

CONSTRUCTION PLANS

FOR

SEWRF RECLAIMED PUMP BACK STATION & SEWRF ARC FLASH MITIGATION

MANATEE COUNTY, FLORIDA

MARCH 2020

MANATEE COUNTY PROJECT #6088380/6097680



PROJECT TEAM:

OWNER:
 MANATEE COUNTY
 1022 26TH AVE. E.
 BRADENTON, FL 34208
 CONTACT: ANTHONY BENITEZ, P.E.
 941-708-7450 ext. 7333

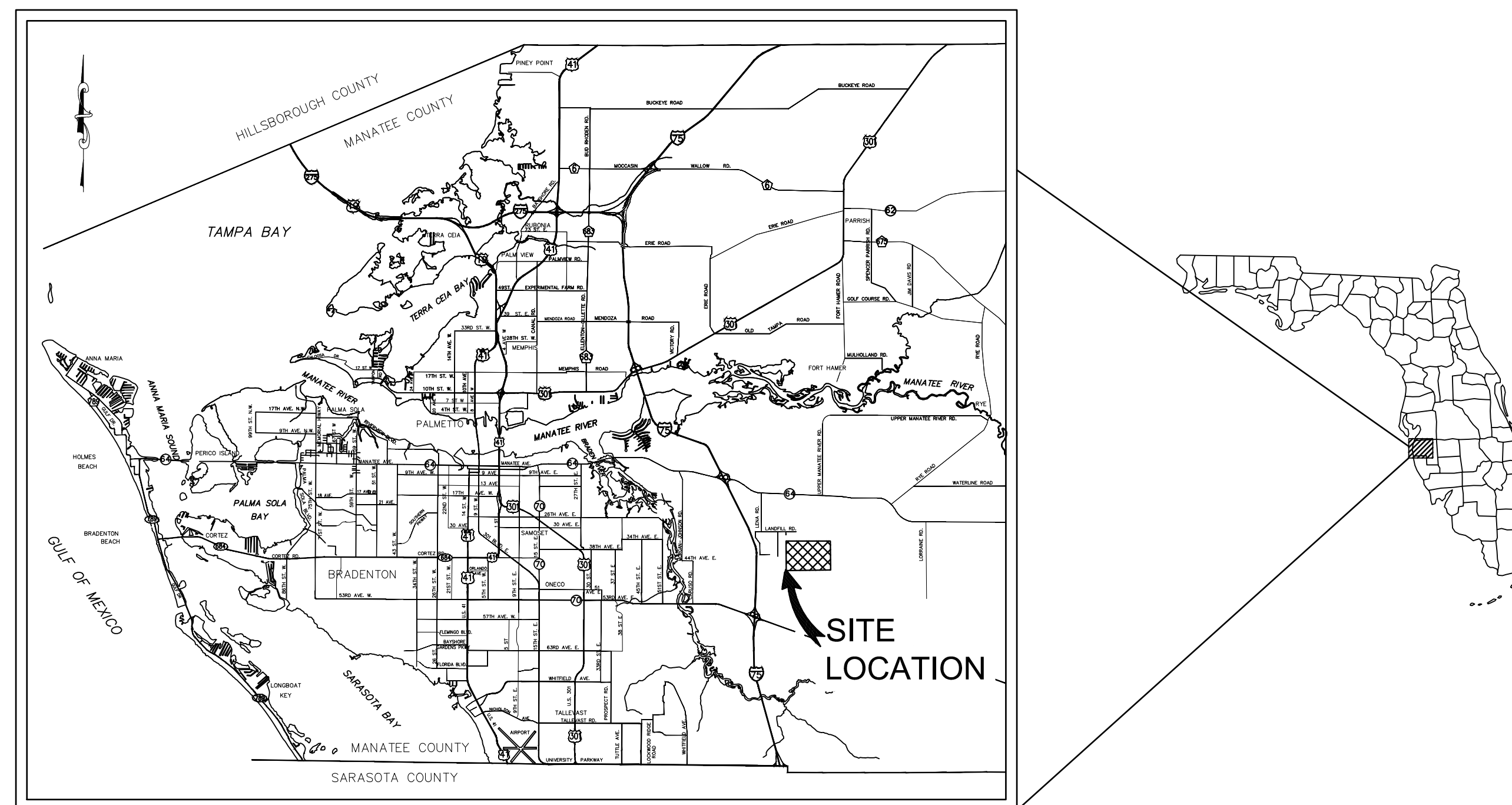
SURVEYOR:
 HYATT SURVEY SERVICES INC.,
 11007 8TH AVENUE EAST
 BRADENTON, FLORIDA 34212
 CONTACT: JOHN MATTHEWS
 941-748-4693

ENGINEER:
 KIMLEY-HORN AND ASSOCIATES, INC.
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 ST. PETERSBURG, FL 33701
 CONTACT: STEPHEN N. ROMANO, P.E.
 727-547-3999

GEOTECH:
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 CONTACT: ROSS T. MCGILLIVRAY, P.E.
 813-620-3389

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 TRICON ENGINEERING
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 TAMPA, FL 33602
 CONTACT: TIMOTHY THOMAS, P.E.
 813-227-9190

ECOLOGY:
 QUEST ECOLOGY INC.
 735 LAKEVIEW DRIVE
 WIMAUMA, FLORIDA 33598
 CONTACT: LEE COOK
 813-765-6209



PROJECT VICINITY MAP
 N.T.S.

BID SET

PREPARED BY
Kimley»Horn

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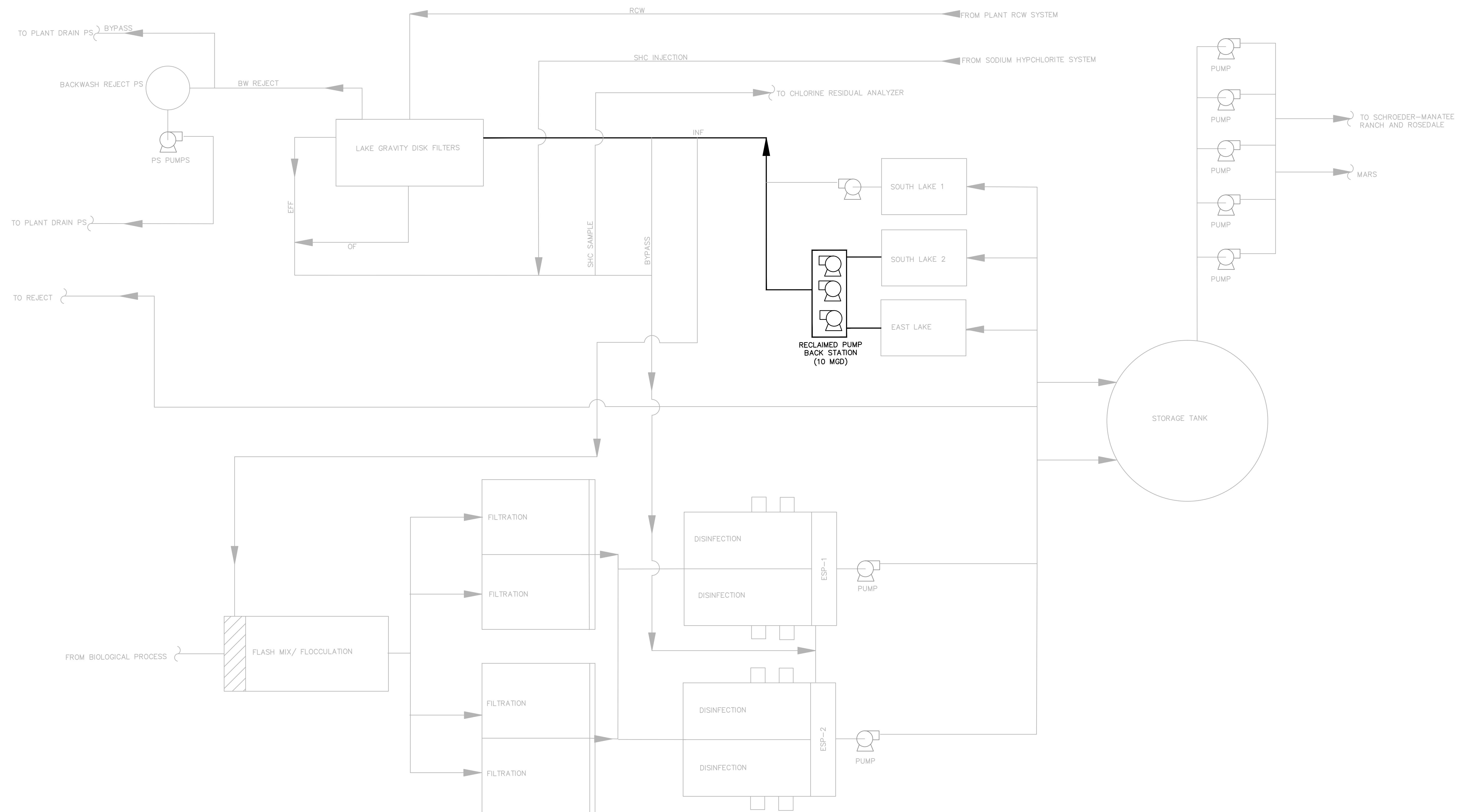
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STEPHEN N. ROMANO, P.E.
 FLORIDA LICENSE NUMBER:
 57579
 DATE:

DATE
 MARCH 2020
 KHA PROJECT NO.
 148400015
 SHEET NUMBER
 G-1

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KHA PROJECT
 148400015
 DATE
 1/28/2020
 SCALE AS SHOWN
 DESIGNED BY SNR
 DRAWN BY ASR
 CHECKED BY WEW


**SEWRF RECLAIMED
 PUMP BACK STATION**
 MANATEE COUNTY

LICENSED PROFESSIONAL
 STEPHEN N. ROMANO, P.E.
 FL LICENSE NUMBER
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 FL DATE:

PROCESS FLOW DIAGRAM

SHEET NUMBER
G-3



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KHA PROJECT
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Manatee County
FLORIDA

**SEWRF RECLAIMED
PUMP BACK STATION**

MANATEE COUNTY

LICENSED PROFESSIONAL

STEPHEN N. ROMANO, P.E.

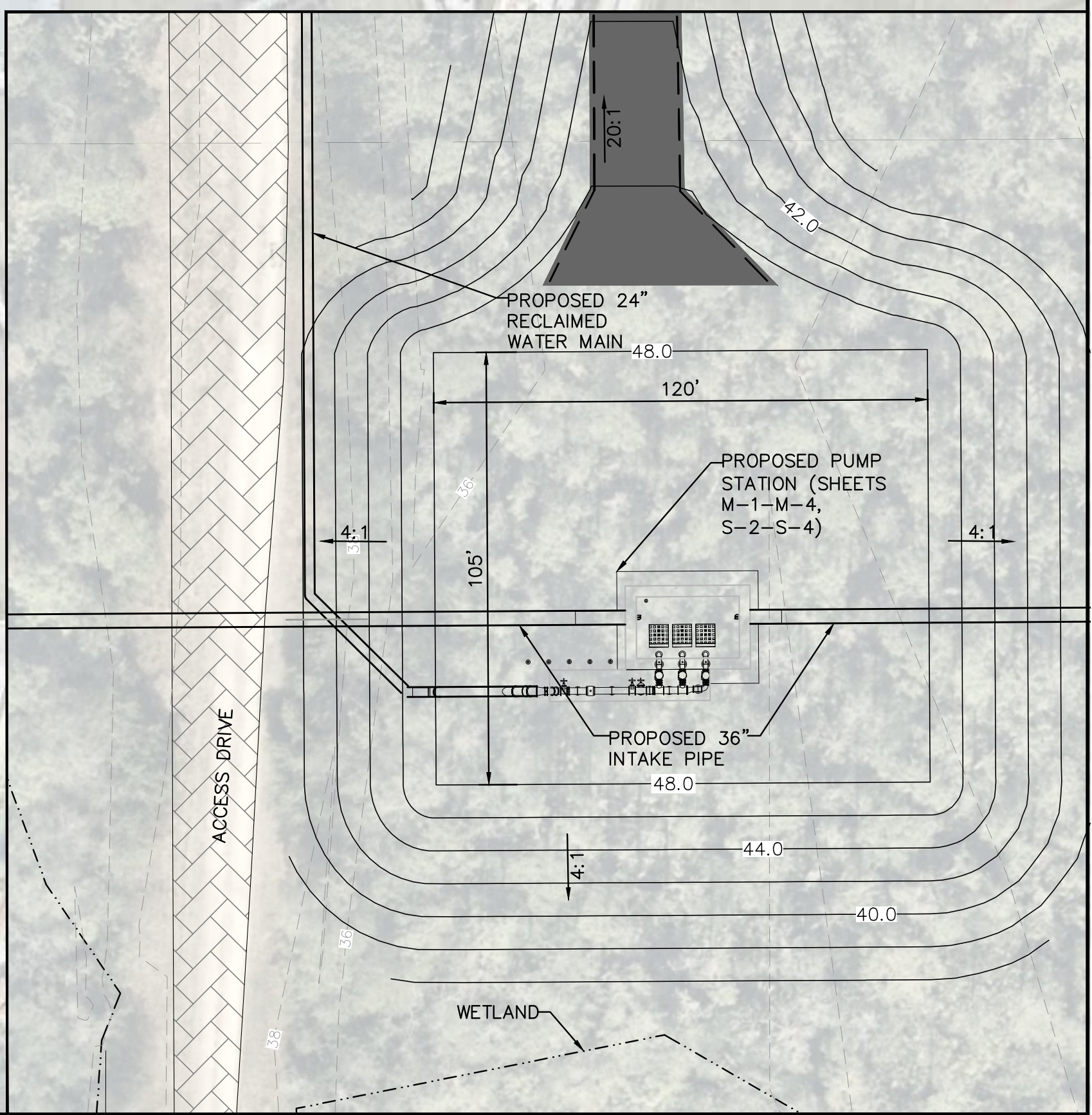
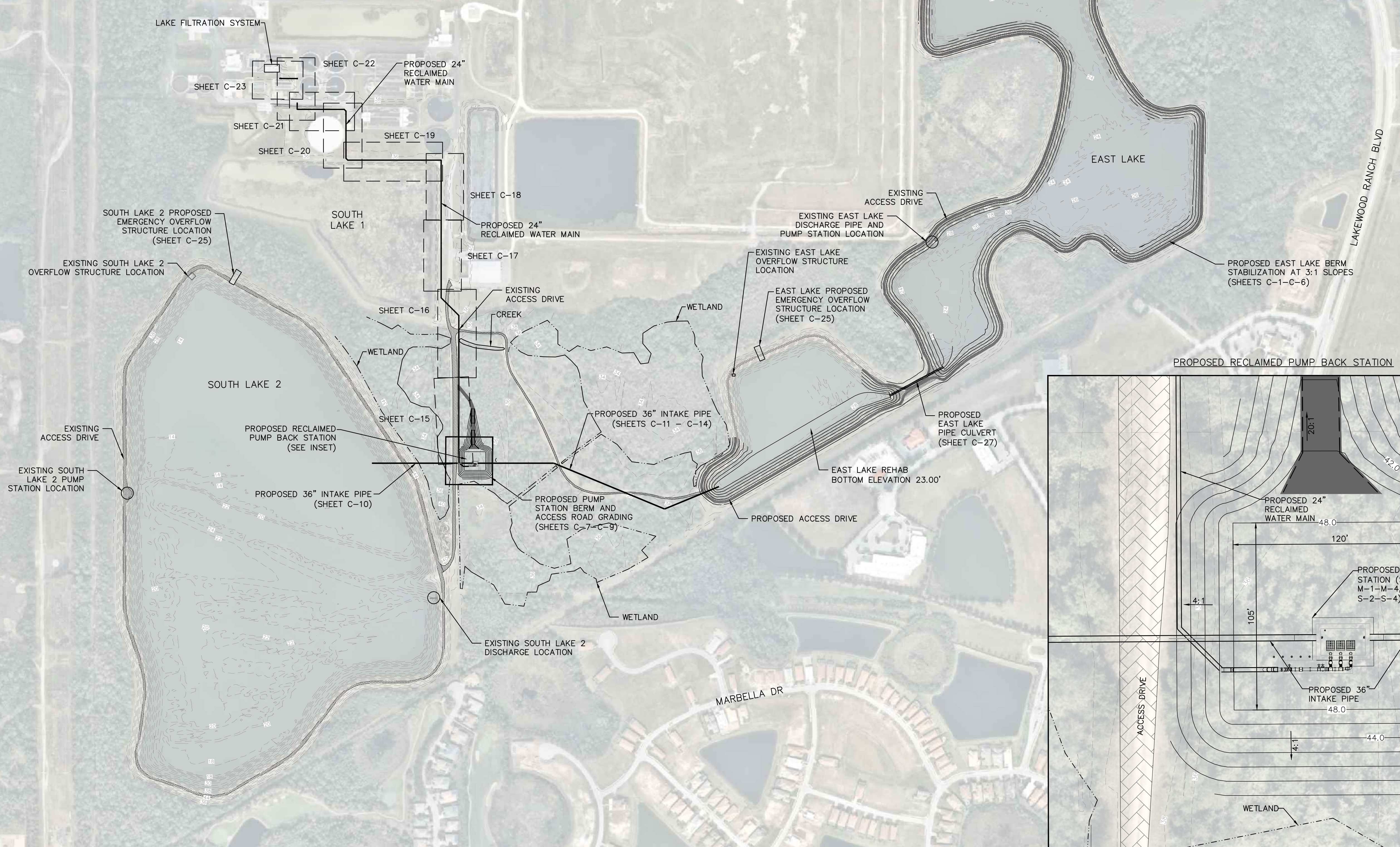
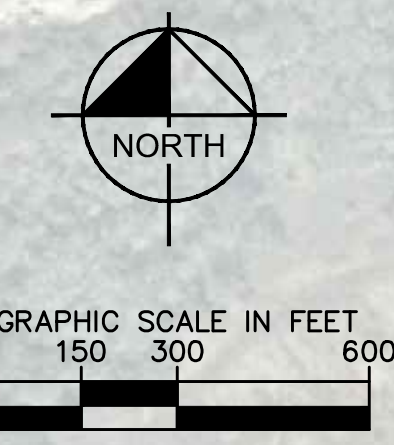
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EXISTING SITE PLAN

SHEET NUMBER
G-4

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Manatee County
FLORIDA

SEWRF RECLAIMED PUMP BACK STATION

MANATEE COUNTY

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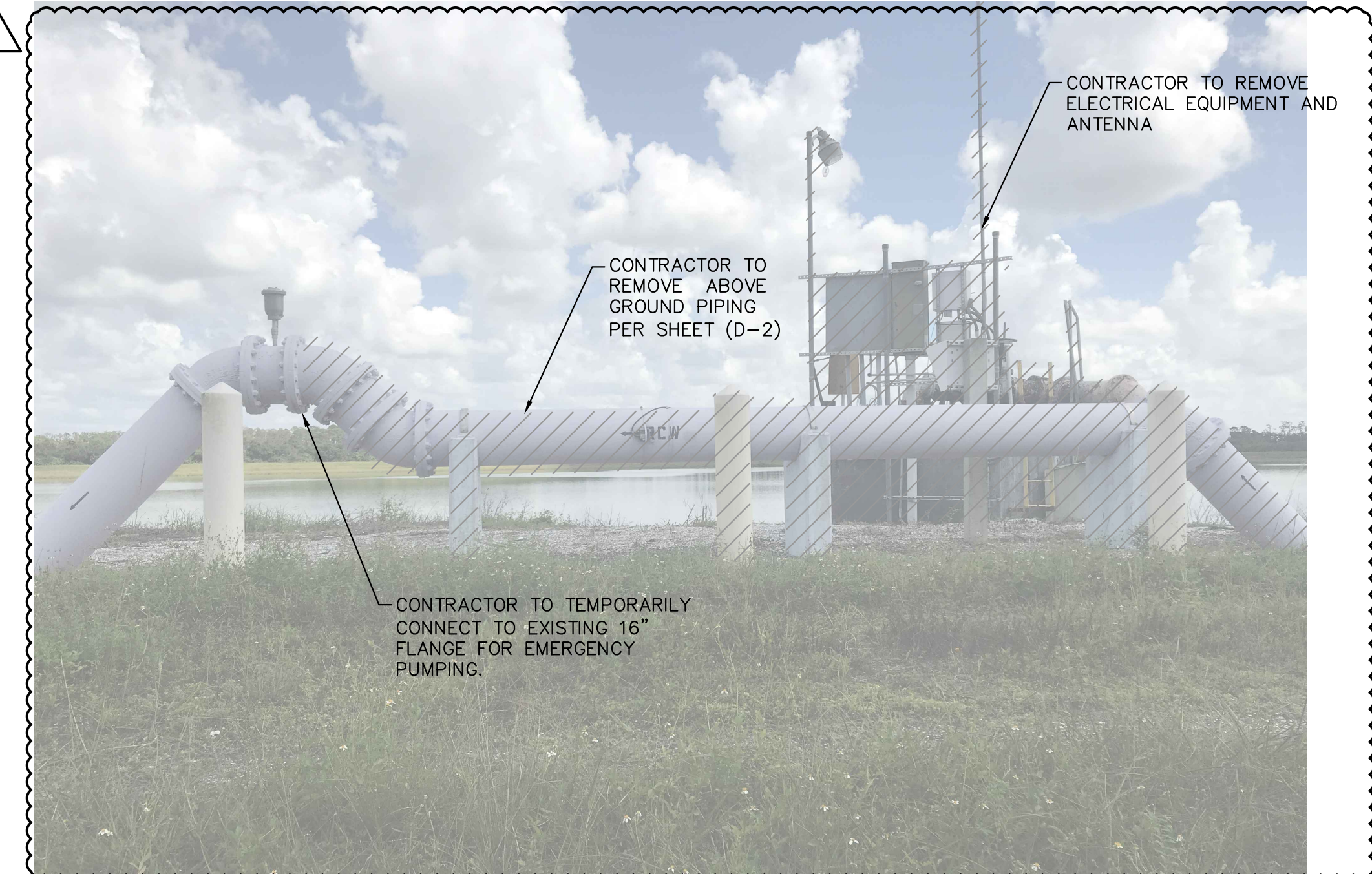
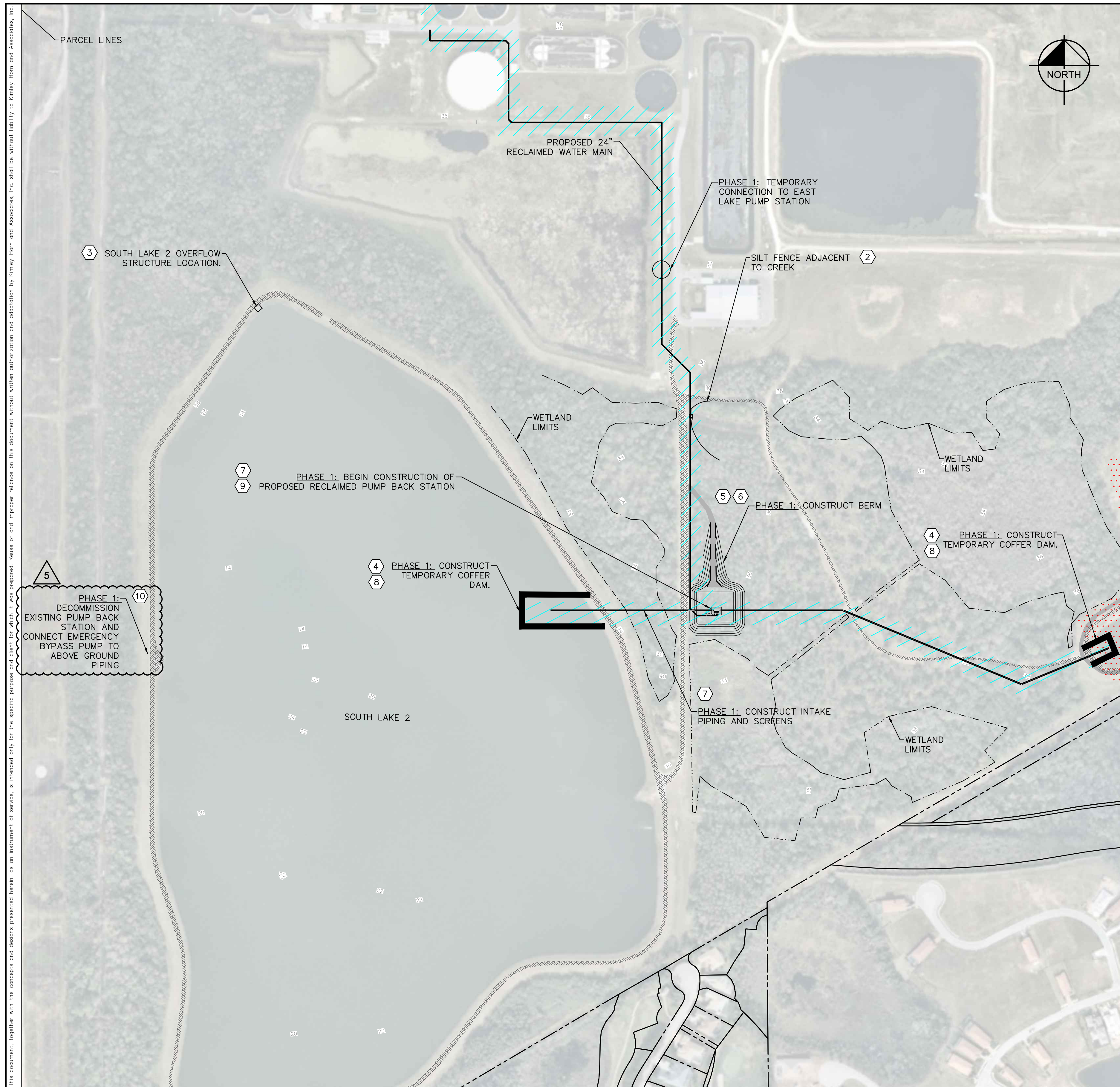
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PROPOSED SITE PLAN

SHEET NUMBER
G-5



PHASE 1

- ① INSTALL SWPPP INFORMATION SIGN NEAR PLANNED CONSTRUCTION ENTRANCE AND WITHIN EASY ACCESS TO THE GENERAL PUBLIC WITHOUT ENTERING THE CONSTRUCTION SITE.
- ② INSTALL SILT FENCE AS NECESSARY FOR PHASE 1 CONSTRUCTION ACTIVITIES.
- ③ INSTALL STOP LOGS IN SOUTH LAKE 2 OVERFLOW STRUCTURE TO BLOCK ANY DISCHARGE.
- ④ CONSTRUCT TEMPORARY COFFER DAM IN SOUTH LAKE 2 AND EAST LAKE TO CONSTRUCT INTAKE SCREENS AND ASSOCIATED PIPING.
- ⑤ CONSTRUCT BERM LEADING FROM THE ACCESS ROAD TO THE PROPOSED RECLAIMED PUMP BACK STATION.
- ⑥ PERMANENTLY STABILIZE WITH VEGETATIVE COVER, TO PREVENT EROSION AND SEDIMENT LOSS, IMMEDIATELY FOLLOWING THE COMPLETION OF BERMS AND FILL LOCATIONS AS AREAS ARE BROUGHT TO FINAL GRADE (SEE NOTE 2 BELOW).
- ⑦ CONSTRUCT INTAKE PIPING, DISCHARGE PIPING, RECLAIMED PUMP BACK STATION INCLUDING ALL ASSOCIATED PIPING AND APPURTENANCES. PERMANENTLY STABILIZE AS WORK PROGRESSES.
- ⑧ REMOVE TEMPORARY COFFER DAMS.
- ⑨ START UP AND TEST THE PROPOSED RECLAIMED PUMP BACK STATION AND PLACE INTO SERVICE (SLUICE GATE FOR SOUTH LAKE 2 TO REMAIN CLOSED.)
- ⑩ AFTER SUCCESSFUL START-UP OF THE RECLAIMED PUMP STATION AND APPROVAL BY MANATEE COUNTY, DECOMMISSION EXISTING SOUTH LAKE 2 RECLAIMED PUMP BACK STATION OR BYPASS OPERATIONS (SEE PHOTO THIS SHEET).

NOTE:
 1. DEWATERING EFFLUENT SHALL NOT BE PERMITTED TO LEAVE THE CONSTRUCTION SITE. CONTRACTOR TO DEWATER TO TEMPORARY SEDIMENT BASIN AS IDENTIFIED IN THE PHASING SCHEDULE. CONTRACTOR TO ENGAGE EMERGENCY PUMP TO RECLAIMED WATER RECLAMATION FACILITY, AS REQUIRED, TO MAINTAIN WATER LEVEL WITHIN SEDIMENT BASIN.
 2. CONTRACTOR SHALL STABILIZE AREAS WITHIN 7 DAYS AFTER CONSTRUCTION ACTIVITIES HAVE TEMPORARILY OR PERMANENTLY CEASED FOR ANY PORTION OF THE SITE. PERMANENT STABILIZATION AT SLOPPED AREAS SHALL CONSIST OF SOD OR SEED WITH SLOPE BLANKET STABILIZATION. CONTRACTOR SHALL BE RESPONSIBLE FOR ACHIEVING FINAL STABILIZATION WITH A DENSITY OF AT LEAST 70% AS DEFINED IN THE FDEP GENERIC PERMIT

5	ADDENDUM 5	5/26/2020	SNR
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 MANATEE COUNTY

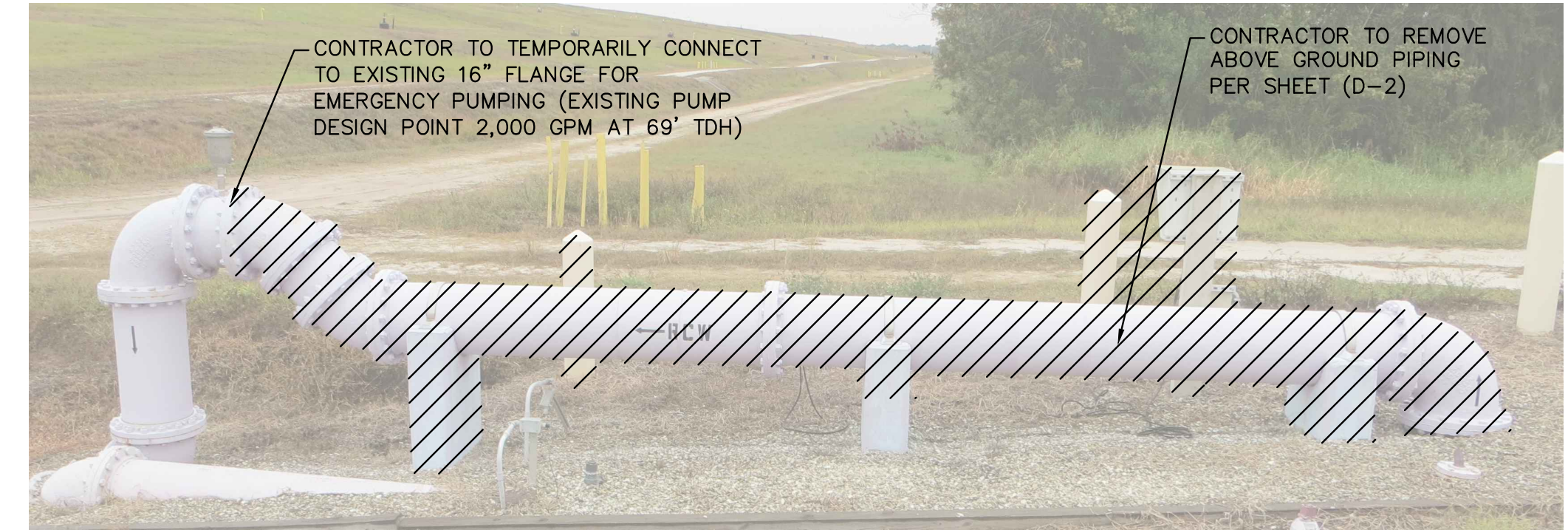
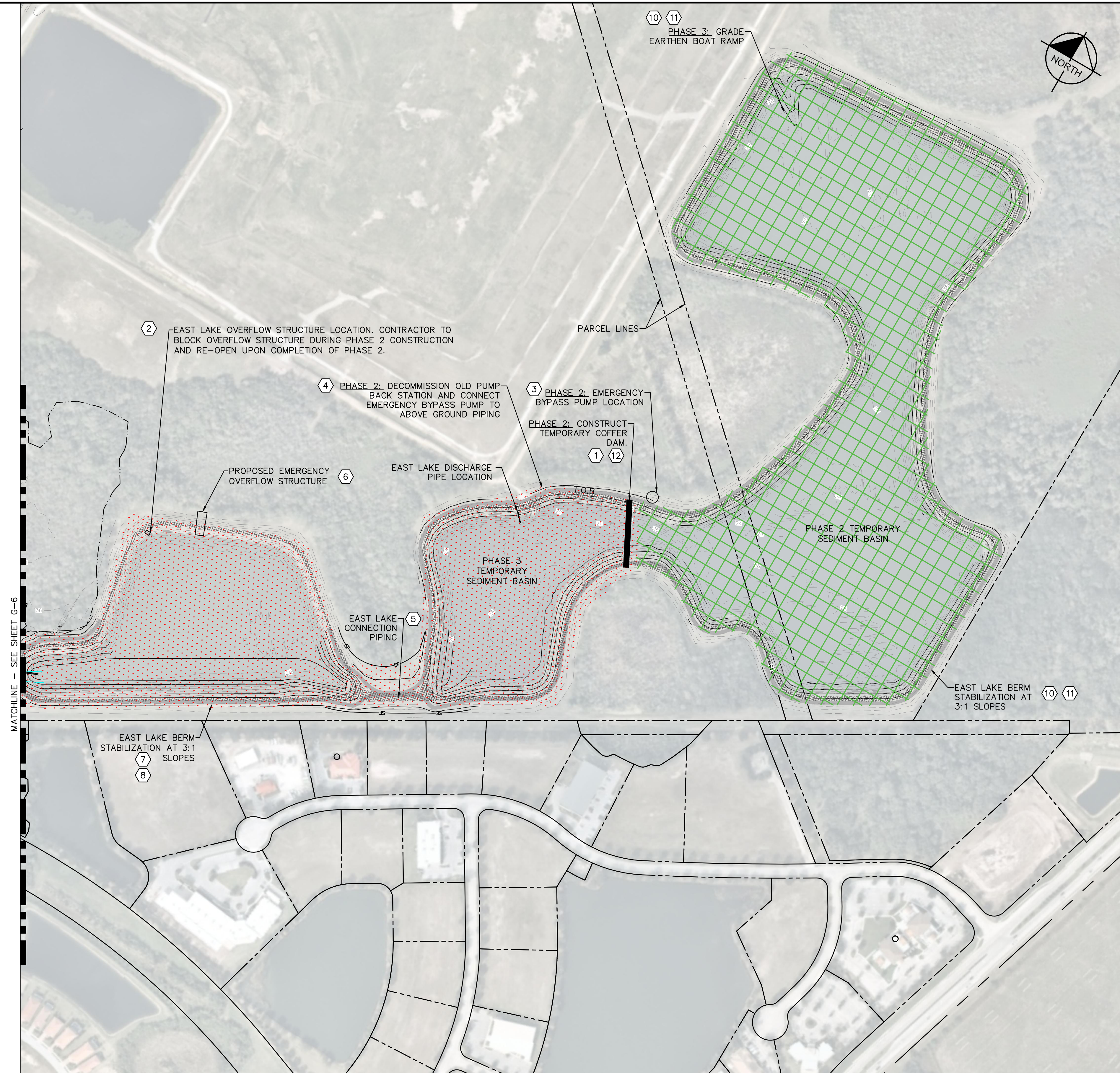
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**EROSION CONTROL AND
 CONSTRUCTION PHASING PLAN
 PHASE 1**

SHEET NUMBER
G-6

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EAST LAKE TEMPORARY EMERGENCY PUMPING CONNECTION

- PHASE 2
1. CONSTRUCT TEMPORARY COFFER DAM IN EAST LAKE (DEWATER INTO PHASE 2 TEMPORARY SEDIMENT BASIN). CONTRACTOR SHALL FOLLOW RECOMMENDATIONS OF GEOTECHNICAL REPORT NO. 17-7261 DATED SEPTEMBER 2018.
 2. INSTALL STOP LOGS IN EAST LAKE OVERFLOW STRUCTURE TO BLOCK ANY DISCHARGE.
 3. CONSTRUCT TEMPORARY EMERGENCY PUMP STATION ON NORTH EAST SIDE OF TEMPORARY COFFER DAM. CONNECT PUMP STATION TO EXISTING ABOVE GROUND PIPING (SEE PHOTO THIS SHEET). TEMPORARY/EMERGENCY PUMP STATION SHALL BE ABLE TO OPERATE TO PREVENT WATER FROM OVERFLOWING DISCHARGE STRUCTURE.
 4. DEMOLISH EAST LAKE RECLAIMED PUMP STATION AND EXISTING DISCHARGE STRUCTURE. REBUILD BERM TO MATCH PROPOSED GRADES.
 5. CONSTRUCT EAST LAKE CONNECTION PIPING AND REGRADE THE BOTTOM OF EAST LAKE (SUITABLE SOILS TO BE PLACED IN PROPOSED EARTHEN BERM AREA).
 6. CONSTRUCT EMERGENCY OVERFLOW STRUCTURE AND DISCHARGE STRUCTURE.
 7. REGRADE BERMS IN THE SOUTHERN PORTION OF EAST LAKE, WEST OF THE TEMPORARY COFFER DAM (SUITABLE SOILS TO BE PLACE IN PROPOSED EARTHEN BERM AREA).
 8. PERMANENTLY STABILIZE WITH VEGETATIVE COVER, TO PREVENT EROSION AND SEDIMENT LOSS, IMMEDIATELY FOLLOWING THE COMPLETION OF BERMS AND FILL LOCATIONS AS AREAS ARE BROUGHT TO FINAL GRADE (SEE NOTE 2 BELOW).
- PHASE 3
9. DEWATER NORTHERN PORTION OF EAST LAKE INTO PHASE 3 TEMPORARY SEDIMENT BASIN. CONTRACTOR SHALL FOLLOW RECOMMENDATIONS OF GEOTECHNICAL REPORT NO. 17-7261 DATED SEPTEMBER 2018. OPEN EAST LAKE SLIDE GATE AT NEW RECLAIMED PUMP BACK STATION.
 10. REGRADE BERMS AND GRADE THE EARTHEN BOAT RAMP IN THE NORTHERN PORTION OF EAST LAKE, EAST OF THE TEMPORARY COFFER DAM (SUITABLE SOILS TO BE PLACE IN PROPOSED EARTHEN BERM AREA).
 11. PERMANENTLY STABILIZE VEGETATIVE COVER, TO PREVENT EROSION AND SEDIMENT LOSS, IMMEDIATELY FOLLOWING THE COMPLETION OF BERMS AND FILL LOCATIONS AS AREAS ARE BROUGHT TO FINAL GRADE (SEE NOTE 2 BELOW).
 12. REMOVE THE TEMPORARY COFFER DAM, SILT FENCE AND RE-OPEN EAST LAKE OVERFLOW STRUCTURE.

NOTE:

1. DEWATERING EFFLUENT SHALL NOT BE PERMITTED TO LEAVE THE CONSTRUCTION SITE. CONTRACTOR TO DEWATER TO TEMPORARY SEDIMENT BASIN AS IDENTIFIED IN THE PHASING SCHEDULE. CONTRACTOR TO ENGAGE EMERGENCY PUMP TO RECLAIMED WATER RECLAMATION FACILITY, AS REQUIRED, TO MAINTAIN WATER LEVEL WITHIN SEDIMENT BASIN.
2. CONTRACTOR SHALL STABILIZE AREAS WITHIN 7 DAYS AFTER CONSTRUCTION ACTIVITIES HAVE TEMPORARILY OR PERMANENTLY CEASED FOR ANY PORTION OF THE SITE. PERMANENT STABILIZATION AT SLOPPED AREAS SHALL CONSIST OF SOD OR SEED WITH SLOPE BLANKET STABILIZATION. CONTRACTOR SHALL BE RESPONSIBLE FOR ACHIEVING FINAL STABILIZATION WITH A DENSITY OF AT LEAST 70% AS DEFINED IN THE FDEP GENERIC PERMIT

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SCALE AS SHOWN

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DRAWN BY ASR

CHECKED BY WEW

MANATEE COUNTY

Manatee County FLORIDA

SEWRF RECLAIMED PUMP BACK STATION

FL DATE:

LICENSED PROFESSIONAL

STEPHEN N. ROMANO, P.E.

FL LICENSE NUMBER
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EROSION CONTROL AND CONSTRUCTION PHASING PLAN

PHASE 2 AND 3

SHEET NUMBER

G-7

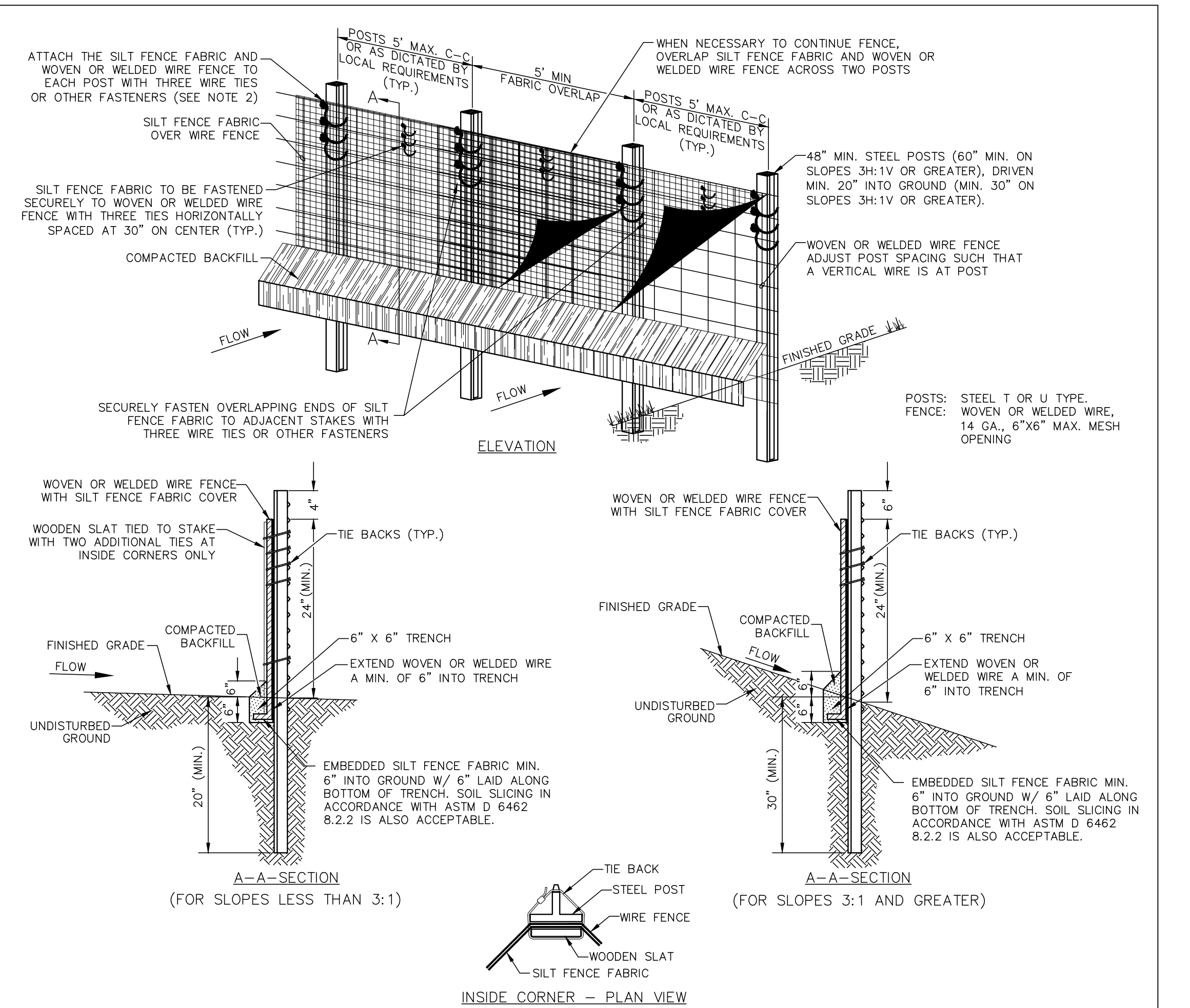
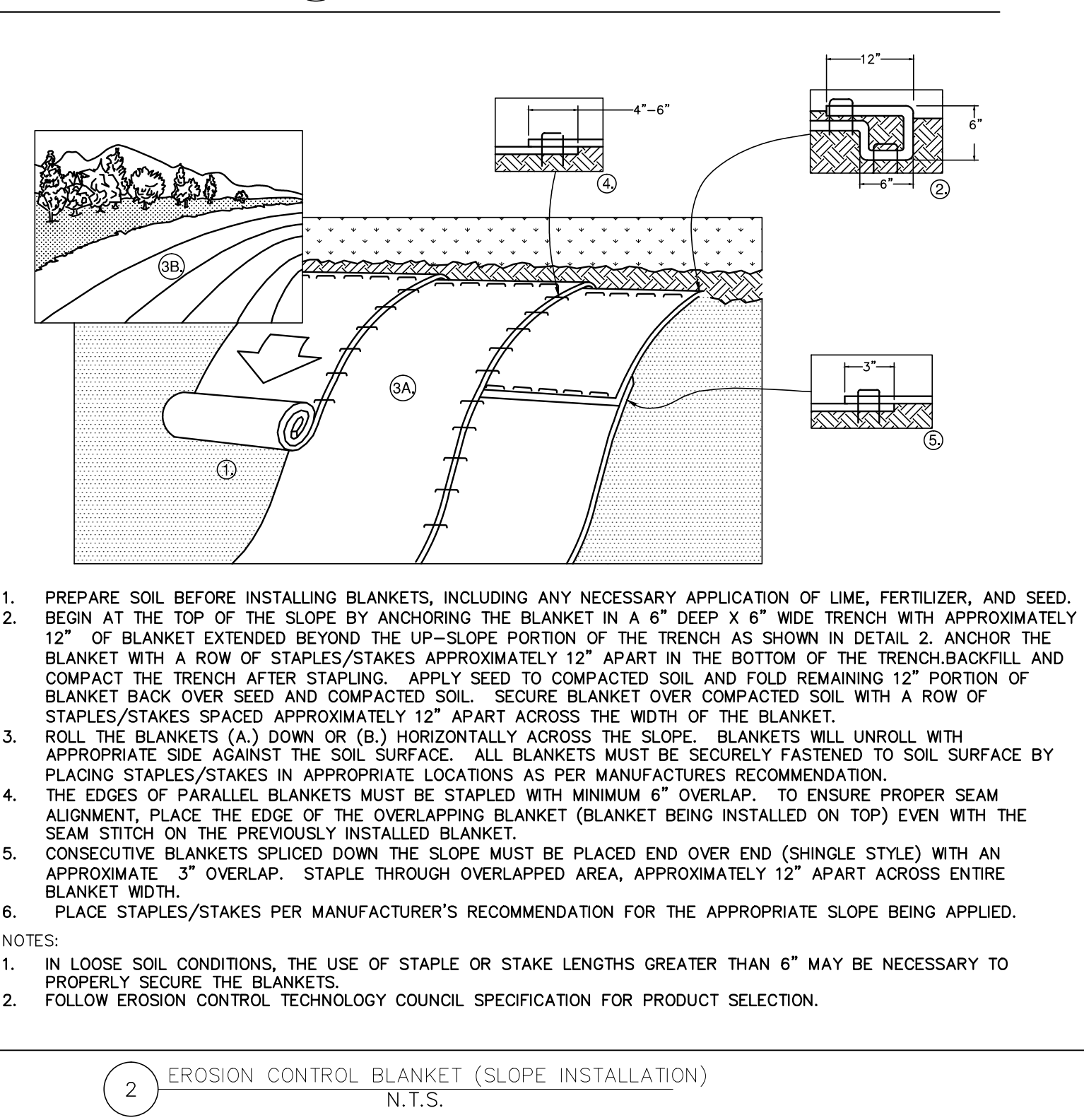
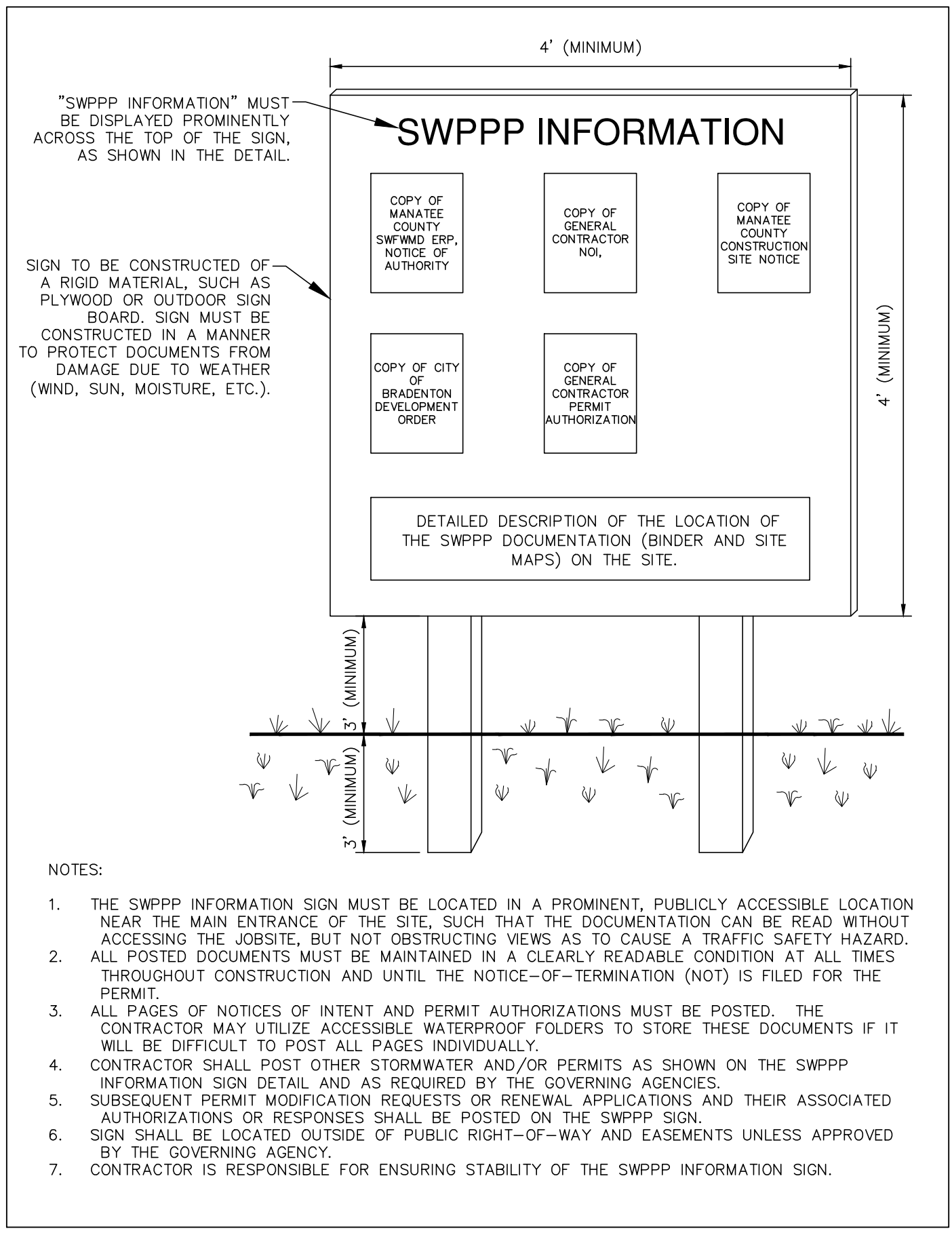
EROSION AND SEDIMENT CONTROL NOTES

- A. GENERAL CONTRACTOR SHALL BE RESPONSIBLE FOR FILING NOTICE OF INTENT TO USED THE GENERIC PERMIT FOR STORMWATER DISCHARGE FROM LARGE AND SMALL CONSTRUCTION ACTIVITIES.
- B. CONTRACTOR SHALL IMPLEMENT BEST MANAGEMENT PRACTICES AS REQUIRED BY THIS STORM WATER POLLUTION PREVENTION PLAN. ADDITIONAL BEST MANAGEMENT PRACTICES SHALL BE IMPLEMENTED AS DICTATED BY CONDITIONS AT NO ADDITIONAL COST OF OWNER THROUGHOUT ALL PHASES OF CONSTRUCTION.
- C. BEST MANAGEMENT PRACTICES (BMP'S) AND CONTROLS SHALL CONFORM TO FEDERAL, STATE, OR LOCAL REQUIREMENTS OR MANUAL OF PRACTICE, AS APPLICABLE. CONTRACTOR SHALL IMPLEMENT ADDITIONAL CONTROLS AS DIRECTED BY PERMITTING AGENCY OR OWNER.
- D. SITE MAP MUST CLEARLY DELINEATE ALL STATE WATERS. PERMITS FOR ANY CONSTRUCTION ACTIVITY IMPACTING STATE WATERS OR REGULATED WETLANDS MUST BE MAINTAINED ON SITE AT ALL TIMES.
- E. CONTRACTOR TO LIMIT DISTURBANCE OF SITE IN STRICT ACCORDANCE WITH SWPPP IMPLEMENTATION SEQUENCE, OR AS REQUIRED BY THE APPLICABLE GENERIC PERMIT. NO UNNECESSARY OR IMPROPERLY SEQUENCED GRADING AND/OR GRADING SHALL BE PERMITTED.
- F. ALL DENUDED/BARE AREAS THAT WILL BE INACTIVE FOR 7 DAYS OR MORE, MUST BE STABILIZED IMMEDIATELY UPON COMPLETION OF MOST RECENT GRADING ACTIVITY, WITH THE USE OF FAST-GERMINATING ANNUAL GRASS/GRAIN VARIETIES, STRAW/HAY MULCH, WOOD CELLULOSE FIBERS, TACKIFIERS, NETTING AND/OR BLANKETS. COMPLETION MUST BE ACHIEVED WITHIN 7 DAYS.
- G. DISTURBED PORTIONS OF THE SITE WHERE CONSTRUCTION ACTIVITY HAS PERMANENTLY STOPPED SHALL BE PERMANENTLY STABILIZED. THESE AREAS SHALL BE SEEDED, SODDED, AND/OR VEGETATED IMMEDIATELY, AND COMPLETED NO LATER THAN 7 DAYS AFTER THE LAST CONSTRUCTION ACTIVITY OCCURRING IN THESE AREAS. REFER TO THE GRADING PLAN AND/OR LANDSCAPE PLAN.
- H. SLOPES SHALL BE LEFT IN A ROUGHENED CONDITION DURING THE GRADING PHASE TO REDUCE RUNOFF VELOCITIES AND EROSION. TEMPORARY AND/OR PERMANENT STABILIZATION SHALL BE APPLIED PER REQUIREMENTS IN THESE E&S CONTROL NOTES.
- I. DUE TO THE GRADE CHANGES DURING THE DEVELOPMENT OF THE PROJECT, THE CONTRACTOR SHALL BE RESPONSIBLE FOR ADJUSTING THE EROSION AND SEDIMENT CONTROL MEASURES (SILT FENCES, ETC.) TO PREVENT EROSION AND POLLUTANT DISCHARGE OFF-SITE.
- J. ALL MEASURES STATED ON THIS PLAN, AND IN THE STORM WATER POLLUTION PREVENTION PLAN, SHALL BE MAINTAINED IN FULLY FUNCTIONAL CONDITION UNTIL NO LONGER REQUIRED FOR A COMPLETED PHASE OF WORK OR FINAL STABILIZATION OF THE SITE. ALL EROSION AND SEDIMENTATION CONTROL MEASURES SHALL BE CHECKED BY A QUALIFIED PERSON IN ACCORDANCE WITH THE CONTRACT DOCUMENTS OR THE APPLICABLE GENERIC PERMIT, WHICHEVER IS MORE STRINGENT, AND REPAIRED IN ACCORDANCE WITH THE PLANS.
- K. STORM WATER POLLUTANT CONTROL MEASURES INSTALLED DURING CONSTRUCTION, THAT WILL ALSO PROVIDE STORM WATER MANAGEMENT AFTER CONSTRUCTION, ARE INCLUDED IN THE CONTRACT DOCUMENTS.
- L. ALL PERMANENT CONTROLS AND SYSTEMS MUST BE INSTALLED AND FUNCTIONING AS DESIGNED AND FREE OF ACCUMULATED SEDIMENT AND DEBRIS DURING FINAL PROJECT INSPECTION AND APPROVAL.

NOI TABLE	
PROJECT NAME	SEWRP RECLAIMED PUMP BACK STATION
PROJECT ADDRESS	3331 LENA ROAD
CITY	BRADENTON
STATE	FLORIDA
ZIP CODE	34211
COUNTY	MANATEE
LATITUDE	27° 28' 08.20" N
LONGITUDE	82° 27' 05.8" W
INDIAN COUNTY LANDS	NO
WATER MANAGEMENT DISTRICT	SWFMD
LARGE OR SMALL CONSTRUCTION	LARGE
LOD ACREAGE	290 ACRES
SWPPP LOCATION	ADDRESS IN PART IV
DEWATERING	YES
WITHIN 500' OF CONTAMINATED SITE	YES
REMIEDIATED	NO
POLLUTANTS PRESENT	YES
RECEIVING WATER	MANATEE RIVER

SOIL EROSION/SEDIMENTATION CONTROL OPERATION TIME SCHEDULE												
NOTE: GENERAL CONTRACTOR TO COMPLETE TABLE WITH THEIR ESTIMATED PROJECT SCHEDULE												
CONSTRUCTION SEQUENCE	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC
TEMPORARY CONSTRUCTION EXITS												
TEMPORARY CONTROL MEASURES												
SEDIMENT CONTROL BASIN(S)/TRAP(S)												
STRIP & STOCKPILE TOPSOIL												
ROUGH GRADING												
STORM FACILITIES												
SITE CONSTRUCTION												
FINISH GRADING												
PERMANENT CONTROL STRUCTURES												
FOUNDATION / BUILDING CONSTRUCTION												
LANDSCAPING/SEED/FINAL STABILIZATION												

1) CONTRACTOR MUST COMPLETE TABLE WITH ESTIMATED DATES OR PROJECT ACTIVITIES PRIOR TO BMP CERTIFICATION.
 2) TIME SCHEDULE MUST COINCIDE WITH THE SWPPP IMPLEMENTATION SEQUENCE.



- SPECIFICATIONS FOR SILT FENCE INSTALLATION**
- MATERIALS AND INSTALLATION SHALL COMPLY WITH ASTM D 6462 LATEST EDITION.
 - INSTALL SILT FENCE AT A FAIRLY LEVEL GRADE ALONG THE CONTOUR WITH THE ENDS CURVED UPHILL TO PROVIDE SUFFICIENT UPSTREAM STORAGE VOLUME FOR THE ANTICIPATED RUNOFF.
 - ATTACH THE GEOTEXTILE OR FABRIC TO THE WOVEN OR WELDED WIRE FENCE WITH THREE WIRE TIES OR OTHER FASTENERS (HORIZONTALLY SPACED EVERY 30"), ALL SPACED WITHIN THE TOP 8" OF THE FABRIC. ATTACH EACH TIE DIAGONALLY AT LEAST 45 DEGREES THROUGH THE FABRIC, WITH EACH PUNCTURE AT LEAST 1" VERTICALLY APART. AT EACH POST, ATTACH THE GEOTEXTILE OR FABRIC AND THE WOVEN OR WELDED WIRE FENCE TO THE POST AS PREVIOUSLY STATED. IN ADDITION, EACH TIE PLACED ON A POST SHOULD BE POSITIONED TO HANG ON A POST NIPPLE WHEN TIGHTENED TO PREVENT SAGGING.
 - WHEN TWO SECTIONS OF SILT FENCE FABRIC ADJOIN EACH OTHER, THEY SHALL BE OVERLAPPED A MINIMUM OF 60" ACROSS TWO POSTS, AS SHOWN.
 - ALL SILT FENCE SHALL INCLUDE WIRE SUPPORT UNLESS THE STATIC SLICING EQUIPMENT IS UTILIZED TO INSTALL THE FENCE PER DETAIL "SILT FENCE INSTALLATION (SLICING METHOD)".
 - WRAP APPROXIMATELY 6" OF FABRIC AROUND THE END POSTS AND SECURE WITH 3 TIES.
 - COMPACT THE SOIL IMMEDIATELY NEXT TO THE SILT FENCE FABRIC WITH THE FRONT WHEEL OF THE TRACTOR, SKID STEER, OR ROLLER EXERTING AT LEAST 60 POUNDS PER SQ. INCH. COMPACT THE UPSTREAM SIDE FIRST. COMPACT EACH SIDE TWICE FOR A TOTAL OF FOUR TRIPS.
 - ADD POST CAPS AS NEEDED BASED ON SITE CONDITIONS AND APPLICABLE AGENCY REQUIREMENTS.
- MAINTENANCE NOTES**
- SILT FENCES SHALL BE INSPECTED ALONG ITS ENTIRETY AND MUST BE CLEANED WHEN SEDIMENT HAS ACCUMULATED TO ONE-THIRD THE HEIGHT OF THE SILT FENCE. MAINTENANCE/CLEANOUT MUST BE CONDUCTED REGULARLY TO PREVENT ACCUMULATED SEDIMENTS FROM REACHING ON-THIRD THE HEIGHT OF THE SILT FENCE.
 - ALL MATERIAL EXCAVATED FROM BEHIND SILT FENCE SHALL BE STOCKPILED ON AN UPLAND PORTION OF THE SITE IF SUITABLE FOR REUSE.
 - SPECIAL ATTENTION SHOULD BE PAID TO ENSURE THAT NO UNDERMINING OF SILT FENCE HAS OCCURRED AND THAT NO BYPASS IS OCCURRING AT JOINING SECTIONS.
 - IF EXCESS SEDIMENT IS ACCUMULATING IN ANY SECTION OF SILT FENCE, THE CONTRACTOR SHOULD IMPLEMENT ADDITIONAL UPSTREAM STABILIZATION MEASURES OR ADDITIONAL BMPS (PENDING CEC APPROVAL) TO PREVENT EXCESSIVE BUILDUP ON SILT FENCE.
 - SILT FENCES SHALL BE REPAIRED TO THEIR ORIGINAL CONDITIONS IF DAMAGED.

3 SEDIMENTATION/SILT FENCE WITH WIRE BACKING
N.T.S.

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KHA PROJECT	148400015
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MANATEE COUNTY

Manatee County FLORIDA

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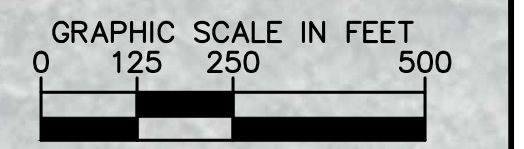
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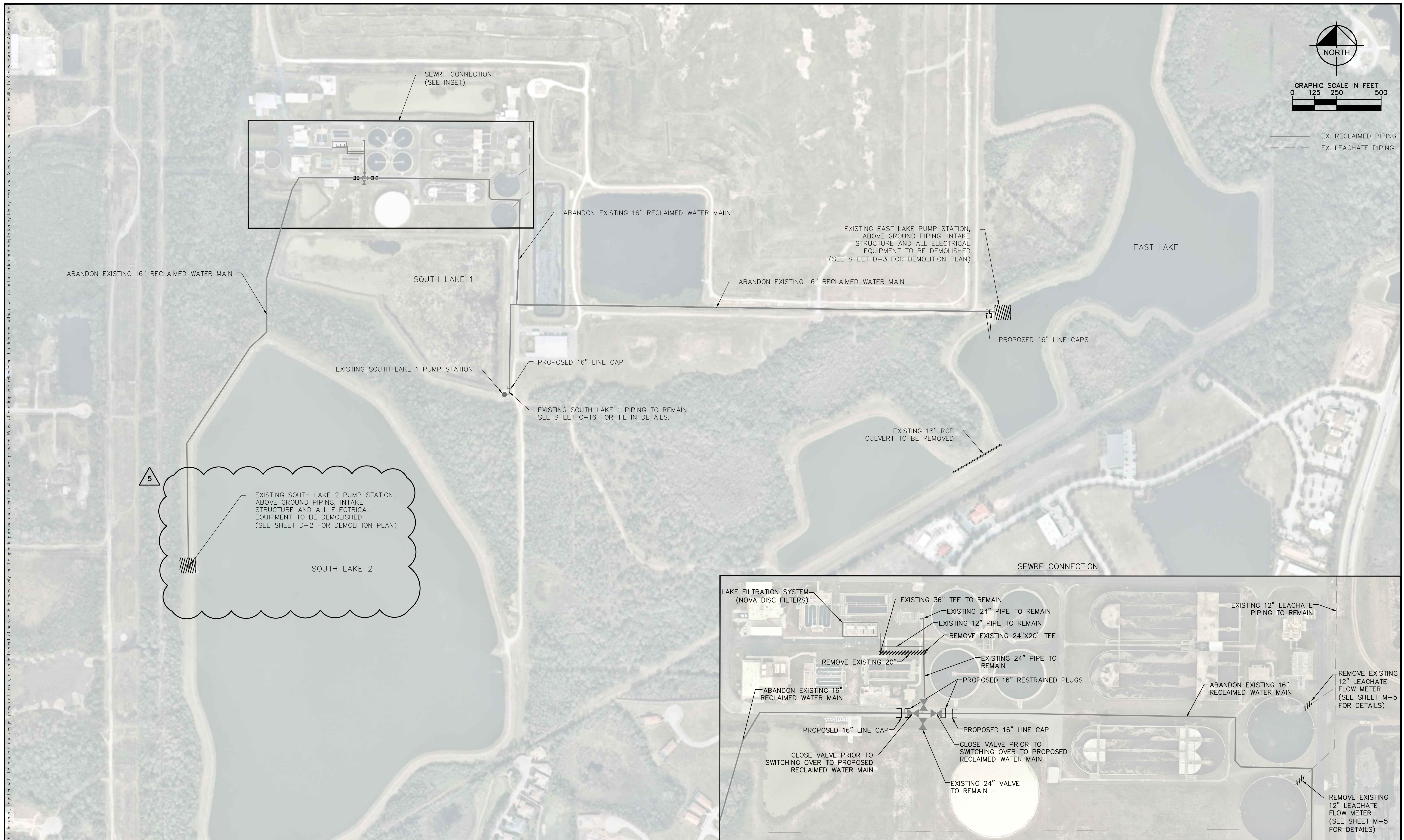
EROSION CONTROL AND SEDIMENTATION DETAILS

SHEET NUMBER	G-8
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— EX. RECLAIMED PIPING
 - - - EX. LEACHATE PIPING



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DESIGNED BY SNR
DRAWN BY ASR
CHECKED BY WEW

Manatee County Florida

SEWRF RECLAIMED PUMP BACK STATION

MANATEE COUNTY

LICENSED PROFESSIONAL
STEPHEN N. ROMANO, P.E.
FL LICENSE NUMBER 57579
FL DATE:

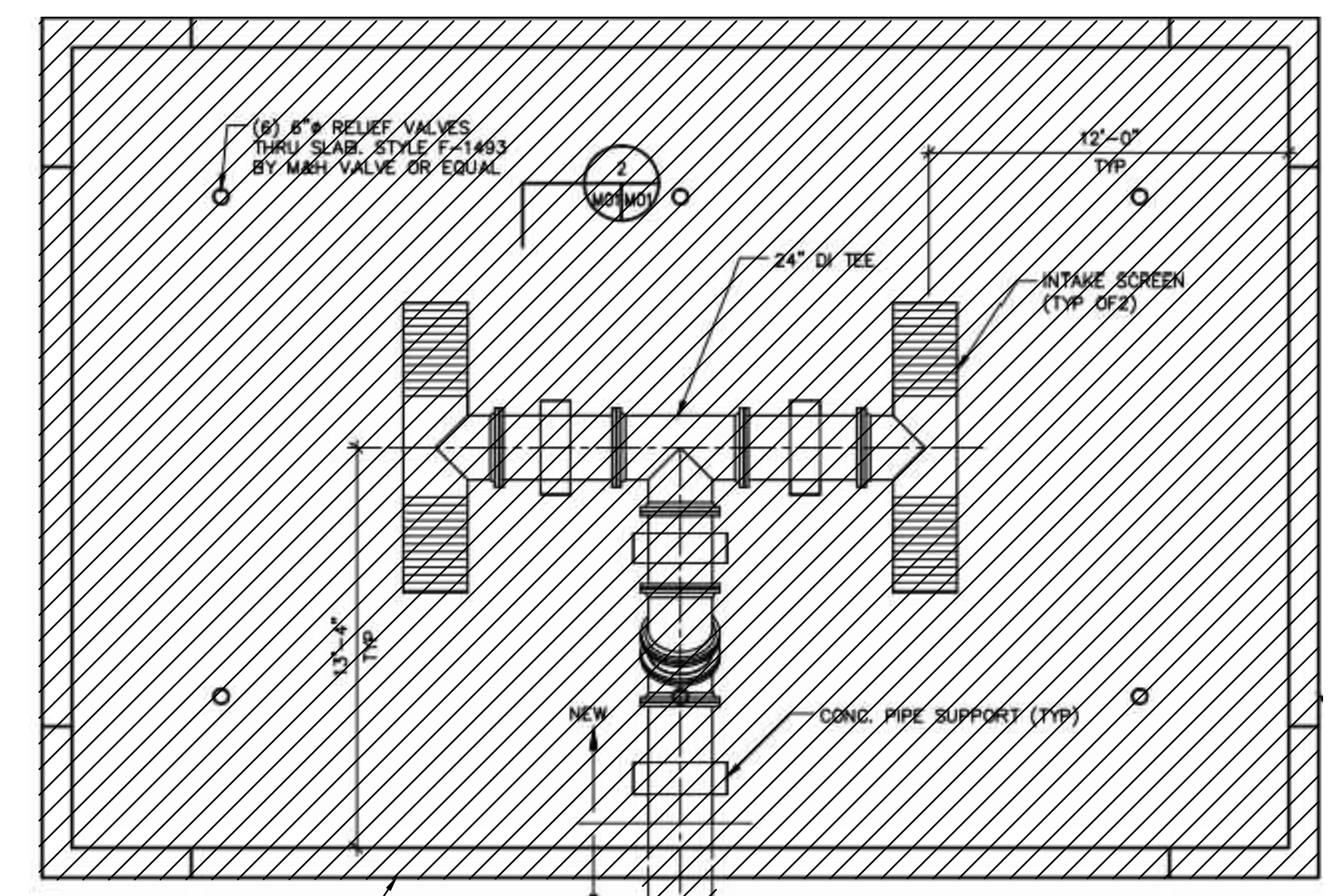
OVERALL DEMOLITION PLAN

SHEET NUMBER
D-1



CONTRACTOR TO REMOVE ELECTRICAL EQUIPMENT AND ANTENNA

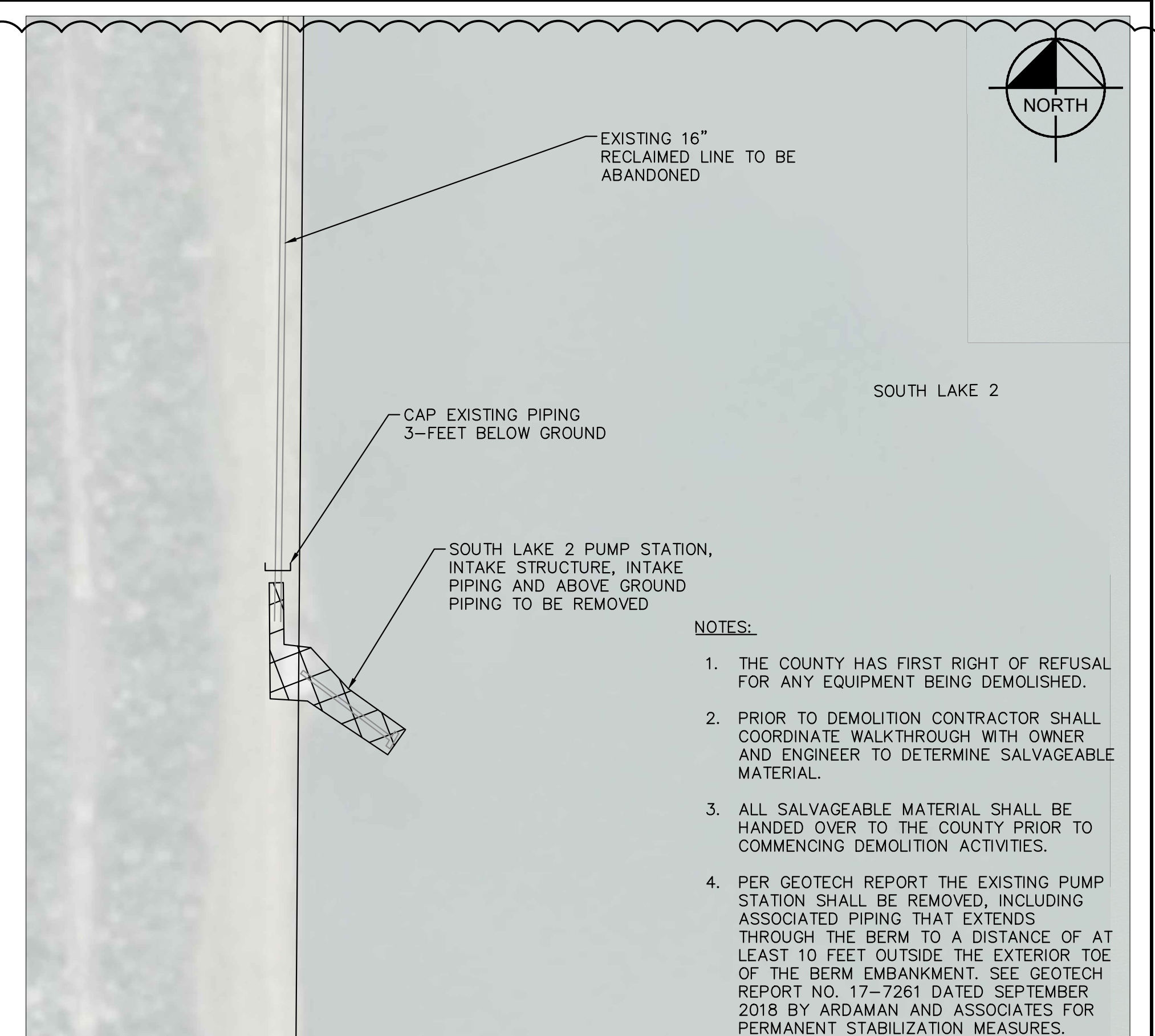
EX. SOUTH LAKE 2 PUMP STATION



CONTRACTOR TO REMOVE INTAKE PIPING AND STRUCTURE. INTAKE SCREENS TO BE SALVAGED AND PROPERLY STORED ONSITE.

