

# 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

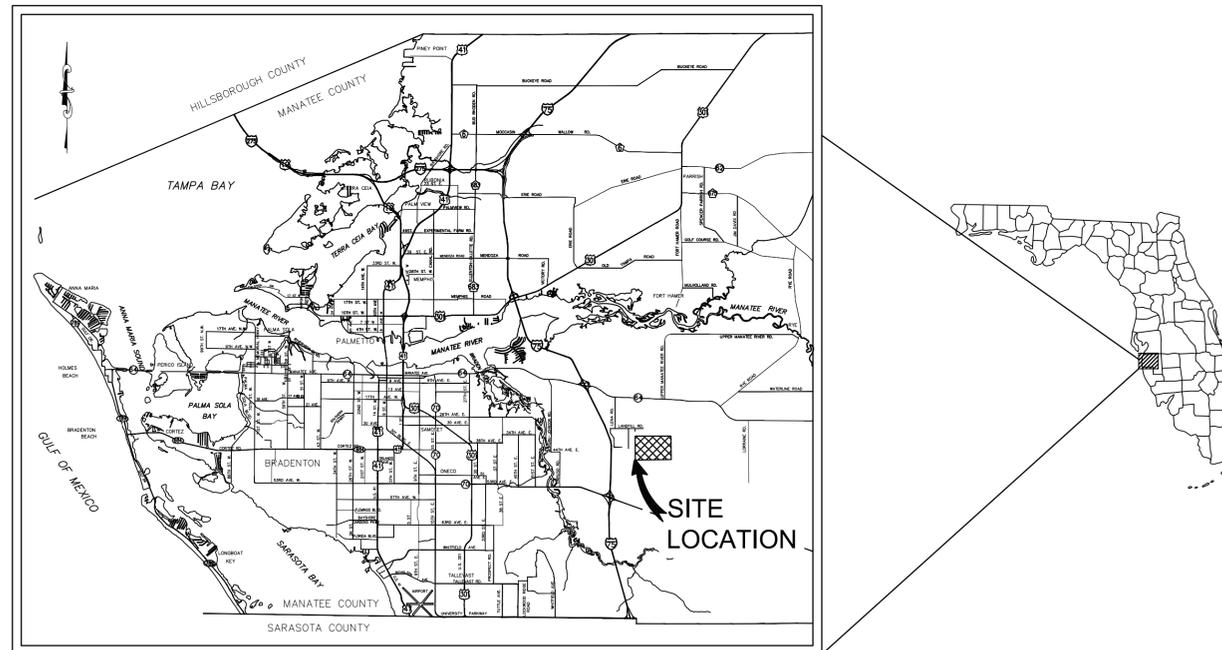
**SURVEYOR:**  
 HYATT SURVEY SERVICES INC.,  
 11007 8TH AVENUE EAST  
 BRADENTON, FLORIDA 34212  
 CONTACT: JOHN MATTHEWS  
 941-748-4693

**ENGINEER:**  
 KIMLEY-HORN AND ASSOCIATES, INC.  
 100 2ND AVENUE SOUTH, SUITE 105N  
 ST. PETERSBURG, FL 33701  
 CONTACT: STEPHEN N. ROMANO, P.E.  
 727-547-3999

**GEOTECH:**  
 ARDAMAN & ASSOCIATES  
 3925 COCONUT PALM DRIVE  
 TAMPA, FLORIDA 33619  
 CONTACT: ROSS T. MCGILLIVRAY, P.E.  
 813-620-3389

**ELECTRICAL:**  
 TRICON ENGINEERING  
 777 S. HARBOUR ISLAND BLVD. SUITE 870  
 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**

© 2020 KIMLEY-HORN AND ASSOCIATES, INC.  
 100 2ND AVENUE SOUTH, SUITE 105N  
 ST. PETERSBURG, FL 33701  
 PHONE: (727) 547-3999  
 WWW.KIMLEY-HORN.COM CA 00000696

No.	REVISIONS	DATE	BY

THE SITE CONSTRUCTION STAKEOUT SHALL BE PERFORMED UNDER THE DIRECTION OF A FLORIDA REGISTERED SURVEYOR. AUTOCAD FILES WILL BE FURNISHED TO AID IN THE SITE CONSTRUCTION STAKEOUT. ANY DISCREPANCIES FOUND BETWEEN AUTOCAD FILES AND SITE CONSTRUCTION PLANS SHALL BE BROUGHT TO THE ENGINEER'S ATTENTION FOR CLARIFICATION PRIOR TO THAT STAKEOUT.

THIS DOCUMENT IS PROTECTED BY SECTION 106 OF THE "UNITED STATES COPYRIGHT ACT". REPRODUCTION OR ALTERATION OF THIS DOCUMENT OR THE INFORMATION CONTAINED HEREON BY ANY MEANS WHATSOEVER IS STRICTLY PROHIBITED WITHOUT THE PRIOR WRITTEN CONSENT OF KIMLEY-HORN AND ASSOCIATES, INC. CONSENT IS HEREBY GRANTED SPECIFICALLY TO GOVERNMENTAL AGENCIES TO REPRODUCE THIS DOCUMENT IN COMPLIANCE WITH F.S. CHAPTER 119.

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

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

This document, together with the contracts and design documents, is intended only for the specific purpose and site for which it was prepared. It is not to be used for any other purpose without the written consent of Kimley-Horn and Associates, Inc.

Discipline	Sheet Number	Sheet Title	
GENERAL	G-1	COVER SHEET	
	G-2	DRAWING INDEX AND GENERAL NOTES	
	G-3	PROCESS FLOW DIAGRAM	
	G-4	EXISTING SITE PLAN	
	G-5	PROPOSED SITE PLAN	
	G-6	EROSION CONTROL AND CONSTRUCTION PHASING PLAN PHASE 1	
	G-7	EROSION CONTROL AND CONSTRUCTION PHASING PLAN PHASE 2 AND 3	
	G-8	EROSION CONTROL AND SEDIMENTATION DETAILS	
	DEMOLITION	D-1	OVERALL DEMOLITION PLAN
		D-2	SOUTH LAKE 2 PUMP STATION DEMOLITION PLAN
D-3		EAST LAKE PUMP STATION DEMOLITION PLAN	
C-1		EAST LAKE REHABILITATION PLAN	
C-2		EAST LAKE REHABILITATION CURVE TABLES	
C-3		EAST LAKE REHABILITATION SECTIONS	
C-4		EAST LAKE REHABILITATION SECTIONS	
C-5		EAST LAKE REHABILITATION SECTIONS	
C-6		EAST LAKE REHABILITATION SECTIONS	
C-7		PUMP STATION GRADING PLAN	
CIVIL	C-8	PUMP STATION GRADING SECTIONS	
	C-9	PUMP STATION GRADING SECTIONS	
	C-10	PLAN & PROFILE - SOUTH LAKE 2 INTAKE PIPING	
	C-11	PLAN & PROFILE - EAST LAKE INTAKE PIPING	
	C-12	PLAN & PROFILE - EAST LAKE INTAKE PIPING	
	C-13	PLAN & PROFILE - EAST LAKE INTAKE PIPING	
	C-14	PLAN & PROFILE - EAST LAKE INTAKE PIPING	
	C-15	PLAN & PROFILE - DISTRIBUTION PIPING	
	C-16	PLAN & PROFILE - DISTRIBUTION PIPING	
	C-17	PLAN & PROFILE - DISTRIBUTION PIPING	
MECHANICAL	M-1	CENTRAL PUMP STATION PLAN	
	M-2	CENTRAL PUMP STATION SECTIONS	
	M-3	CENTRAL PUMP STATION SECTIONS	
	M-4	CENTRAL PUMP STATION ISOMETRIC VIEW	
	M-5	LEACHATE PIPING IMPROVEMENTS	
	M-6	MECHANICAL DETAILS	
	S-1	STRUCTURAL GENERAL NOTES	
	S-2	CENTRAL PUMP STATION PLAN	
	S-3	CENTRAL PUMP STATION SECTIONS	
	S-4	DISCHARGE PIPING FOUNDATION	
STRUCTURAL	S-5	INTAKE SCREEN SLAB	
	S-6	LEACHATE METERING ASSEMBLY PAD	
	S-7	STRUCTURAL DETAILS	
	S-8	STRUCTURAL DETAILS	
	E-1	ELECTRICAL LEGEND AND ABBREVIATIONS	
	E-2	ELECTRICAL SITE PLAN	
	E-3	CENTRAL PUMP STATION ELECTRICAL LAYOUT	
	E-4	CENTRAL PUMP STATION ELECTRICAL EQUIPMENT RACK LAYOUTS	
	E-5	CENTRAL PUMP STATION ELECTRICAL EQUIPMENT RACK LAYOUTS	
	E-6	CENTRAL PUMP STATION ELECTRICAL ONE-LINE DIAGRAM	
ELECTRICAL	E-7	ELECTRICAL DETAILS AND PANEL SCHEDULE	
	E-8	ELECTRICAL MODIFICATIONS SITE PLAN	
	E-9	ELECTRICAL DETAILS	
	E-10	CONDUIT AND CABLE SCHEDULE	
	E-11	ELECTRICAL BUILDING NO.1 FLOOR PLAN	
	E-12	MCC-9 ELEVATION AND DETAILS	
	E-13	MCC-10 ELEVATION AND DETAILS	
	E-14	MCC-9 AND MCC-10 ONE-LINE DIAGRAMS	
	E-15	BIO-SOLIDS BUILDING ELECTRICAL PLAN	
	E-16	DEWATERING BUILDING TEMPORARY POWER PLAN	
INSTRUMENTATION	I-1	WIRING DIAGRAMS	
	I-1	INSTRUMENTATION LEGEND AND ABBREVIATIONS	
	I-2	MOTOR CONTROL CABINET EXTERIOR ELEVATION	
	I-2A	MOTOR CONTROL CABINET DEADFRONT ELEVATION	
	I-2B	MOTOR CONTROL CABINET DEADFRONT ELEVATION	
	I-3	MOTOR CONTROL CABINET BILL OF MATERIALS	
	I-4	TYPICAL VFD WIRING SCHEMATIC	
	I-5	PUMP CONTROL CABINET ELEVATIONS AND DETAIL	
	I-5A	PUMP CONTROL CABINET BILL OF MATERIALS	
	I-6	PUMP CONTROL CABINET POWER WIRING SCHEMATICS	
I-6A	PUMP CONTROL CABINET PLC IO WIRING SCHEMATICS		
I-7	INSTRUMENTATION DETAILS		
I-8	WET WELL JUNCTION BOX RACK DETAILS		
I-9	JUNCTION BOX DETAILS		

**SURVEY LEGEND**

○ IRON PIPE	◇ SIGN	🌳 OAK
● IRON ROD W/ CAP	◊ UTILITY POLE	🌴 PALM
⊙ PK NAIL W/ DISC	— GUY WIRE	🌳 TREE
■ CONCRETE MONUMENT	⊠ WATER METER	● JANUARY SUE TEST HOLE
R/W RIGHT-OF WAY	⊕ SANITARY MANHOLE	● MAY SUE TEST HOLE
PID PARCEL IDENTIFICATION	⊖ STORM MANHOLE	
PB PLAT BOOK	⊞ MAILBOX	
CB CONDOMINIUM BOOK	⊛ LIGHT POLE	
ORB OFFICIAL RECORD BOOK	⊙ FIRE HYDRANT	
PG PAGE	⊖ BACKFLOW PREVENTER	
BM SITE CONTROL POINT	● BOLLARD	
P/O PORTION OF	⊕ FLAG POLE	
⊙ SITE BENCHMARK	⊖ IRRIGATION BOX	

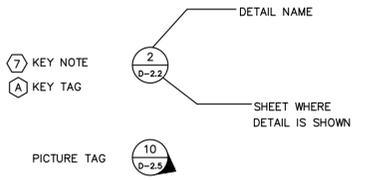
**SITE LEGEND**

	EXISTING	PROPOSED
CONCRETE SIDEWALK/ FLOWABLE FILL		
ASPHALT		
FENCE		
TO BE DEMOLISHED		
SILT FENCE		
MILL & SURFACE		
GRAVEL		
WETLAND BUFFER		
ACCESS DRIVE		
EX. FORCE MAIN		
EX. WATER		
EX. STORM		
EX. UGC		
EX. RECLAIMED WATER MAIN		
EX. SANITARY SEWER		
EX. SURFACE POND WATER		
EX. REJECT		
EX. CLAIRIFIER EFFLUENT		
EX. COMPRESSED AIR		
EX. PLAIN DRAIN FORCE MAIN		

**ABBREVIATIONS**

ARV	AIR RELEASE VALVE
CLS/CLS2	CENTERLINE CHLORINE SOLUTION
D	DUCTILE IRON
DIA	DIAMETER
DIP	DUCTILE IRON PIPE
EFF	EFFLUENT
ELEC	ELECTRICAL
EX	EXISTING
FL	FLANGED
FM	FORCE MAIN
FRP	FIBERGLASS PIPE
FT	FOOT OR FEET
INV	INVERT
MEG	MATCH EXISTING GRADE
MH	MANHOLE
MJ	MECHANICAL JOINT
PE	PLAIN END
PS	PUMP STATION
PVC	POLYVINYLCHLORIDE
PW	POTABLE WATER
RCW	RECLAIM WATER
SCH	SCHEDULE
SPW	STORAGE POND WATER
SS	STAINLESS STEEL
SWH	SIDE WALL HEIGHT
TYP.	TYPICAL
UGC	UNDERGROUND CONDUIT
VERT.	VERTICAL
W/	WITH
MEG	MATCH EXISTING GRADE

**PLAN CALLOUT LEGEND**



**GENERAL NOTES**

- THESE PLANS ARE SOLELY TO ASSIST THE CONTRACTOR IN ASSESSING THE NATURE AND EXTENT OF THE EXISTING CONDITIONS WHICH MAY BE ENCOUNTERED DURING THE COURSE OF WORK. CONTRACTORS ARE DIRECTED, PRIOR TO BIDDING, TO CONDUCT WHATEVER INVESTIGATION NECESSARY TO DETERMINE THE ACTUAL CONDITIONS THAT WILL BE ENCOUNTERED.
- LOCATION, ELEVATIONS AND DIMENSIONS OF EXISTING UTILITIES, STRUCTURES, AND OTHER FEATURES ARE SHOWN TO THE BEST INFORMATION AVAILABLE AT THE TIME OF PREPARATION OF THESE PLANS BUT DO NOT PURPORT TO BE ABSOLUTELY CORRECT. THE CONTRACTOR SHALL VERIFY, PRIOR TO CONSTRUCTION, THE LOCATIONS, ELEVATIONS, AND DIMENSIONS OF ALL EXISTING UTILITIES, STRUCTURES, AND OTHER FEATURES (WHETHER OR NOT SHOWN ON THE PLANS) AFFECTING HIS WORK.
- THE CONTRACTOR SHALL REVIEW AND VERIFY ALL DIMENSIONS ON THE PLANS AND REVIEW ALL FIELD CONDITIONS THAT MAY AFFECT CONSTRUCTION. SHOULD DISCREPANCIES OCCUR, THE CONTRACTOR SHALL NOTIFY THE ENGINEER TO OBTAIN THE ENGINEERS CLARIFICATION BEFORE COMMENCING.
- THE CONTRACTOR SHALL PROTECT ALL EXISTING STRUCTURES, STORM DRAINS, SEWERS, UTILITIES, AND OTHER FACILITIES IN THE CONSTRUCTION AREA. THE CONTRACTOR SHALL REPAIR ANY DAMAGES DUE TO HIS CONSTRUCTION.
- WHERE IT IS NECESSARY TO DEFLECT PIPE EITHER HORIZONTALLY OR VERTICALLY, PIPE JOINT DEFLECTION SHALL NOT EXCEED 75% OF THE MANUFACTURERS' MAXIMUM RECOMMENDED DEFLECTION.
- THE CONTRACTOR SHALL BE RESPONSIBLE FOR THE MAINTENANCE OF THE EXISTING DRAINAGE SYSTEM WITHIN THE LIMITS OF THE PROJECT AREA FOR THE DURATION OF THE PROJECT.
- THE CONTRACTOR SHALL PROVIDE CERTIFIED RECORD DRAWINGS AS OUTLINED IN THE SPECIFICATIONS. RED-LINE DRAWINGS SHALL BE CURRENT WITH EACH PAY APPLICATION SUBMITTED AND WILL BE CHECKED AS PART OF THE PAY APPLICATION REVIEW PROCESS. PAYMENT WILL NOT BE MADE TO CONTRACTOR WITHOUT APPROVED RED-LINE DRAWINGS. THE MOST CURRENT SET OF RED-LINE DRAWINGS SHALL ALSO BE BROUGHT TO EACH MONTHLY PROGRESS MEETING.
- FIELD CONDITIONS MAY NECESSITATE ALIGNMENT AND GRADE DEVIATION OF THE PROPOSED PIPELINES TO AVOID CONFLICTS. NO ADDITIONAL PAYMENT SHALL BE MADE WITHOUT PRIOR APPROVAL OF THE OWNER AND THE OWNER'S ENGINEER.
- IT SHALL BE THE CONTRACTOR'S RESPONSIBILITY TO PROPERLY DISPOSE OF ALL WASTEWATER, SLUDGE, AND GRIT WITHIN ALL PIPES TO BE DEMOLISHED, REMOVED, OR CONNECTED TO.
- ALL PROPOSED WORK SHALL BE COORDINATED WITH WASTEWATER TREATMENT PLANT PERSONNEL AND MANATEE COUNTY UTILITIES DEPARTMENT AT LEAST TWO WEEKS IN ADVANCE OF PROPOSED CONSTRUCTION.
- THE CONTRACTOR SHALL FURNISH SHOP DRAWINGS PER SPECIFICATION SECTION 01340 TO THE ENGINEER FOR REVIEW OF ALL PIPE CONNECTIONS, TRANSITIONS, AND SPECIAL APPURTENANCES PRIOR TO FABRICATION OR DELIVERY TO THE JOB SITE.
- CONNECTIONS TO EXISTING FACILITIES SHALL BE ACCOMPLISHED IN A NEAT WORKMANSHIP LIKE MANNER, WHEN FIELD CONDITIONS INDICATE ANY VARIANCE FROM DETAILED METHODS. THE CONTRACTOR SHALL PROVIDE COMPREHENSIVE AND DETAILED DRAWINGS FOR OWNER REVIEW AND APPROVAL PRIOR TO MAKING THE CONNECTIONS.
- UNLESS OTHERWISE INDICATED OR APPROVED, ALL BELOW GROUND DUCTILE IRON PIPE SHALL HAVE PUSH-ON OR MECHANICAL JOINTS, AND ALL ABOVE GROUND DUCTILE IRON PIPE SHALL HAVE FLANGED JOINTS. ALL PIPE IN CONTACT WITH RECLAIMED WATER SHALL HAVE A CEMENT LINING PER AWWA C104. ALL BURIED PIPE SHALL HAVE AN EXTERNAL COAL TAR ENAMEL. ALL EXPOSED PIPE SHALL HAVE AN FACTORY APPLIED EXTERIOR EPOXY PRIMER. ALL JOINTS SHALL BE RESTRAINED PER JOINT RESTRAINT TABLE UNLESS OTHERWISE SPECIFIED ON THE PLANS. CONTRACTOR TO FULLY RESTRAIN EXISTING PIPE AT TIE-IN LOCATIONS OF NEW PIPE IN ACCORDANCE WITH JOINT RESTRAINT TABLE.
- ALL PIPELINES SHALL HAVE A MINIMUM COVER OF 36" BELOW EXISTING GRADE UNLESS OTHERWISE NOTED OR DIRECTED.
- SANITARY SEWERS AND FORCE MAINS CROSSING OVER OR UNDER WATER MAINS SHALL BE LAID TO PROVIDE A MINIMUM VERTICAL DISTANCE OF 18" BETWEEN THE INVERT OF THE UPPER PIPE AND THE CROWN OF THE LOWER PIPE. WHERE THIS MINIMUM SEPARATION CANNOT BE MAINTAINED, THE CROSSING SHALL BE ARRANGED SO THAT THE SEWER OR FORCE MAIN PIPE JOINTS ARE EQUIDISTANT FROM THE POINT OF CROSSING WITH NO LESS THAN 10" BETWEEN ANY TWO JOINTS. AS AN ALTERNATIVE, THE SEWER OR FORCE MAIN MAY BE PLACED IN A WATERTIGHT CASING PIPE.
- WATER SHALL NOT BE PERMITTED IN BUILDING EXCAVATIONS OR TRENCHES DURING CONSTRUCTION. DEWATERING IS REQUIRED TO A MINIMUM OF 18" BELOW BOTTOM OF EXCAVATION.
- THE CONTRACTOR SHALL NOT ALLOW ANY DISCHARGE OF WASTEWATER TO LANDS AND/OR ADJACENT WATER BODIES OR STORM DRAINS. ANY LEAKAGE MUST BE CONTAINED AND REMOVED BY THE CONTRACTOR TO THE PLANT DRAIN PUMP STATION AT THE WASTEWATER TREATMENT PLANT. CONTRACTOR SHALL BE RESPONSIBLE FOR REPORTING ANY SPILLS TO FDEP.
- ALL BELOW-GRADE FITTINGS 4-INCHES AND GREATER IN DIAMETER SHALL BE MECHANICAL JOINT DUCTILE IRON AND COATED ON THE INSIDE WITH CEMENT LINING PER AWWA C104, AND SHALL HAVE A COAL TAR ENAMEL COATING ON THE OUTSIDE.
- ALL EXPOSED FITTINGS 4-INCHES AND GREATER IN DIAMETER SHALL BE FLANGED JOINT DUCTILE IRON AND COATED ON THE INSIDE WITH A CEMENT LINING PER AWWA C104, AND SHALL HAVE A FACTORY APPLIED EXTERIOR EPOXY PRIMER.
- ALL EXPOSED PIPING AND FITTINGS SHALL BE PAINTED WITH DESIGNATED COLORS ASSOCIATED WITH THEIR USAGE AS PROVIDED IN THE SPECIFICATIONS.
- ALL NEW PIPELINES SHALL BE FLUSHED, PRESSURE TESTED, AND APPROVED PRIOR TO TIE-INS TO EXISTING FACILITIES. THE CONTRACTOR WILL BE ALLOWED TO USE TEMPORARY PLUGS FOR PRESSURE TESTING.
- CONTRACTOR SHALL MAINTAIN A CLEAR PATH FOR ALL SURFACE WATER DRAINAGE STRUCTURES AND DITCHES DURING ALL PHASES OF CONSTRUCTION. THE CONTRACTOR SHALL BE REQUIRED TO INSTALL ALL EROSION, SEDIMENT, AND TURBIDITY CONTROL MEASURES PRIOR TO CONSTRUCTION OF ANY COMPONENTS ASSOCIATED WITH THE PROJECT. SEDIMENT CONTROL INCLUDES SILT DAMS, TRAPS, EROSION PROTECTION, AND ANY OTHER APPURTENANCES NEEDED BUT NOT NECESSARILY SHOWN ON THESE DRAWINGS.
- CONTRACTOR SHALL PROVIDE PROTECTIVE MATTING, FUEL CONTAINMENT AND ALL OTHER MATERIALS, EQUIPMENT AND LABOR TO PROTECT THE STAGING AREA DURING CONSTRUCTION.
- CONTRACTOR SHALL, PRIOR TO BEGINNING CONSTRUCTION, SUBMIT A "FUELING SPILL PREVENTION PLAN" THAT SHALL CLEARLY INDICATE HOW FUEL SPILLS WILL BE PREVENTED WHEN FUELING BOTH WITHIN AND OUTSIDE

**EARTHWORK NOTES**

- ALL EXCAVATED MATERIAL SHALL BE REMOVED FROM THE SITE IN ACCORDANCE WITH THE OWNER'S REQUIREMENTS EXCESS DIRT EXCAVATED IN CONSTRUCTING THE PROPOSED IMPROVEMENTS TO THE PROPOSED GRADES SHALL BE RETAINED BY THE CONTRACTOR.
- THE CONTRACTOR SHALL INSTALL BARRICADES OF OTHER SYSTEMS APPROVED BY THE OWNER'S REPRESENTATIVE TO PROTECT TREES THAT ARE TO REMAIN. IF TREES NEED TO BE REMOVED, THE CONTRACTOR SHALL PREPARE AND SUBMIT THE REQUIRED TREE REMOVAL PERMITS. THAT ASSOCIATED PERMITTING FEES SHALL BE BORNE BY THE CONTRACTOR AND INCLUDED WITHIN THE SCOPE OF WORK. THE COST TO REMOVE AND REPLACE (IF REQUIRED) THE TREES SHALL BE BORNE BY THE CONTRACTOR.
- DAMAGES TO TREE ROOTS GREATER THAN 1-INCH IN DIAMETER THAT ARE AFFECTED BY THE CONTRACTOR'S ACTIVITIES WITHIN THE DRIP-LINE OF THE TREE SHALL BE SAWS WITH A CLEAN CUT.
- THE CONTRACTOR SHALL PROVIDE ALL SHEETING, SHORING, AND BRACING REQUIRED TO PROTECT ADJACENT STRUCTURES OR TO MINIMIZE TRENCH WIDTHS. WHEN A SEPARATE PAY ITEM IS NOT PROVIDED, THE COST OF ALL SHEETING, SHORING AND BRACING REQUIRED SHALL BE INCLUDED IN THE CONTRACT PRICE FOR THE ITEM OF WORK FOR WHICH SHEETING, SHORING AND BRACING IS ANTICIPATED TO BE REQUIRED IN ACCORDANCE WITH THE TRENCH SAFETY ACT.

**SURVEY NOTES**

- THE FOLLOWING VERTICAL CONTROL MONUMENTS WERE RECOVERED AND UTILIZED FOR THE ELEVATIONS INDICATED HEREIN:
  - COORDINATES- N: 1138264.41 E: 513497.33 ELEV. (NGVD) 48.93'
- THIS SURVEY IS REFERENCED TO A PROJECTION OF THE FLORIDA STATE PLANE COORDINATE SYSTEM (WEST ZONE NAD 1983/2011 ADJUSTMENT).
- THIS IS NOT A BOUNDARY OR MEAN HIGH WATER SURVEY. TITLE WORK WAS NOT PROVIDED.
- THIS SURVEY IS SUBJECT TO PERTINENT EASEMENTS, RIGHTS-OF-WAY AND RESTRICTIONS OF RECORD, IF ANY.
- THIS SURVEY DRAWING WAS PREPARED FOR THE EXCLUSIVE USE OF THE PARTY OR PARTIES CERTIFIED TO BELOW FOR THE EXPRESS PURPOSE STATED HEREON AND/OR CONTAINED IN THE CONTRACT BETWEEN HYATT SURVEY SERVICES, INC. AND THE CLIENT FOR THIS PROJECT. COPYING, DISTRIBUTING AND/OR USING THIS DRAWING, IN WHOLE OR IN PART FOR ANY PURPOSE OTHER THAN ORIGINALLY INTENDED WITHOUT WRITTEN CONSENT FROM HYATT SURVEY SERVICES, INC. IS STRICTLY PROHIBITED AND RENDERS THE SURVEYOR'S CERTIFICATION, SIGNATURE AND SEAL NULL AND VOID. ANY QUESTIONS CONCERNING THE CONTENT OR PURPOSE OF THIS DRAWING SHOULD BE DIRECTED TO HYATT SURVEY SERVICES, INC.

