIR STORAGE LOCATION ADJACENT TO THE LOCK.



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LAKE COUNTY, FLORIDA

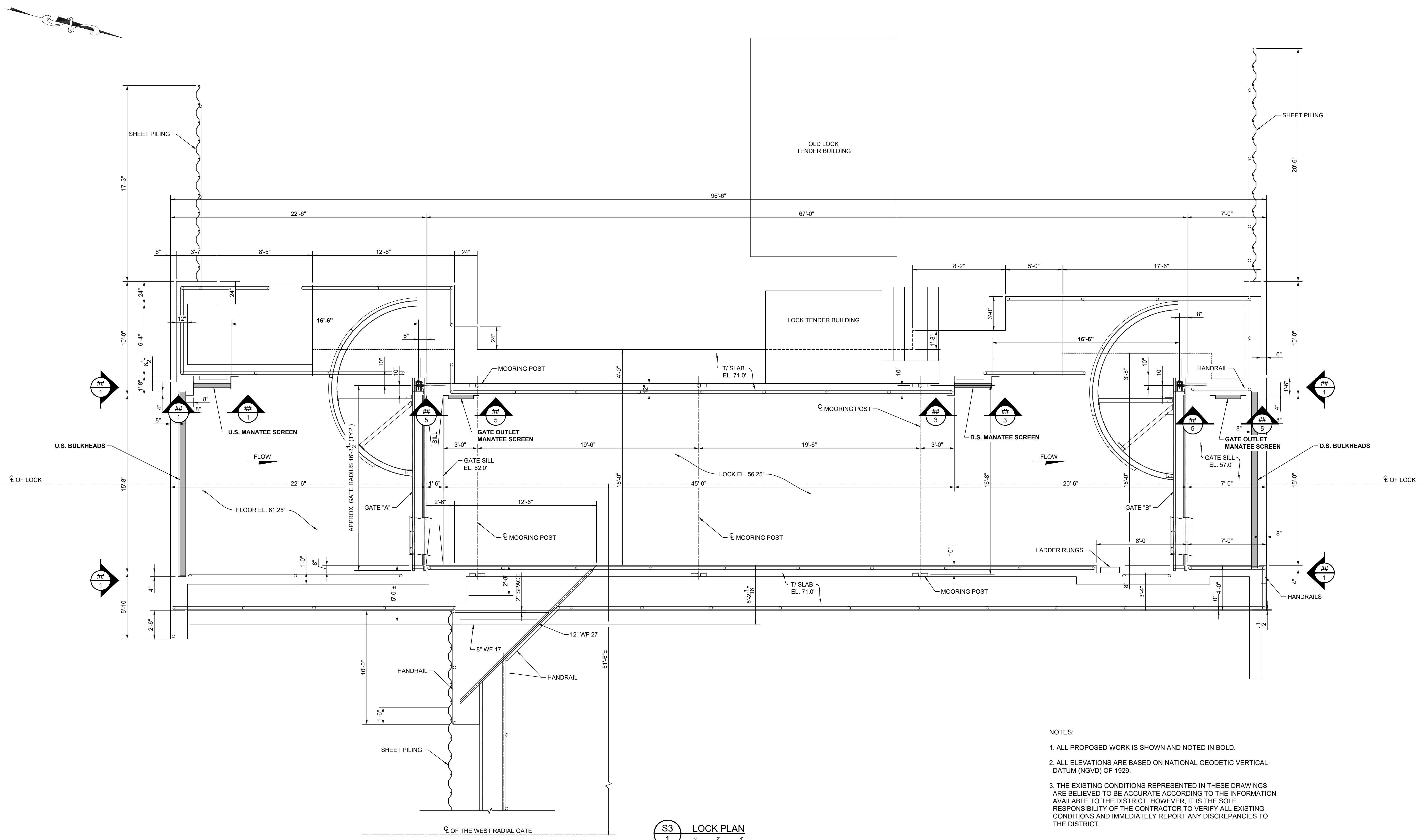

ST. JOHNS RIVER WATER MANAGEMENT DISTRICT
 P.O. BOX 1429 PALATKA, FLORIDA

DRAWN: N.J.G.	DATE: SEPTEMBER 5, 2023	REVIEWER: W.R.C.
SCALE: 1/2" = 1'-0"	DESIGNER: W.R.C.	SECTION CHIEF: W.R.C.