NOTE:
 • PROPOSED DEMOLITION AS PART OF THE CONSTRUCTION PLANS ARE BASED ON THE RECORD DRAWINGS

EX. SOUTH LAKE 2 INTAKE STRUCTURE



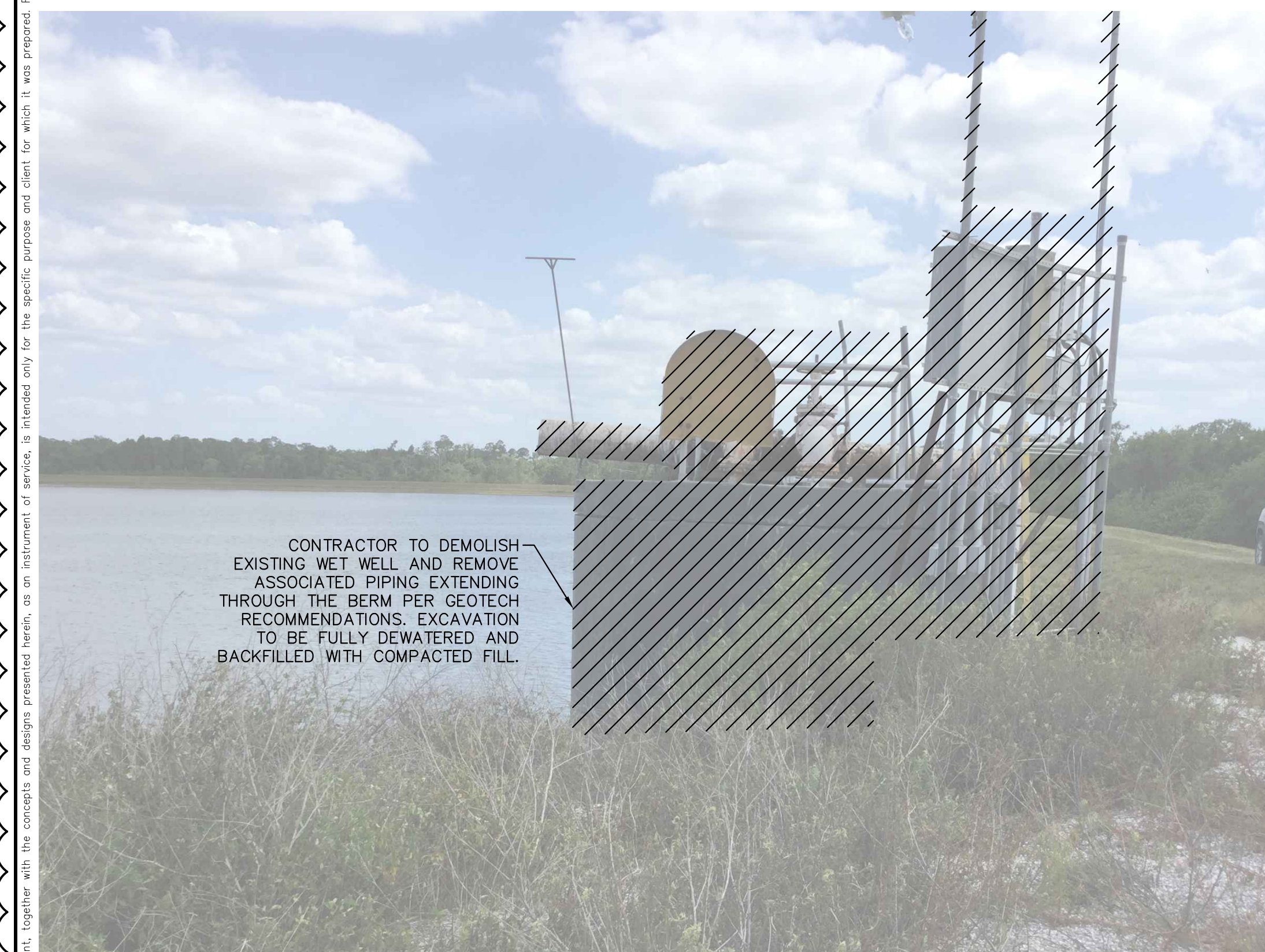
EXISTING 16" RECLAIMED LINE TO BE ABANDONED

CAP EXISTING PIPING 3- FEET BELOW GROUND

SOUTH LAKE 2 PUMP STATION, INTAKE STRUCTURE, INTAKE PIPING AND ABOVE GROUND PIPING TO BE REMOVED

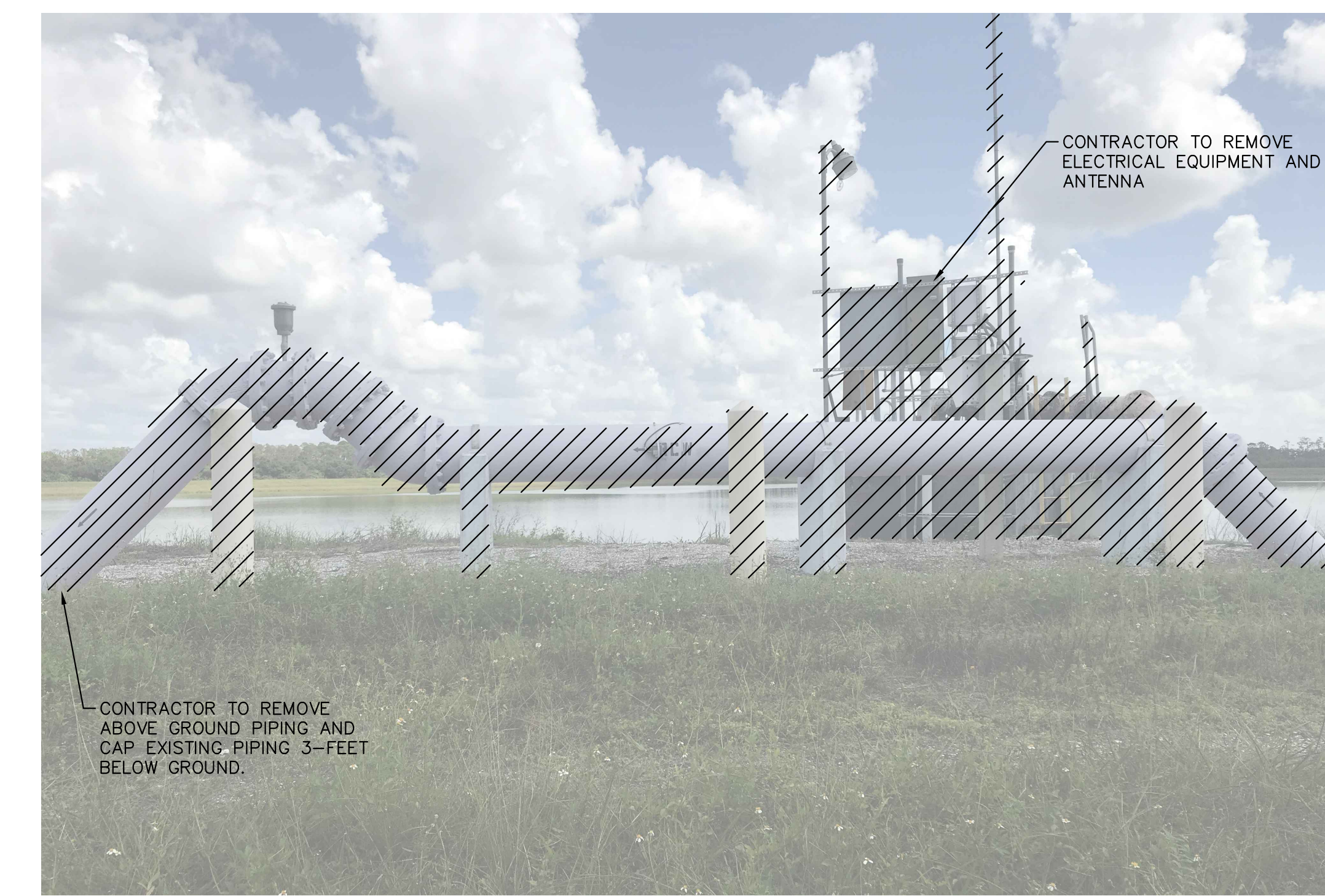
- NOTES:
1. THE COUNTY HAS FIRST RIGHT OF REFUSAL FOR ANY EQUIPMENT BEING DEMOLISHED.
 2. PRIOR TO DEMOLITION CONTRACTOR SHALL COORDINATE WALKTHROUGH WITH OWNER AND ENGINEER TO DETERMINE SALVAGEABLE MATERIAL.
 3. ALL SALVAGEABLE MATERIAL SHALL BE HANDED OVER TO THE COUNTY PRIOR TO COMMENCING DEMOLITION ACTIVITIES.
 4. PER GEOTECH REPORT THE EXISTING PUMP STATION SHALL BE REMOVED, INCLUDING ASSOCIATED PIPING THAT EXTENDS THROUGH THE BERM TO A DISTANCE OF AT LEAST 10 FEET OUTSIDE THE EXTERIOR TOE OF THE BERM EMBANKMENT. SEE GEOTECH REPORT NO. 17-7261 DATED SEPTEMBER 2018 BY ARDAMAN AND ASSOCIATES FOR PERMANENT STABILIZATION MEASURES.

EXISTING PUMP STATION LOCATION MAP



CONTRACTOR TO DEMOLISH EXISTING WET WELL AND REMOVE ASSOCIATED PIPING EXTENDING THROUGH THE BERM PER GEOTECH RECOMMENDATIONS. EXCAVATION TO BE FULLY DEWATERED AND BACKFILLED WITH COMPACTED FILL.

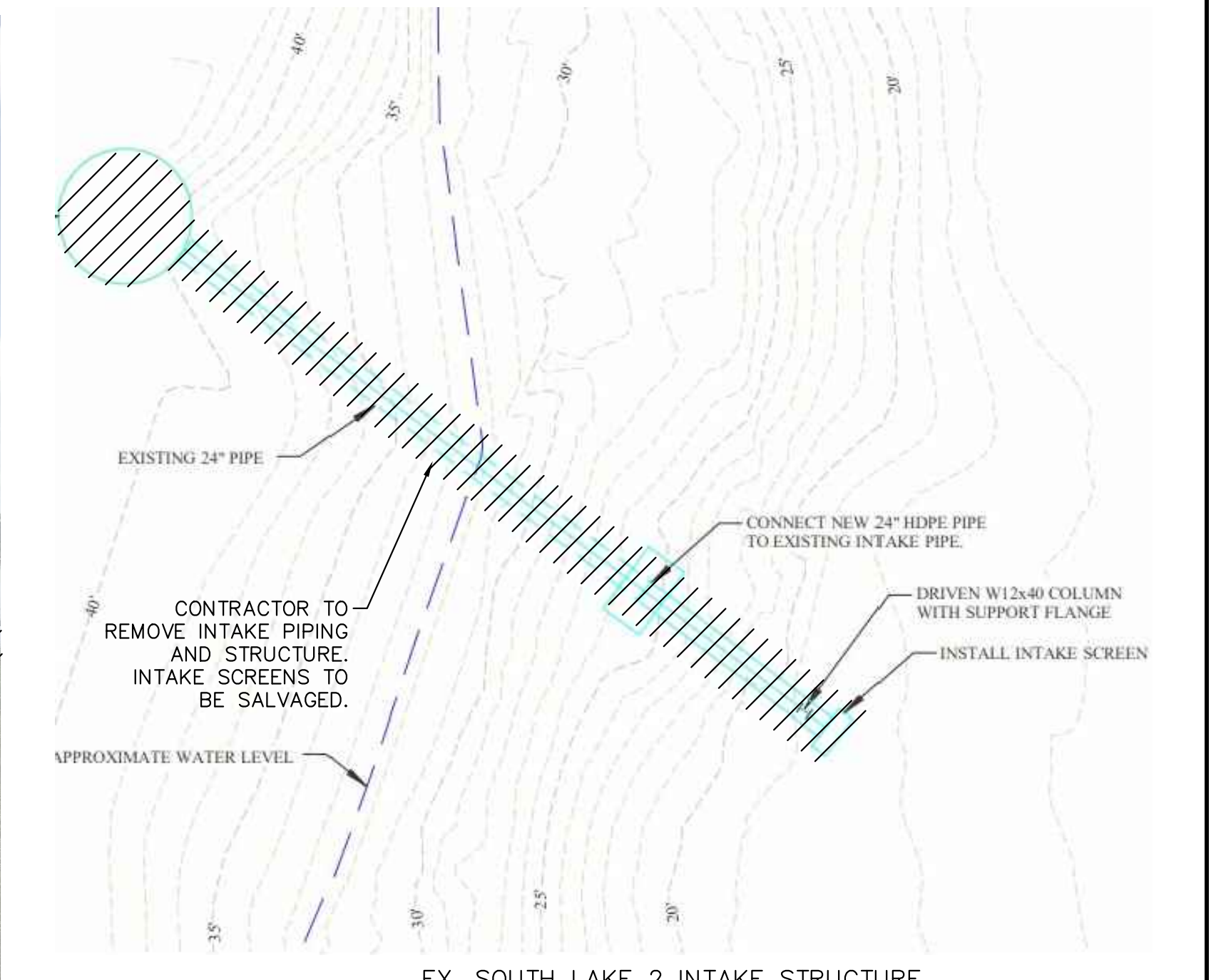
EX. SOUTH LAKE 2 PUMP STATION



CONTRACTOR TO REMOVE ELECTRICAL EQUIPMENT AND ANTENNA

CONTRACTOR TO REMOVE ABOVE GROUND PIPING AND CAP EXISTING PIPING 3- FEET BELOW GROUND.

EX. SOUTH LAKE 2 ABOVE GROUND PIPING



EXISTING 24" PIPE

CONTRACTOR TO REMOVE INTAKE PIPING AND STRUCTURE. INTAKE SCREENS TO BE SALVAGED.

APPROXIMATE WATER LEVEL

CONNECT NEW 24" HDPE PIPE TO EXISTING INTAKE PIPE.

DRIVEN W12x40 COLUMN WITH SUPPORT FLANGE

INSTALL INTAKE SCREEN

EX. SOUTH LAKE 2 INTAKE STRUCTURE

NOTE:
 • PROPOSED DEMOLITION AS PART OF THE CONSTRUCTION PLANS ARE BASED ON THE RECORD DRAWINGS

5	ADDENDUM 5	5/26/2020	SNR
No.	REVISIONS	DATE	BY

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KHA PROJECT	148400015
DATE	1/28/2020
SCALE	AS SHOWN
DESIGNED BY	SNR
DRAWN BY	ASR
CHECKED BY	WEW

Manatee County

SEWRF RECLAIMED PUMP BACK STATION

MANATEE COUNTY

LICENSED PROFESSIONAL

STEPHEN N. ROMANO, P.E.

FL LICENSE NUMBER 57579

SOUTH LAKE 2 PUMP STATION DEMOLITION PLAN

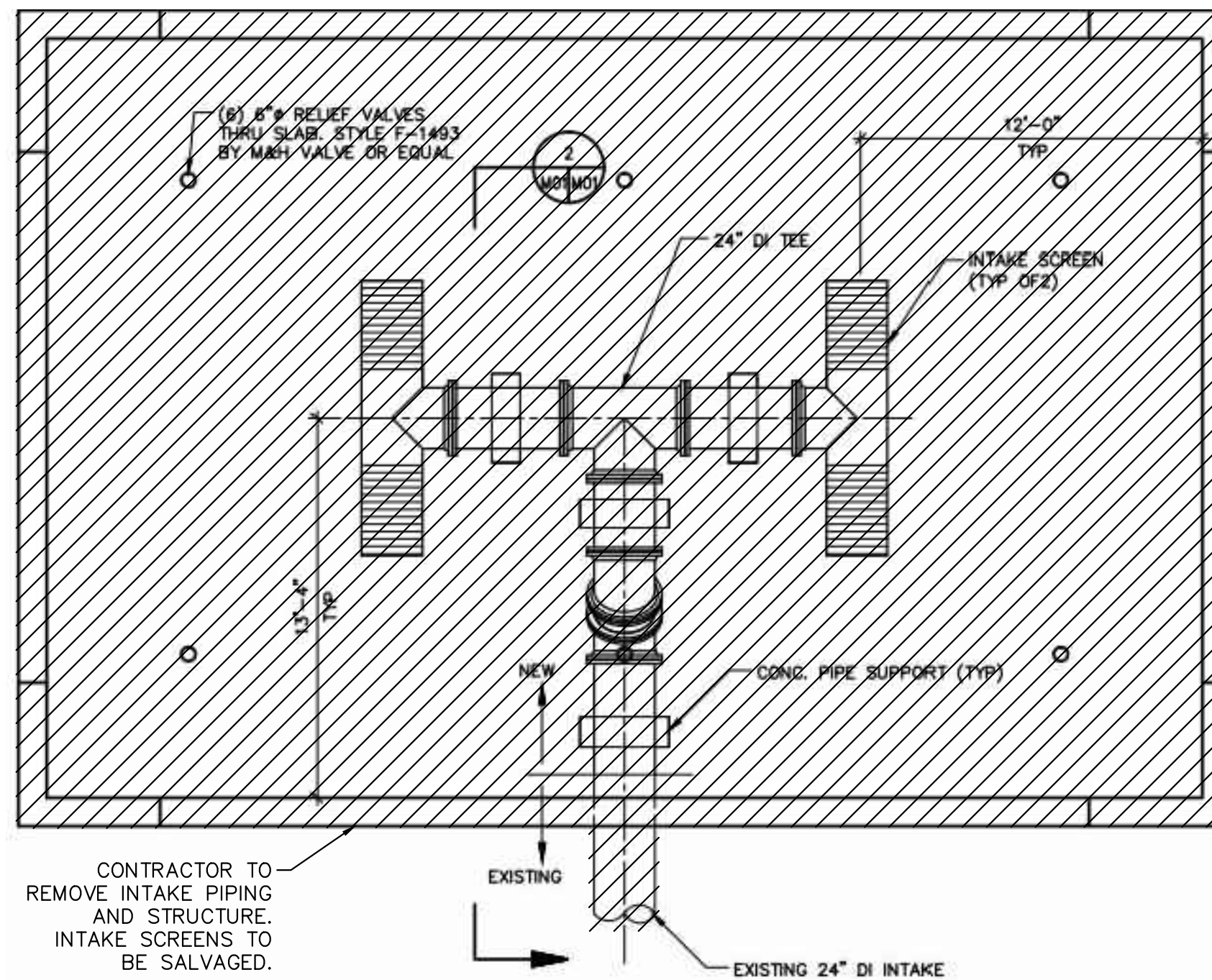
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D-2

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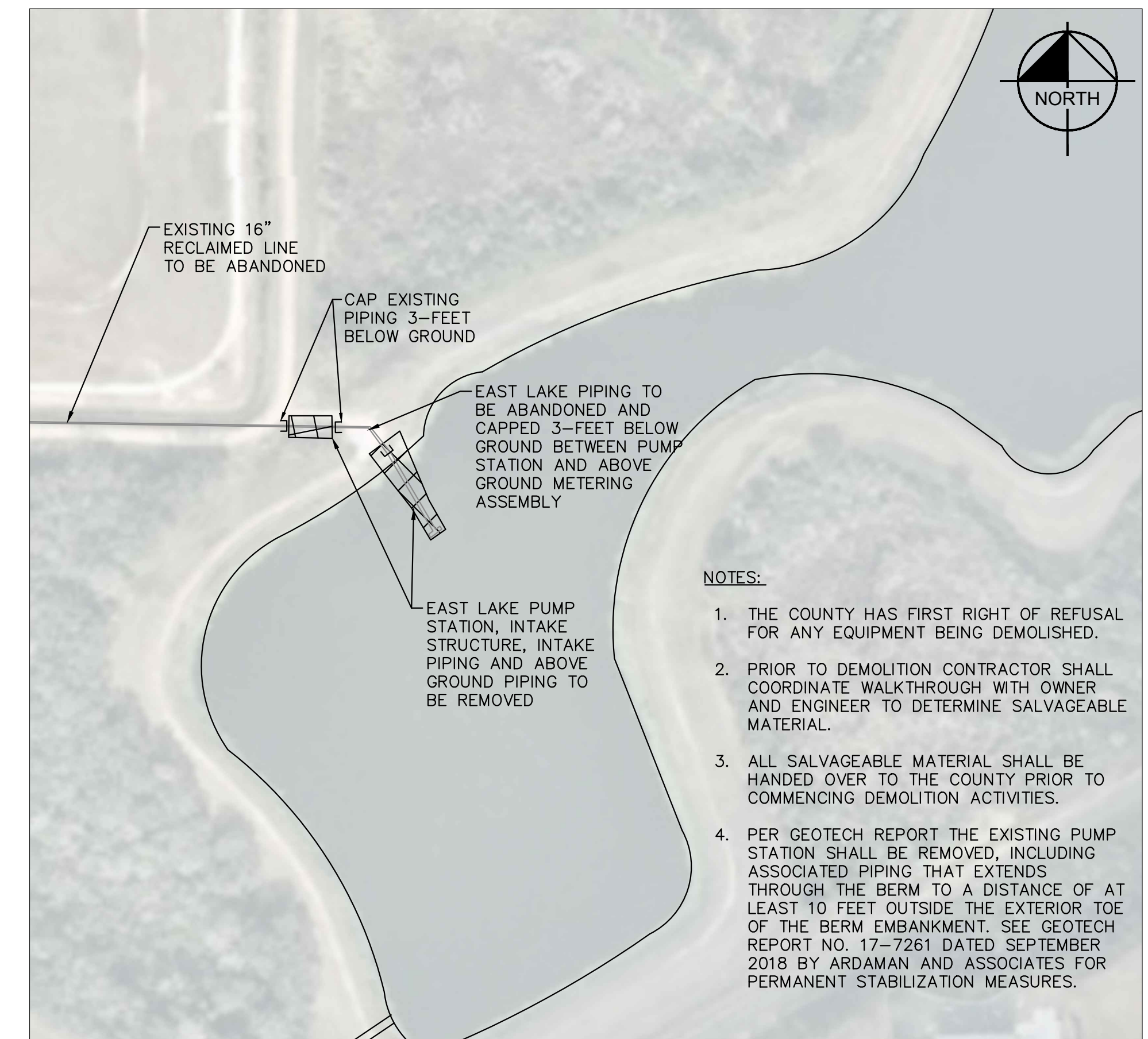


EX. EAST LAKE PUMP STATION



EX. EAST LAKE INTAKE STRUCTURE

NOTE:
 • PROPOSED DEMOLITION AS PART OF THE CONSTRUCTION PLANS ARE BASED ON THE RECORD DRAWINGS.



EXISTING PUMP STATION LOCATION MAP

NOTES:

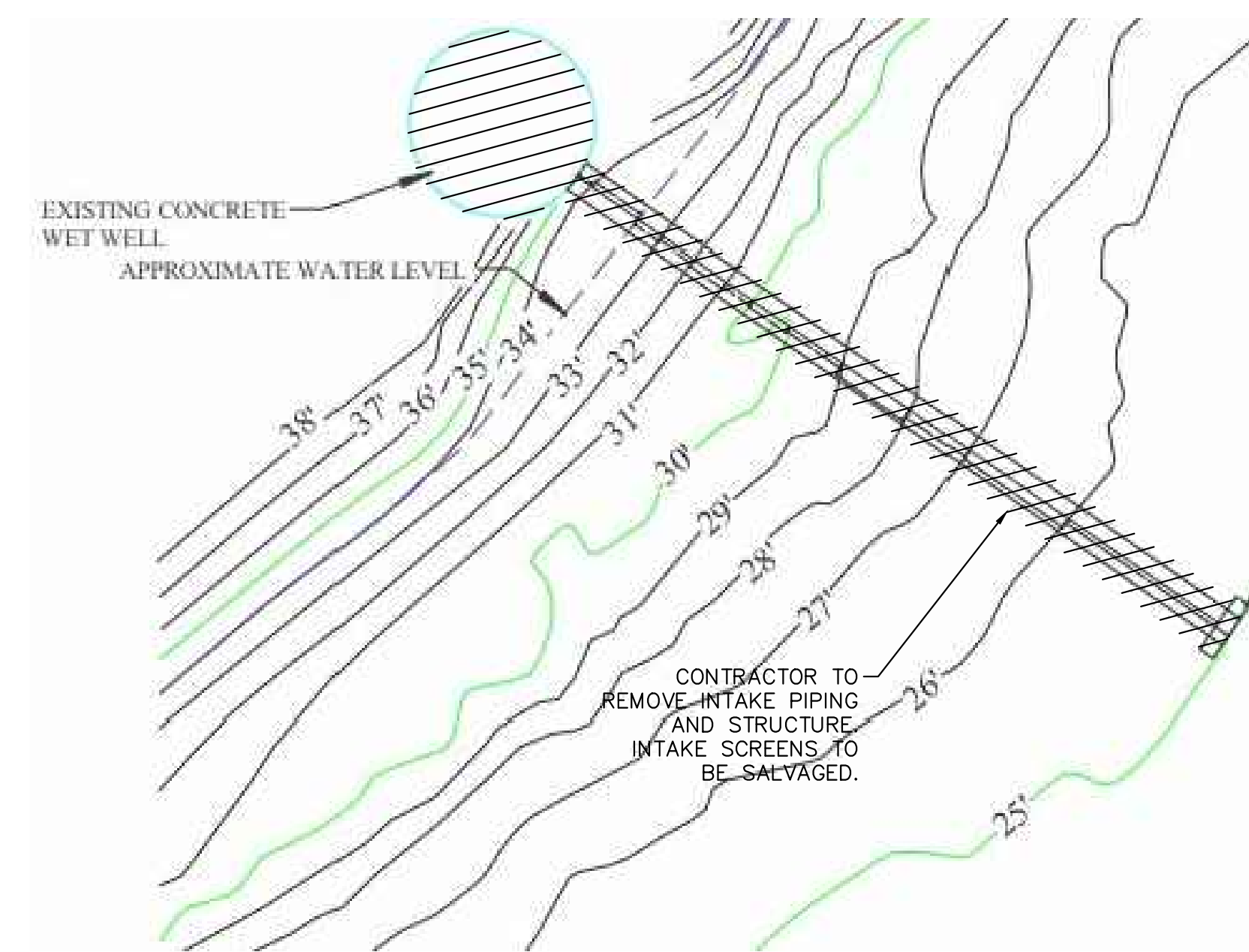
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EX. EAST LAKE ELECTRICAL EQUIPMENT



EX. EAST LAKE ABOVE GROUND PIPING



EX. EAST LAKE INTAKE STRUCTURE

NOTE:
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MANATEE COUNTY
**SEWRF RECLAIMED
 PUMP BACK STATION**

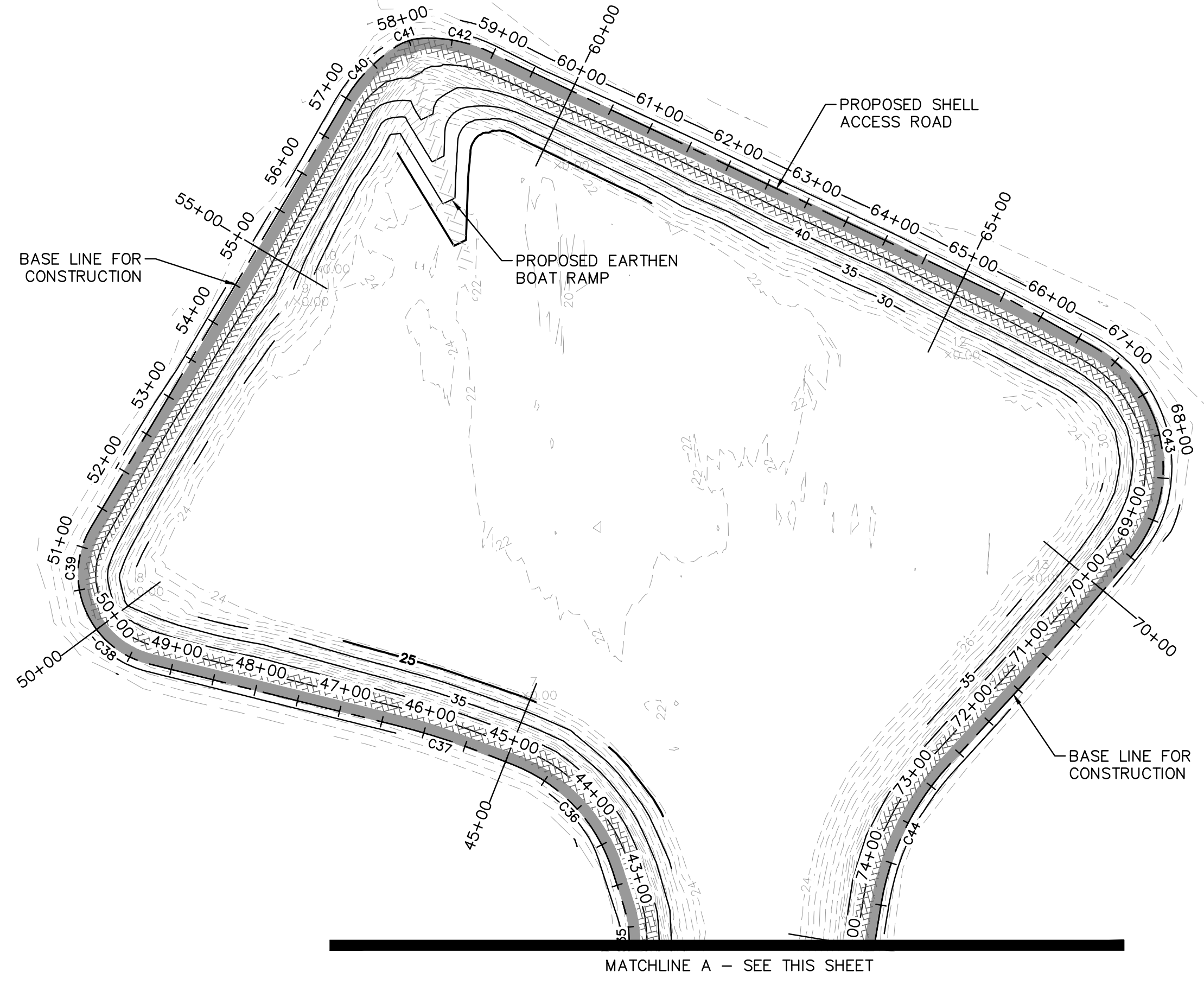


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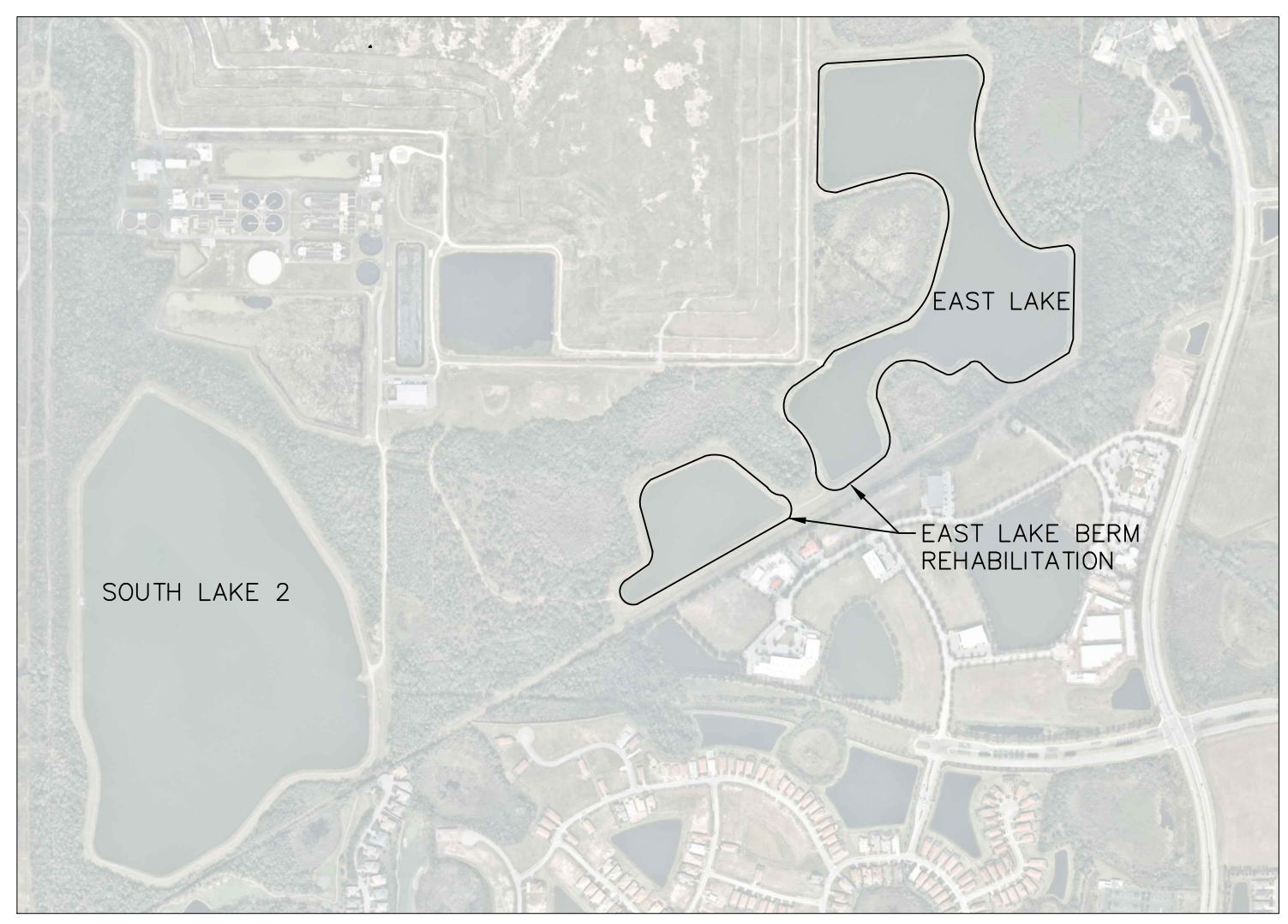
**EAST LAKE PUMP STATION
 DEMOLITION PLAN**

5
 SHEET NUMBER
D-3

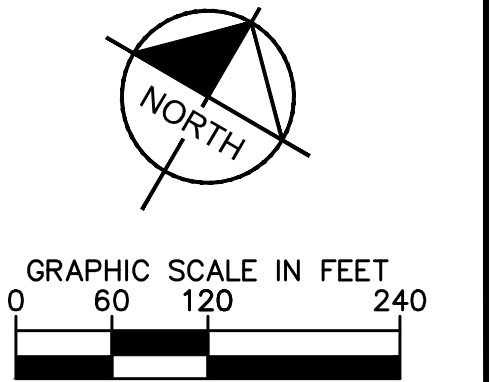
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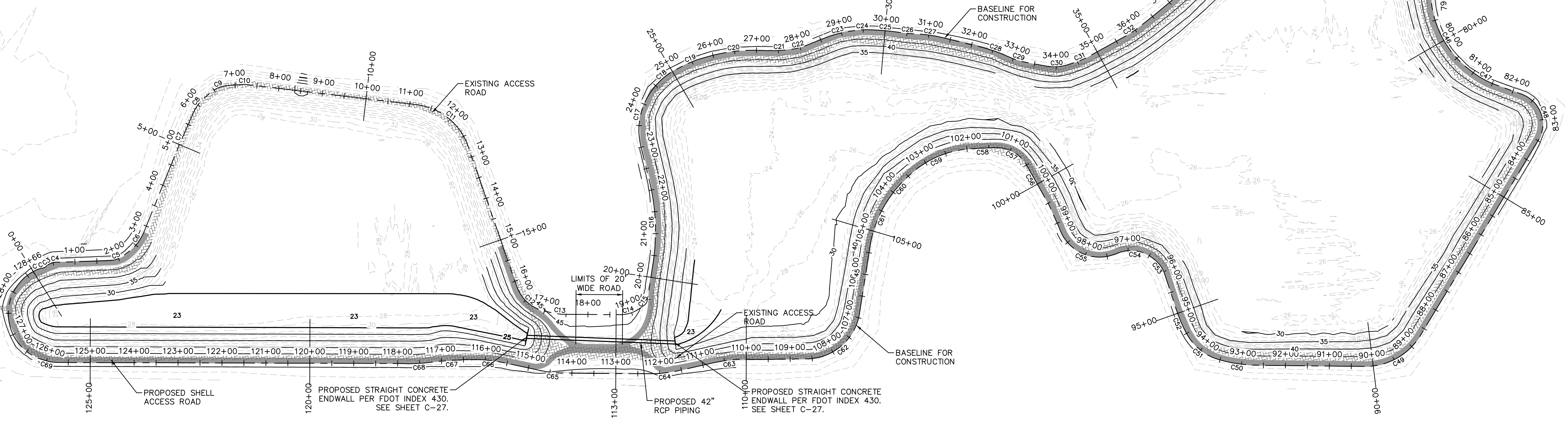
EAST LAKE CROSS SECTIONS	
SHEET	STATION
C-3	0+00
C-3	5+00
C-3	10+00
C-3	15+00
C-3	20+00
C-3	25+00
C-4	30+00
C-4	35+00
C-4	40+00
C-4	45+00
C-4	50+00
C-4	55+00
C-5	60+00
C-5	65+00
C-5	70+00
C-5	75+00
C-5	80+00
C-5	85+00
C-6	90+00
C-6	95+00
C-6	100+00
C-6	105+00
C-6	110+00
C-6	113+00
C-6	120+00
C-6	125+00



KEY MAP: EAST LAKE



LEGEND:
 PROPOSED SHELL ACCESS ROAD (SEE DETAIL 3 SHEET C-29 FOR DETAILS.)
 EXISTING ACCESS ROAD



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Manatee County
 FLORIDA

**SEWRF RECLAIMED
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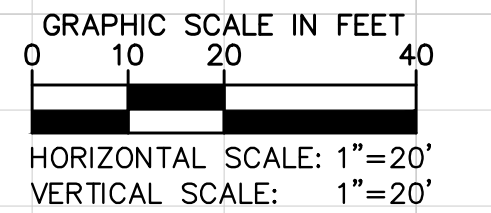
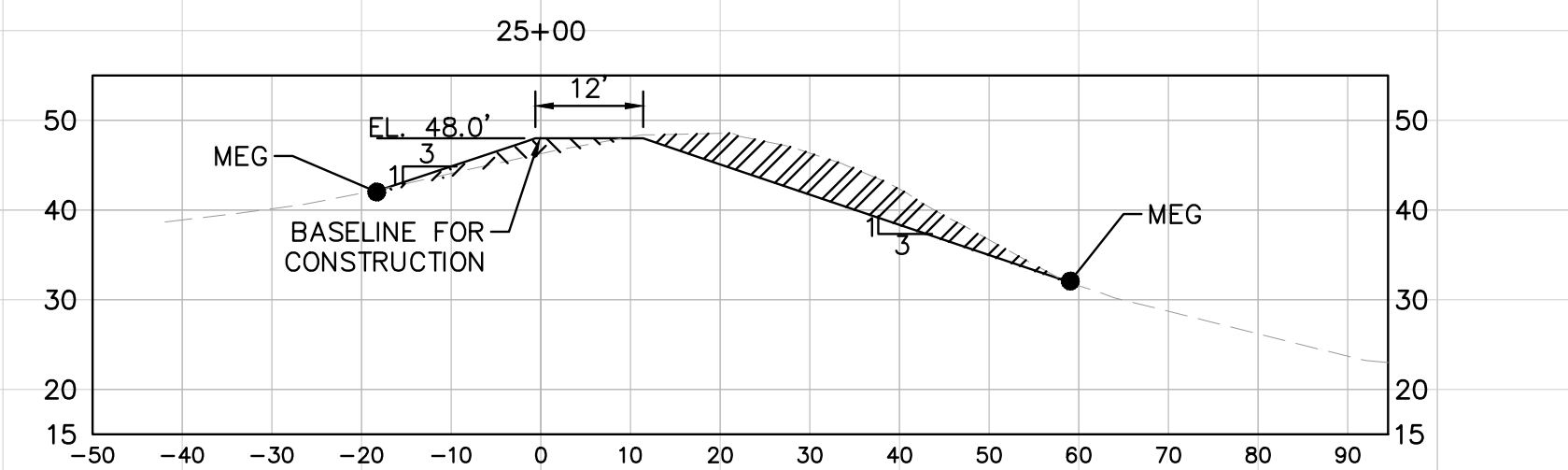
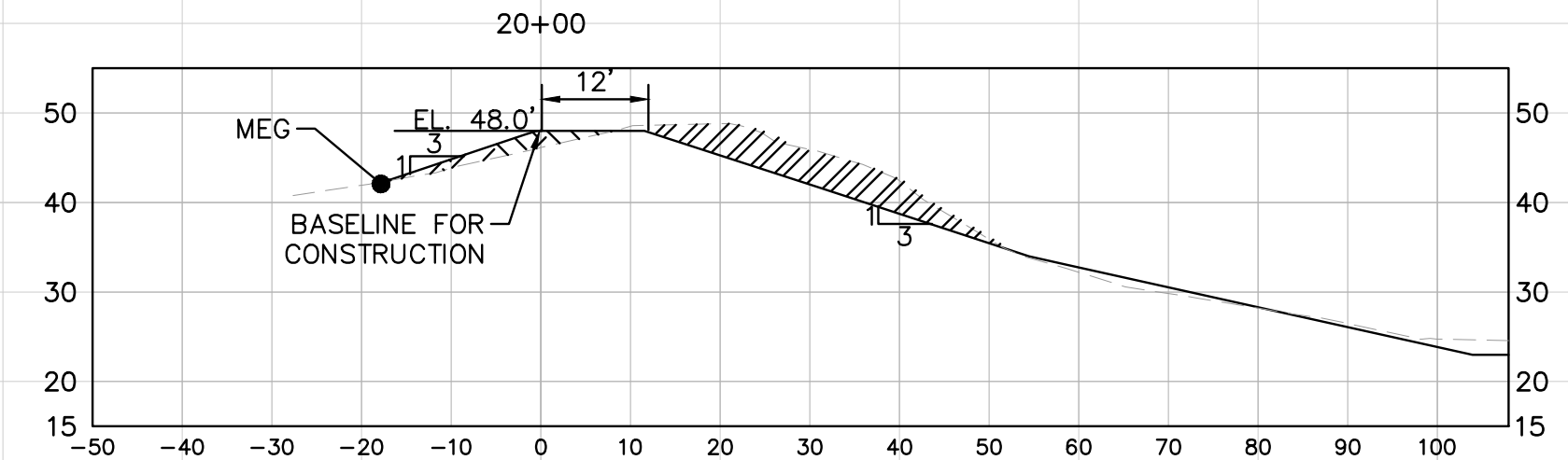
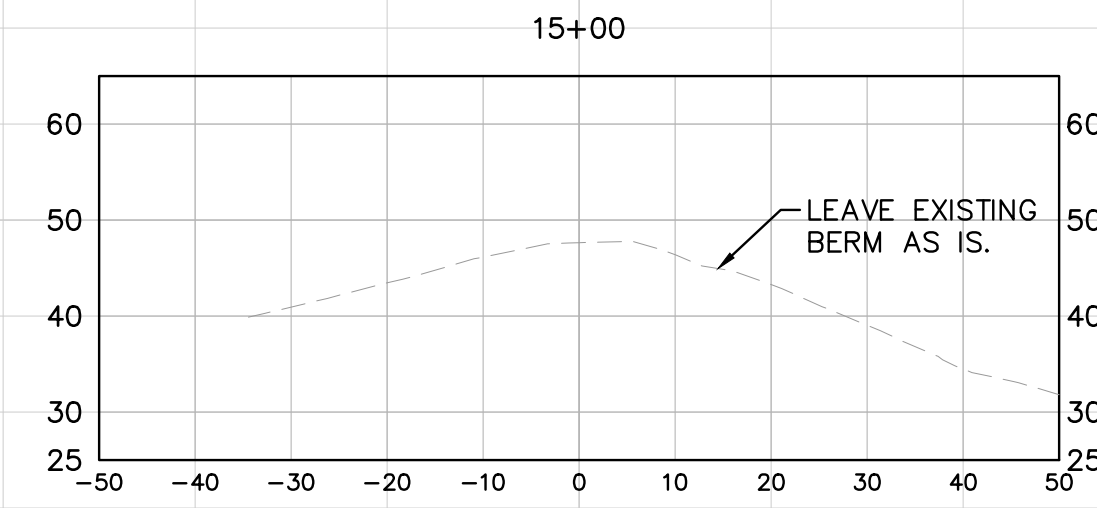
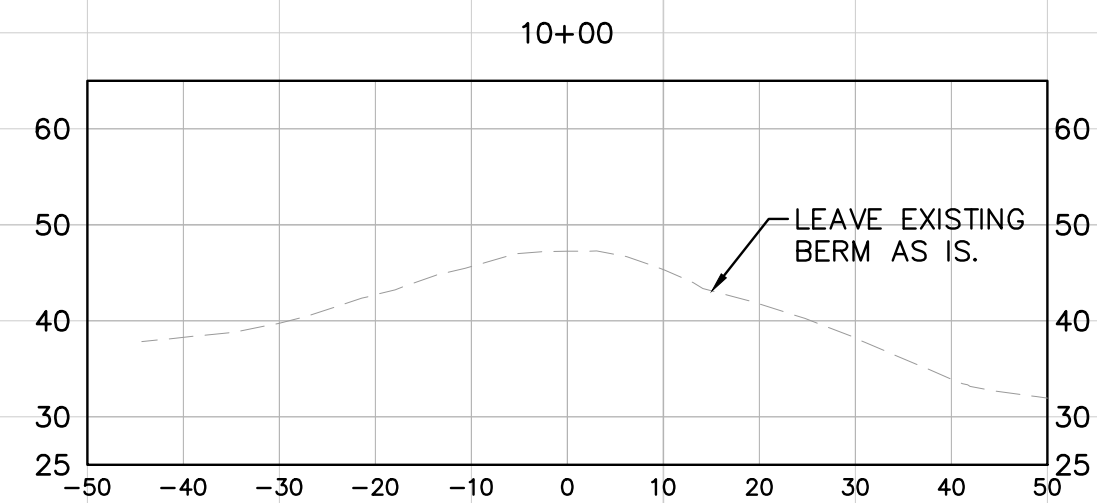
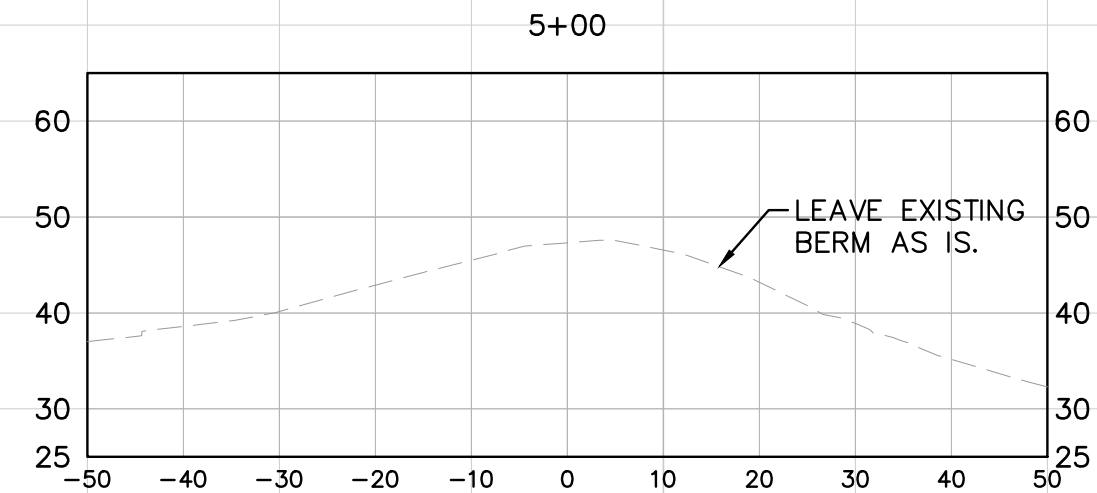
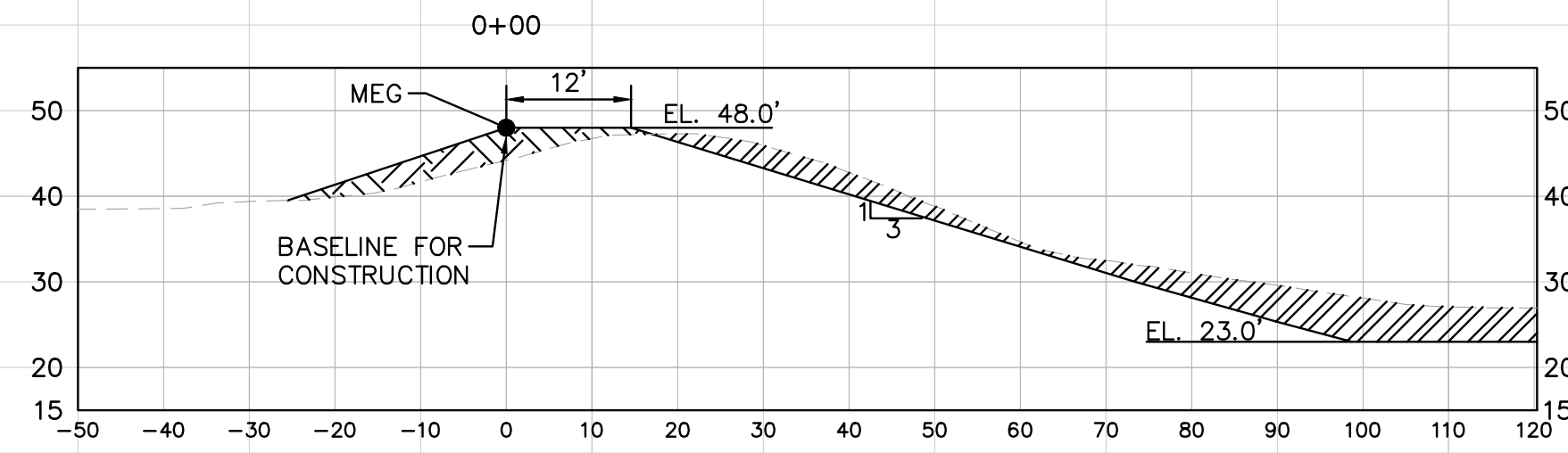
MANATEE COUNTY

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**EAST LAKE
 REHABILITATION PLAN**

SHEET NUMBER
C-1

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LEGEND:
 FILL AREA
 CUT AREA

*REFER TO DETAIL 3 SHEET C-29 FOR 12' ACCESS DRIVE RESTORATION

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 PUMP BACK STATION**

MANATEE COUNTY

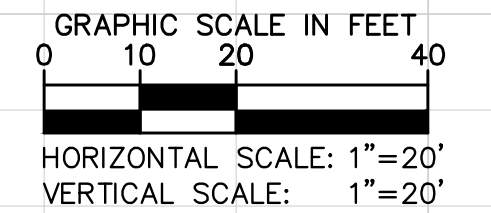
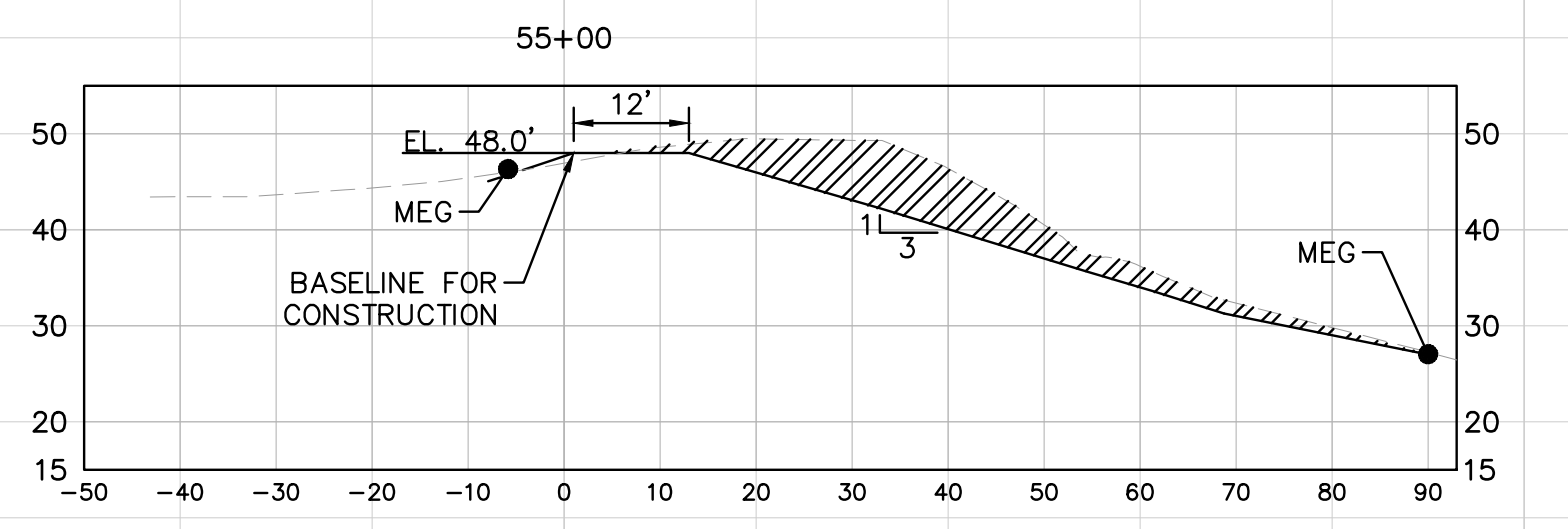
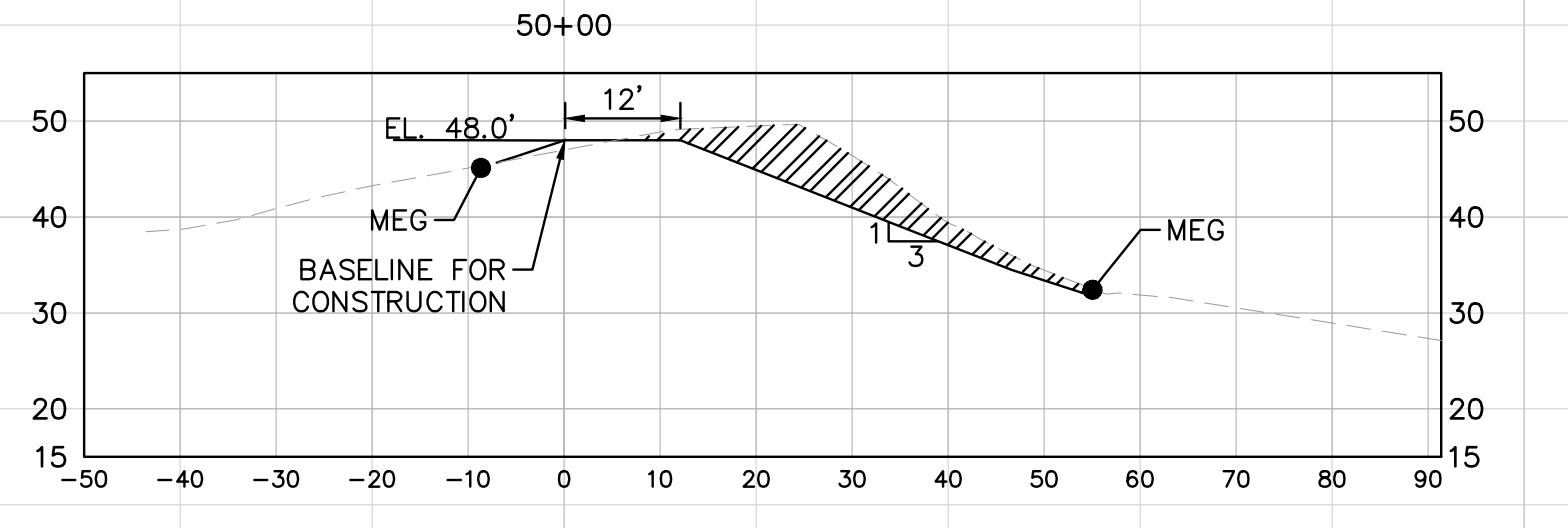
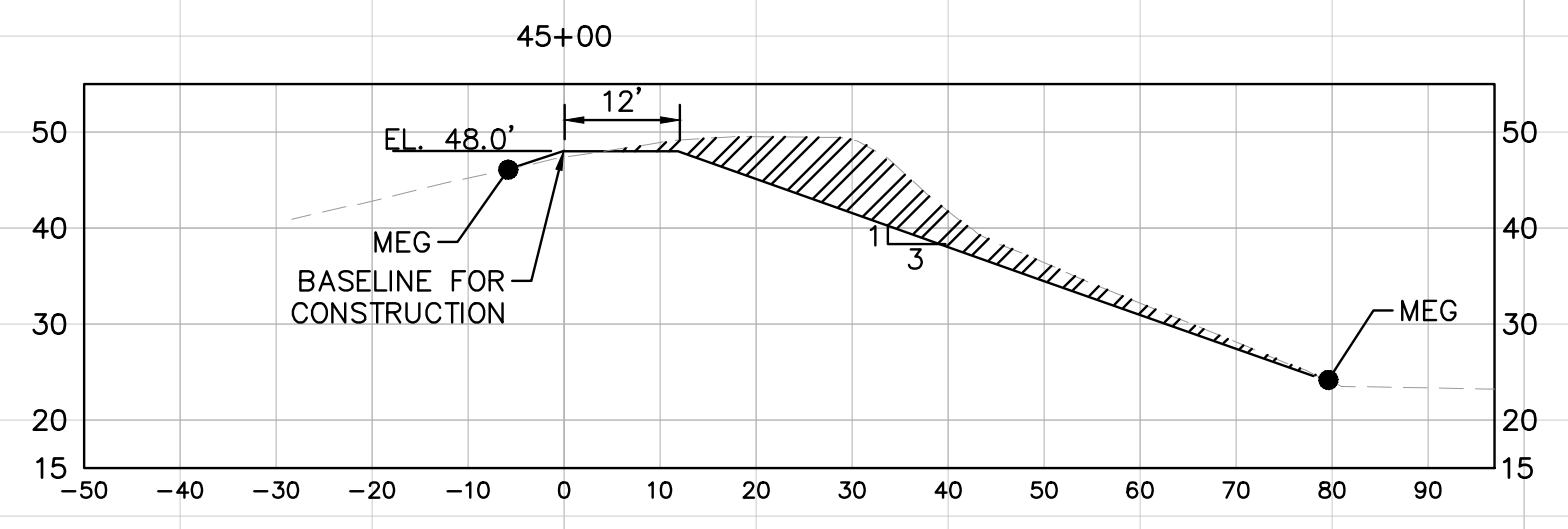
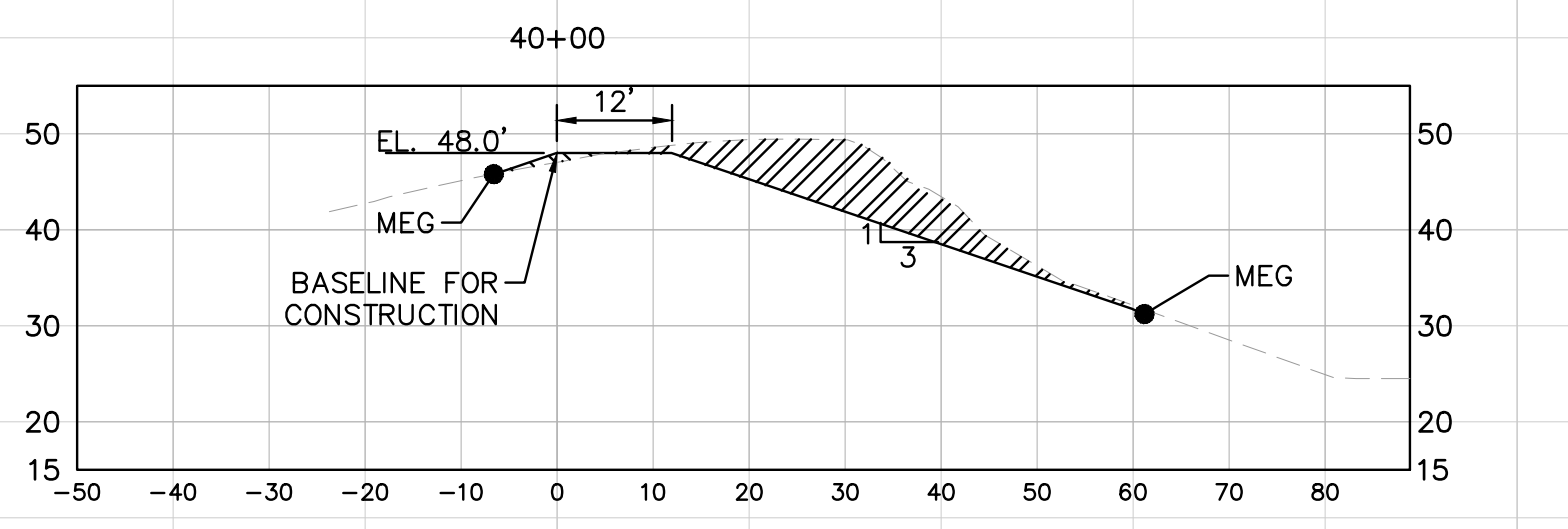
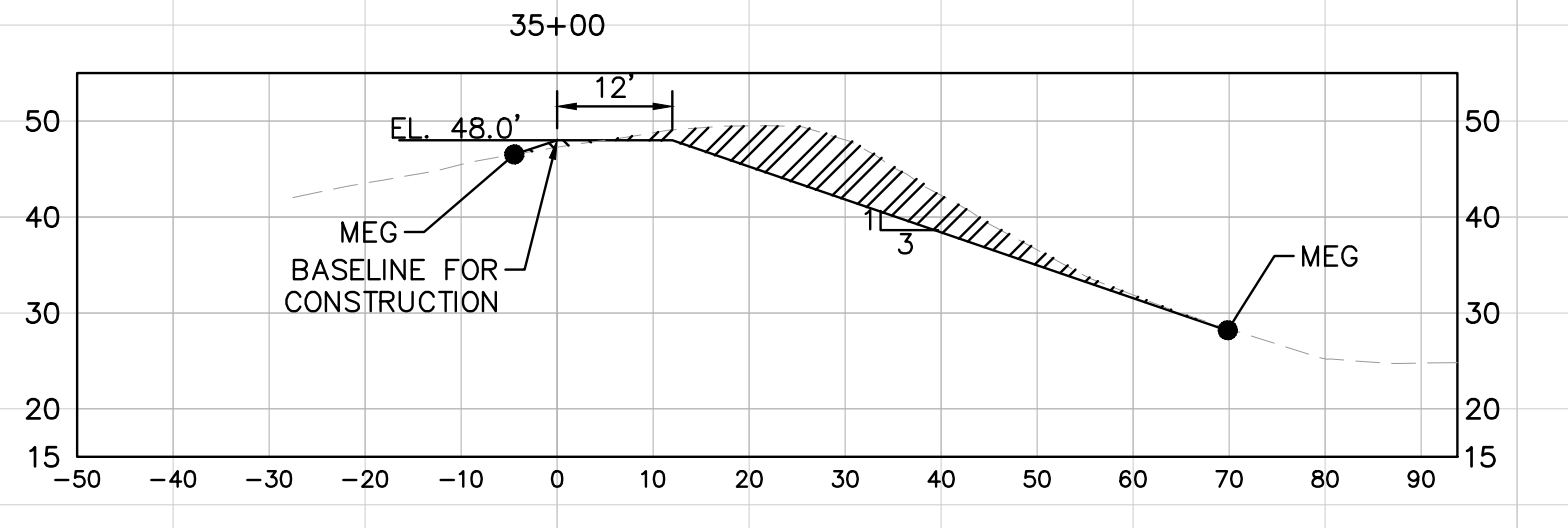
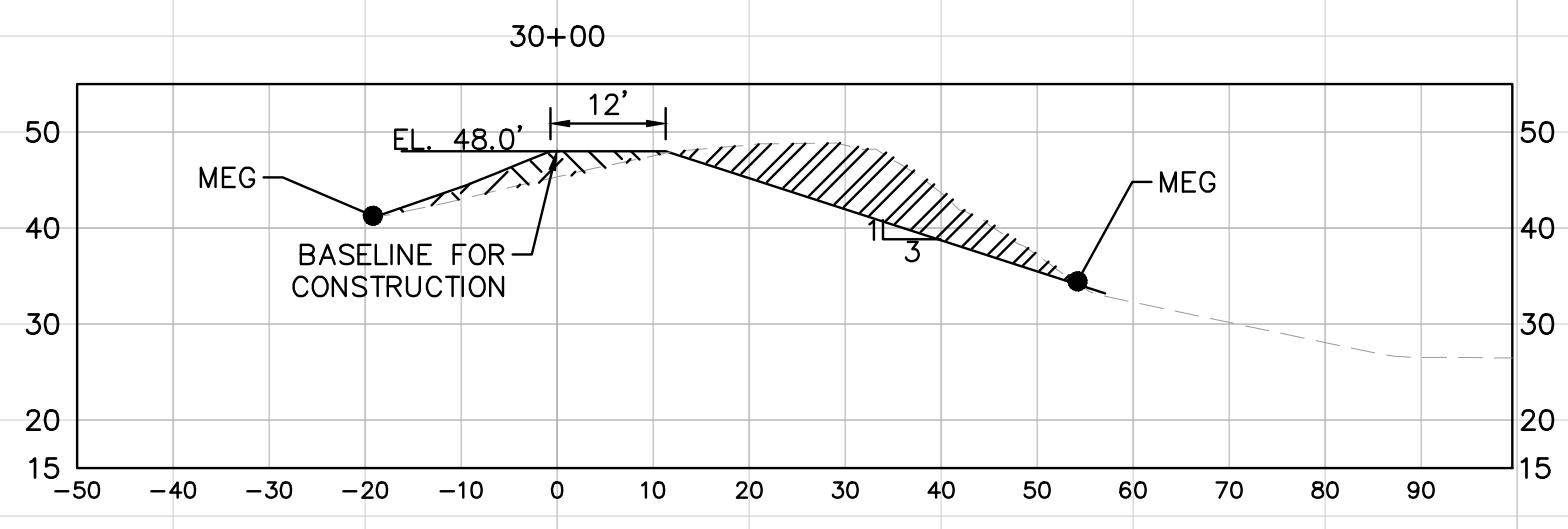
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 FL DATE: _____

EAST LAKE REHABILITATION SECTIONS

SHEET NUMBER
C-3

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 PUMP BACK STATION**
 MANATEE COUNTY