**UTILITY NOTES**

- THE CONTRACTOR SHALL BE RESPONSIBLE FOR COORDINATING WITH THE FOLLOWING JURISDICTIONAL BODIES AND UTILITY COMPANIES:
  - MANATEE COUNTY PUBLIC WORKS  
ANTHONY BENITZ, P.E.  
1022 26TH AVENUE EAST  
BRADENTON, FL 34208-3916  
(941) 708-7450 EXT. 7333
  - SOUTHEAST REGIONAL WASTEWATER TREATMENT PLANT  
VICTOR BOUCHER, CHIEF OPERATOR  
LENA ROAD  
BRADENTON, FL 34210  
(941) 792-8811 EXT. 8028
- ALL UTILITY CONSTRUCTION SHALL BE IN CONFORMANCE WITH THE LATEST VERSION OF THE MANATEE COUNTY UTILITY STANDARDS, UNLESS OTHERWISE SPECIFIED.
- ALL VALVE BOX COVERS SHALL BE PAINTED TO INDICATE THEIR TYPE OF SERVICE.
- ALL TEST POINT TAPPING SHALL BE CUT LOOSE FROM THE CORPORATION STOP AND COMPLETELY REMOVED AND DISPOSED OF BY THE CONTRACTOR PRIOR TO FINAL ACCEPTANCE. THE CORPORATION STOP SHALL BE CAPPED AND REMAIN IN PLACE.

**MAY 2017 SUE TEST HOLE DATA**

NUMBER	UTILITY	SIZE/MATERIAL	GROUND ELEVATION	TOP OF PIPE
VH-101	FM	30" DIP	36.55	31.69
VH-102	FM	12" PVC	36.17	31.76
VH-103	FM	36" DIP	35.99	31.69
VH-104	FM	36" DIP	39.34	32.90
VH-105	FM	12" PVC	40.48	33.27
VH-106	RCW	30" DIP	40.50	37.32
VH-107	FM	2" PVC	40.78	37.77
VH-108	FM	36" DIP	38.82	32.64
VH-109	FM	12" PVC	37.95	31.70
VH-110	RCW	30" DIP	37.86	35.06
VH-111	UNKNOWN	DIP	37.45	31.00
VH-112	RCW	36" DIP	34.61	31.61
VH-113	UNKNOWN	DIP	34.54	27.08
VH-114	FM	24" DIP	35.48	32.78
VH-115	FM	12" PVC	35.50	32.67

**JANUARY 2017 SUE TEST HOLE DATA**

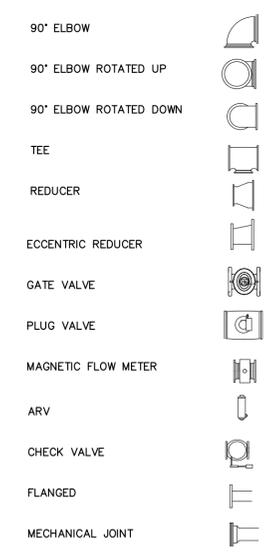
NUMBER	UTILITY	SIZE/MATERIAL	GROUND ELEVATION	TOP OF PIPE
VH-101	UNKNOWN	DIP	35.33	32.82
VH-102	CLE	36" DIP	35.99	29.39
VH-103	2CL2S	2" PVC	36	33.95
VH-104	REJ	12" PVC	37.06	32.94
VH-105	SPW	16" DIP	36.92	33.12
VH-106	UNKNOWN	12" DIP	36.34	33.18
VH-107	RCW	DIP	34.96	29.96
VH-108	BE	2" PVC	35.40	33.55
VH-109	UNKNOWN	12" PVC	35.62	31.34
VH-110	UNKNOWN	8" PE	35.60	32.93
VH-111	BE	2" PVC	35.87	34.27
VH-112	UNKNOWN	DIP	35.05	29.75

NOTE: SUBSURFACE UTILITY ENGINEERING DATA PROVIDED BY HYATT SURVEY SERVICES, DATED JANUARY 18, 2017 AND MAY 24, 2017.

**RESTORATION AND MISCELLANEOUS NOTES**

- ALL RESTORATION WORK PERFORMED THROUGHOUT THE PROJECT SHALL CONFORM TO EXISTING LINES AND GRADES UNLESS OTHERWISE NOTED.
- THE CONTRACTOR SHALL PROVIDE AN ASPHALT PATCH FOR TRENCH AREAS CONSTRUCTED IN EXISTING ROADWAYS. ADJUST ALL CASTINGS TO MATCH NEW PAVEMENT SURFACE.
- THE CONTRACTOR SHALL REPLACE ALL EXISTING PAVING, STABILIZED EARTH, CURBS, SIDEWALKS, FENCES, LANDSCAPING, AND OTHER IMPROVEMENTS WITH THE SAME OR BETTER TYPE AND QUANTITY OF MATERIAL THAT WAS REMOVED DURING CONSTRUCTION OR AS DIRECTED BY THE ENGINEER.
- ALL EXISTING FENCES DISTURBED DURING CONSTRUCTION SHALL BE REPAIRED OR REPLACED AND REINSTALLED BY THE CONTRACTOR AT NO ADDITIONAL COST TO THE OWNER UNLESS SHOWN TO BE REMOVED ON CONSTRUCTION PLANS.
- CONTRACTOR SHALL RESTORE ALL IRRIGATION SYSTEM COMPONENTS TO PRE-CONSTRUCTION CONDITIONS.
- ALL DISTURBED GRASSED AREAS SHALL BE RESTORED WITH SOD LIKE KIND UNLESS OTHERWISE DIRECTED BY OWNER. CONTRACTOR SHALL ROLL ALL SODDED AREAS.
- CONCRETE SIDEWALKS ACROSS DRIVEWAYS SHALL BE RESTORED WITH 6 INCHES OF 3,000 PSI CONCRETE WITH W2.5 X W2.5, 6X6 WIRE MESH. PLACE 1/2 INCH EXPANSION JOINT BETWEEN BACK OF CURB AND NEW CONCRETE. AREA BENEATH RESTORATION SHALL BE MECHANICALLY TAMPED PRIOR TO PLACING CONCRETE.
- CONCRETE SIDEWALKS OUTSIDE OF DRIVEWAYS SHALL BE RESTORED WITH 4 INCHES OF 3,000 PSI CONCRETE PER FDOT DESIGN STANDARDS, SECTIONS 522 & 310.
- RIP RAP SHALL BE INSTALLED PER FDOT STANDARD SPECIFICATION 530 AND SHALL BE PROCURED FROM A FDOT APPROVED YARD.

**PIPE AND FITTING SYMBOLS**



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

**Kimley-Horn**

© 2020 KIMLEY-HORN AND ASSOCIATES, INC.  
100 2ND AVENUE SOUTH, SUITE 105N  
ST. PETERSBURG, FL 33701  
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

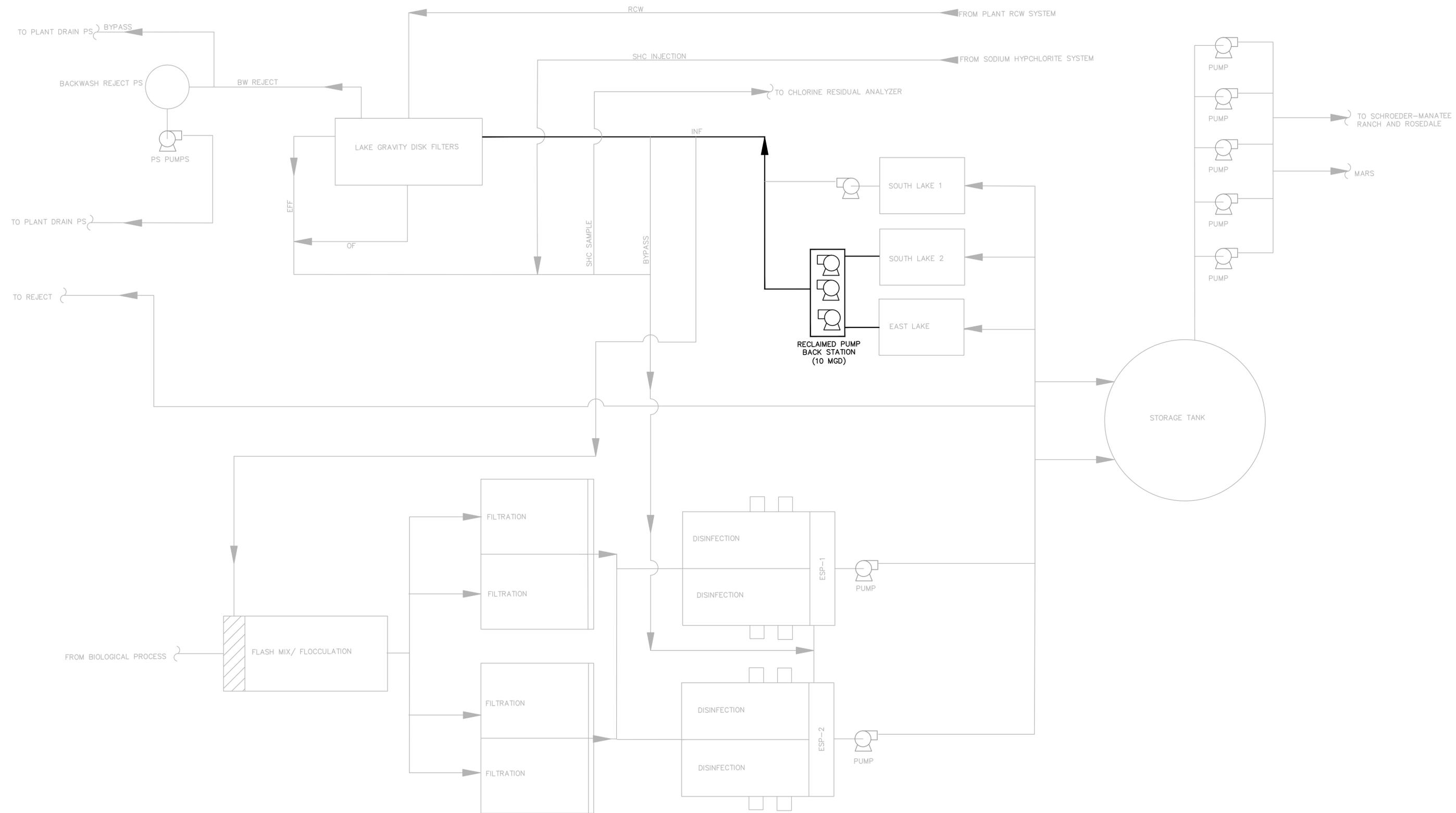
**SEWRF RECLAIMED PUMP BACK STATION**

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

**DRAWING INDEX AND GENERAL NOTES**

SHEET NUMBER **G-2**

This document, together with the concepts and designs presented herein, is intended only for the specific purpose and client for which it was prepared. Reuse of and improper reliance on this document without written authorization and adaptation by Kimley-Horn and Associates, Inc. shall be without liability to Kimley-Horn and Associates, Inc.



No.	REVISIONS	DATE	BY

**Kimley»Horn**

© 2020 KIMLEY-HORN AND ASSOCIATES, INC.  
 100 2ND AVENUE SOUTH, SUITE 105N  
 ST. PETERSBURG, FL 33701  
 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

**PROCESS FLOW DIAGRAM**

SHEET NUMBER
<b>G-3</b>



No.	REVISIONS	DATE	BY

**Kimley»Horn**  
 © 2020 KIMLEY-HORN AND ASSOCIATES, INC.  
 100 2ND AVENUE SOUTH, SUITE 105N  
 ST. PETERSBURG, FL 33701  
 PHONE: 727-547-3999  
 WWW.KIMLEY-HORN.COM CA 0000696

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

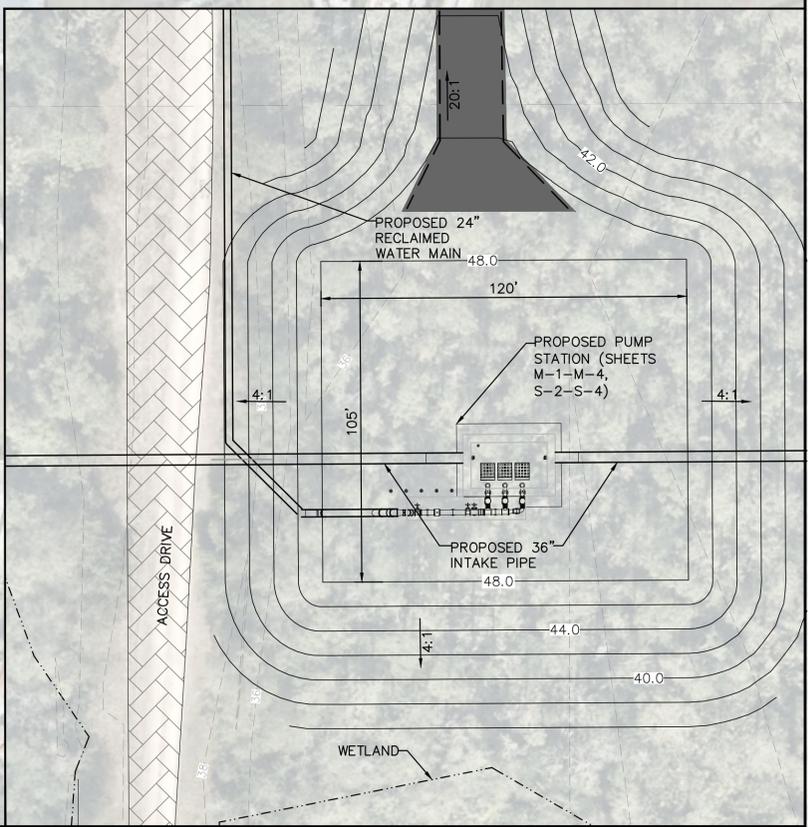
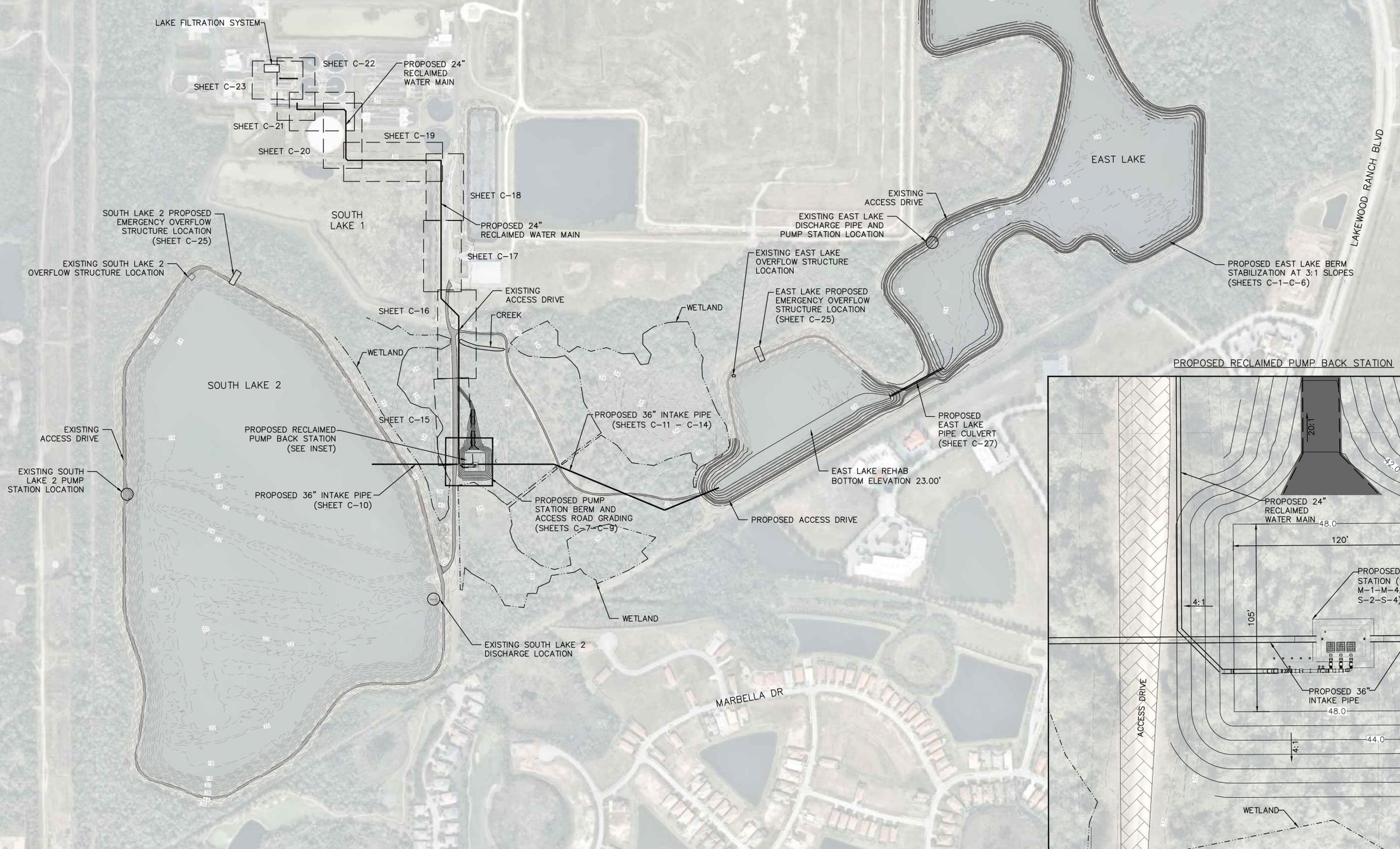
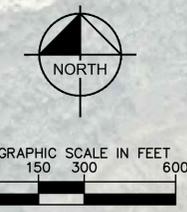
**Manatee County**  
**SEWRF RECLAIMED PUMP BACK STATION**  
 MANATEE COUNTY

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

**EXISTING SITE PLAN**

SHEET NUMBER  
**G-4**

This document, together with the concepts and designs presented herein, is intended only for the specific purpose and client for which it was prepared. Reuse of and improper reliance on this document without written authorization and approval by Kimley-Horn and Associates, Inc. shall be without liability to Kimley-Horn and Associates, Inc.



No.	REVISIONS	DATE	BY

**Kimley»Horn**

© 2020 KIMLEY-HORN AND ASSOCIATES, INC.  
 100 2ND AVENUE SOUTH, SUITE 105N  
 ST. PETERSBURG, FL 33701  
 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

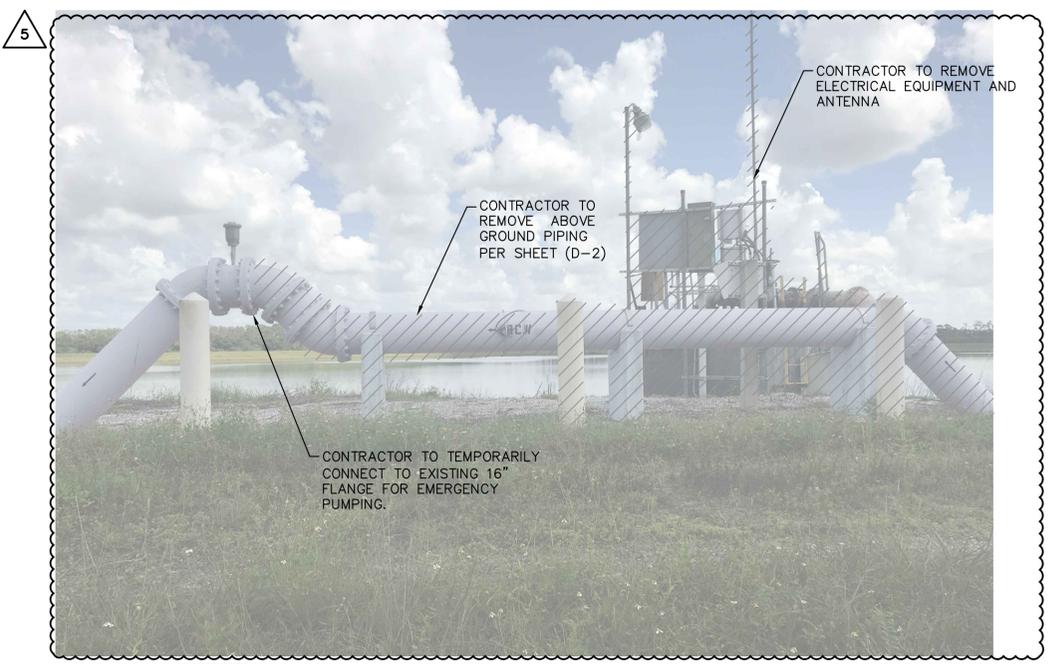
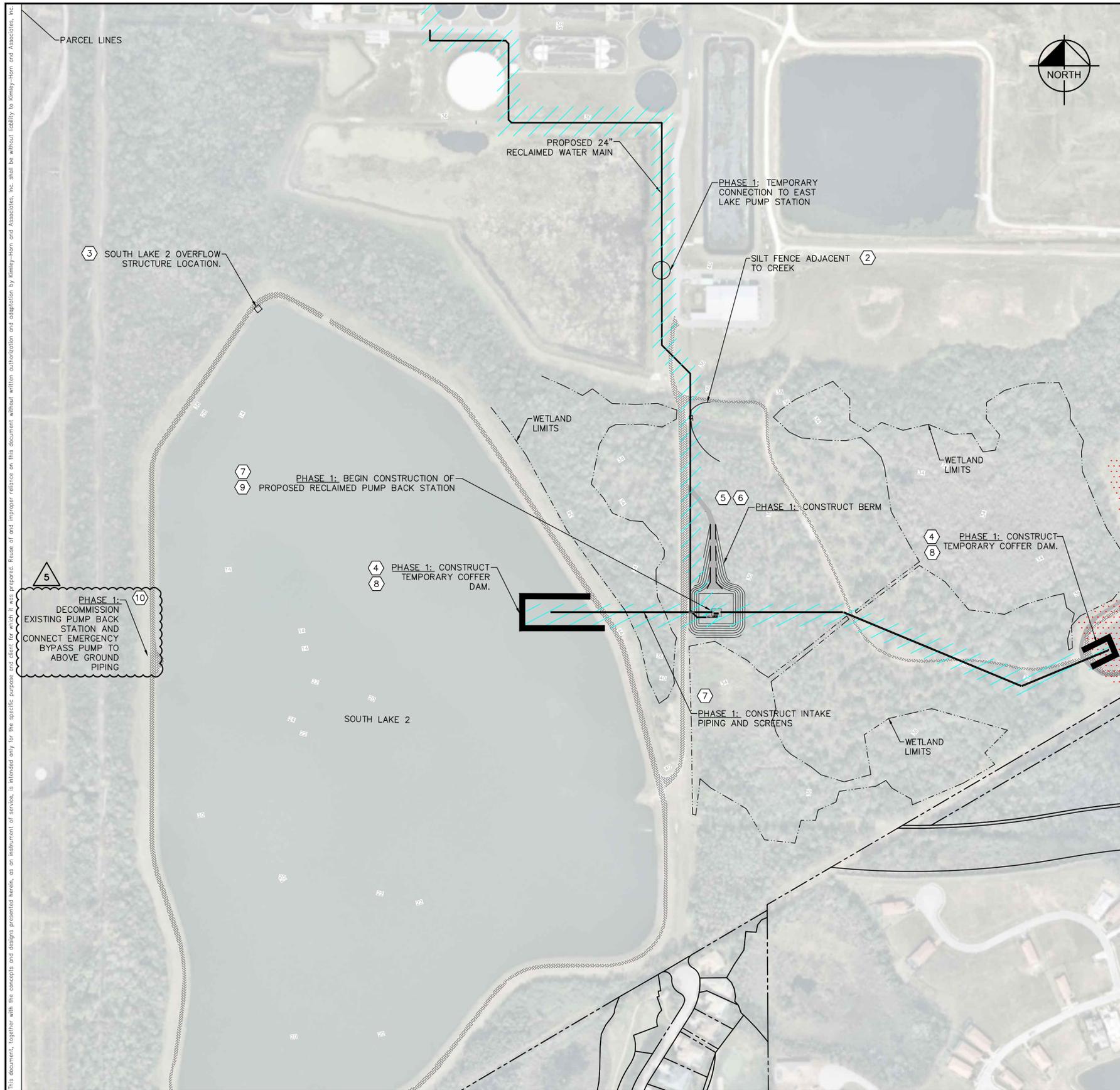
**SEWRF RECLAIMED  
 PUMP BACK STATION**

MANATEE COUNTY

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

**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
No.	REVISIONS	DATE	BY

**Kimley»Horn**  
 © 2020 KIMLEY-HORN AND ASSOCIATES, INC.  
 100 2ND AVENUE SOUTH, SUITE 105N  
 ST. PETERSBURG, FL 33701  
 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

**SEWRF RECLAIMED PUMP BACK STATION**  
 MANATEE COUNTY

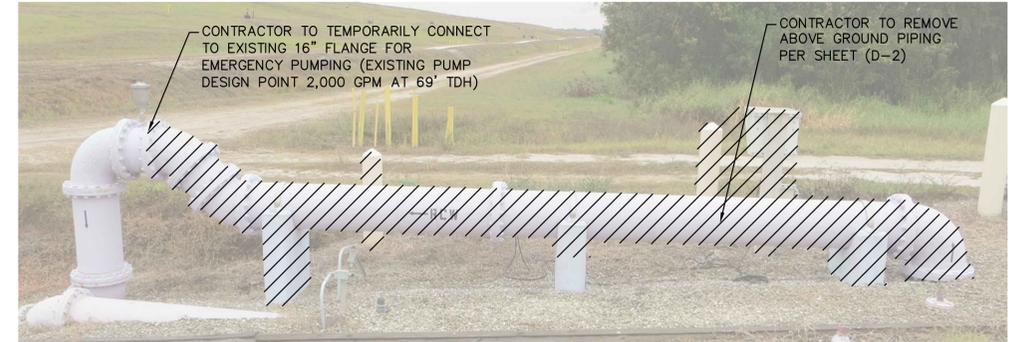
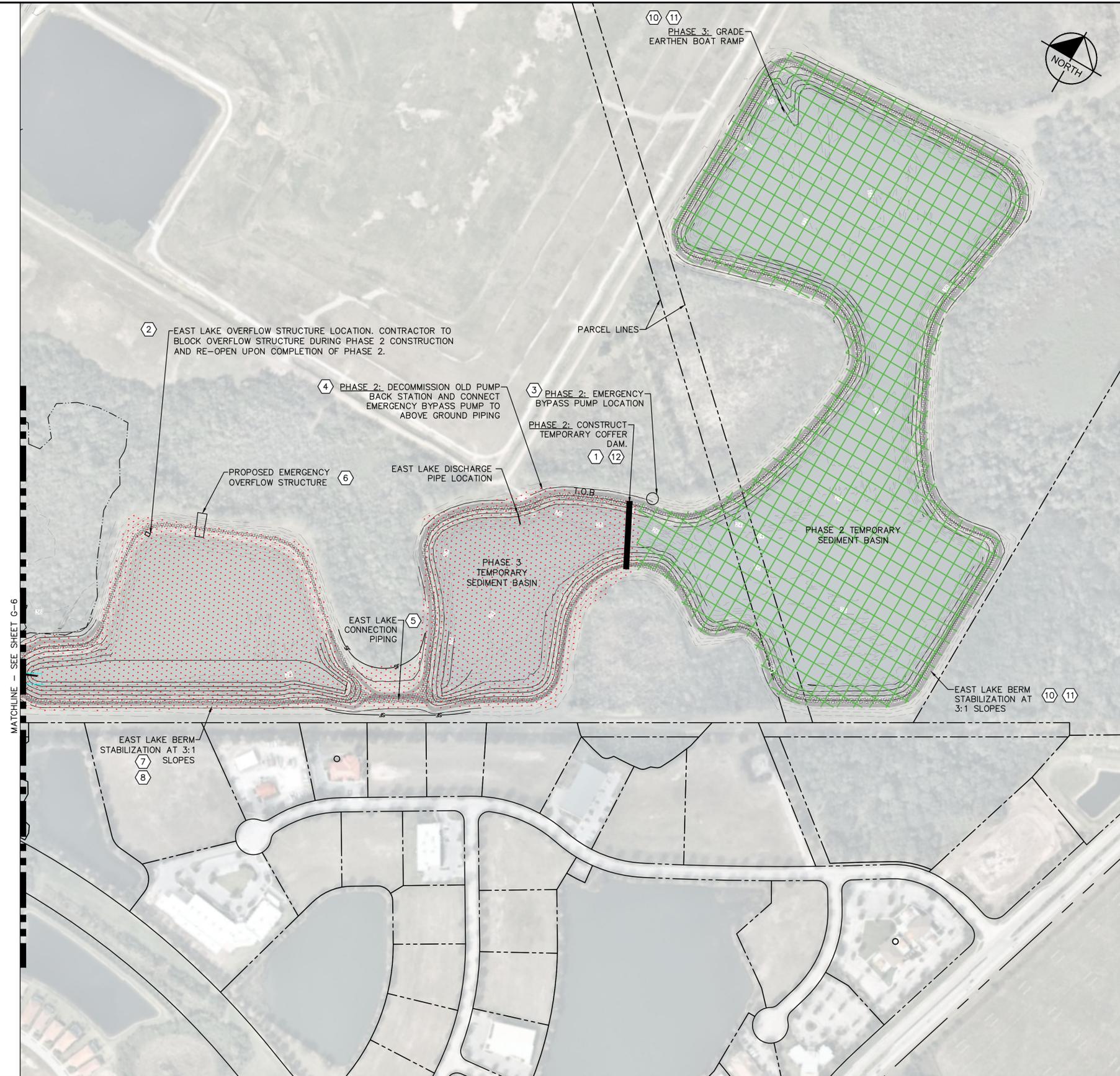
LICENSED PROFESSIONAL	STEPHEN N. ROMANO, P.E.
FL LICENSE NUMBER	57579
FL DATE:	

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

SHEET NUMBER	G-6
--------------	-----

This document, together with the concepts and designs presented herein, is intended only for the specific purpose and site for which it was prepared. Reuse of any information or adaptation by Kimley-Horn and Associates, Inc. shall be without liability to Kimley-Horn and Associates, Inc.