DAM PLAN AND NOTES

CERTIFICATION:	
WILLIAM R. COTE	
P.E. NUMBER: 53746	
DATE: SEPTEMBER 5, 2023	

FILE NAME: AL&D MTE SCR.N.dwg
PROJECT NO.:
SHEET: S1



- NOTES:
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S3 LOCK PLAN
 1
 SCALE: 1/4" = 1'-0"

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UPPER OCKLAWAHA RIVER BASIN
 APOPKA LOCK AND DAM MANATEE SCREENS
 LAKE COUNTY, FLORIDA

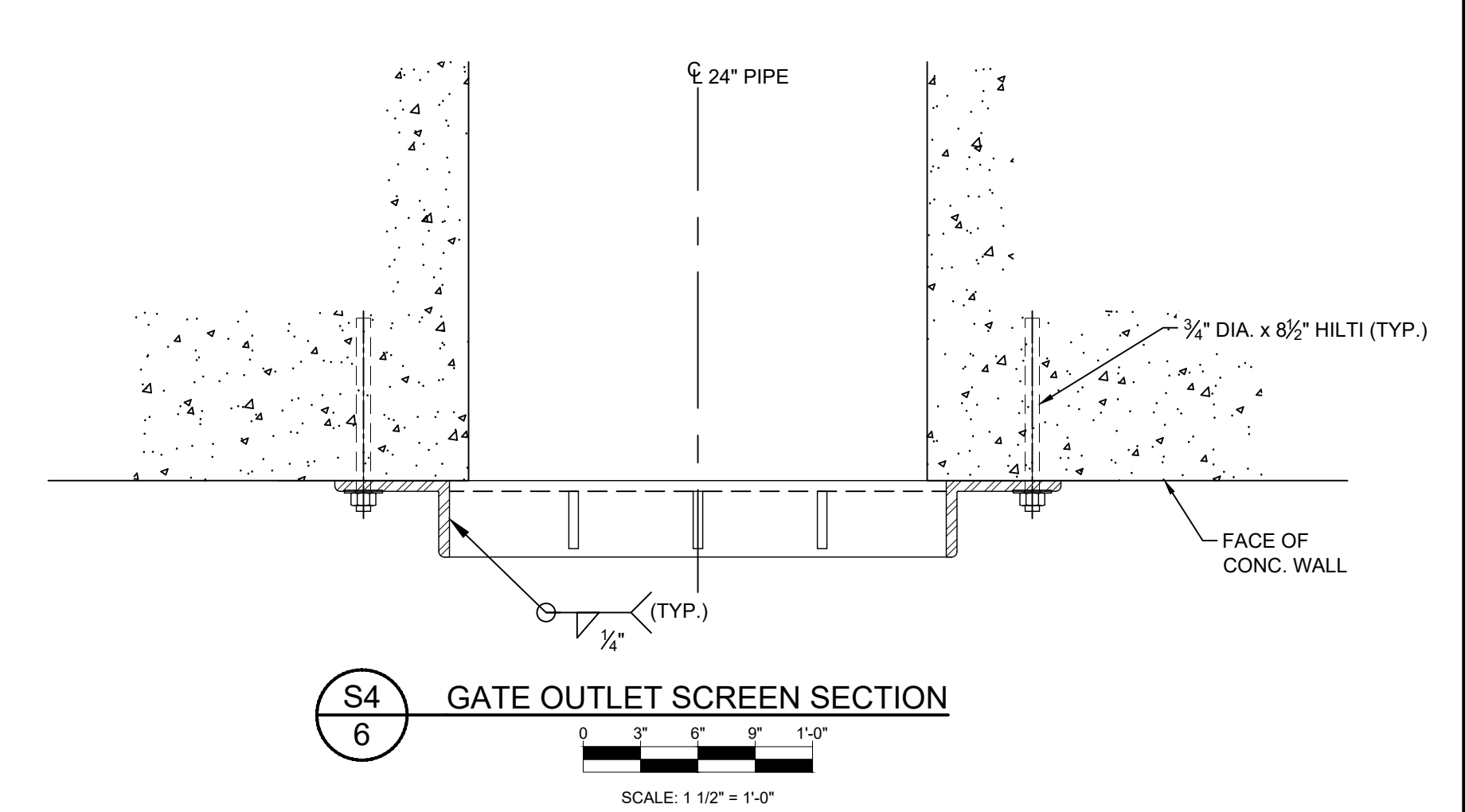