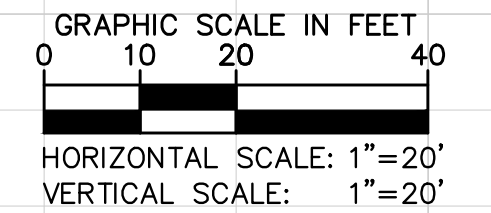
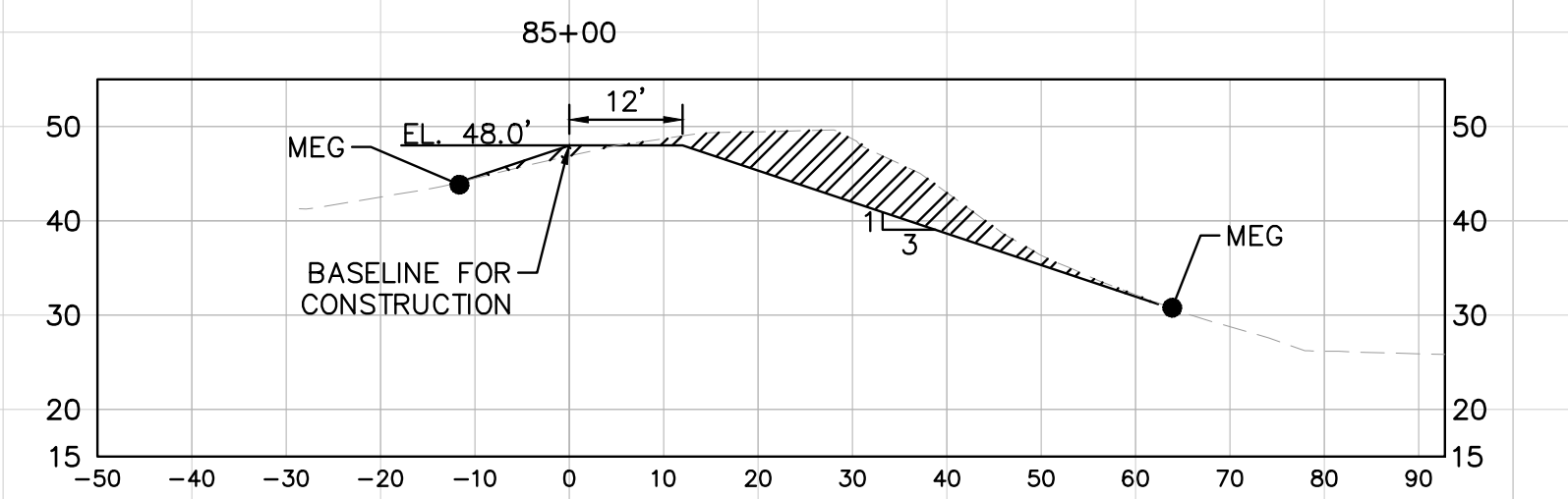
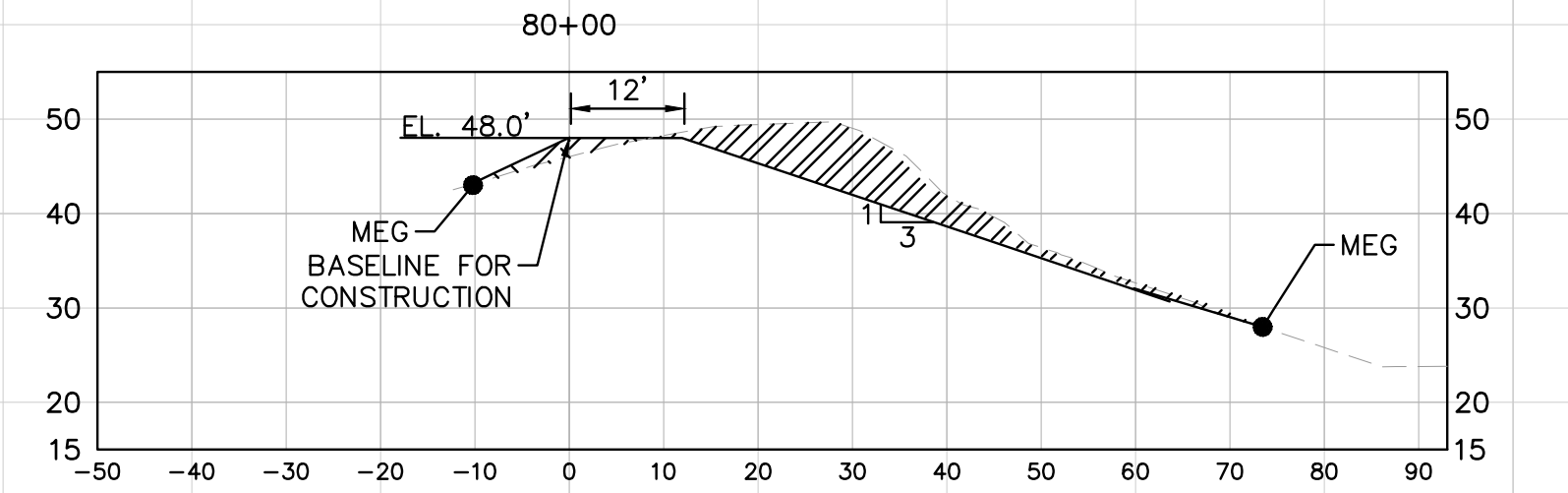
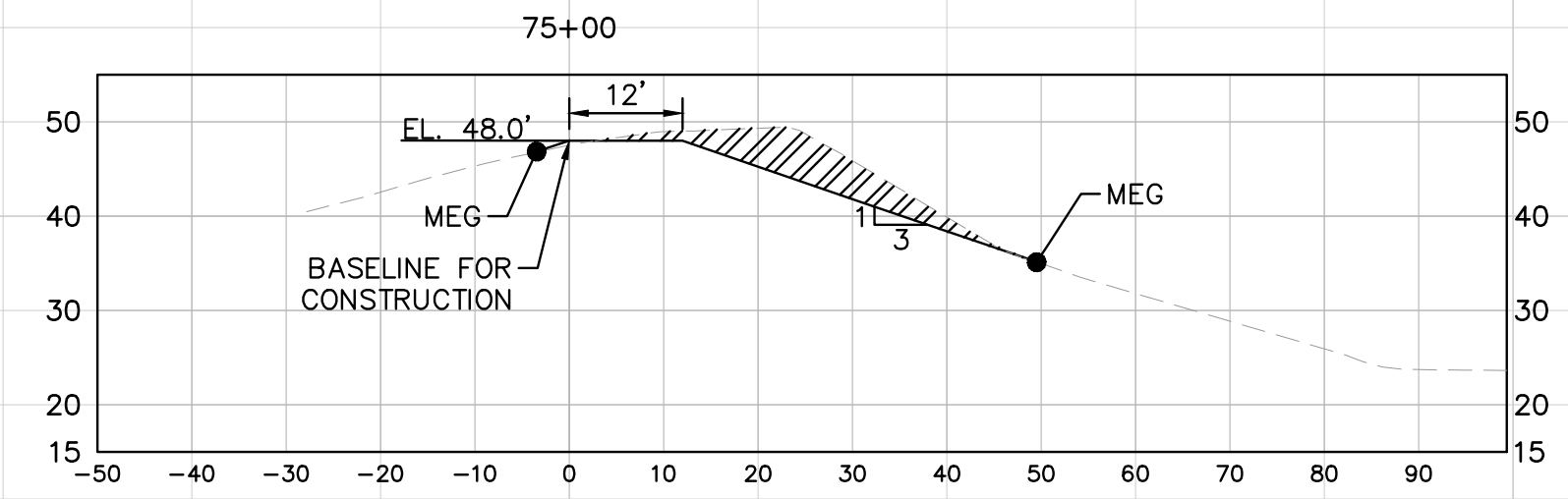
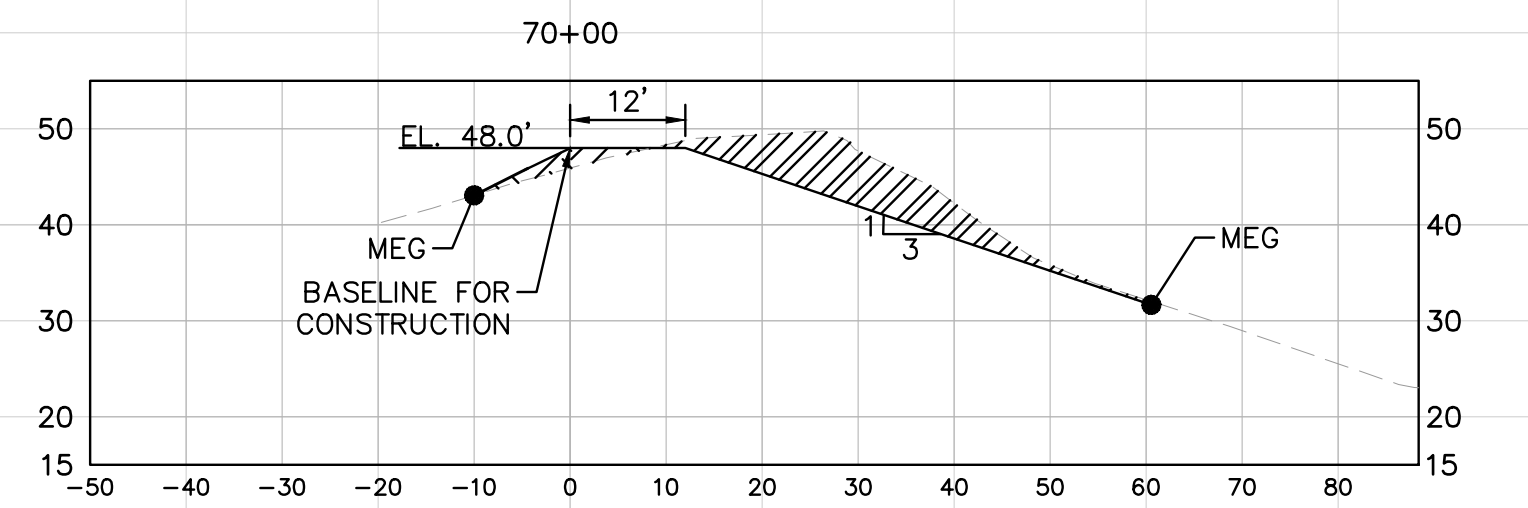
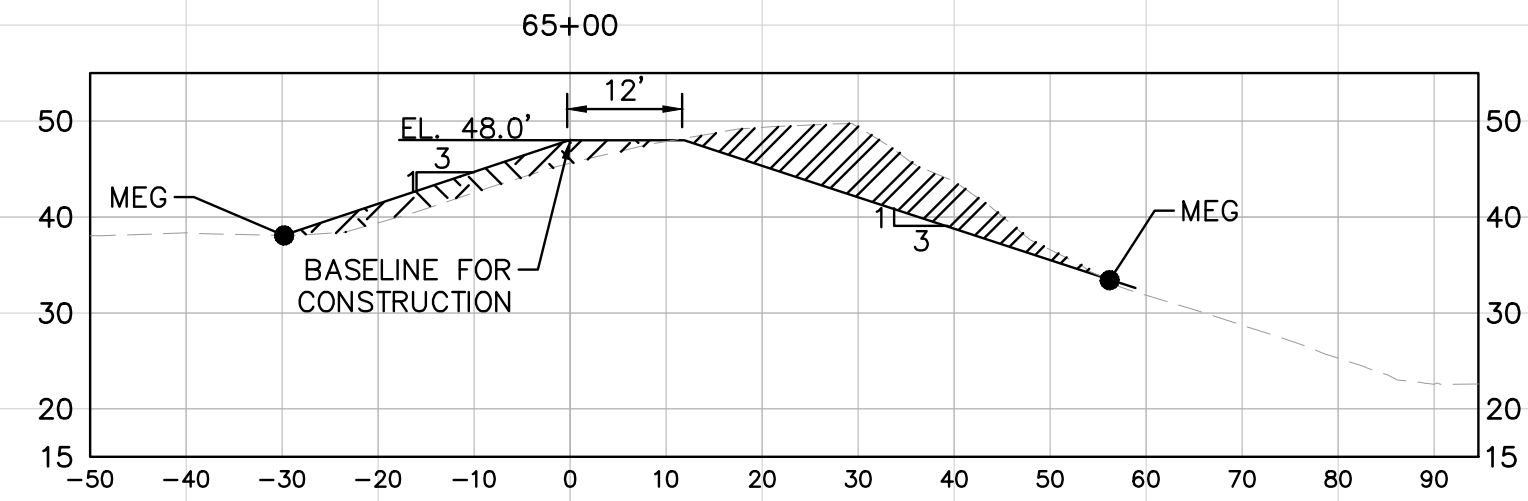
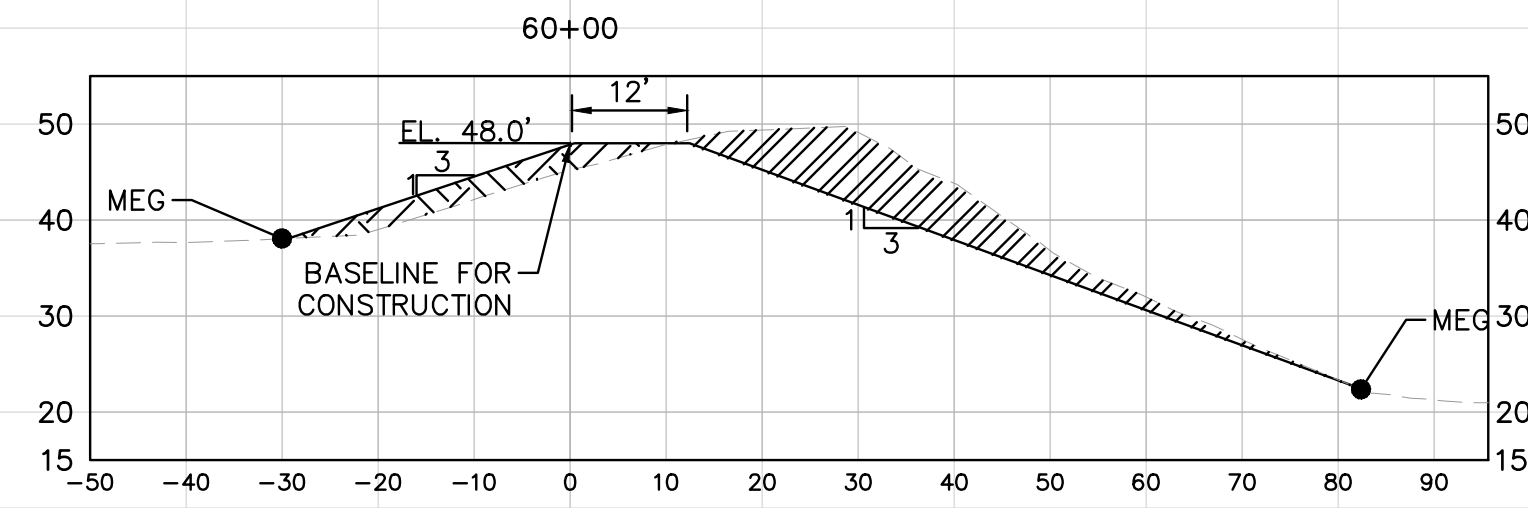
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FL DATE:

**EAST LAKE
 REHABILITATION
 SECTIONS**

SHEET NUMBER

C-4

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LEGEND:
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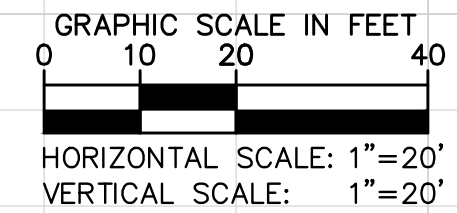
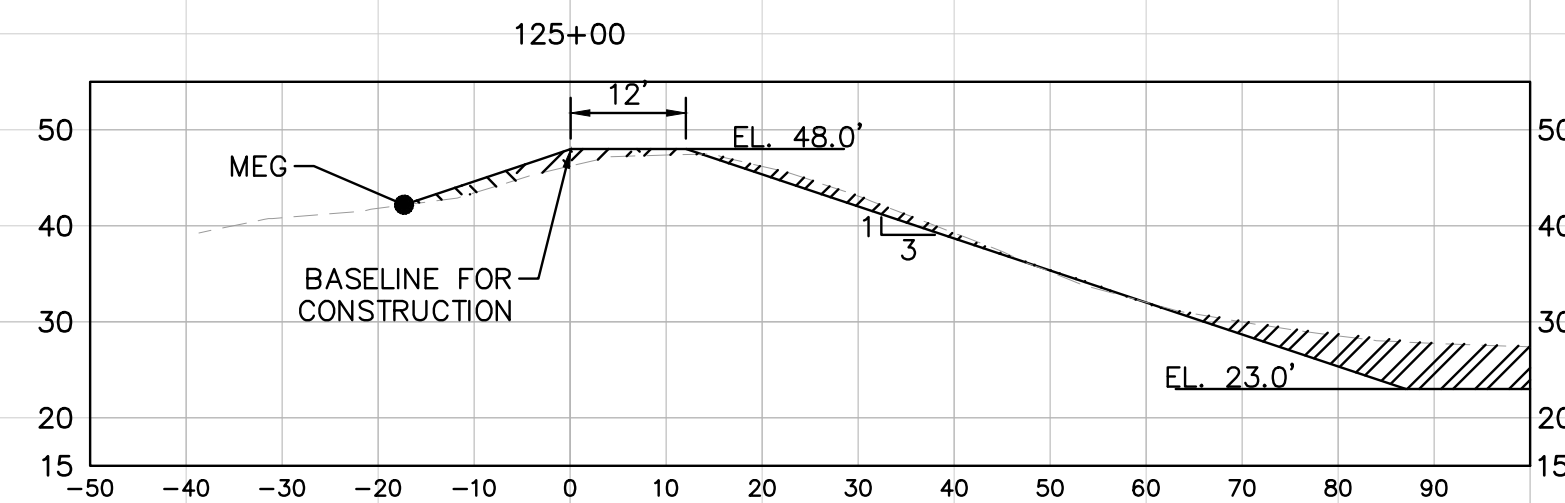
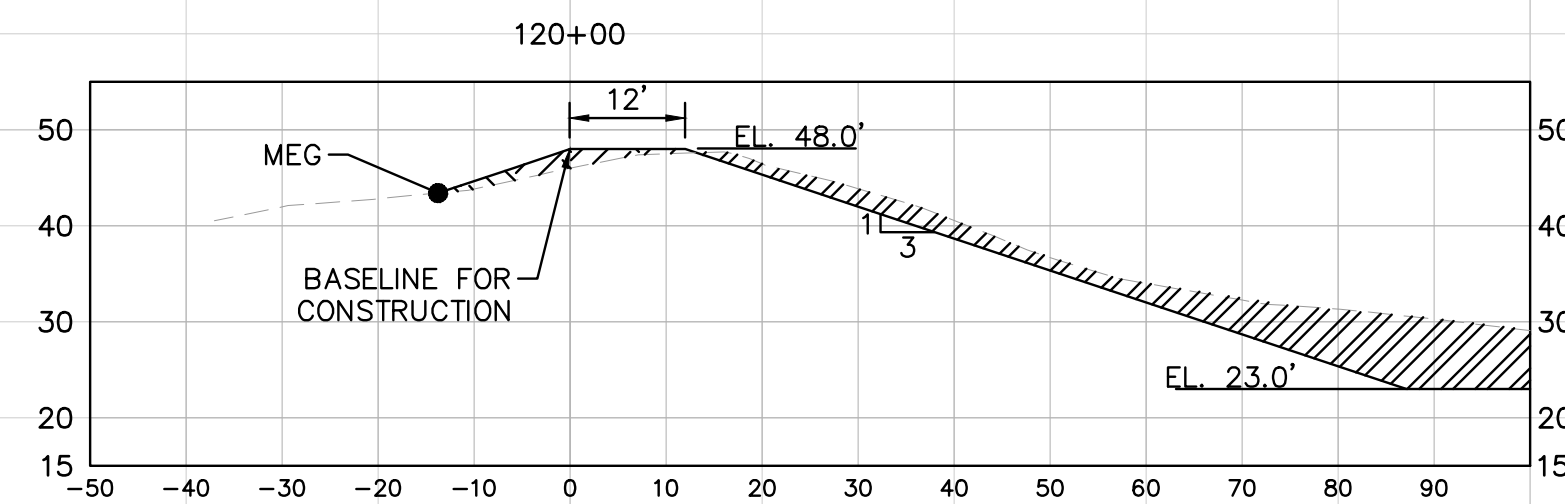
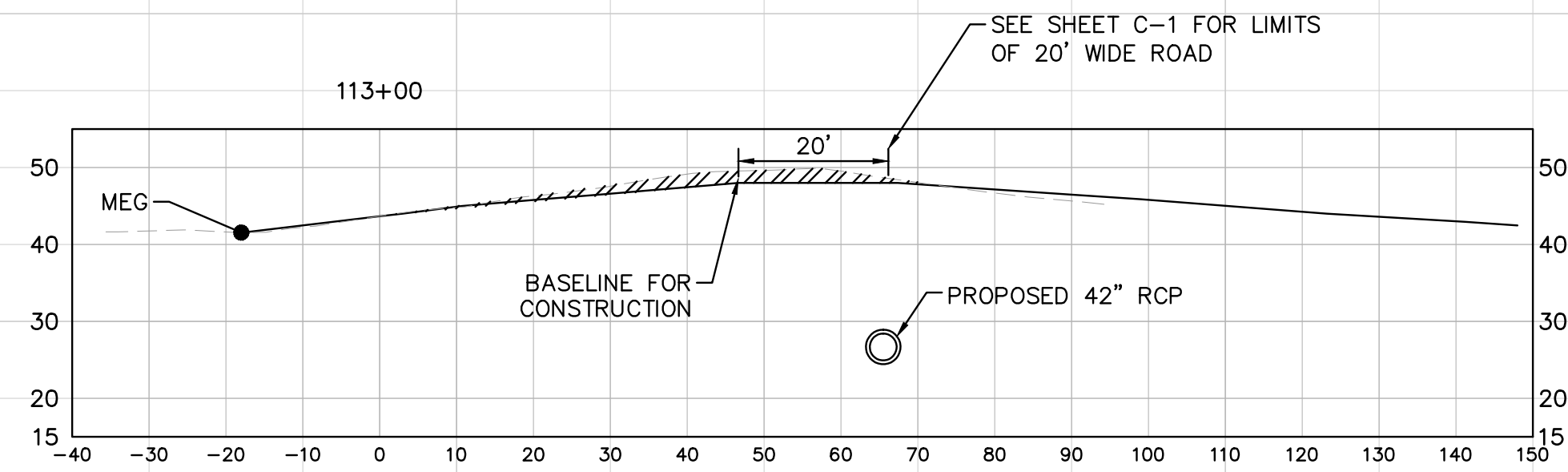
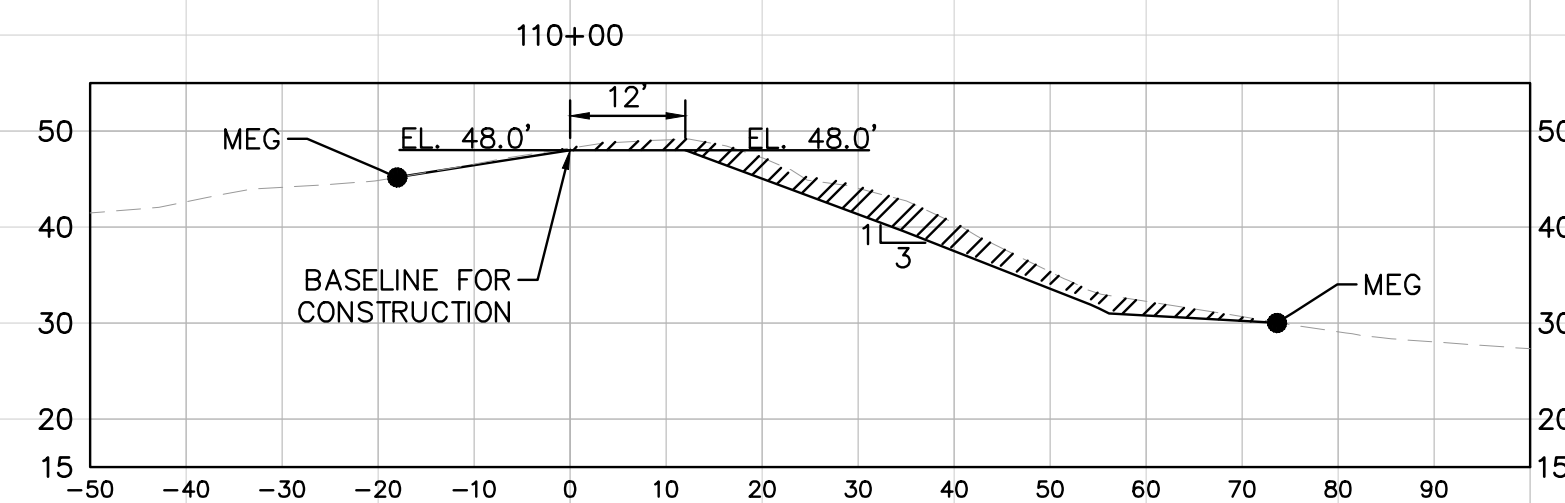
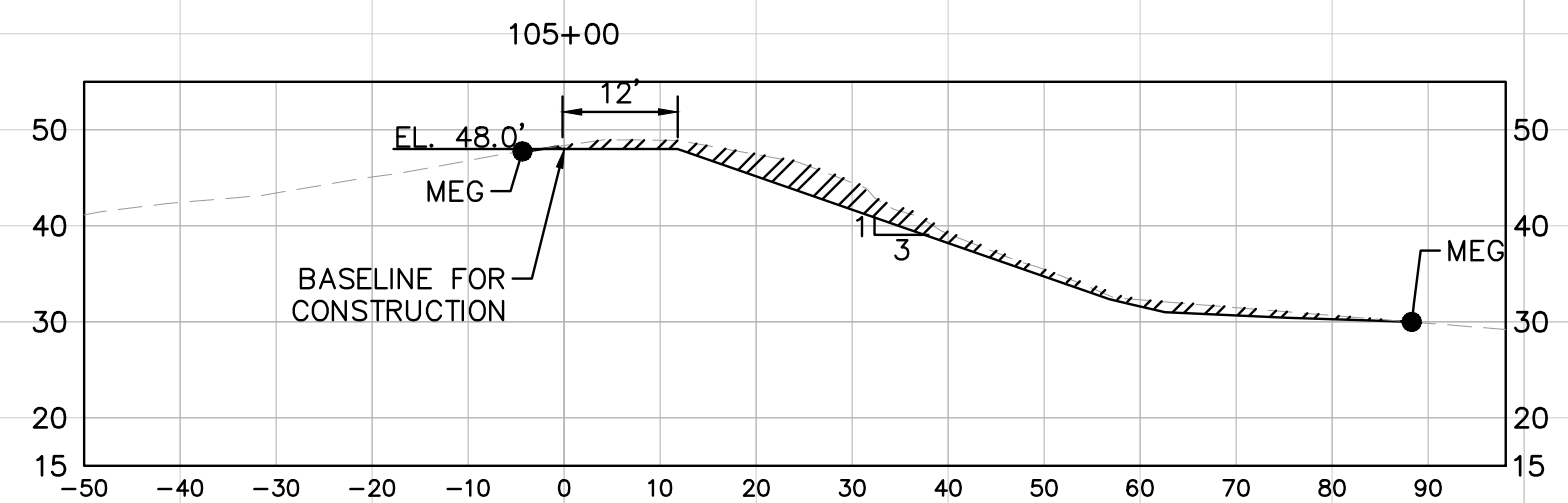
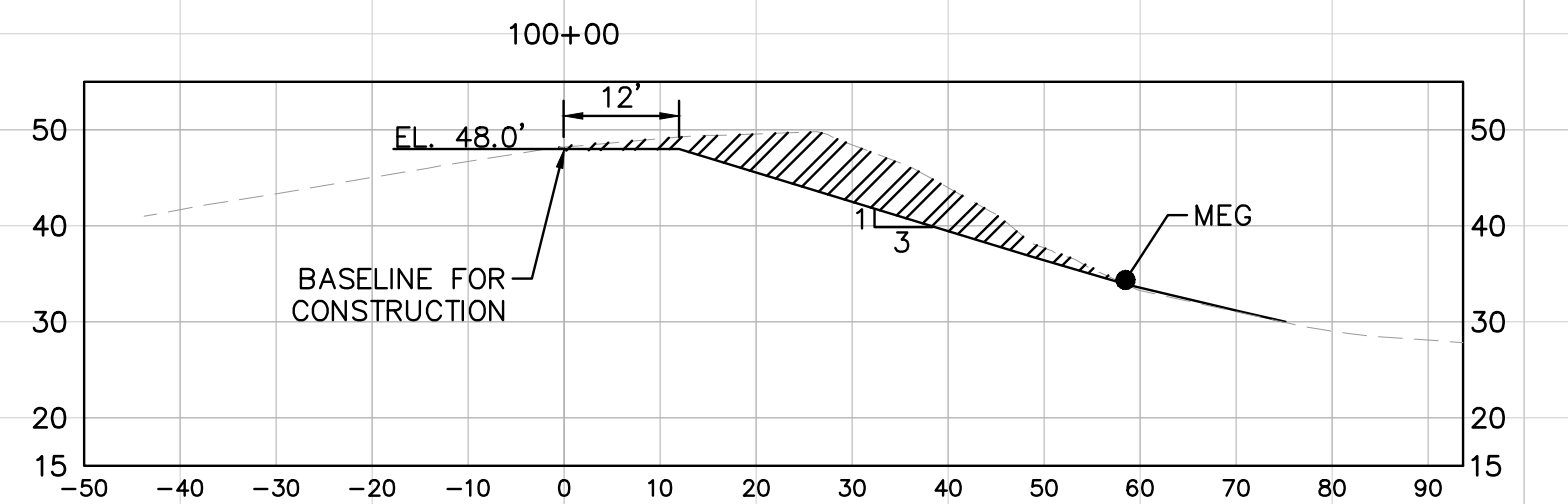
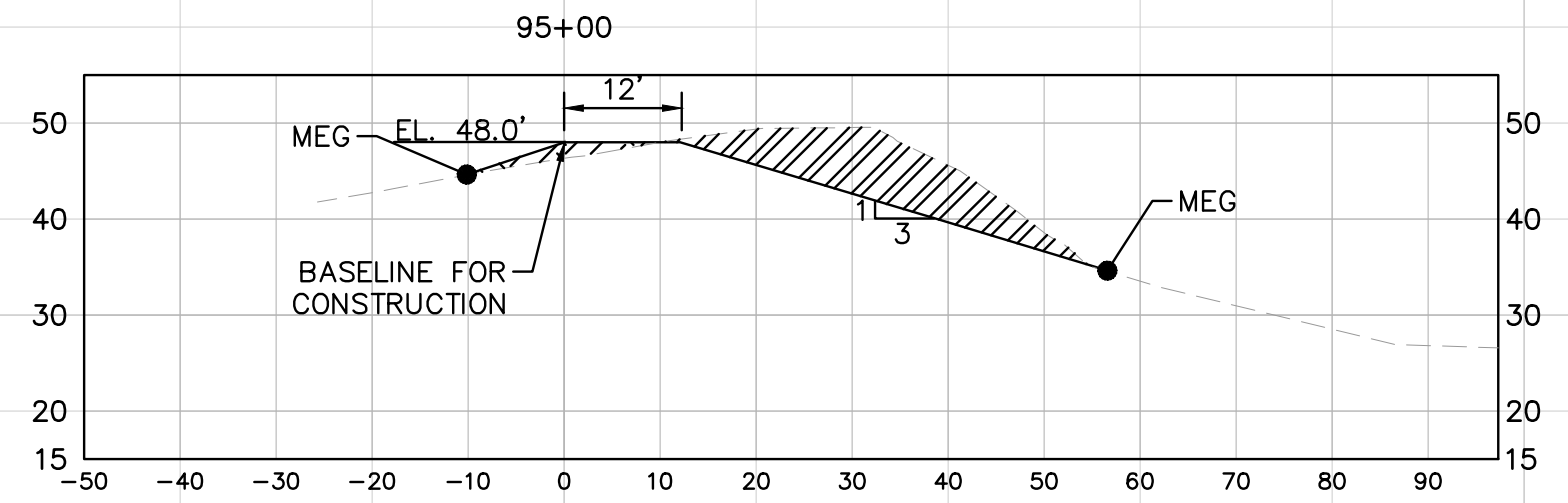
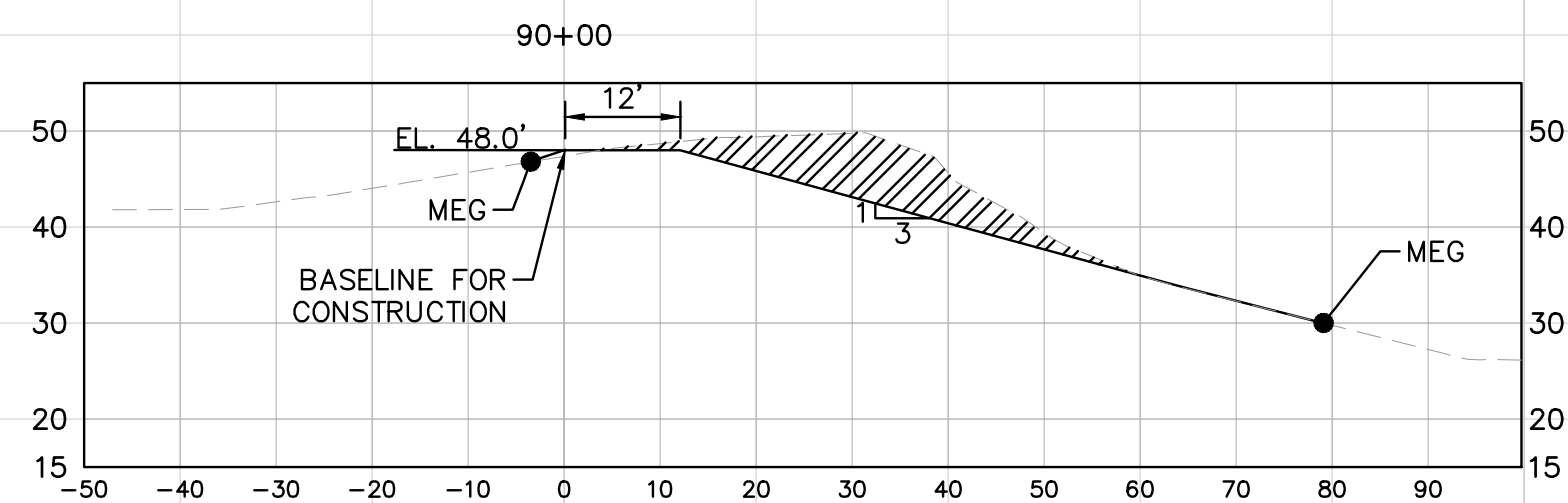
MANATEE COUNTY

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 FL LICENSE NUMBER
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 FL DATE:

EAST LAKE REHABILITATION SECTIONS

SHEET NUMBER
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LEGEND:
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 CUT AREA

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MANATEE COUNTY

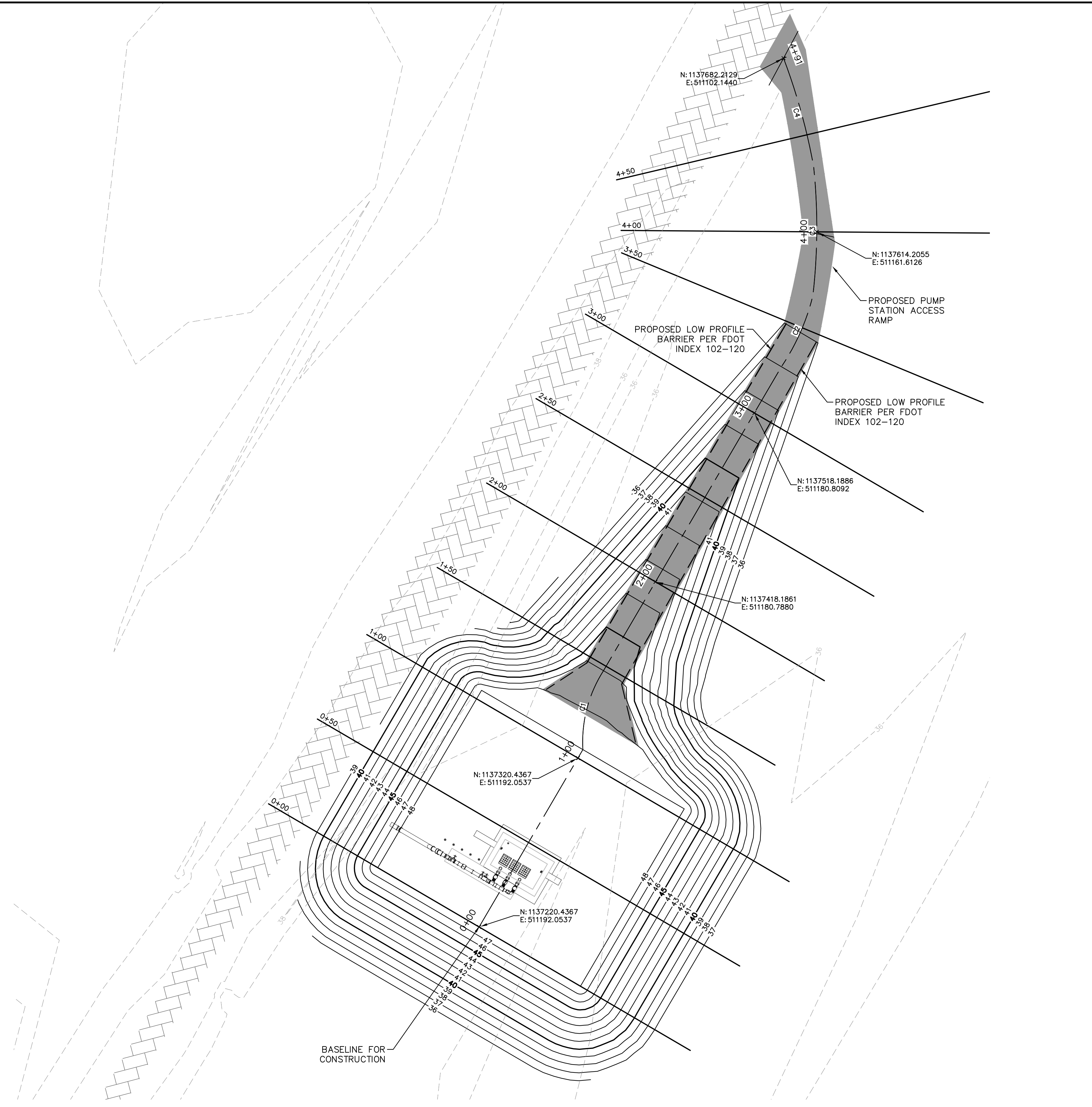
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 FL DATE:

EAST LAKE
 REHABILITATION
 SECTIONS

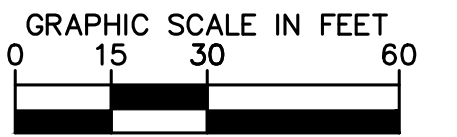
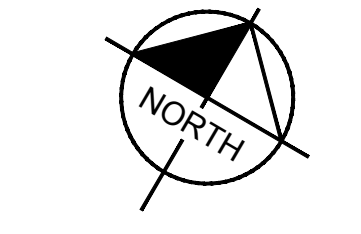
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KEY MAP: EAST LAKE



LEGEND:
 PROPOSED SHELL ACCESS ROAD (SEE DETAIL 3 SHEET C-29 FOR DETAILS.)
 EXISTING ACCESS ROAD
 LOW PROFILE BARRIER PER FDOT INDEX 102-120

5

PUMP STATION ACCESS ROAD AND BERM CROSS SECTIONS	
SHEET	STATION
C-8	0+00
C-8	0+50
C-8	1+00
C-8	1+50
C-8	2+00
C-8	2+50
C-8	3+00
C-8	3+50
C-9	4+00
C-9	4+50

CURVE TABLE								
CURVE	RADIUS	LENGTH	START NORTHING EASTING	START STATION	END NORTHING EASTING	END STATION	PI NORTHING EASTING	PI STATION
C1	67.38'	42.37'	N: 1137325.4566 E: 511192.0537	1+05.02	N: 1137365.5725 E: 511180.7768	1+47.39	N: 1137343.6810 E: 511179.8928	1+26.93
C2	112.82'	39.84'	N: 1137545.7369 E: 511180.8151	3+27.55	N: 1137585.1134 E: 511176.3150	3+67.39	N: 1137565.8266 E: 511182.0779	3+47.68
C3	301.76'	66.02'	N: 1137585.1134 E: 511176.3150	3+67.39	N: 1137642.1842 E: 511143.3798	4+33.41	N: 1137615.4576 E: 511162.9816	4+00.53
C4	315.30'	57.55'	N: 1137642.1842 E: 511143.3798	4+33.41	N: 1137682.2129 E: 511102.1439	4+90.96	N: 1137664.0855 E: 511124.5935	4+62.27

5	ADDENDUM 5	5/26/2020	SNR
No.	REVISIONS	DATE	BY

Kimley»Horn

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KHA PROJECT
 148400015
 DATE
 1/28/2020
 SCALE AS SHOWN
 DESIGNED BY SNR
 DRAWN BY ASR
 CHECKED BY WEW

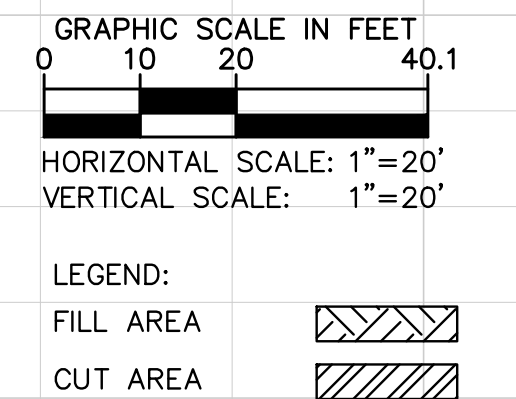
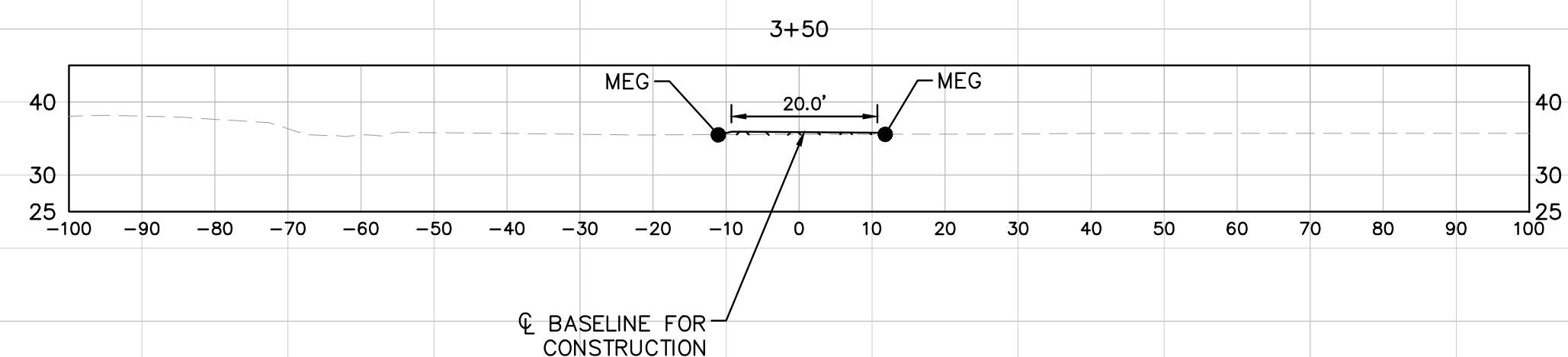
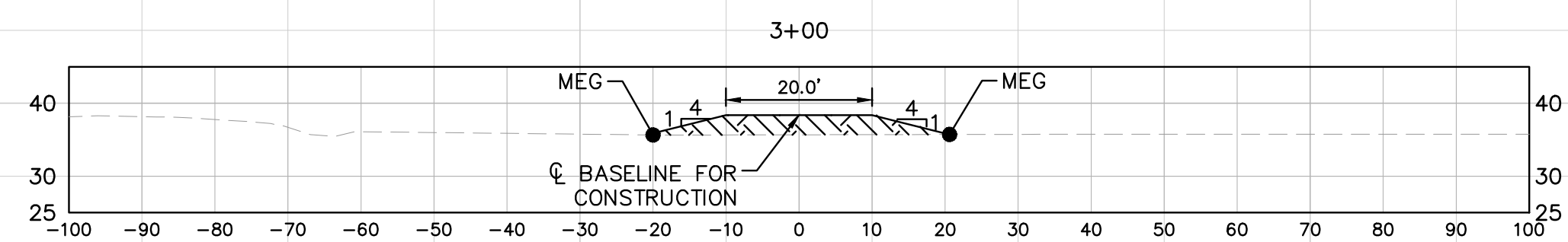
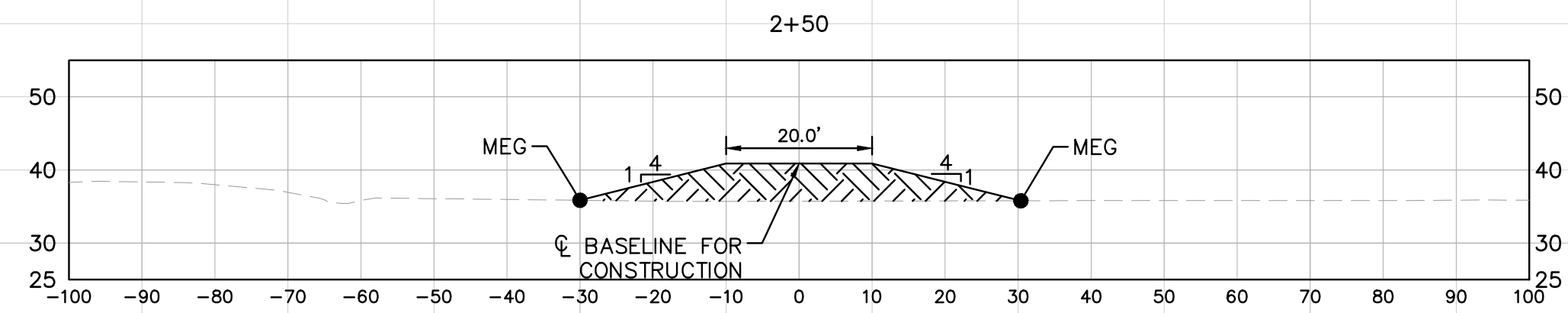
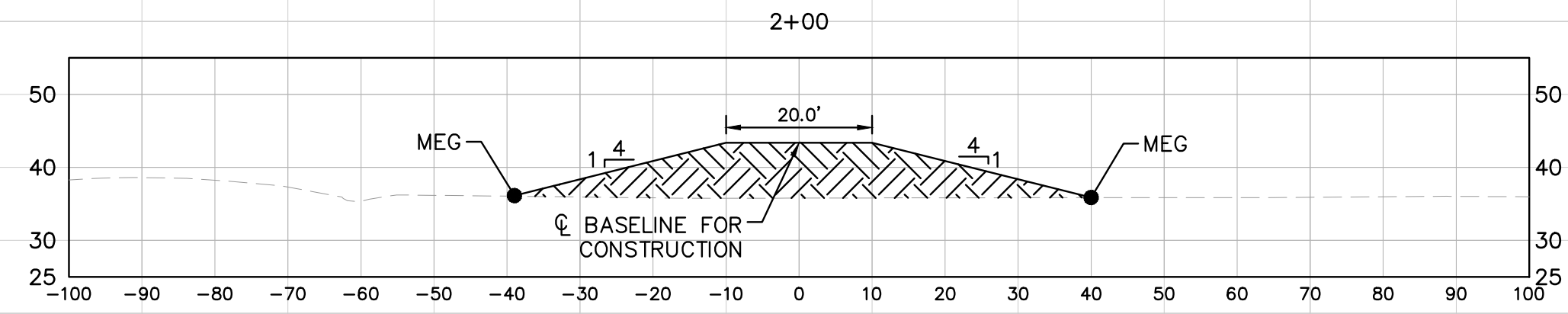
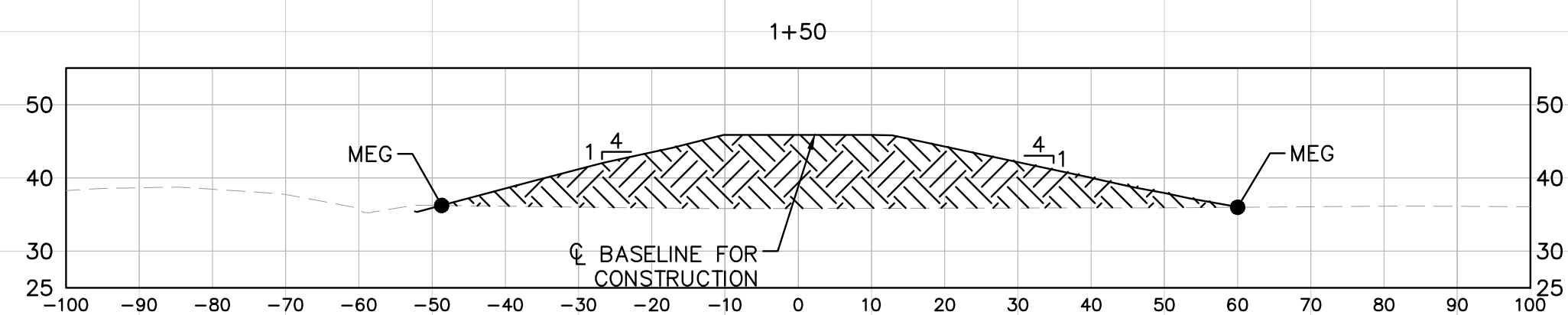
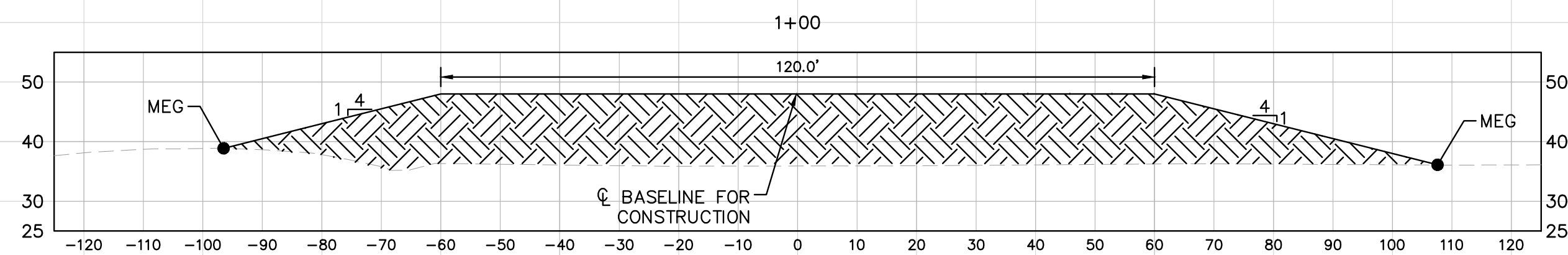
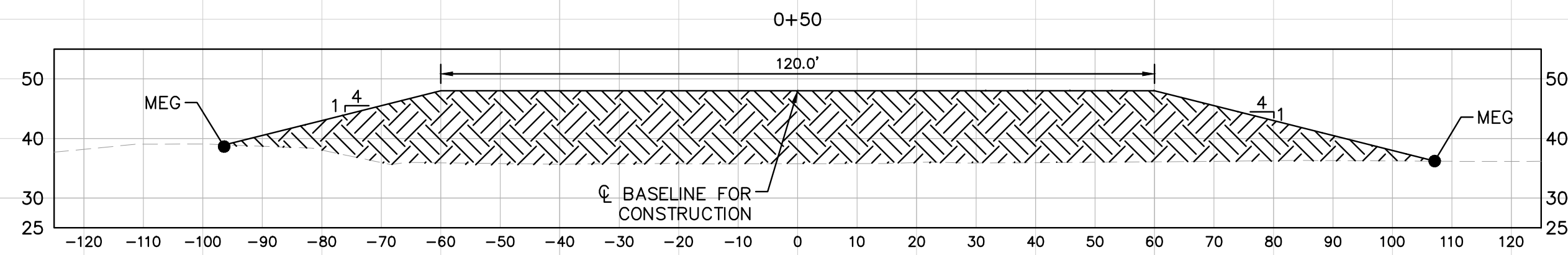
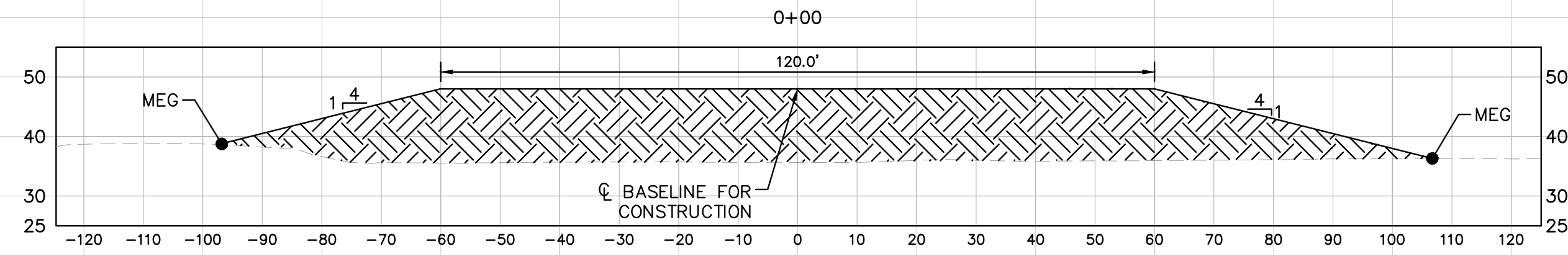
Manatee County
SEWRF RECLAIMED PUMP BACK STATION
 MANATEE COUNTY

LICENSED PROFESSIONAL
 STEPHEN N. ROMANO, P.E.
 FL LICENSE NUMBER
 57579

PUMP STATION GRADING PLAN

SHEET NUMBER
C-7

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KHA PROJECT
 148400015
 DATE
 1/28/2020
 SCALE AS SHOWN
 DESIGNED BY SNR
 DRAWN BY ASR
 CHECKED BY WEW

MANATEE COUNTY



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 PUMP BACK STATION**

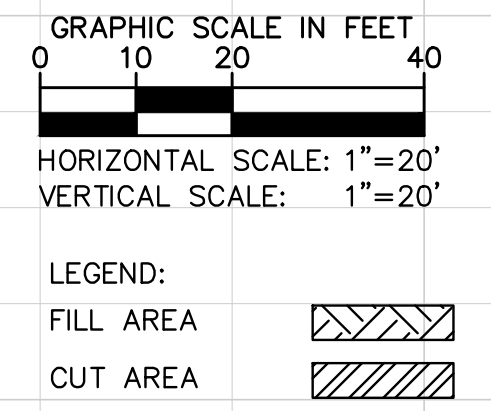
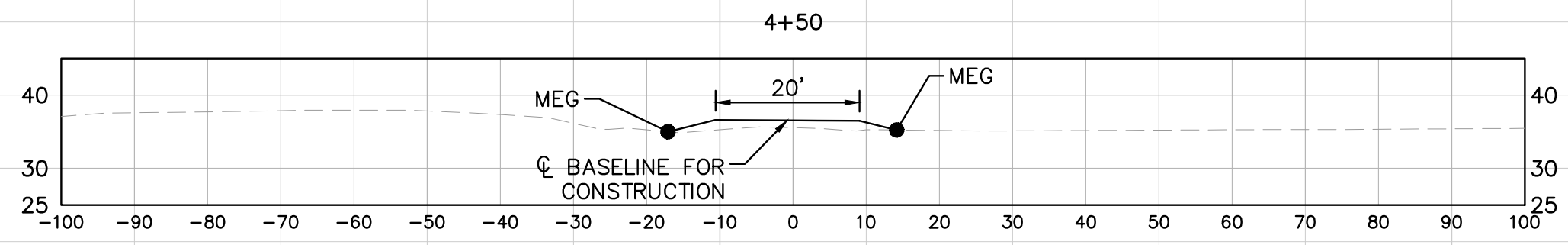
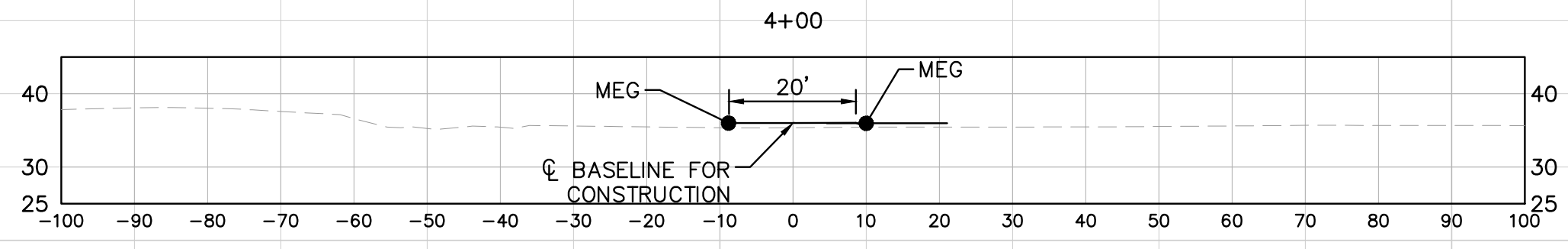
LICENSED PROFESSIONAL
 STEPHEN N. ROMANO, P.E.
 FL LICENSE NUMBER
 57579
 FL DATE:

**PUMP STATION
 GRADING
 SECTIONS**

SHEET NUMBER

C-8


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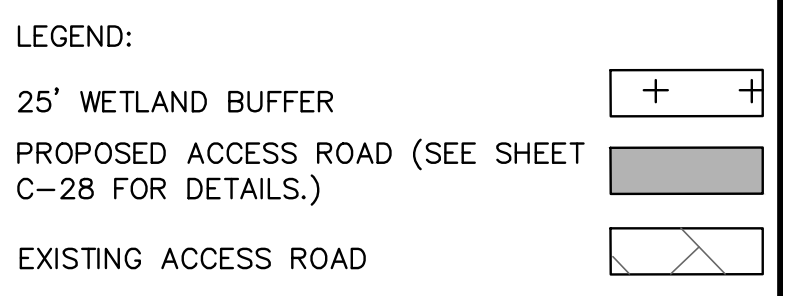
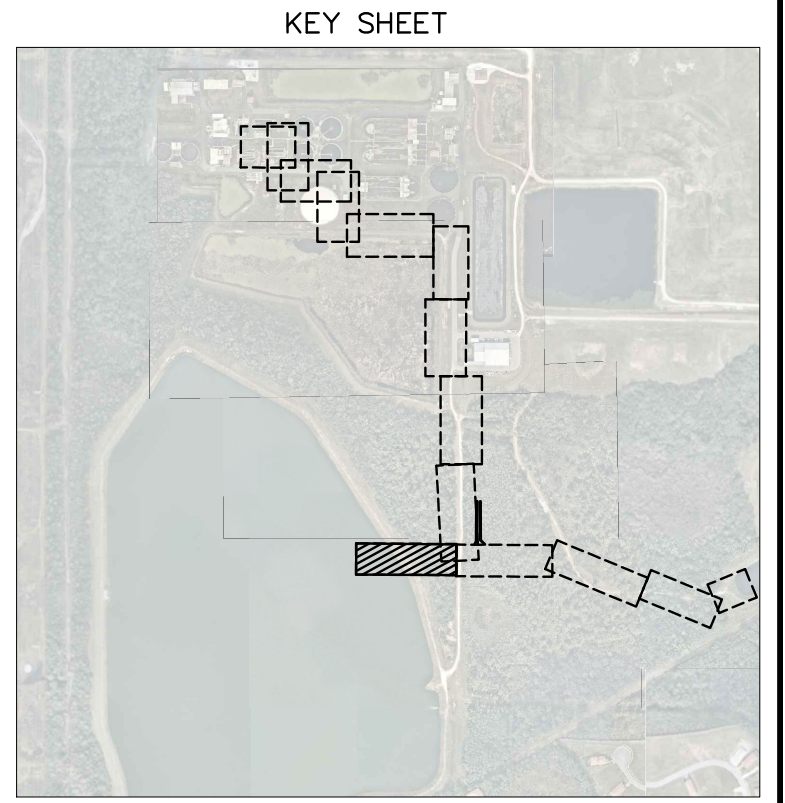
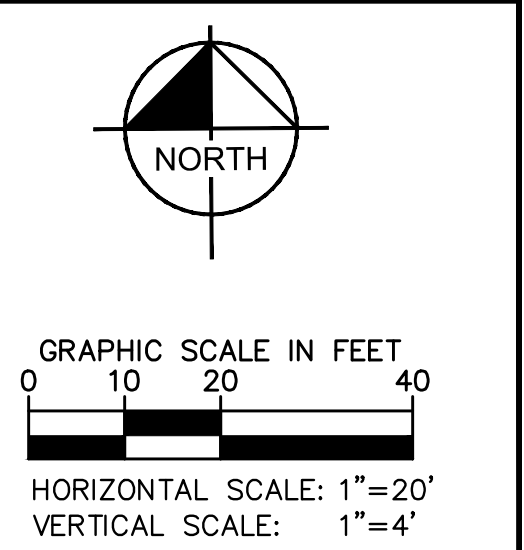
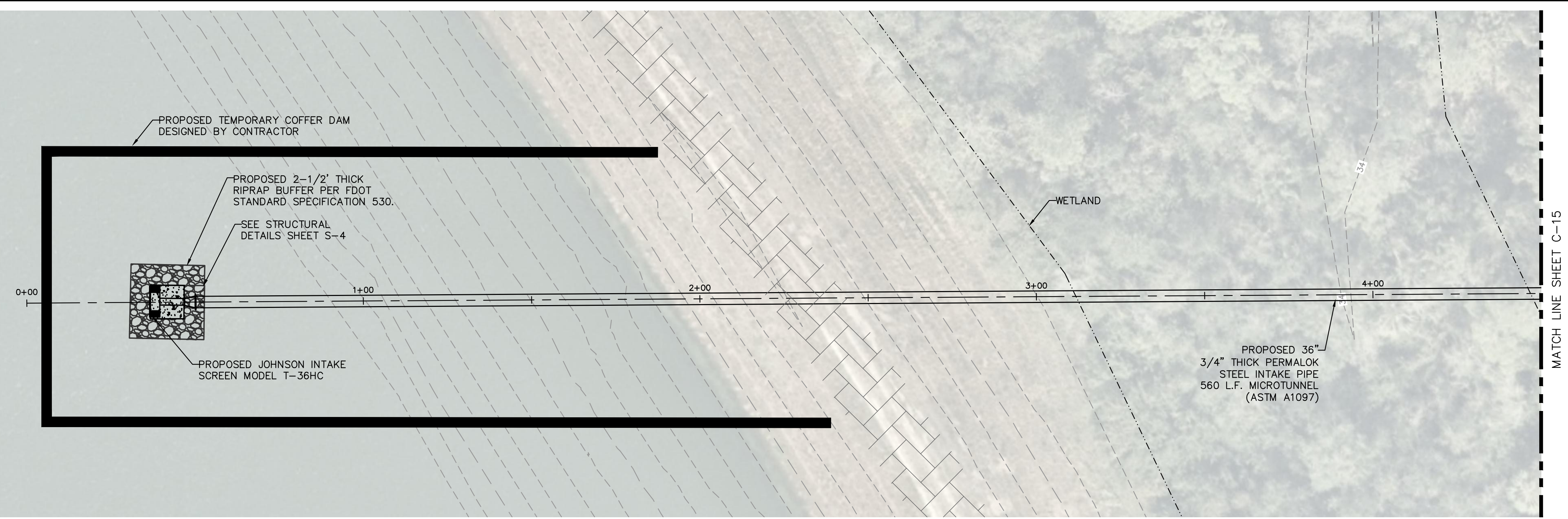

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 MANATEE COUNTY

LICENSED PROFESSIONAL	STEPHEN N. ROMANO, P.E.
FL LICENSE NUMBER	57579
FL DATE:	

**PUMP STATION
 GRADING
 SECTIONS**

SHEET NUMBER	C-9
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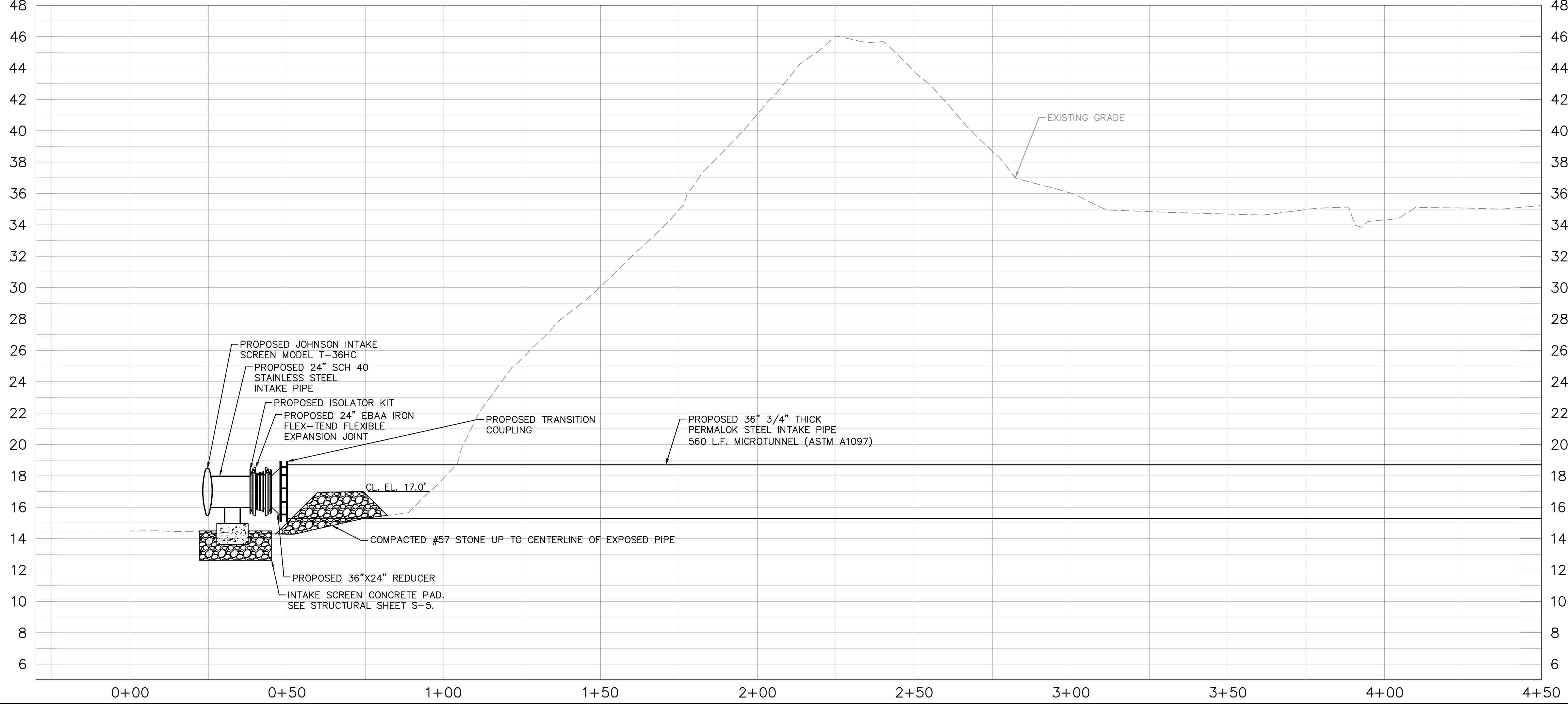
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GROUNDWATER / DEWATERING NOTE:
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KHA PROJECT	148400015
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SCALE	AS SHOWN
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DRAWN BY	ASR
CHECKED BY	WEW


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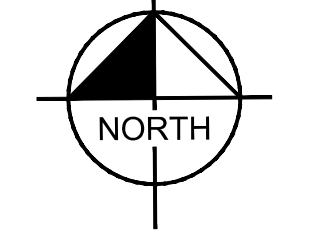
MANATEE COUNTY

LICENSED PROFESSIONAL	STEPHEN N. ROMANO, P.E.
FL LICENSE NUMBER	57579
FL DATE:	

**PLAN & PROFILE - SOUTH
 LAKE 2 INTAKE PIPING**

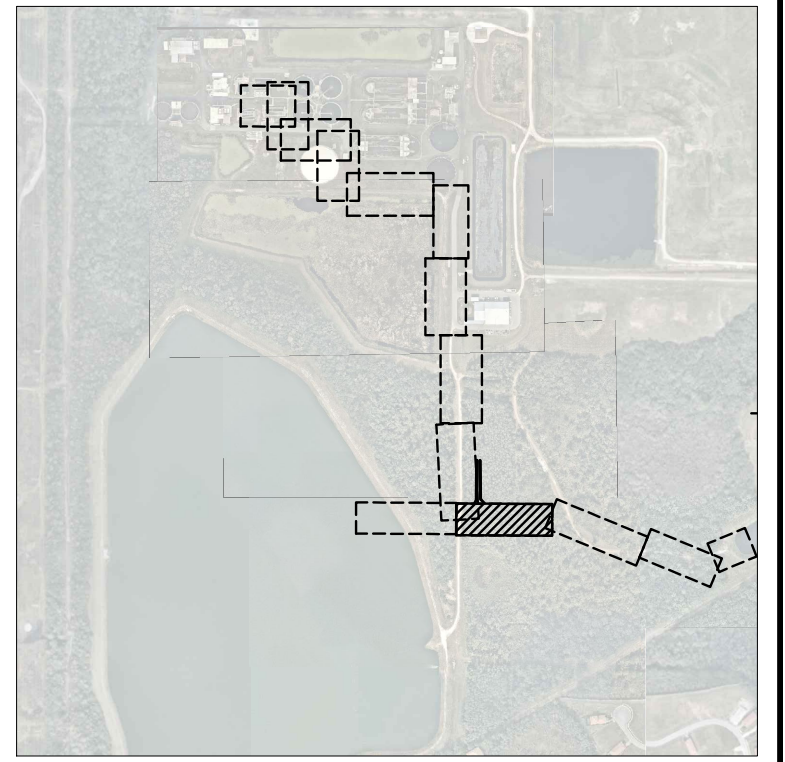
SHEET NUMBER	C-10
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GRAPHIC SCALE IN FEET
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 HORIZONTAL SCALE: 1"=20'
 VERTICAL SCALE: 1"=4'

KEY SHEET

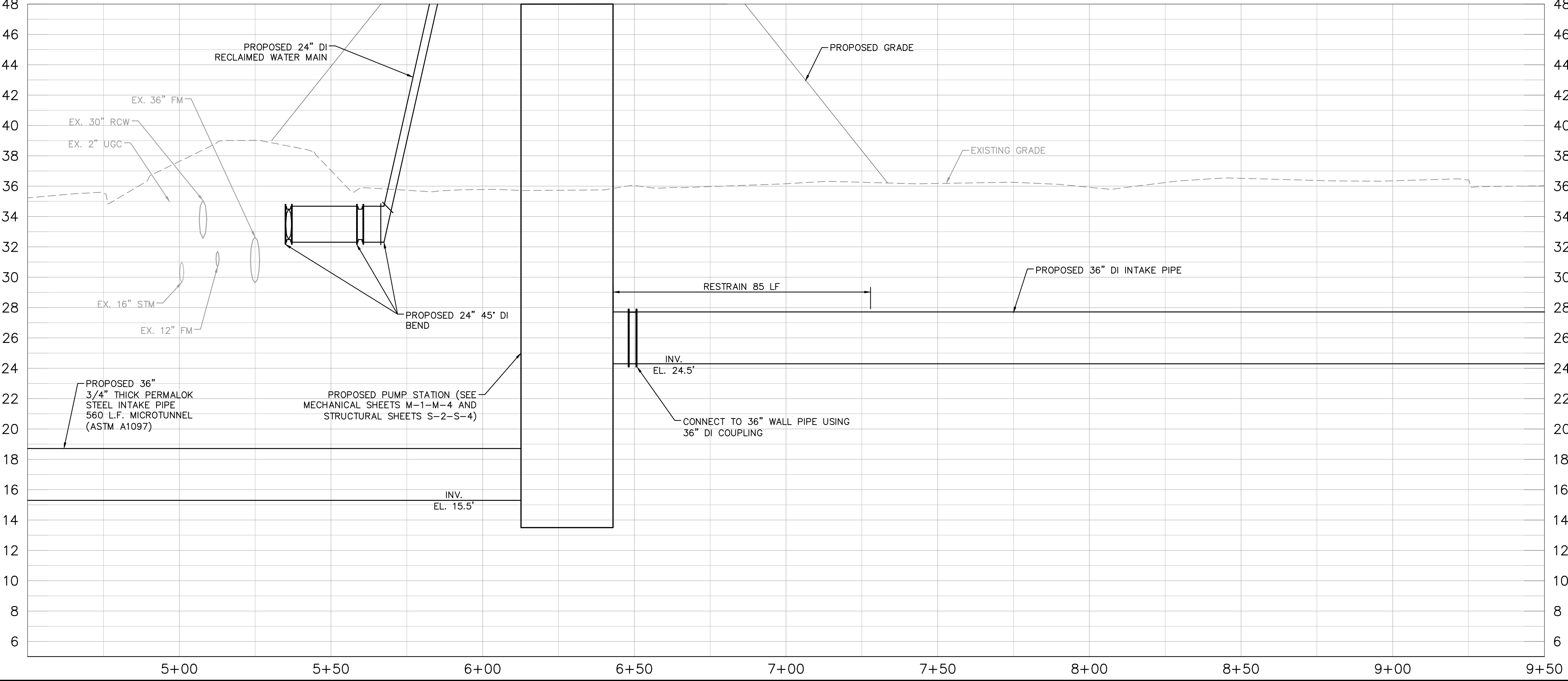
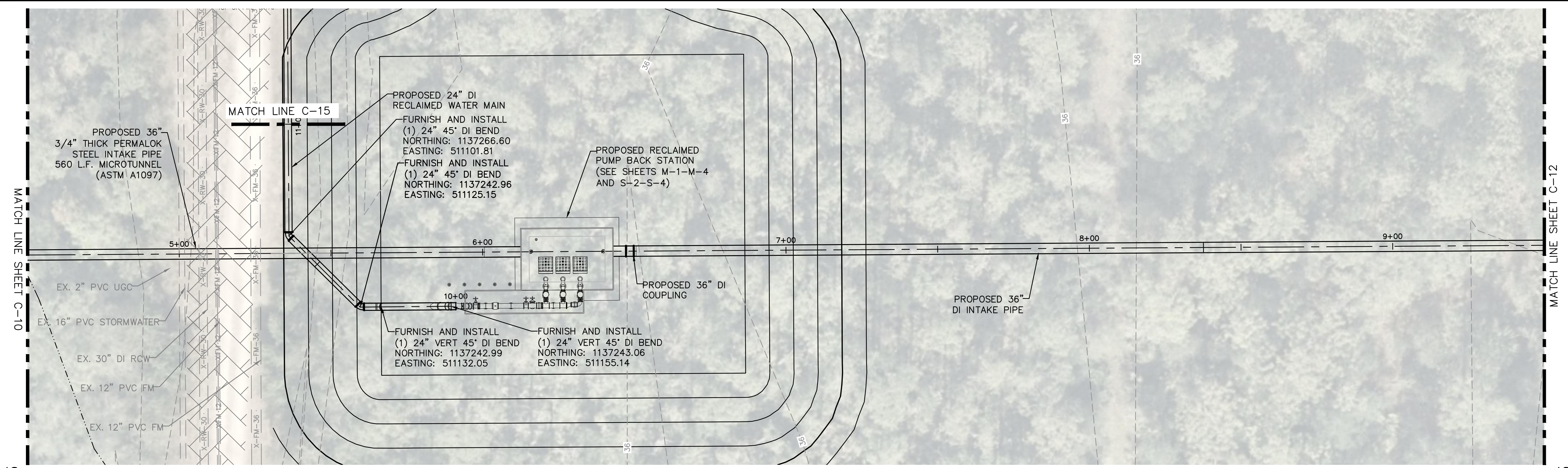


- LEGEND:
- 25' WETLAND BUFFER +
 - PROPOSED ACCESS ROAD (SEE SHEET C-28 FOR DETAILS.)
 - EXISTING ACCESS ROAD

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KHA PROJECT 148400015
DATE 1/28/2020
SCALE AS SHOWN
DESIGNED BY SNR
DRAWN BY ASR
CHECKED BY WEW