This document, together with the concepts and designs presented herein, is intended only for the specific purpose and client for which it was prepared. Reuse of any information or design on this document without written authorization and adaptation by Kimley-Horn and Associates, Inc. shall be without liability to Kimley-Horn and Associates, Inc.



**EAST LAKE TEMPORARY EMERGENCY PUMPING CONNECTION**

- PHASE 2** [Pattern]
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** [Pattern]
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

No.	REVISIONS	DATE	BY

**Kimley»Horn**

© 2020 KIMLEY-HORN AND ASSOCIATES, INC.  
 100 2ND AVENUE SOUTH, SUITE 105N  
 ST. PETERSBURG, FL 33701  
 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

**EROSION CONTROL AND CONSTRUCTION PHASING PLAN**

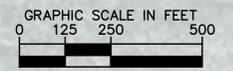
**PHASE 2 AND 3**

SHEET NUMBER

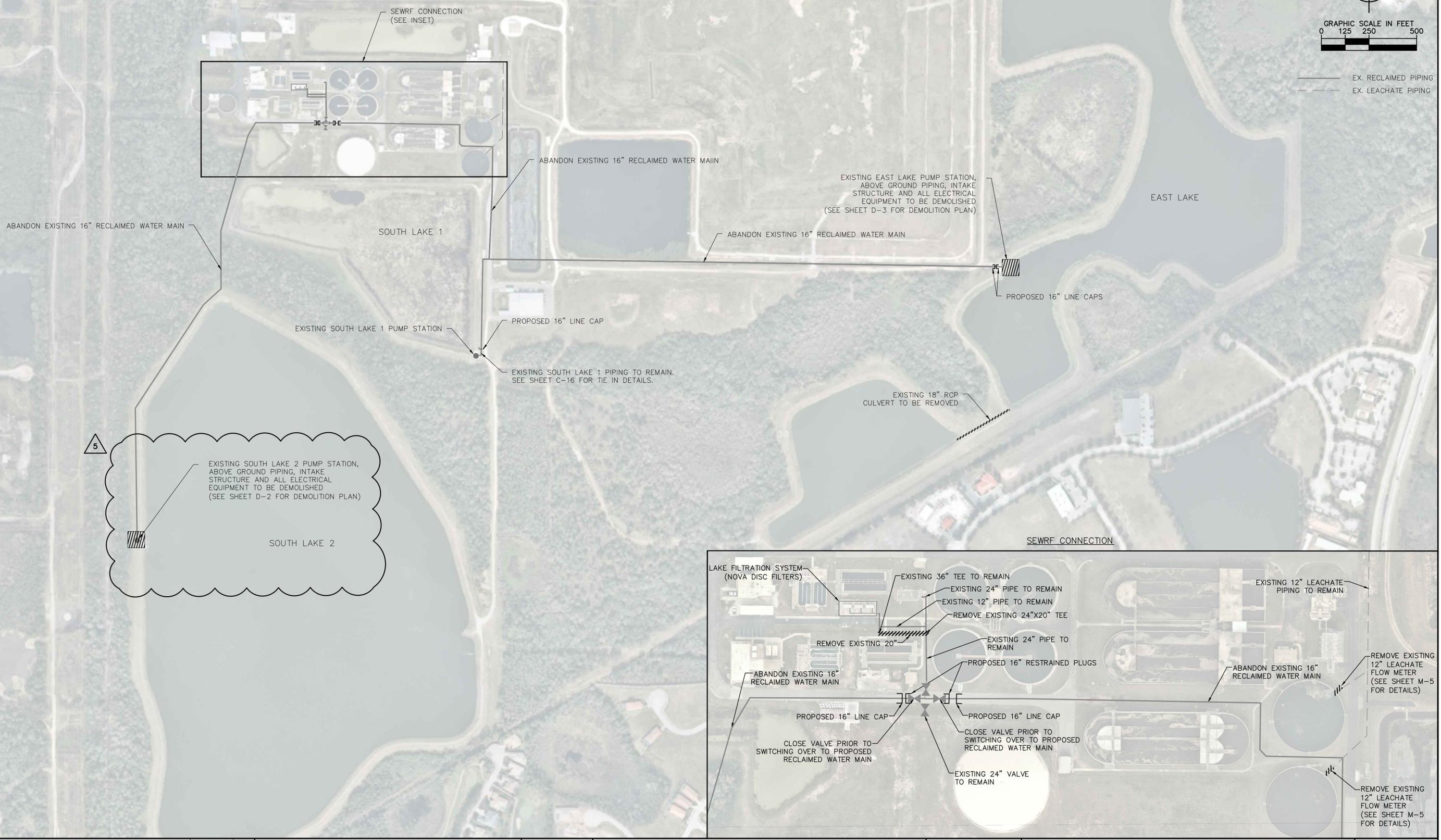
**G-7**



This document, together with the concepts and designs presented herein, is intended only for the specific purpose and client for which it was prepared. Reuse of and improper reliance on this document without written authorization and adaptation by Kimley-Horn and Associates, Inc. shall be without liability to Kimley-Horn and Associates, Inc.



— EX. RECLAIMED PIPING  
 - - - EX. LEACHATE PIPING



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

**Kimley»Horn**

© 2020 KIMLEY-HORN AND ASSOCIATES, INC.  
 100 2ND AVENUE SOUTH, SUITE 105N  
 ST. PETERSBURG, FL 33701  
 PHONE: 727-547-3999  
 WWW.KIMLEY-HORN.COM CA 0000696

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

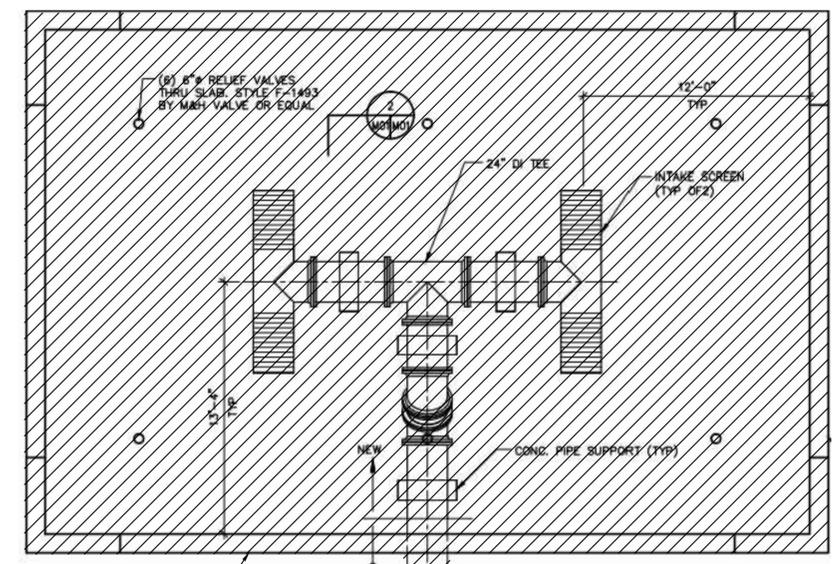
LICENSED PROFESSIONAL
STEPHEN N. ROMANO, P.E.
FL LICENSE NUMBER 57579
FL DATE:

**OVERALL DEMOLITION PLAN**

SHEET NUMBER
D-1

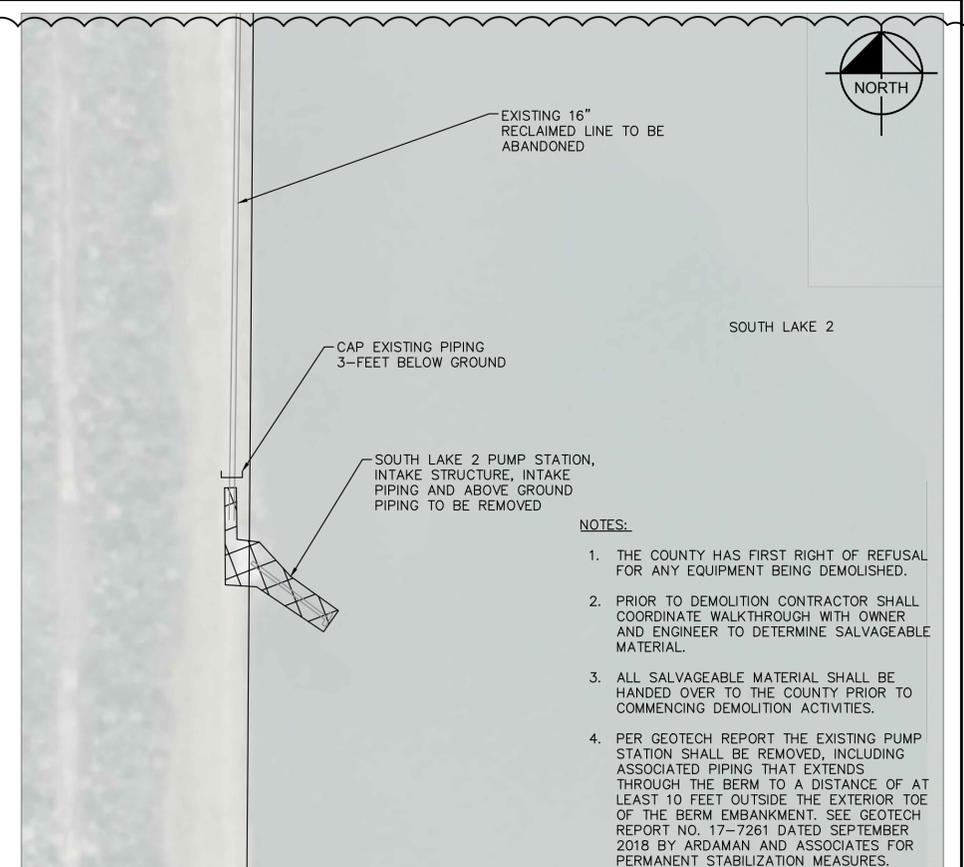


EX. SOUTH LAKE 2 PUMP STATION



EX. SOUTH LAKE 2 INTAKE STRUCTURE

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



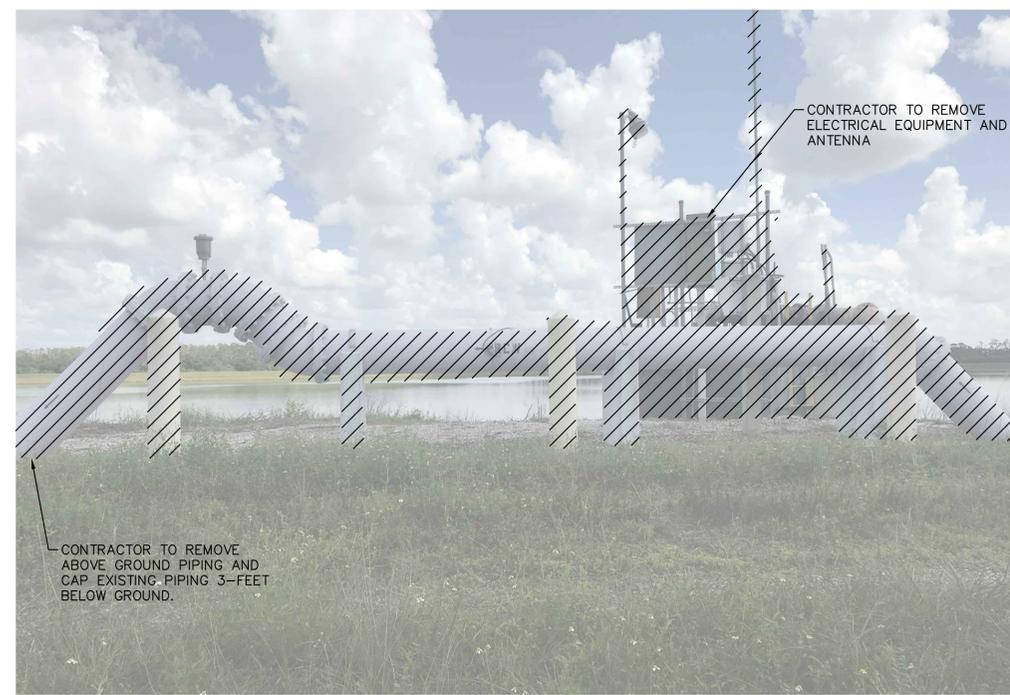
EXISTING PUMP STATION LOCATION MAP

- 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.



EX. SOUTH LAKE 2 PUMP STATION

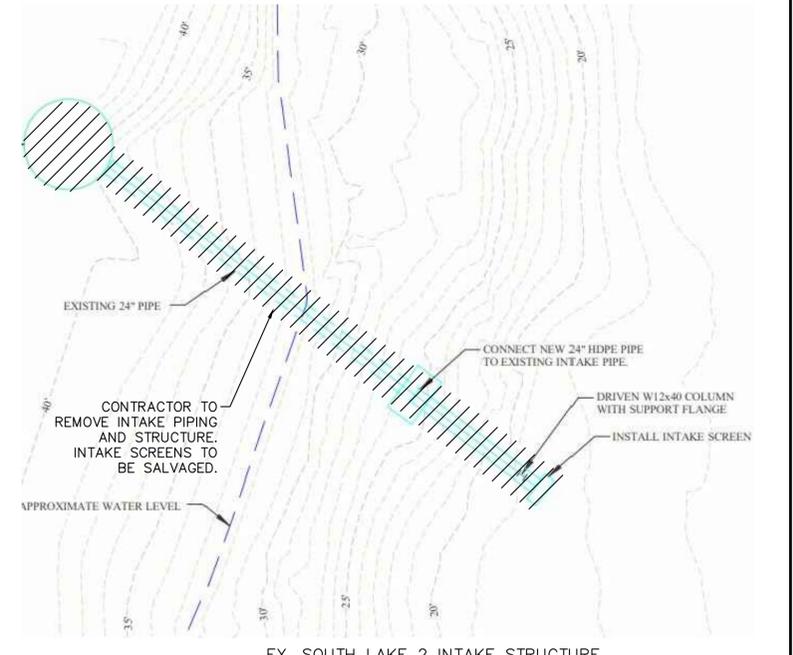
CONTRACTOR TO DEMOLISH EXISTING WET WELL AND REMOVE ASSOCIATED PIPING EXTENDING THROUGH THE BERM PER GEOTECH RECOMMENDATIONS. EXCAVATION TO BE FULLY DEWATERED AND BACKFILLED WITH COMPACTED FILL.



EX. SOUTH LAKE 2 ABOVE GROUND PIPING

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

CONTRACTOR TO REMOVE ELECTRICAL EQUIPMENT AND ANTENNA



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

**Kimley»Horn**

© 2020 KIMLEY-HORN AND ASSOCIATES, INC.  
 100 2ND AVENUE SOUTH, SUITE 105N  
 ST. PETERSBURG, FL 33701  
 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**

**SEWRF RECLAIMED PUMP BACK STATION**

MANATEE COUNTY

LICENSED PROFESSIONAL

STEPHEN N. ROMANO, P.E.

FL LICENSE NUMBER  
57579

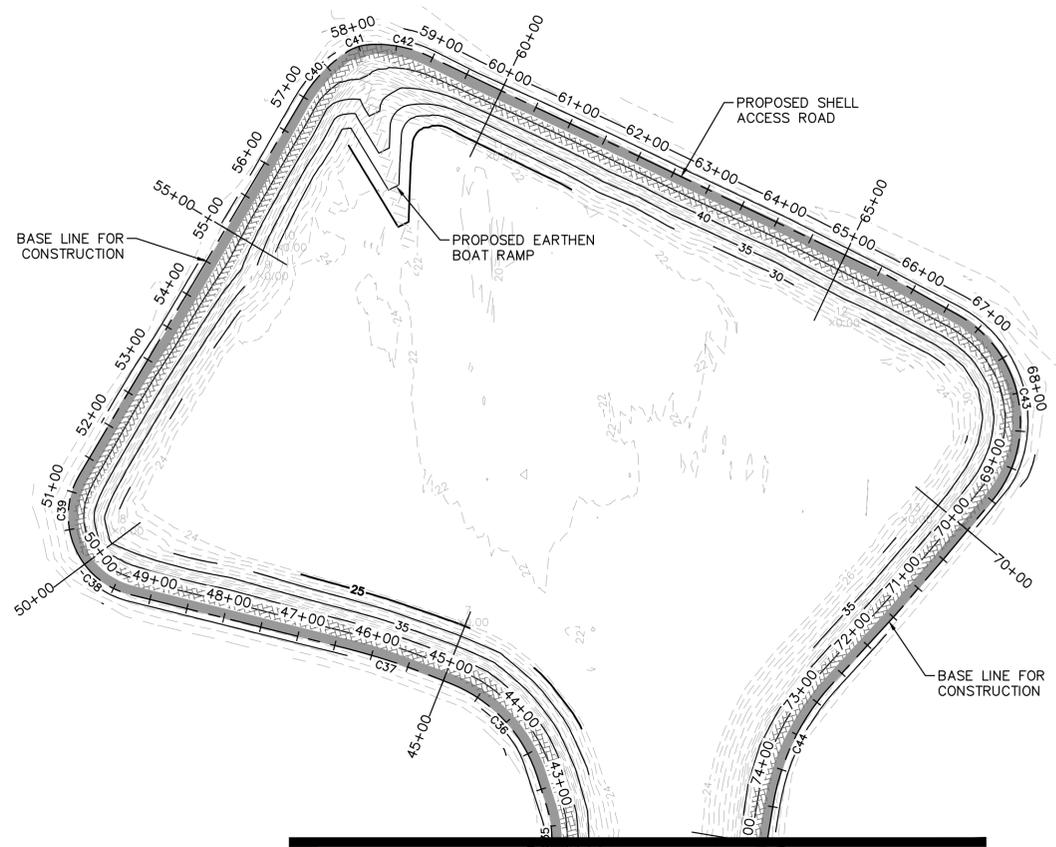
**SOUTH LAKE 2 PUMP STATION DEMOLITION PLAN**

SHEET NUMBER

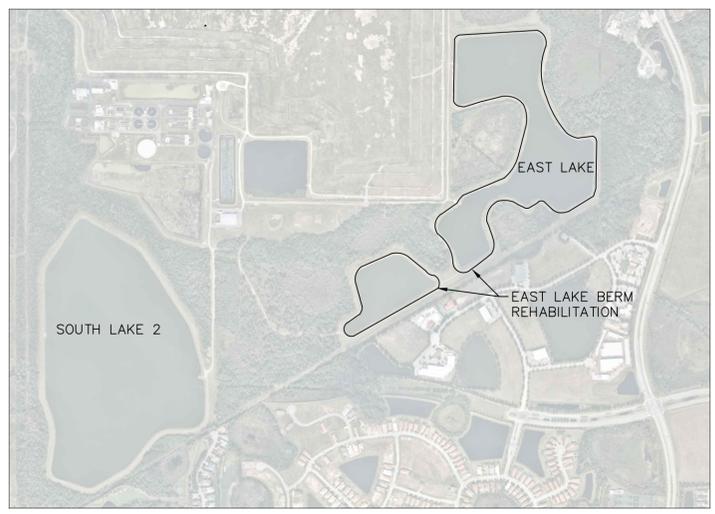
**D-2**



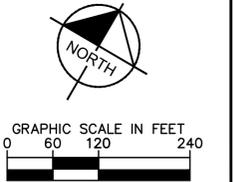
This document, together with the concepts and designs presented herein, is an instrument of service intended only for the specific purpose and client for which it was prepared. Reuse of any improper reliance on this document without written authorization and approval by Kimley-Horn and Associates, Inc. shall be without liability to Kimley-Horn and Associates, Inc.



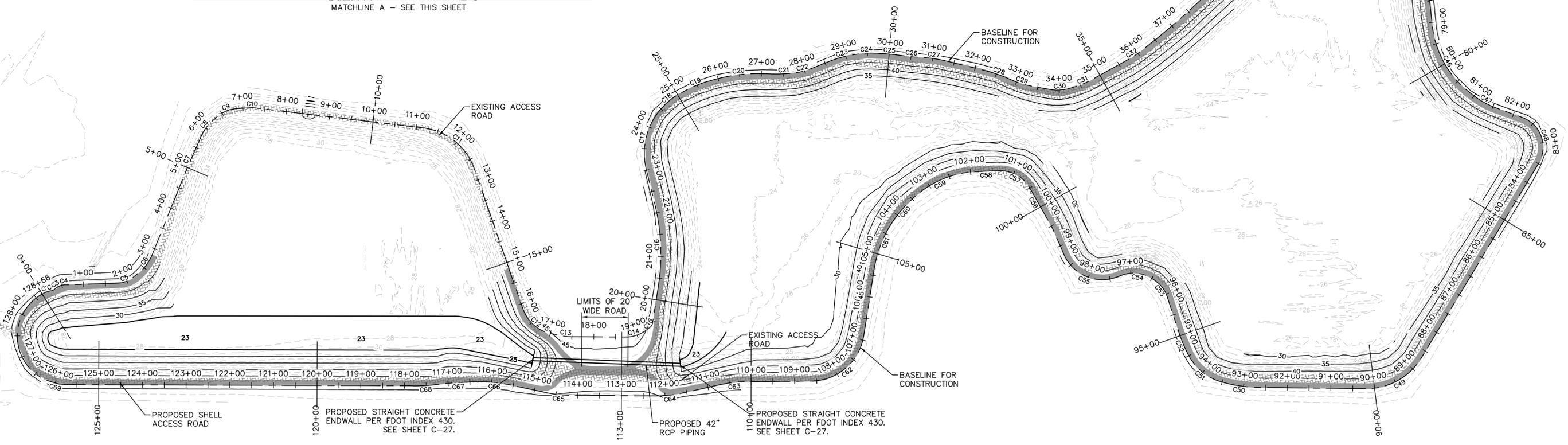
EAST LAKE CROSS SECTIONS	
SHEET	STATION
C-3	0+00
C-3	5+00
C-3	10+00
C-3	15+00
C-3	20+00
C-3	25+00
C-4	30+00
C-4	35+00
C-4	40+00
C-4	45+00
C-4	50+00
C-4	55+00
C-5	60+00
C-5	65+00
C-5	70+00
C-5	75+00
C-5	80+00
C-5	85+00
C-6	90+00
C-6	95+00
C-6	100+00
C-6	105+00
C-6	110+00
C-6	113+00
C-6	120+00
C-6	125+00



KEY MAP: EAST LAKE



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



No.	REVISIONS	DATE	BY

**Kimley Horn**

© 2020 KIMLEY-HORN AND ASSOCIATES, INC.  
 100 2ND AVENUE SOUTH, SUITE 105N  
 ST. PETERSBURG, FL 33701  
 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

**EAST LAKE  
 REHABILITATION PLAN**

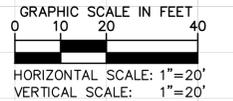
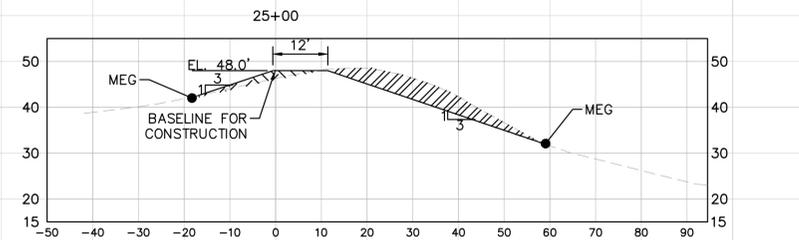
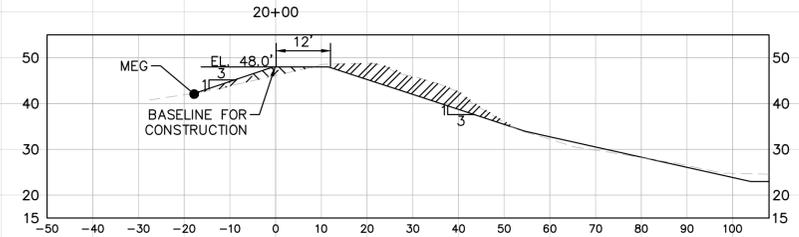
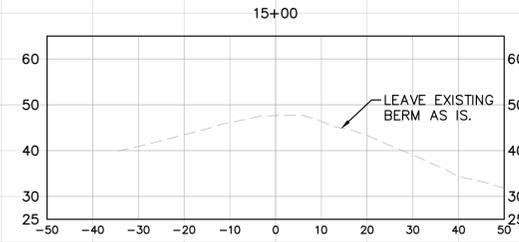
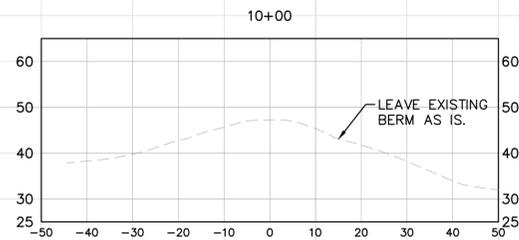
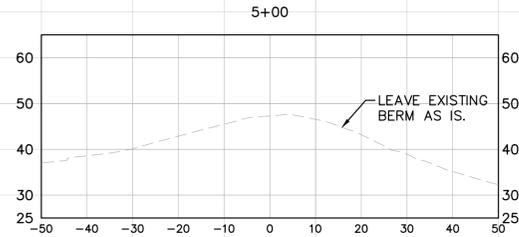
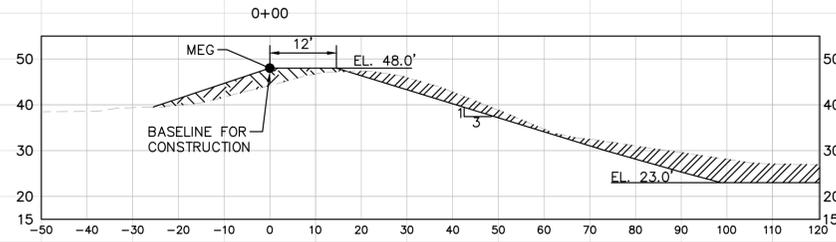
SHEET NUMBER  
**C-1**

This document, together with the concepts and designs presented herein, is an instrument of service, intended only for the specific purpose and client for which it was prepared. Reuse of any instrument of service is prohibited without the written authorization and approval by Kimley-Horn and Associates, Inc. shall be without liability to Kimley-Horn and Associates, Inc.