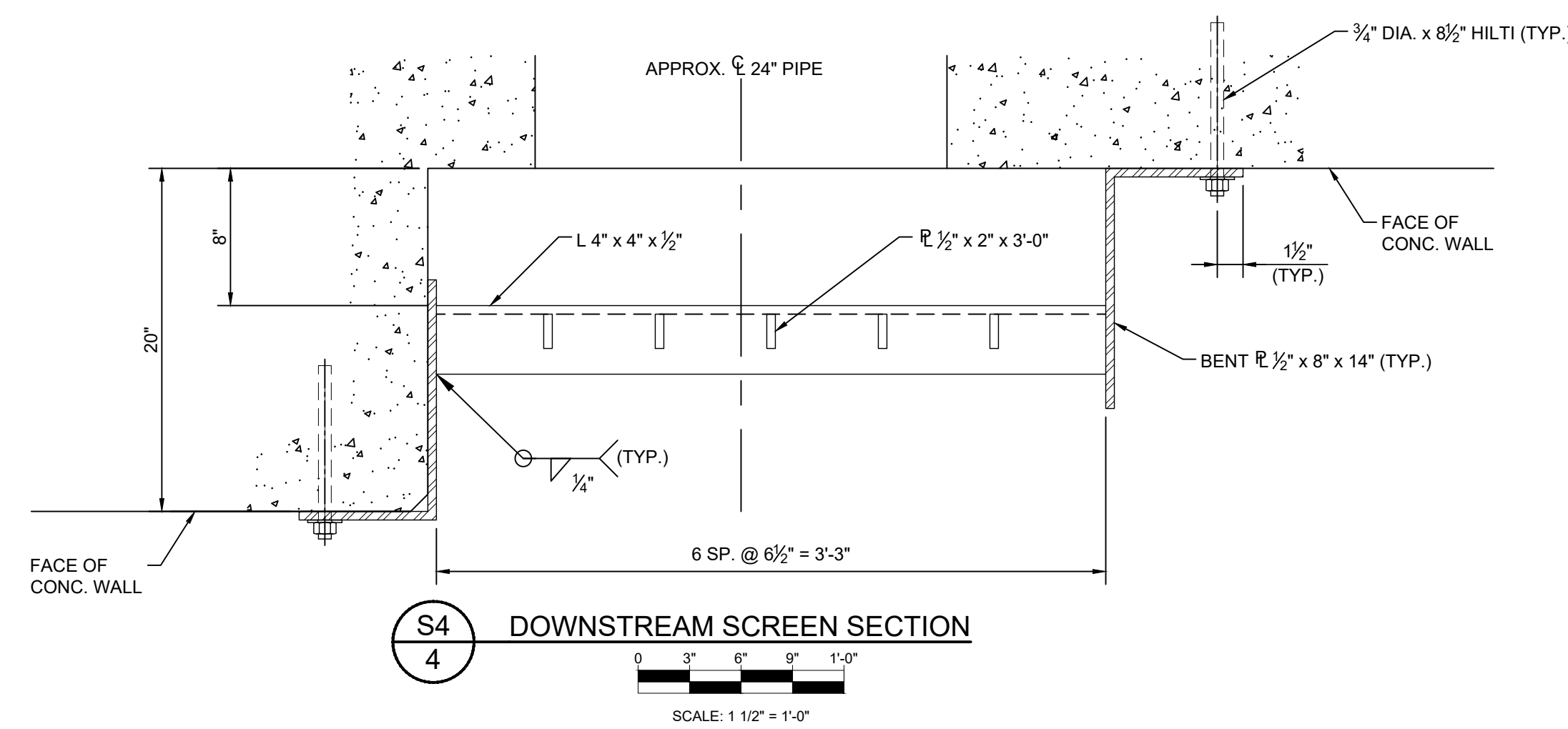
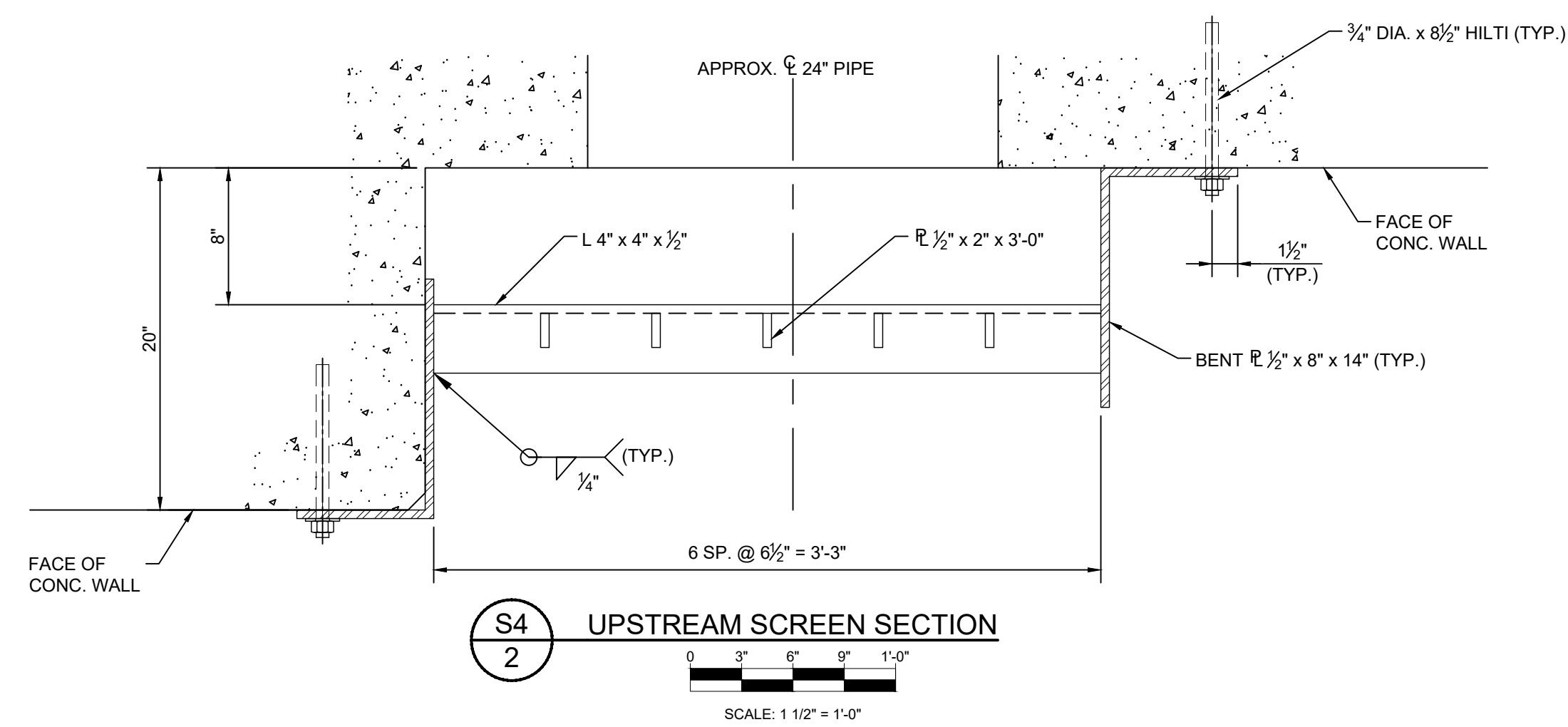
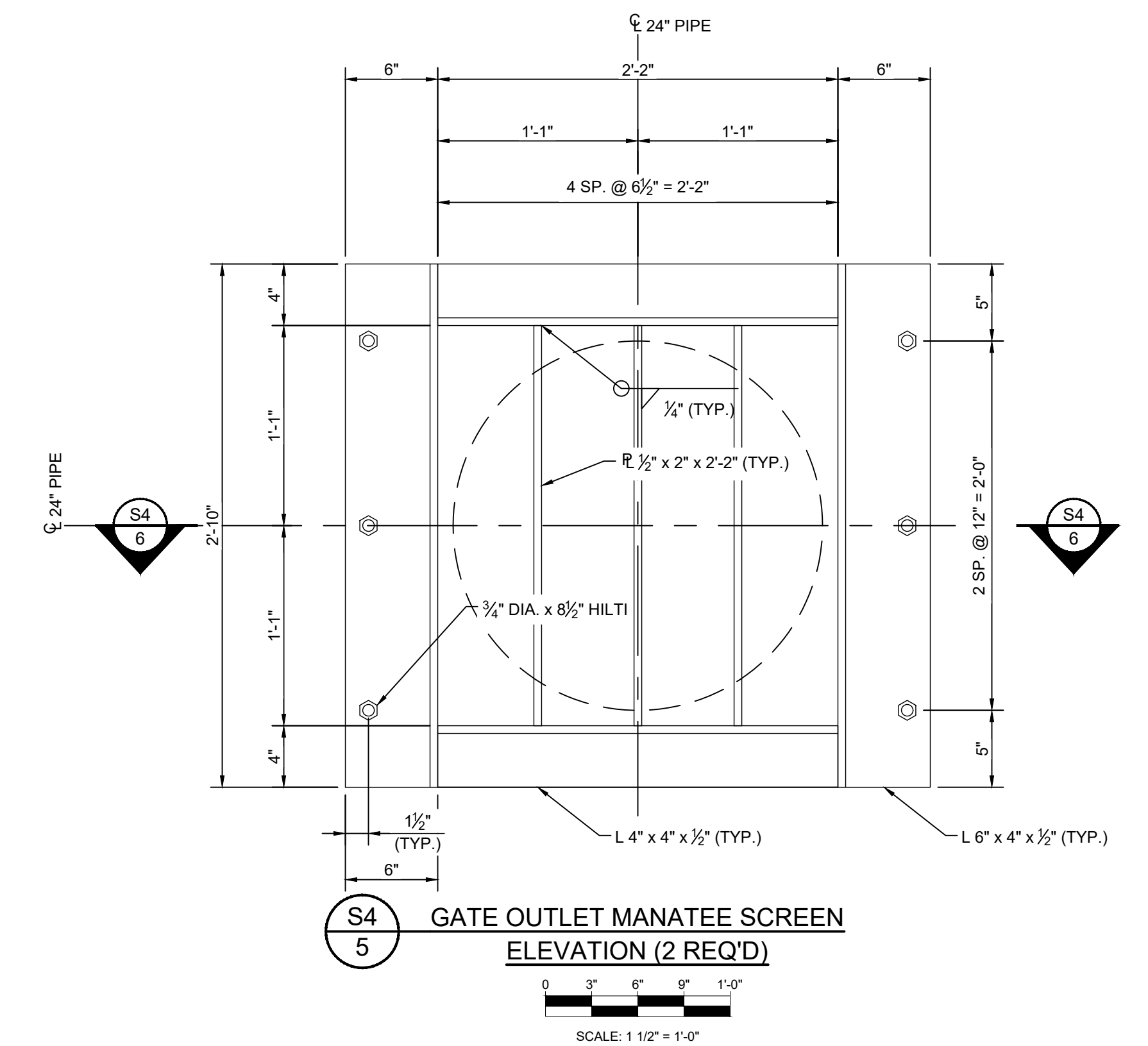