**SEWRF RECLAIMED
PUMP BACK STATION**

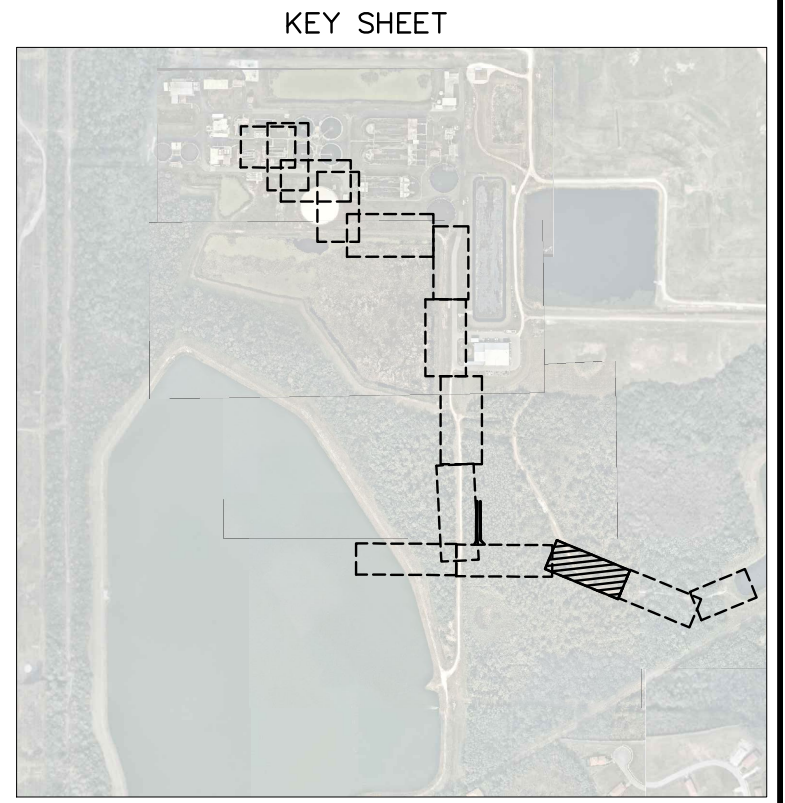
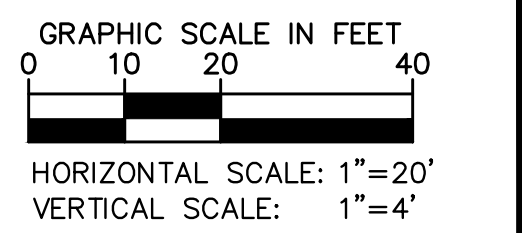
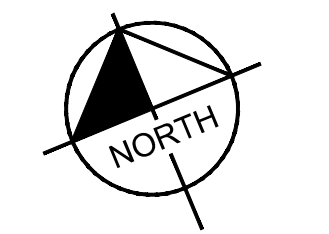
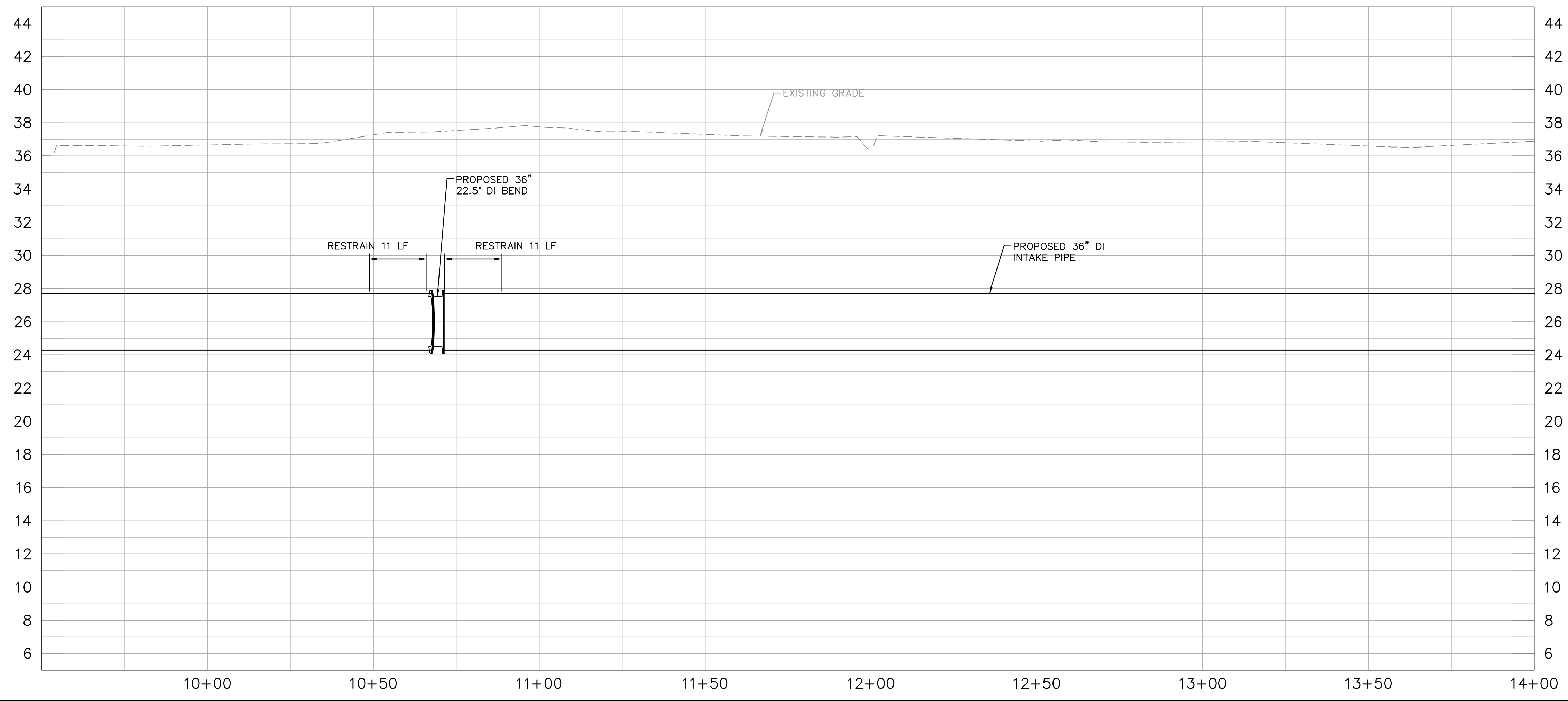
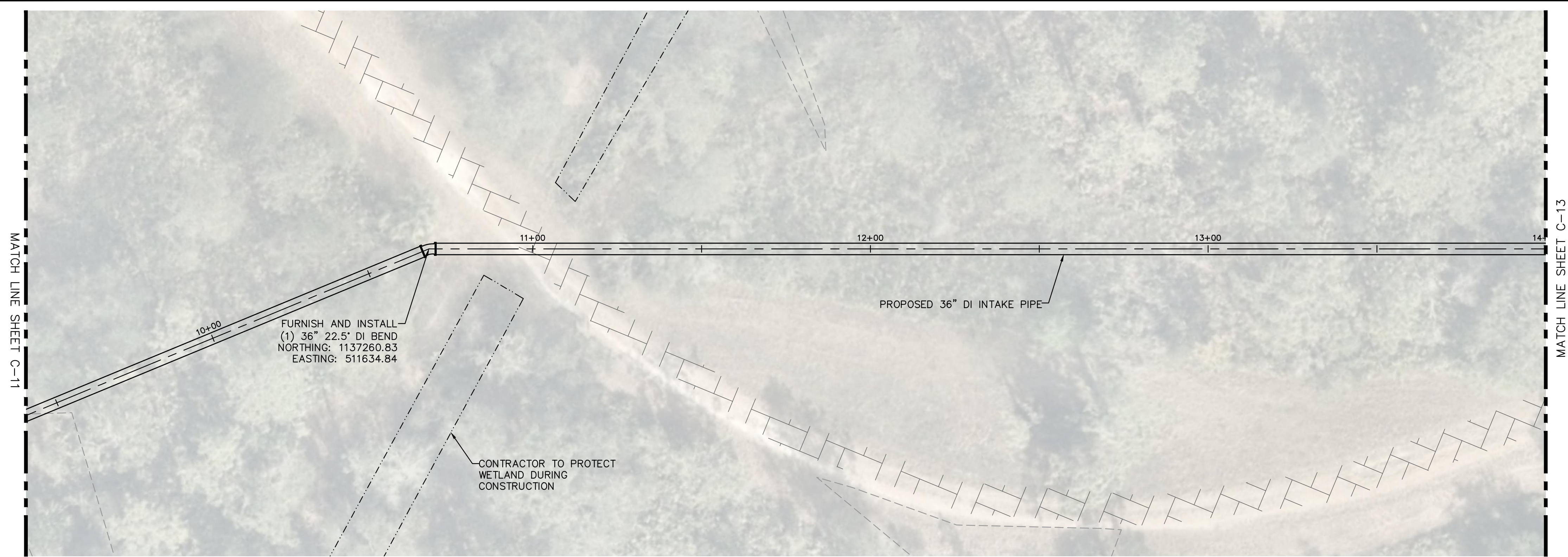
MANATEE COUNTY

LICENSED PROFESSIONAL
STEPHEN N. ROMANO, P.E.
FL LICENSE NUMBER 57579

**PLAN & PROFILE - SOUTH
LAKE 2 INTAKE PIPING**

SHEET NUMBER
C-11

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LEGEND:
 PROPOSED ACCESS ROAD (SEE SHEET C-28 FOR DETAILS.) [Symbol]
 EXISTING ACCESS ROAD [Symbol]

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KHA PROJECT
 148400015
 DATE
 1/28/2020
 SCALE AS SHOWN
 DESIGNED BY SNR
 DRAWN BY ASR
 CHECKED BY WEW

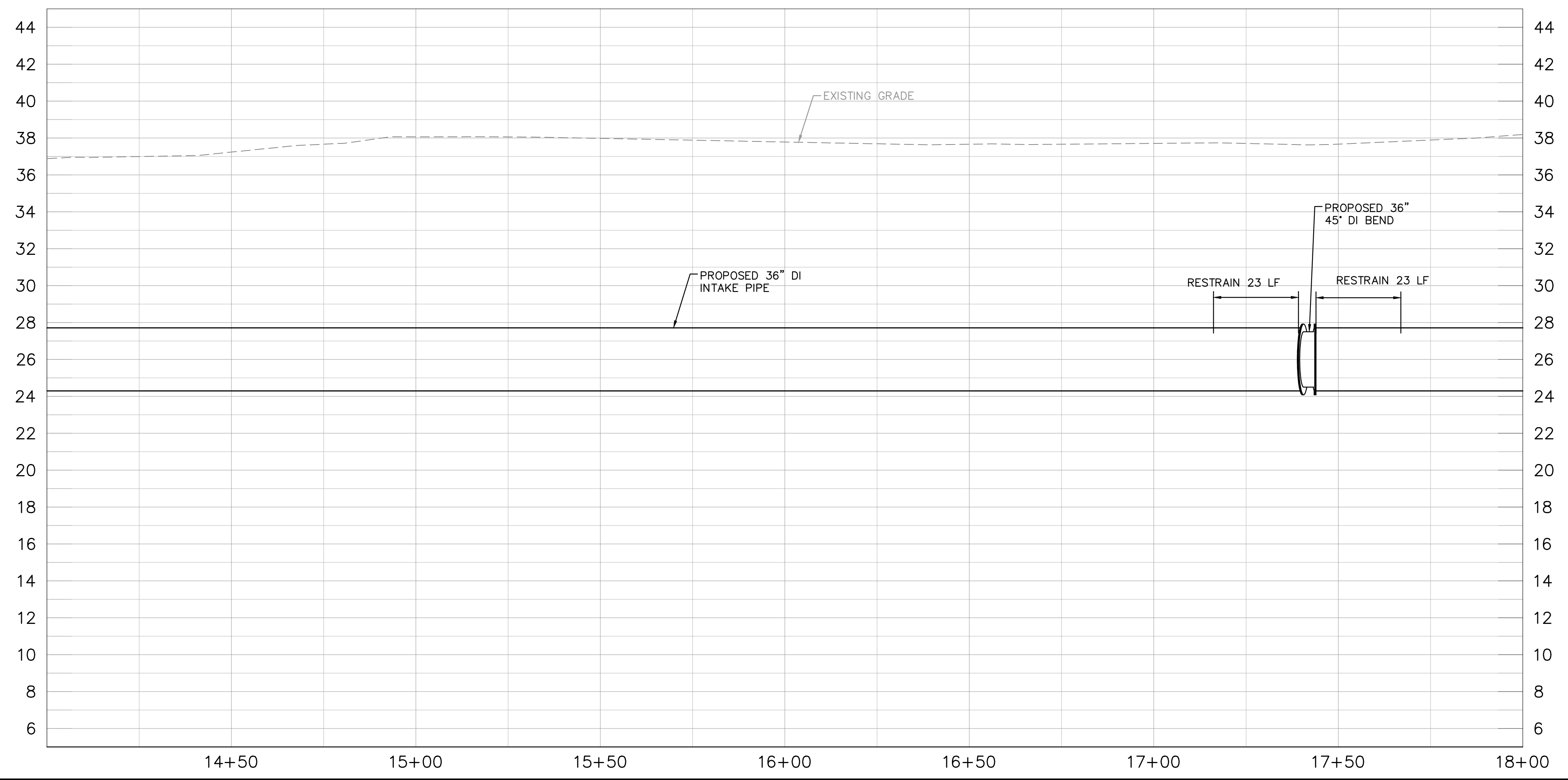
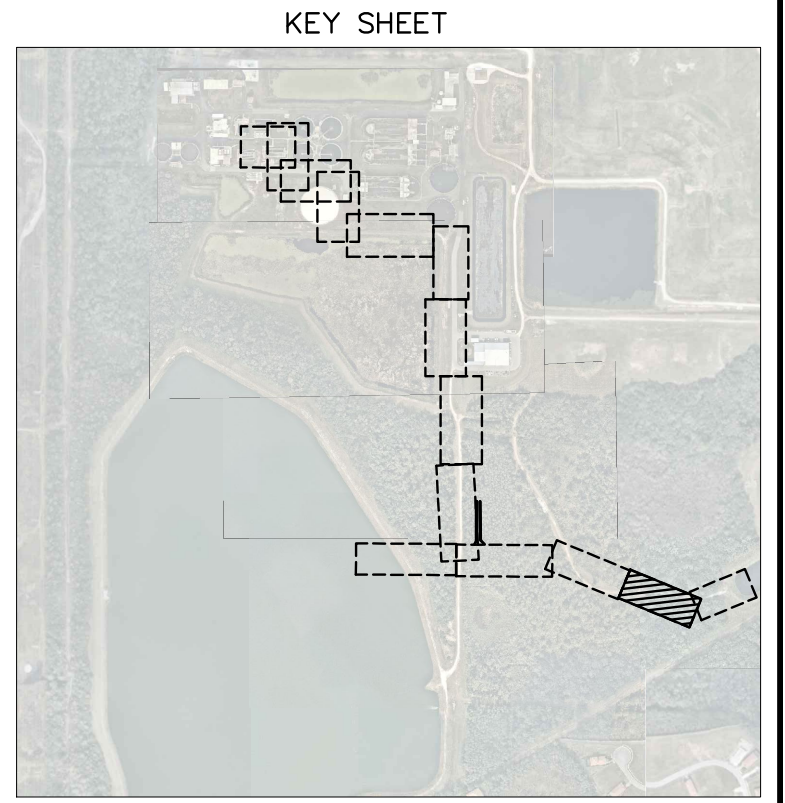
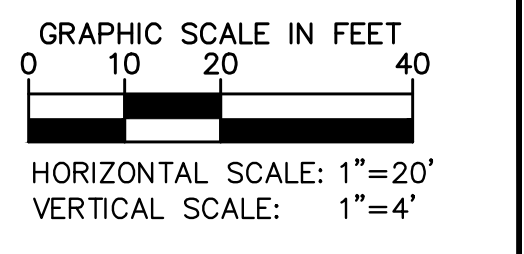
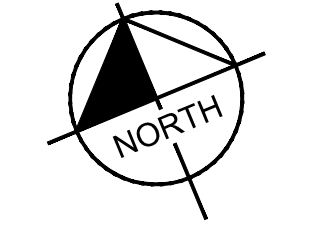
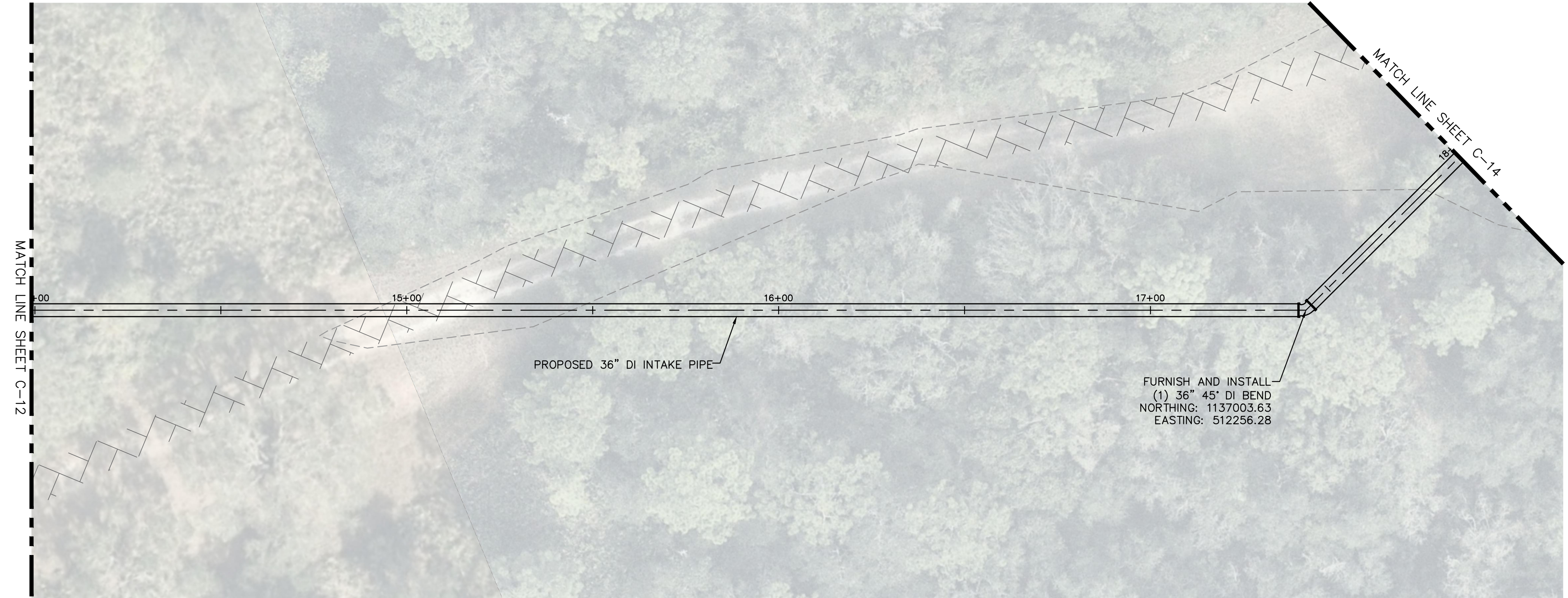
Manatee County
SEWRF RECLAIMED PUMP BACK STATION
 MANATEE COUNTY

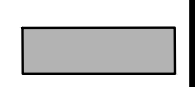
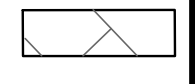
LICENSED PROFESSIONAL
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 FL LICENSE NUMBER
 57579

PLAN & PROFILE - EAST LAKE INTAKE PIPING

SHEET NUMBER
C-12

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LEGEND:
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No.	REVISIONS	DATE	BY

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 ST. PETERSBURG, FL 33701
 PHONE: 727-547-3999
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KHA PROJECT	148400015
DATE	1/28/2020
SCALE	AS SHOWN
DESIGNED BY	SNR
DRAWN BY	ASR
CHECKED BY	WEW

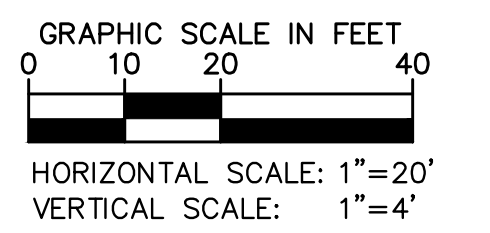
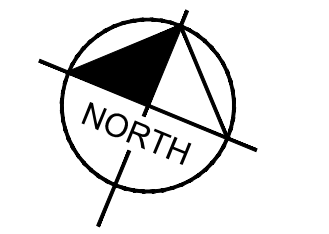
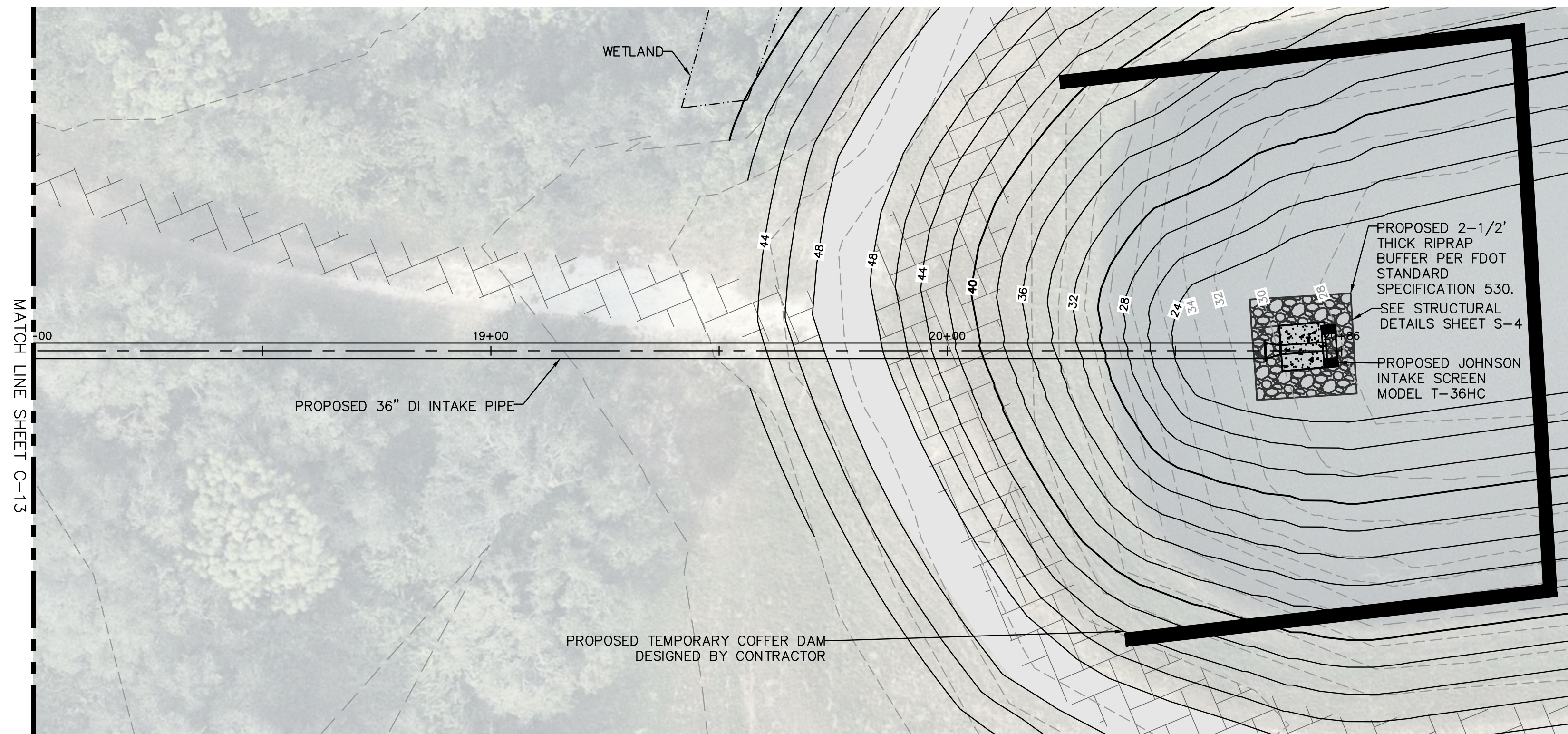

SEWRF RECLAIMED PUMP BACK STATION
 MANATEE COUNTY

LICENSED PROFESSIONAL
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 FL LICENSE NUMBER
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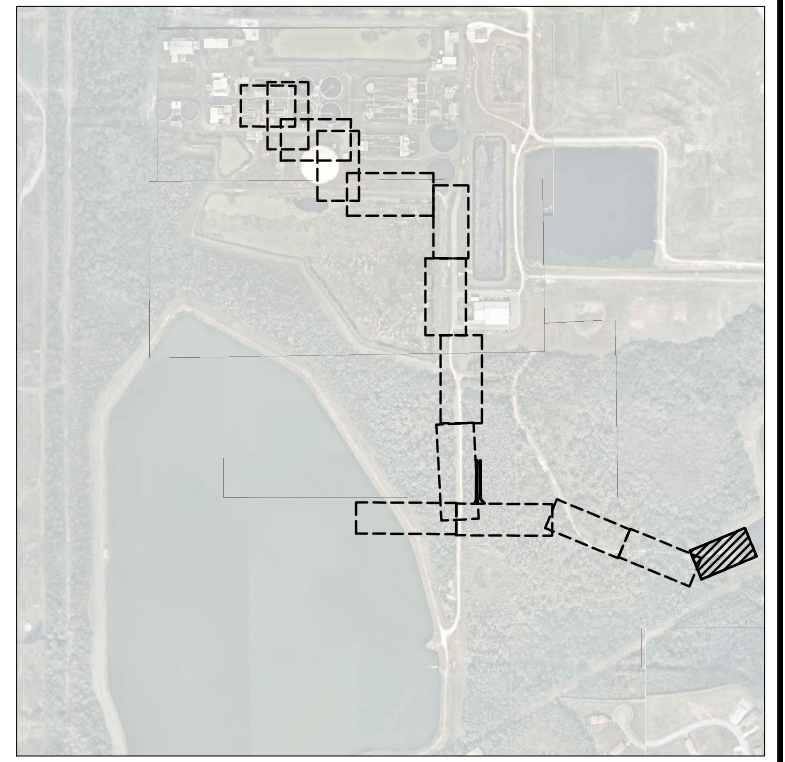
PLAN & PROFILE - EAST LAKE INTAKE PIPING

SHEET NUMBER
C-13

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- NOTE:**
1. SUBMERGED DI PIPE AND FITTINGS SHALL BE RESTRAINED WITH INTEGRAL JOINT RESTRAINTS. EXTERNAL THRUST RESTRAINTS SHALL NOT BE ALLOWED.
 2. CONTRACTOR SHALL INSTALL GRAVEL UP TO THE CENTERLINE OF SUBMERGED INTAKE PIPE

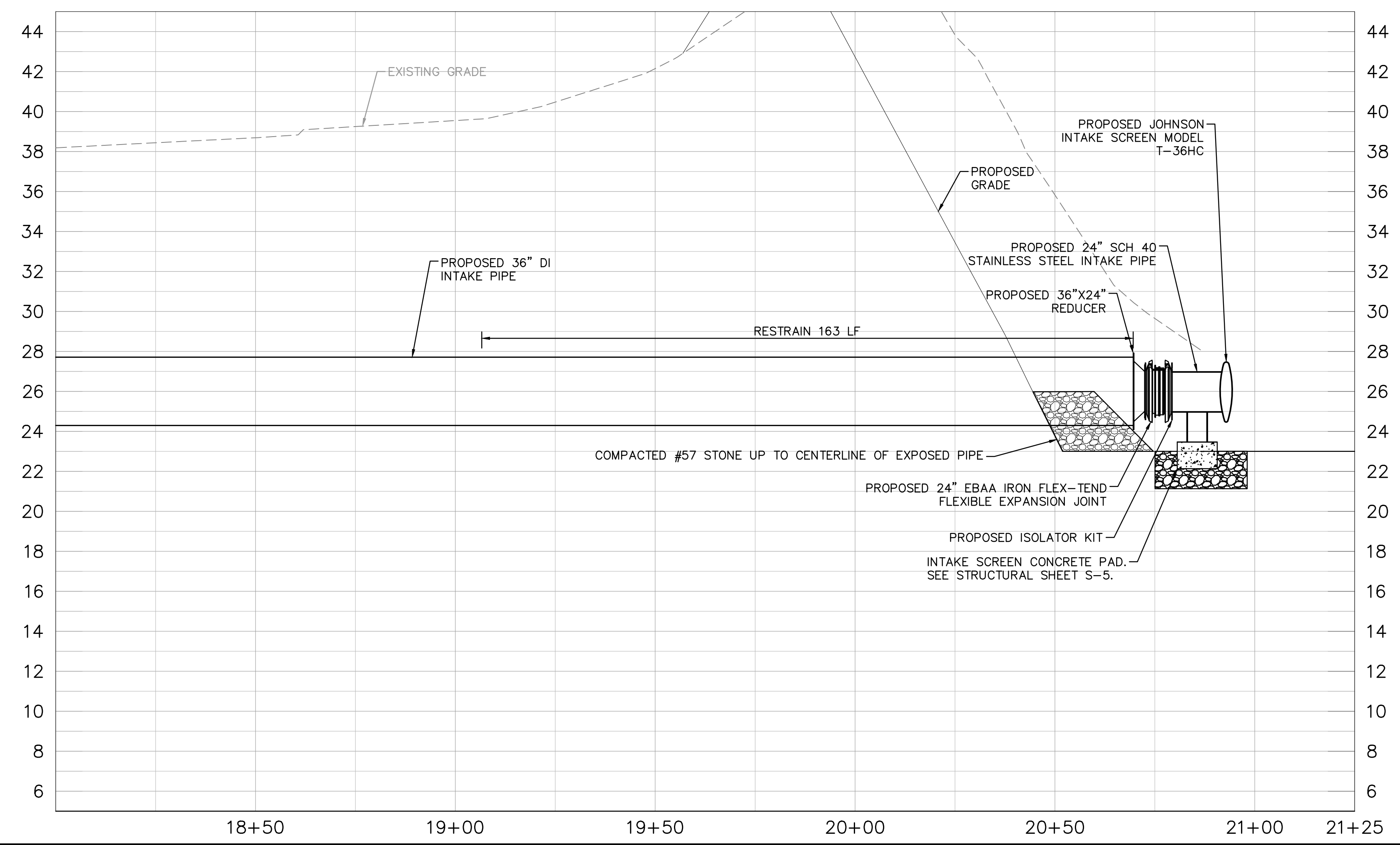


- LEGEND:**
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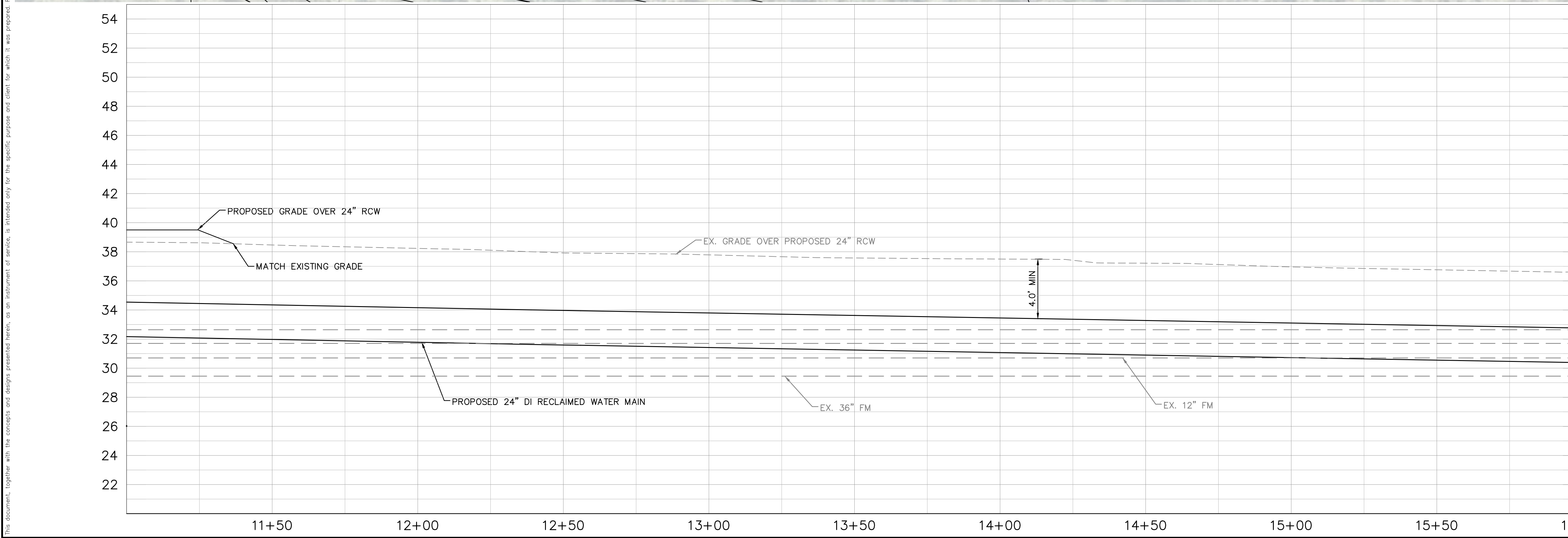
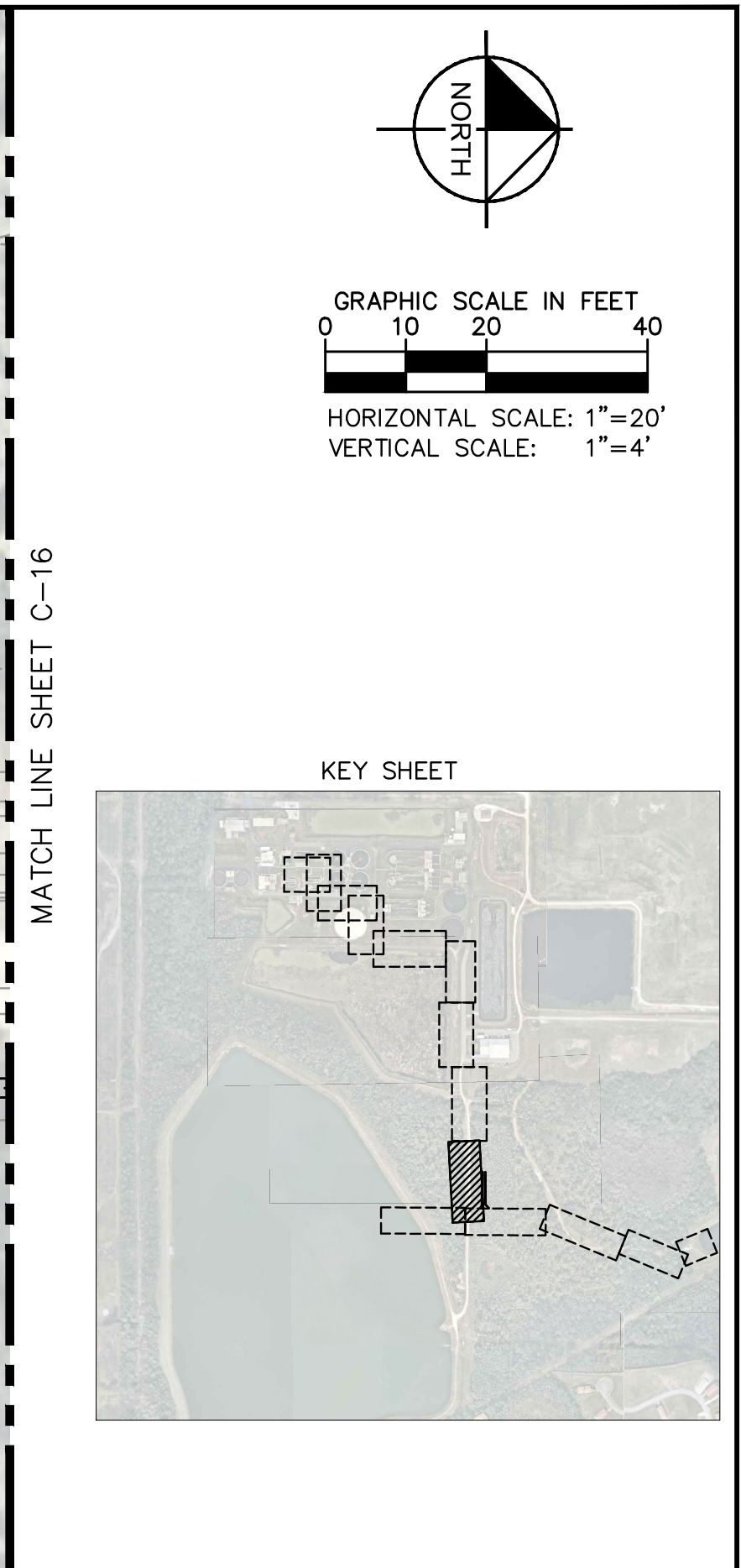
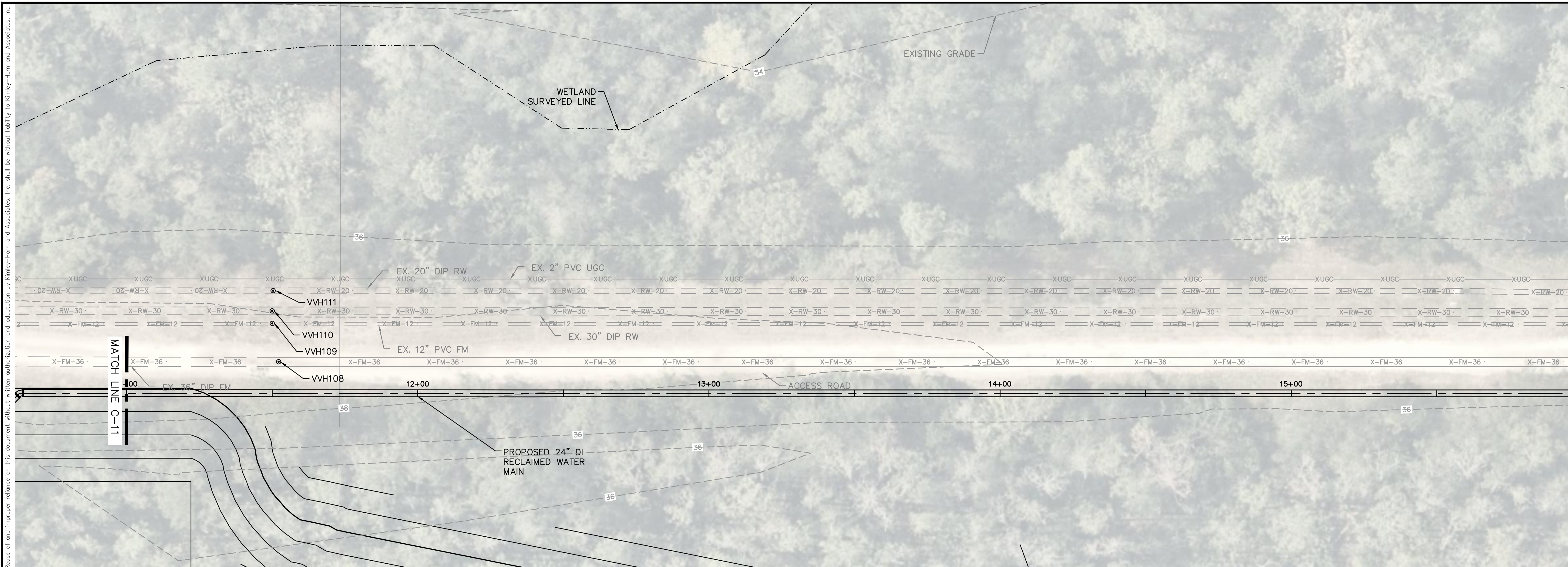
KHA PROJECT 148400015
DATE 1/28/2020
SCALE AS SHOWN
DESIGNED BY SNR
DRAWN BY ASR
CHECKED BY WEW

Manatee County
SEWRF RECLAIMED PUMP BACK STATION
 MANATEE COUNTY

LICENSED PROFESSIONAL
STEPHEN N. ROMANO, P.E.
FL LICENSE NUMBER 57579
FL DATE:

PLAN & PROFILE - EAST LAKE INTAKE PIPING

SHEET NUMBER
C-14



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KHA PROJECT
 148400015
 DATE
 1/28/2020
 SCALE AS SHOWN
 DESIGNED BY SNR
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 CHECKED BY WEW

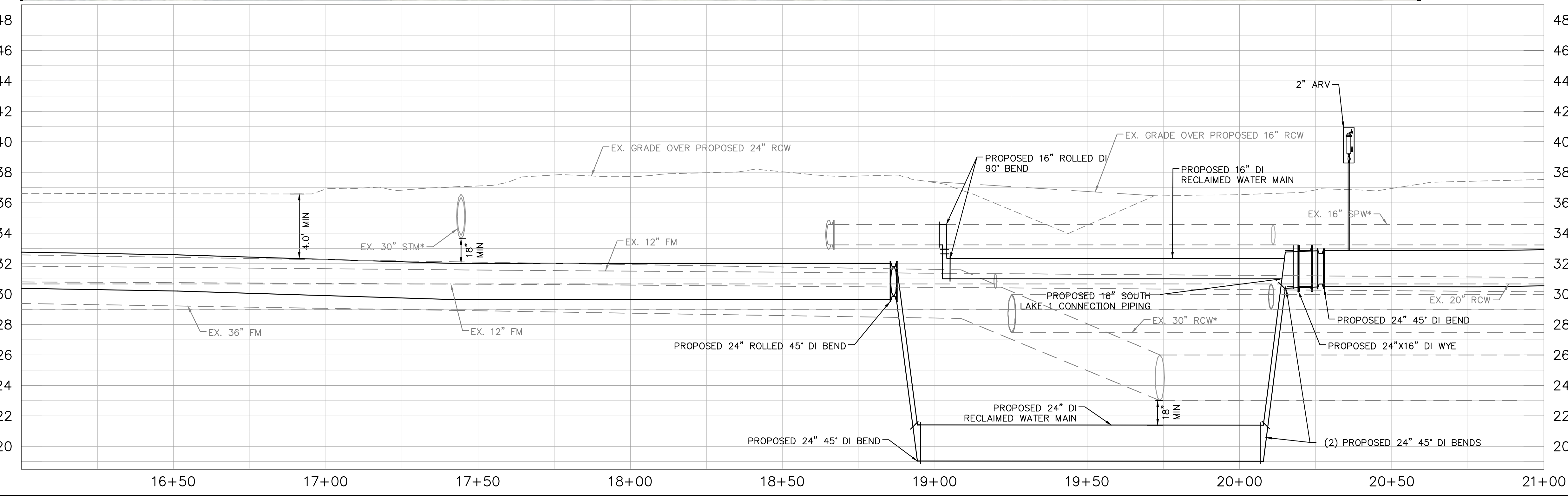
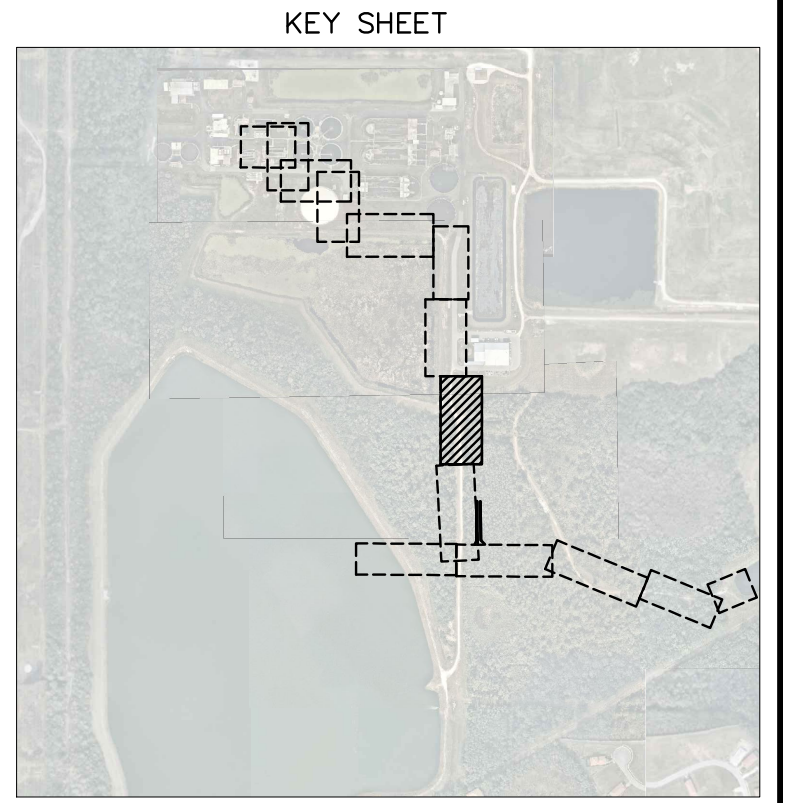
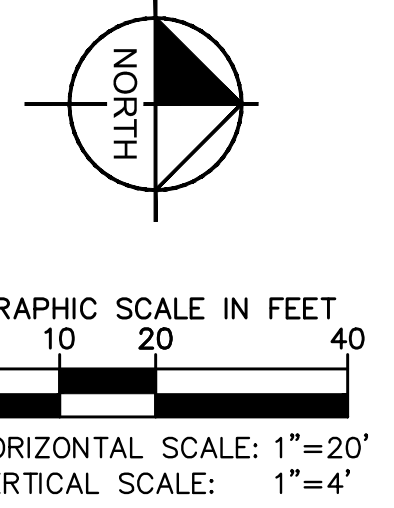
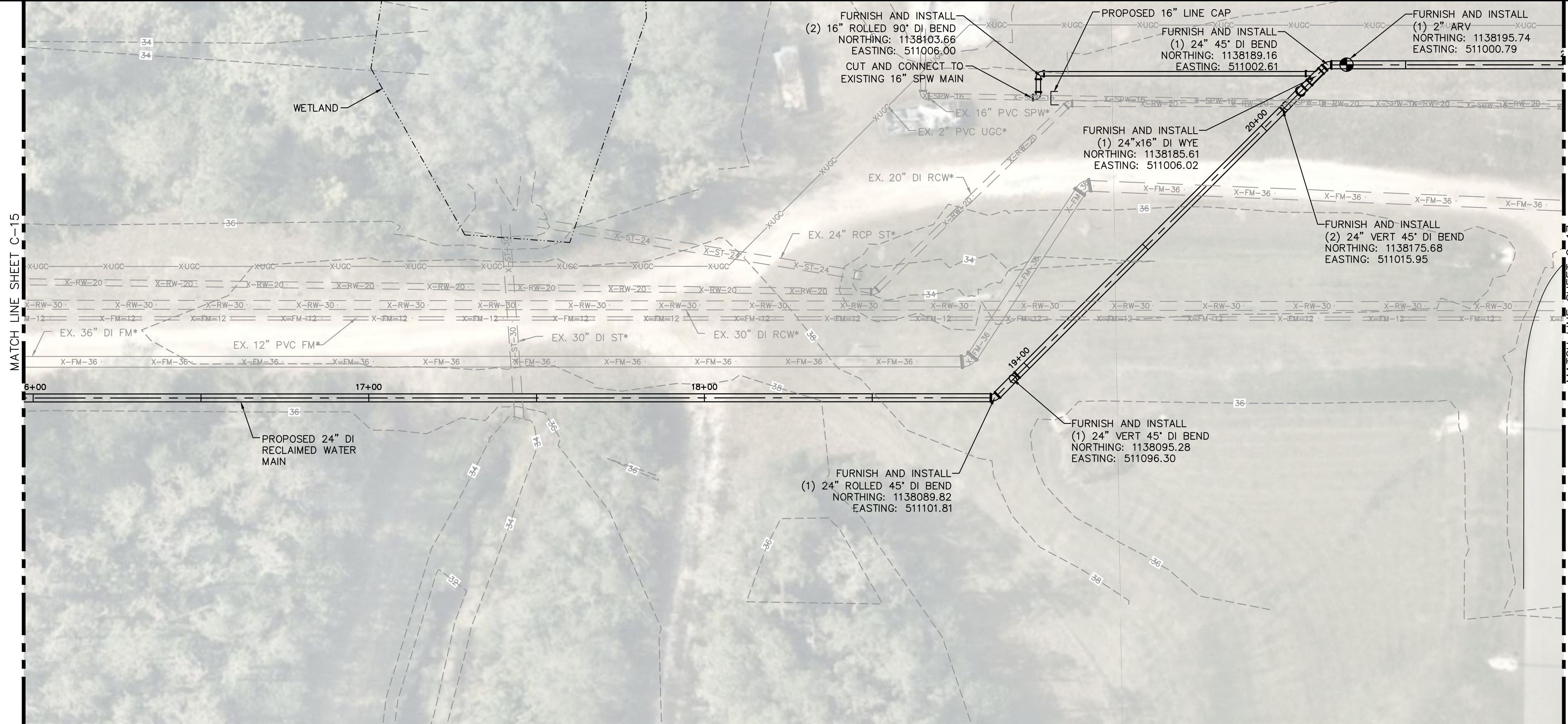
Manatee County
SEWRF RECLAIMED PUMP BACK STATION
 MANATEE COUNTY

LICENSED PROFESSIONAL
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 FL LICENSE NUMBER
 57579
 FL DATE:

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No.	REVISIONS	DATE	BY

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PHONE: 727-547-3999
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KHA PROJECT
148400015
DATE
1/28/2020
SCALE AS SHOWN
DESIGNED BY SNR
DRAWN BY ASR
CHECKED BY WEW

Manatee County
FLORIDA

SEWRF RECLAIMED PUMP BACK STATION

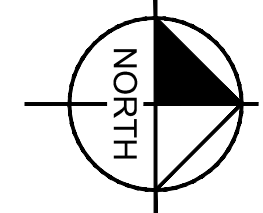
LICENSED PROFESSIONAL
STEPHEN N. ROMANO, P.E.
FL LICENSE NUMBER
57579
FL DATE:

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STEPHEN N. ROMANO, P.E.
FL LICENSE NUMBER
57579
FL DATE:

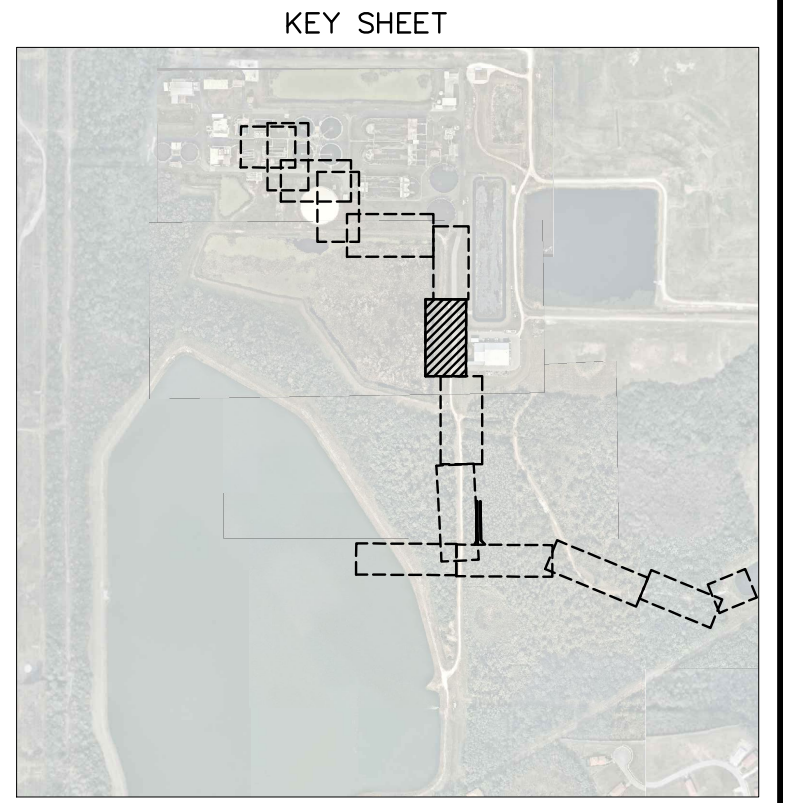
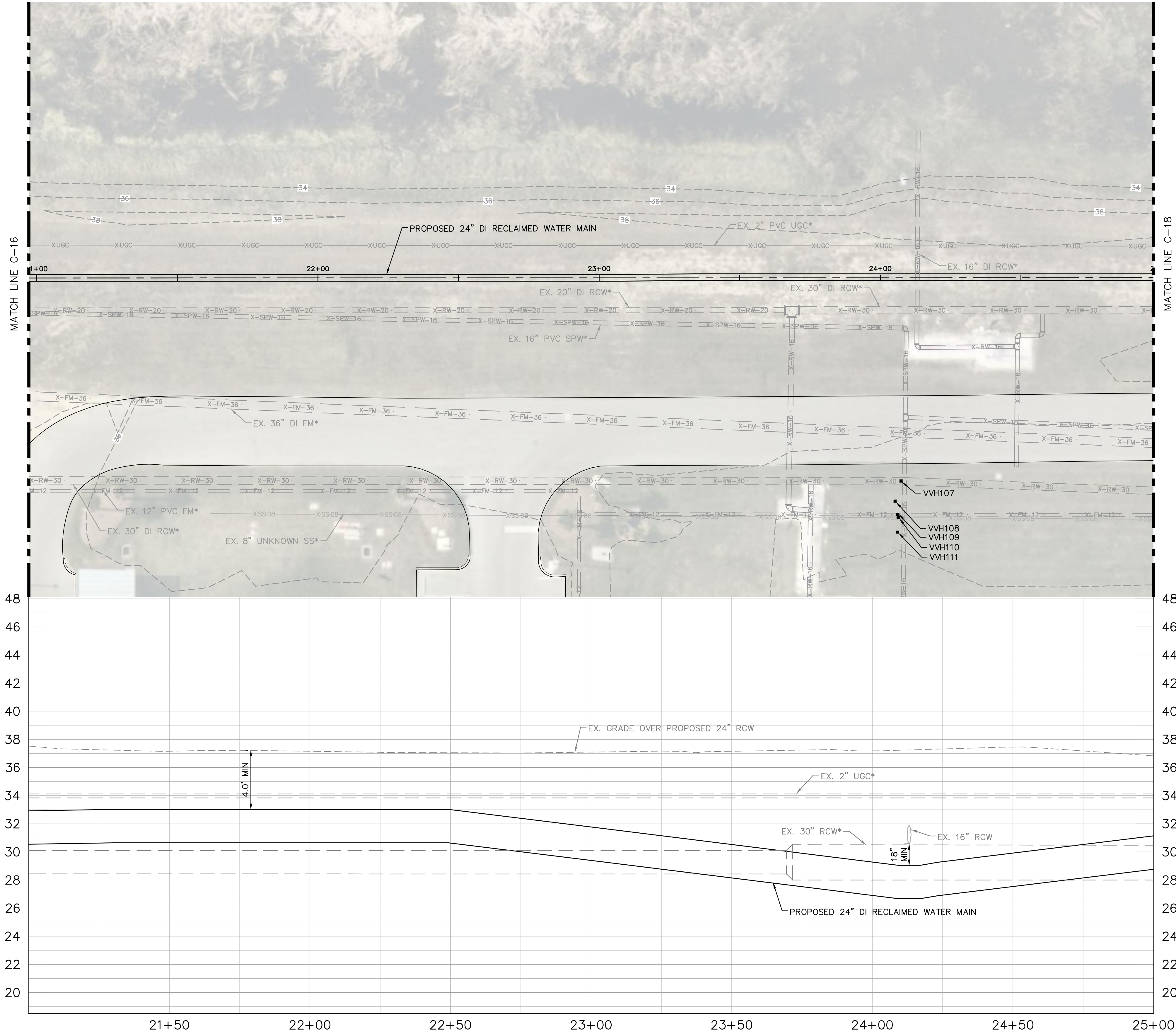
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GRAPHIC SCALE IN FEET
 0 10 20 40
 HORIZONTAL SCALE: 1"=20'
 VERTICAL SCALE: 1"=4'



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No.	REVISIONS	DATE	BY

Kimley & Horn

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 PHONE: 727-547-3999
 WWW.KIMLEY-HORN.COM CA 00000696

KHA PROJECT
 148400015
 DATE
 1/28/2020
 SCALE AS SHOWN
 DESIGNED BY SNR
 DRAWN BY ASR
 CHECKED BY WEW

Manatee County
 FLORIDA

**SEWRF RECLAIMED
 PUMP BACK STATION**

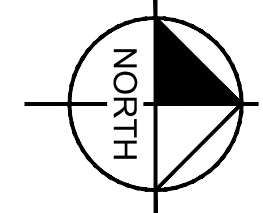
MANATEE COUNTY

LICENSED PROFESSIONAL
 STEPHEN N. ROMANO, P.E.
 FL LICENSE NUMBER
 57579
 FL DATE:

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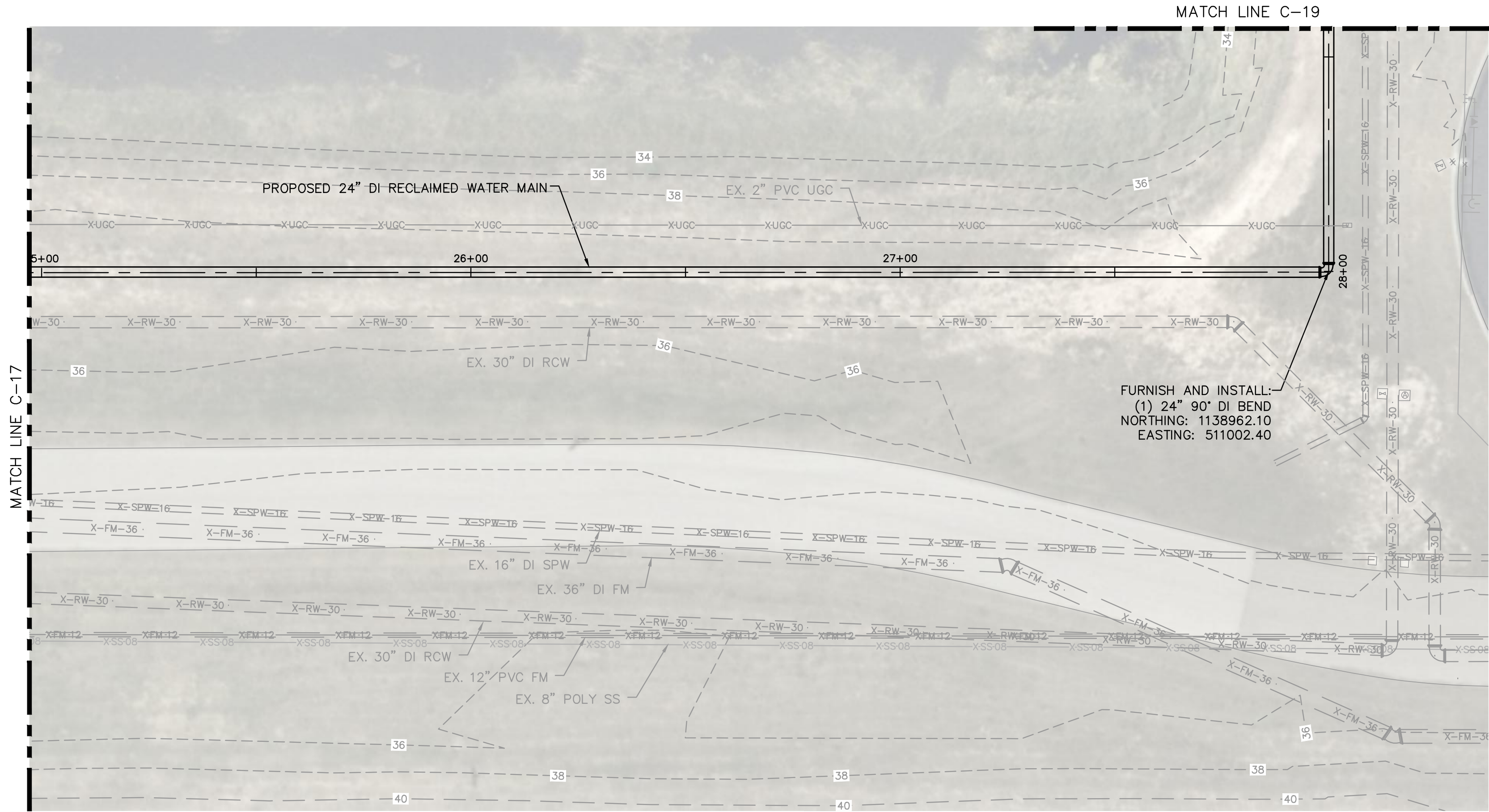
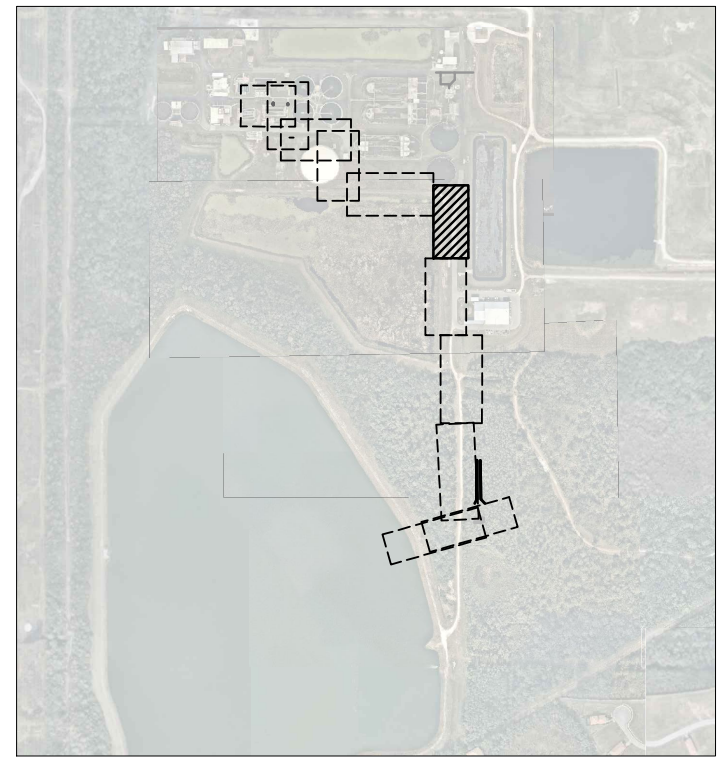
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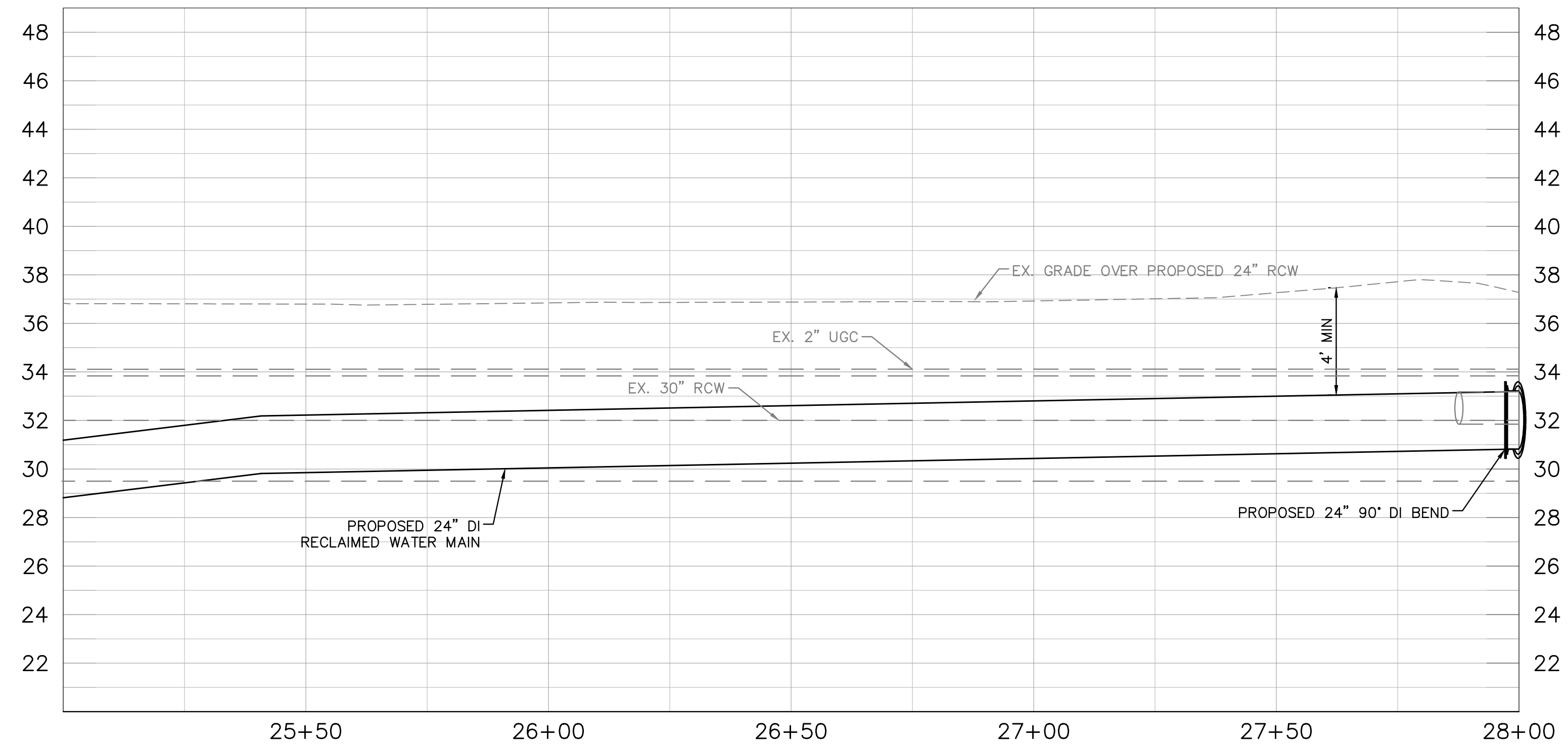


GRAPHIC SCALE IN FEET
 0 10 20 40
 HORIZONTAL SCALE: 1"=20'
 VERTICAL SCALE: 1"=4'

KEY SHEET



FURNISH AND INSTALL:
 (1) 24" 90° DI BEND
 NORTHING: 1138962.10
 EASTING: 511002.40



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KHA PROJECT
 148400015
 DATE
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 DESIGNED BY SNR
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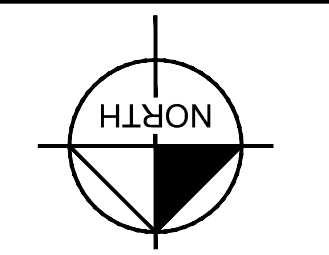
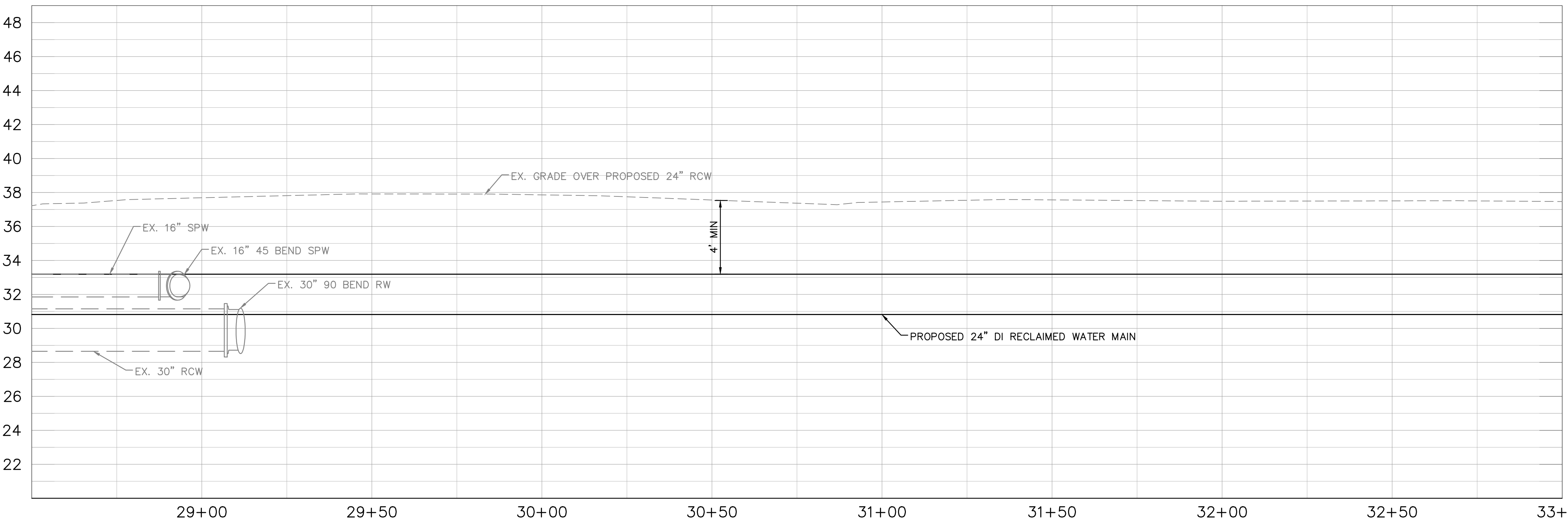
Manatee County
SEWRF RECLAIMED PUMP BACK STATION
 MANATEE COUNTY

LICENSED PROFESSIONAL
 STEPHEN N. ROMANO, P.E.
 FL LICENSE NUMBER
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 FL DATE:

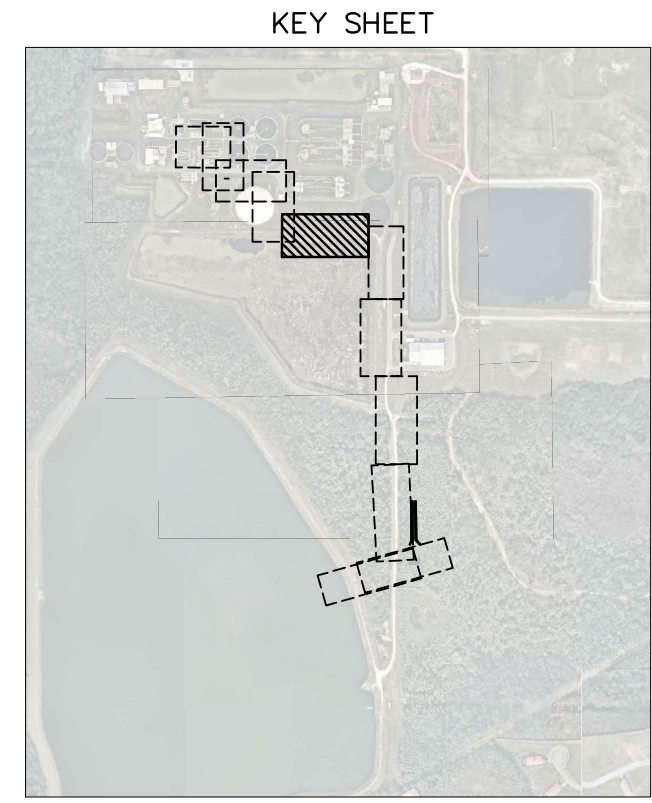
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GRAPHIC SCALE IN FEET
 0 10 20 40
 HORIZONTAL SCALE: 1"=20'
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 WWW.KIMLEY-HORN.COM CA 00000696

KHA PROJECT 148400015
DATE 1/28/2020
SCALE AS SHOWN
DESIGNED BY SNR
DRAWN BY ASR
CHECKED BY WEW

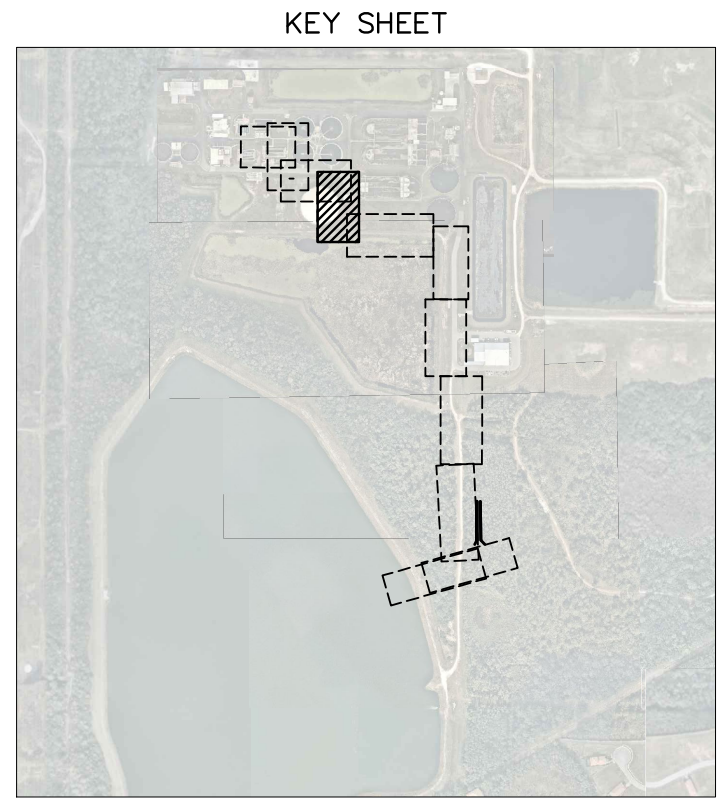
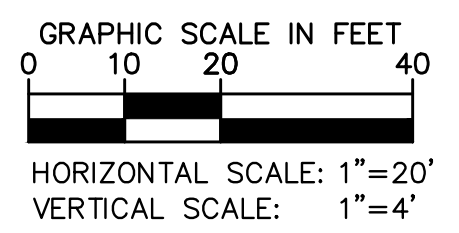
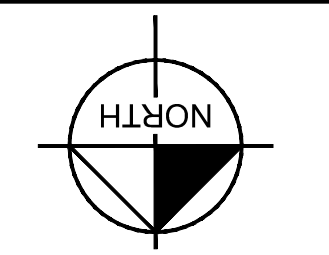
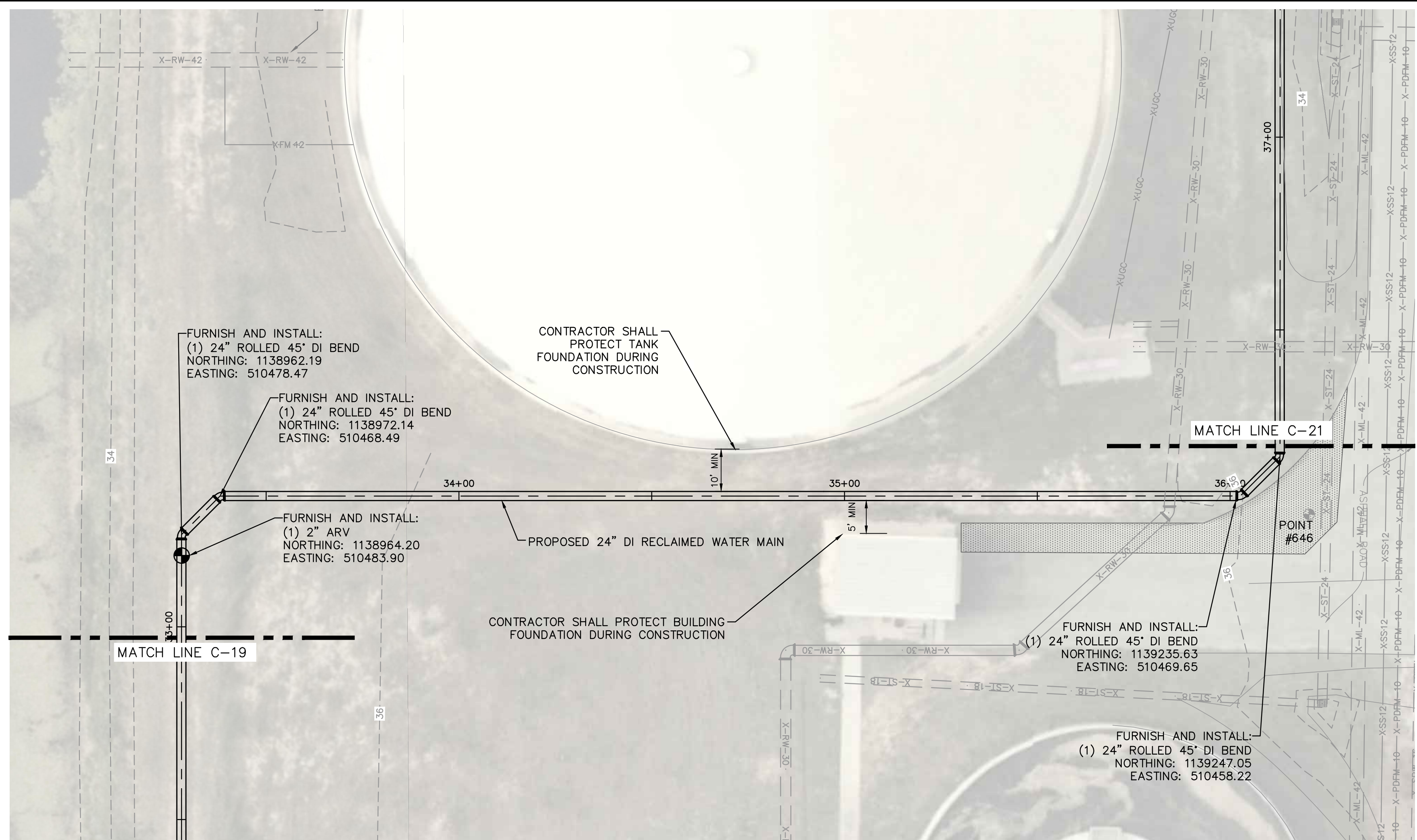
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SEWRF RECLAIMED PUMP BACK STATION
 MANATEE COUNTY