CURVE TABLE								
CURVE	RADIUS	LENGTH	START NORTHING EASTING	START STATION	END NORTHING EASTING	END STATION	PI NORTHING EASTING	PI STATION
C1	56.10'	20.10'	N: 1137201.3589 E: 512475.9605	-0+00.00	N: 1137217.2139 E: 512488.1398	0+20.10	N: 1137210.3892 E: 512480.6145	0+10.16
C2	15.94'	10.11'	N: 1137217.2139 E: 512488.1398	0+20.10	N: 1137224.7157 E: 512494.6616	0+30.21	N: 1137219.8945 E: 512492.6318	0+25.33
C3	37.35'	16.67'	N: 1137224.7157 E: 512494.6616	0+30.21	N: 1137239.3719 E: 512502.3177	0+46.88	N: 1137232.9128 E: 512496.8262	0+38.69
C4	34.26'	17.93'	N: 1137239.3719 E: 512502.3177	0+46.88	N: 1137249.7436 E: 512516.6935	0+64.81	N: 1137246.4830 E: 512508.1166	0+56.06
C5	58.74'	37.50'	N: 1137310.2644 E: 512612.6066	1+78.22	N: 1137338.7309 E: 512636.0375	2+15.73	N: 1137320.6253 E: 512629.0266	1+97.64
C6	122.93'	42.79'	N: 1137363.4333 E: 512645.6030	2+42.22	N: 1137405.9412 E: 512648.0562	2+85.01	N: 1137384.4716 E: 512650.5669	2+63.83
C7	2830.91'	126.83'	N: 1137572.5174 E: 512623.6667	4+53.36	N: 1137698.3764 E: 512608.1097	5+80.19	N: 1137635.2726 E: 512614.4783	5+16.79
C8	99.34'	47.58'	N: 1137698.3764 E: 512608.1097	5+80.19	N: 1137745.0491 E: 512614.6341	6+27.77	N: 1137722.5092 E: 512605.6741	6+04.45
C9	58.62'	34.41'	N: 1137762.3942 E: 512621.5290	6+46.44	N: 1137788.9420 E: 512642.6430	6+80.85	N: 1137778.8590 E: 512628.0739	6+64.15
C10	58.62'	11.38'	N: 1137808.6193 E: 512671.0749	7+15.43	N: 1137814.1497 E: 512681.0011	7+26.81	N: 1137811.8678 E: 512675.7687	7+21.13
C11	142.20'	159.03'	N: 1137969.5863 E: 513037.4109	11+15.64	N: 1137947.3477 E: 513186.6362	12+74.67	N: 1138005.1610 E: 513118.9822	12+04.63
C12	88.00'	90.74'	N: 1137728.7259 E: 513442.4707	16+11.19	N: 1137711.7647 E: 513527.5738	17+01.94	N: 1137696.1303 E: 513480.2161	16+61.06
C13	148.00'	30.33'	N: 1137717.3874 E: 513544.6055	17+19.87	N: 1137729.7715 E: 513572.2372	17+50.20	N: 1137722.1587 E: 513559.0581	17+35.09
C14	78.81'	48.84'	N: 1137789.7186 E: 513676.0153	18+70.05	N: 1137824.2718 E: 513709.4275	19+18.90	N: 1137801.6458 E: 513698.2535	18+95.29
C15	17.92'	13.26'	N: 1137836.5548 E: 513714.9546	19+32.36	N: 1137849.4587 E: 513716.1894	19+45.63	N: 1137842.7673 E: 513718.0749	19+39.32
C16	480.26'	191.04'	N: 1137929.1064 E: 513684.8906	20+31.20	N: 1138088.5417 E: 513581.9499	22+22.24	N: 1138019.1982 E: 513649.4875	21+28.00
C17	152.75'	141.93'	N: 1138145.9247 E: 513526.0612	23+02.34	N: 1138276.3816 E: 513484.6140	24+44.28	N: 1138200.7671 E: 513472.6469	23+78.90
C18	149.83'	57.37'	N: 1138279.2656 E: 513485.0705	24+47.20	N: 1138332.8609 E: 513504.5383	25+04.57	N: 1138307.9500 E: 513489.6102	24+76.24
C19	268.73'	62.88'	N: 1138344.0220 E: 513511.2267	25+17.58	N: 1138393.7062 E: 513549.5391	25+80.46	N: 1138371.1157 E: 513527.4630	25+49.17
C20	375.15'	112.16'	N: 1138402.3130 E: 513557.9500	25+92.50	N: 1138469.7113 E: 513647.0846	27+04.66	N: 1138442.7247 E: 513597.4417	26+49.00
C21	311.13'	50.39'	N: 1138479.8590 E: 513665.7517	27+25.91	N: 1138507.3972 E: 513707.8843	27+76.30	N: 1138491.9185 E: 513687.9354	27+51.16
C22	138.43'	34.45'	N: 1138509.5220 E: 513710.6228	27+79.77	N: 1138533.7915 E: 513734.9454	28+14.21	N: 1138520.1358 E: 513724.3017	27+97.08
C23	275.48'	69.14'	N: 1138568.5065 E: 513762.0030	28+58.23	N: 1138617.1631 E: 513810.8704	29+27.37	N: 1138595.9173 E: 513783.3675	28+92.98
C24	129.31'	21.29'	N: 1138623.4699 E: 513819.0347	29+37.69	N: 1138635.0425 E: 513836.8758	29+58.98	N: 1138629.9922 E: 513827.4779	29+48.36
C25	511.41'	54.58'	N: 1138641.4290 E: 513848.7606	29+72.47	N: 1138664.6543 E: 513898.1283	30+27.05	N: 1138654.3602 E: 513872.8242	29+99.79
C26	332.47'	33.83'	N: 1138667.1230 E: 513904.1968	30+33.60	N: 1138681.4406 E: 513934.8284	30+67.43	N: 1138673.5020 E: 513919.8771	30+50.53
C27	305.80'	61.12'	N: 1138683.1291 E: 513938.0085	30+71.03	N: 1138706.2258 E: 513994.4909	31+32.16	N: 1138697.5093 E: 513965.0917	31+01.70
C28	340.84'	64.19'	N: 1138731.6997 E: 514080.4105	32+21.77	N: 1138744.0608 E: 514143.3071	32+85.97	N: 1138740.8505 E: 514111.2751	32+53.96
C29	194.00'	48.25'	N: 1138744.0782 E: 514143.4805	32+86.14	N: 1138754.7782 E: 514190.3970	33+34.39	N: 1138746.4962 E: 514167.6075	33+10.39
C30	105.78'	50.26'	N: 1138769.1083 E: 514229.8288	33+76.34	N: 1138796.6491 E: 514271.3074	34+26.60	N: 1138777.8570 E: 514253.9024	34+01.95
C31	211.52'	44.44'	N: 1138803.4330 E: 514277.5905	34+35.85	N: 1138838.9604 E: 514304.1551	34+80.29	N: 1138819.7962 E: 514292.7458	34+58.15
C32	194.00'	27.80'	N: 1138920.0711 E: 514352.4437	35+74.69	N: 1138944.8967 E: 514364.9088	36+02.49	N: 1138932.0366 E: 514359.5672	35+88.61
C33	1669.16'	481.25'	N: 1138944.8967 E: 514364.9088	36+02.49	N: 1139409.6294 E: 514483.3306	40+83.74	N: 1139168.6876 E: 514457.8513	38+44.80
C34	169.00'	59.52'	N: 1139459.4558 E: 514487.8415	41+33.77	N: 1139518.4491 E: 514482.7671	41+93.29	N: 1139489.4039 E: 514490.5527	41+63.84
C35	144.00'	82.99'	N: 1139518.4491 E: 514482.7671	41+93.29	N: 1139588.2249 E: 514439.9809	42+76.28	N: 1139559.6784 E: 514471.7156	42+35.97

CURVE TABLE								
CURVE	RADIUS	LENGTH	START NORTHING EASTING	START STATION	END NORTHING EASTING	END STATION	PI NORTHING EASTING	PI STATION
C36	194.00'	171.76'	N: 1139616.1184 E: 514408.9723	43+17.99	N: 1139663.6253 E: 514249.6979	44+89.75	N: 1139677.6255 E: 514340.5959	44+09.96
C37	851.43'	112.80'	N: 1139658.8463 E: 514218.6704	45+21.15	N: 1139634.3500 E: 514108.6424	46+33.95	N: 1139650.2478 E: 514162.8438	45+77.63
C38	105.57'	98.01'	N: 1139551.7556 E: 513827.0489	49+27.41	N: 1139568.3051 E: 513733.9802	50+25.42	N: 1139568.3051 E: 513776.3715	49+80.26
C39	104.57'	98.08'	N: 1139568.3051 E: 513733.9802	50+25.42	N: 1139652.5633 E: 513691.1291	51+23.50	N: 1139599.5782 E: 513691.2087	50+78.40
C40	178.66'	87.43'	N: 1140219.3517 E: 513695.3888	56+90.31	N: 1140304.1817 E: 513712.6147	57+77.74	N: 1140263.9172 E: 513693.4113	57+34.92
C41	59.48'	37.80'	N: 1140304.1817 E: 513712.6147	57+77.74	N: 1140332.8509 E: 513736.2651	58+15.54	N: 1140322.4055 E: 513719.7254	57+97.30
C42	161.00'	83.14'	N: 1140332.8509 E: 513712.6147	58+15.54	N: 1140358.7953 E: 513814.2800	58+98.67	N: 1140356.1243 E: 513771.8469	58+58.05
C43	161.00'	282.70'	N: 1140416.6587 E: 514580.4341	66+67.20	N: 1140229.1160 E: 514742.3285	69+49.90	N: 1140420.3959 E: 514774.3378	68+61.14
C44	309.00'	179.16'	N: 1139915.6712 E: 514682.1075	72+69.14	N: 1139739.5220 E: 514695.5978	74+48.30	N: 1139825.5844 E: 514662.5787	73+61.32
C45	710.56'	123.98'	N: 1139513.7725 E: 512675.7687	76+96.57	N: 1139407.9261 E: 514862.5907	78+20.55	N: 1139458.0397 E: 514825.8377	77+58.72
C46	224.00'	182.83'	N: 1139338.7451 E: 514913.3277	79+06.34	N: 1139248.8774 E: 515066.7401	80+89.17	N: 1139260.6454 E: 514970.6056	80+03.19
C47	194.00'	58.70'	N: 1139247.6731 E: 515076.5780	80+99.08	N: 1139249.3964 E: 515135.0266	81+57.78	N: 1139244.0796 E: 515105.9337	81+28.65
C48	72.00'	127.16'	N: 1139260.9177 E: 515283.0052	82+21.86	N: 1139189.0399 E: 515283.0052	83+49.03	N: 1139276.6739 E: 515284.2845	83+09.51
C49	146.96'	152.68'	N: 1138670.8717 E: 515275.4414	88+67.25	N: 1138545.2737 E: 515201.1934	90+19.93	N: 1138586.8440 E: 515274.2278	89+51.29
C50	322.00'	87.42'	N: 1138423.7699 E: 514987.8019	92+65.49	N: 1138391.2935 E: 514906.9315	93+52.90	N: 1138402.0091 E: 514949.5845	93+09.46
C51	122.00'	96.54'	N: 1138391.2935 E: 514906.9315	93+52.90	N: 1138405.3008 E: 514813.9427	94+49.44	N: 1138378.8780 E: 514857.5119	94+03.86
C52	322.00'	57.73'	N: 1138405.3008 E: 514813.9427	94+49.44	N: 1138439.4915 E: 514767.5189	95+07.17	N: 1138420.3097 E: 514789.1941	94+78.38
C53	69.00'	42.27'	N: 1138497.2413 E: 514702.2624	95+94.31	N: 1138514.1381 E: 514664.2384	96+36.58	N: 1138511.7020 E: 514685.9221	96+16.13
C54	79.00'	79.94'	N: 1138514.1381 E: 514664.2384	96+36.58	N: 1138485.4850 E: 514586.9030	97+23.19	N: 1138519.7700 E: 514614.1104	96+87.02
C55	96.00'	149.10'	N: 1138478.5903 E: 514581.4316	97+31.99	N: 1138462.0227 E: 514447.8971	98+81.09	N: 1138404.7102 E: 514522.8029	98+26.31
C56	15911.82'	65.25'	N: 1138518.9976 E: 514362.7342	99+83.67	N: 1138551.9969 E: 514306.4408	100+48.93	N: 1138535.5550 E: 514334.6213	100+16.30
C57	79.00'	87.05'	N: 1138551.9969 E: 514306.4408	100+48.93	N: 1138550.2817 E: 514223.7459	101+35.98	N: 1138576.5438 E: 514264.5664	100+97.47
C58	56767.94'	57.39'	N: 1138550.2817 E: 514223.7459	101+35.98	N: 1138519.2305 E: 514175.4813	101+93.37	N: 1138534.7683 E: 514199.6058	101+64.67
C59	225.97'	167.02'	N: 1138519.2305 E: 514175.4813	101+93.37	N: 1138384.5059 E: 514083.2893	103+60.39	N: 1138469.7243 E: 514103.2913	102+80.90
C60	290.48'	44.27'	N: 1138384.5059 E: 514083.2893	103+60.39	N: 1138341.1402 E: 514074.6022	104+04.66	N: 1138363.1546 E: 514077.2902	103+82.57
C61	269.56'	131.62'	N: 1138341.1402 E: 514074.6022	104+04.66	N: 1138211.9615 E: 514091.8209	105+36.29	N: 1138274.4061 E: 514067.1211	104+71.82
C62	122.37'	176.58'	N: 1137916.3574 E: 514148.1703	106+91.07	N: 1137967.8036 E: 514148.1703	108+67.65	N: 1137967.2128 E: 514186.5146	107+98.72
C63	318.00'	70.72'	N: 1137846.3296 E: 513974.3394	110+04.26	N: 1137804.2388 E: 513917.6892	110+74.98	N: 1137828.4469 E: 513943.6644	110+39.77
C64	282.00'	63.84'	N: 1137748.0595 E: 513857.4089	111+57.38	N: 1137710.1697 E: 513806.2000	112+21.22	N: 1137726.2040 E: 513833.9580	111+89.44
C65	282.00'	57.80'	N: 1137613.7390 E: 513639.2630	114+14.01	N: 1137613.7390 E: 513639.2630	114+71.80	N: 1137590.1422 E: 513586.6134	114+43.01
C66	318.00'	69.32'	N: 1137563.0811 E: 513504.6433	115+58.13	N: 1137534.3762 E: 513441.6983	116+27.44	N: 1137552.1725 E: 513471.6003	115+92.92
C67	5370.96'	67.01'	N: 1137526.2087 E: 513427.9751	116+43.41	N: 1137488.8169 E: 513372.3639	117+10.43	N: 1137507.6863 E: 513400.0528	116+76.92
C68	394.42'	82.59'	N: 1137443.1701 E: 513303.7172	117+10.43	N:			

This document, together with the concepts and designs presented herein, is an instrument of service intended only for the specific purpose and client for which it was prepared. Reuse of any improper reliance on this document without written authorization and adaptation by Kimley-Horn and Associates, Inc. shall be without liability to Kimley-Horn and Associates, Inc.



LEGEND:  
 FILL AREA   
 CUT AREA

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

No.	REVISIONS	DATE	BY



© 2020 KIMLEY-HORN AND ASSOCIATES, INC.  
 100 2ND AVENUE SOUTH, SUITE 105N  
 ST. PETERSBURG, FL 33701  
 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

**SEWRF RECLAIMED  
 PUMP BACK STATION**

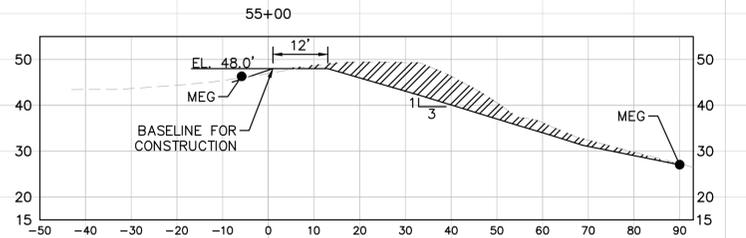
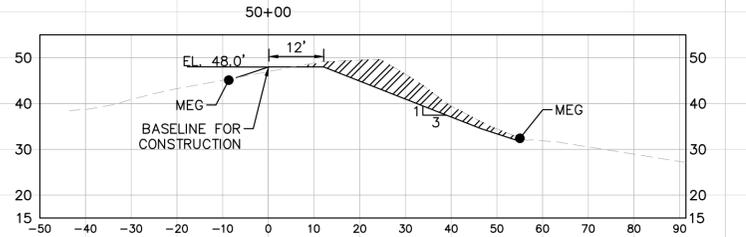
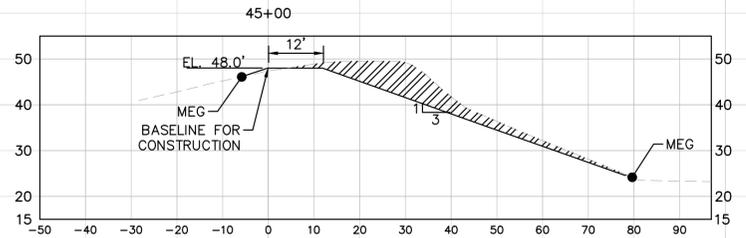
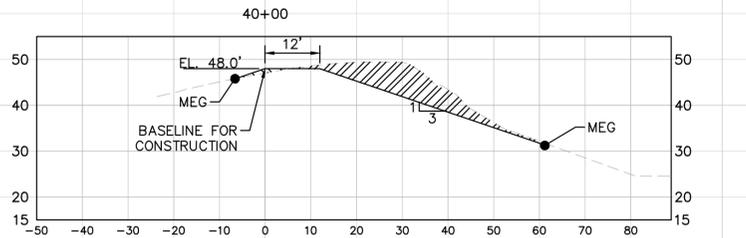
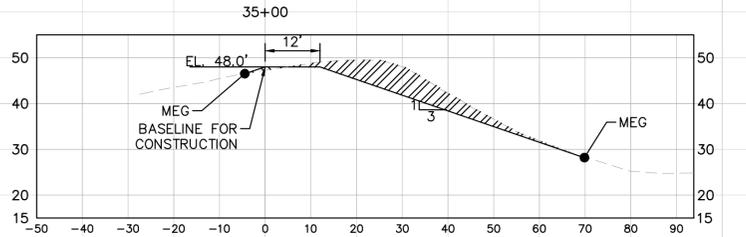
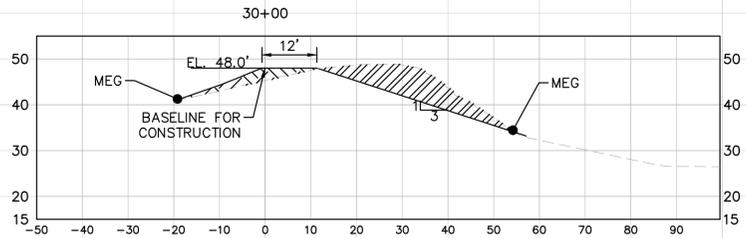
MANATEE COUNTY

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

## EAST LAKE REHABILITATION SECTIONS

SHEET NUMBER  
C-3

This document, together with the concepts and designs presented herein, is an instrument of service intended only for the specific purpose and client for which it was prepared. Reuse of any improper reliance on this document without written authorization and approval by Kimley-Horn and Associates, Inc. shall be without liability to Kimley-Horn and Associates, Inc.



GRAPHIC SCALE IN FEET  
  
 HORIZONTAL SCALE: 1"=20'  
 VERTICAL SCALE: 1"=20'

LEGEND:  
 FILL AREA   
 CUT AREA

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

No.	REVISIONS	DATE	BY

**Kimley»Horn**

© 2020 KIMLEY-HORN AND ASSOCIATES, INC.  
 100 2ND AVENUE SOUTH, SUITE 105N  
 ST. PETERSBURG, FL 33701  
 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

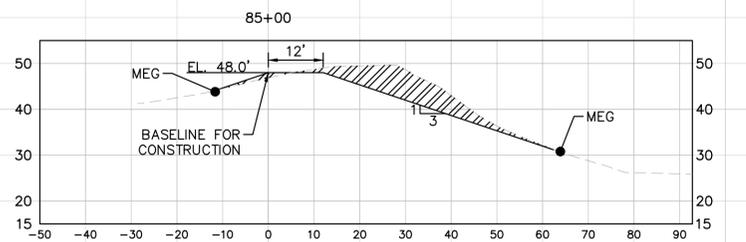
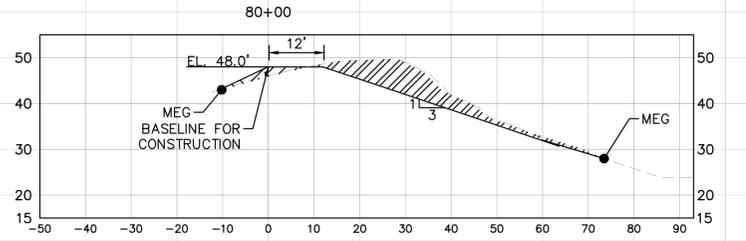
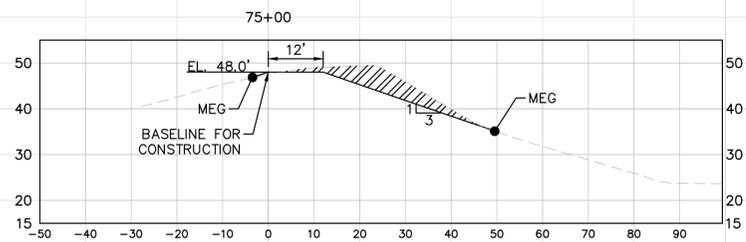
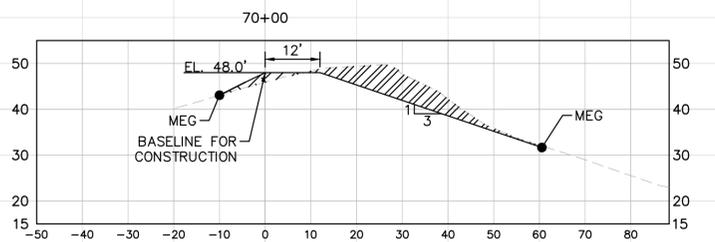
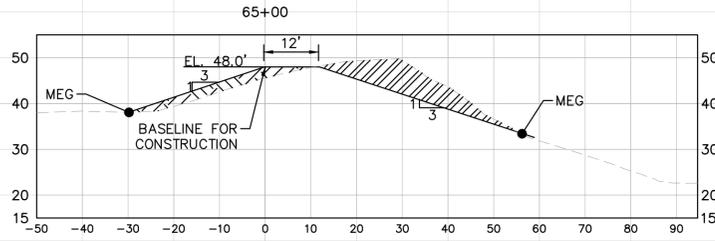
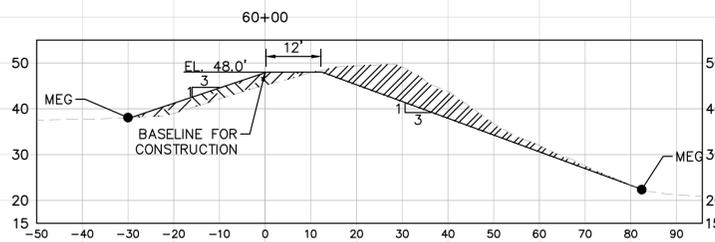
**SEWRF RECLAIMED  
 PUMP BACK STATION**  
 MANATEE COUNTY

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

**EAST LAKE  
 REHABILITATION  
 SECTIONS**

SHEET NUMBER  
**C-4**

This document, together with the concepts and designs presented herein, is an instrument of service intended only for the specific purpose and client for which it was prepared. Reuse of or improper reliance on this document without written authorization and adaptation by Kimley-Horn and Associates, Inc. shall be without liability to Kimley-Horn and Associates, Inc.



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

LEGEND:  
 FILL AREA   
 CUT AREA 

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

No.	REVISIONS	DATE	BY

**Kimley»Horn**

© 2020 KIMLEY-HORN AND ASSOCIATES, INC.  
 100 2ND AVENUE SOUTH, SUITE 105N  
 ST. PETERSBURG, FL 33701  
 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

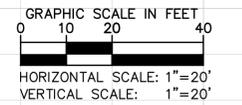
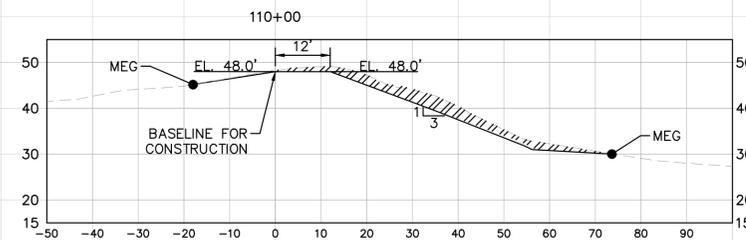
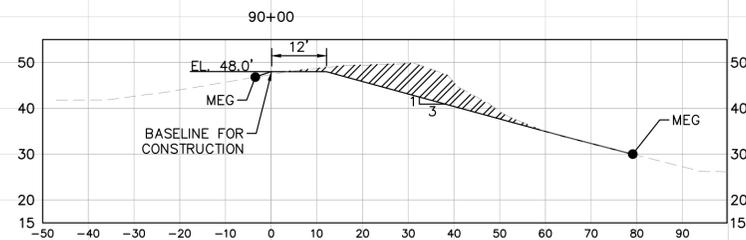
  
**SEWRF RECLAIMED  
 PUMP BACK STATION**  
 MANATEE COUNTY

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

**EAST LAKE  
 REHABILITATION  
 SECTIONS**

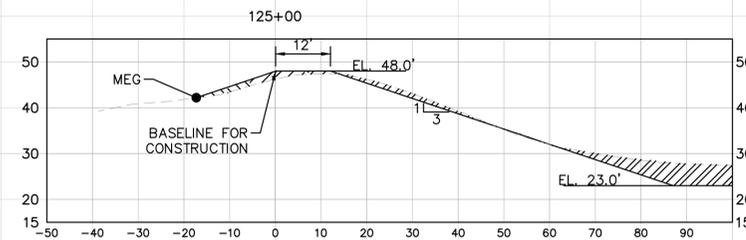
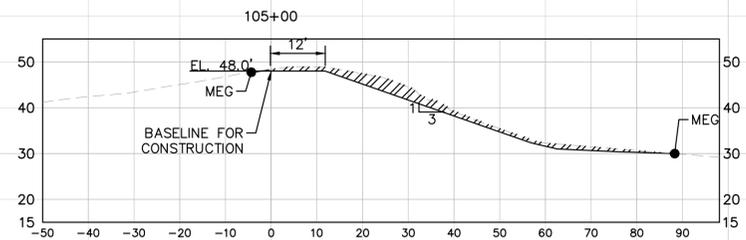
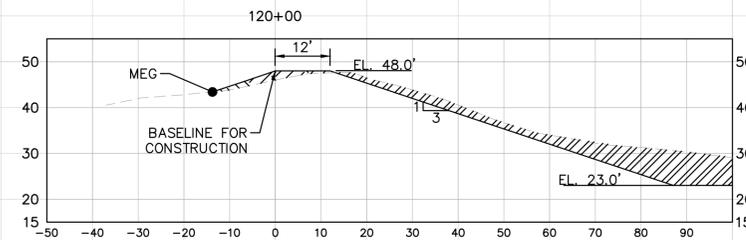
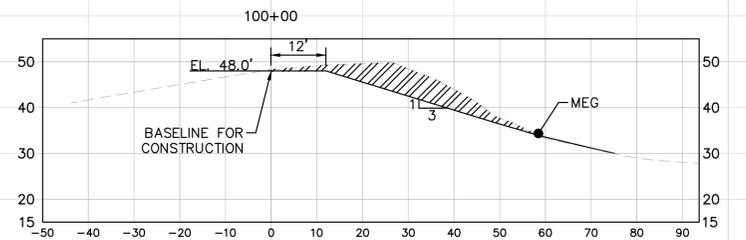
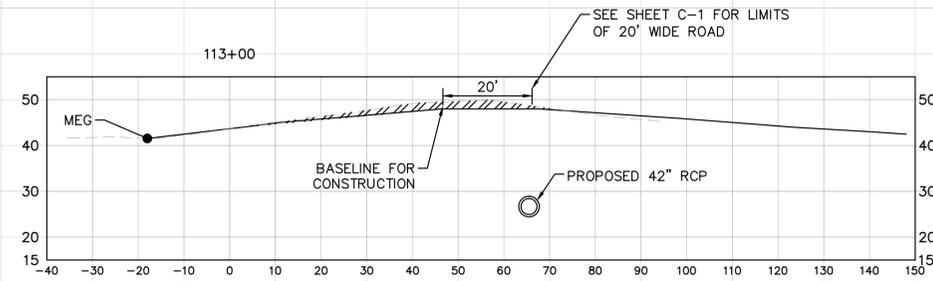
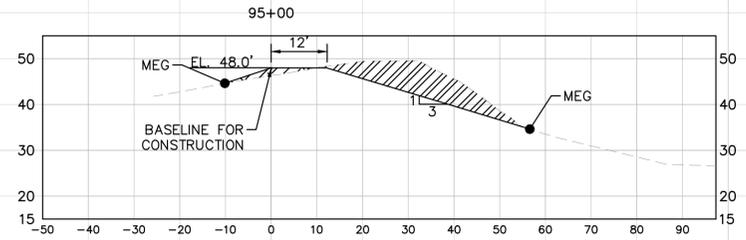
SHEET NUMBER  
**C-5**

This document, together with the concepts and designs presented herein, is an instrument of service intended only for the specific purpose and client for which it was prepared. Reuse of any improper reliance on this document without written authorization and adaptation by Kimley-Horn and Associates, Inc. shall be without liability to Kimley-Horn and Associates, Inc.