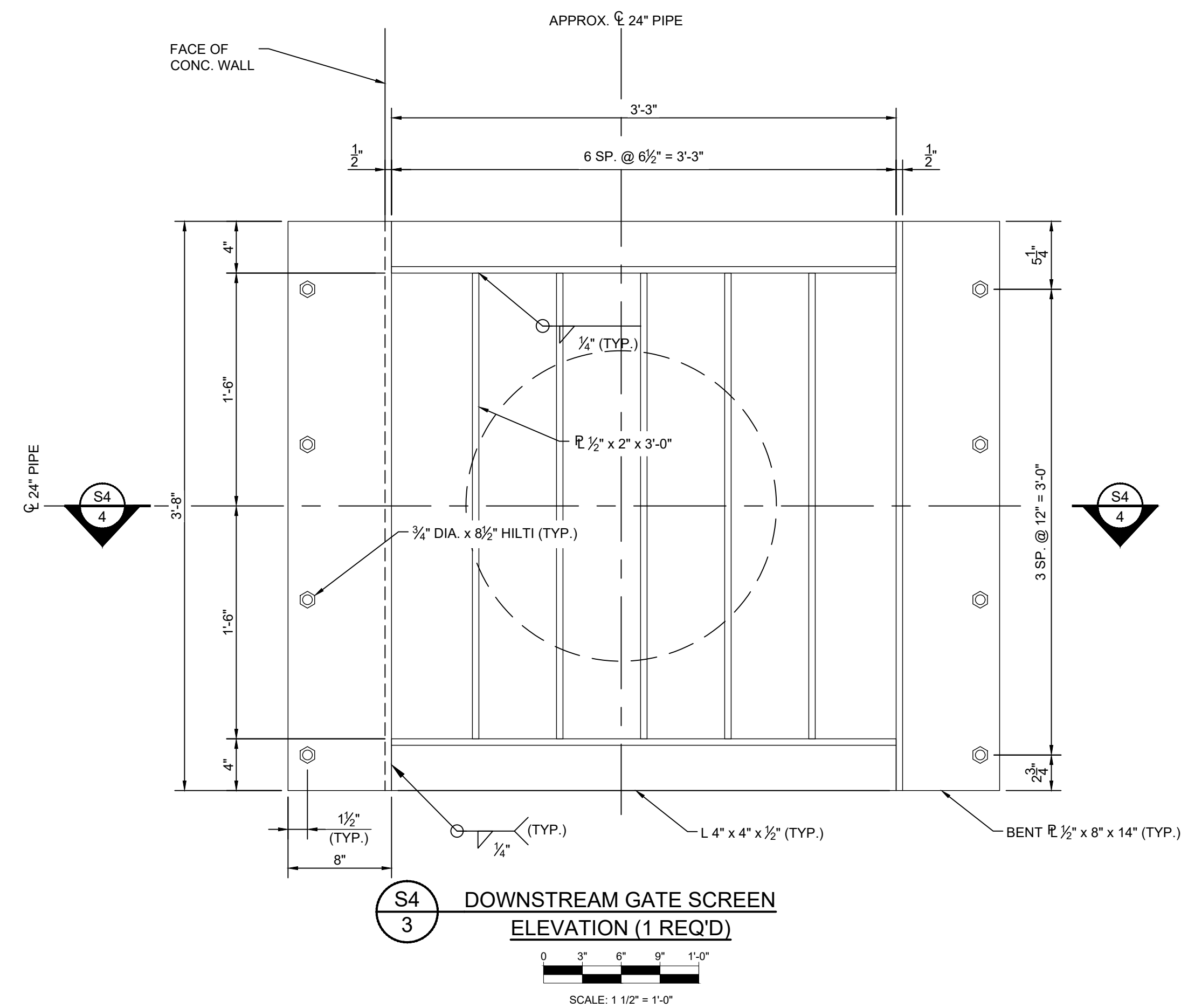
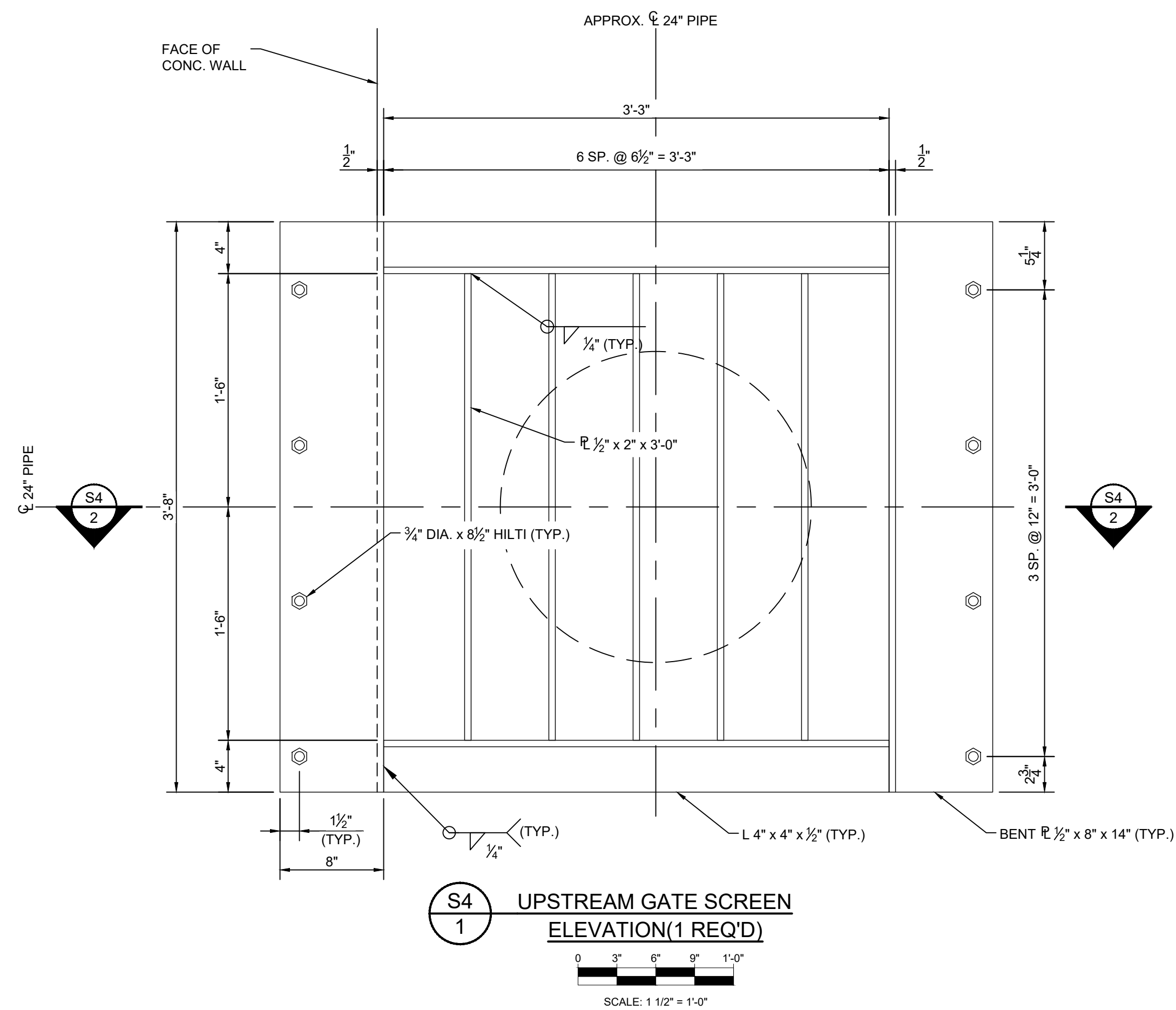
ST. JOHNS RIVER
 WATER MANAGEMENT DISTRICT
 P.O. BOX 1429 PALATKA, FLORIDA