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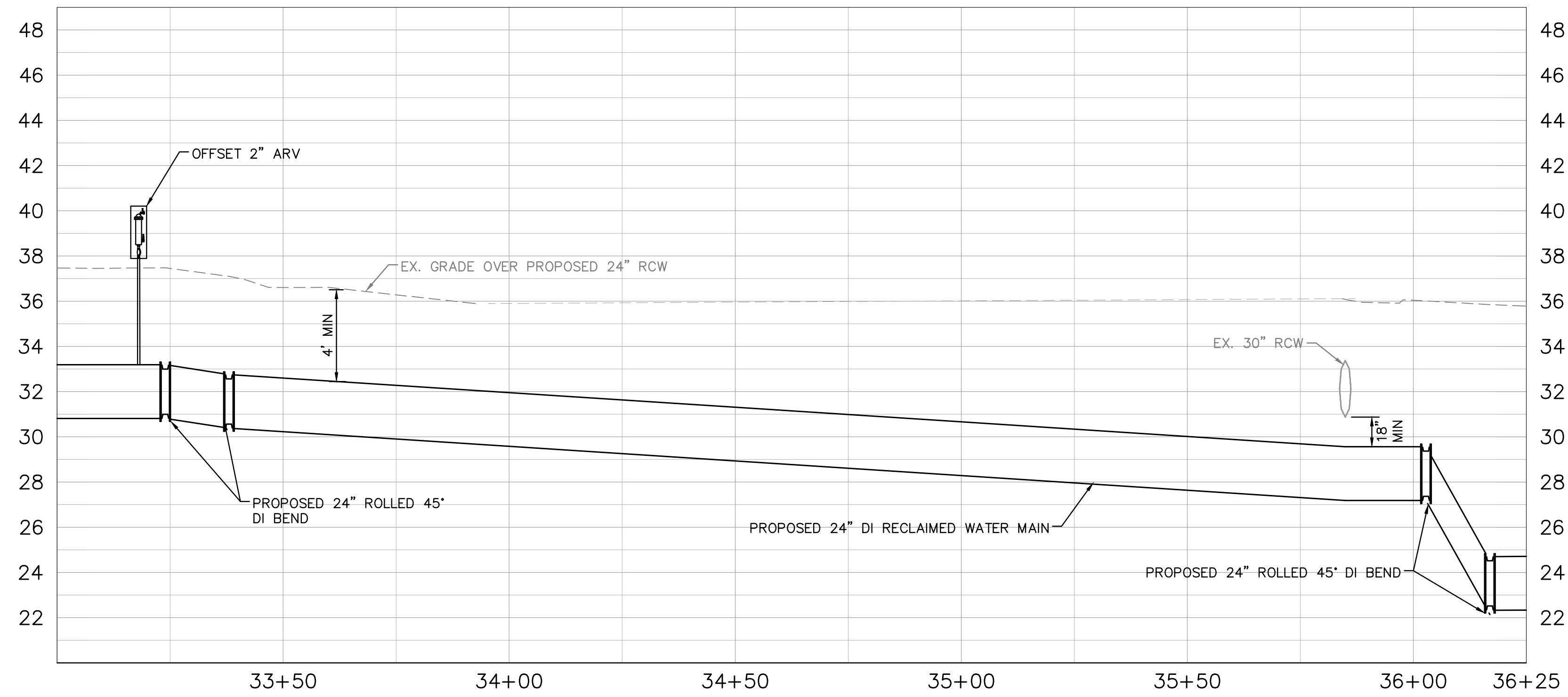
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LEGEND:
ROADWAY RESTORATION
(SEE SHEET C-28 FOR DETAILS)



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KHA PROJECT
148400015
DATE
1/28/2020
SCALE AS SHOWN
DESIGNED BY SNR
DRAWN BY ASR
CHECKED BY WEW

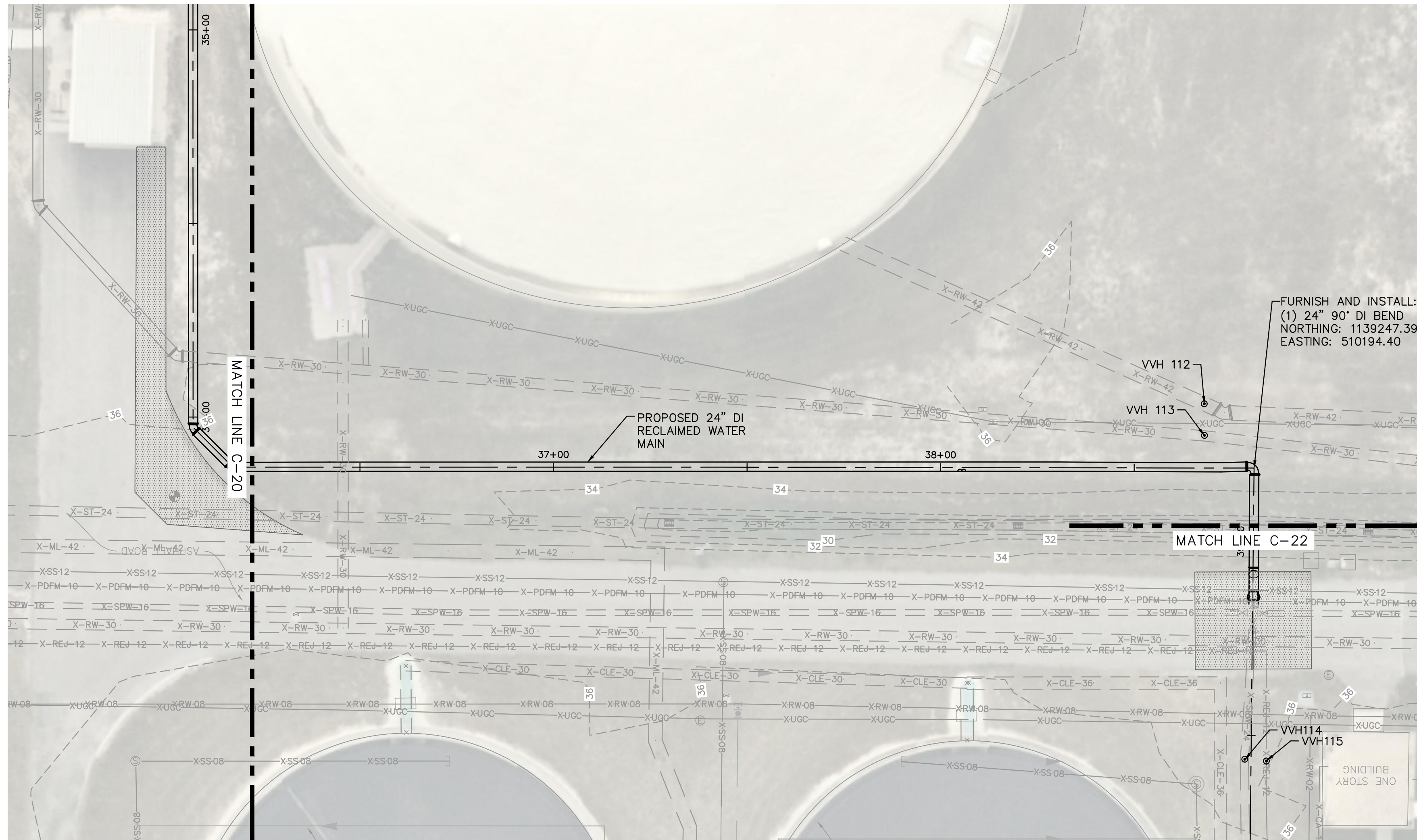
Manatee County
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MANATEE COUNTY

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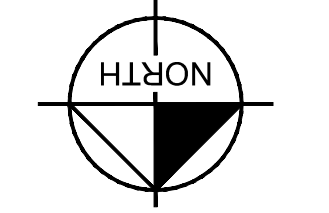
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C-20

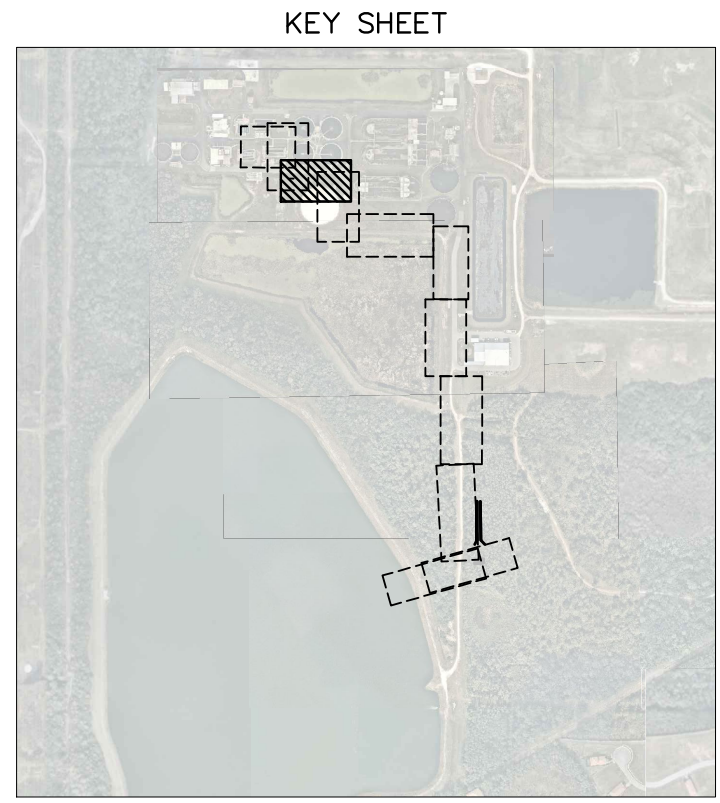
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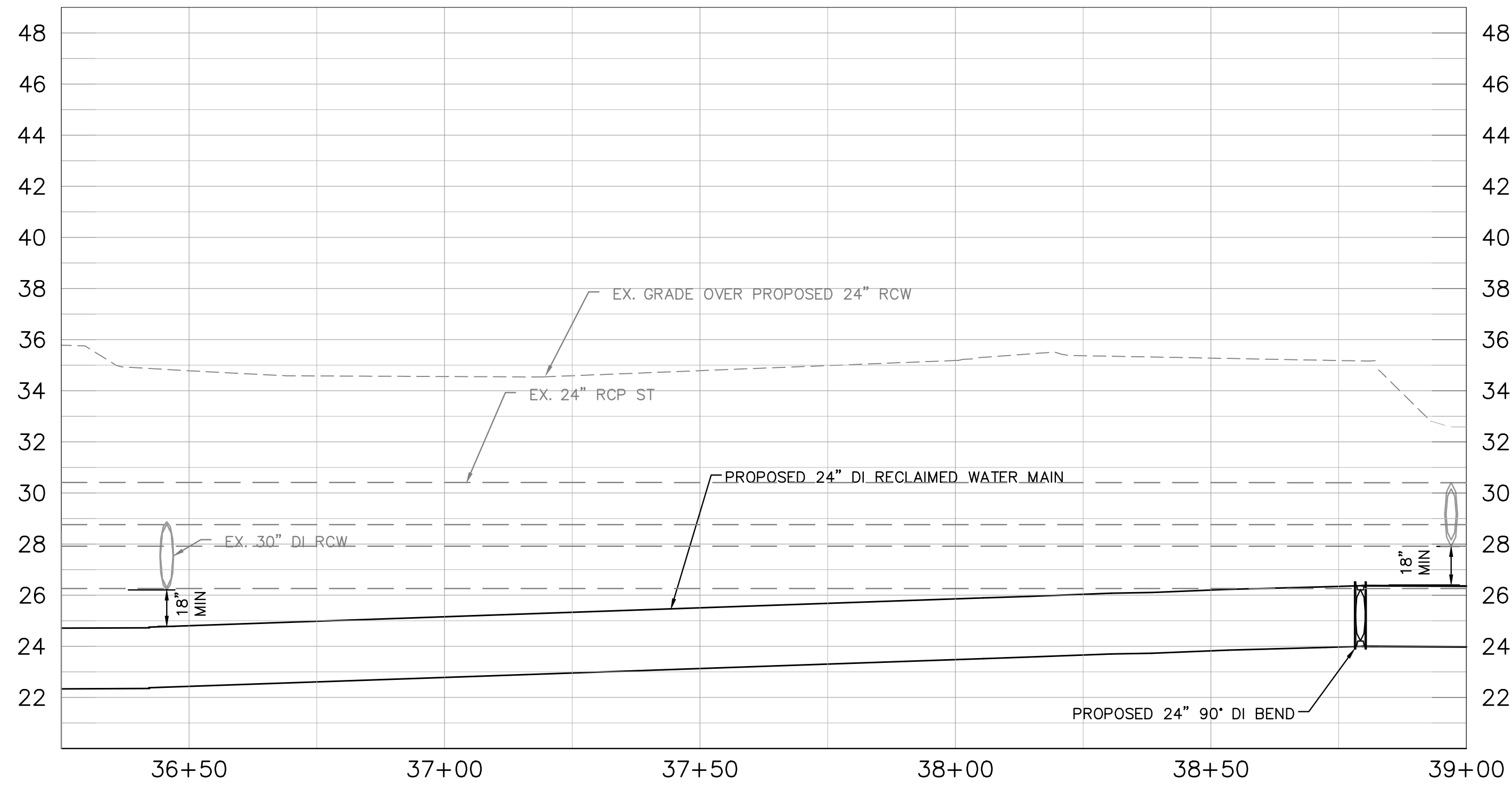
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NORTHING: 1139247.39
EASTING: 510194.40



GRAPHIC SCALE IN FEET
0 10 20 40
HORIZONTAL SCALE: 1"=20'
VERTICAL SCALE: 1"=4'



LEGEND:
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(SEE SHEET C-28 FOR DETAILS)



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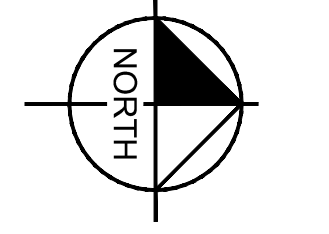
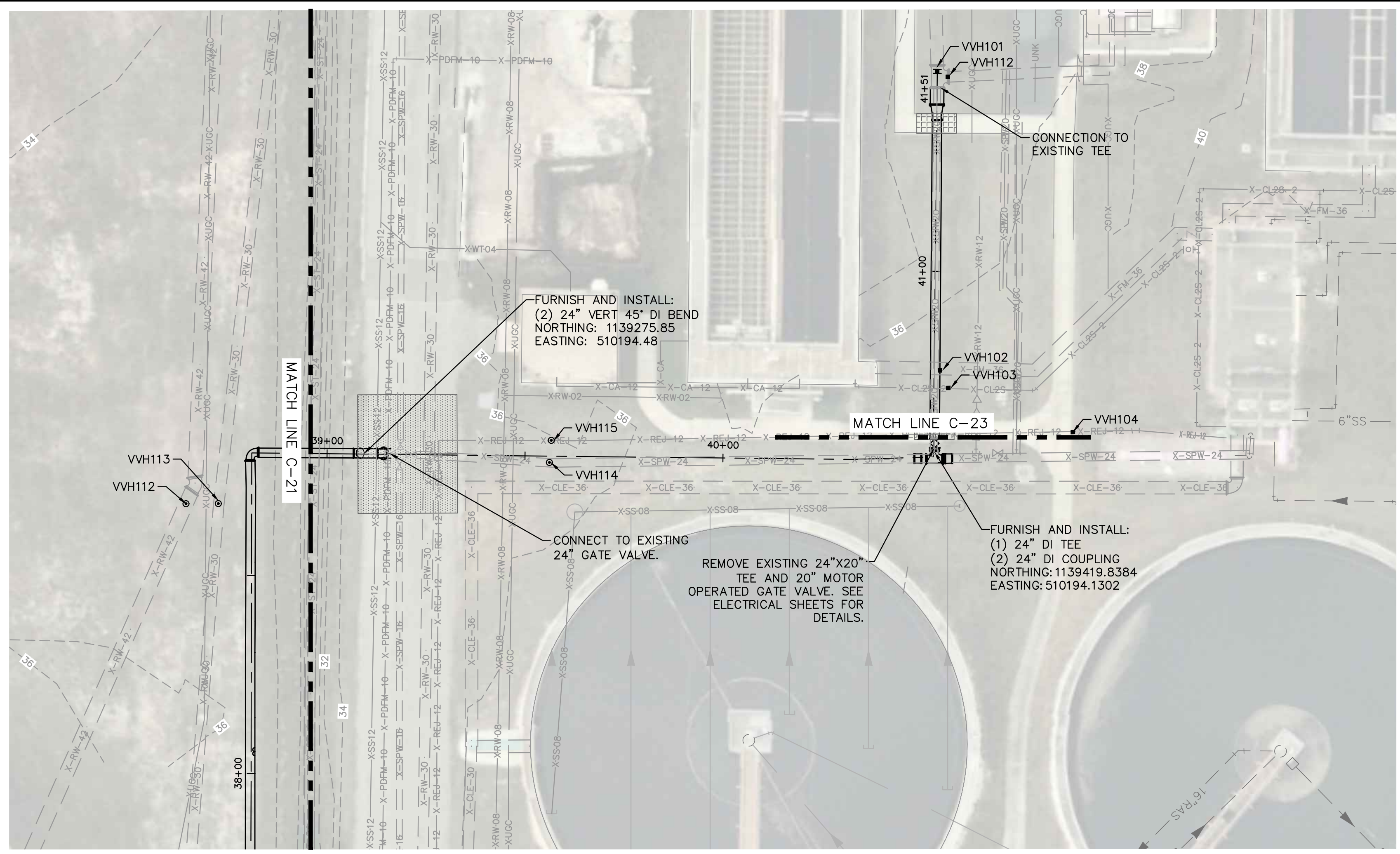
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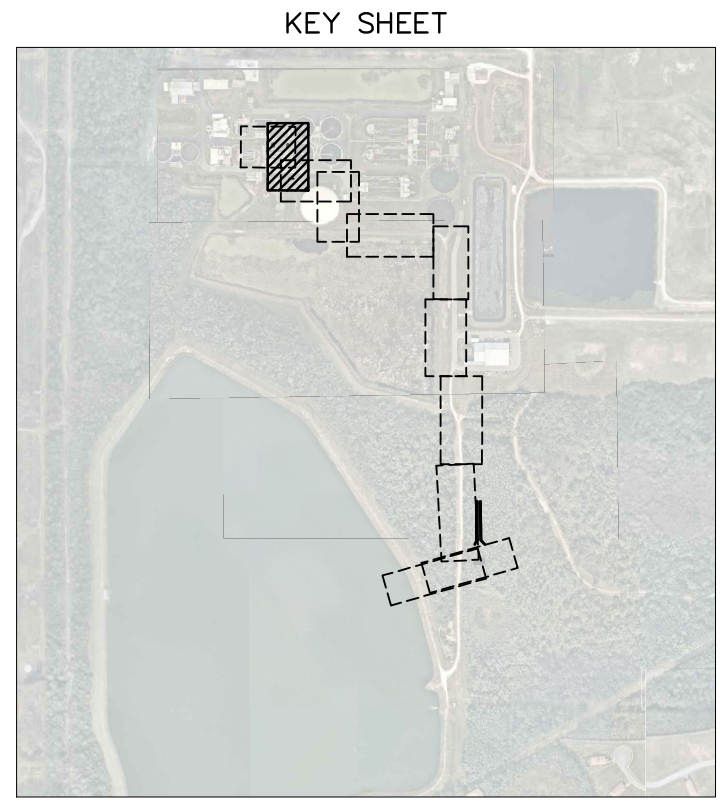
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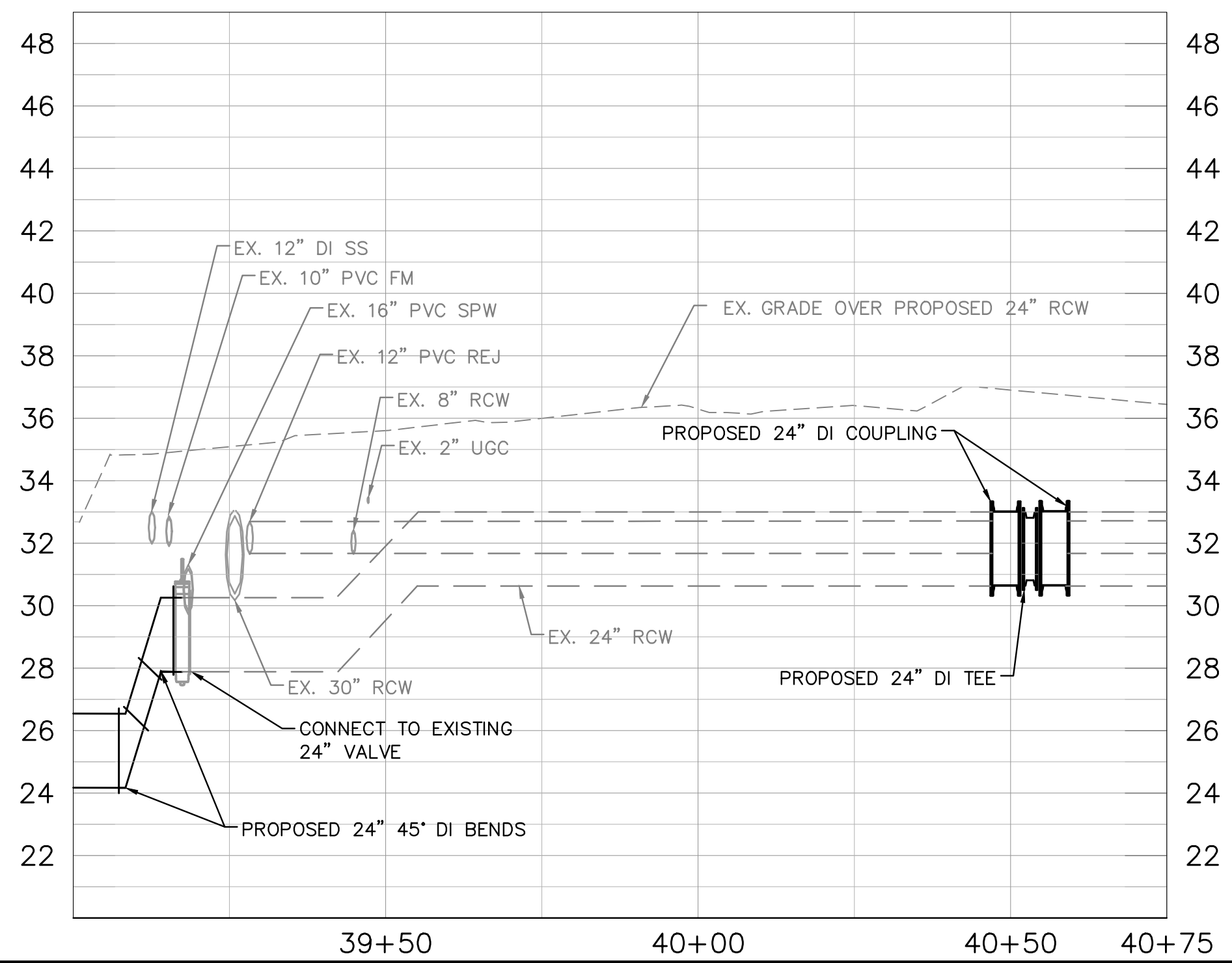
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GRAPHIC SCALE IN FEET
 0 10 20 40
 HORIZONTAL SCALE: 1"=20'
 VERTICAL SCALE: 1"=4'



LEGEND:
 ROADWAY RESTORATION.
 (SEE SHEET C-28 FOR DETAILS) [Pattern]
 SIDEWALK RESTORATION.
 (SEE SHEET C-29 FOR DETAILS) [Pattern]



***NOTES:**
 THE ELEVATIONS OF THE UTILITIES MARKED WITH AN ASTERISK (*) HAVE BEEN ASSUMED ON THE BASIS OF TYPICAL ANTICIPATED SOIL COVERAGE. CONTRACTOR SHALL NOT RELY ON THIS INFORMATION FOR CONSTRUCTION, BUT SHALL BE RESPONSIBLE FOR FIELD LOCATIONS (HORIZONTAL AND VERTICAL) OF ALL UTILITIES CROSSING THE PROPOSED FORCE MAIN. CONTRACTOR SHALL INCLUDE IN THE UNIT COST OF THE SUBJECT FORCE MAIN CONSTRUCTION, THE COST OF UTILITY ADJUSTMENTS NECESSARY TO ATTAIN DESIGN MINIMUM SEPARATION FOR UTILITIES CONFLICTING WITH THE CONSTRUCTION OF THE PROPOSED FORCE MAIN. INTERRUPTIONS OF ANY EXISTING UTILITY SERVICES SHALL BE NOTICED TO EFFECTED CUSTOMERS A MINIMUM OF 48 HOURS IN ADVANCE AND SHALL NOT EXCEED 4 HOURS IN DURATION.

WHERE CONCRETE REPAIRS ARE NECESSARY AND EXPANSION JOINTS ARE PRESENT, CONTRACTOR TO REMOVE AND REPLACE CONCRETE UP TO THE NEXT EXPANSION JOINT; OTHERWISE, REPLACE CONCRETE AS NECESSARY.

GROUNDWATER / DEWATERING NOTE:
 THE PRESENCE OF GROUNDWATER SHOULD BE ANTICIPATED ON THIS PROJECT. CONTRACTOR'S BID SHALL INCLUDE CONSIDERATION FOR THIS ISSUE. WHEN PERFORMING GRADING OPERATIONS DURING PERIODS OF WET WEATHER, PROVIDE ADEQUATE DEWATERING, DRAINAGE AND GROUND WATER MANAGEMENT TO CONTROL MOISTURE OF SOILS.

No.	REVISIONS	DATE	BY

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 PHONE: 727-547-3999
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KHA PROJECT
 148400015
 DATE
 1/28/2020
 SCALE AS SHOWN
 DESIGNED BY SNR
 DRAWN BY ASR
 CHECKED BY WEW

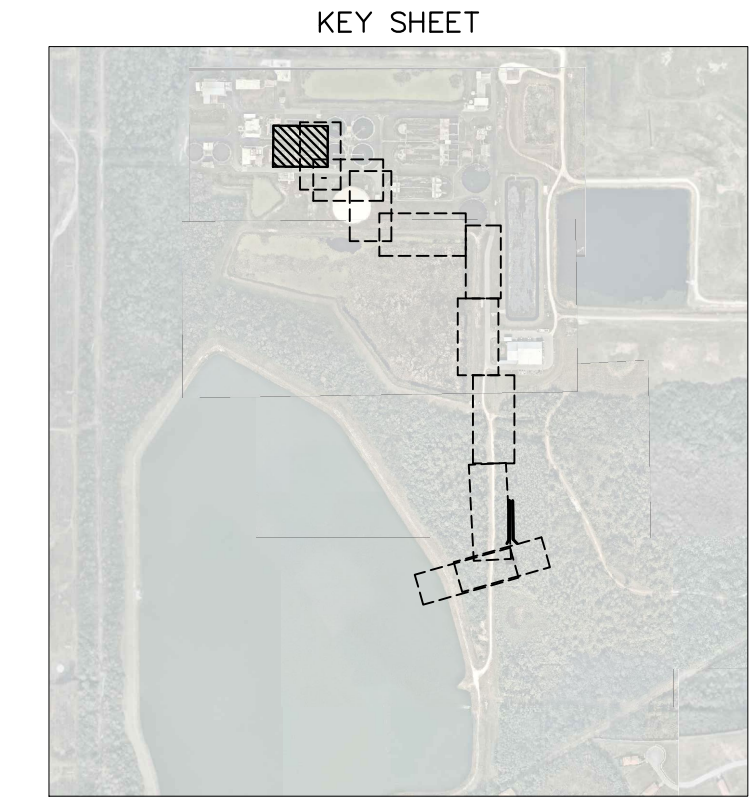
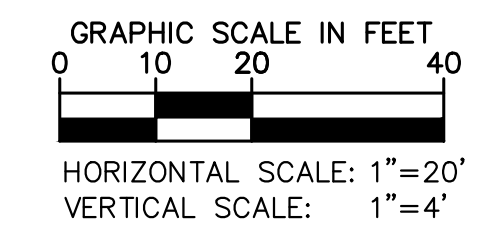
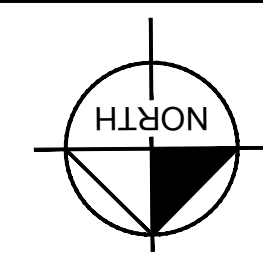
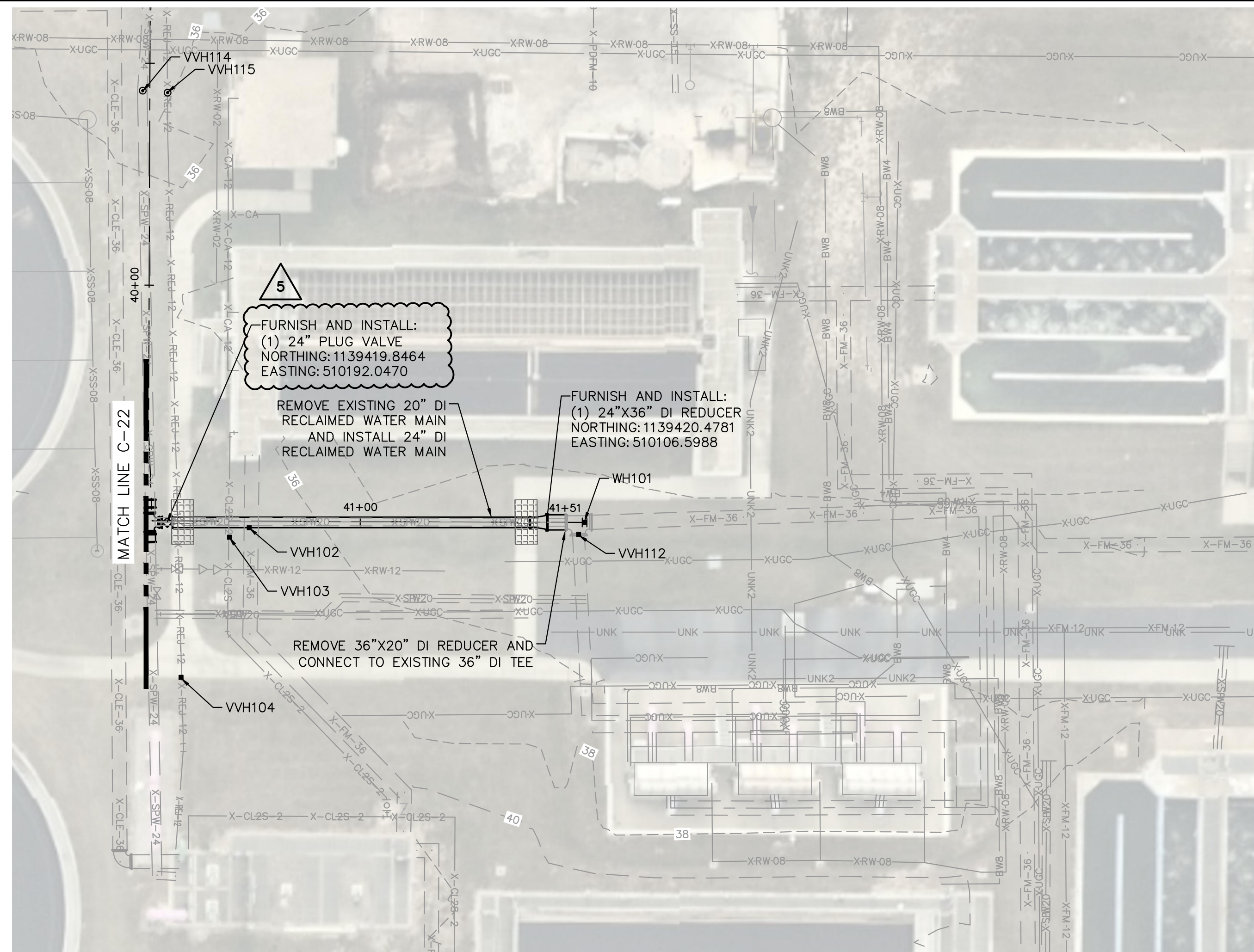
Manatee County
SEWRF RECLAIMED PUMP BACK STATION
 MANATEE COUNTY

LICENSED PROFESSIONAL
 STEPHEN N. ROMANO, P.E.
 FL LICENSE NUMBER
 57579
 FL DATE:

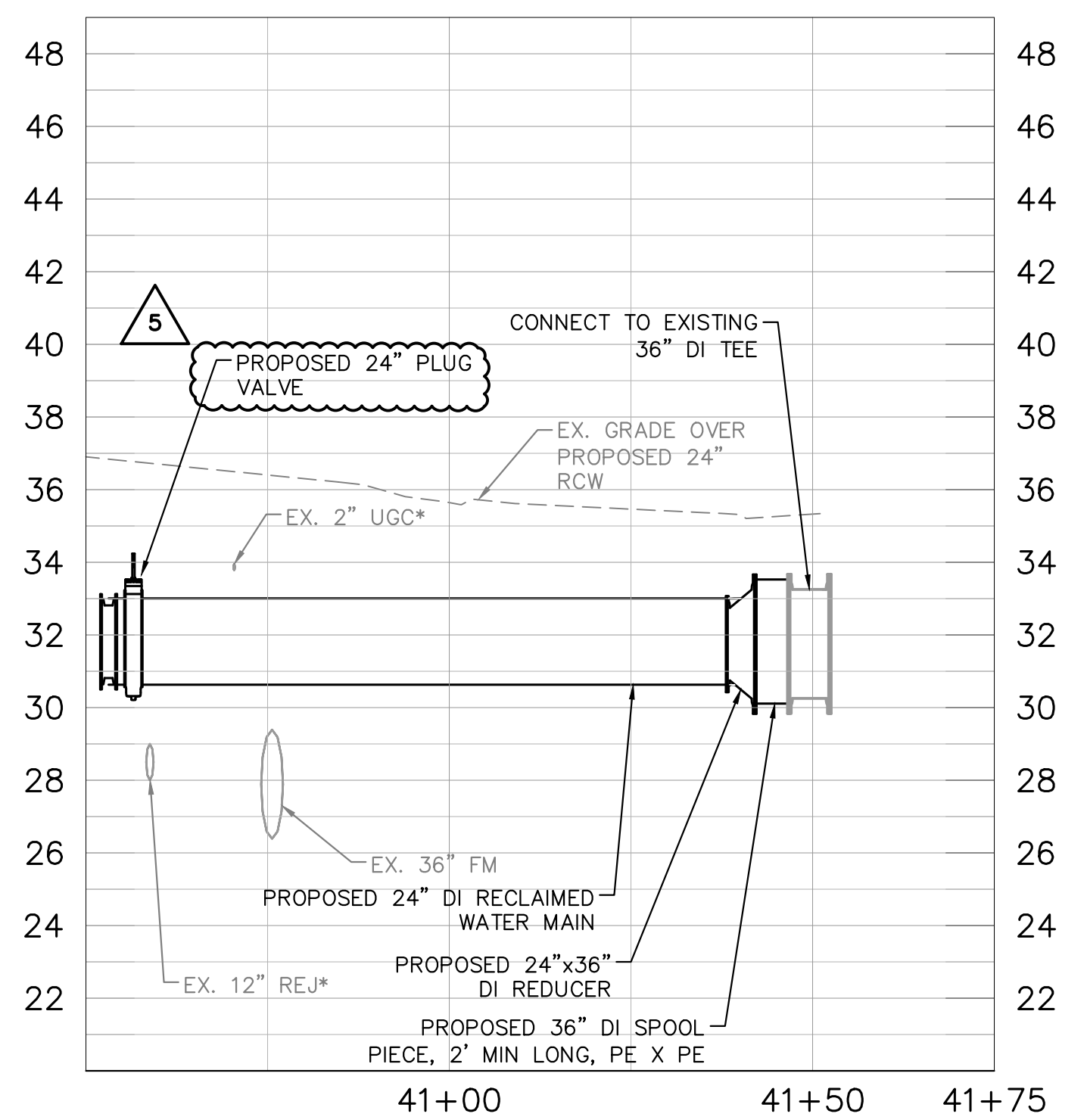
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C-22

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LEGEND:
 SIDEWALK RESTORATION.
 (SEE SHEET C-29 FOR DETAILS)



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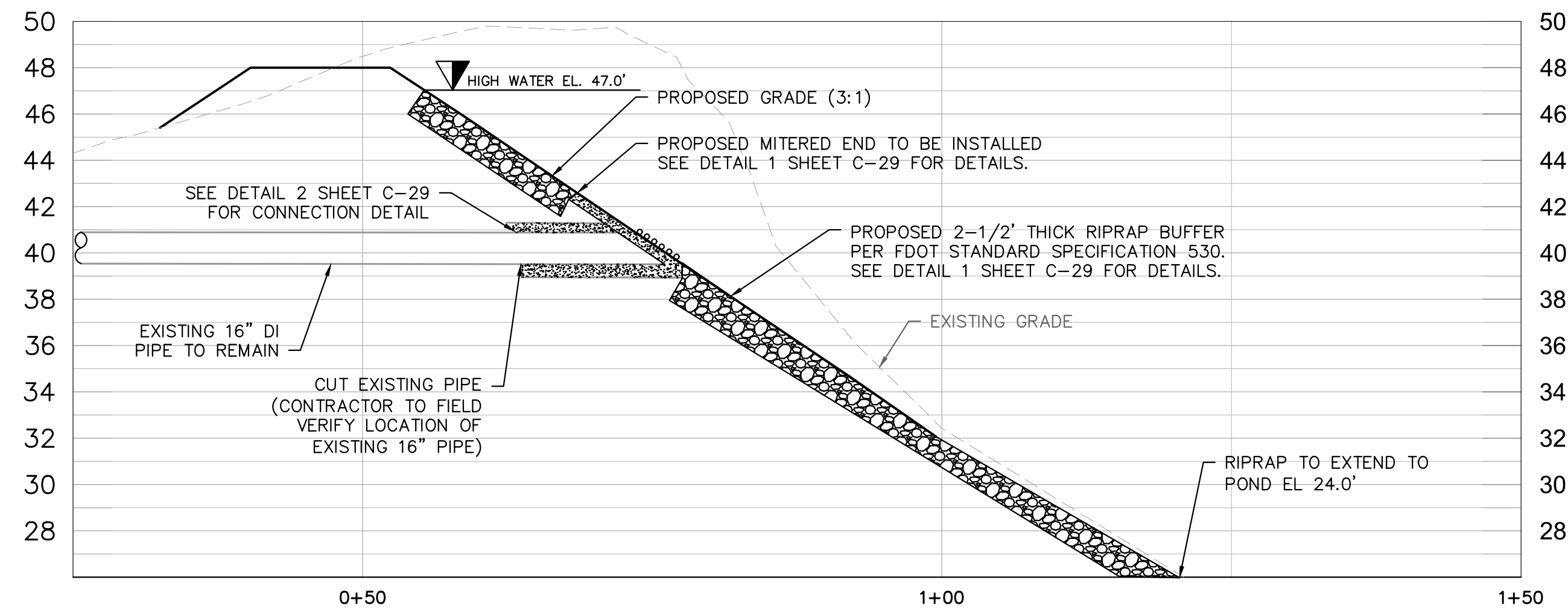
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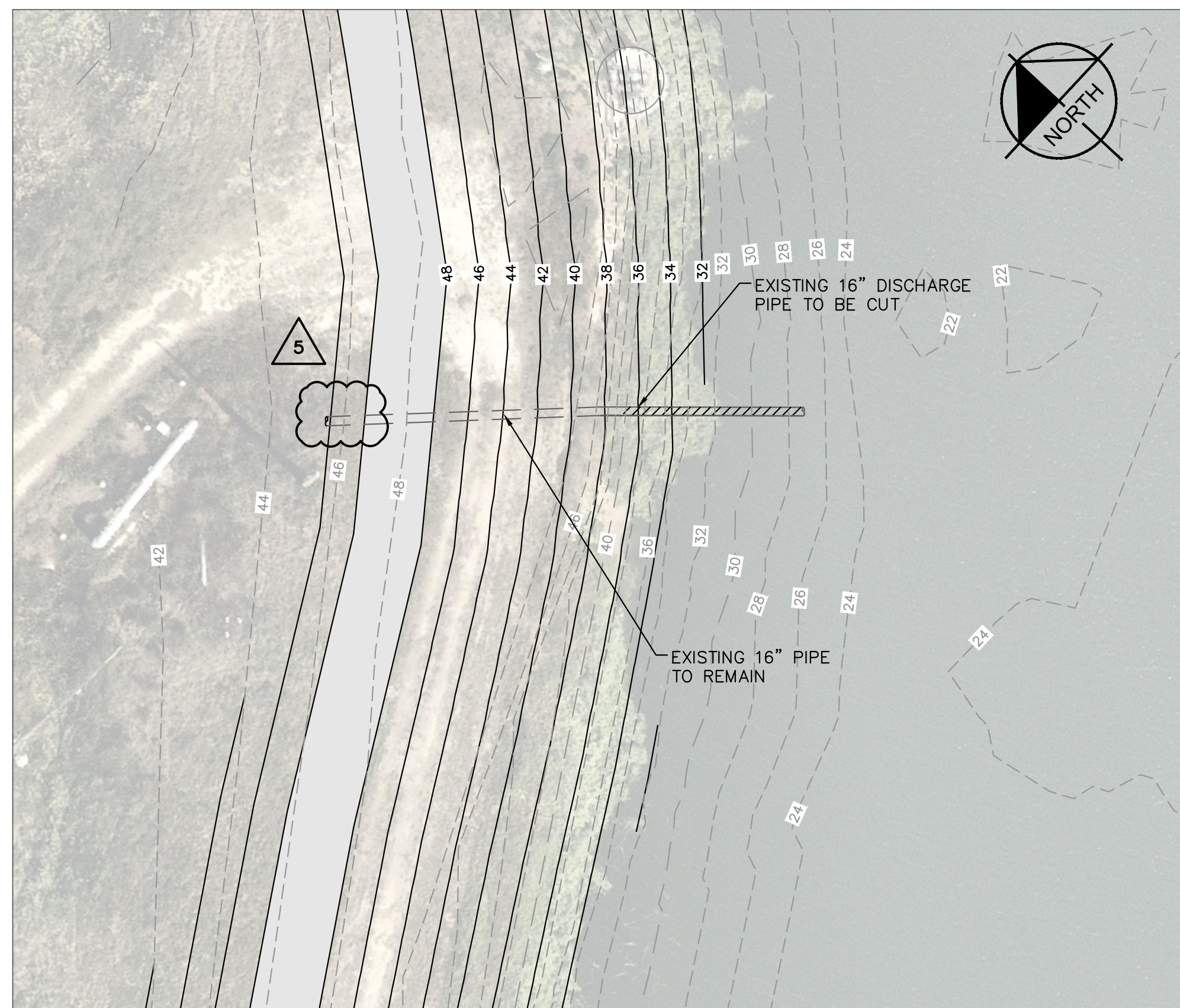
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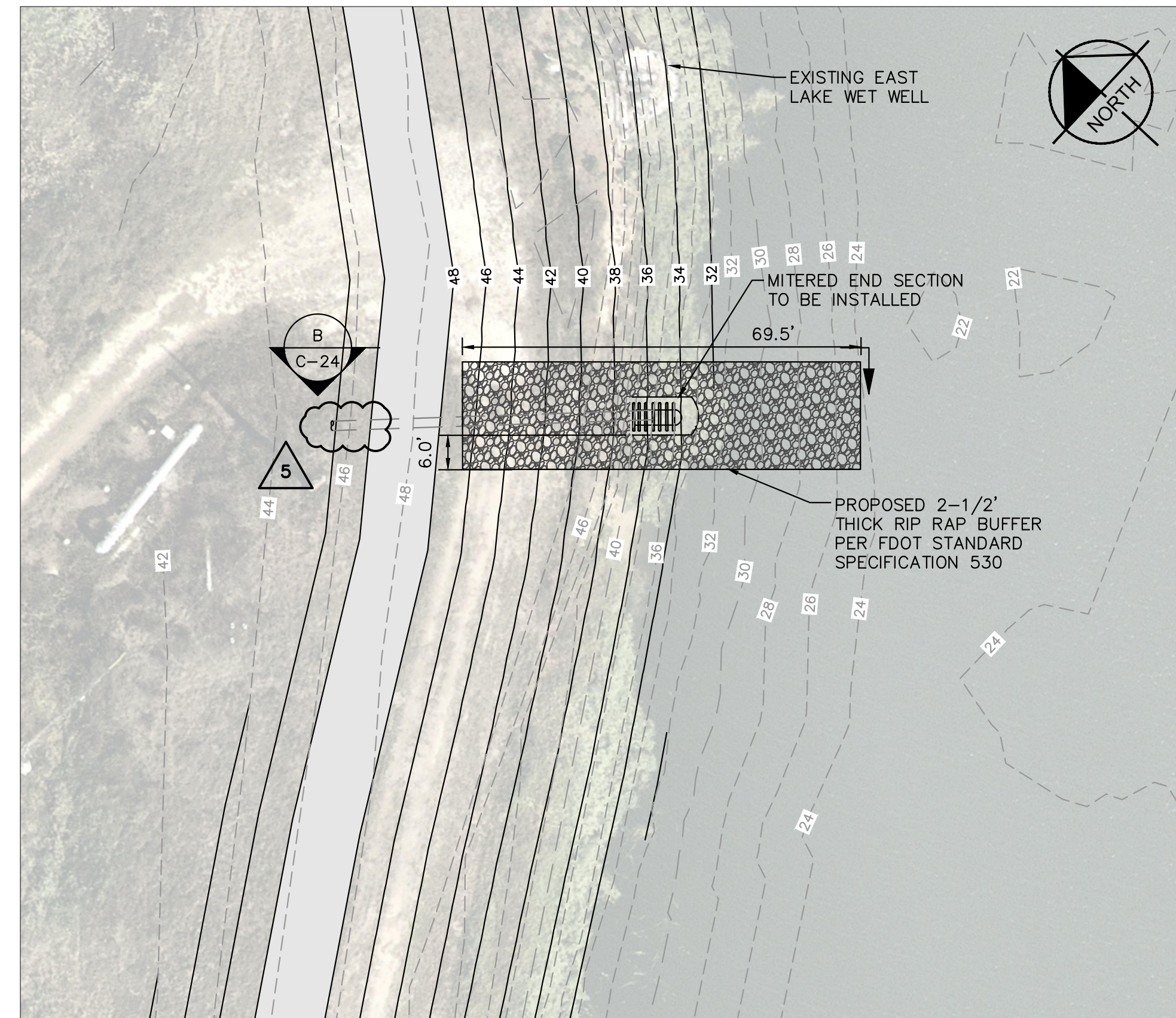
B PROPOSED EAST LAKE DISCHARGE
 -- SCALE: 1" = 10'



DISCHARGE LOCATION MAP OVERVIEW



EAST LAKE DISCHARGE DEMOLITION PLAN



PROPOSED EAST LAKE DISCHARGE PLAN

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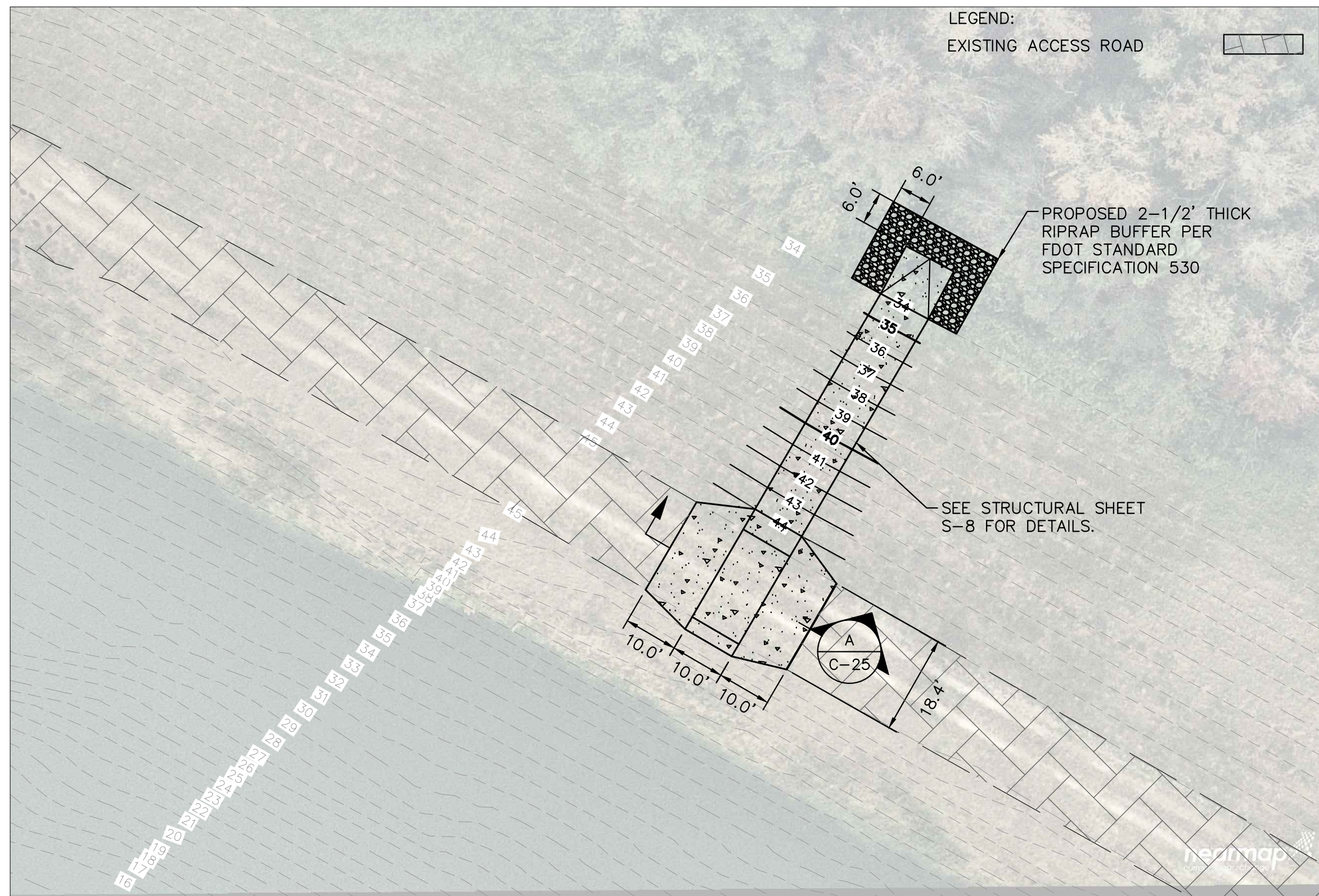
FL DATE:

EAST LAKE ENERGY DISSIPATION
 STRUCTURE

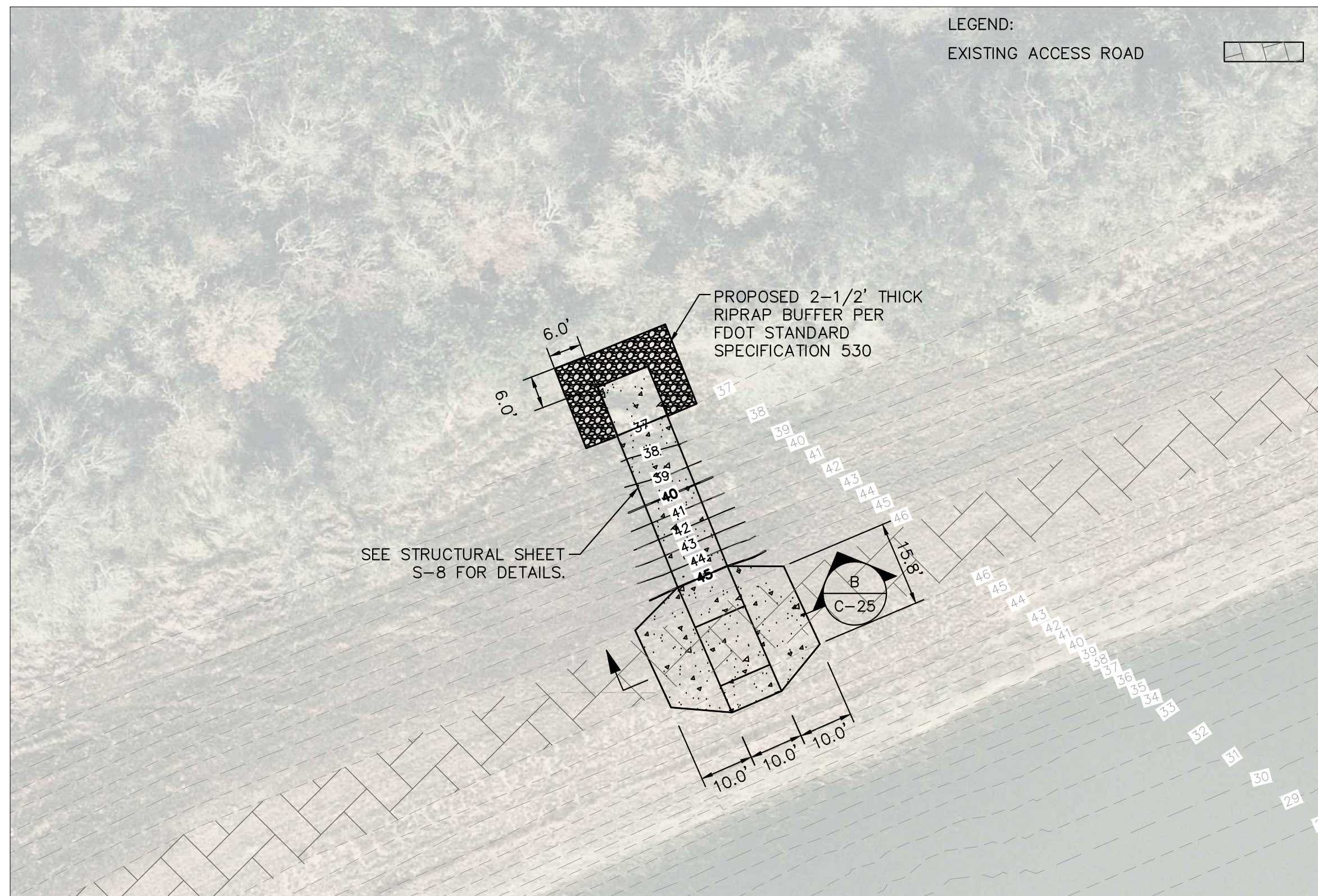
SHEET NUMBER

C-24

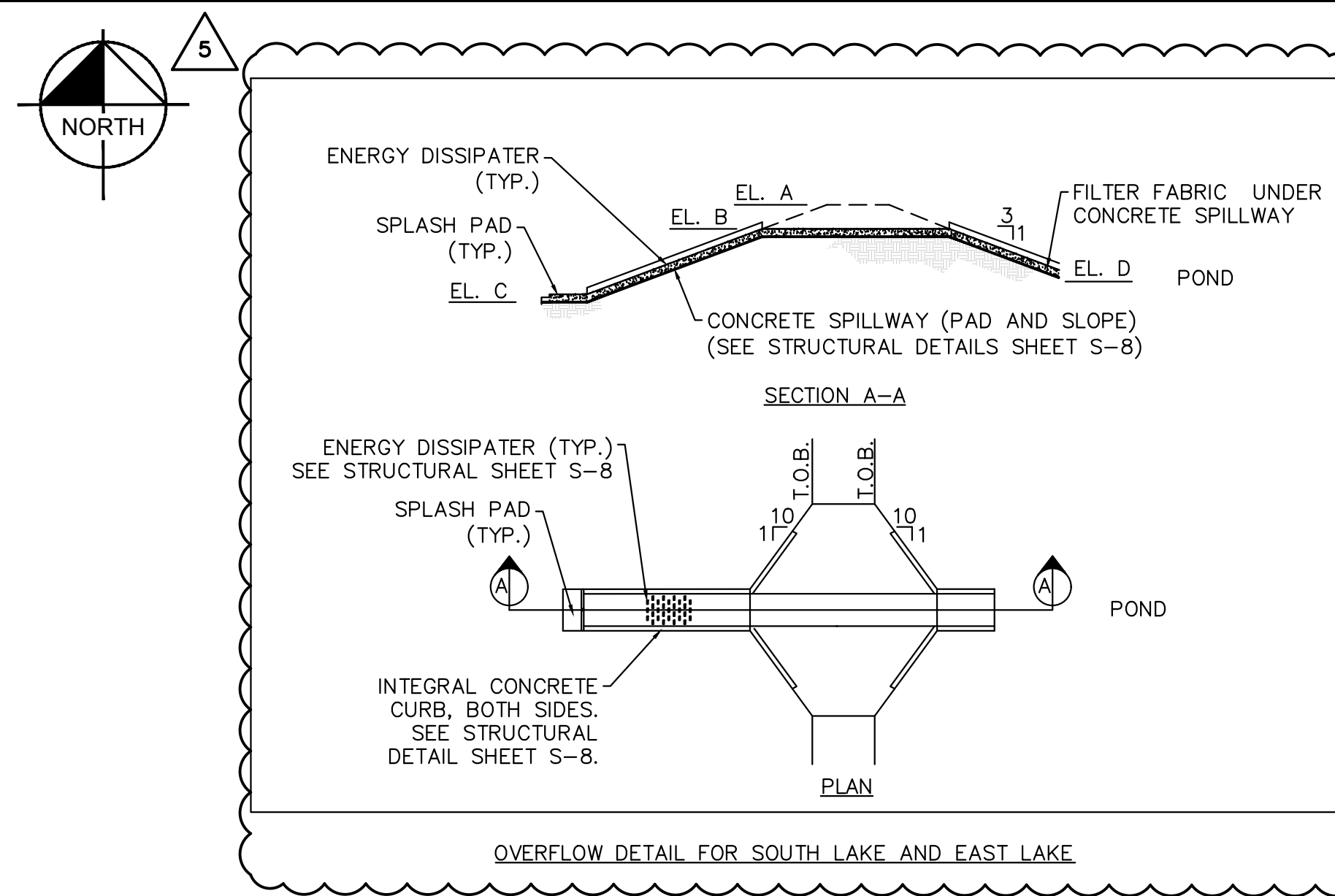
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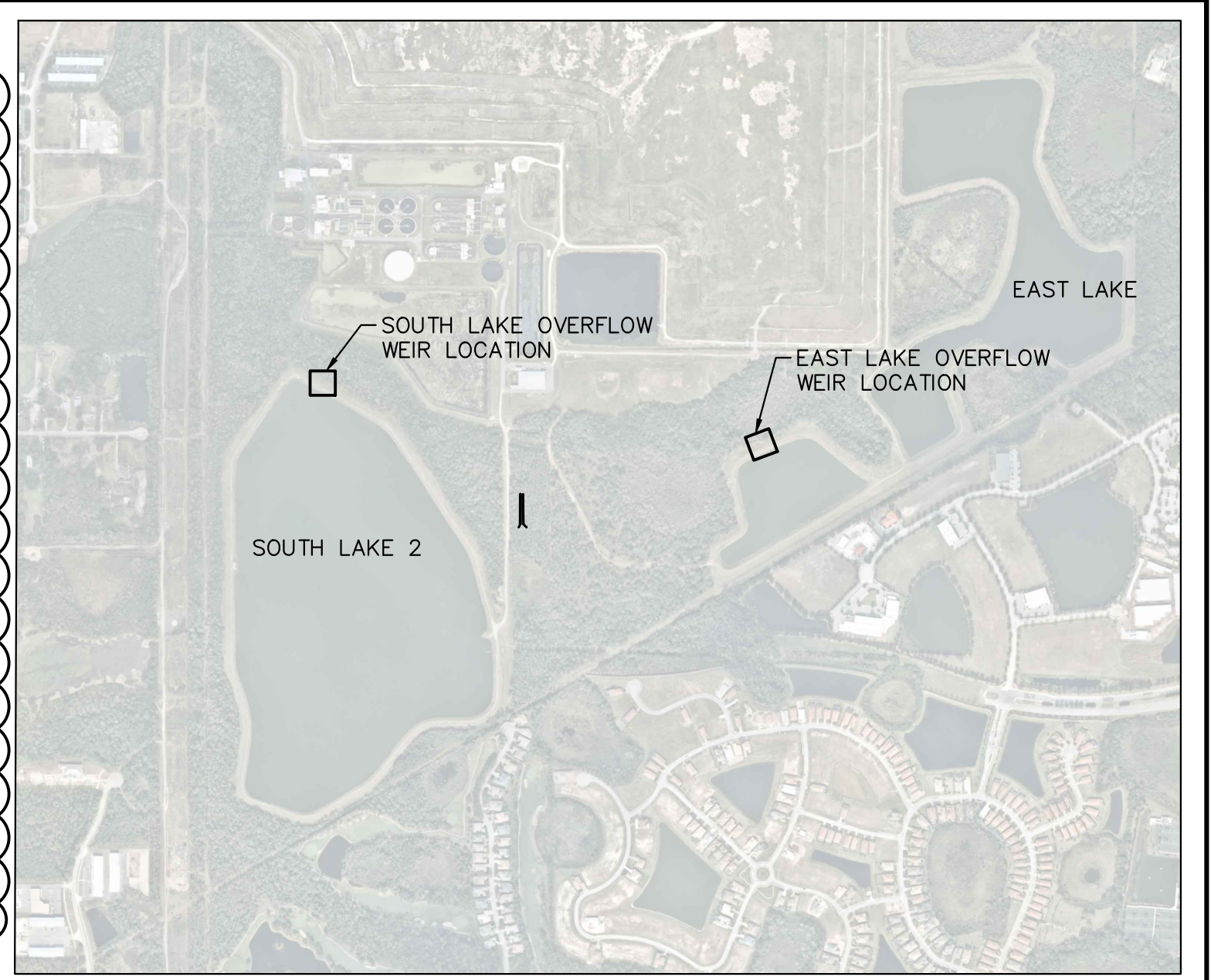
SOUTH LAKE WEIR LOCATION



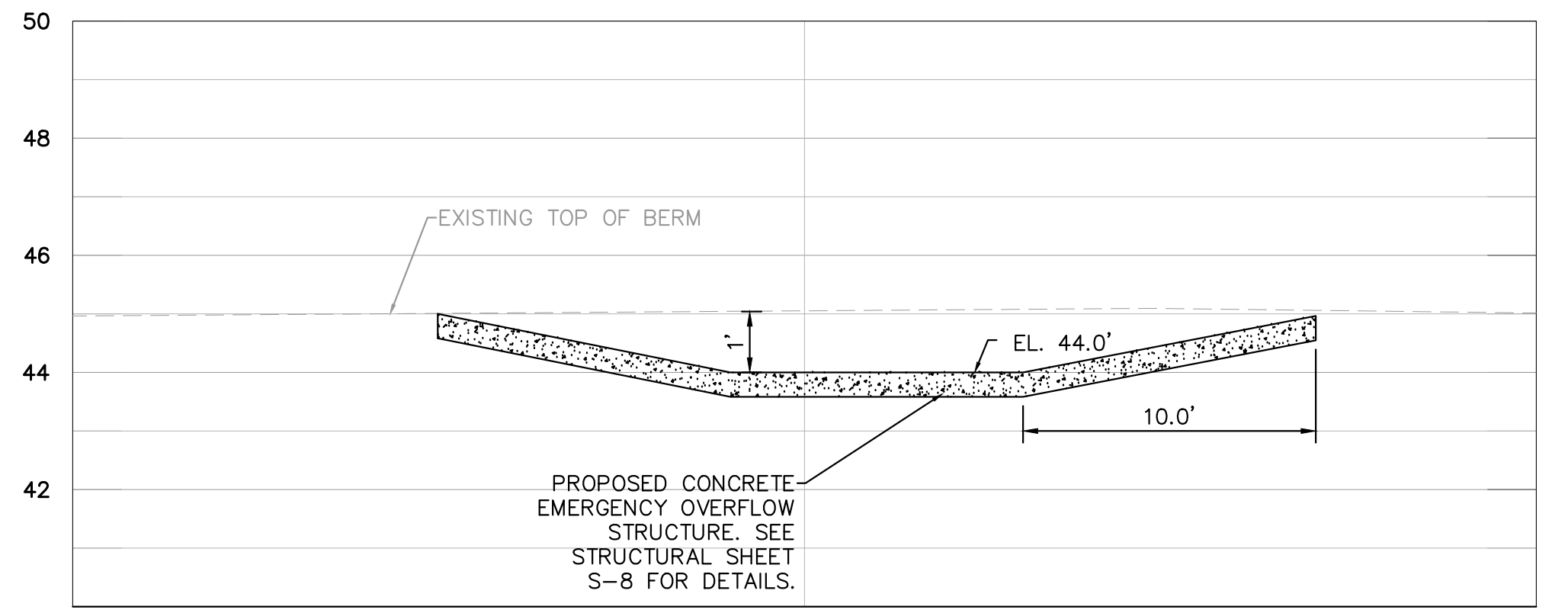
EAST LAKE WEIR LOCATION



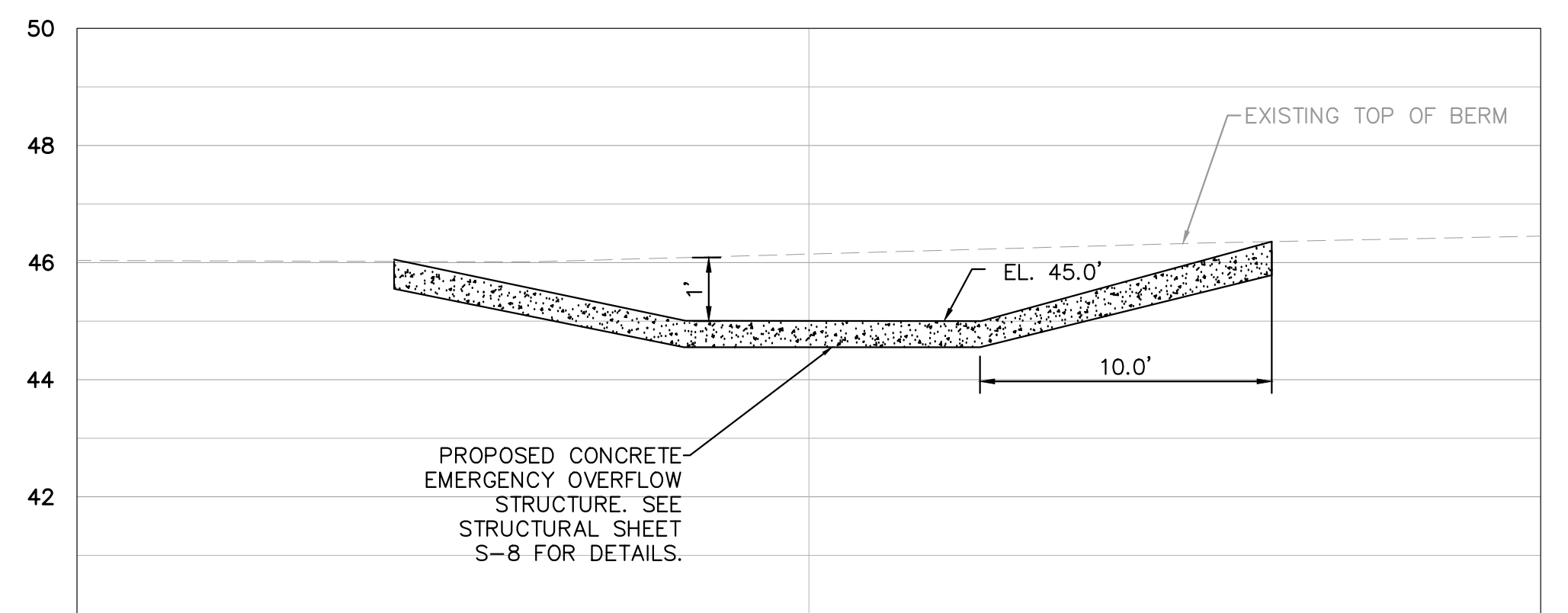
DESCRIPTION	ELEVATION TABLE	
	SOUTH LAKE	EAST LAKE
TOP OF BANK ELEVATION (A)	45.0'	46.0'
TOP OF WEIR ELEVATION (B)	44.0'	45.0'
SPLASH PAD ELEVATION (C)	34.0'	37.0'
POND SIDE ELEVATION (D)	42.0'	45.0'



OVERFLOW STRUCTURE LOCATION MAP



SOUTH LAKE - SECTION A



EAST LAKE - SECTION B

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DATE 1/28/2020
SCALE AS SHOWN
DESIGNED BY SNR
DRAWN BY ASR
CHECKED BY WEW

Manatee County FLORIDA

SEWRF RECLAIMED PUMP BACK STATION

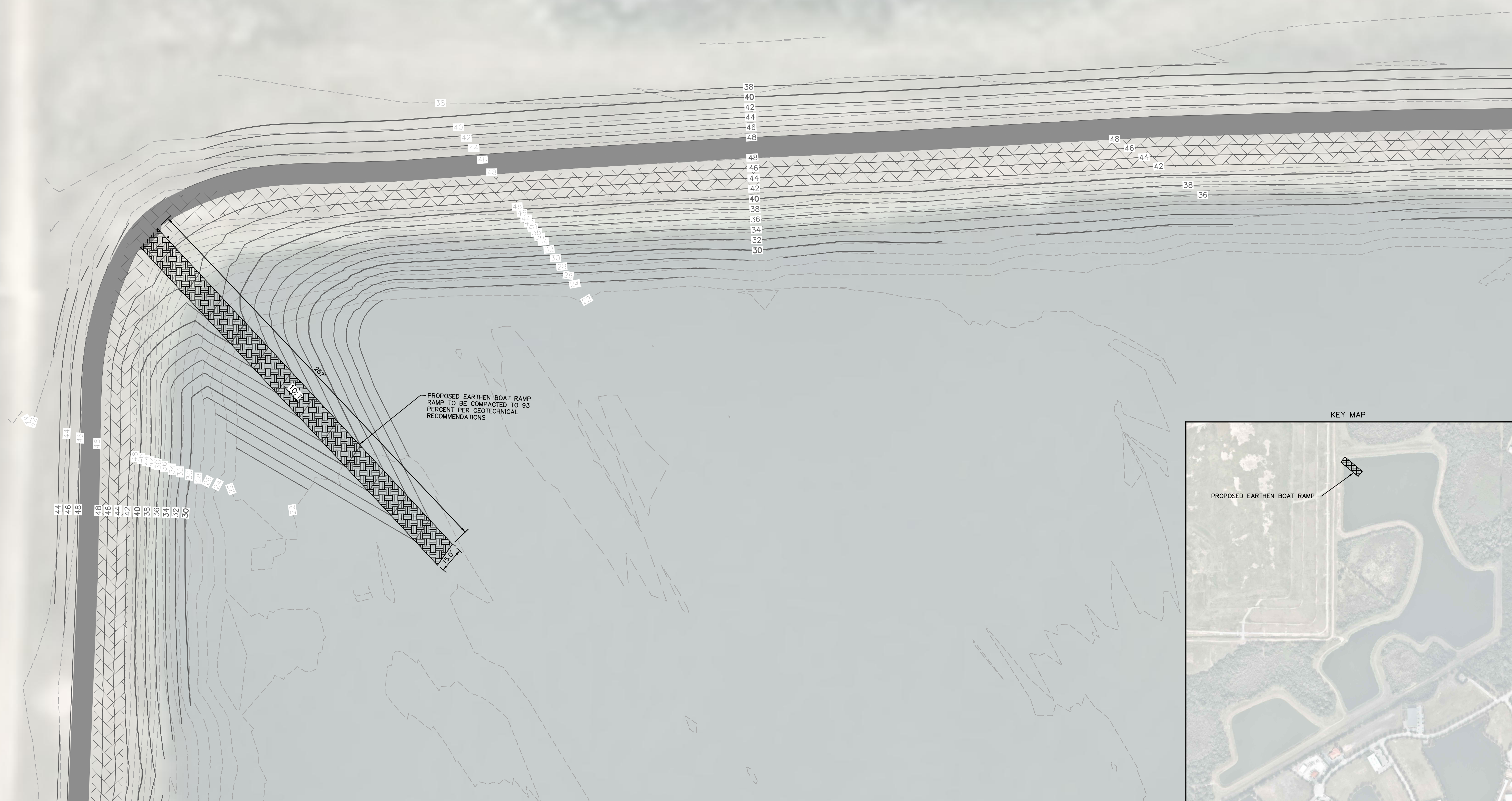
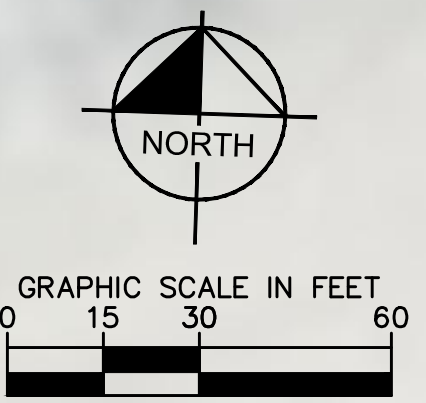
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OVERFLOW STRUCTURES