LEGEND:  
 FILL AREA   
 CUT AREA

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



No.	REVISIONS	DATE	BY

**Kimley»Horn**

© 2020 KIMLEY-HORN AND ASSOCIATES, INC.  
 100 2ND AVENUE SOUTH, SUITE 105N  
 ST. PETERSBURG, FL 33701  
 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



SEWRF RECLAIMED  
 PUMP BACK STATION

MANATEE COUNTY

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

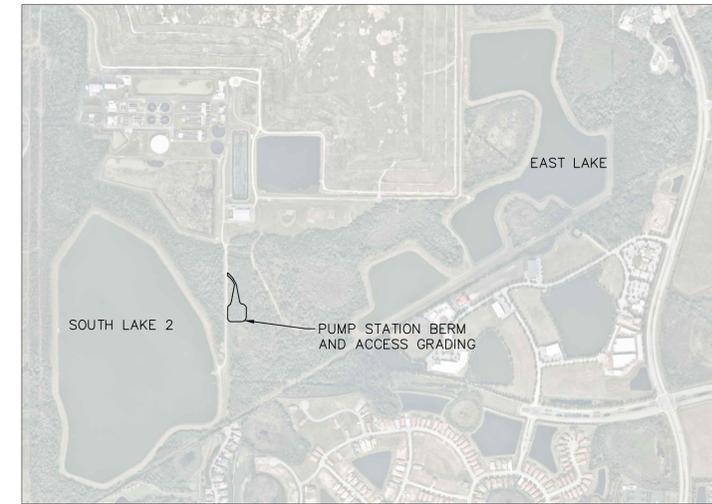
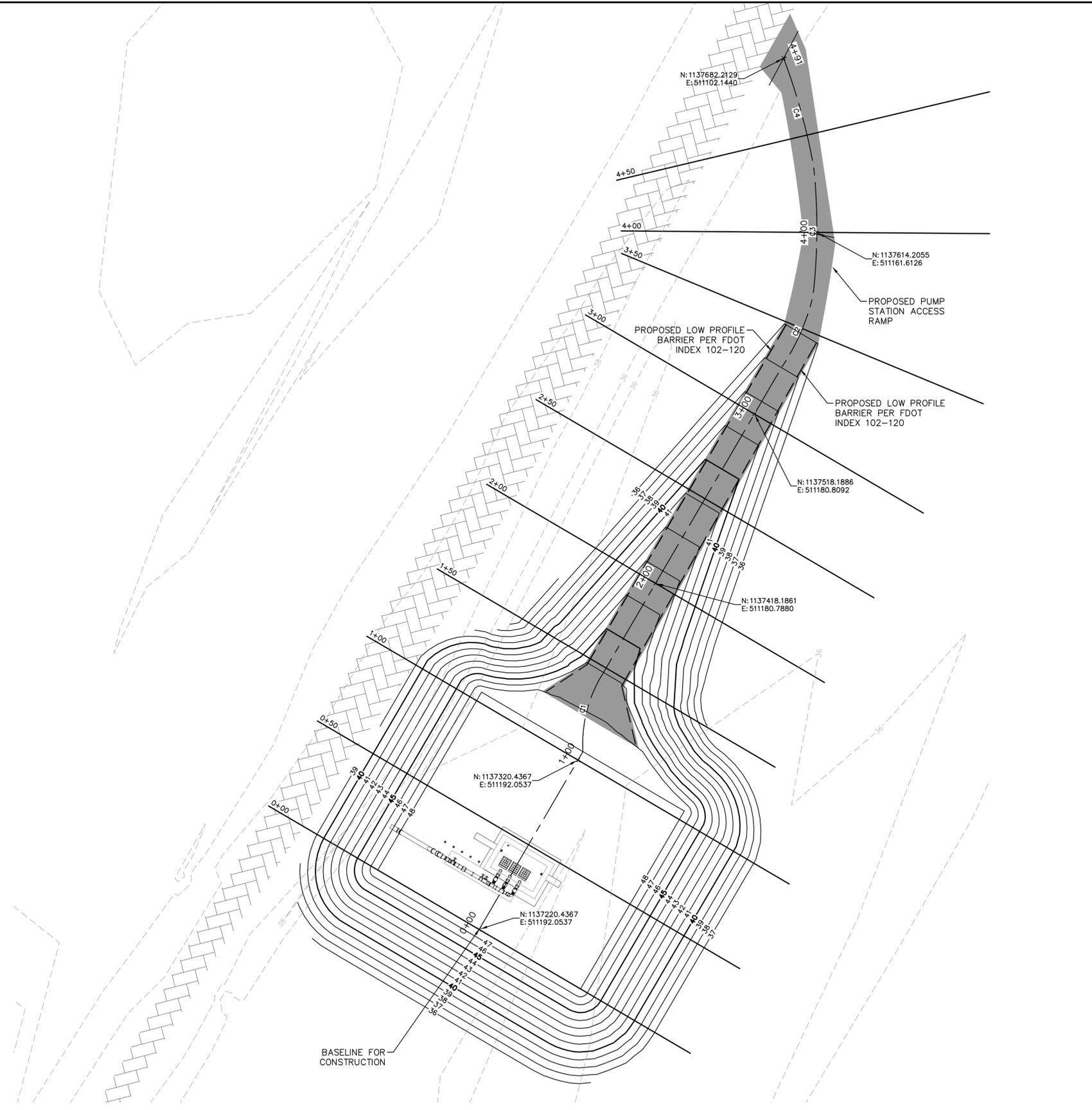
FL DATE:

EAST LAKE  
 REHABILITATION  
 SECTIONS

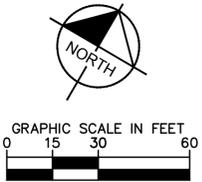
SHEET NUMBER

C-6

This document, together with the concepts and designs presented herein, is intended only for the specific purpose and client for which it was prepared. Reuse of any improper reference on this document without written authorization and adaptation by Kimley-Horn and Associates, Inc. shall be without liability to Kimley-Horn and Associates, Inc.



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**  
 © 2020 KIMLEY-HORN AND ASSOCIATES, INC.  
 100 2ND AVENUE SOUTH, SUITE 105N  
 ST. PETERSBURG, FL 33701  
 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

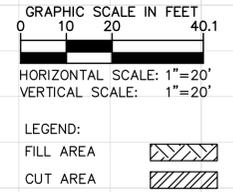
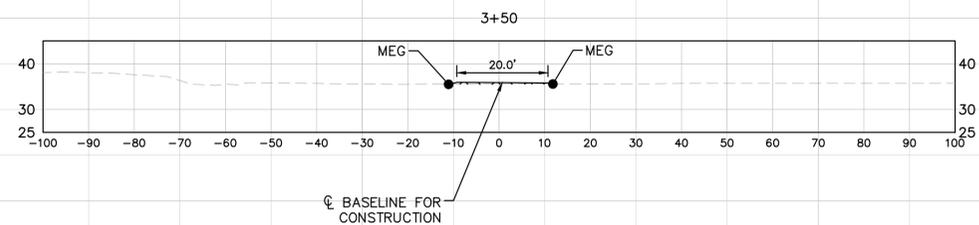
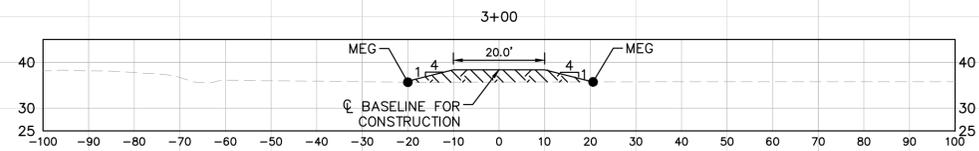
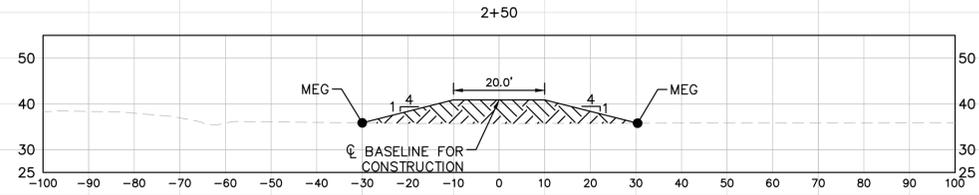
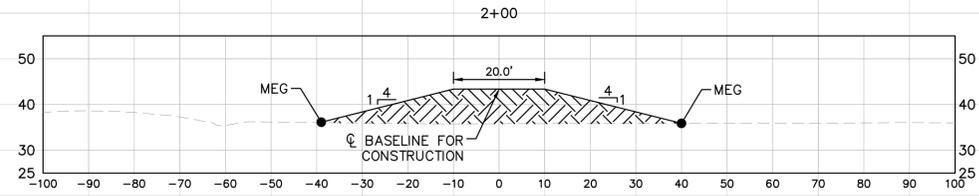
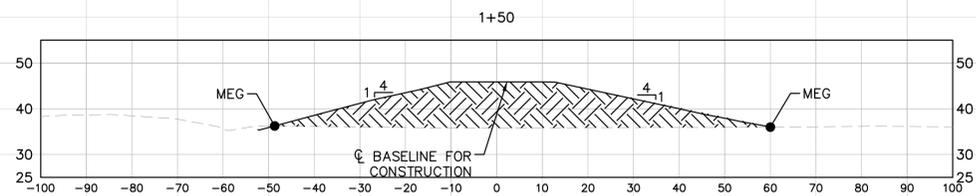
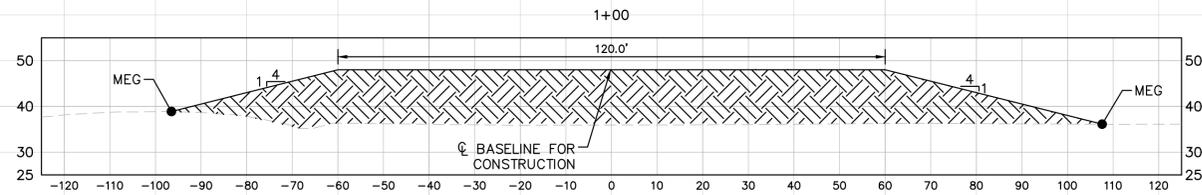
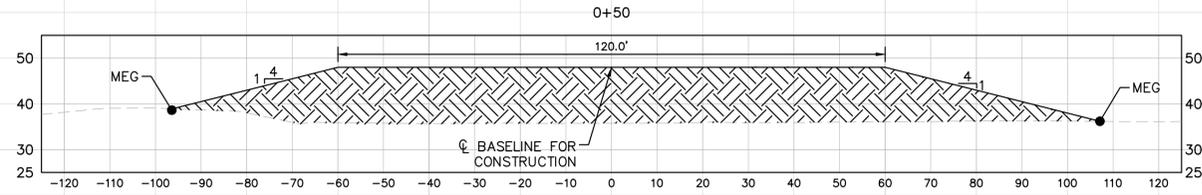
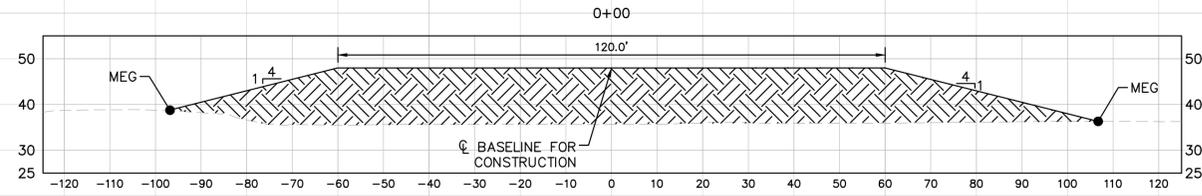
**Manatee County**  
**SEWRF RECLAIMED PUMP BACK STATION**  
 MANATEE COUNTY

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

**PUMP STATION GRADING PLAN**

SHEET NUMBER  
**C-7**

This document, together with the concepts and designs presented herein, is an instrument of service and shall be used only for the specific purpose and client for which it was prepared. Reuse of any portion of this document without written authorization and adaptation by Kimley-Horn and Associates, Inc. shall be without liability to Kimley-Horn and Associates, Inc.



No.	REVISIONS	DATE	BY

**Kimley»Horn**  
 © 2020 KIMLEY-HORN AND ASSOCIATES, INC.  
 100 2ND AVENUE SOUTH, SUITE 105N  
 ST. PETERSBURG, FL 33701  
 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

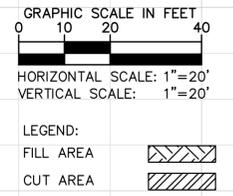
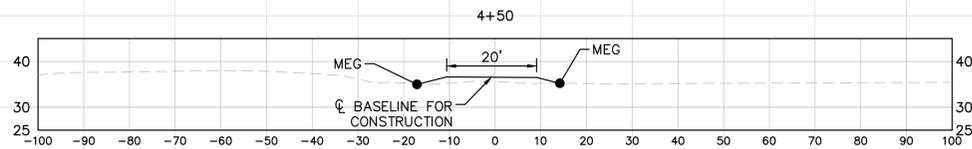
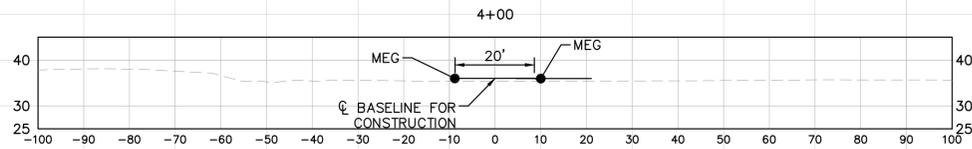
**Manatee County**  
**SEWRF RECLAIMED PUMP BACK STATION**  
 MANATEE COUNTY

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

**PUMP STATION GRADING SECTIONS**

SHEET NUMBER  
**C-8**

This document, together with the concepts and designs presented herein, is intended only for the specific purpose and client for which it was prepared. Reuse of any improper reliance on this document without written authorization and adaptation by Kimley-Horn and Associates, Inc. shall be without liability to Kimley-Horn and Associates, Inc.



No.	REVISIONS	DATE	BY

**Kimley»Horn**  
 © 2020 KIMLEY-HORN AND ASSOCIATES, INC.  
 100 2ND AVENUE SOUTH, SUITE 105N  
 ST. PETERSBURG, FL 33701  
 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

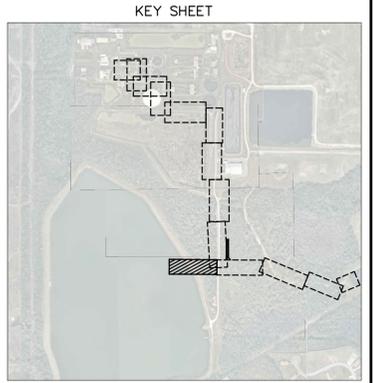
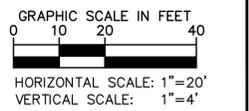
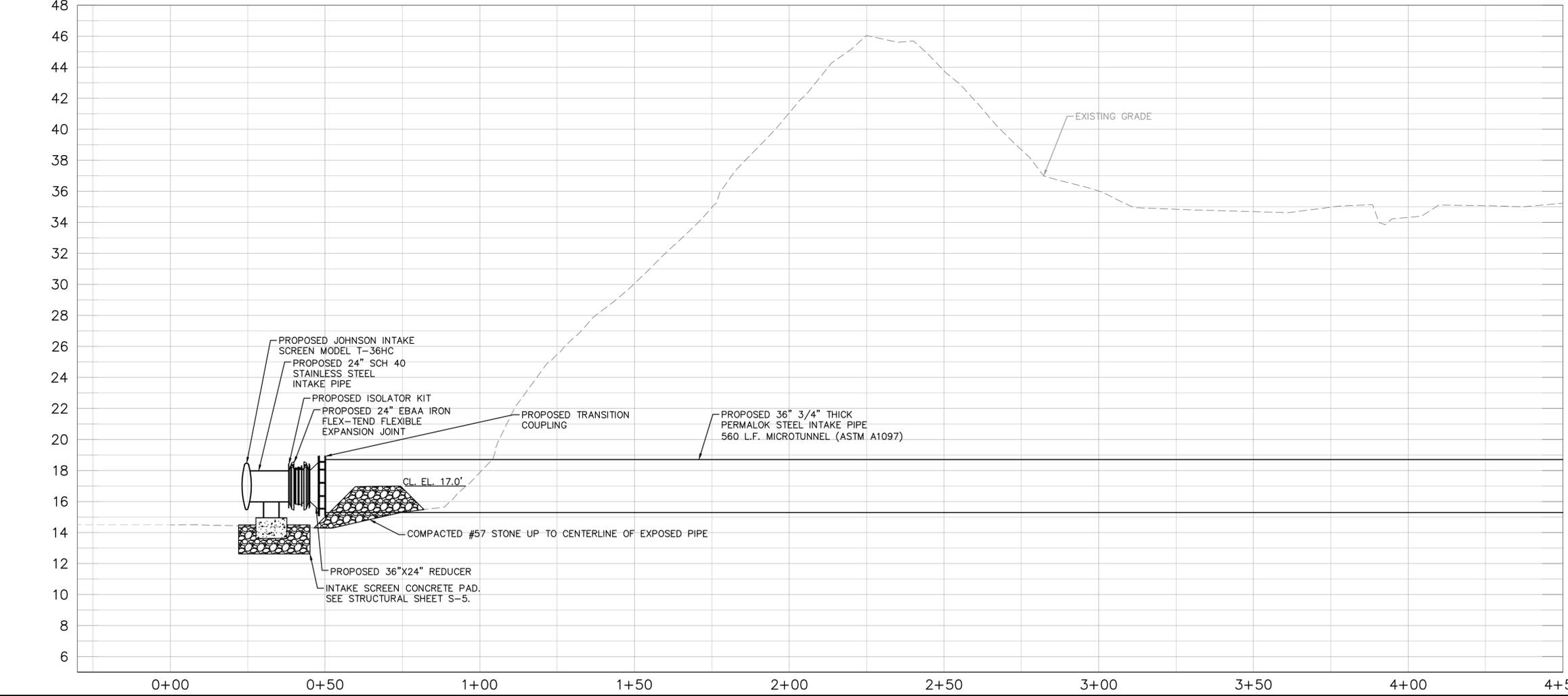
  
**SEWRF RECLAIMED  
 PUMP BACK STATION**  
 MANATEE COUNTY

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

**PUMP STATION  
 GRADING  
 SECTIONS**

SHEET NUMBER	<b>C-9</b>
--------------	------------

This document, together with the concepts and designs presented herein, is an instrument of service intended only for the specific purpose and client for which it was prepared. Reuse of any improper reliance on this document without written authorization and adaptation by Kimley-Horn and Associates, Inc. shall be without liability to Kimley-Horn and Associates, Inc.



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

**\*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

© 2020 KIMLEY-HORN AND ASSOCIATES, INC.  
 100 2ND AVENUE SOUTH, SUITE 105N  
 ST. PETERSBURG, FL 33701  
 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

**SEWRF RECLAIMED  
PUMP BACK STATION**

MANATEE COUNTY

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

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

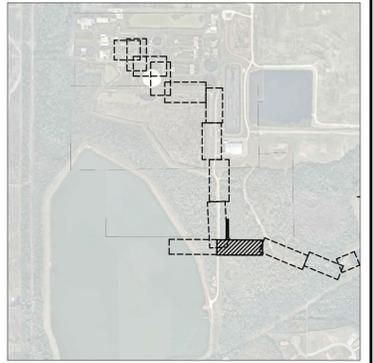
SHEET NUMBER
C-10

This document, together with the concepts and designs presented herein, is intended only for the specific purpose and client for which it was prepared. Reuse of any improper reliance on this document without written authorization and adaptation by Kimley-Horn and Associates, Inc. shall be without liability to Kimley-Horn and Associates, Inc.



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

KEY SHEET

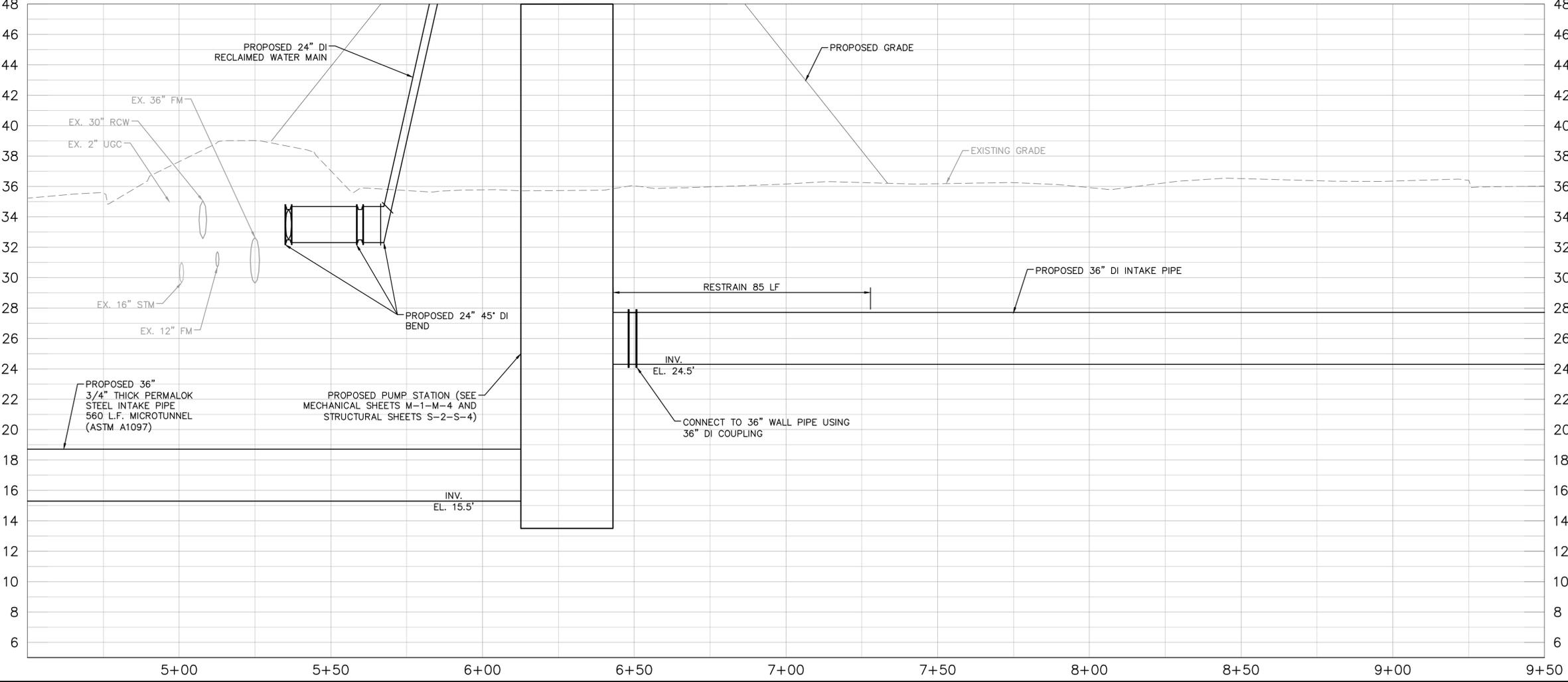
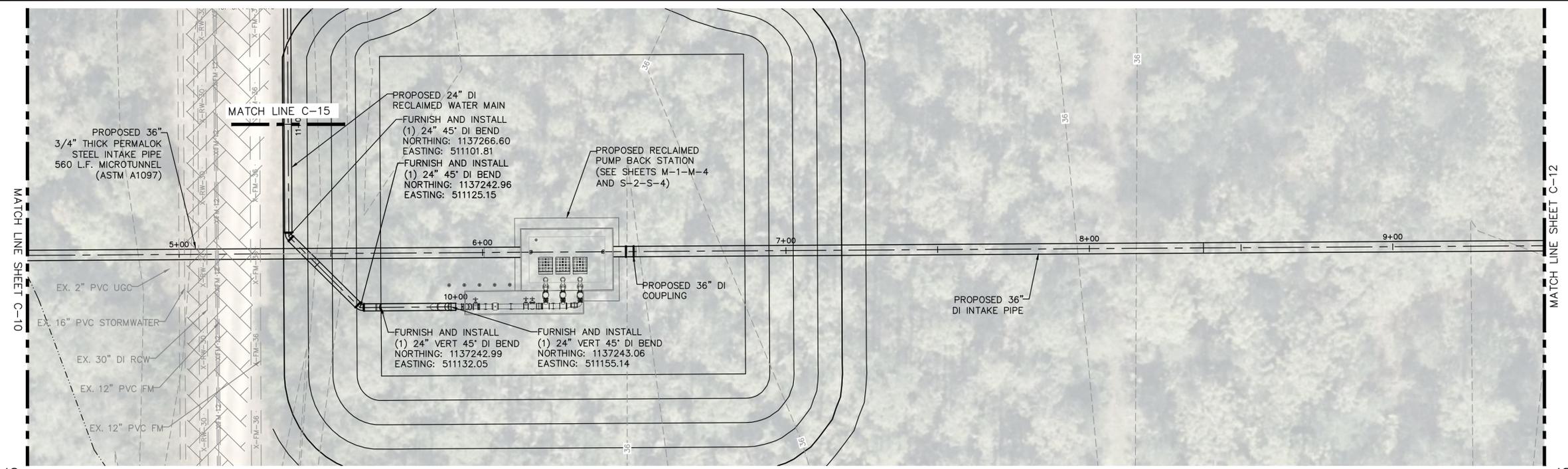


- LEGEND:
- 25' WETLAND BUFFER +
  - PROPOSED ACCESS ROAD (SEE SHEET C-28 FOR DETAILS.)
  - EXISTING ACCESS ROAD

**\*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

**Kimley & Horn**

© 2020 KIMLEY-HORN AND ASSOCIATES, INC.  
 100 2ND AVENUE SOUTH, SUITE 105N  
 ST. PETERSBURG, FL 33701  
 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