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 SCALE: 1/4" = 1'-0" DESIGNER: W.R.C. SECTION CHIEF: W.R.C.

LOCK STRUCTURE PLAN

CERTIFICATION:
 WILLIAM R. COTE
 P.E. NUMBER: 53746
 DATE: SEPTEMBER 5, 2023

FILE NAME:
 AL&D MTE SCR.N.dwg
 PROJECT NO.:
 SHEET:
 S3



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ISSUED FOR BID	N.J.G.	09/05/23	W.R.C.	09/05/23
NO.	REVISION	BY	DATE	APPROVED

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APOPKA LOCK AND DAM MANATEE SCREENS
LAKE COUNTY, FLORIDA

ST. JOHNS RIVER
WATER MANAGEMENT DISTRICT
P.O. BOX 1429 PALATKA, FLORIDA

DRAWN: N.J.G. DATE: SEPTEMBER 5, 2023 REVIEWER: W.R.C.

SCALE: 1 1/2" = 1'-0" DESIGNER: W.R.C. SECTION CHIEF: W.R.C.

LOCK STRUCTURE MANATEE SCREENS

CERTIFICATION:

WILLIAM R. COTE
P.E. NUMBER: 53746
DATE: SEPTEMBER 5, 2023

FILE NAME:
AL&D MTE SCR.N.dwg

PROJECT NO.:

SHEET:
S4