SHEET NUMBER
C-25

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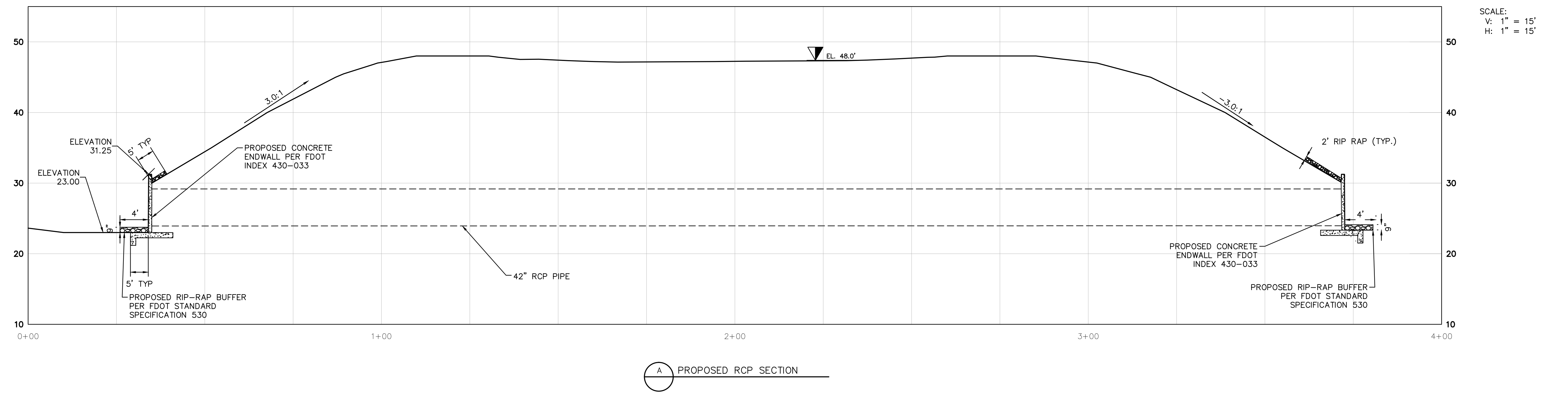
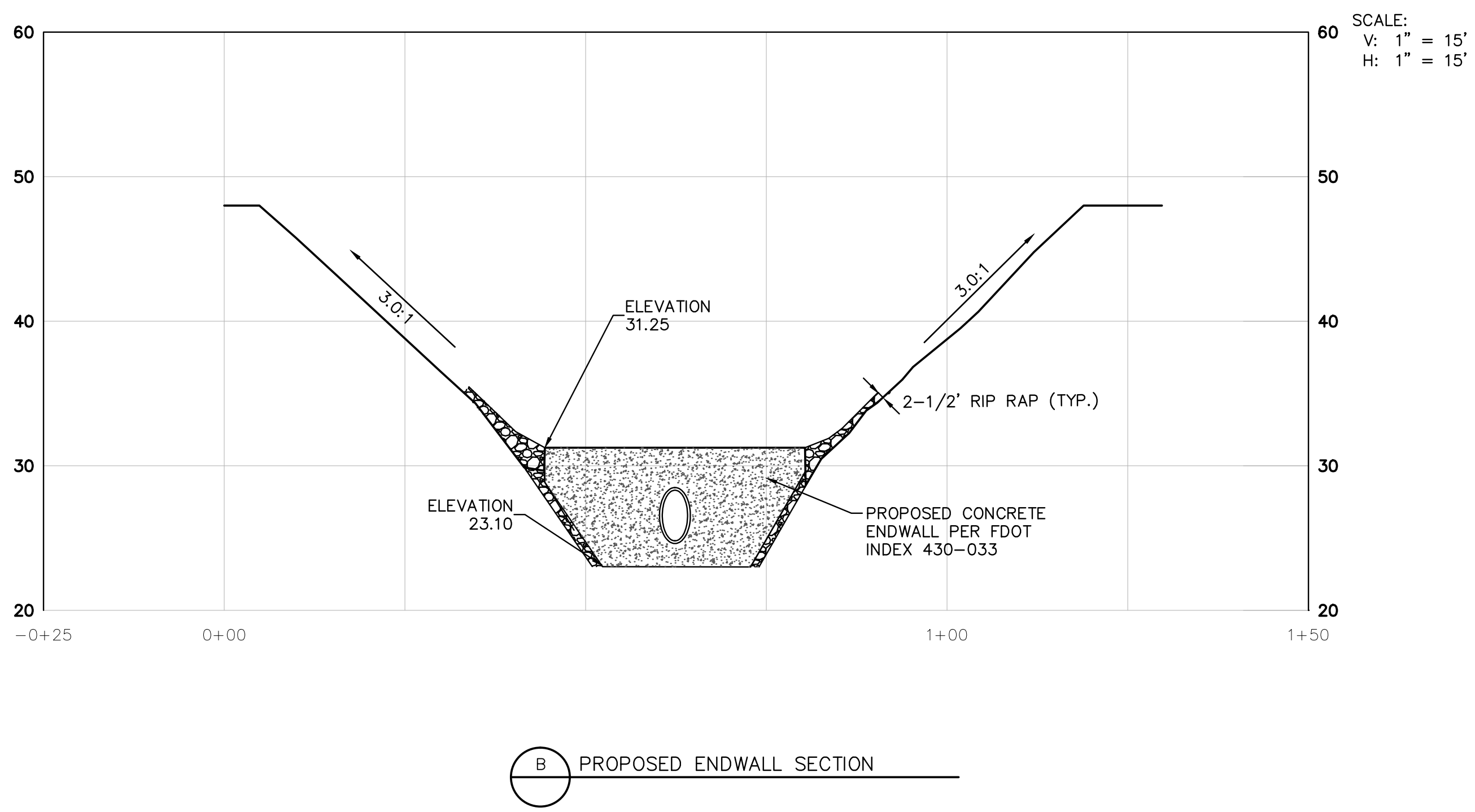
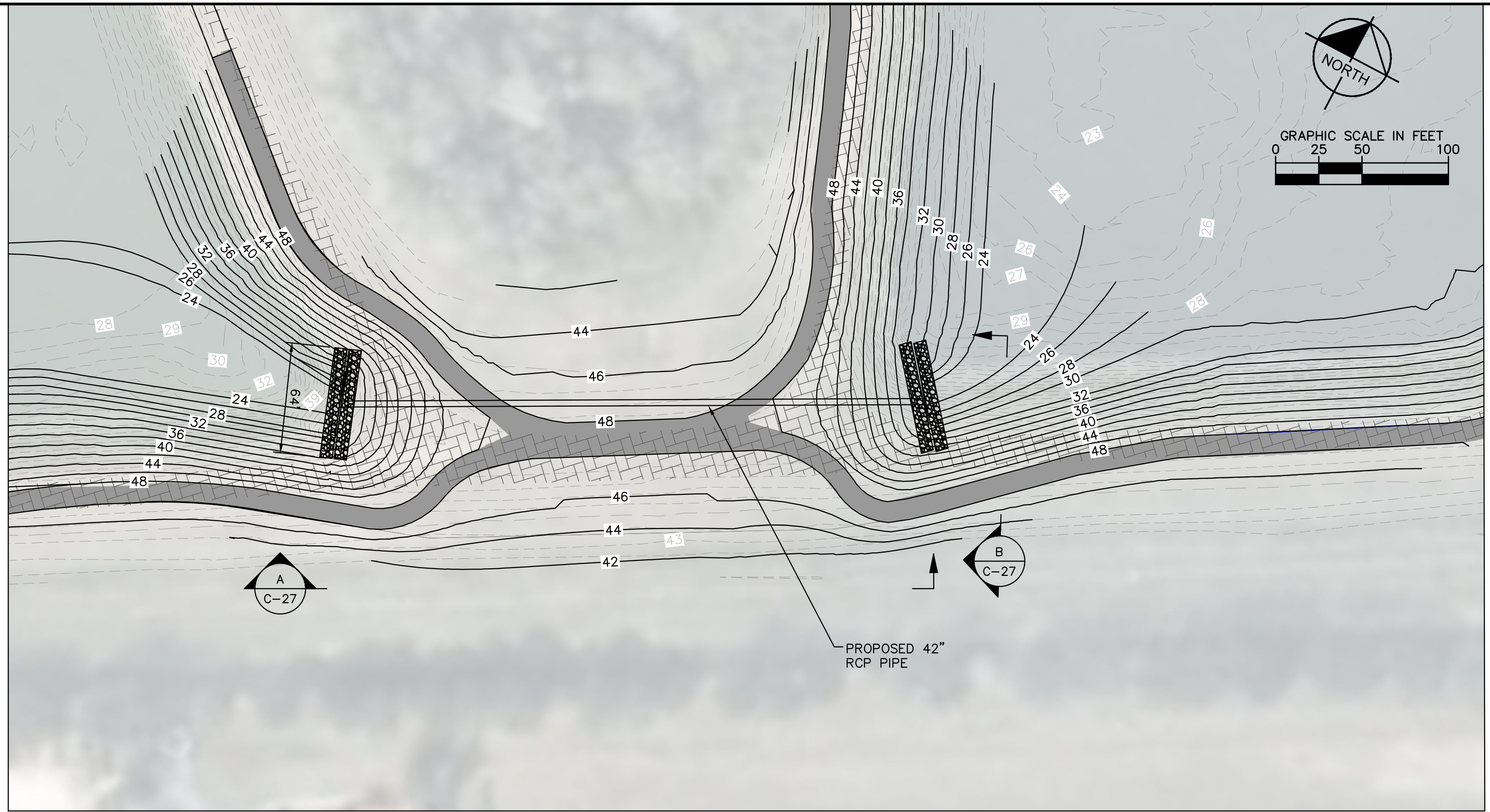
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**EAST LAKE EARTHEN BOAT
 RAMP**

SHEET NUMBER
C-26

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Manatee County
FLORIDA

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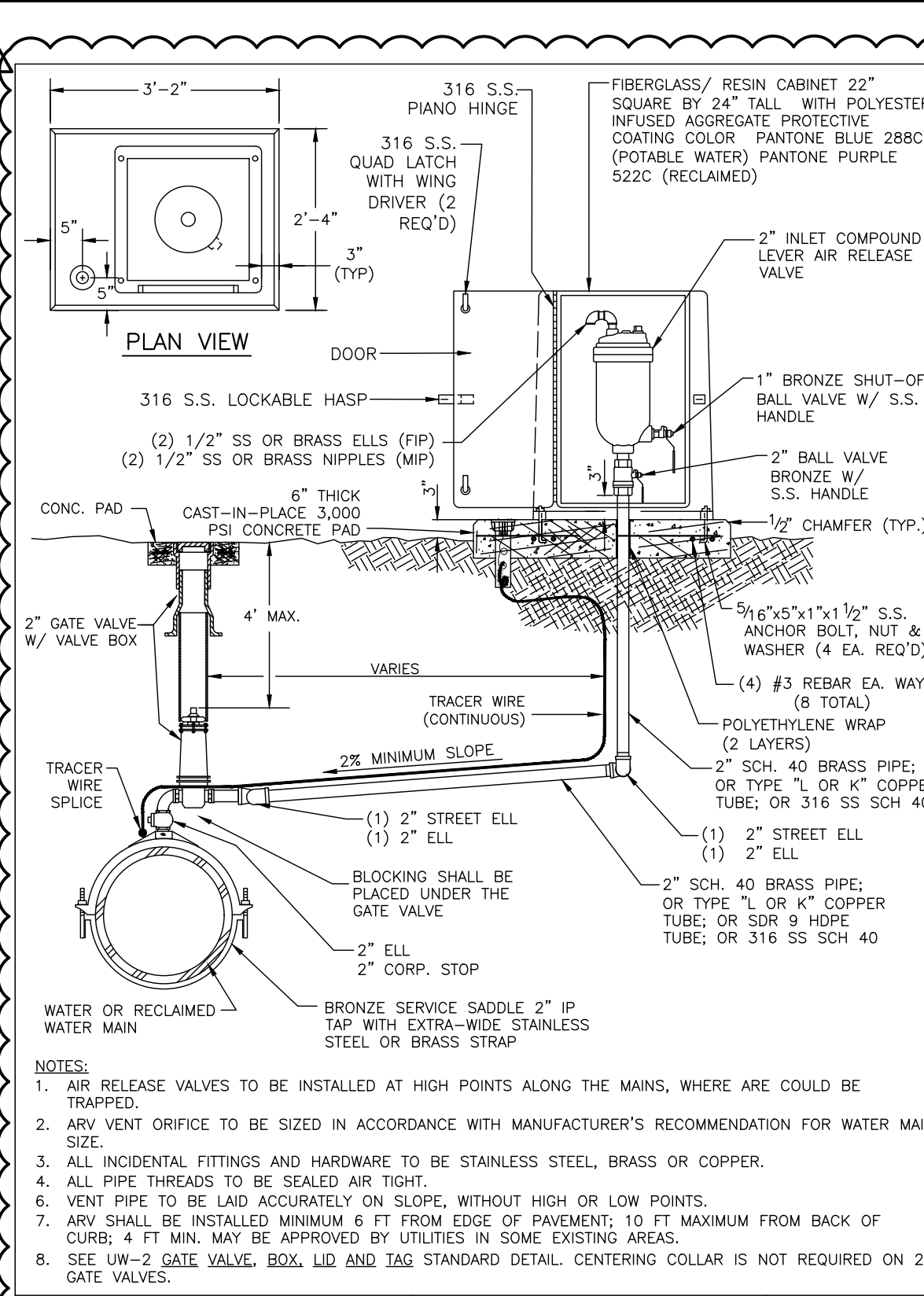
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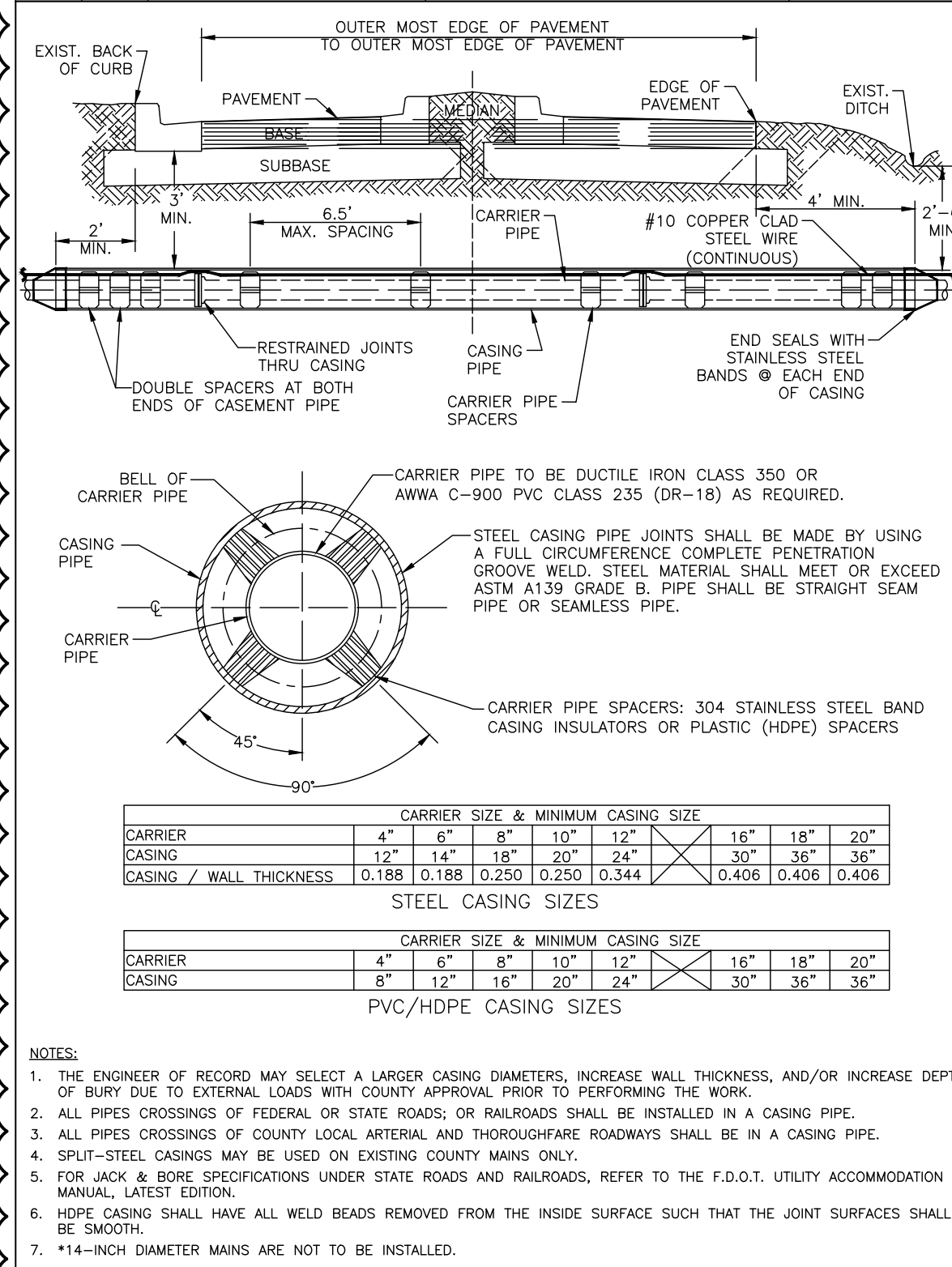
EAST LAKE CULVERT

SHEET NUMBER C-27

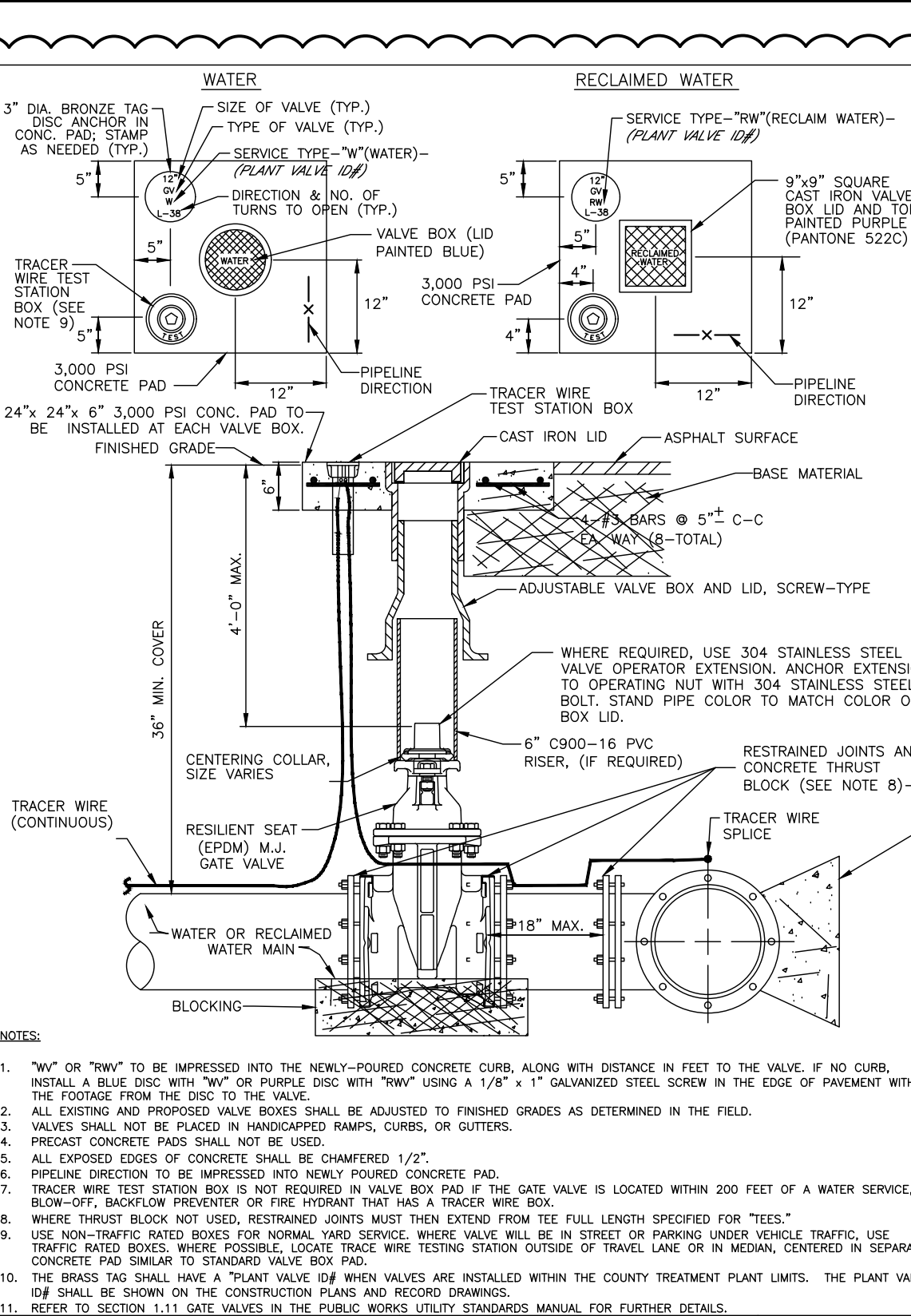
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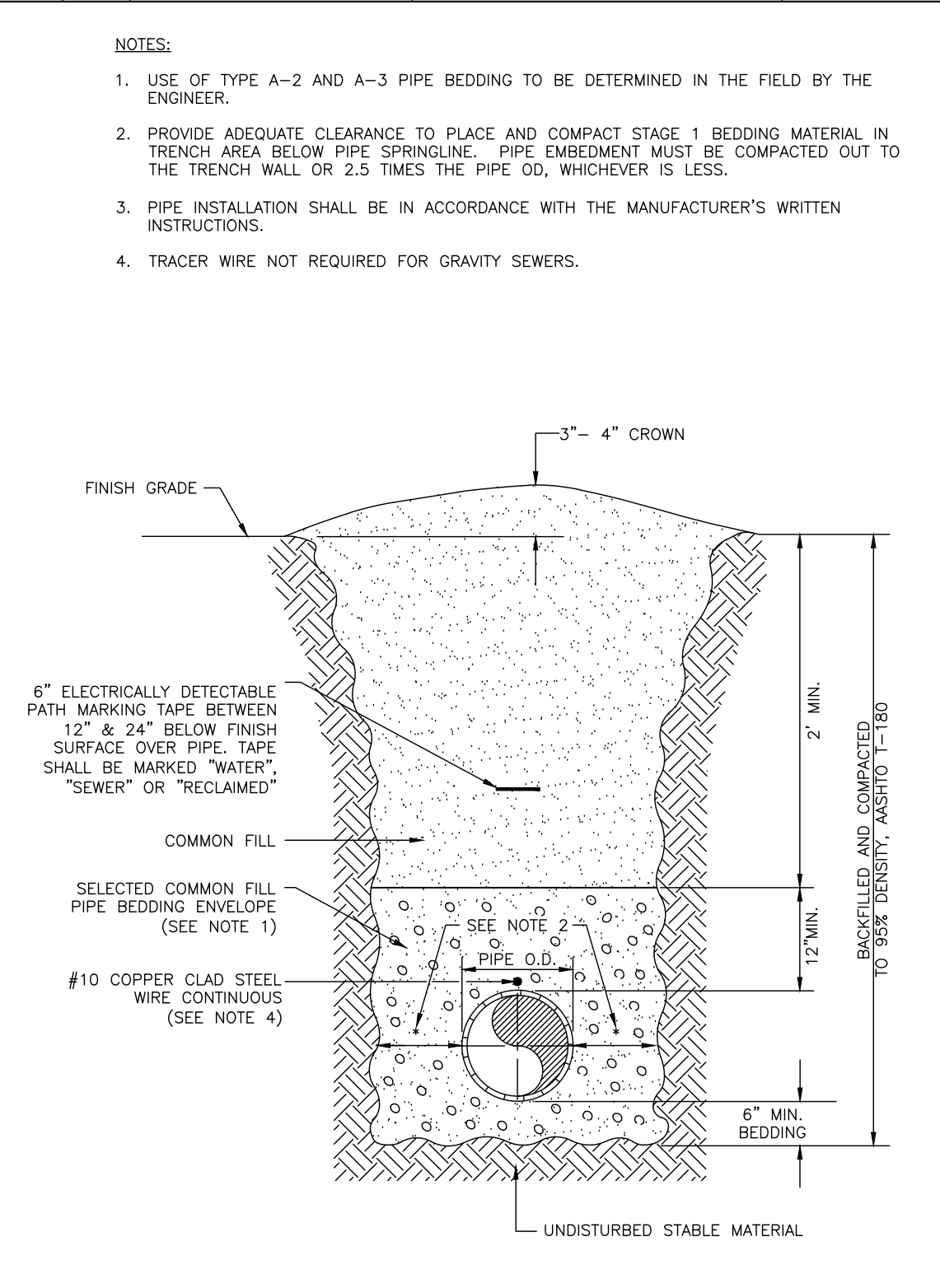
MANATEE COUNTY PUBLIC WORKS DEPARTMENT	ABOVE-GROUND AIR RELEASE VALVE ASSY. FOR 16-INCH AND LARGER MAINS	UW-11
REV. BY DATE	February 25, 2020 DATE OF APPROVAL	



MANATEE COUNTY PUBLIC WORKS DEPARTMENT	CASING CROSSING	UG-3
REV. BY DATE	February 25, 2020 DATE OF APPROVAL	



MANATEE COUNTY PUBLIC WORKS DEPARTMENT	GATE VALVE, BOX, LID AND TAG	UW-2
REV. BY DATE	February 25, 2020 DATE OF APPROVAL	

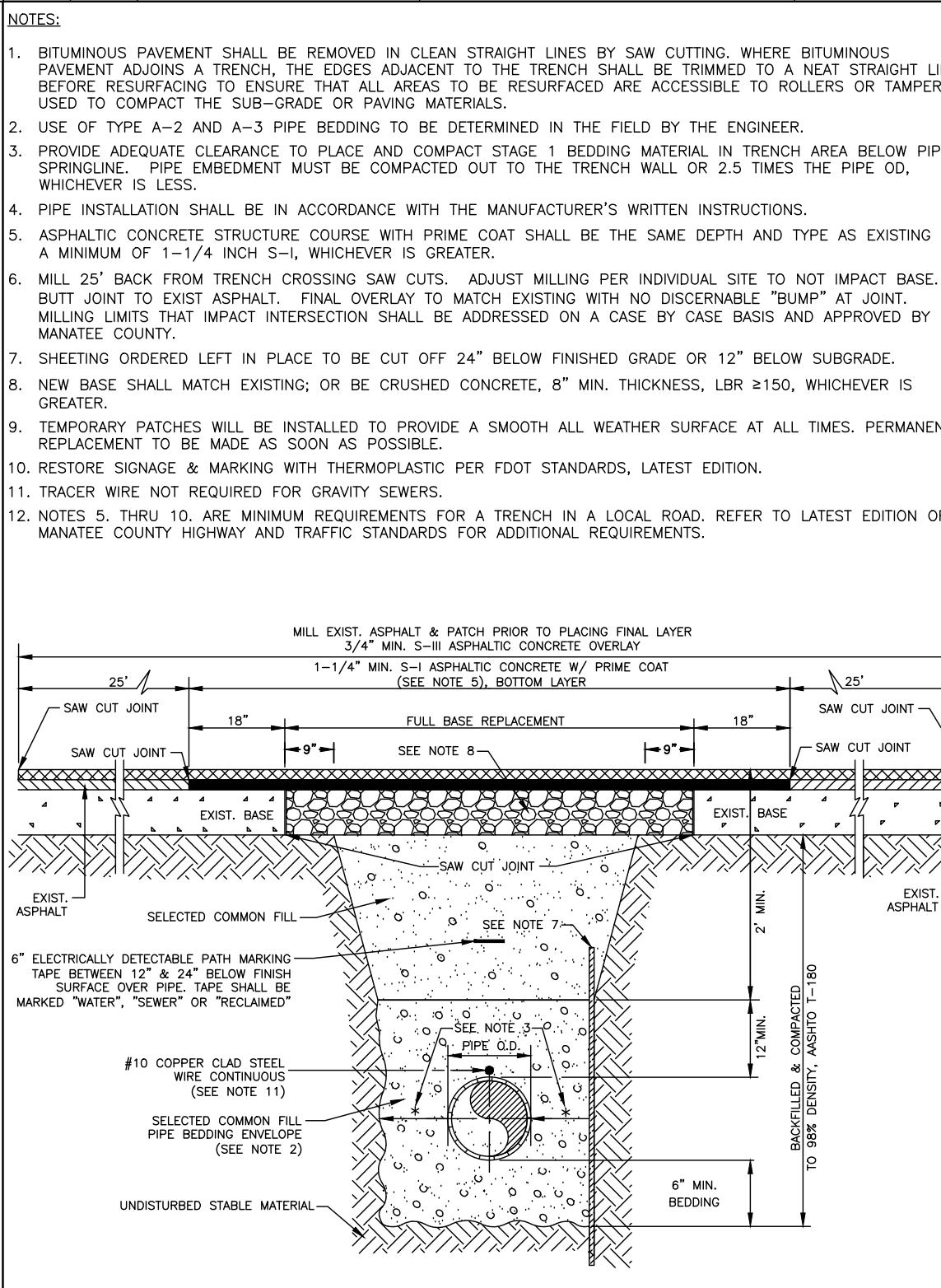


MANATEE COUNTY PUBLIC WORKS DEPARTMENT	TRENCH WITH UNIMPROVED SURFACE TYPE A-1 PIPE BEDDING	UG-11
REV. BY DATE	February 25, 2020 DATE OF APPROVAL	

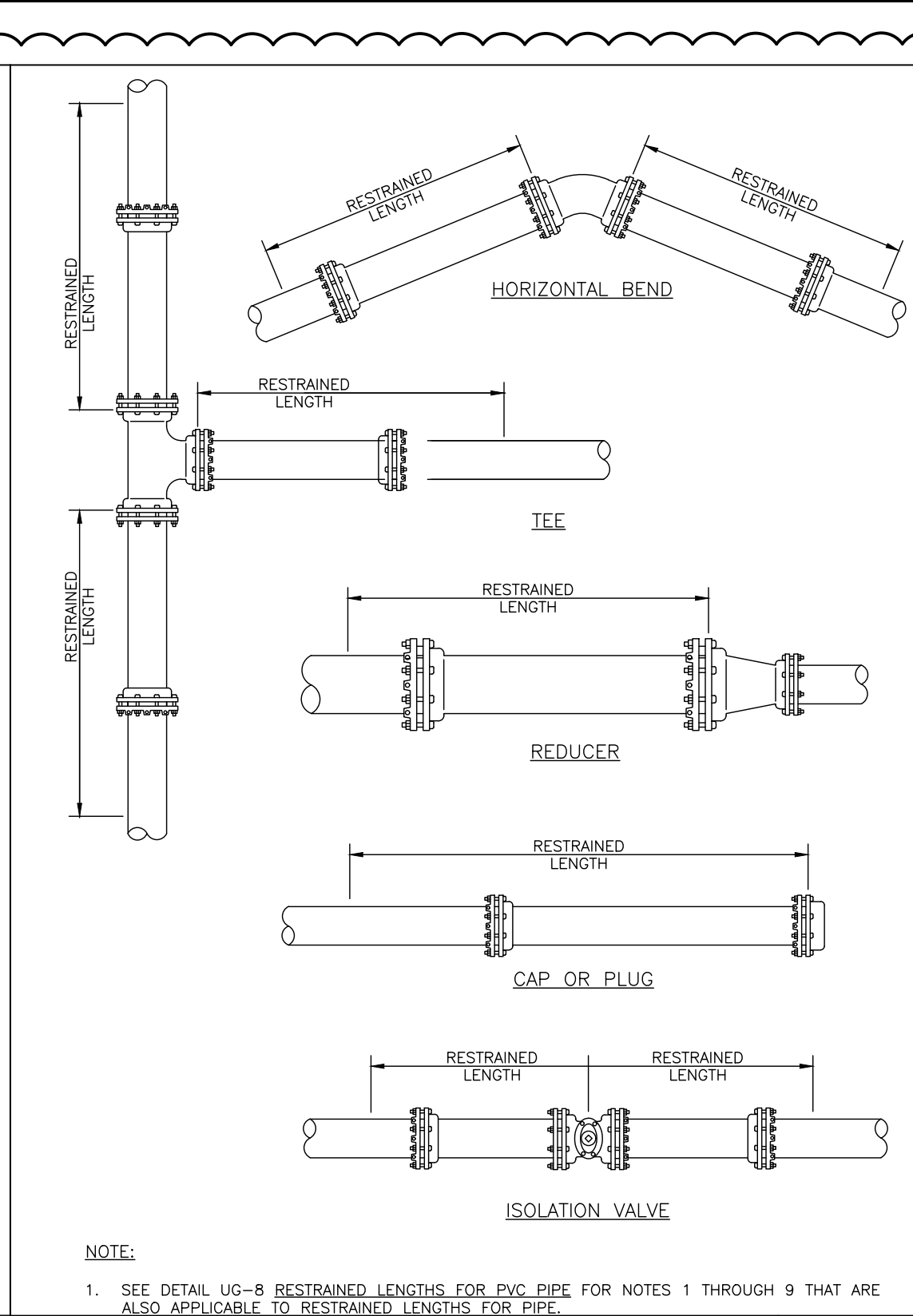
REQUIRED LENGTH OF RESTRAINED JOINT PIPE FOR DIP (POLY-WRAPPED)

MAIN PIPE SIZE	90° BENDS			TEES			REDUCERS			PLUGS & VALVES
	90°	45°	22.5°	SIZE	LENGTH	SIZE	LENGTH	SIZE	LENGTH	
36	142	59	28	x36	393	x36	314	x36	137	453
30	124	51	25	x30	333	x30	272	x30	116	391
24	106	44	21	x24	283	x24	231	x24	98	327
20	92	38	18	x20	243	x20	193	x20	84	280
16	77	32	15	x16	203	x16	163	x16	70	231
12	61	25	12	x12	163	x12	133	x12	56	181
10	52	22	10	x10	143	x10	113	x10	47	153
8	44	18	9	x8	123	x8	93	x8	38	128
6	34	14	7	x6	103	x6	73	x6	29	98
4	24	10	5	x4	83	x4	53	x4	19	69

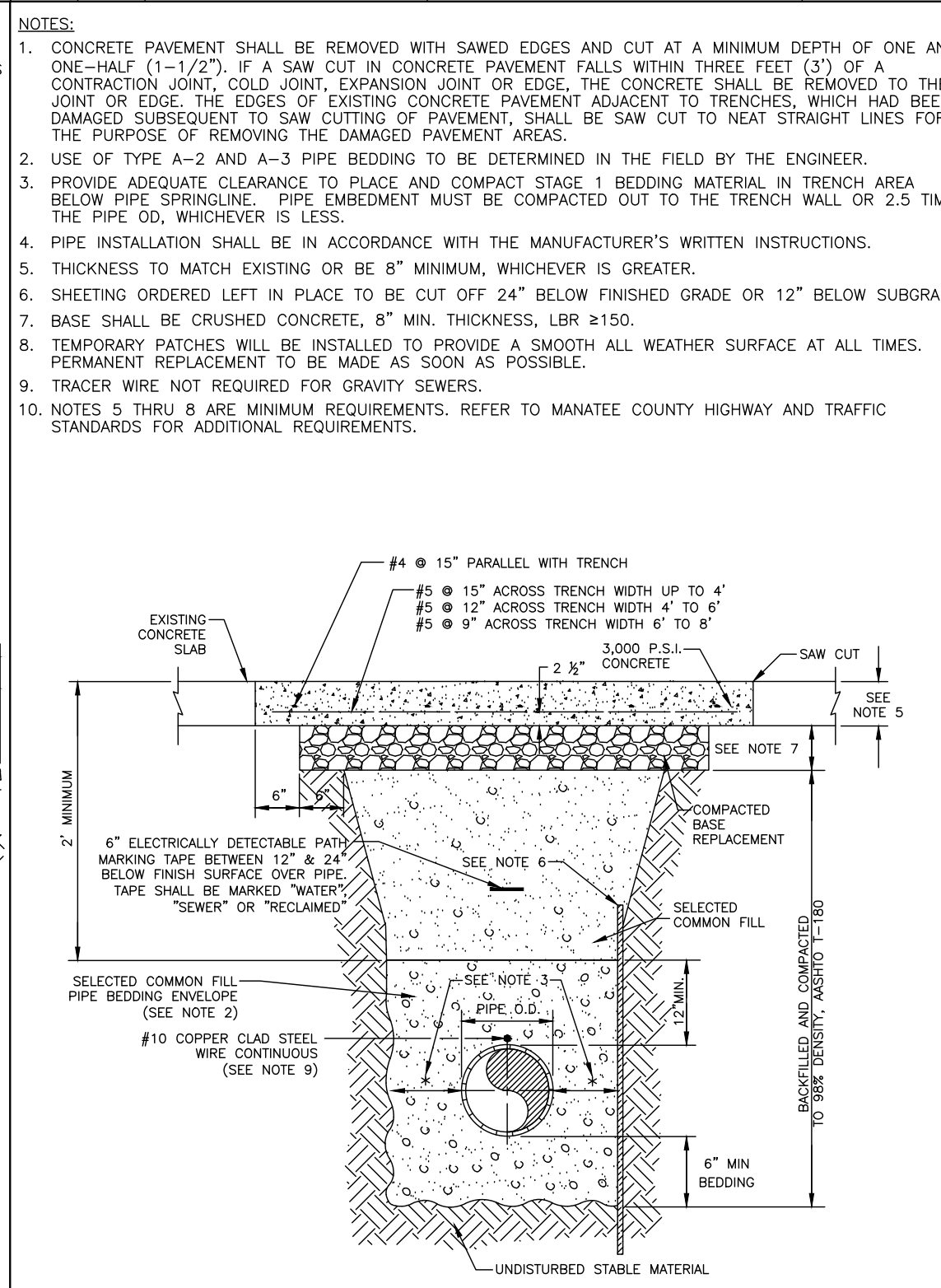
MANATEE COUNTY PUBLIC WORKS DEPARTMENT	RESTRAINED LENGTHS FOR DIP	UG-9
REV. BY DATE	February 25, 2020 DATE OF APPROVAL	



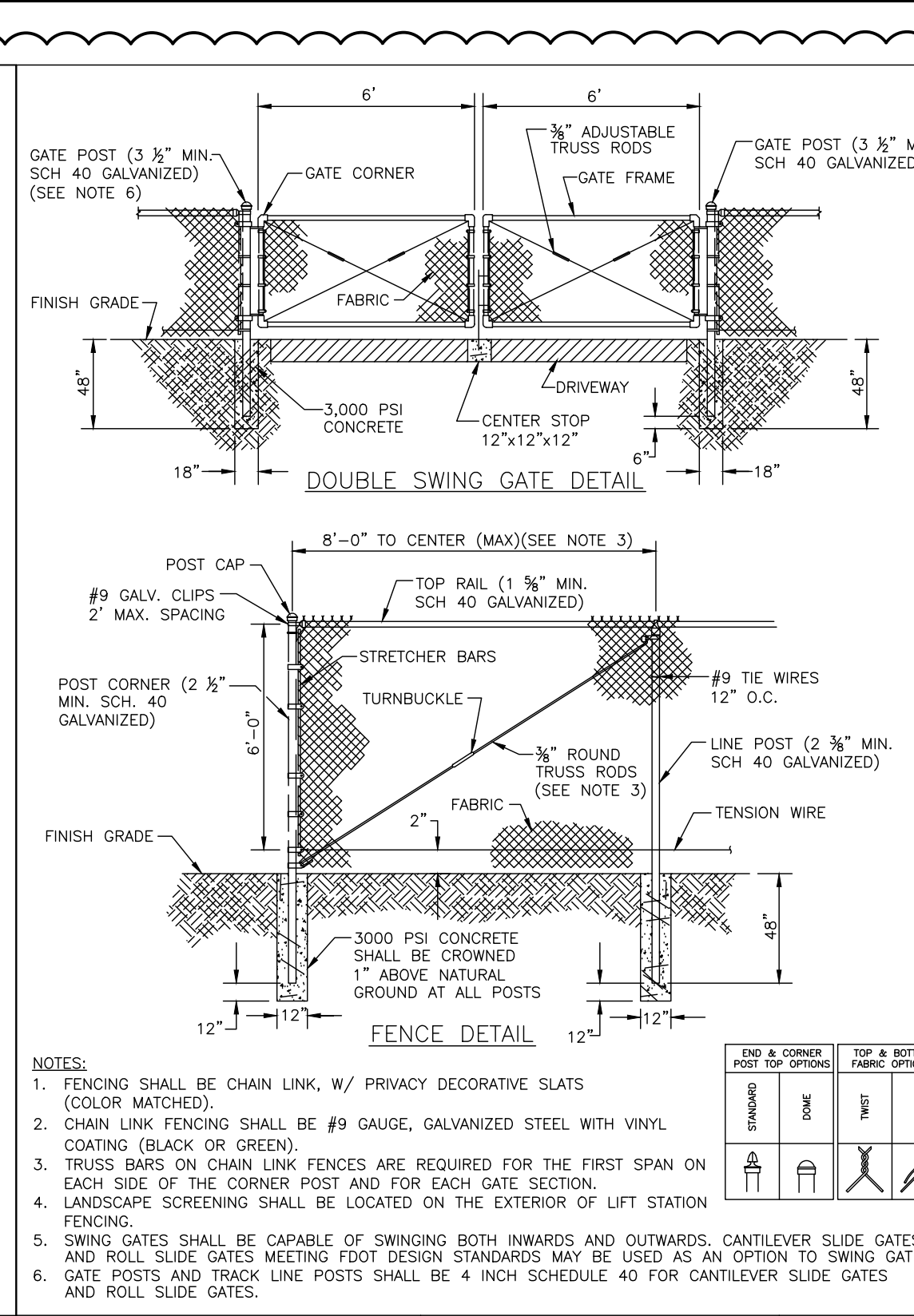
MANATEE COUNTY PUBLIC WORKS DEPARTMENT	TRENCH WITH ASPHALT PAVEMENT SURFACE TYPE A-1 PIPE BEDDING (CROSSING)	UG-12
REV. BY DATE	February 25, 2020 DATE OF APPROVAL	



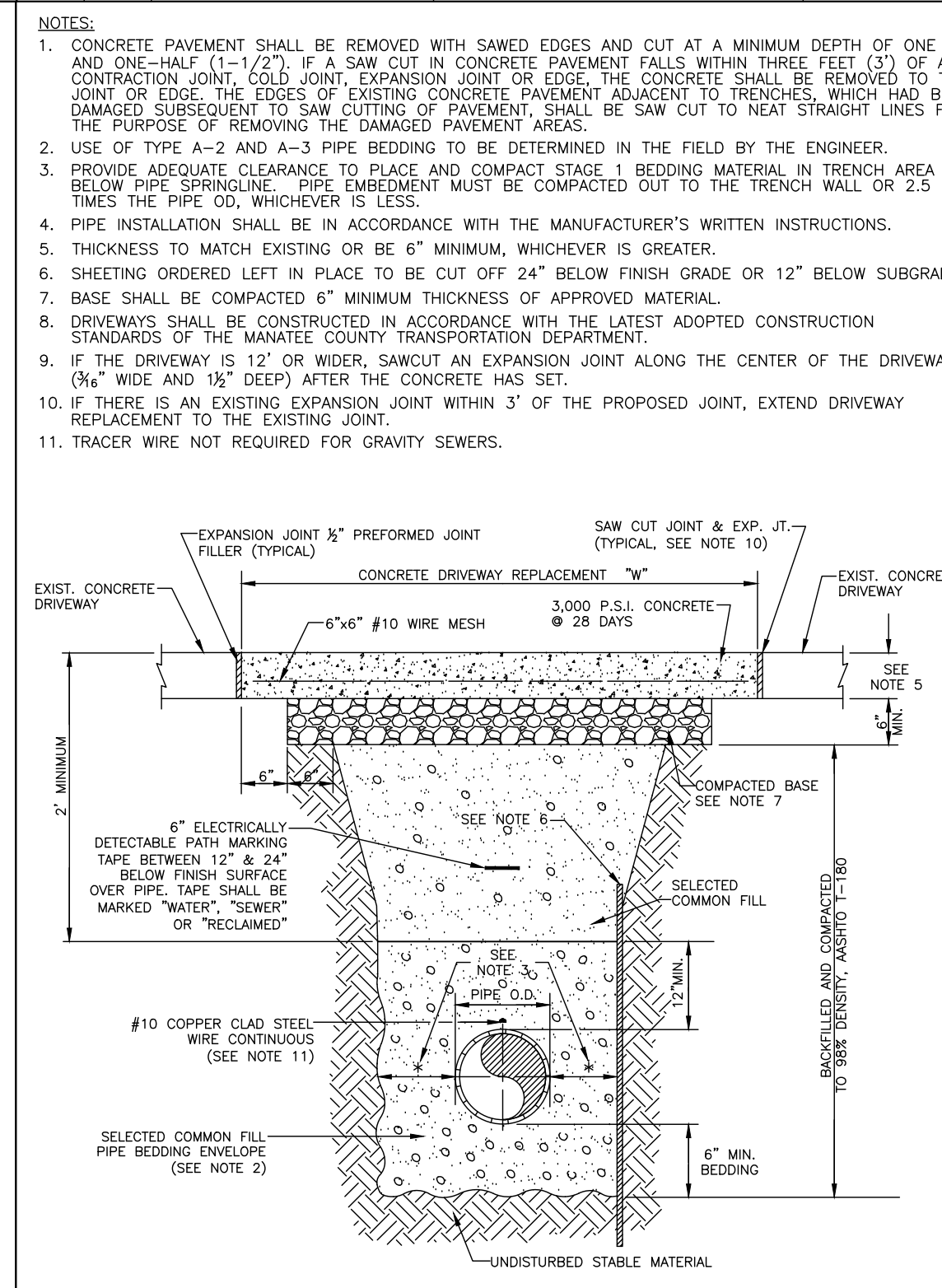
MANATEE COUNTY PUBLIC WORKS DEPARTMENT	RESTRAINED LENGTHS FOR PIPE	UG-10
REV. BY DATE	February 25, 2020 DATE OF APPROVAL	



MANATEE COUNTY PUBLIC WORKS DEPARTMENT	TRENCH WITH CONCRETE PAVEMENT SURFACE TYPE A-1 PIPE BEDDING	UG-13
REV. BY DATE	February 25, 2020 DATE OF APPROVAL	



MANATEE COUNTY PUBLIC WORKS DEPARTMENT	SECURITY FENCING	US-17
REV. BY DATE	February 25, 2020 DATE OF APPROVAL	



MANATEE COUNTY PUBLIC WORKS DEPARTMENT	TRENCH WITH CONCRETE DRIVEWAY SURFACE TYPE A-1 PIPE BEDDING	UG-14
REV. BY DATE	February 25, 2020 DATE OF APPROVAL	

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MANATEE COUNTY

LICENSED PROFESSIONAL

STEPHEN N. ROMANO, P.E.

FL LICENSE NUMBER
57579
FL DATE:

SHEET NUMBER

CIVIL DETAILS

C-28

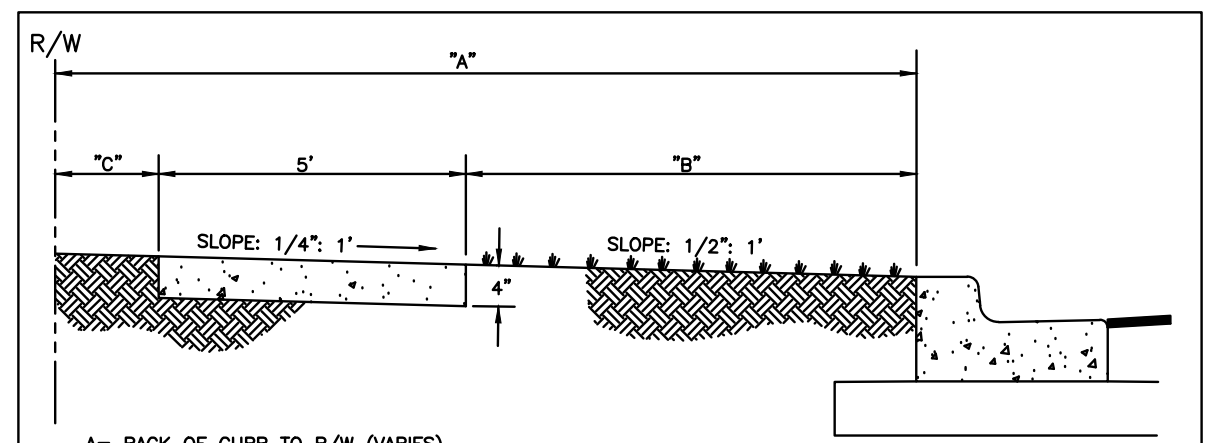
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GENERAL NOTES

- SIDEWALK SHALL BE CONSTRUCTED A MINIMUM OF 4" THICK, USING 3000 PSI CONCRETE. WHERE SIDEWALK BISECTS A DRIVEWAY, THE MINIMUM SHALL BE 6" OF CLASS 1 CONCRETE REINFORCED WITH 6"x6" #10 WIRE MESH.
* SEE SHEETS #101.2 & 101.3.
- ALL SIDEWALKS SHALL BE CONSTRUCTED TO THE SPECIFICATIONS OF THE MANATEE COUNTY LAND DEVELOPMENT CODE, SECTION 722. A MINIMUM (5) FOOT WIDE SIDEWALK SHALL BE INSTALLED ALONG THE NORTH AND WEST SIDES OF ALL NEW LOCAL STREETS WHICH ARE CONSTRUCTED IN CONJUNCTION WITH A NEW RESIDENTIAL DEVELOPMENT. A SIDEWALK A MINIMUM OF (5) FEET IN WIDTH SHALL BE INSTALLED ON BOTH SIDES OF ALL THOROUGHFARES. REFER TO F.D.O.T. ROADWAY AND TRAFFIC STANDARDS, LATEST REVISION FOR CURB CUT RAMP SPECIFICATIONS.
- THE CONCRETE SHALL BE GIVEN A BROOM FINISH. THE SURFACE VARIATIONS SHALL NOT BE MORE THAN 1/8" UNDER A TEN FOOT STRAIGHTEDGE, NOR MORE THAN 1/8" ON A FIVE-FOOT TRAVERSE SECTION. THE EDGE OF THE SIDEWALK SHALL BE CAREFULLY FINISHED WITH AN EDGING TOOL HAVING A RADIUS OF 1/2".
- EXPANSION JOINT: EXPANSION JOINTS BETWEEN THE SIDEWALKS AND THE CURB OR DRIVEWAY OR AT FIXED OBJECTS AND SIDEWALK INTERSECTIONS SHALL BE 1/2" MATERIAL SHALL MEET THE REQUIREMENTS OF AASHTO M153 OR AASHTO M213. FOR LONG POORS, AN EXPANSION JOINT SHALL BE PLACED AT INTERVALS NOT TO EXCEED 120'.
- CONTRACTION JOINTS:
OPEN TYPE JOINTS
OPEN TYPE CONTRACTION JOINTS SHALL BE FORMED BY STAKING A METAL BULKHEAD IN PLACE AND DEPOSITING THE CONCRETE ON BOTH SIDES. AFTER THE CONCRETE HAS SET SUFFICIENTLY TO PRESERVE THE WIDTH AND THE SHAPE OF THE JOINT, THE BULKHEAD SHALL BE REMOVED. AFTER THE SIDEWALK HAS BEEN FINISHED OVER THE JOINT, THE SLOT SHALL BE FINISHED WITH A TOOL HAVING A 1/2" RADIUS.
SAWED JOINTS
A SLOT APPROXIMATELY 3/16" WIDE AND NOT LESS THAN 1" DEEP AT 10' CENTERS SHALL BE CUT WITH A CONCRETE SAW AFTER THE CONCRETE HAS SET.
- SIDEWALKS ALONG OTHER STREETS SHALL BE CONSTRUCTED AND DEDICATED AS REQUIRED BY THE APPROVING AUTHORITY WHEN NECESSARY TO CONTINUE AN EXISTING OR PROPOSED SIDEWALK.
- HANDICAP RAMPS SHALL MEET FLORIDA ACCESSIBILITIES STANDARDS, AND SECTIONS 301.0, 301.1 AND 301.2.
- ALL SIDEWALKS ON R/W WITHIN 10' OF AN EXISTING OR PROPOSED TREE THAT WILL EXCEED 6" IN DIAMETER AT MATURITY SHALL BE 5" THICK AND CONTAIN 2-#3 REBAR CENTERED VERTICALLY AND SPACED 3' ON CENTER. PALMS ARE NOT CONSIDERED TREES.

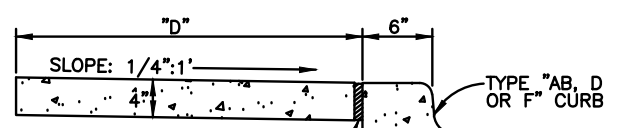
*NOTE: FOR COMPLETE SIDEWALK DETAILS, SEE F.D.O.T. DESIGN STANDARDS, 2006 EDITION, INDEX 304, SHEETS 1 THROUGH 6 AND INDEX 310, SHEETS 1 & 2.

MANATEE COUNTY TRANSPORTATION DEPARTMENT		SIDEWALKS GENERAL NOTES	301.0
REV. BY	DATE		
	6/12/07		
	DATE OF B.O.C.C. APPROVAL		



A= BACK OF CURB TO R/W (VARIES)
B= UNPAVED AREA (VARIES), REFER TO F.D.O.T. GREEN BOOK, TABLE 3-12, LATEST REVISION.
C= VARIES, SEE 401 SERIES

TYPICAL SIDEWALK LOCATION

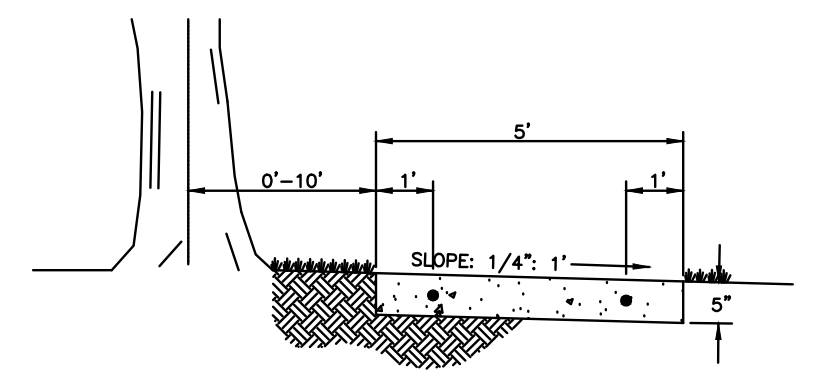


WHERE SIDEWALK ABUTS CURB PROVIDE 1/2" PREFORMED JOINT FILLER SEE NOTE #4 ON 300.1

D= SIDEWALK WIDTH SHALL BE 6" STANDARD, WHERE WALK ABUTS TYPE "AB, D OR F" CURB. WHERE SPEED LIMIT IS 25 MPH OR LESS, WIDTH CAN BE 5"-6".

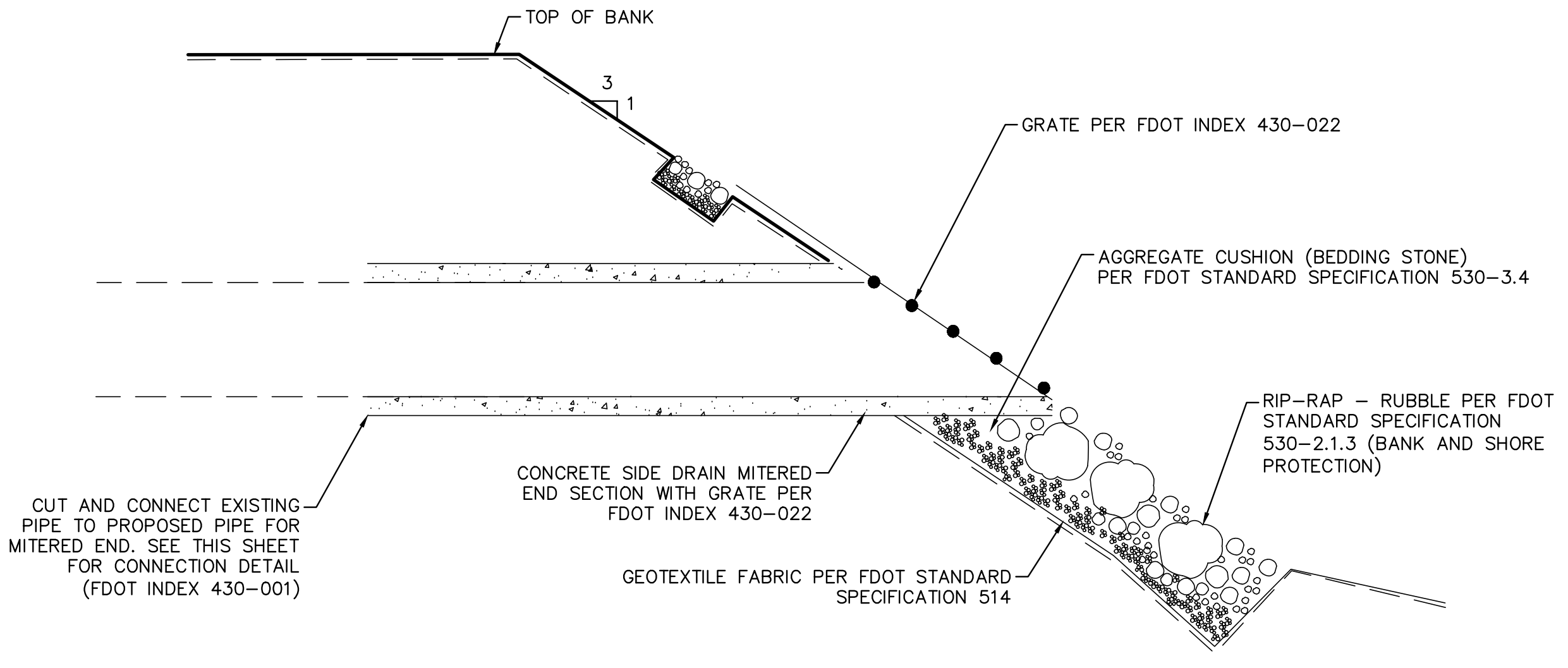
* SEE SHEET 300.1 "GENERAL NOTES" FOR FURTHER INFORMATION

ALTERNATE SIDEWALK LOCATION

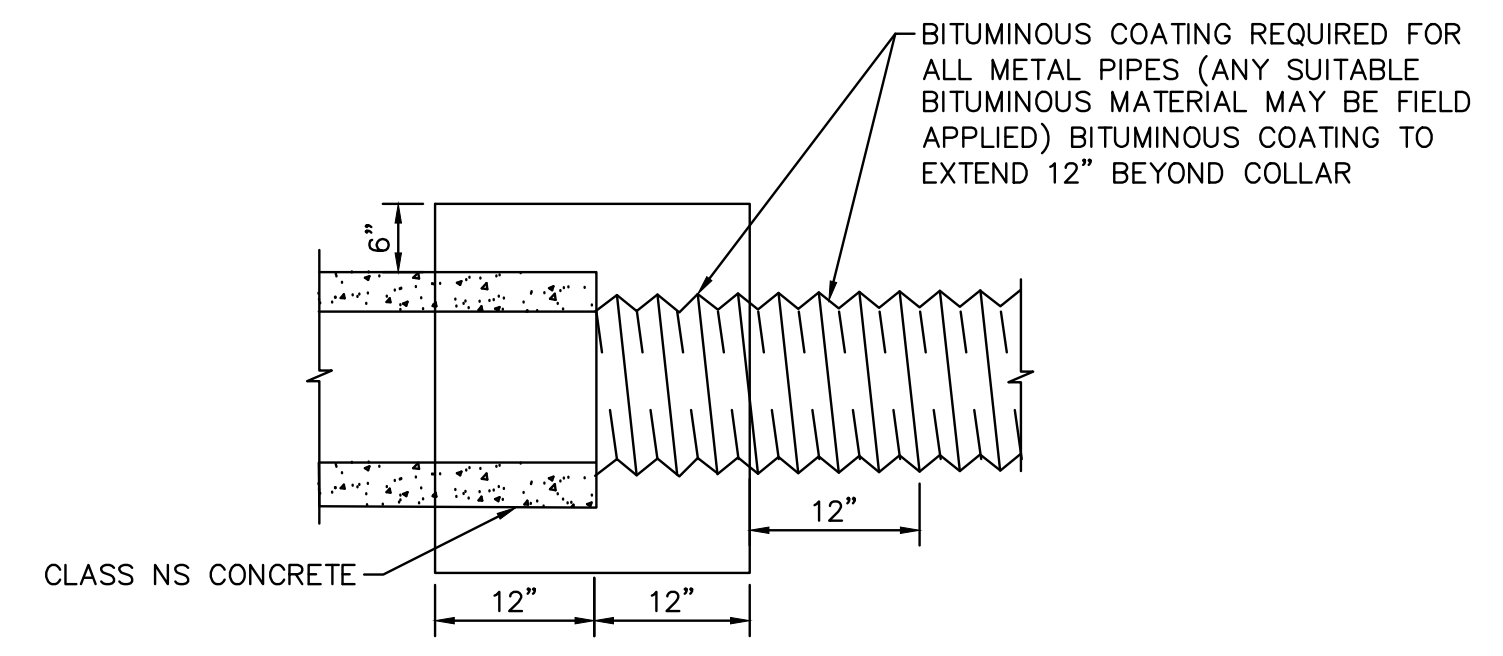


SIDEWALK LOCATION CLOSE TO TREES

MANATEE COUNTY TRANSPORTATION DEPARTMENT		SIDEWALK REQUIREMENTS	301.1
REV. BY	DATE		
	6/12/07		
	DATE OF B.O.C.C. APPROVAL		

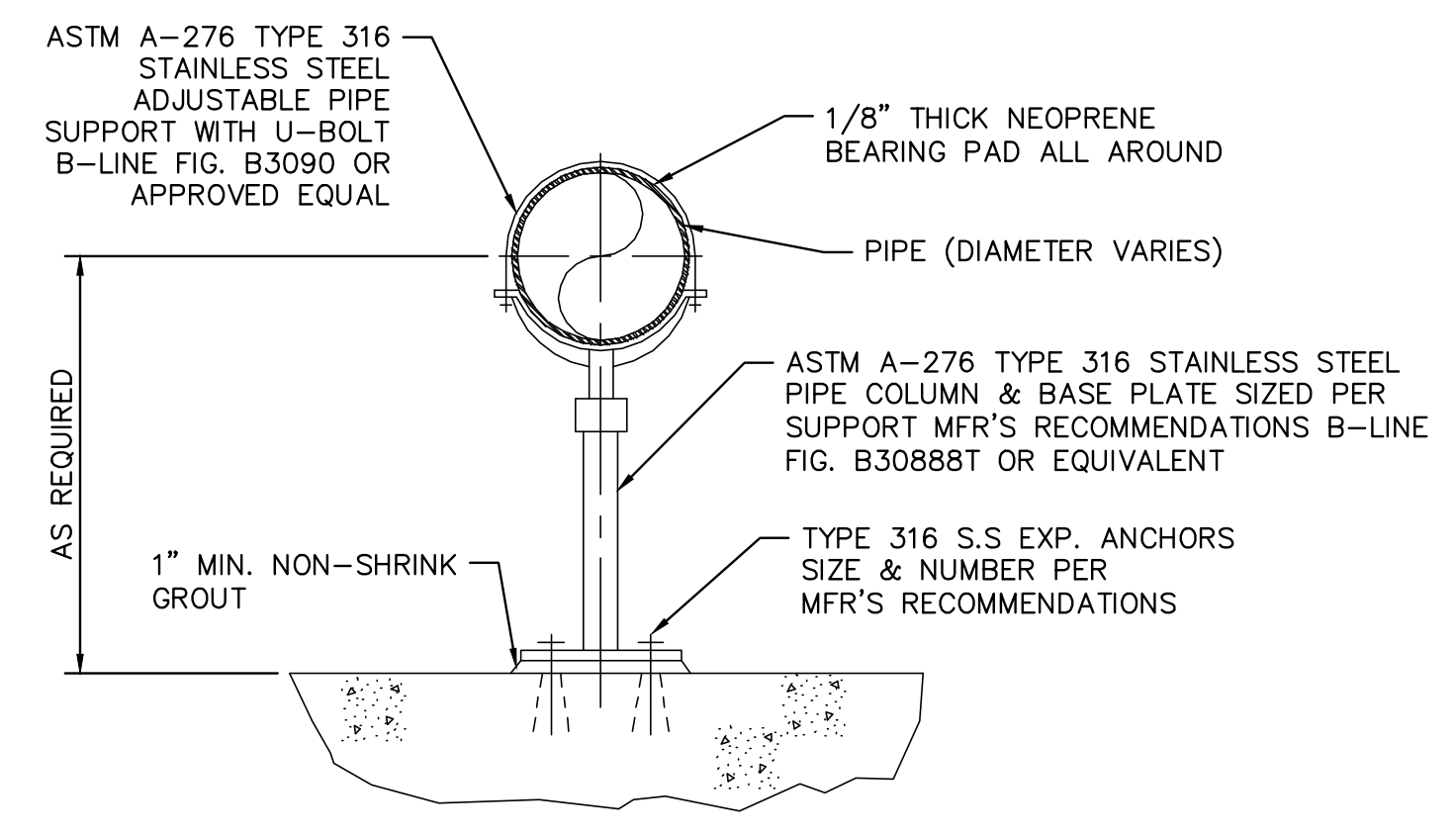


1 ENERGY DISSIPATION STRUCTURE DETAIL
C-29 N.T.S.

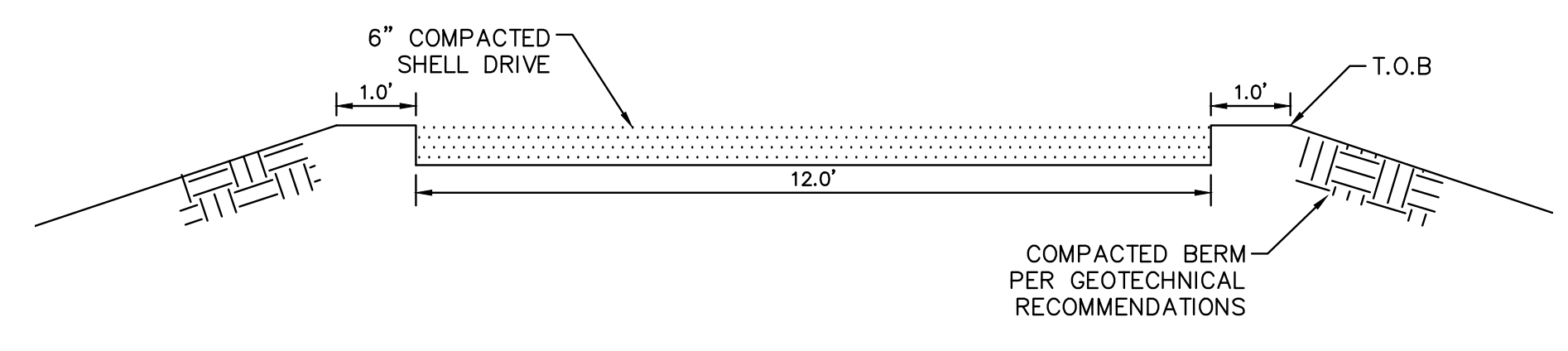


NOTE: COST OF CONCRETE AND BITUMINOUS COATING TO BE INCLUDED IN CONTRACT UNIT PRICE FOR EITHER NEW PIPE OR MITERED END SECTION. ALTERNATE CONNECTION MUST BE APPROVED BY THE STATE DRAINAGE ENGINEER. A CONCRETE JACKET SHALL NOT BE USED TO JOIN:
A. METAL PIPE OF DISSIMILAR MATERIAL

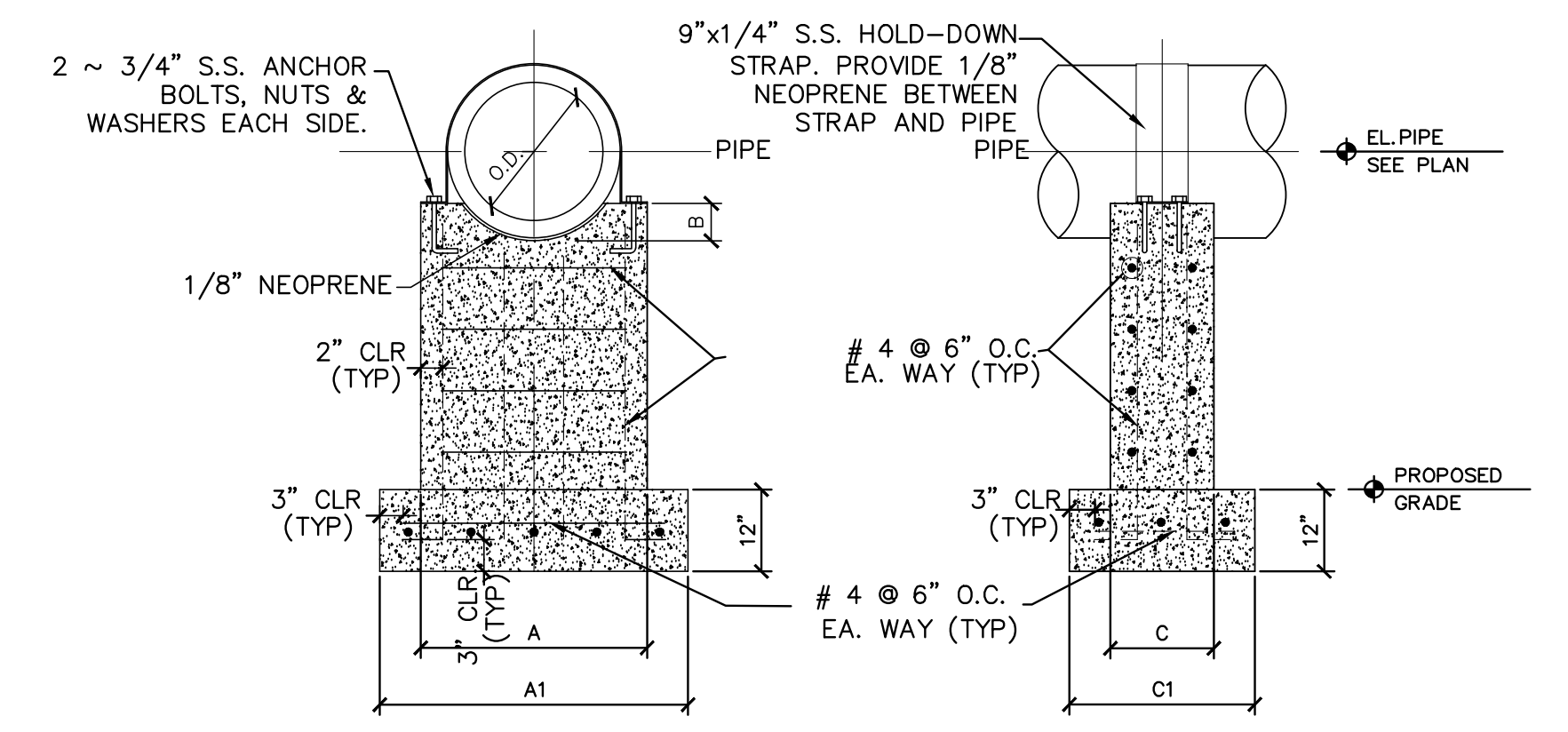
2 FDOT INDEX 430-001 - CONCRETE JACKET FOR CONNECTING DISSIMILAR PIPES DETAIL
C-29



4 STAINLESS STEEL PIPE SUPPORT DETAIL
C-29 N.T.S.



3 PROPOSED ACCESS DRIVE - COMPACTED SHELL DRIVE
C-29 N.T.S.



PIPE SIZE	A	A1	B	C	C1
4"	1'-4"	2'-0"	2"	8"	1'-4"
6"	1'-6"	2'-2"	2"	8"	1'-4"
8"	1'-8"	2'-4"	3"	1'-0"	1'-8"
12"	2'-0"	2'-8"	4"	1'-0"	1'-8"
16"	2'-4"	3'-0"	4"	1'-0"	1'-8"
18"	2'-6"	3'-2"	6"	1'-0"	1'-8"
20"	2'-8"	3'-8"	6"	1'-6"	2'-6"
24"	3'-0"	4'-0"	6"	1'-6"	2'-6"
30"	3'-6"	4'-6"	9"	1'-6"	2'-6"

5 CONCRETE PIPE SUPPORT DETAIL
C-29 N.T.S.

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KHA PROJECT 148400015
DATE 1/28/2020
SCALE AS SHOWN
DESIGNED BY SNR
DRAWN BY ASR
CHECKED BY WEW

Manatee County FLORIDA

SEWRF RECLAIMED PUMP BACK STATION

MANATEE COUNTY

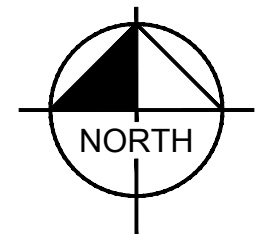
LICENSED PROFESSIONAL

STEPHEN N. ROMANO, P.E.