**SEWRF RECLAIMED  
PUMP BACK STATION**

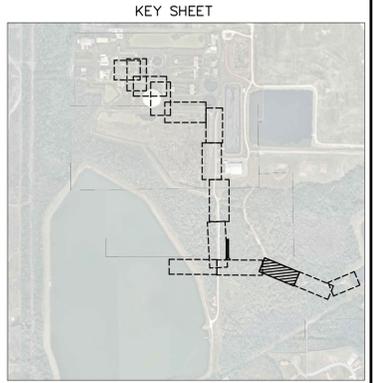
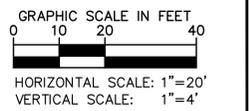
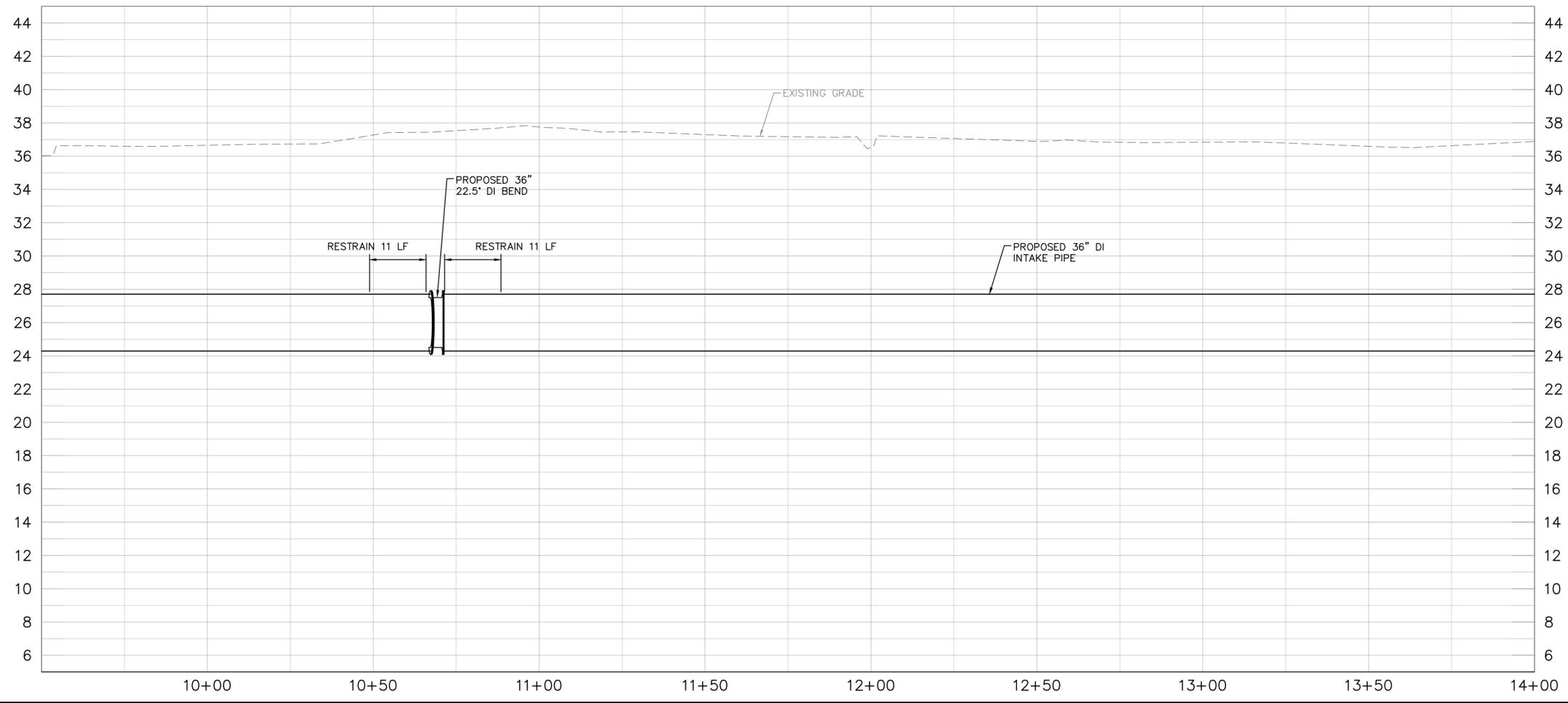
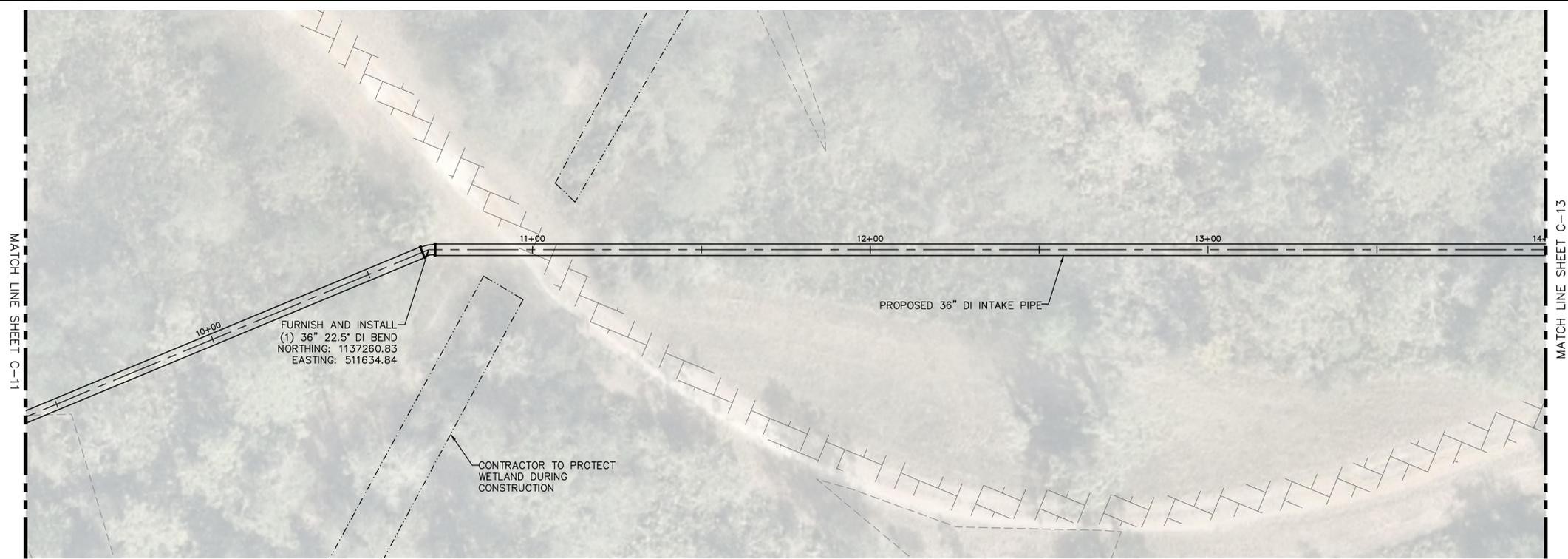
MANATEE COUNTY

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

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

SHEET NUMBER
<b>C-11</b>

This document, together with the concepts and designs presented herein, is intended only for the specific purpose and client for which it was prepared. Reuse of any improper reliance on this document without written authorization and adaptation by Kimley-Horn and Associates, Inc. shall be without liability to Kimley-Horn and Associates, Inc.



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

**\*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

**Kimley & Horn**  
 © 2020 KIMLEY-HORN AND ASSOCIATES, INC.  
 100 2ND AVENUE SOUTH, SUITE 105N  
 ST. PETERSBURG, FL 33701  
 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

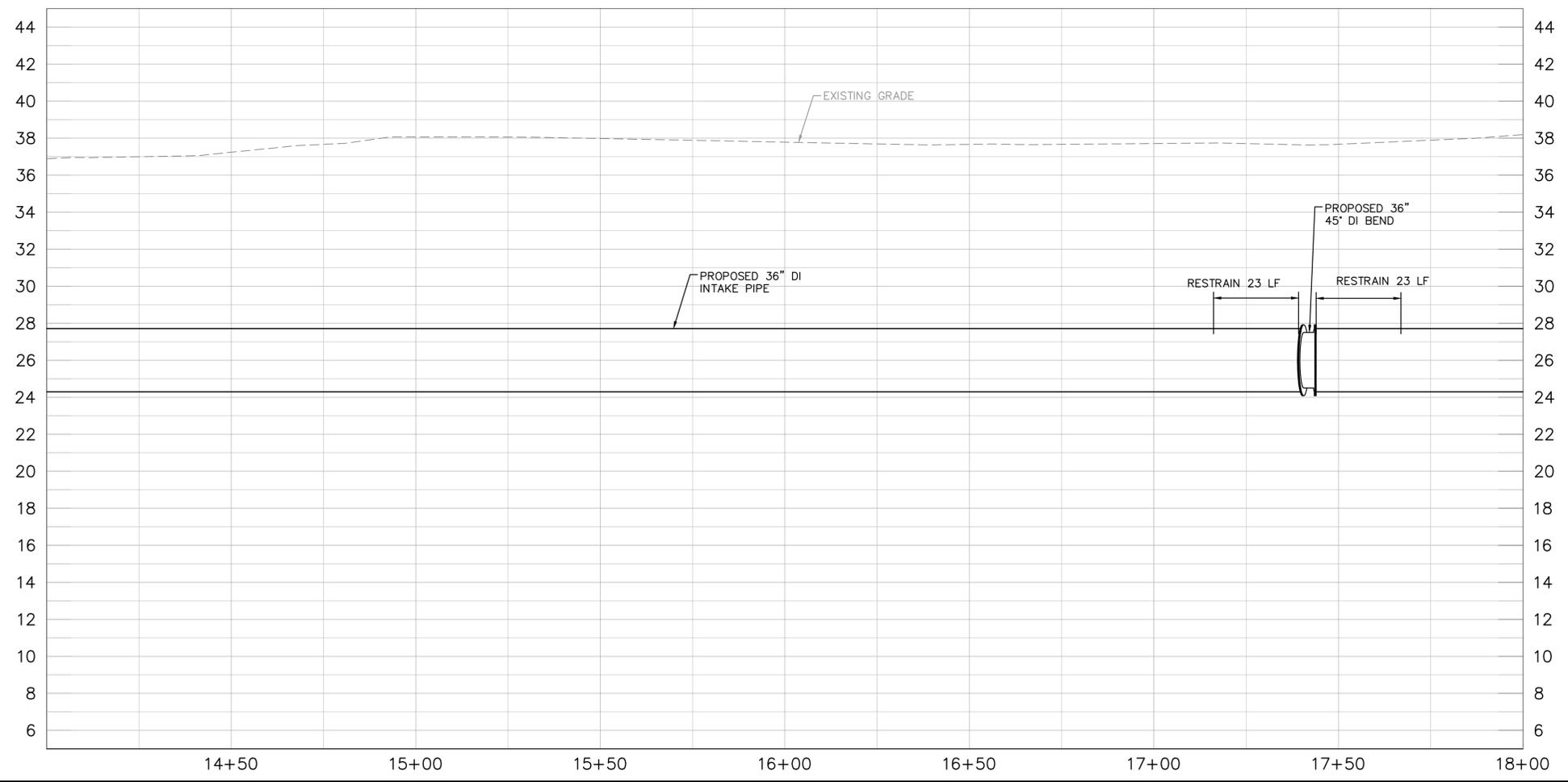
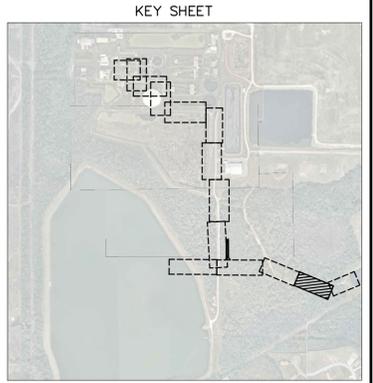
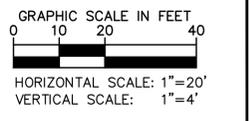
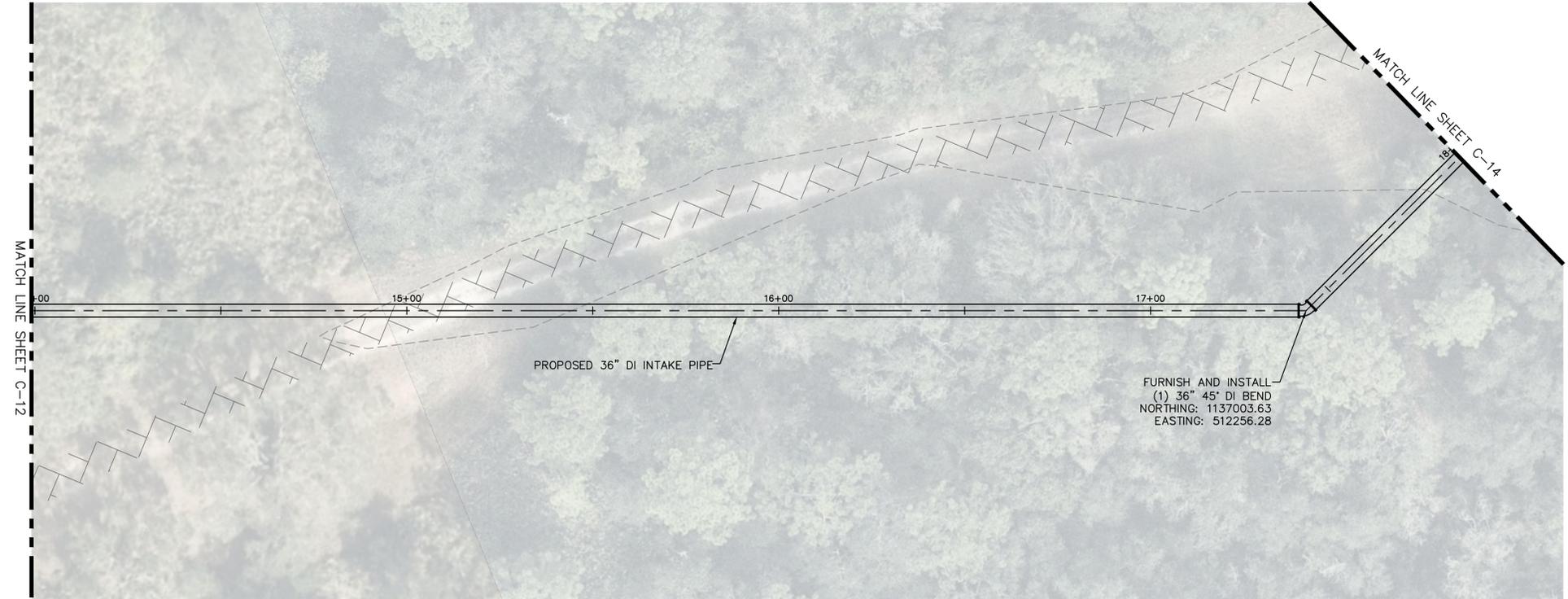
**Manatee County**  
**SEWRF RECLAIMED PUMP BACK STATION**  
 MANATEE COUNTY

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

**PLAN & PROFILE - EAST LAKE INTAKE PIPING**

SHEET NUMBER  
**C-12**

This document, together with the concepts and designs presented herein, is intended only for the specific purpose and client for which it was prepared. Reuse of any improper reliance on this document without written authorization and adaptation by Kimley-Horn and Associates, Inc. shall be without liability to Kimley-Horn and Associates, Inc.



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

**\*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

**Kimley»Horn**  
 © 2020 KIMLEY-HORN AND ASSOCIATES, INC.  
 100 2ND AVENUE SOUTH, SUITE 105N  
 ST. PETERSBURG, FL 33701  
 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

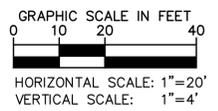
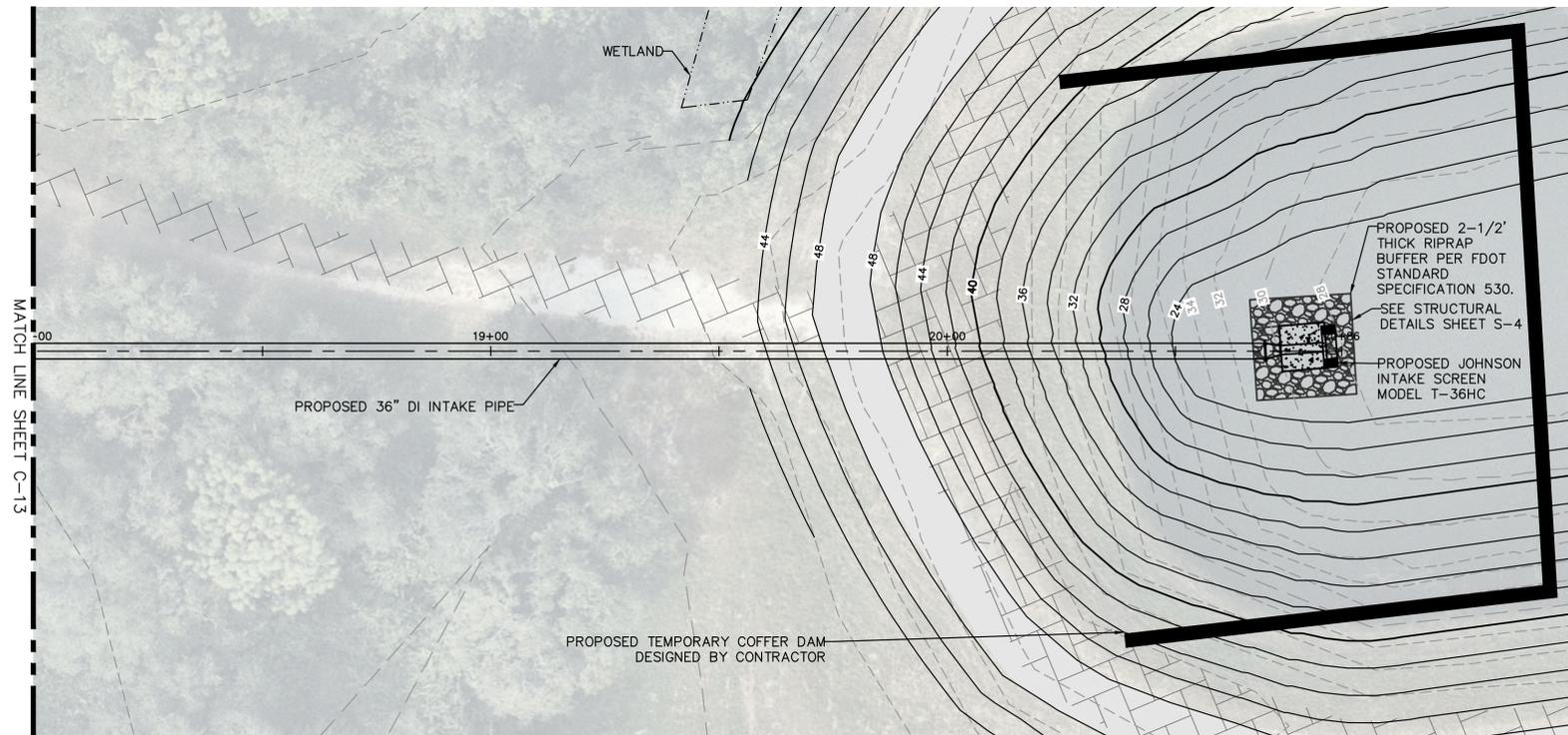
**SEWRF RECLAIMED  
 PUMP BACK STATION**  
 MANATEE COUNTY

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

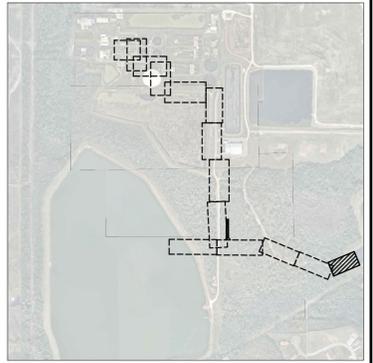
**PLAN & PROFILE - EAST  
 LAKE INTAKE PIPING**

SHEET NUMBER  
**C-13**

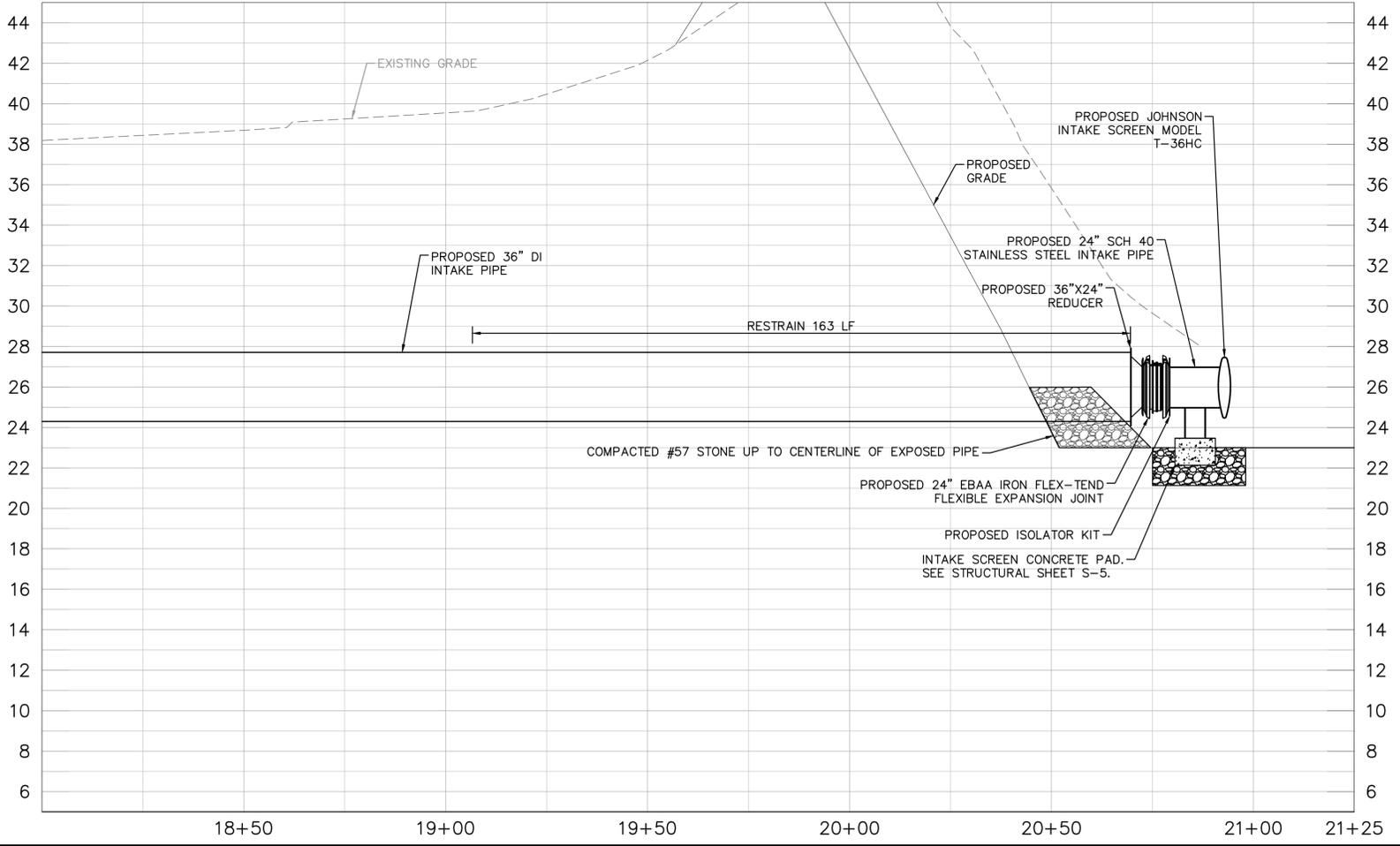
This document, together with the concepts and designs presented herein, is intended only for the specific purpose and client for which it was prepared. Reuse of or improper reliance on this document without written authorization and adaptation by Kimley-Horn and Associates, Inc. shall be without liability to Kimley-Horn and Associates, Inc.



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



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



**\*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

**Kimley & Horn**

© 2020 KIMLEY-HORN AND ASSOCIATES, INC.  
 100 2ND AVENUE SOUTH, SUITE 105N  
 ST. PETERSBURG, FL 33701  
 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

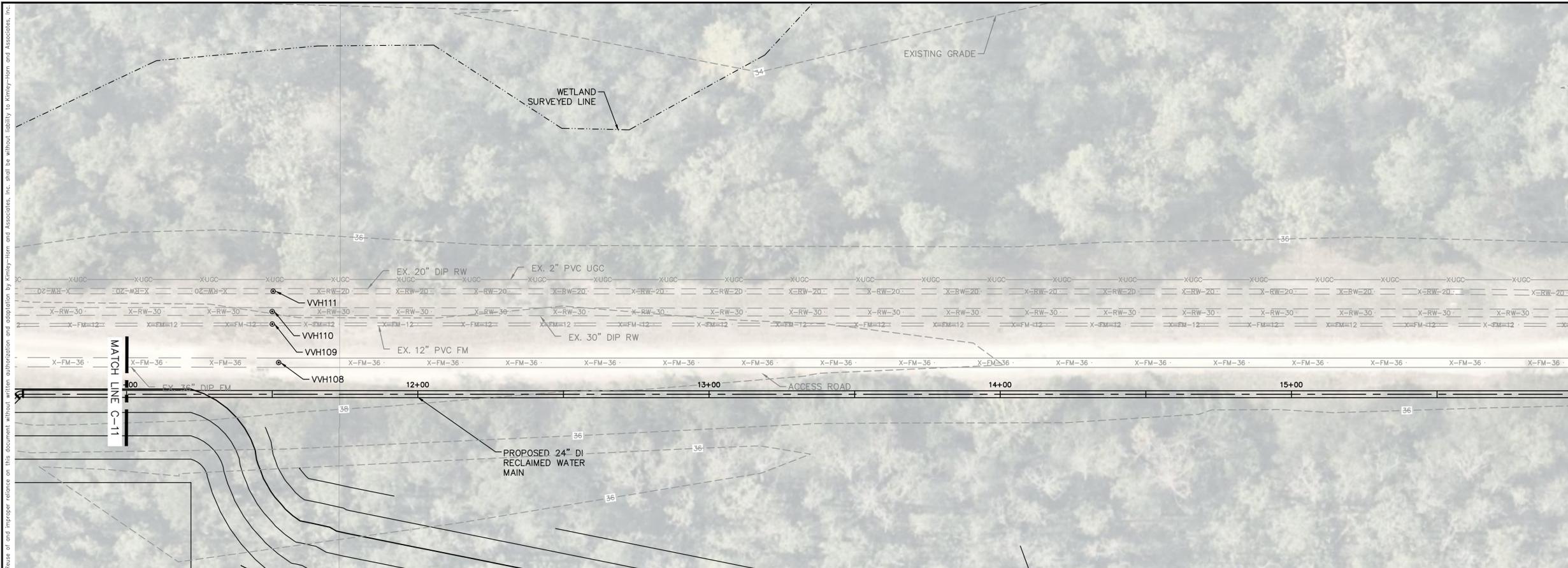
**SEWRF RECLAIMED  
 PUMP BACK STATION**

MANATEE COUNTY

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

**PLAN & PROFILE - EAST  
 LAKE INTAKE PIPING**

SHEET NUMBER
<b>C-14</b>

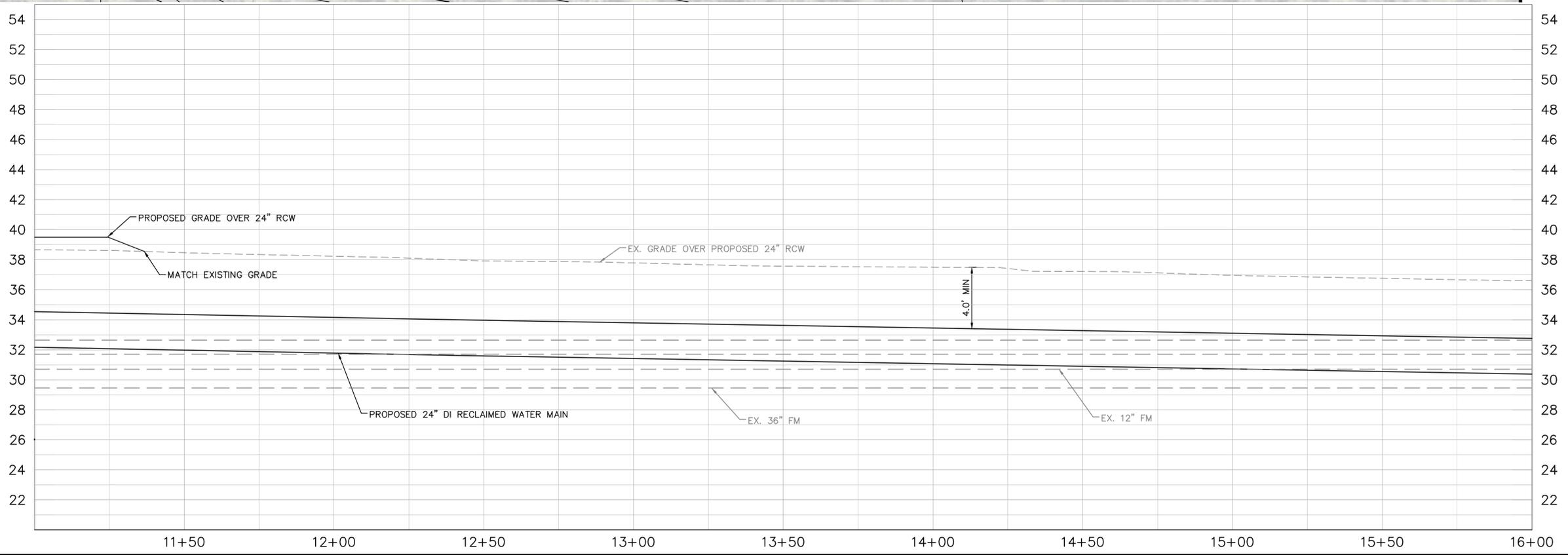
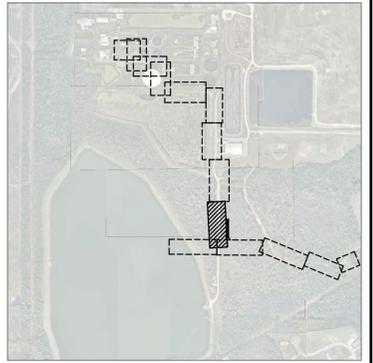


MATCH LINE SHEET C-16



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

KEY SHEET



**\*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

**Kimley»Horn**  
 © 2020 KIMLEY-HORN AND ASSOCIATES, INC.  
 100 2ND AVENUE SOUTH, SUITE 105N  
 ST. PETERSBURG, FL 33701  
 PHONE: 727-547-3999  
 WWW.KIMLEY-HORN.COM CA 00000696

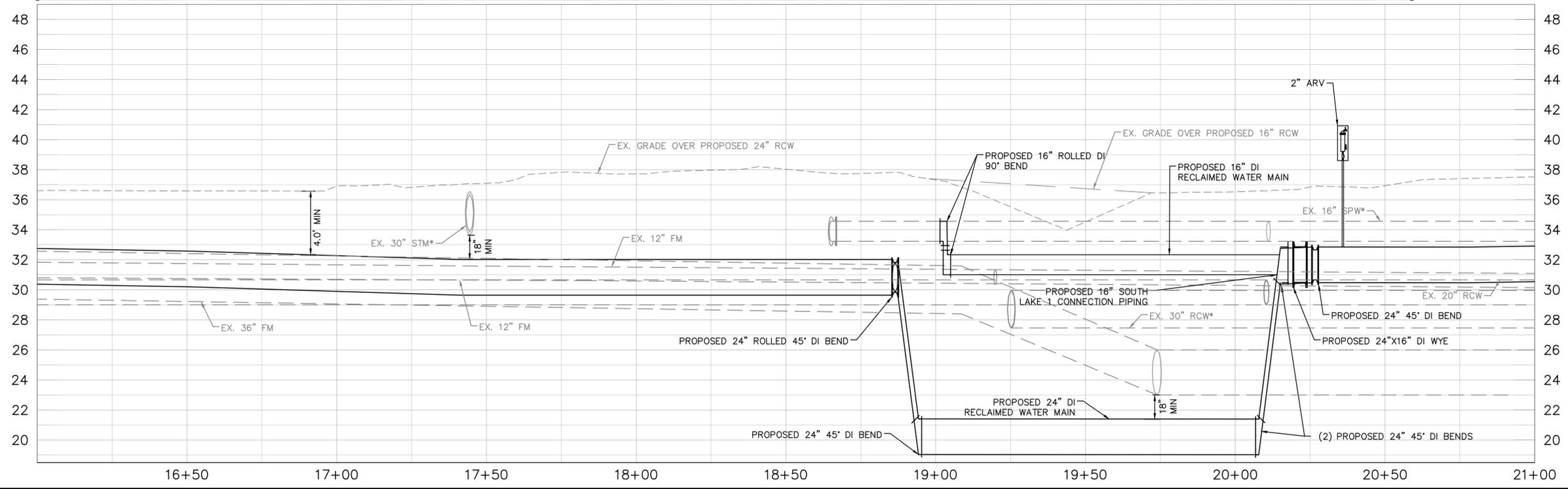
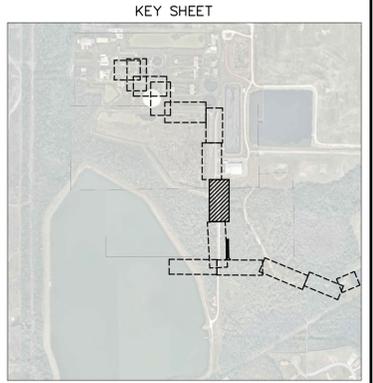
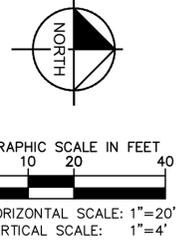
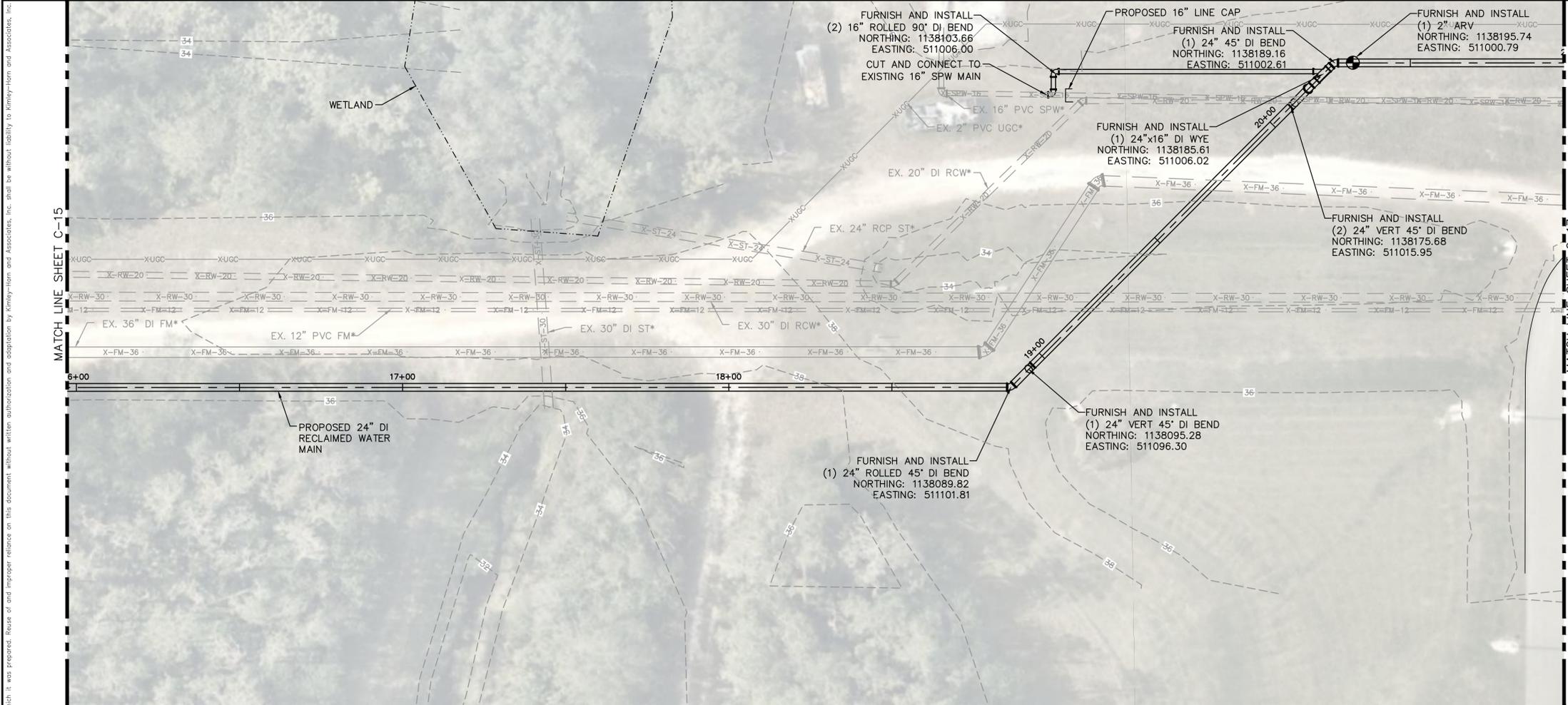
KHA PROJECT  
 148400015  
 DATE  
 1/28/2020  
 SCALE AS SHOWN  
 DESIGNED BY SNR  
 DRAWN BY ASR  
 CHECKED BY WEW

**Manatee County**  
**SEWRF RECLAIMED PUMP BACK STATION**  
 MANATEE COUNTY

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

**PLAN & PROFILE - DISTRIBUTION PIPING**

SHEET NUMBER  
**C-15**



\*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

**Kimley»Horn**

© 2020 KIMLEY-HORN AND ASSOCIATES, INC.  
100 2ND AVENUE SOUTH, SUITE 105N  
ST. PETERSBURG, FL 33701  
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**

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

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

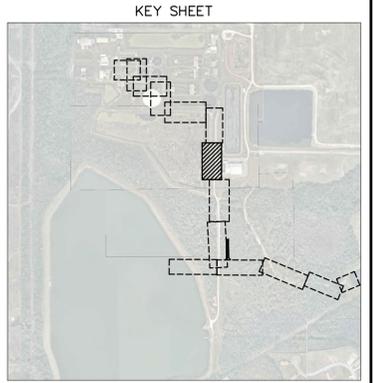
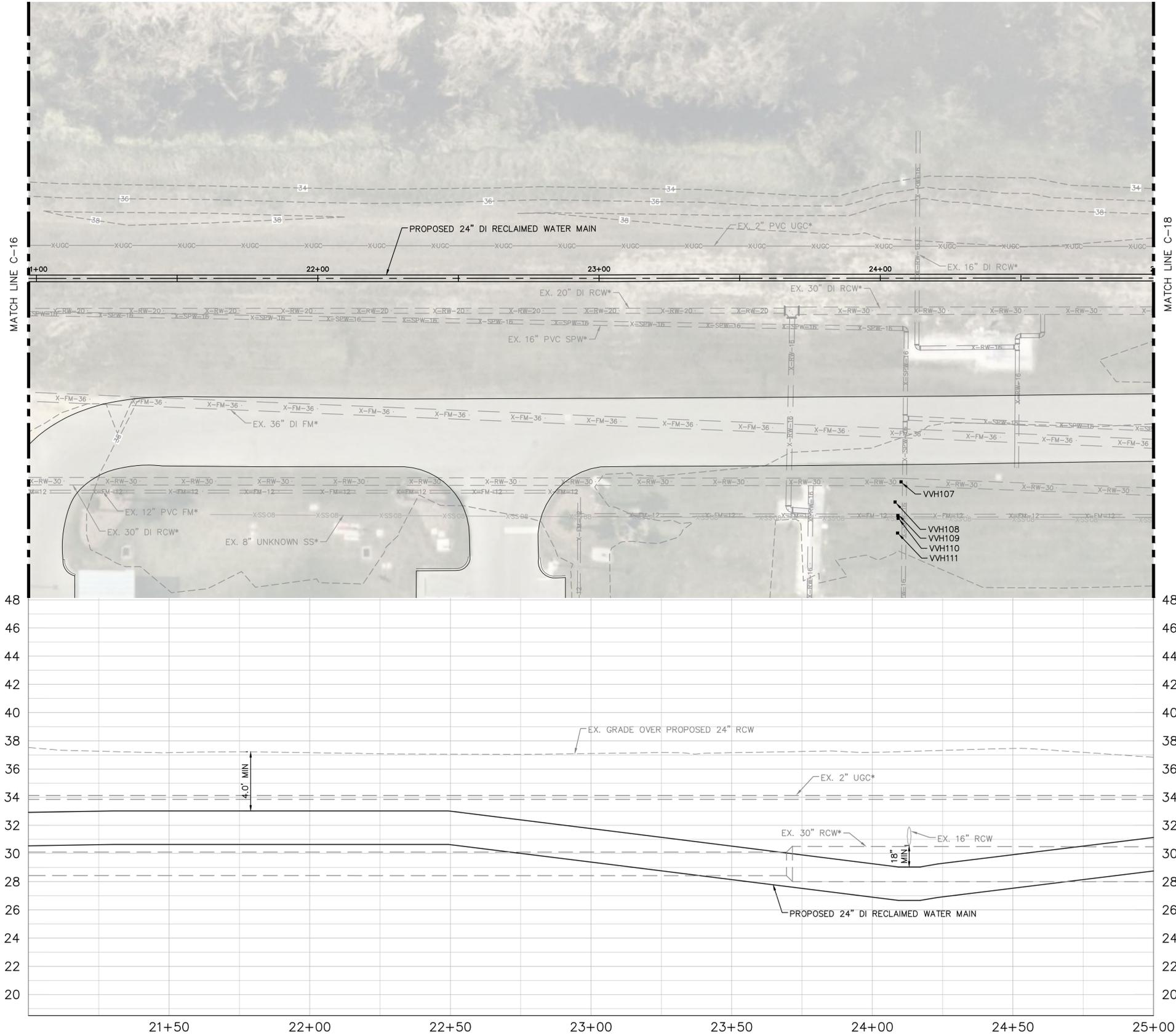
**PLAN & PROFILE - DISTRIBUTION PIPING**

SHEET NUMBER  
**C-16**

This document, together with the concepts and designs presented herein, is an instrument of service, as an instrument of service, intended only for the specific purpose and client for which it was prepared. Reuse of any information or design in this document without written authorization and adaptation by Kimley-Horn and Associates, Inc. shall be without liability to Kimley-Horn and Associates, Inc.



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



**\*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

**Kimley & Horn**  
 © 2020 KIMLEY-HORN AND ASSOCIATES, INC.  
 100 2ND AVENUE SOUTH, SUITE 105N  
 ST. PETERSBURG, FL 33701  
 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**  
**SEWRF RECLAIMED PUMP BACK STATION**  
 MANATEE COUNTY

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

**PLAN & PROFILE - DISTRIBUTION PIPING**

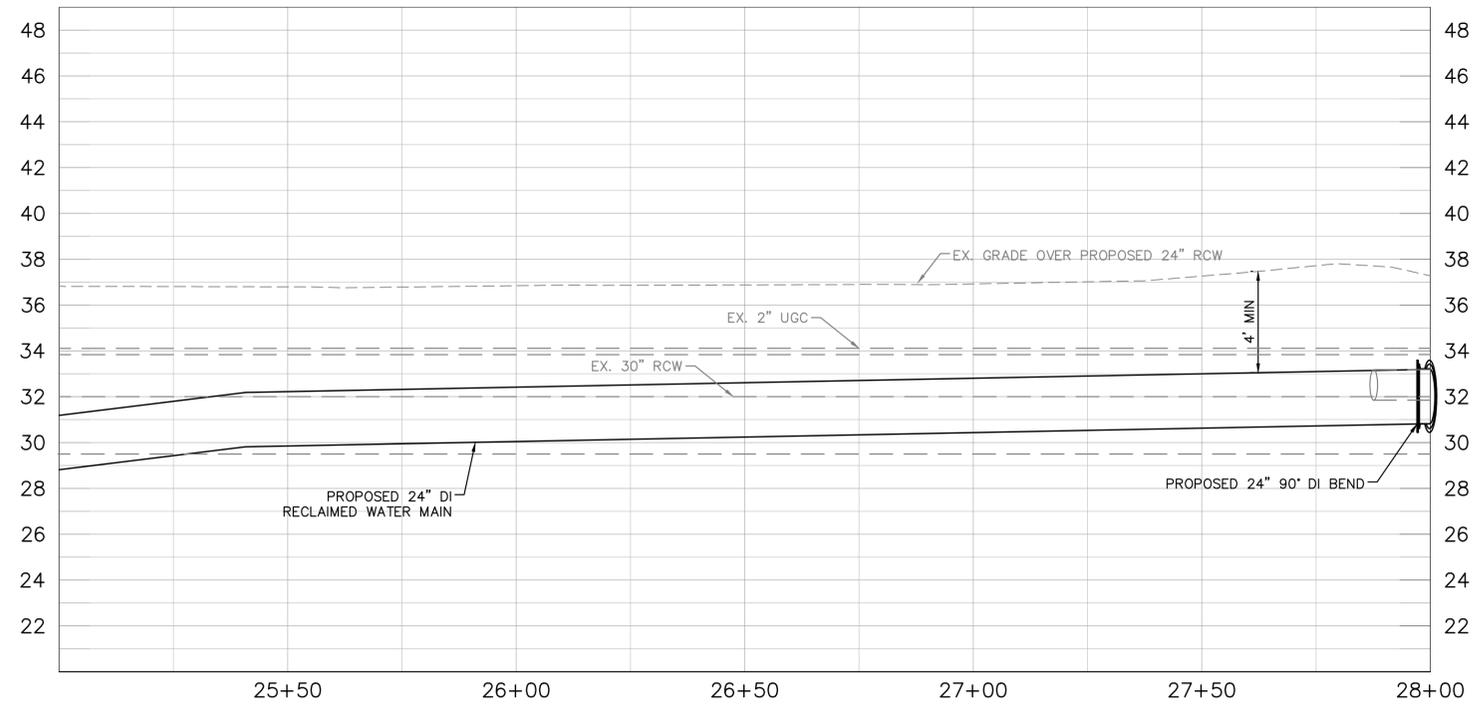
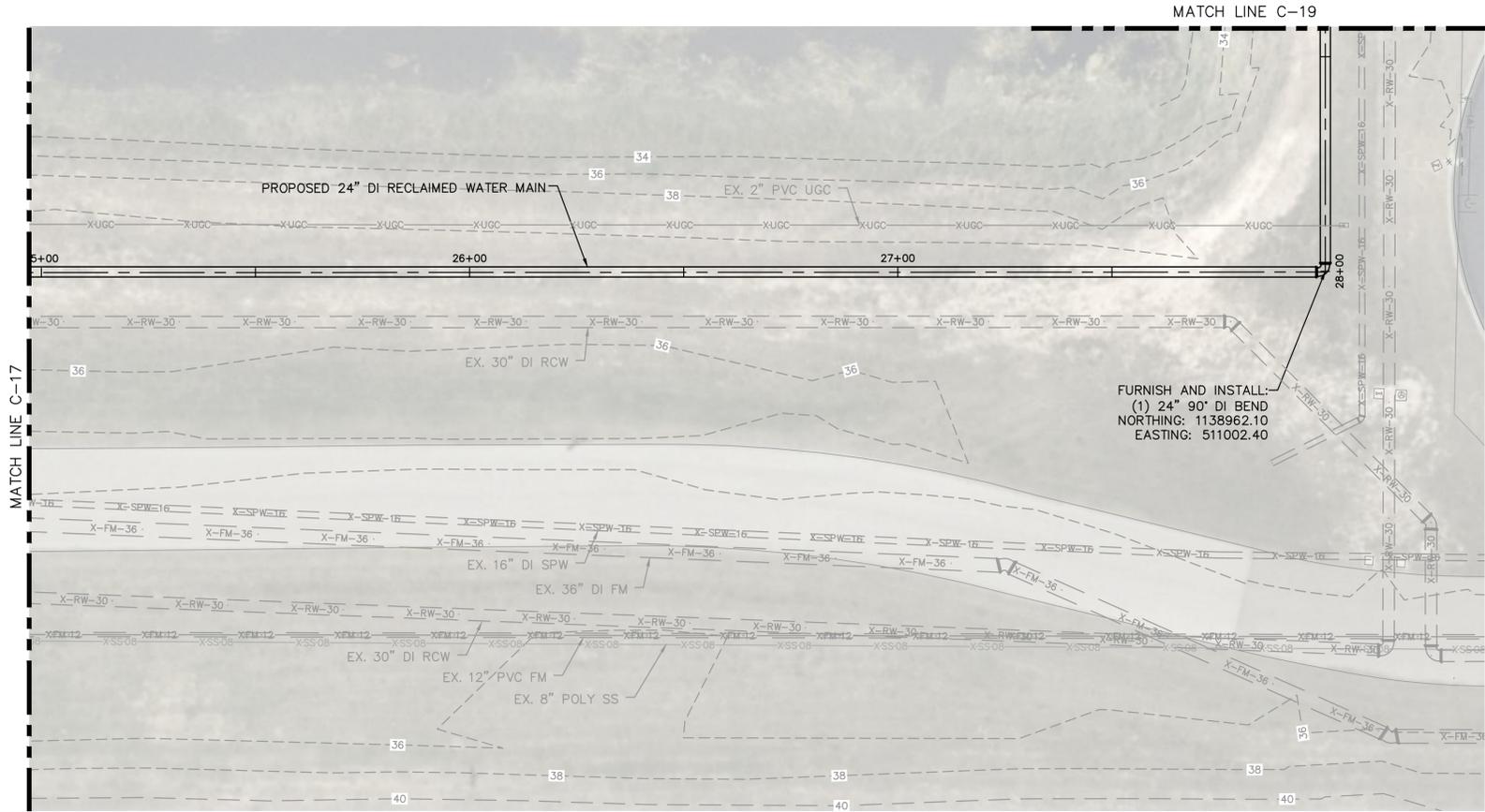
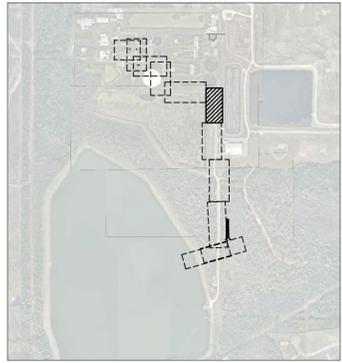
SHEET NUMBER  
**C-17**

This document, together with the concepts and designs presented herein, is an instrument of service intended only for the specific purpose and client for which it was prepared. Reuse of any improper reference on this document without written authorization and approval by Kimley-Horn and Associates, Inc. shall be without liability to Kimley-Horn and Associates, Inc.



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

KEY SHEET



**\*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

**Kimley»Horn**  
 © 2020 KIMLEY-HORN AND ASSOCIATES, INC.  
 100 2ND AVENUE SOUTH, SUITE 105N  
 ST. PETERSBURG, FL 33701  
 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

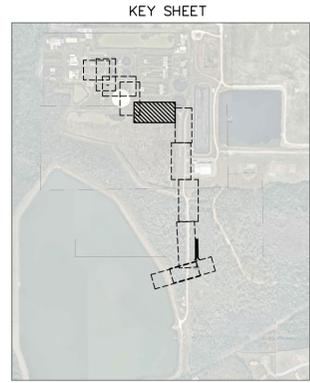
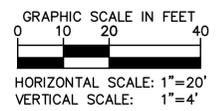
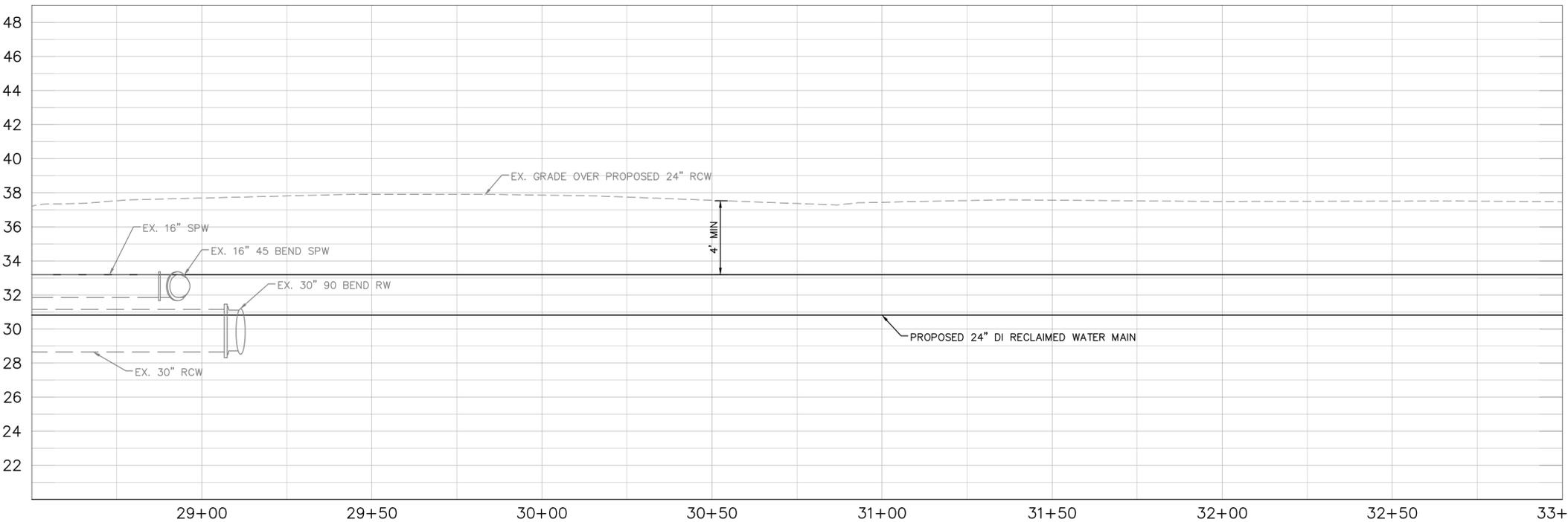
**Manatee County**  
**SEWRF RECLAIMED PUMP BACK STATION**  
 MANATEE COUNTY

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

**PLAN & PROFILE - DISTRIBUTION PIPING**

SHEET NUMBER  
**C-18**

This document, together with the concepts and designs presented herein, is intended only for the specific purpose and client for which it was prepared. Reuse of any improper reference on this document without written authorization and adaptation by Kimley-Horn and Associates, Inc. shall be without liability to Kimley-Horn and Associates, Inc.