FL LICENSE NUMBER 57579

CIVIL DETAILS

SHEET NUMBER
C-29



NOTES:

- 1 SUBMERSIBLE PUMP, MODEL HYDROMATIC-S12L, 11.50 IN IMP, 3470 GPM @ 71 FT, 125 HP, 60 HZ
- 2 12" D.I. 90° BEND, FL
- 3 12" D.I. SPOOL PIECE, FL
- 4 12" FLANGED COUPLING ADAPTER
- 5 12" SWING CHECK VALVE, FL
- 6 12" GATE VALVE, FL
- 7 18"x12" D.I. ECCENTRIC REDUCER, FL
- 8 18"x12" D.I. TEE, FL
- 9 18" D.I. SPOOL PIECE, FL
- 10 18" FLANGED COUPLING ADAPTER
- 11 18" D.I. TEE, FL
- 12 18" SIDE ACTUATED GATE VALVE, FL
- 13 18" ENDRESS HAUSER MAG METER PROLINE PROMAG L400
- 14 18" D.I. 45° BEND, FL
- 15 24"x18" D.I. ECCENTRIC REDUCER, FL
- 16 24" D.I. 45° BEND, FL
- 17 24" D.I. TEE, FL
- 18 SLIDE GATE (SEE DETAIL SHEET M-6)
- 19 4" VENT WITH INSECT SCREEN (SEE DETAIL SHEET M-6)
- 20 ALUMINUM SINGLE DOOR ACCESS HATCH (SHOWN IN OPEN POSITION, 4'-8"x5'-6" FRAME OPENING) WITH SAFETY GRATING, LADDER AND SAFETY ROOST
- 21 PRESSURE GAUGE (SEE DETAIL SHEET M-6)
- 22 STAINLESS STEEL PIPE SUPPORT (SEE DETAIL SHEET M-6)
- 23 2" ARV
- 24 2" AIR VACUUM VALVE

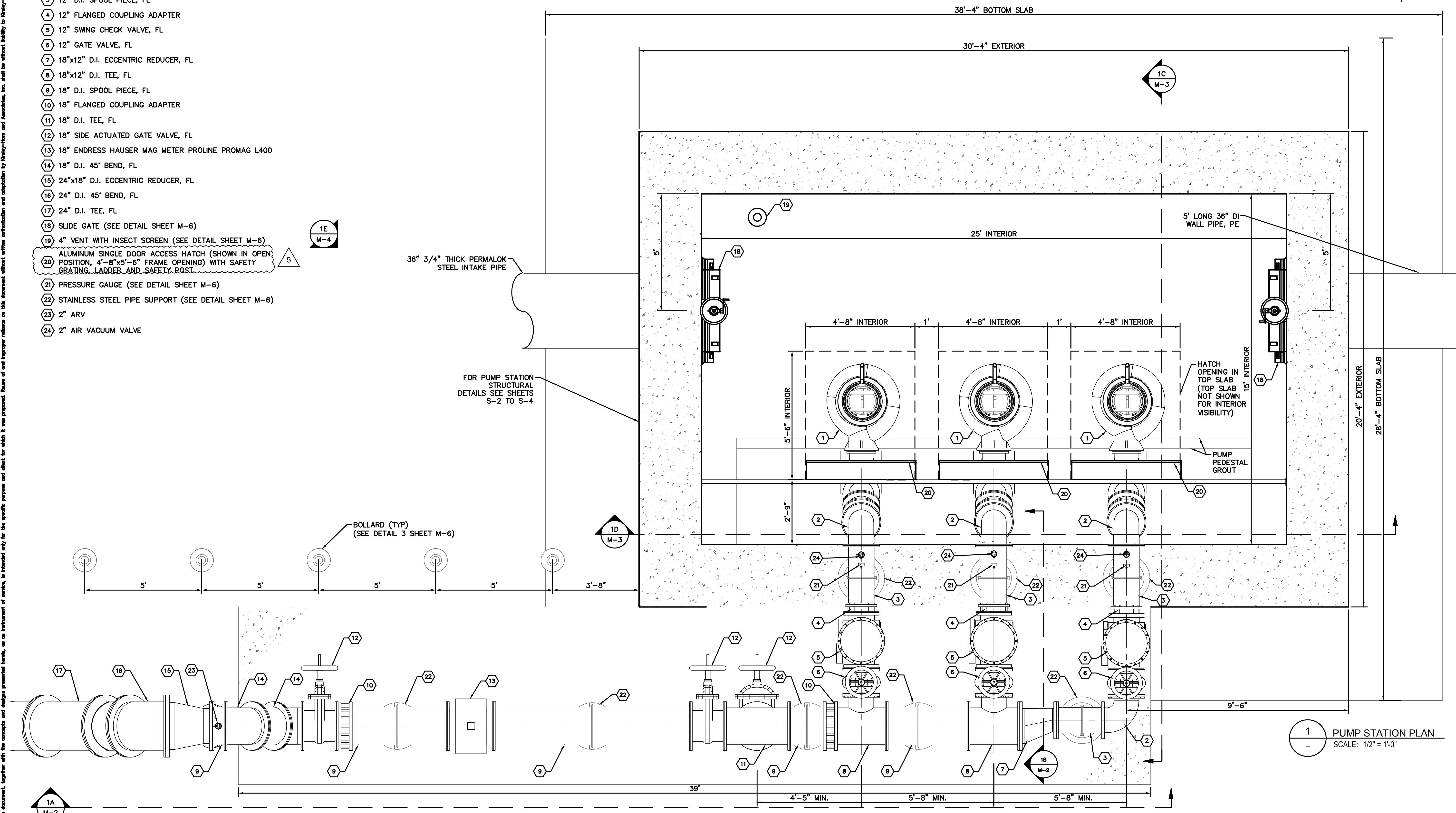
5

1E
M-4

5

1D
M-3

1
PUMP STATION PLAN
SCALE: 1/2" = 1'-0"



5	ADDENDUM 5	5/26/2020	SNR
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KHA PROJECT
148400015

DATE
1/28/2020

SCALE AS SHOWN

DESIGNED BY SNR

DRAWN BY ASR

CHECKED BY WEW

Manatee County
FLORIDA

SEWRF RECLAIMED
PUMP BACK STATION

MANATEE COUNTY

LICENSED PROFESSIONAL

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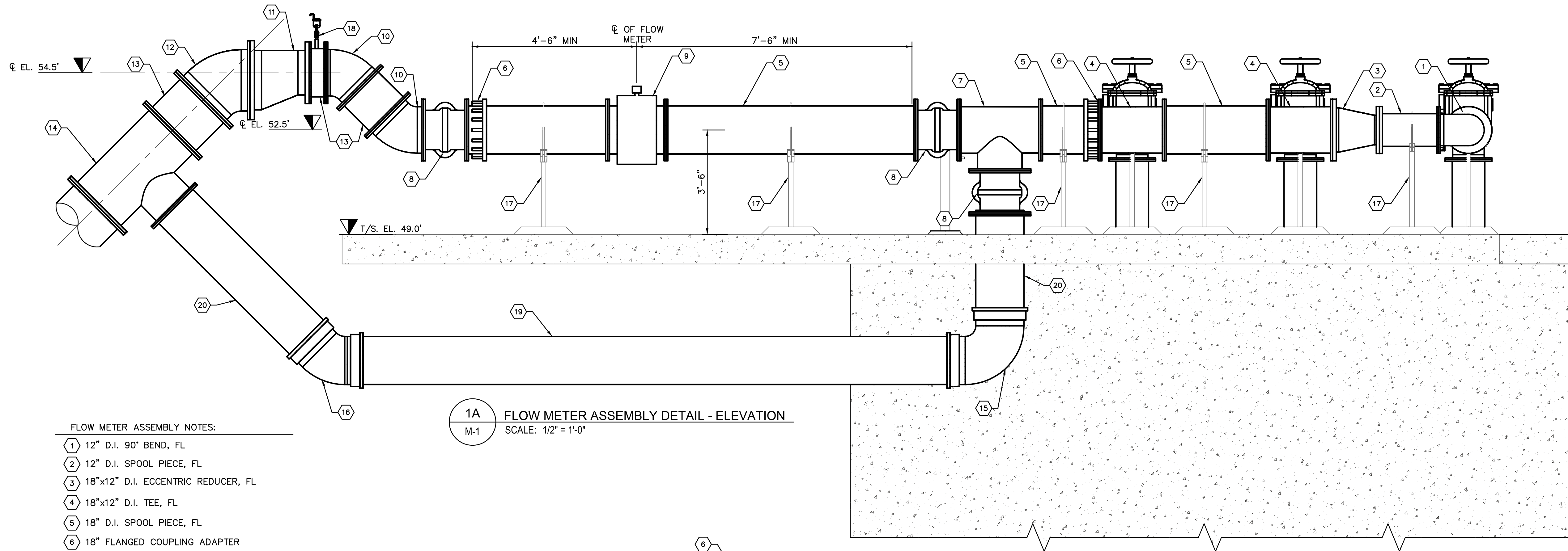
FL DATE:

CENTRAL PUMP STATION
PLAN

SHEET NUMBER
M-1

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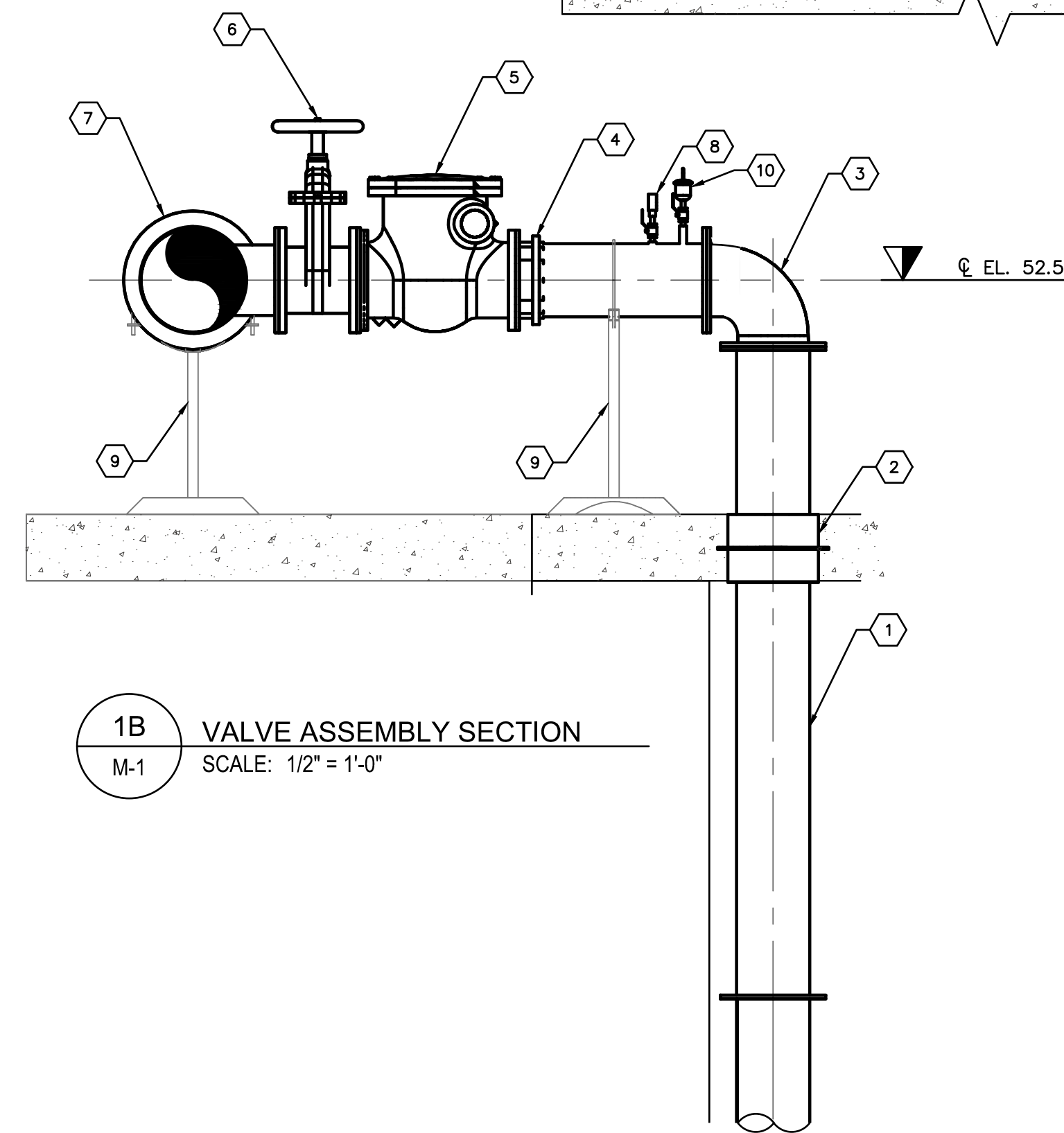
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1A FLOW METER ASSEMBLY DETAIL - ELEVATION
M-1 SCALE: 1/2" = 1'-0"

FLOW METER ASSEMBLY NOTES:

- ① 12" D.I. 90° BEND, FL
- ② 12" D.I. SPOOL PIECE, FL
- ③ 18"x12" D.I. ECCENTRIC REDUCER, FL
- ④ 18"x12" D.I. TEE, FL
- ⑤ 18" D.I. SPOOL PIECE, FL
- ⑥ 18" FLANGED COUPLING ADAPTER
- ⑦ 18" D.I. TEE, FL
- ⑧ 18" SIDE ACTUATED GATE VALVE, FL
- ⑨ 18" ENDRESS HAUSER MAG METER PROLINE PROMAG L400
- ⑩ 18" D.I. 45° BEND, FL
- ⑪ 24"x18" D.I. ECCENTRIC REDUCER, FL
- ⑫ 24" D.I. 45° BEND, FL
- ⑬ 24" D.I. SPOOL PIECE, FL
- ⑭ 24"x18" D.I. TEE, FL
- ⑮ 18" D.I. 90° BEND, MJ
- ⑯ 18" D.I. 45° BEND, MJ
- ⑰ STAINLESS STEEL PIPE SUPPORT (SEE DETAIL SHEET M-6)
- ⑱ 2" ARV
- ⑲ 18" D.I. SPOOL PIECE, PE
- ⑳ 18" D.I. SPOOL PIECE, FL X PE



1B VALVE ASSEMBLY SECTION
M-1 SCALE: 1/2" = 1'-0"

VALVE ASSEMBLY NOTES:

- ① 12" D.I. SPOOL PIECE, FL
 - ② 12" LINK SEAL W/ 316 SS HARDWARE
 - ③ 12" D.I. 90° BEND, FL
 - ④ 12" FLANGED COUPLING ADAPTER
 - ⑤ 12" SWING CHECK VALVE, FL
 - ⑥ 12" GATE VALVE, FL
 - ⑦ 18"x12" D.I. TEE, FL
 - ⑧ PRESSURE GAUGE ASSEMBLY (SEE DETAIL SHEET M-6)
 - ⑨ STAINLESS STEEL PIPE SUPPORT (SEE DETAIL SHEET M-6)
 - ⑩ 2" AIR VACUUM VALVE
- NOTE: FOR PUMP STATION STRUCTURAL DETAILS, REFER TO SHEETS S-2 TO S-4

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SCALE AS SHOWN
DESIGNED BY SNR
DRAWN BY ASR
CHECKED BY WEW

Manatee County
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PUMP BACK STATION**
MANATEE COUNTY
FL DATE:

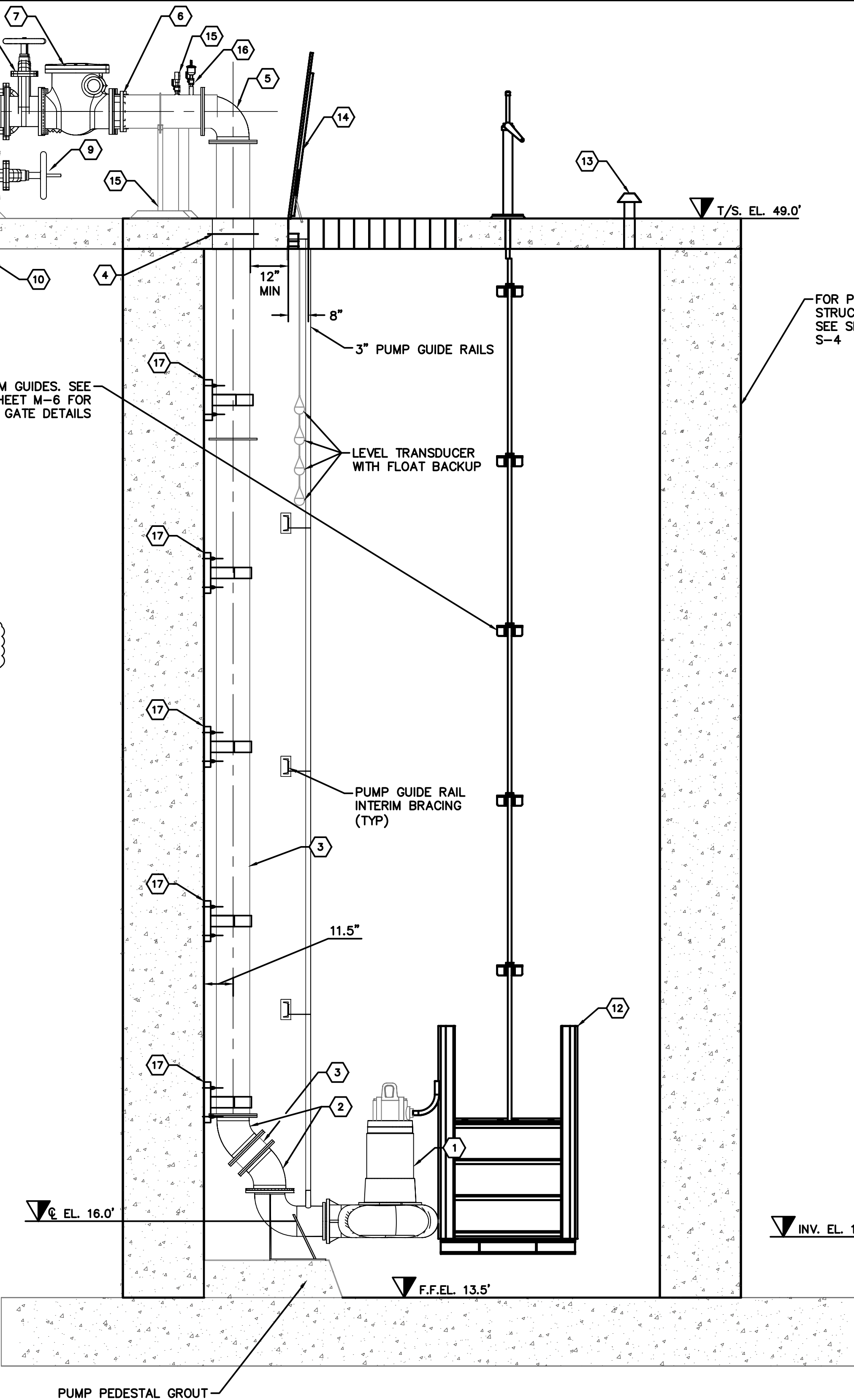
LICENSED PROFESSIONAL
STEPHEN N. ROMANO, P.E.
FL LICENSE NUMBER
57579

**CENTRAL PUMP STATION
SECTIONS**

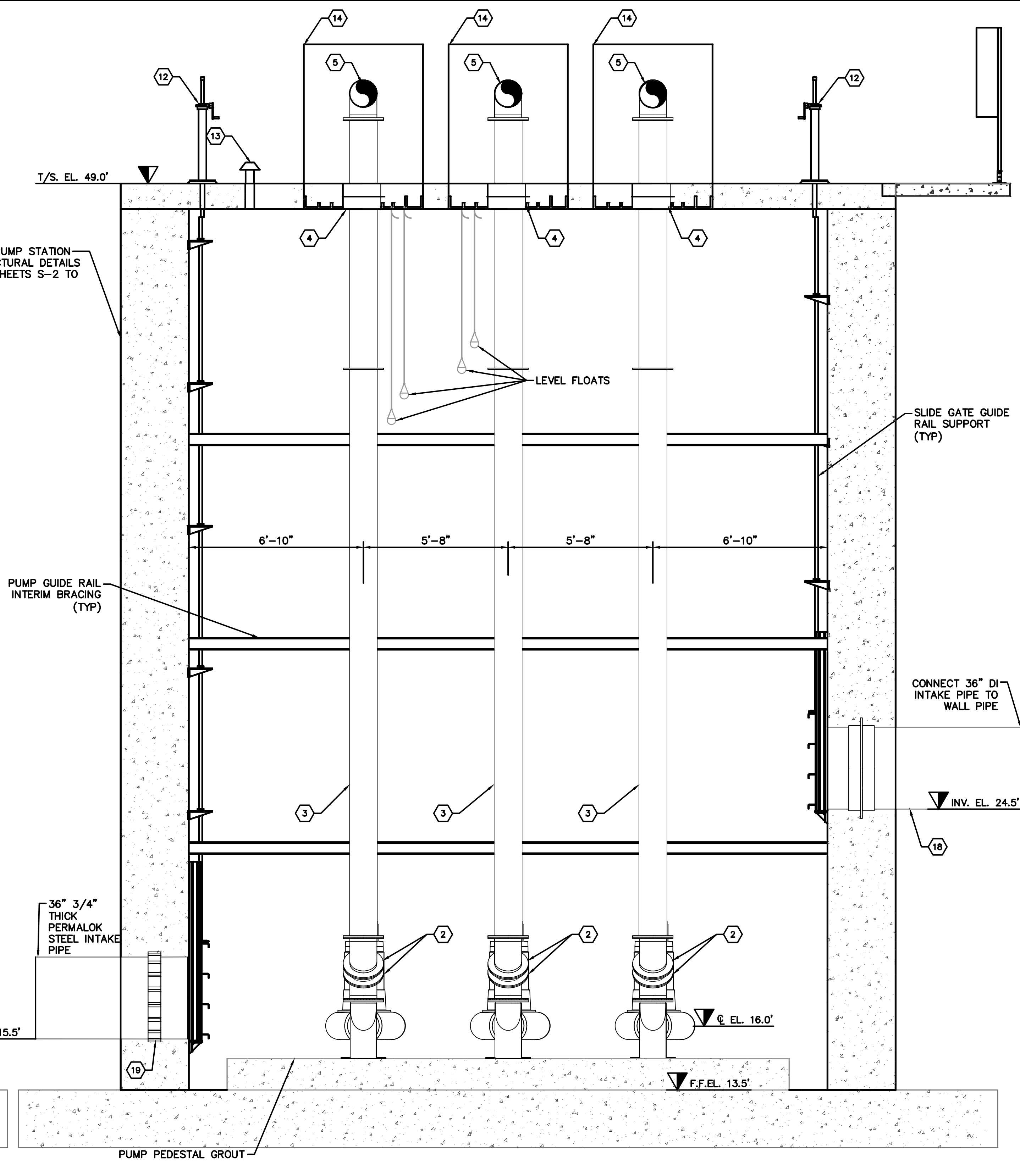
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M-2

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- NOTES:
- 1 SUBMERSIBLE PUMP, MODEL HYDROMATIC-S12L, 11.50 IN IMP, 3470 GPM @ 71 FT, 125 HP, 60 HZ
 - 2 12" D.I. 45° BEND, FL
 - 3 12" D.I. SPOOL PIECE, FL
 - 4 12" LINK SEAL W/ 316 SS HARDWARE
 - 5 12" D.I. 90° BEND, FL
 - 6 12" FLANGED COUPLING ADAPTER
 - 7 12" SWING CHECK VALVE, FL
 - 8 12" GATE VALVE, FL
 - 9 18" SIDE ACTUATED GATE VALVE, FL
 - 10 18" D.I. SPOOL PIECE, FL X PE
 - 11 18" D.I. 90° BEND, MJ
 - 12 SLIDE GATE (SEE DETAIL SHEET M-6)
 - 13 4" VENT WITH INSECT SCREEN (SEE DETAIL SHEET M-6)
 - 14 ALUMINUM SINGLE DOOR ACCESS HATCH (SHOWN IN OPEN POSITION, 4'-8"x5'-6" FRAME OPENING) WITH SAFETY GRATING AND SAFETY POST
 - 15 STAINLESS STEEL PIPE SUPPORT (SEE DETAIL SHEET M-6)
 - 16 2" AIR VACUUM VALVE
 - 17 STAINLESS STEEL WALL MOUNTED PIPE SUPPORT (SEE DETAIL SHEET M-6)
 - 18 5' LONG 36" DI WALL PIPE, PE
 - 19 36" LINK SEAL W/ 316 SS HARDWARE



1C TYPICAL PUMP DETAIL - SECTION
SCALE: 3/8" = 1'-0"



1D PUMPS DETAIL - ELEVATION
SCALE: 3/8" = 1'-0"

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DATE 1/28/2020
SCALE AS SHOWN
DESIGNED BY SNR
DRAWN BY ASR
CHECKED BY WEW

Manatee County

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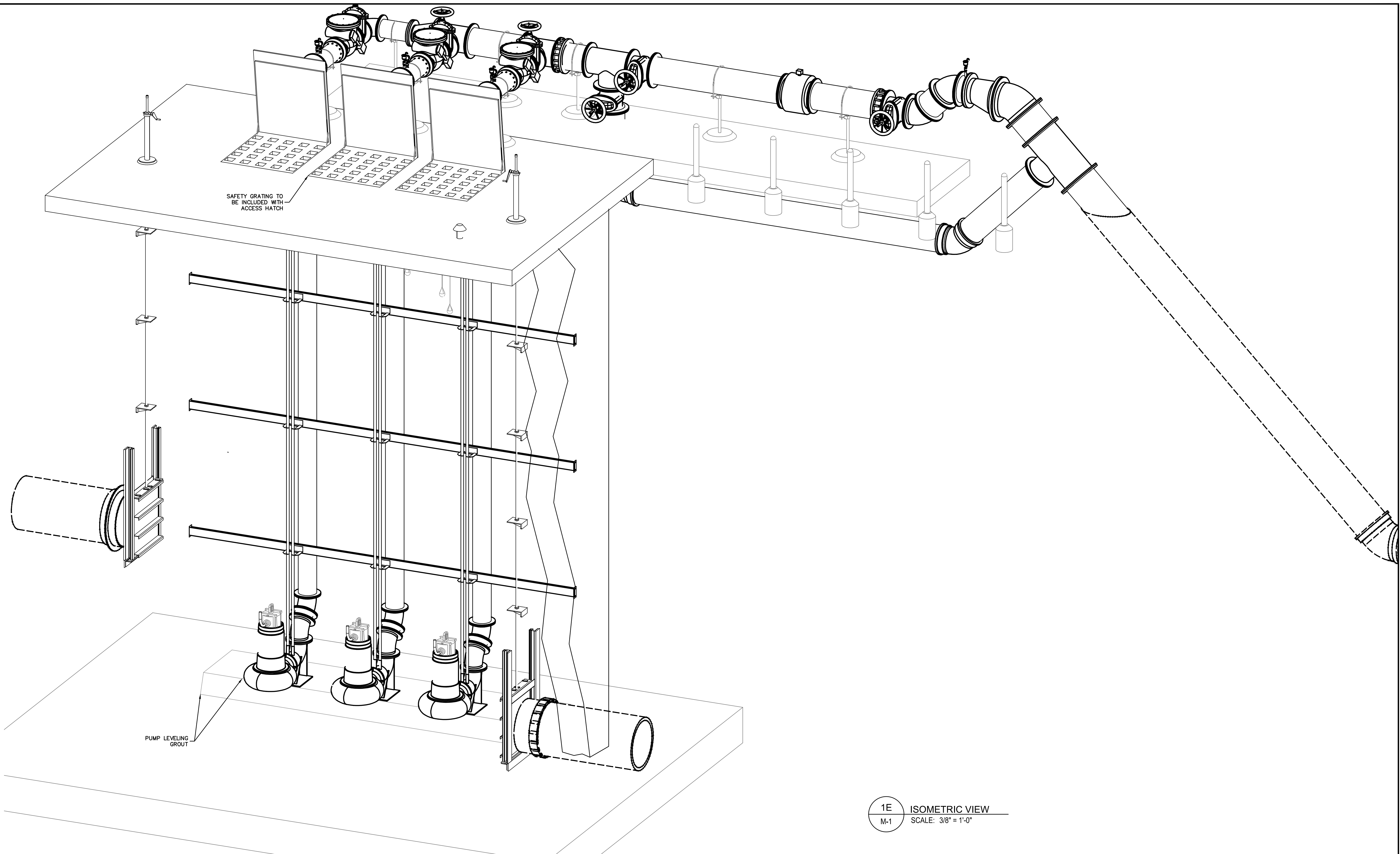
MANATEE COUNTY

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FL LICENSE NUMBER 57579
FL DATE:

CENTRAL PUMP STATION
SECTIONS

SHEET NUMBER
M-3

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1E ISOMETRIC VIEW
M-1 SCALE: 3/8" = 1'-0"

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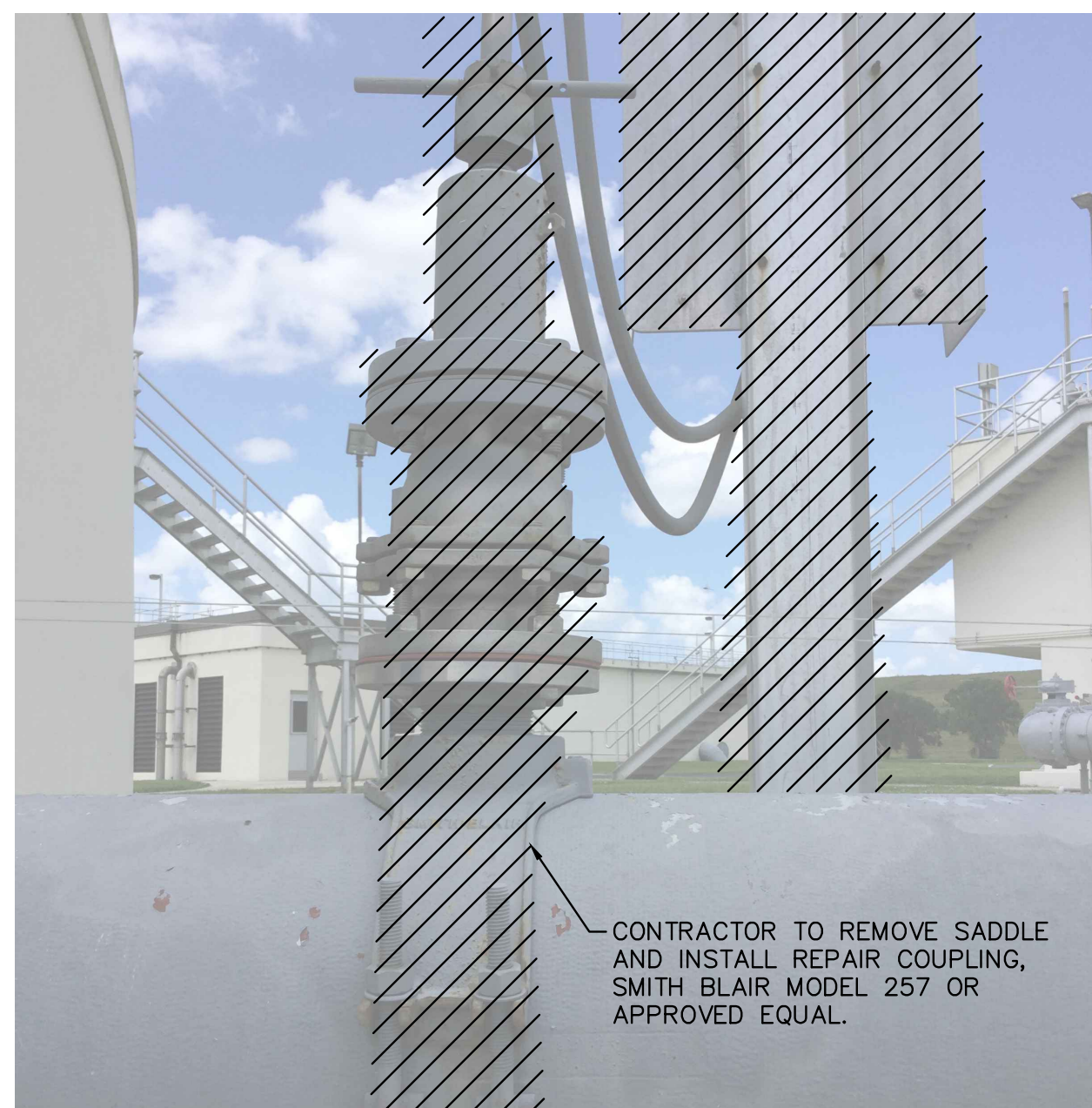
**CENTRAL PUMP STATION
ISOMETRIC VIEW**

SHEET NUMBER
M-4

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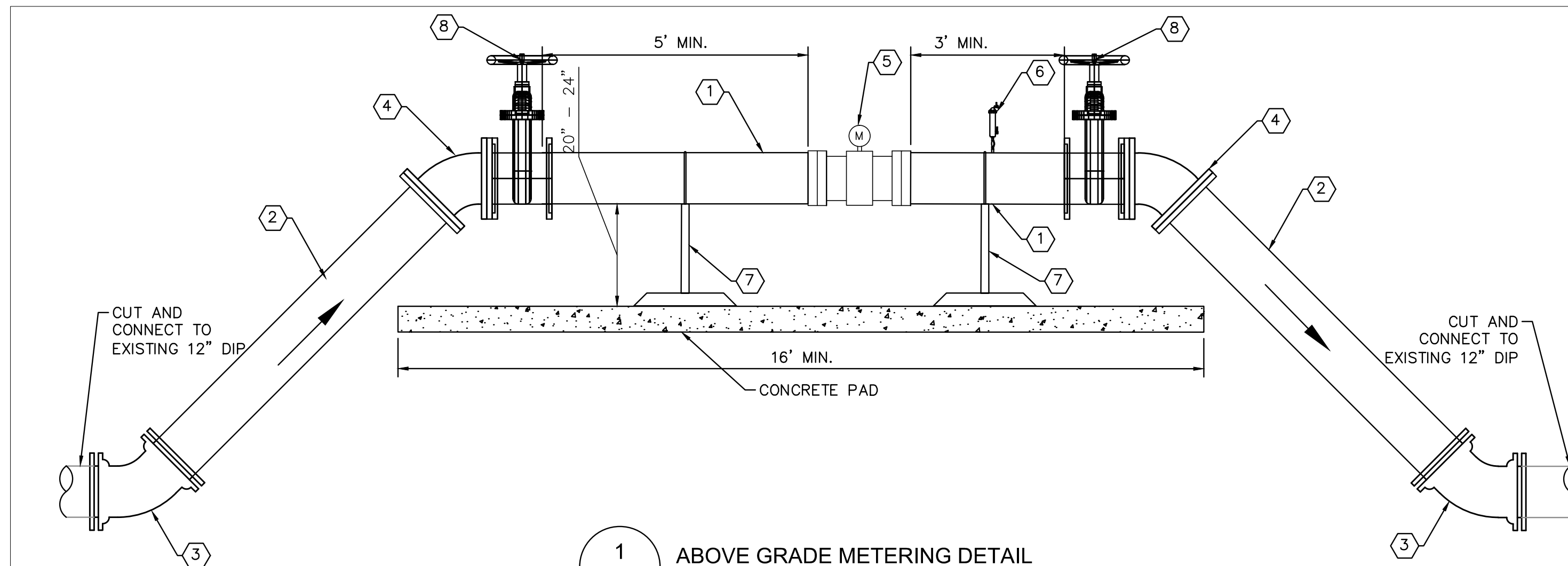
CONTRACTOR TO REMOVE FLOW METER, FLOW TRANSMITTER, SCADA PANEL AND ALL ASSOCIATED ELECTRICAL EQUIPMENT



CONTRACTOR TO REMOVE SADDLE AND INSTALL REPAIR COUPLING, SMITH BLAIR MODEL 257 OR APPROVED EQUAL.

EX. NORTH AND SOUTH EQUALIZATION TANK LEACHATE FLOW METER DEMOLITION

EX. LEACHATE FLOW METER DEMOLITION



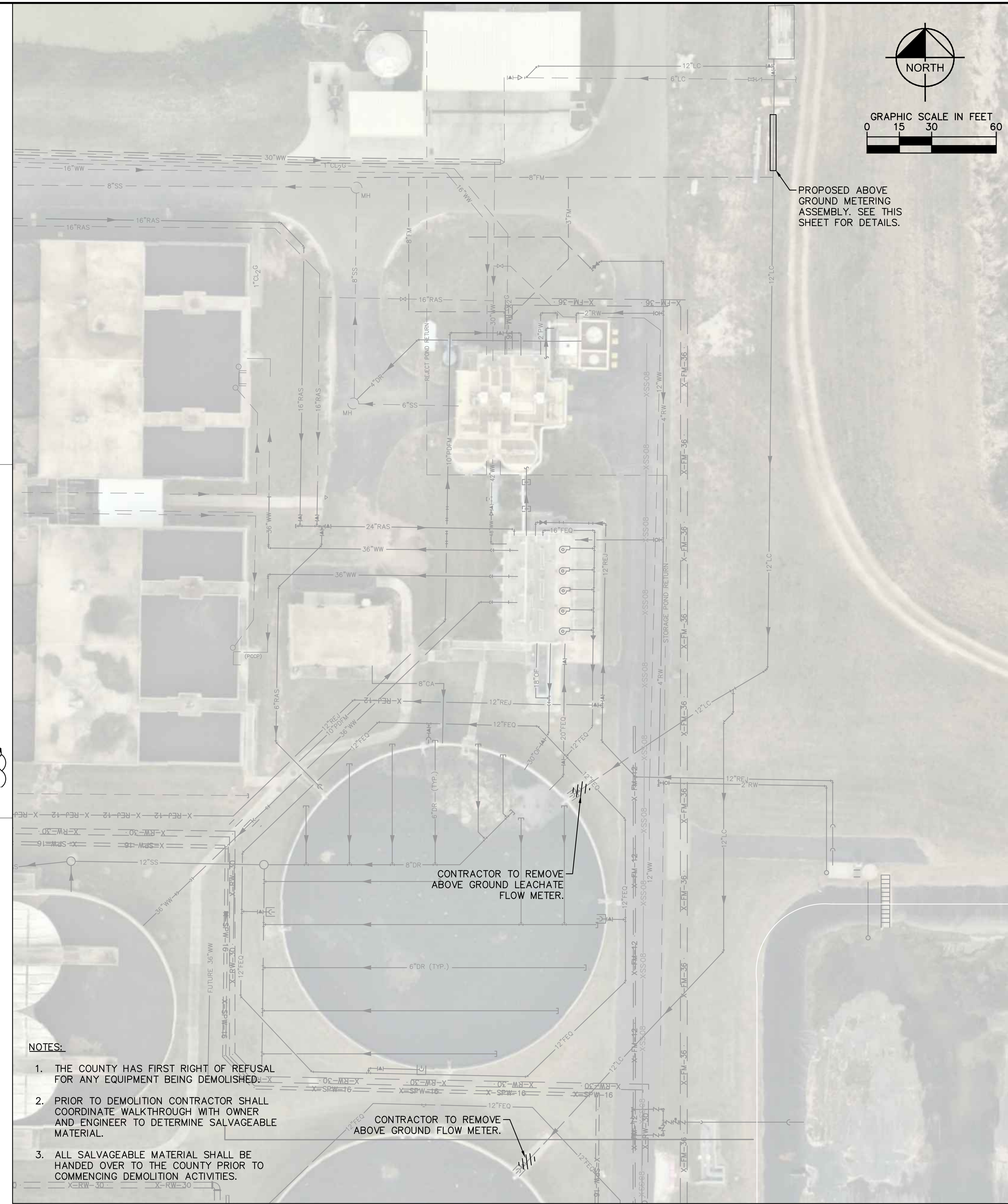
1 ABOVE GRADE METERING DETAIL
M-5 SCALE: 1/2" = 1'-0"

MAG METER PIPING NOTES:

- 1 12" D.I. SPOOL PIECE, FLG
- 2 12" D.I. SPOOL PIECE, FLG X PE
- 3 12" D.I. 45° BEND (COMPACT), MJ
- 4 12" D.I. 45° BEND (COMPACT), FLG
- 5 12" ENDRESS HAUSER MAG METER PROMAG W400
- 6 2" ARV
- 7 S.STL PIPE SUPPORT (SEE SHEET C-29 FOR DETAILS)
- 8 12" GATE VALVE, FLG

MAG METER DETAIL NOTES:

1. ABOVE GROUND PIPING SHALL BE D.I. BODY FLANGED FITTINGS.
2. ALL PIPING SHALL BE COLOR CODED IN ACCORDANCE W/ MANATEE COUNTY STANDARDS.
3. PIPE THROUGH SLAB AND ABOVE GROUND SHALL BE D.I. PIPE AND FITTINGS.
4. ALL METAL APPURTENANCES INCLUDING BOLTS, NUTS, AND WASHERS SHALL BE STAINLESS STEEL (TYPE 316) UNLESS OTHERWISE NOTED. ALL STAINLESS STEEL BOLTS SHALL BE TREATED WITH NEVER-SIZE PRIOR TO ASSEMBLY.
5. CONTRACTOR TO PROVIDE REQUIRED LENGTH OF PIPE DOWNSTREAM AND UPSTREAM OF THE PROPOSED METER IN ACCORDANCE WITH MANUFACTURER'S RECOMMENDATIONS.
6. ALL BELOW GROUND PIPING SHALL BE RESTRAINED ACCORDINGLY.
7. CONTRACTOR TO REMOVE/ABANDON EXISTING VAULTS AND FORCE MAIN AS NECESSARY TO PROPERLY INSTALL PROPOSED METER ASSEMBLY. ALL VOIDED AREAS SHALL BE REFILLED WITH FLOWABLE FILL.
8. ALL BELOW GROUND D.I. PIPE AND FITTINGS SHALL BE POLYETHYLENE WRAPPED.
9. INSTALL 6" OF COMPACTED 1" WASHED, CRUSHED SHELL OVER ONE LAYER OF WEED BARRIER OVER ALL EXPOSED GROUND SURFACES. ONE LAYER OF WEED BARRIER IS TO BE LAID AND EXTEND TO A LINE 6 FEET OUTSIDE OF THE CONCRETE PAD. THE WEED BARRIER SHALL BE MIRASCAPE MANUFACTURED BY MIFAFI OR APPROVED EQUAL. ALL FINISHED GRADE SURFACES SHALL SLOPE AWAY FROM THE CONCRETE SLABS AT A MINIMUM SLOPE OF 2% EXTENDING TO A LINE 6 FEET OUTSIDE OF THE CONCRETE PAD LINE. ALL DISTURBED GROUND SHALL BE COMPACTED TO 95% MAX DENSITY, AASHTO T-180, BEFORE INSTALLING THE WEED BARRIER.



NOTES:

1. THE COUNTY HAS FIRST RIGHT OF REFUSAL FOR ANY EQUIPMENT BEING DEMOLISHED.
2. PRIOR TO DEMOLITION CONTRACTOR SHALL COORDINATE WALKTHROUGH WITH OWNER AND ENGINEER TO DETERMINE SALVAGEABLE MATERIAL.
3. ALL SALVAGEABLE MATERIAL SHALL BE HANDED OVER TO THE COUNTY PRIOR TO COMMENCING DEMOLITION ACTIVITIES.

LEACHATE PIPING IMPROVEMENTS TO HEADWORKS AND EQUILIZATION TANKS

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STEPHEN N. ROMANO, P.E.

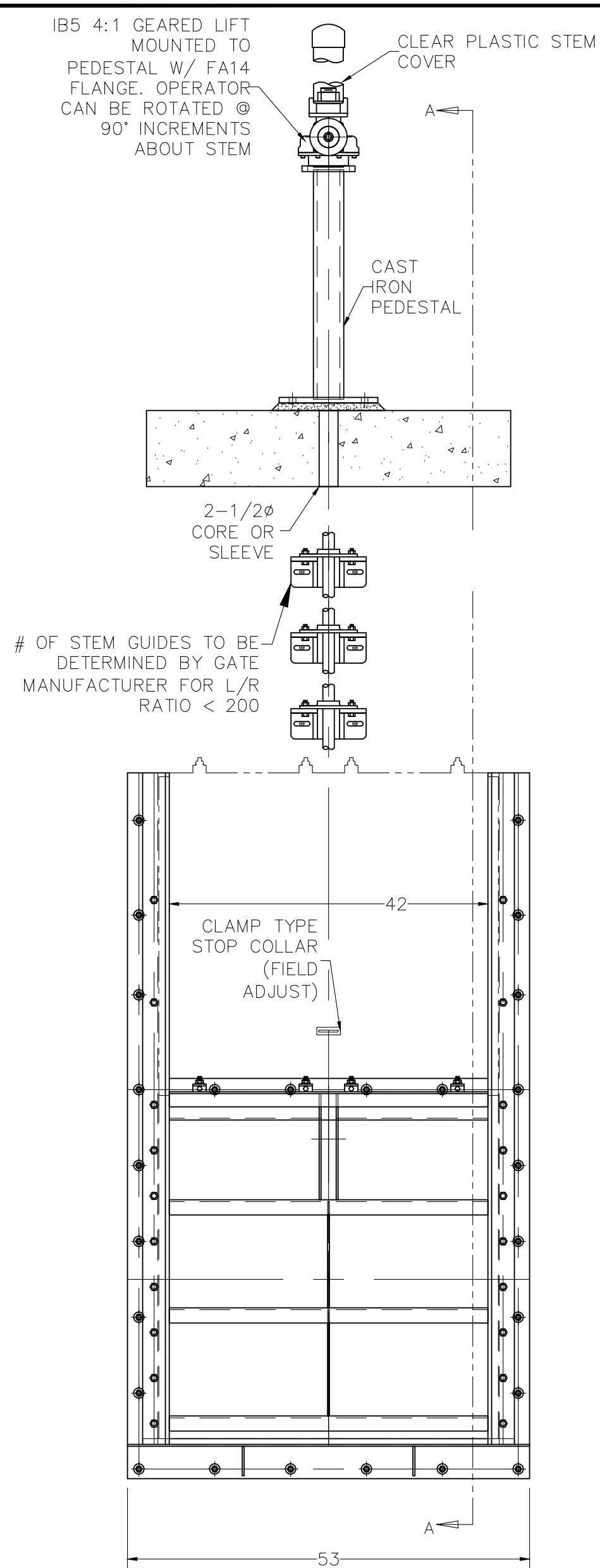
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FL DATE:

LEACHATE PIPING
IMPROVEMENTS

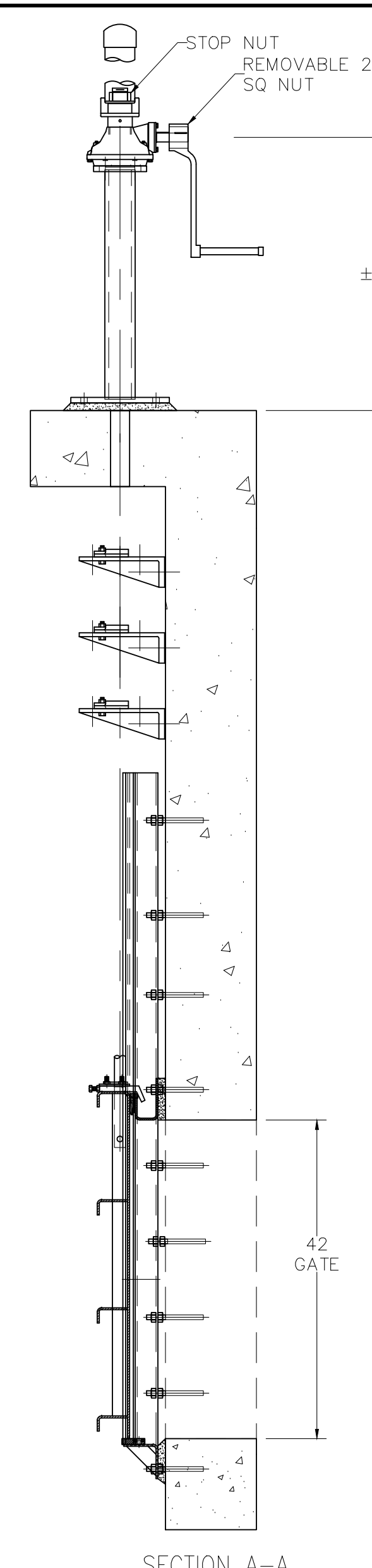
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M-5

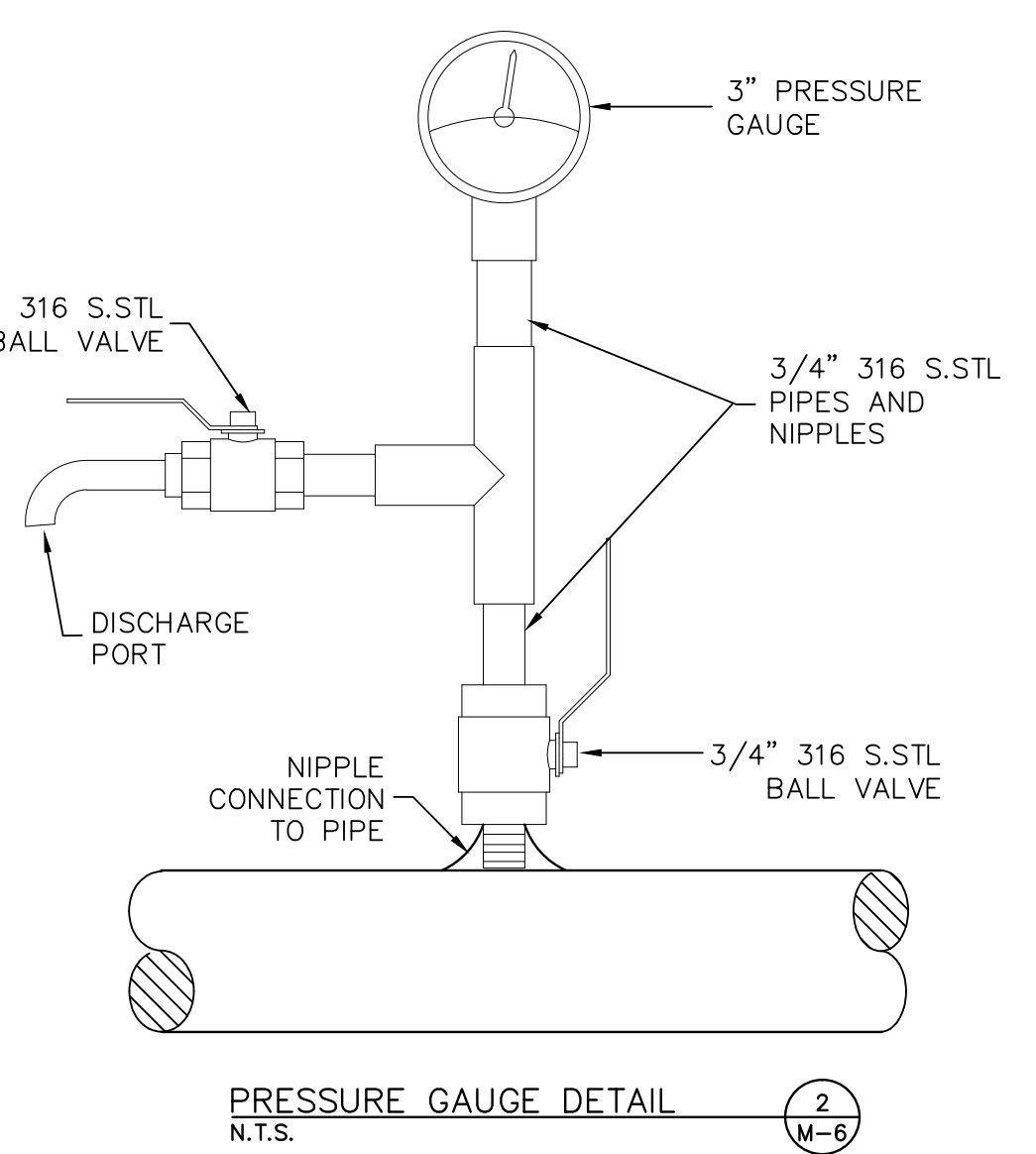
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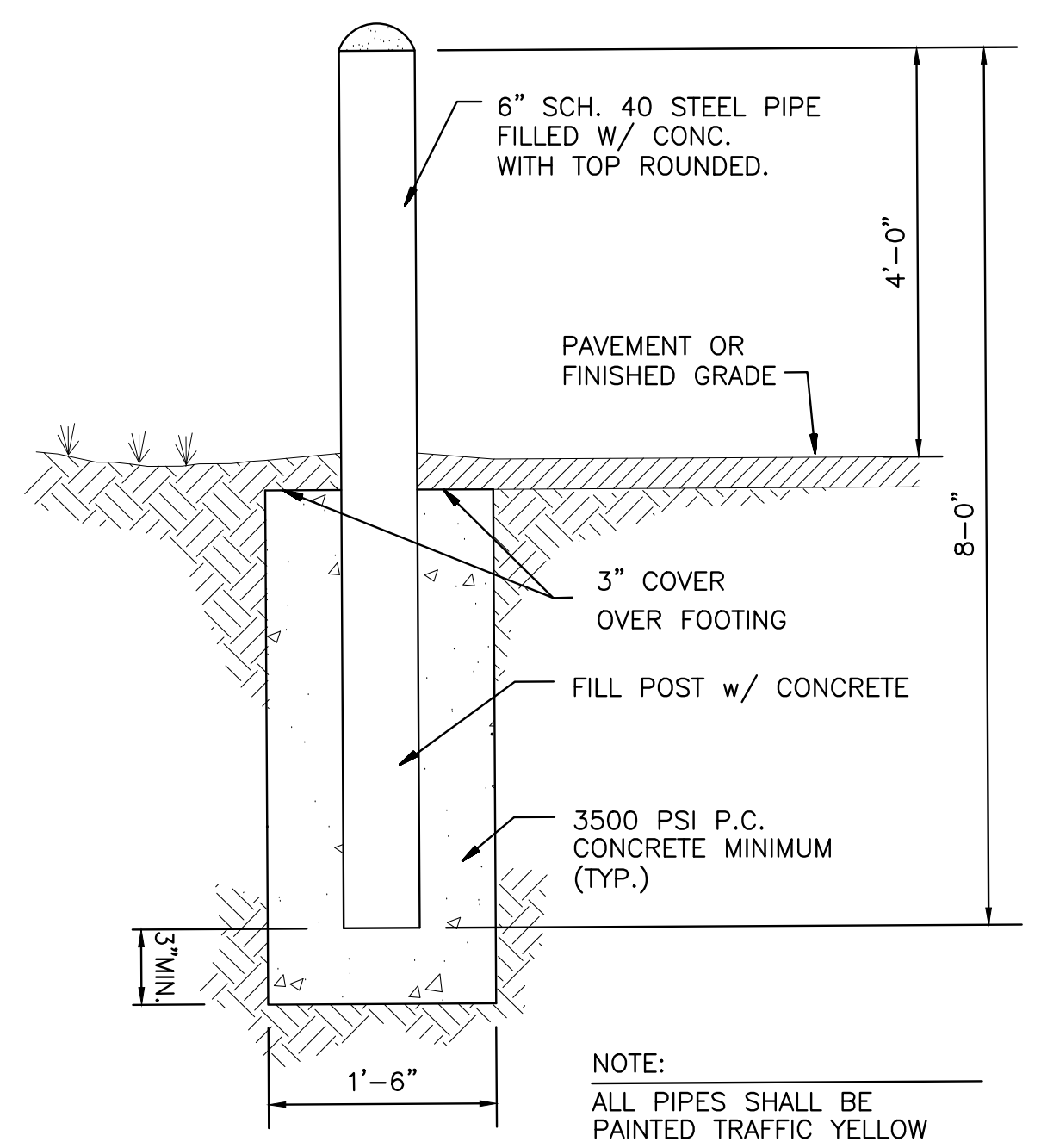
SLIDE GATE DETAIL
3/4" = 1' - 0"
1
M-6



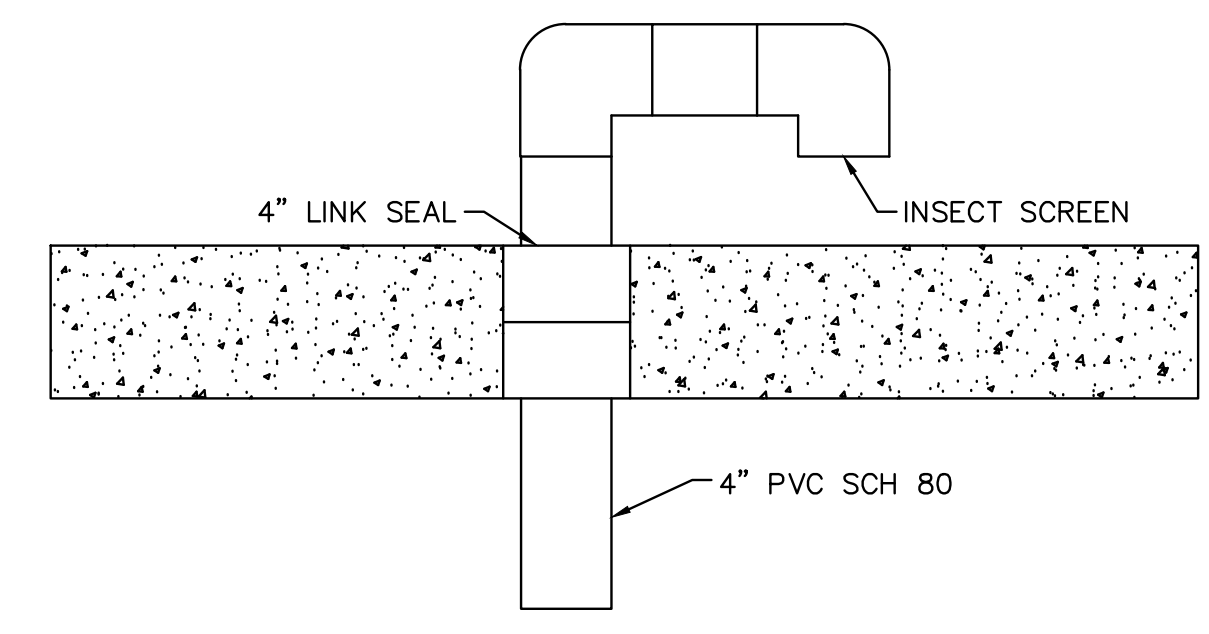
SECTION A-A



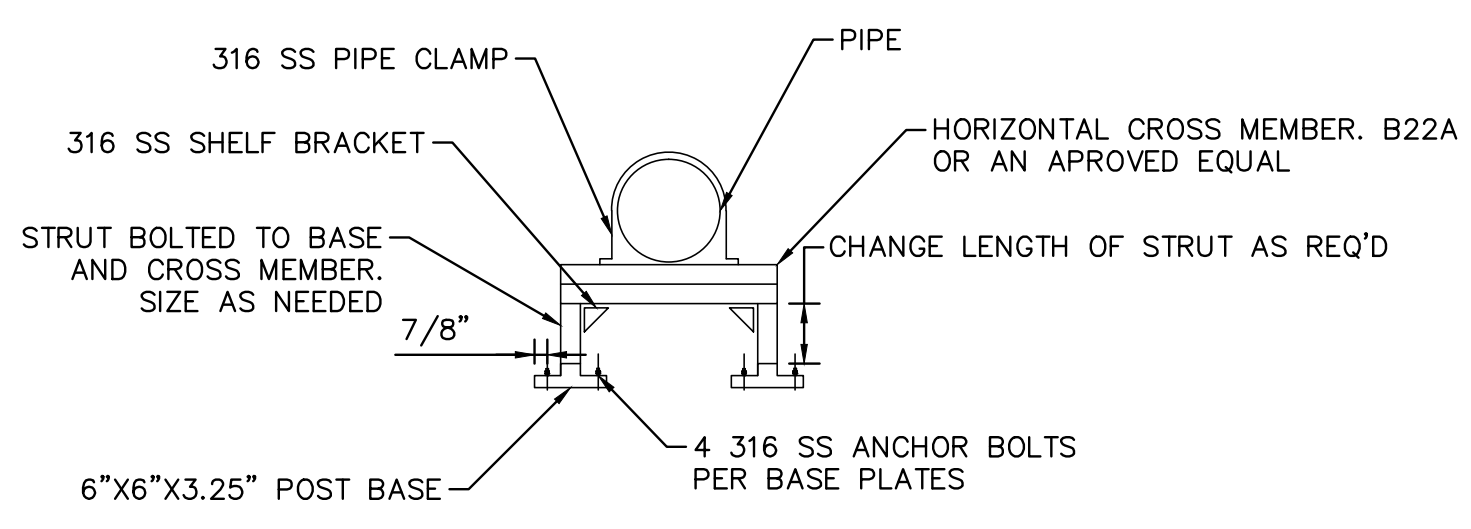
PRESSURE GAUGE DETAIL
2
M-6
N.T.S.



BOLLARD DETAIL
3
M-6
N.T.S.



4\"/>



WALL MOUNTED PIPE SUPPORT
5
M-6
N.T.S.


- NOTES:
1. ALL HARDWARE TO BE 316 SS
 2. CONTRACTOR TO FIELD VERIFY ALL MEASUREMENTS BEFORE ORDERING MATERIALS
 3. ALL GATE INSTALLATIONS SHALL PASS LEAKAGE TEST PER AWWA C563
 4. ALL GATE AND FRAME DIMENSIONS TO BE DESIGNED BY GATE MANUFACTURER
 5. DIMENSIONS SHOWN ABOVE IN INCHES

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MECHANICAL DETAILS

SHEET NUMBER
M-6

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STRUCTURAL NOTES

1. GENERAL:

- (A) THESE NOTES ARE NOT INTENDED TO REPLACE THE PROJECT SPECIFICATIONS OR CONSTRUCTION DRAWING NOTES AND DETAILS. IN CASE OF CONFLICT BETWEEN THE REQUIREMENTS OF THE SPECIFICATIONS/CONSTRUCTION DRAWINGS AND THESE NOTES, THE MORE STRINGENT REQUIREMENT SHALL APPLY.
- (B) PROTECT EXISTING FACILITIES, STRUCTURES AND UTILITY LINES FROM ALL DAMAGE. CONTRACTOR SHALL PROTECT THE WORK, ADJACENT PROPERTY, AND THE PUBLIC. CONTRACTOR IS SOLELY RESPONSIBLE FOR DAMAGE OR INJURY DUE TO HIS ACT OR NEGLIGENCE.
- (C) THE CONTRACTOR IS SOLELY RESPONSIBLE FOR JOB SAFETY AND CONSTRUCTION PROCEDURES.
- (D) PRIOR TO CONSTRUCTION, FIELD VERIFY ALL DIMENSIONS IN THE DRAWINGS AND DETAILS AND REPORT ANY DISCREPANCIES IMMEDIATELY TO THE ENGINEER.
- (E) REFER TO THE ENGINEER FOR INSTRUCTION FOR ANY DIMENSION NOT GIVEN ON DRAWINGS. SCALING OF DRAWINGS SHALL NOT BE USED TO OBTAIN OR VERIFY ANY DIMENSION SHOWN ON THE DRAWINGS.

2. CONCRETE:

- (A) ALL CONCRETE MATERIALS, PLACING AND HANDLING SHALL BE IN ACCORDANCE WITH THE LATEST EDITION OF ACI 301, ACI 318 AND ACI 350. CURING OF CONCRETE SHALL BE IN STRICT ACCORDANCE WITH ACI 301 PROVISIONS.
- (B) STRUCTURAL CONCRETE SHALL HAVE THE FOLLOWING MINIMUM 28-DAY COMPRESSIVE STRENGTH:
 - 1. FOUNDATIONS 5000 PSI
 - 2. TANK 5000 PSI
 - 3. SLAB-ON-GRADE 4000 PSI
- (C) USE NORMAL WEIGHT CONCRETE (135 PCF MIN.) FOR ALL STRUCTURAL MEMBERS. DO NOT USE CALCIUM CHLORIDE IN ANY CONCRETE.
- (D) PROVIDE 3 INCH ± 1 INCH SLUMP.
- (E) ALL CONCRETE TO HAVE A MAXIMUM WATER/CEMENT RATIO OF 0.40. MINIMUM CEMENTITIOUS CONTENT SHALL BE 515 LBS/CY. FLY ASH SHALL BE TYPE F ONLY.
- (F) PROVIDE 3" CONCRETE COVER OVER REINFORCING BARS EXCEPT AS OTHERWISE NOTED.
- (G) FORM TIES AND REINFORCING BAR SUPPORTS SHALL BE OF NON-CORROSIVE MATERIAL INCLUDING, BUT NOT LIMITED TO, FIBERGLASS, PLASTIC, AND/OR PRECAST CONCRETE MEETING THESE SPECIFICATIONS.
- (H) CONCRETE FINISHES:
 - 1. FORMED SURFACE--SMOOTH FORM FINISH PER ACI 301.
 - 2. BROOM FINISH FOR SLAB ON GRADE SUCH AS DISCHARGE PIPING CONCRETE PAD AND TOP SLAB OF CENTRAL PUMP STATION
- (I) ALL GROUT SHALL BE NON-SHRINK, NON-METALLIC.
- (J) ALL CONCRETE CONSTRUCTION SHALL BE DONE IN THE DRY.
- (K) PROVIDE 3/4" CHAMFER ON ALL EXPOSED EDGES UNLESS OTHERWISE NOTED.
- (L) CONTRACTOR IS RESPONSIBLE FOR THE PROPER DESIGN AND CONSTRUCTION OF ALL FORMWORK AND SHORING. DESIGN SHALL BE PERFORMED BY A LICENSED FLORIDA PROFESSIONAL ENGINEER.
- (M) CONTRACTOR SHALL REFER TO MECHANICAL DRAWINGS FOR LOCATIONS AND SIZES OF SLEEVES, OPENINGS, EMBEDDED ITEMS, SLAB RECESSES, SLOPES, ETC. THESE ITEMS SHALL BE COORDINATED WITH OTHER TRADES AND INSTALLED PRIOR TO CONCRETE PLACEMENT.
- (N) A QUALIFIED TESTING LABORATORY SHALL BE RETAINED TO PERFORM THE FOLLOWING CONCRETE TESTS:
 - 1. CYLINDER STRENGTH TESTS - ASTM C39. ONE SET OF FIVE CYLINDERS FOR EACH 50 CUBIC YARDS OR FRACTION THEREOF PLACED. TEST ONE AT 3 DAYS, ONE AT 7 DAYS, TWO AT 28 DAYS, AND HOLD ONE.
 - 2. SLUMP TESTS - ASTM C143
- (O) ONE COPY OF ALL TEST REPORTS SHALL BE SENT DIRECTLY TO OWNER, ENGINEER, AND CONTRACTOR.
- (P) SUBMITTALS:
 - 1. SUBMIT PROPOSED CONCRETE MIX DESIGN PRIOR TO CONSTRUCTION
 - 2. SUBMIT DETAILED SHOP DRAWINGS OF REINFORCING BARS SHOWING NUMBER, SIZE, AND LOCATION. INCLUDE BAR LISTS AND BEND DIAGRAMS.

3. REINFORCEMENT:

- (A) REINFORCING STEEL SHALL BE A.S.T.M. A-615 WITH SUPPLEMENT, GRADE 60: MINIMUM WORKING STRESS - 24,000 PSI.
- (B) ALL REINFORCEMENT SHALL BE UNCOATED (BLACK).
- (C) ALL DIMENSIONS PERTAINING TO LOCATION OF REINFORCING BARS ARE TO CENTERLINE OF BARS EXCEPT WHERE THE CLEAR DIMENSION IS SHOWN TO FACE OF CONCRETE.
- (D) ACI STANDARD HOOKS SHALL BE USED UNLESS OTHERWISE NOTED.
- (E) ALL LAP AND SPLICE LENGTHS SHALL BE IN ACCORDANCE WITH THE LATEST EDITION OF ACI 318, ACI 350 AND CRSI STANDARD PRACTICES, EXCEPT AS OTHERWISE NOTED.

4. FOUNDATIONS:

- (A) A GEOTECHNICAL REPORT OF SUBSURFACE CONDITIONS HAS BEEN PREPARED BY ARDAMAN & ASSOCIATES (DATED SEPTEMBER 12, 2018, PROJECT # 17-7261). ANY ADDITIONAL GEOTECHNICAL WORK WILL BE THE RESPONSIBILITY OF THE CONTRACTOR.
- (B) NOTIFY THE ENGINEER IMMEDIATELY OF ANY EXISTING FOUNDATION CONDITIONS OR DETAILS THAT ARE IN CONFLICT WITH THOSE INDICATED AND SHOWN IN THE DRAWINGS.
- (C) ADHERE TO THE RECOMMENDATIONS MADE IN THE SOIL PREPARATION SECTION OF THE GEOTECHNICAL REPORT.
- (D) ALL FILL AND COMPACTION SHALL BE IN ACCORDANCE WITH THE RECOMMENDATIONS IN THE GEOTECHNICAL REPORT.
- (E) IN ACCORDANCE WITH THE RECOMMENDATION OF THE FEBRUARY 28, 2020 EMAIL FROM JERRY KUEHN, P.E. OF ARDAMAN AND ASSOCIATES TO KEVIN GERSZUNY OF KIMLEY-HORN AND ASSOCIATES, EMBANKMENT FILL SHALL BE PLACED DURING THE CONSTRUCTION OF THE PUMP STATION.

DESIGN CRITERIA:


CODE: 2017 FLORIDA BUILDING CODE WITH SUPPLEMENTS
 LIVE LOADS:
 A. TANK ROOF SLAB 200 PSF
 WIND LOAD:
 BASIC WIND SPEED 150 MPH
 EXPOSURE C
 RISK CATEGORY II

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PUMP BACK STATION**

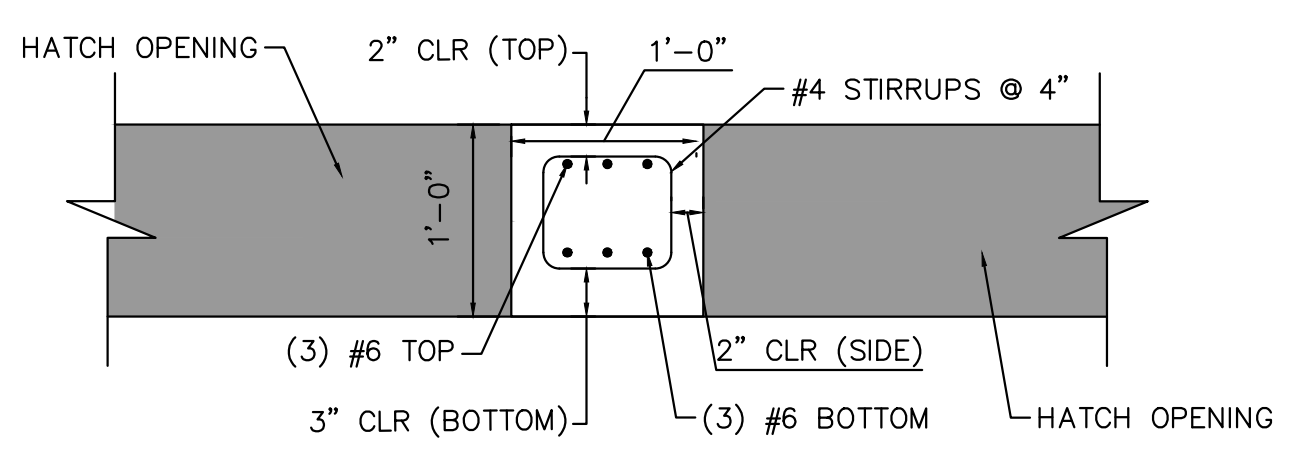
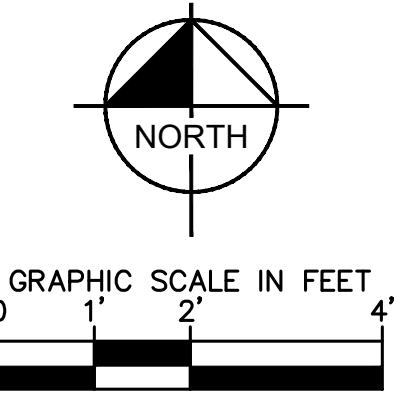
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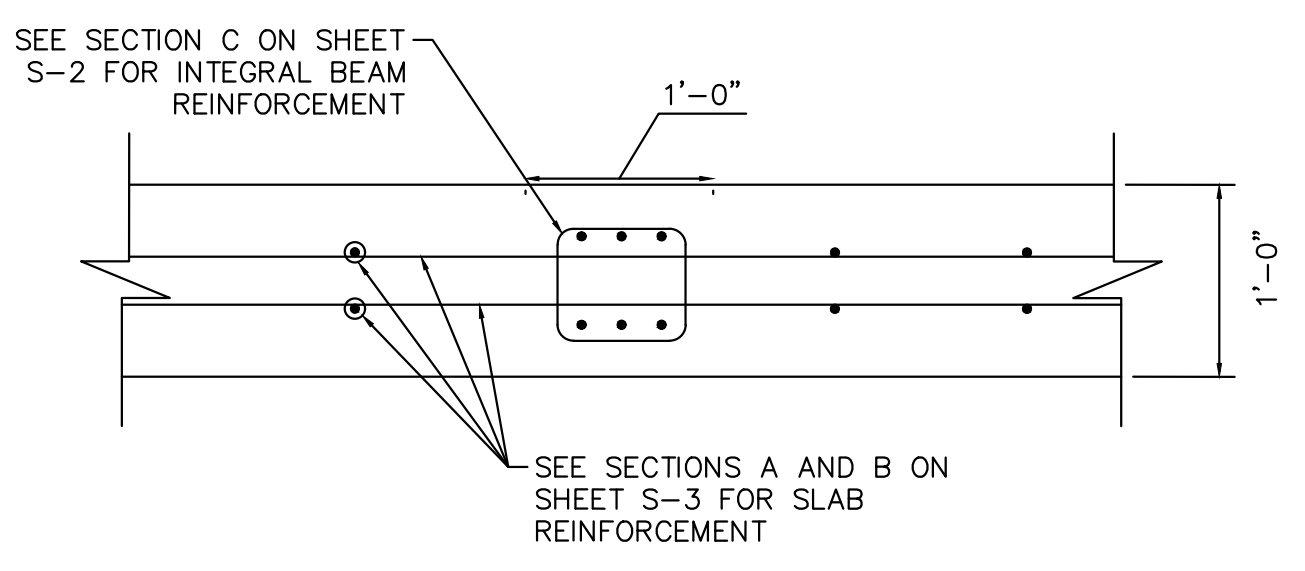
STRUCTURAL GENERAL NOTES

SHEET NUMBER
S-1

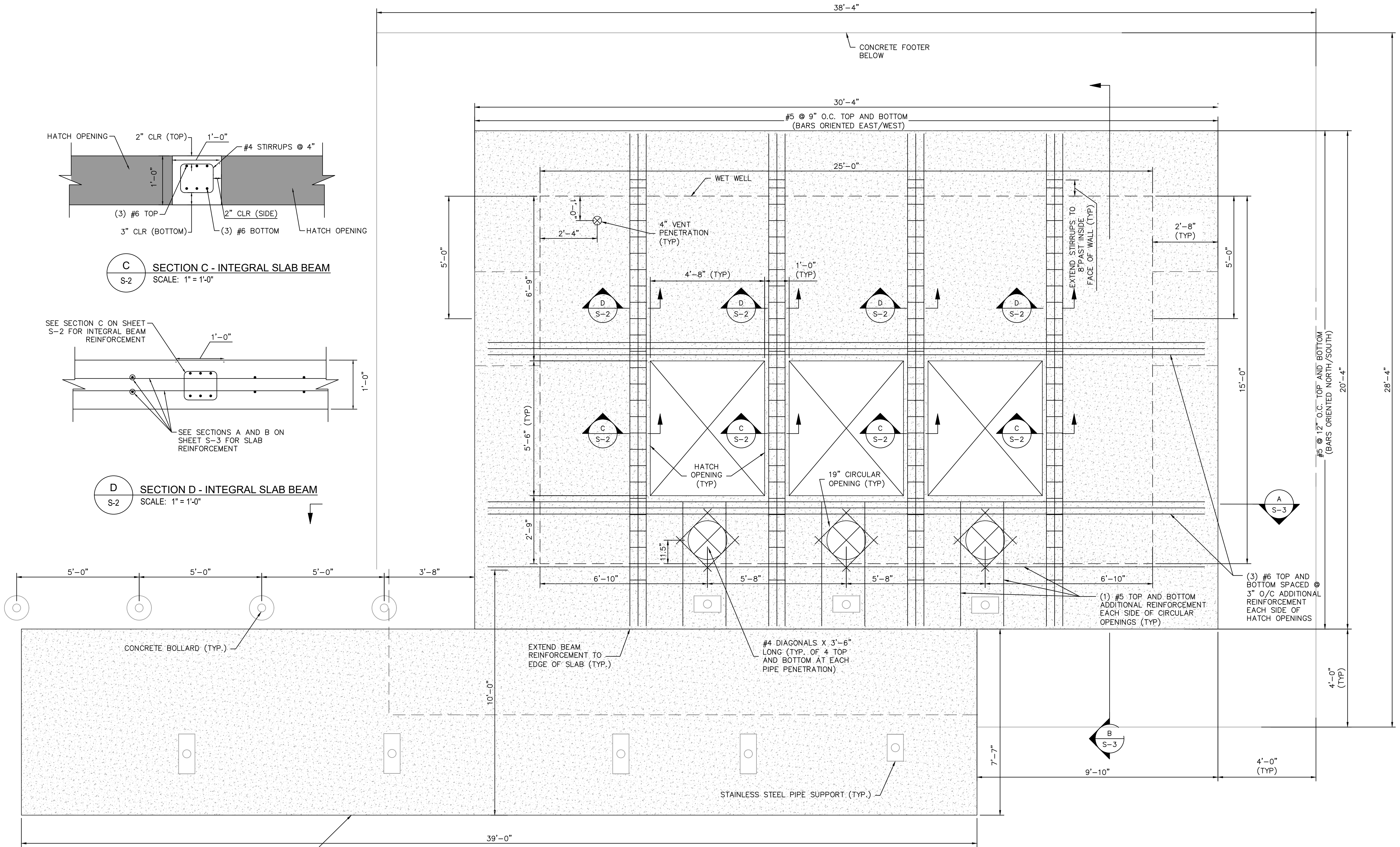
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C SECTION C - INTEGRAL SLAB BEAM
S-2 SCALE: 1" = 1'-0"



D SECTION D - INTEGRAL SLAB BEAM
S-2 SCALE: 1" = 1'-0"



NOTE: MAIN SLAB REINFORCEMENT NOT SHOWN FOR CLARITY

1 CENTRAL PUMP STATION PLAN
- SCALE: 1/2" = 1'-0"

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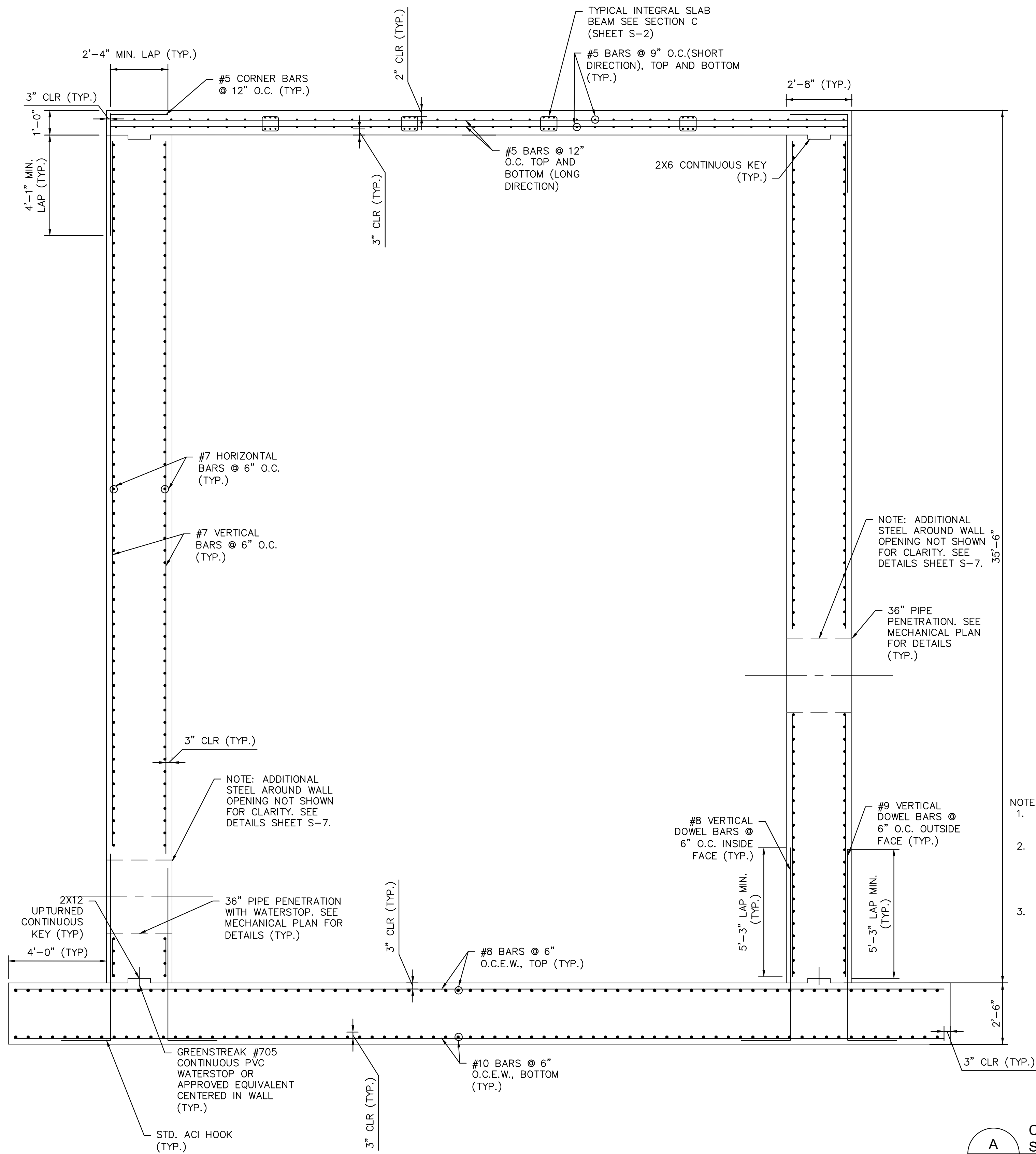
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**CENTRAL PUMP STATION
PLAN**

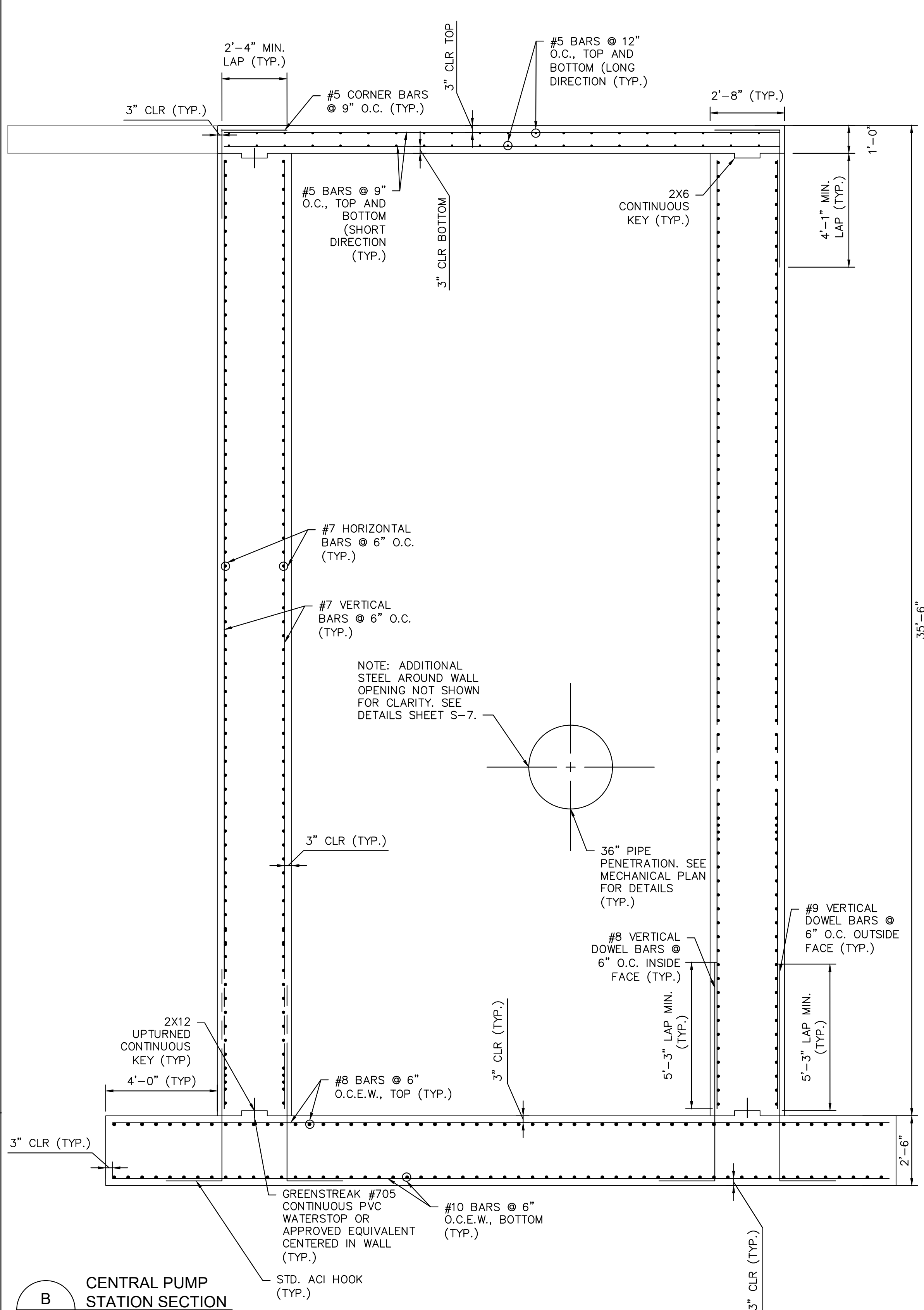
SHEET NUMBER
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A
CENTRAL PUMP STATION SECTION
SCALE: N.T.S.

- NOTES:
1. SEE MECHANICAL SHEETS FOR ALL PIPE PENETRATION INSTALLATION DETAILS.
 2. FOR DETAILS AND ADDITIONAL REINFORCING NOT SHOWN, INCLUDING WALL OPENINGS AND TYPICAL WALL CORNER REINFORCEMENT, SEE DETAILS, SHEET S-7.
 3. ADDITIONAL VERTICAL REINFORCEMENT EITHER SIDE OF WALL OPENINGS SHALL EXTEND TO BASE OF WALL AND LAP ADDITIONAL WALL DOWELS ON EITHER SIDE OF OPENING. WALL DOWELS SHALL BE DEVELOPED IN THE FOUNDATION WITH STD ACI HOOKS.



B
CENTRAL PUMP STATION SECTION
SCALE: 3/8\"/>

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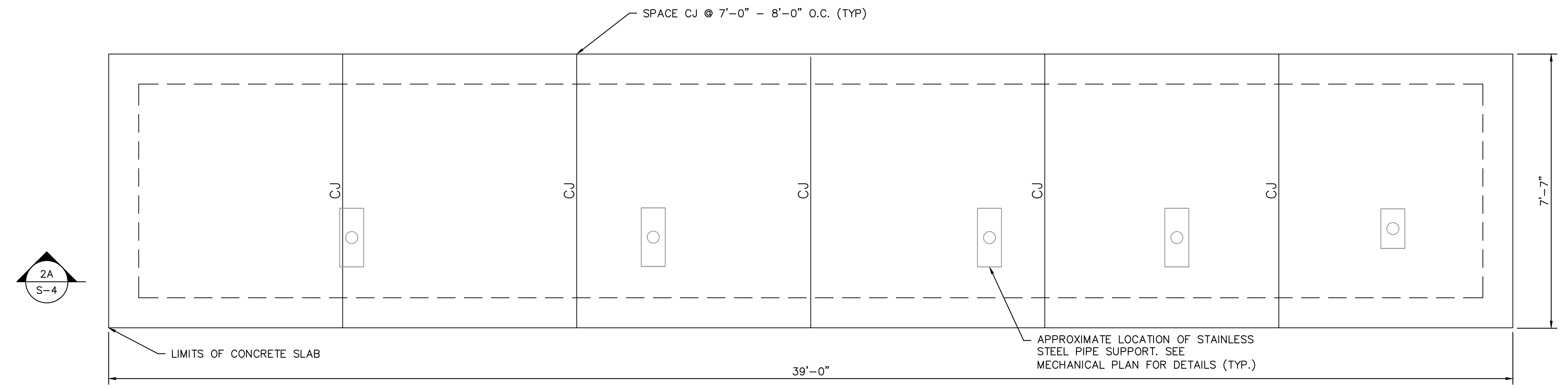
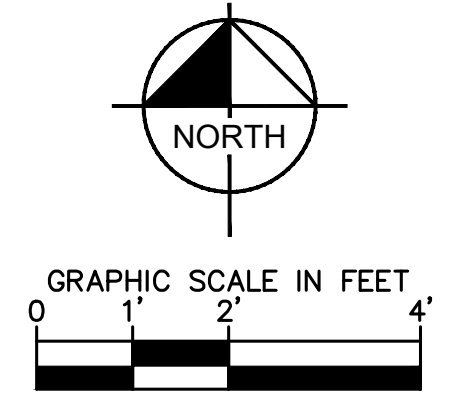
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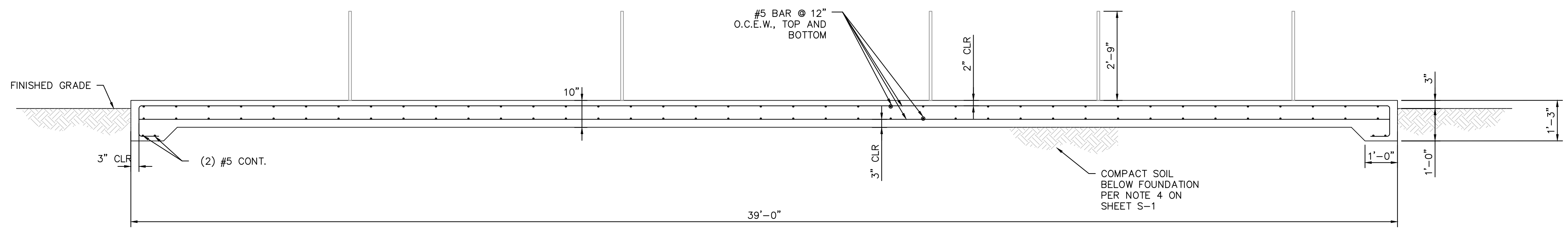
**CENTRAL PUMP STATION
SECTIONS**

SHEET NUMBER
S-3

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2 DISCHARGE PIPING PAD FOUNDATION PLAN
 -- SCALE: 1/2" = 1'-0"
 NOTE: CJ = SAW CUT CONTROL JOINT. CUT 2" DEEP.



2A DISCHARGE PIPING PAD FOUNDATION SECTION
 S-4 SCALE: 1/2" = 1'-0"

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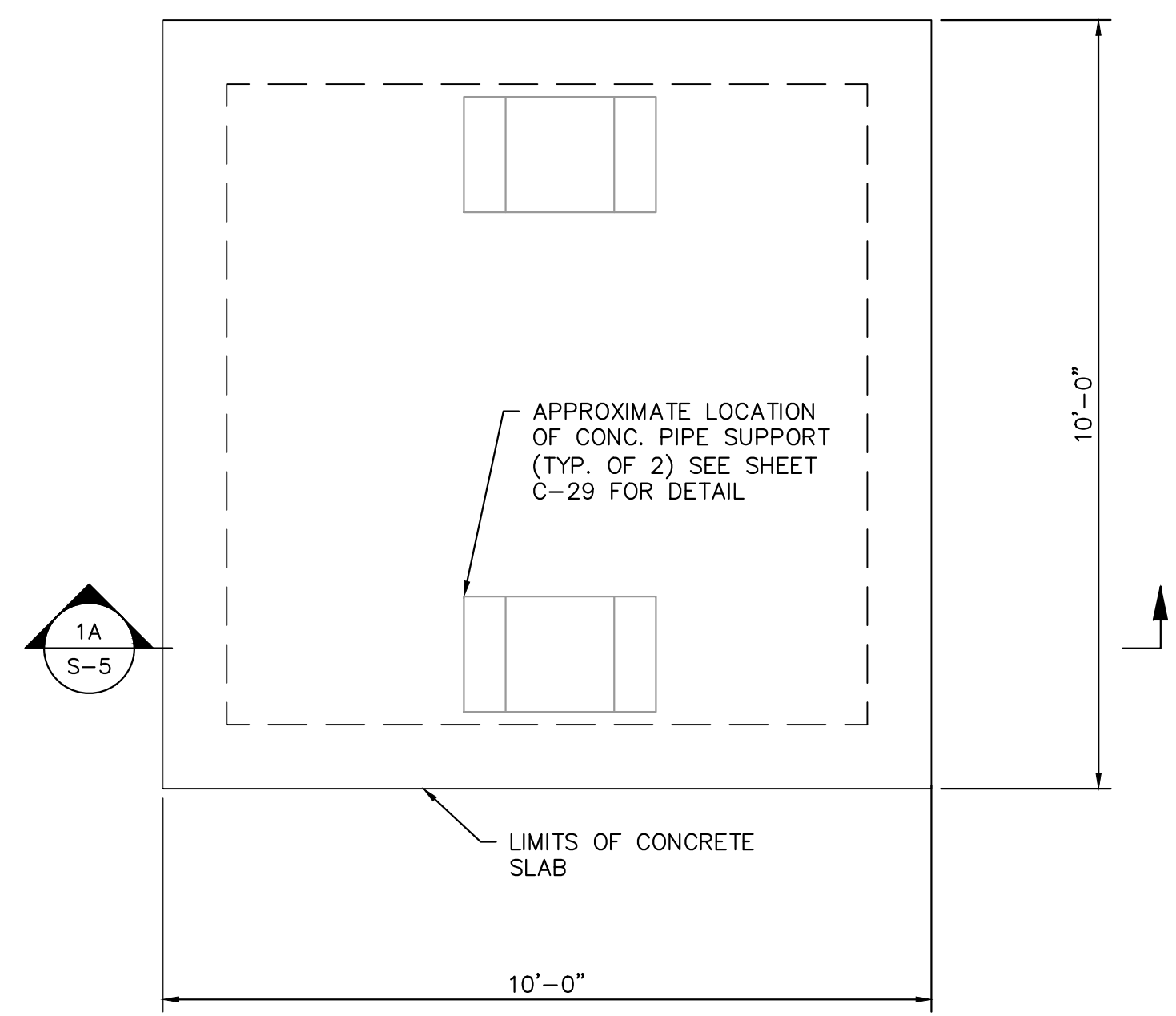
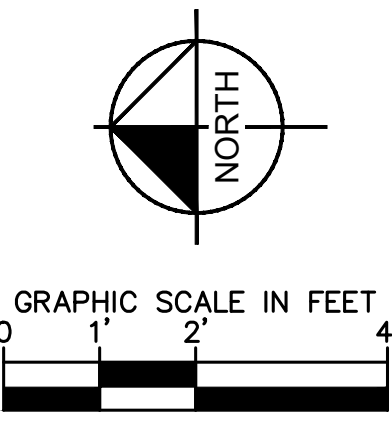
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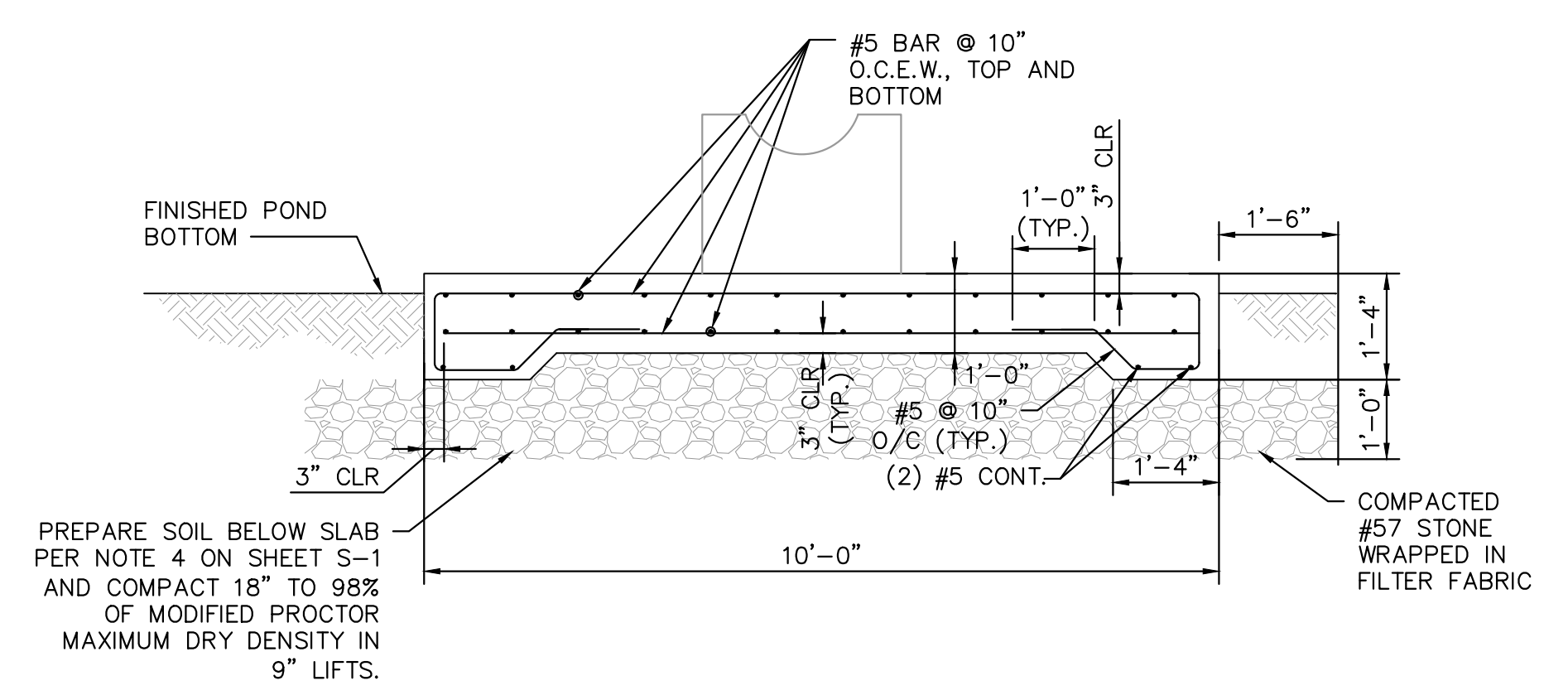
**DISCHARGE PIPING
 FOUNDATION**

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S-4

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1 INTAKE SCREEN PAD FOUNDATION PLAN
SCALE: 1/2" = 1'-0"



1A INTAKE SCREEN PAD FOUNDATION SECTION
S-5 SCALE: 1/2" = 1'-0"

- NOTES:
1. CONTRACTOR SHALL BE RESPONSIBLE FOR PERFORMING THEIR OWN GEOTECHNICAL INVESTIGATION AT THE INTAKE STRUCTURE PRIOR TO AND DURING CONSTRUCTION.
 2. THE INTAKE STRUCTURE SHALL BE CONSTRUCTED IN DRY CONDITIONS.
 3. PREPARATION AND COMPACTION OF THE LAKE BOTTOM BELOW THE INTAKE STRUCTURE SHALL BE INSPECTED AND APPROVED BY THE CONTRACTOR'S GEOTECHNICAL ENGINEER PRIOR TO PLACEMENT OF THE #57 STONE

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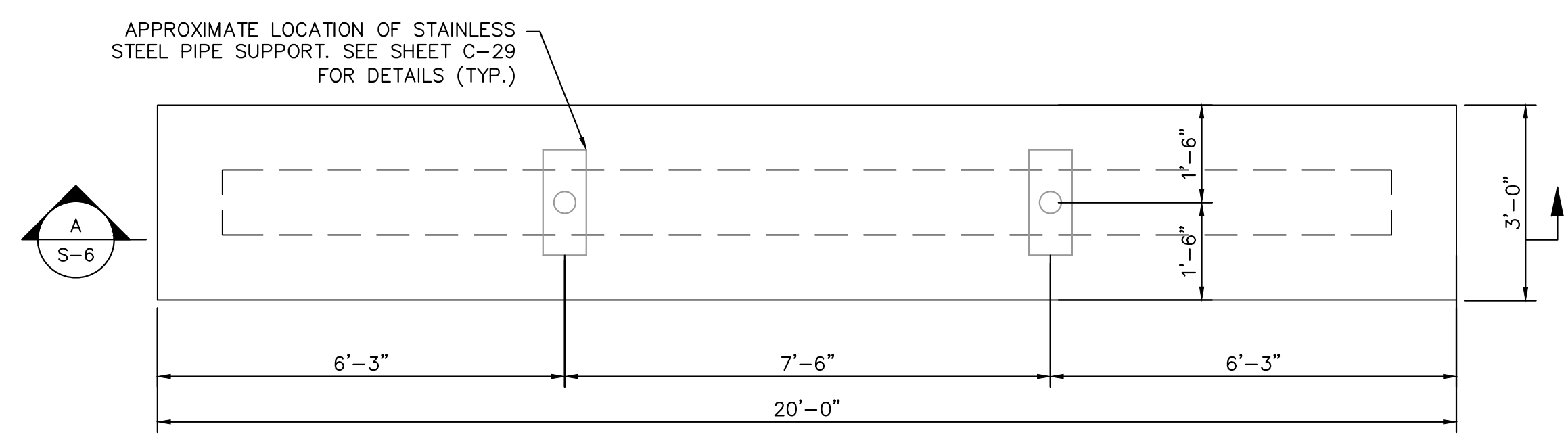
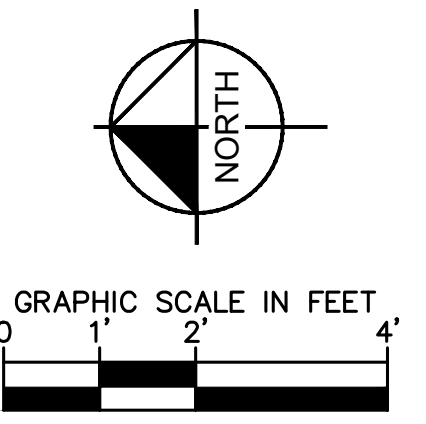
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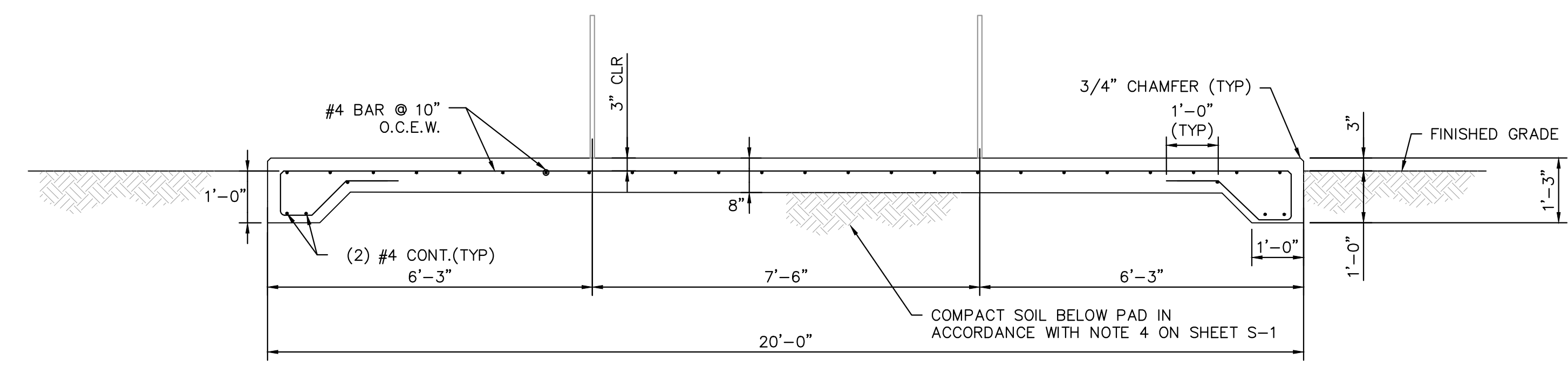
INTAKE SCREEN SLAB

SHEET NUMBER
S-5

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1 LEACHATE FLOW METER SUPPORT PAD
SCALE: NTS



A LEACHATE FLOW METER SUPPORT PAD SECTION
S-6 SCALE: NTS

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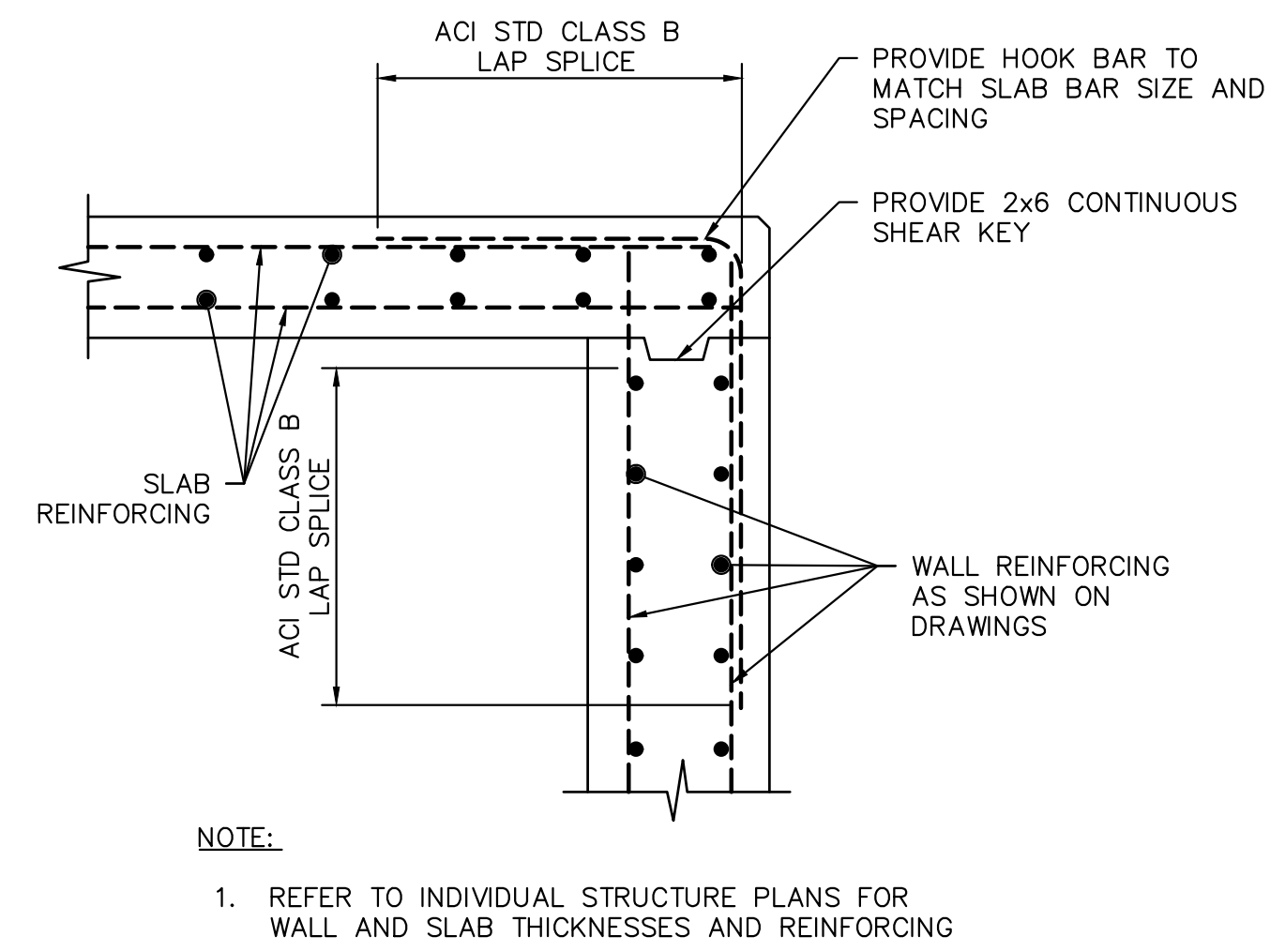
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**LEACHATE METERING
ASSEMBLY PAD**

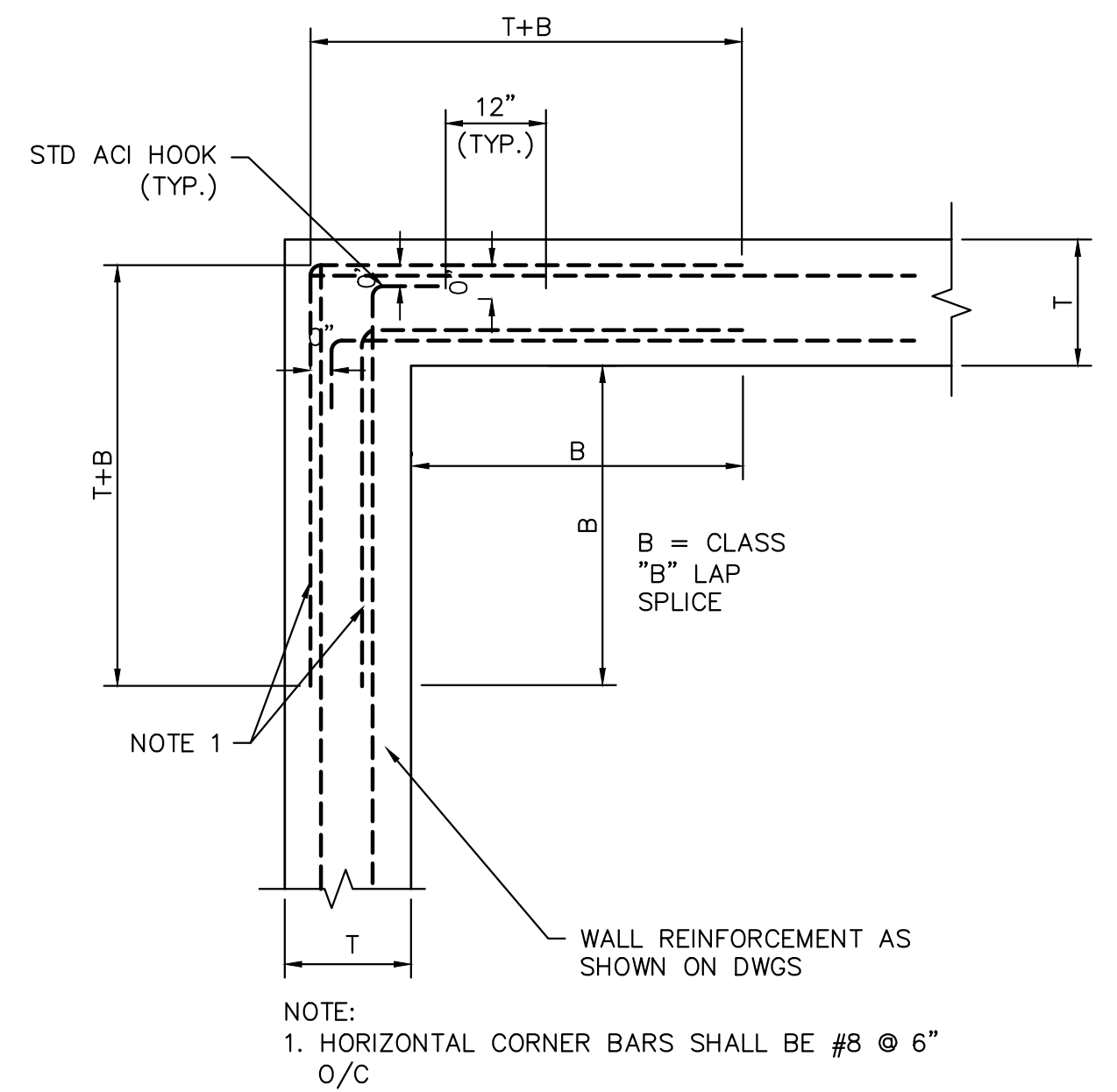
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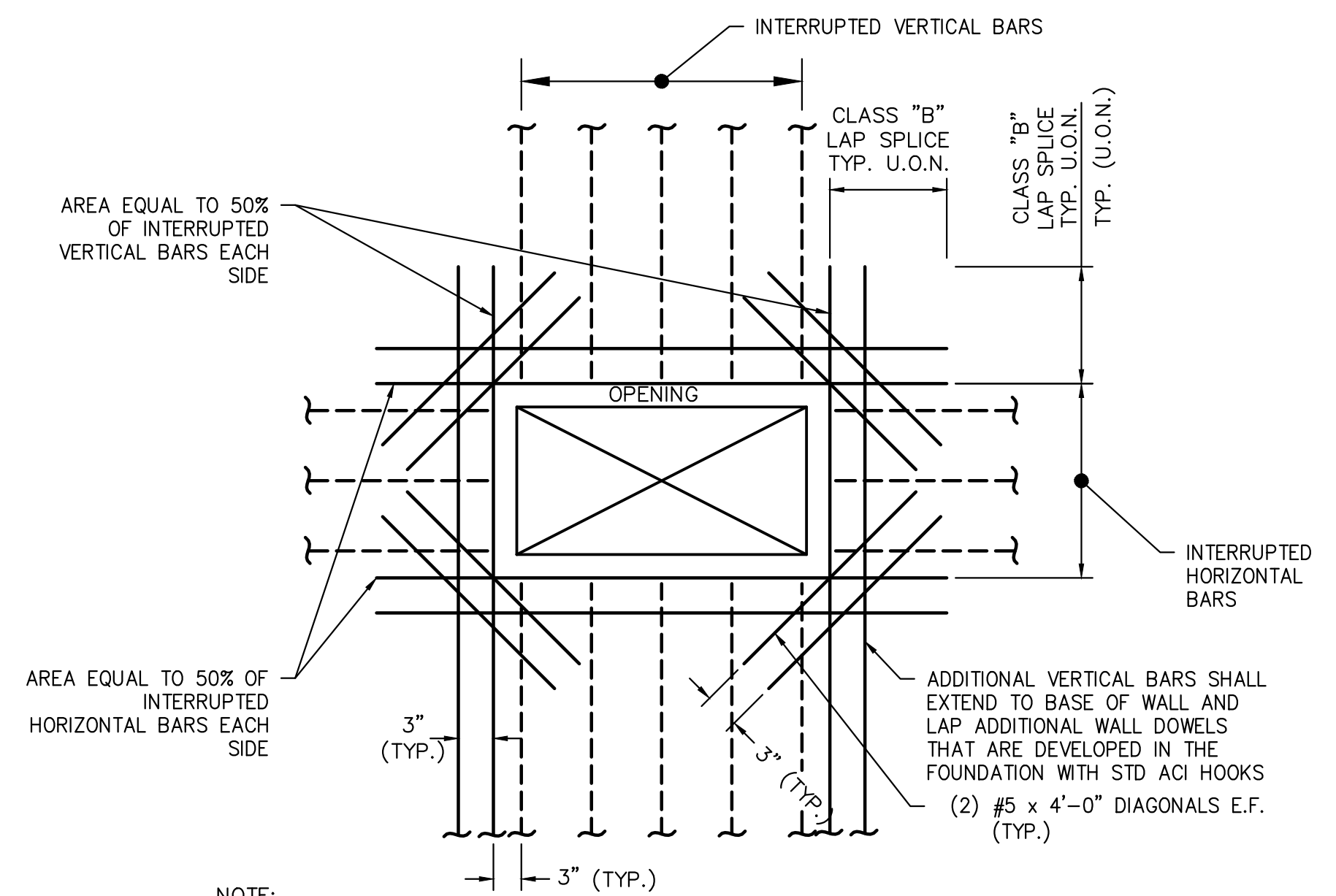
NOTE:
1. REFER TO INDIVIDUAL STRUCTURE PLANS FOR WALL AND SLAB THICKNESSES AND REINFORCING

1 SLAB TO WALL CONNECTION DETAIL
SCALE: NTS



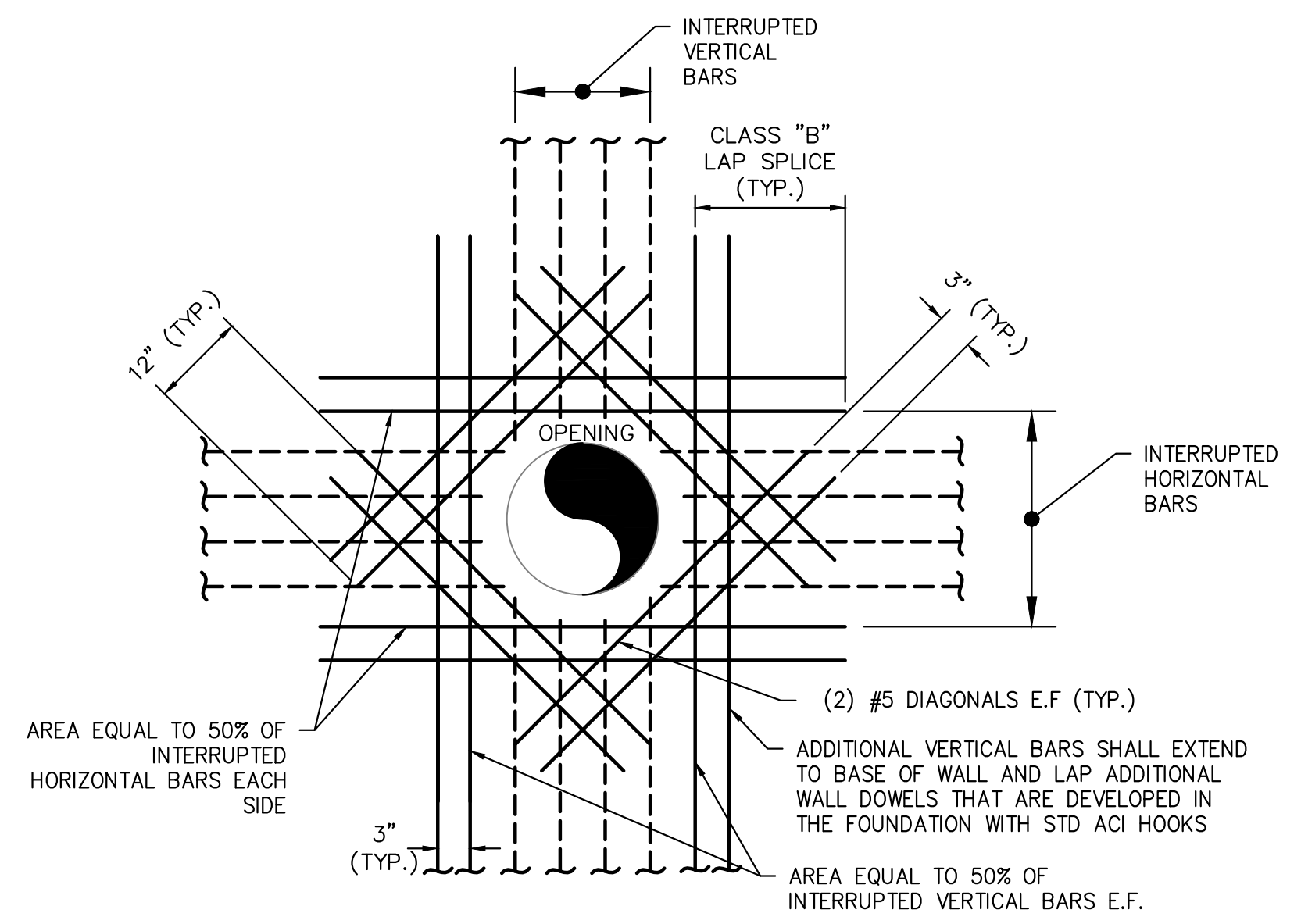
NOTE:
1. HORIZONTAL CORNER BARS SHALL BE #8 @ 6" O/C

2 TYPICAL CORNER REINFORCING DETAIL
SCALE: NTS



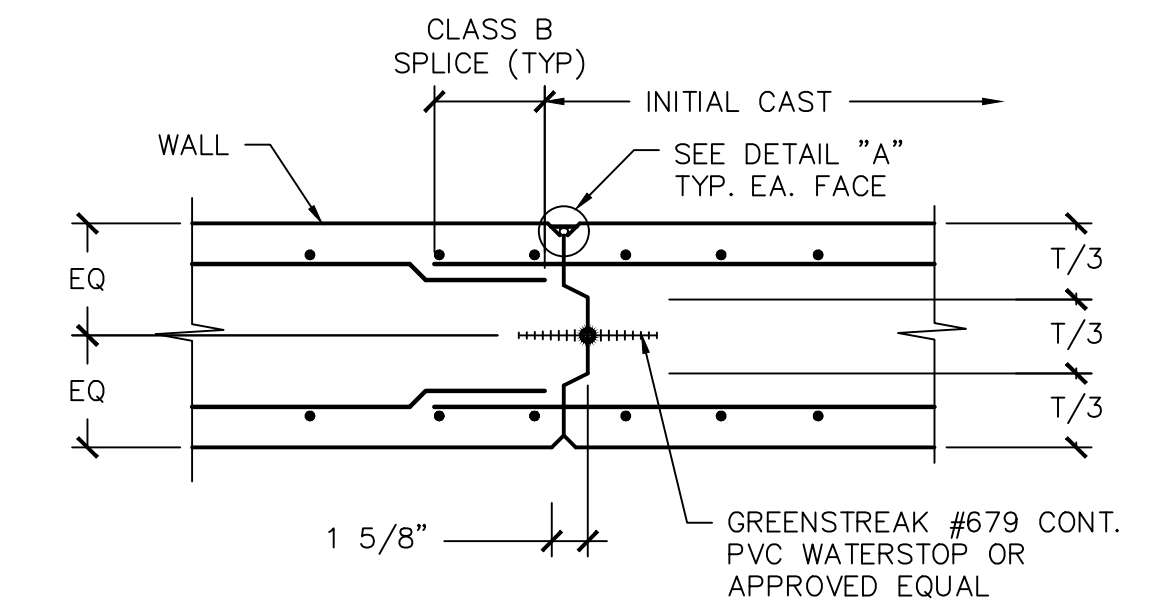
NOTE:
1. WHERE INTEGRAL BEAMS OR DROP DOWN BEAMS ARE ADJACENT TO OPENING, ADDITIONAL REINFORCING IS NOT REQUIRED.
2. PROVIDE 3" CLEAR AROUND OPENINGS, UNLESS NOTED OTHERWISE.
3. ADDITIONAL VERTICAL REINFORCING SHALL BE DEVELOPED IN FOOTING WITH STD ACI HOOKS

3 TYPICAL RECTANGULAR OPENING REINFORCING DETAIL
SCALE: NTS
FOR OPENINGS 12" OR GREATER IN EITHER DIRECTION



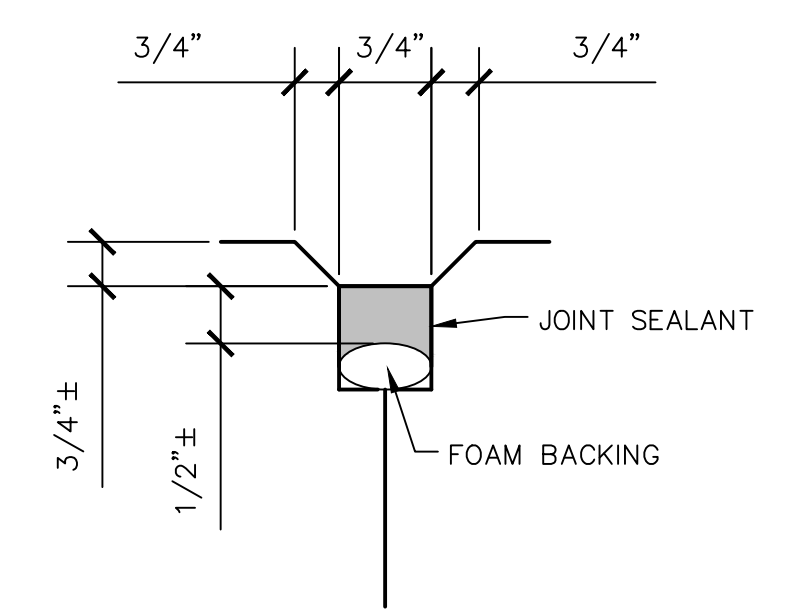
NOTE:
1. WHERE INTEGRAL BEAMS OR DROP DOWN BEAMS ARE ADJACENT TO OPENING, ADDITIONAL REINFORCING IS NOT REQUIRED.
2. PROVIDE 3" CLEAR AROUND OPENINGS, UNLESS NOTED OTHERWISE.
3. ADDITIONAL VERTICAL REINFORCING SHALL BE DEVELOPED IN FOOTING WITH STD ACI HOOKS

4 TYPICAL CIRCULAR OPENING REINFORCING DETAIL
SCALE: NTS
FOR WALL OPENINGS 12" OR GREATER IN DIAMETER



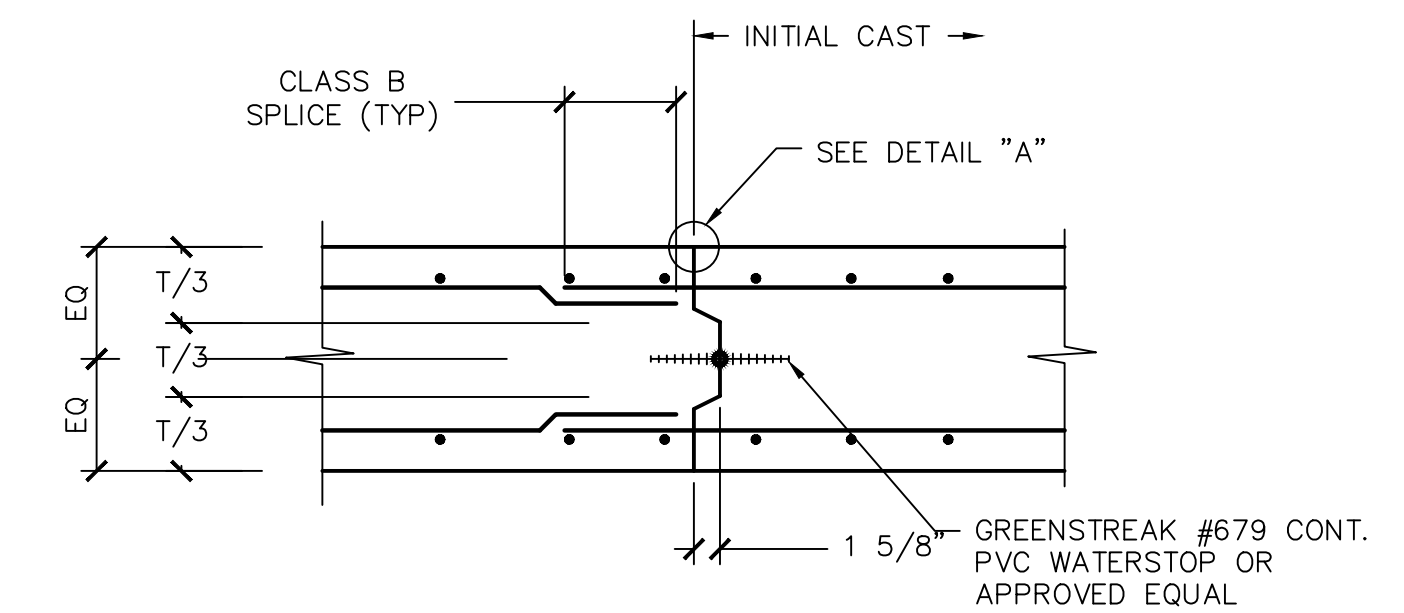
STOP WATERSTOP 6" BELOW TOP OF WALL.
NOTE:
1. CONTRACTOR SUBMIT LOCATION IF NOT SPECIFIED
2. DO NOT LOACTE VERTICAL CONSTRUCTION JOINTS WITHIN 10' OF WET WELL CORNERS

5 WALL CONSTRUCTION JOINT DETAIL
SCALE: NTS



NOTE:
1. JOINT SEALANT SHALL BE SIKAFLEX - 2C NS EZ MIX OR APPROVED EQUIVALENT. INSTALL PER MANUFACTURERS REQUIREMENTS

6 DETAIL "A" CONTROL/CONSTRUCTION JOINT
SCALE: NTS



CONTRACTOR SUBMIT LOCATION IF NOT SPECIFIED

7 BASE SLAB CONSTRUCTION JOINT DETAIL
SCALE: NTS

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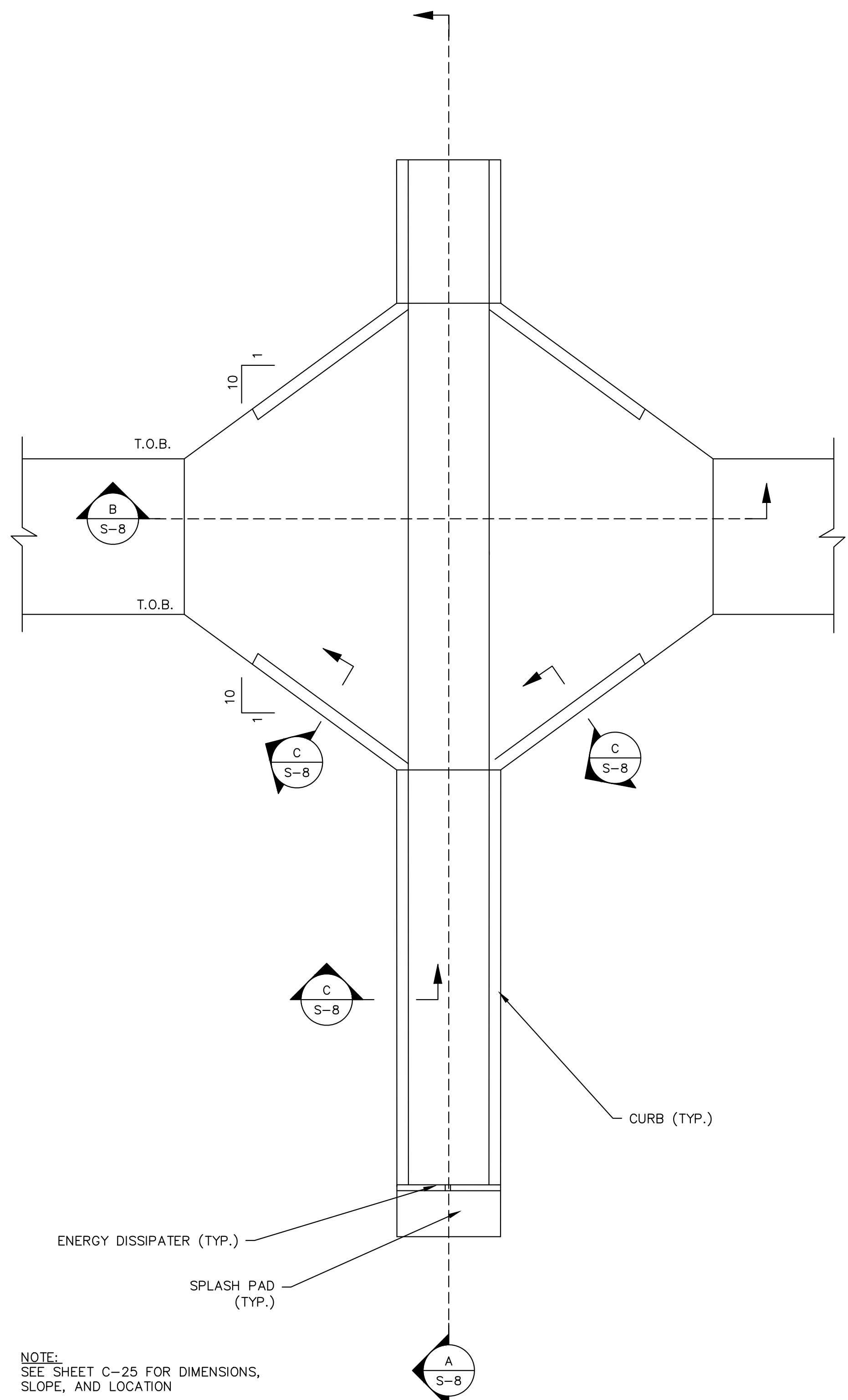
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STRUCTURAL DETAILS

FL DATE:

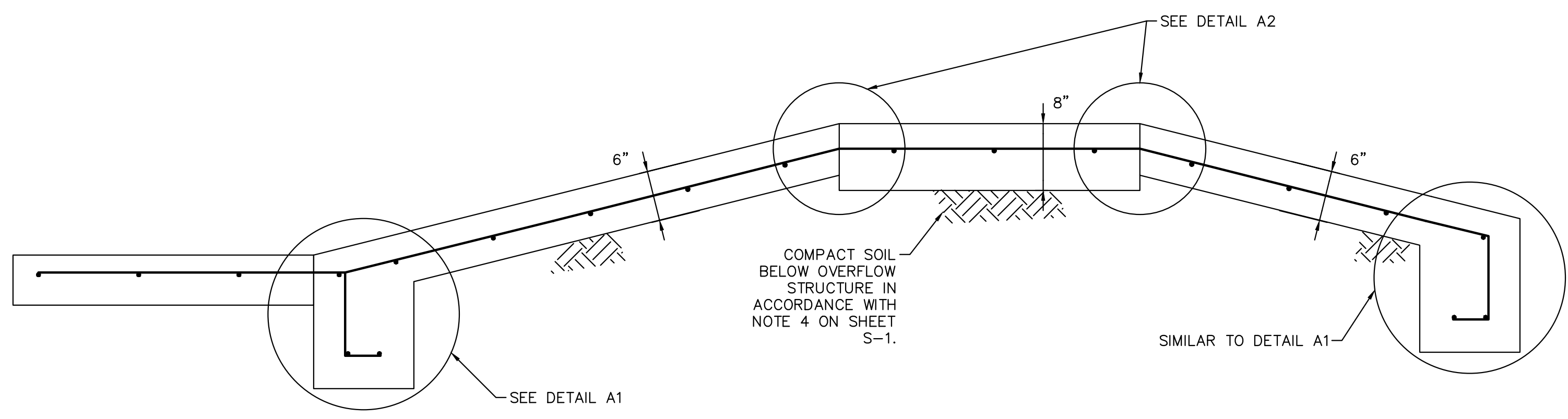
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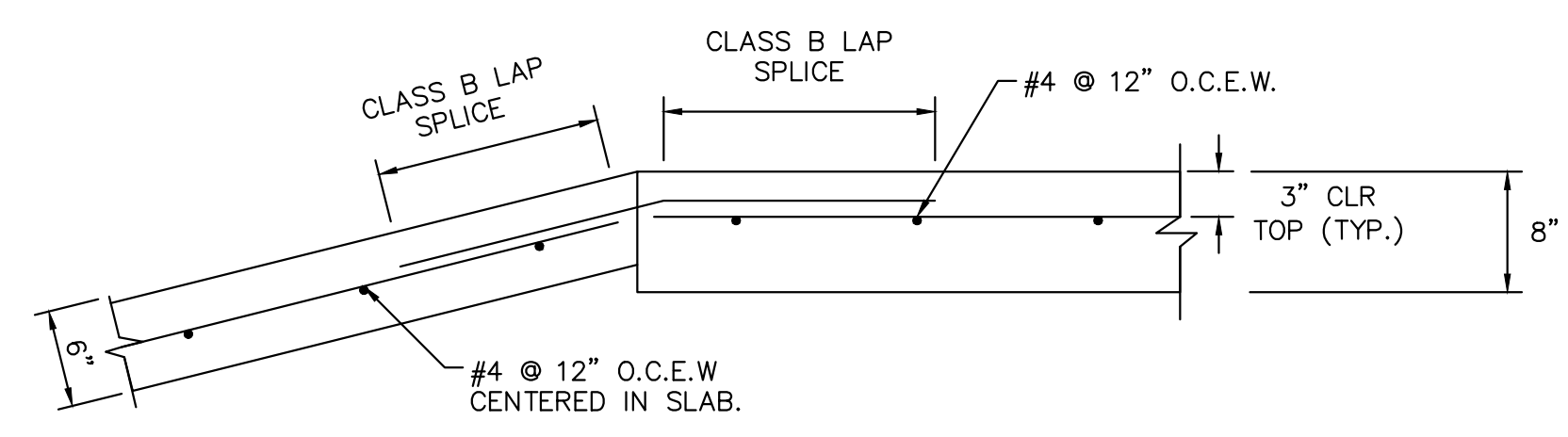


NOTE:
SEE SHEET C-25 FOR DIMENSIONS,
SLOPE, AND LOCATION

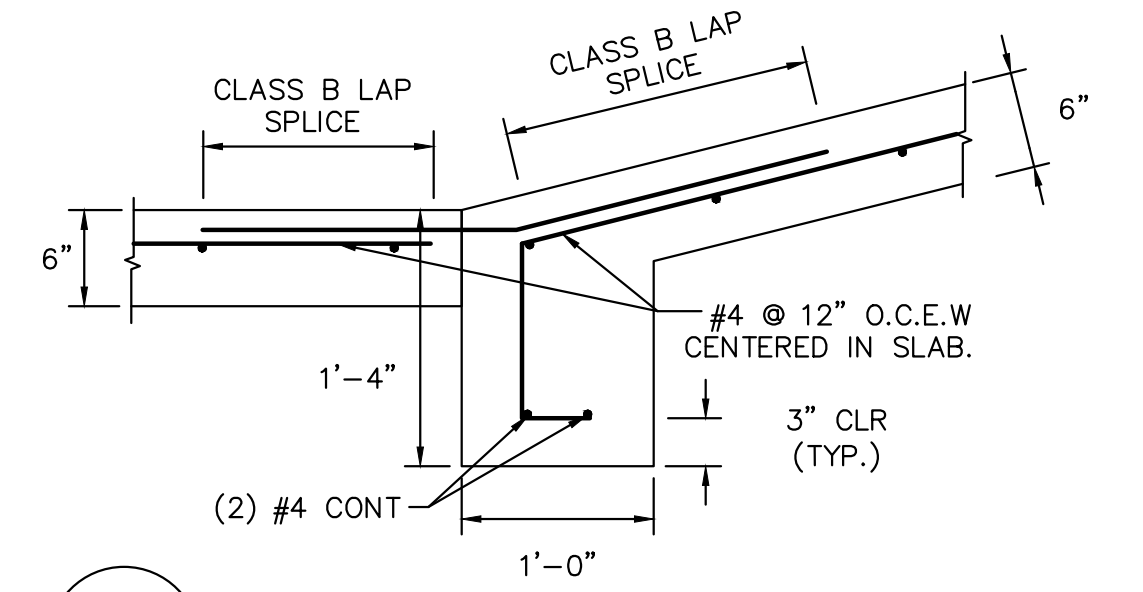
1 TYPICAL OVERFLOW STRUCTURE
C-25 SCALE: NTS



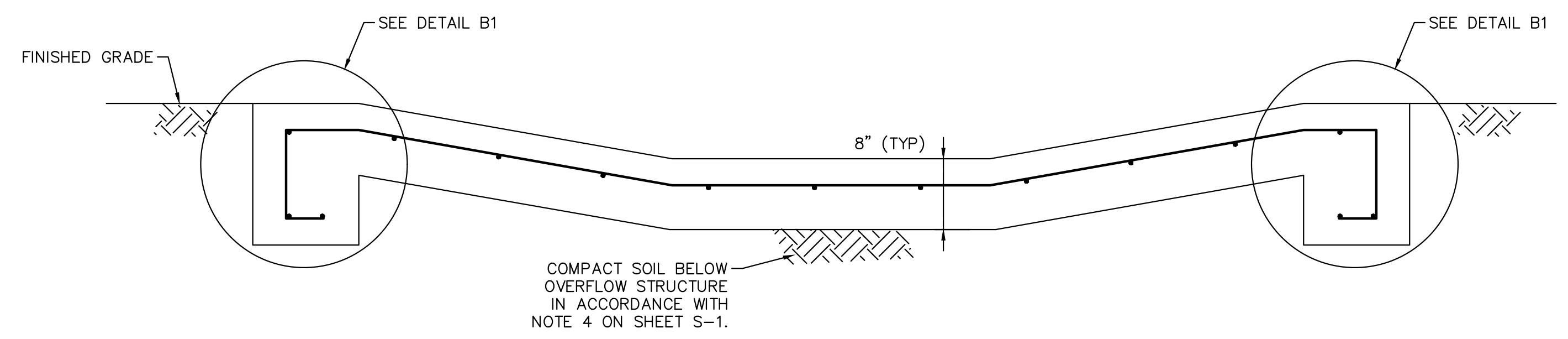
A TYPICAL OVERFLOW STRUCTURE SECTION
S-8 SCALE: NTS



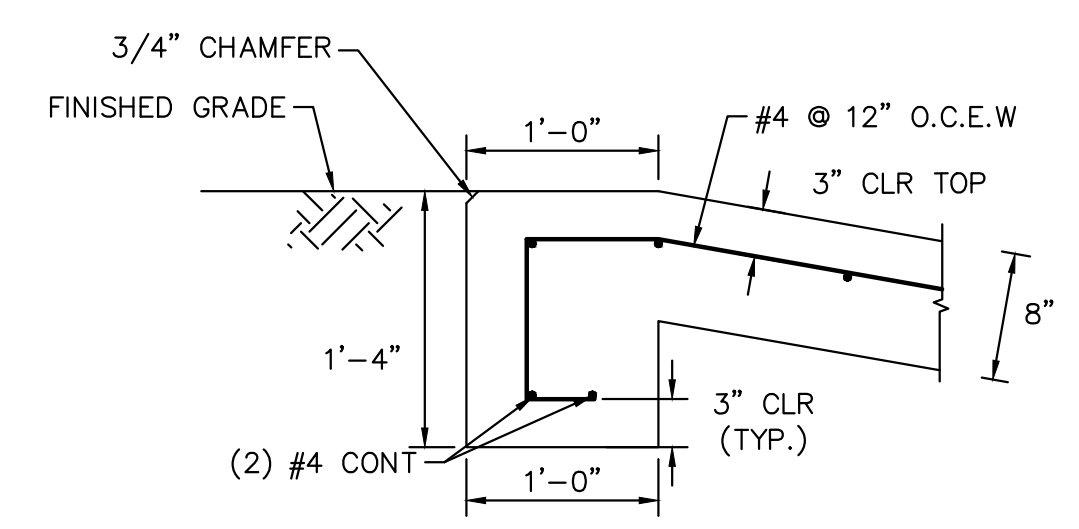
A2 OVERFLOW STRUCTURE SECTION DETAIL
S-8 SCALE: NTS



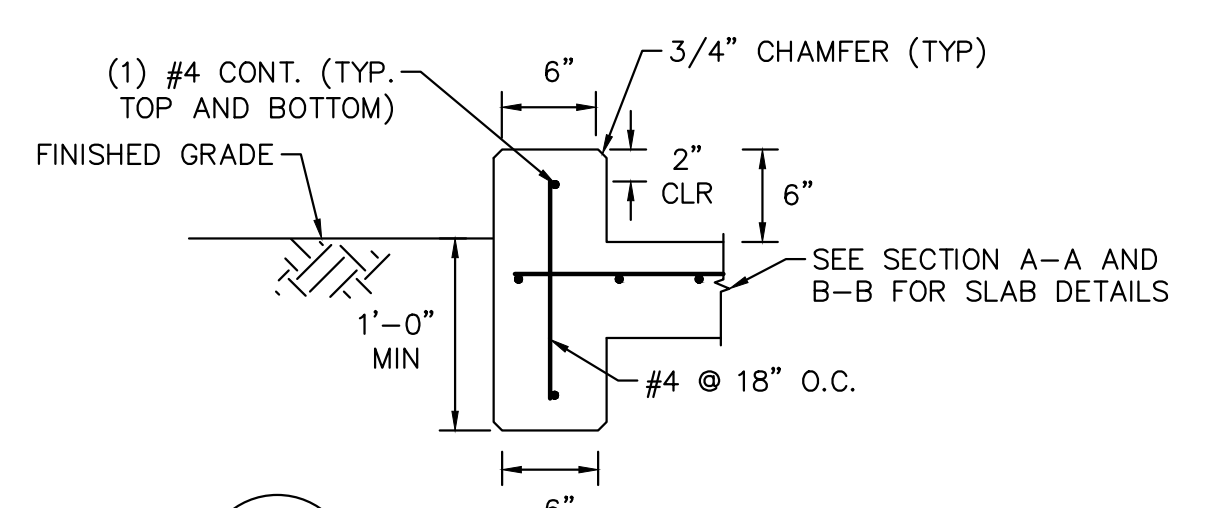
A1 OVERFLOW STRUCTURE SECTION DETAIL
S-8 SCALE: NTS



B TYPICAL OVERFLOW STRUCTURE SECTION
S-8 SCALE: NTS



B1 OVERFLOW STRUCTURE SECTION DETAIL PLAN
S-8 SCALE: NTS



C TYPICAL CURB DETAIL
S-8 SCALE: NTS

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STRUCTURAL DETAILS

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