**\*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

**Kimley»Horn**  
 © 2020 KIMLEY-HORN AND ASSOCIATES, INC.  
 100 2ND AVENUE SOUTH, SUITE 105N  
 ST. PETERSBURG, FL 33701  
 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

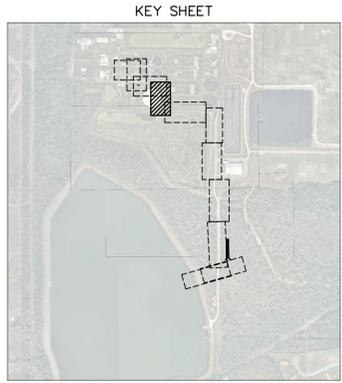
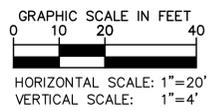
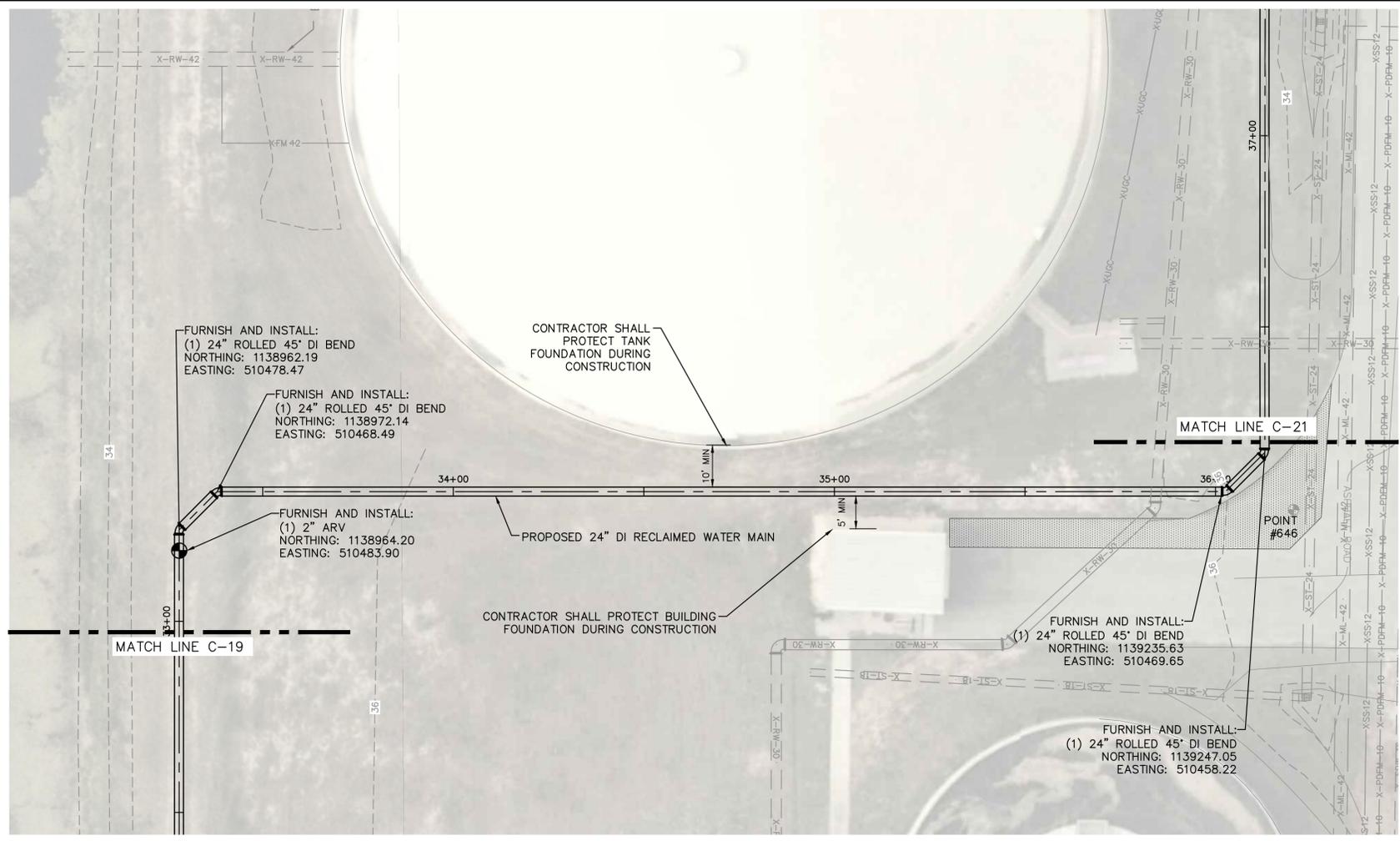
**SEWRF RECLAIMED  
 PUMP BACK STATION**  
 MANATEE COUNTY

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

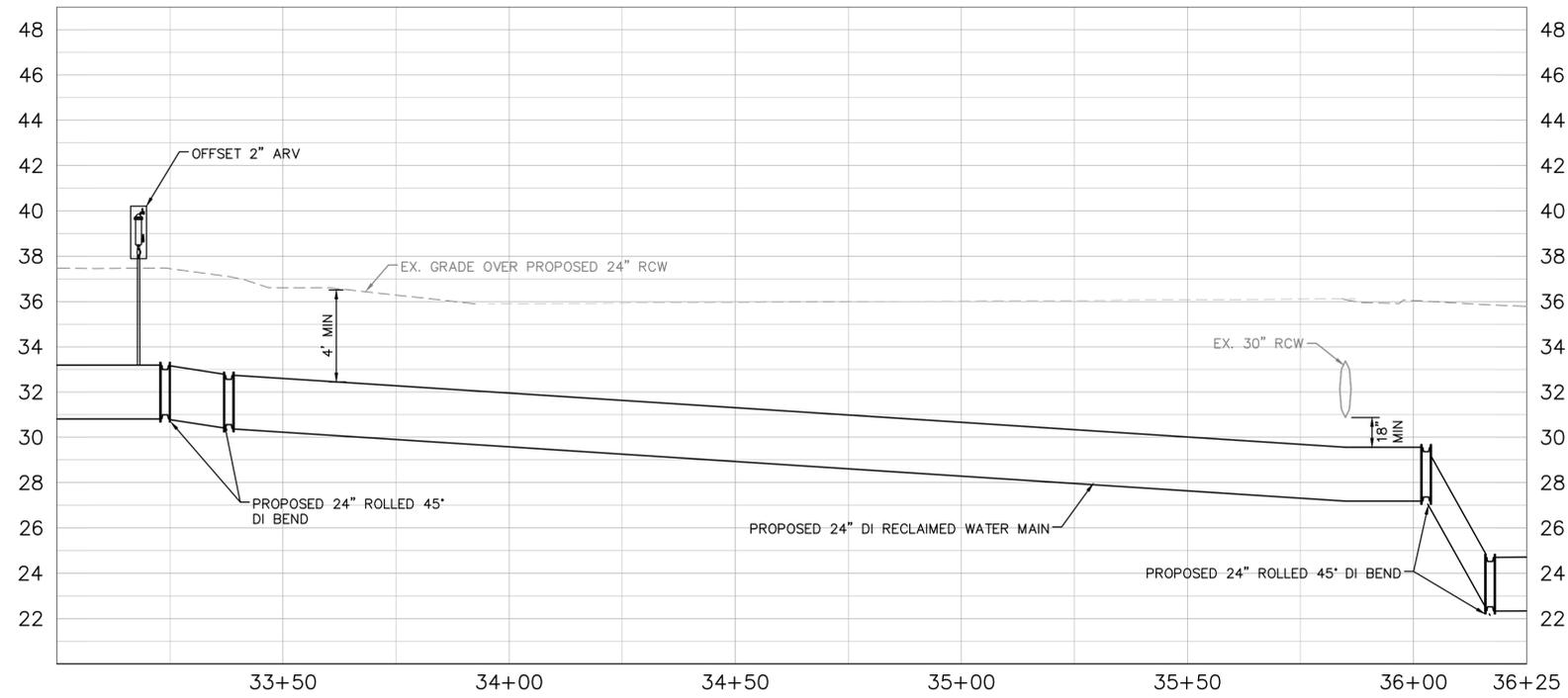
**PLAN & PROFILE -  
 DISTRIBUTION PIPING**

SHEET NUMBER
<b>C-19</b>

This document, together with the concepts and designs presented herein, is intended only for the specific purpose and client for which it was prepared. Reuse of any improper reference on this document without written authorization and adaptation by Kimley-Horn and Associates, Inc. shall be without liability to Kimley-Horn and Associates, Inc.



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



**\*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

**Kimley & Horn**  
© 2020 KIMLEY-HORN AND ASSOCIATES, INC.  
100 2ND AVENUE SOUTH, SUITE 105N  
ST. PETERSBURG, FL 33701  
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**  
**SEWRF RECLAIMED PUMP BACK STATION**  
MANATEE COUNTY

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

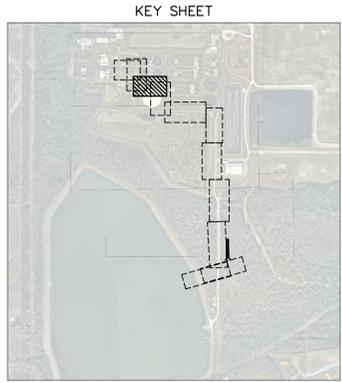
**PLAN & PROFILE - DISTRIBUTION PIPING**

SHEET NUMBER  
**C-20**

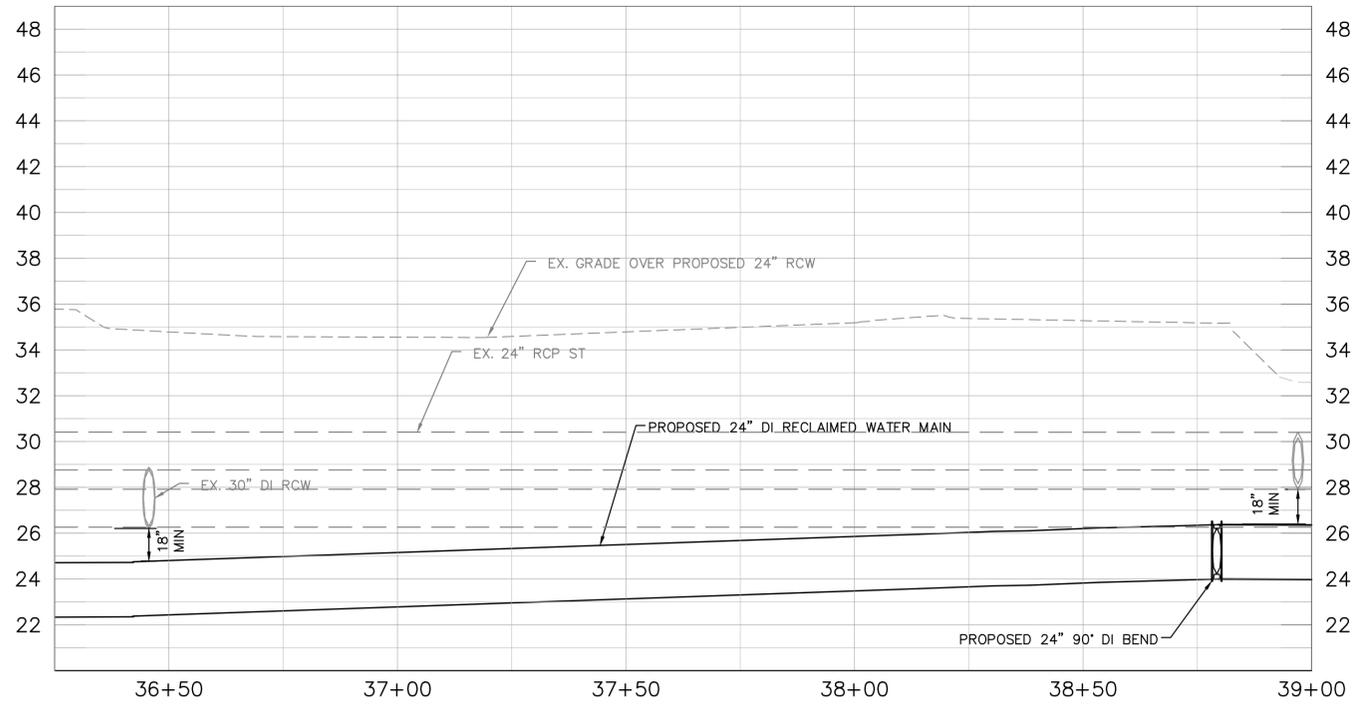
This document, together with the concepts and designs presented herein, is intended only for the specific purpose and client for which it was prepared. Reuse of any improper reliance on this document without written authorization and approval by Kimley-Horn and Associates, Inc. shall be without liability to Kimley-Horn and Associates, Inc.



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)



\*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

**Kimley»Horn**  
 © 2020 KIMLEY-HORN AND ASSOCIATES, INC.  
 100 2ND AVENUE SOUTH, SUITE 105N  
 ST. PETERSBURG, FL 33701  
 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

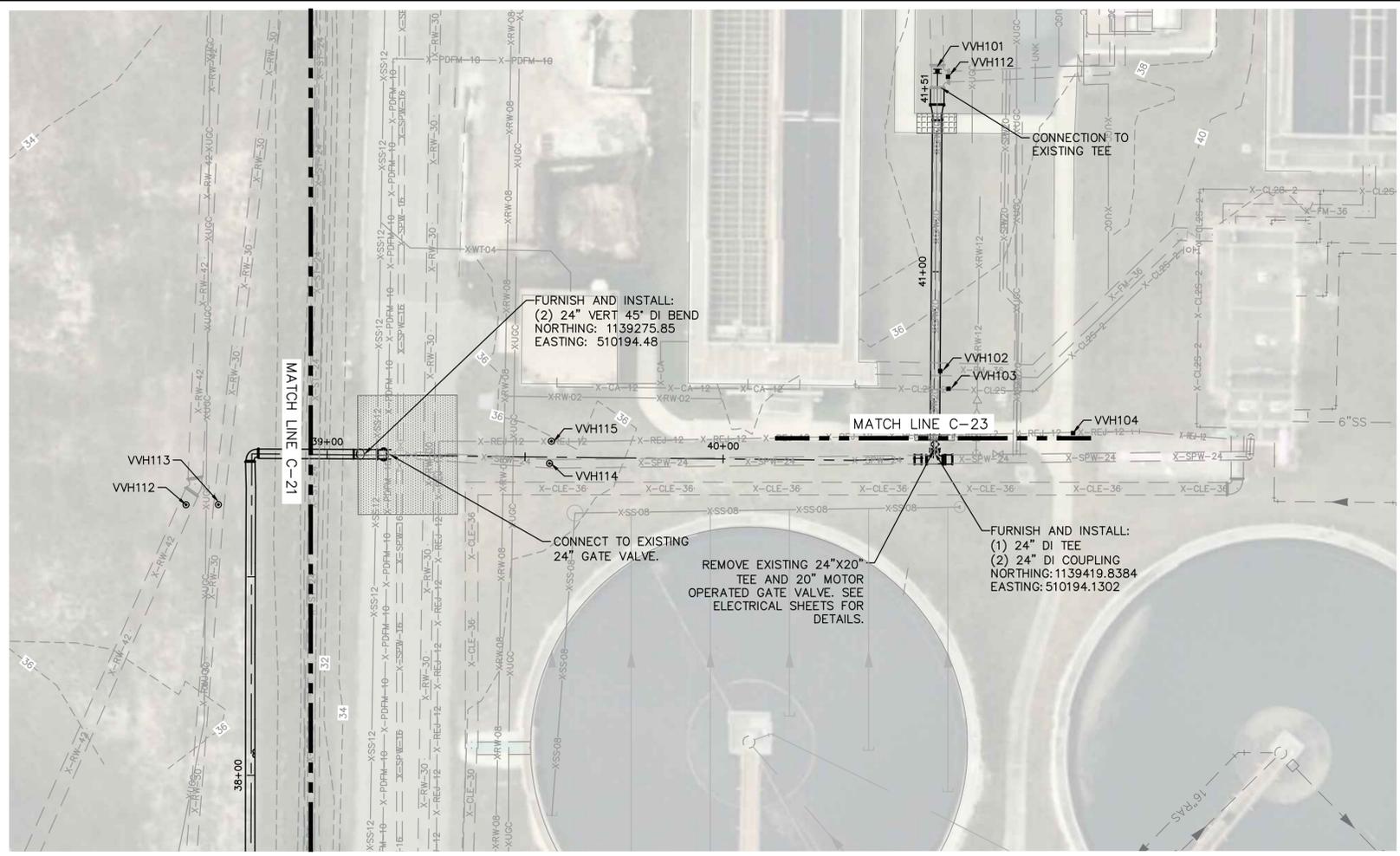
**Manatee County**  
**SEWRF RECLAIMED PUMP BACK STATION**  
 MANATEE COUNTY

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

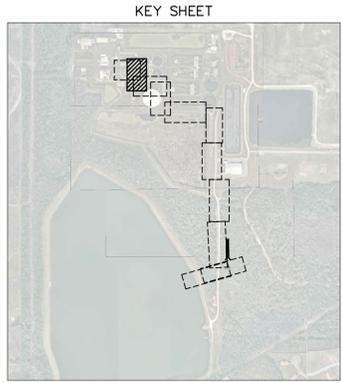
**PLAN & PROFILE - DISTRIBUTION PIPING**

SHEET NUMBER  
**C-21**

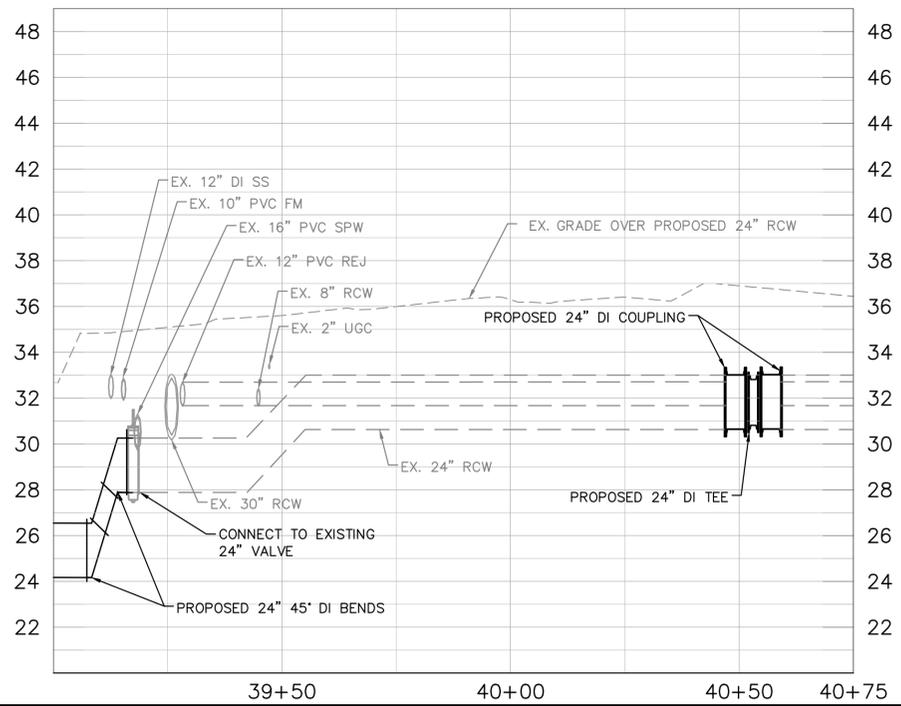
This document, together with the concepts and designs presented herein, is intended only for the specific purpose and client for which it was prepared. Reuse of any improper reference on this document without written authorization and adaptation by Kimley-Horn and Associates, Inc. shall be without liability to Kimley-Horn and Associates, Inc.



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) [Patterned box]  
 SIDEWALK RESTORATION.  
 (SEE SHEET C-29 FOR DETAILS) [Patterned box]



**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

**Kimley & Horn**  
 © 2020 KIMLEY-HORN AND ASSOCIATES, INC.  
 100 2ND AVENUE SOUTH, SUITE 105N  
 ST. PETERSBURG, FL 33701  
 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

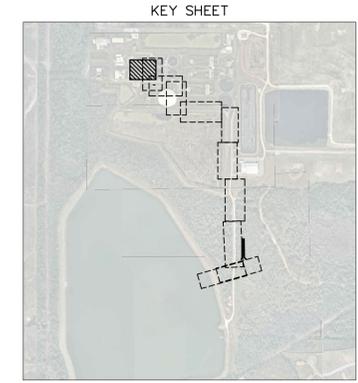
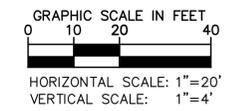
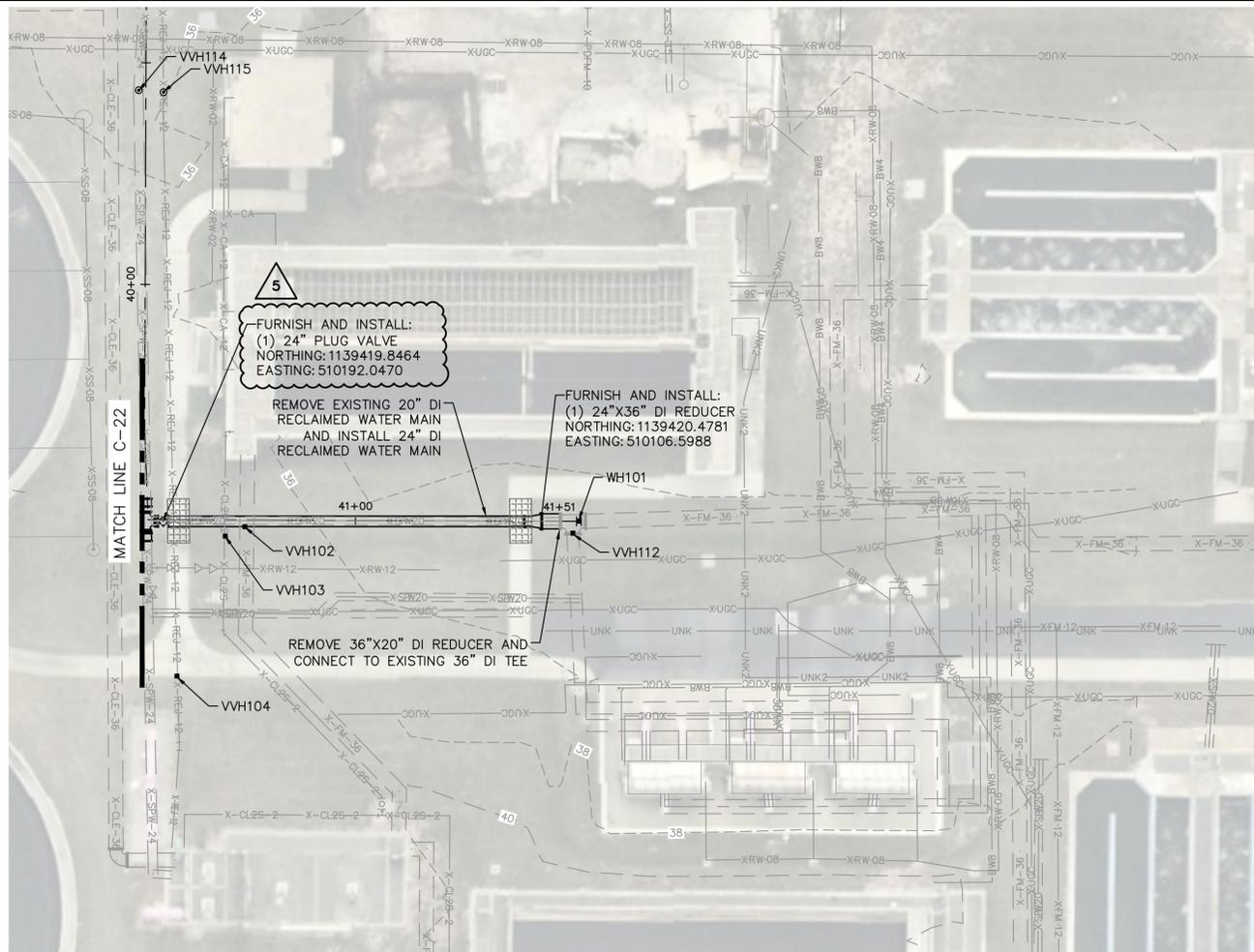
**Manatee County**  
**SEWRF RECLAIMED PUMP BACK STATION**  
 MANATEE COUNTY  
 LICENSED PROFESSIONAL  
 STEPHEN N. ROMANO, P.E.  
 FL LICENSE NUMBER  
 57579  
 FL DATE:

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

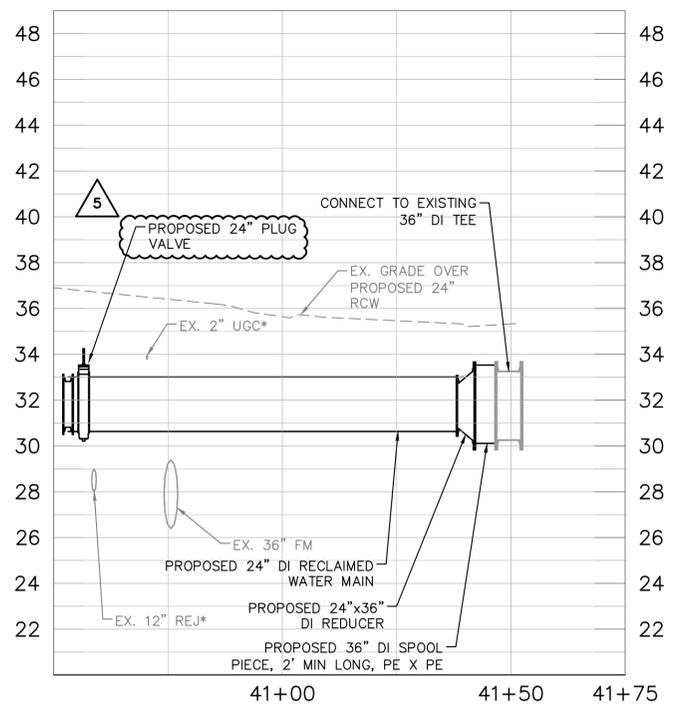
**PLAN & PROFILE - DISTRIBUTION PIPING**

SHEET NUMBER  
**C-22**

This document, together with the concepts and designs presented herein, is intended only for the specific purpose and client for which it was prepared. Reuse of any improper reference on this document without written authorization and adaptation by Kimley-Horn and Associates, Inc. shall be without liability to Kimley-Horn and Associates, Inc.



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



**\*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.

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

**Kimley >> Horn**  
 © 2020 KIMLEY-HORN AND ASSOCIATES, INC.  
 100 2ND AVENUE SOUTH, SUITE 105N  
 ST. PETERSBURG, FL 33701  
 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

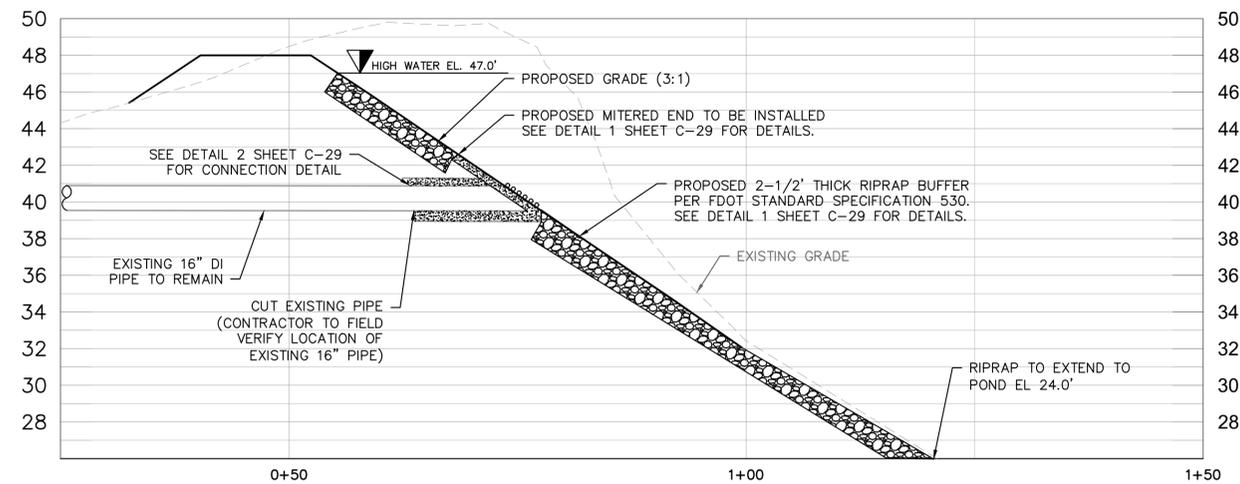
**Manatee County**  
 FLORIDA  
**SEWRF RECLAIMED PUMP BACK STATION**  
 MANATEE COUNTY

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

**PLAN & PROFILE - DISTRIBUTION PIPING**

SHEET NUMBER  
**C-23**

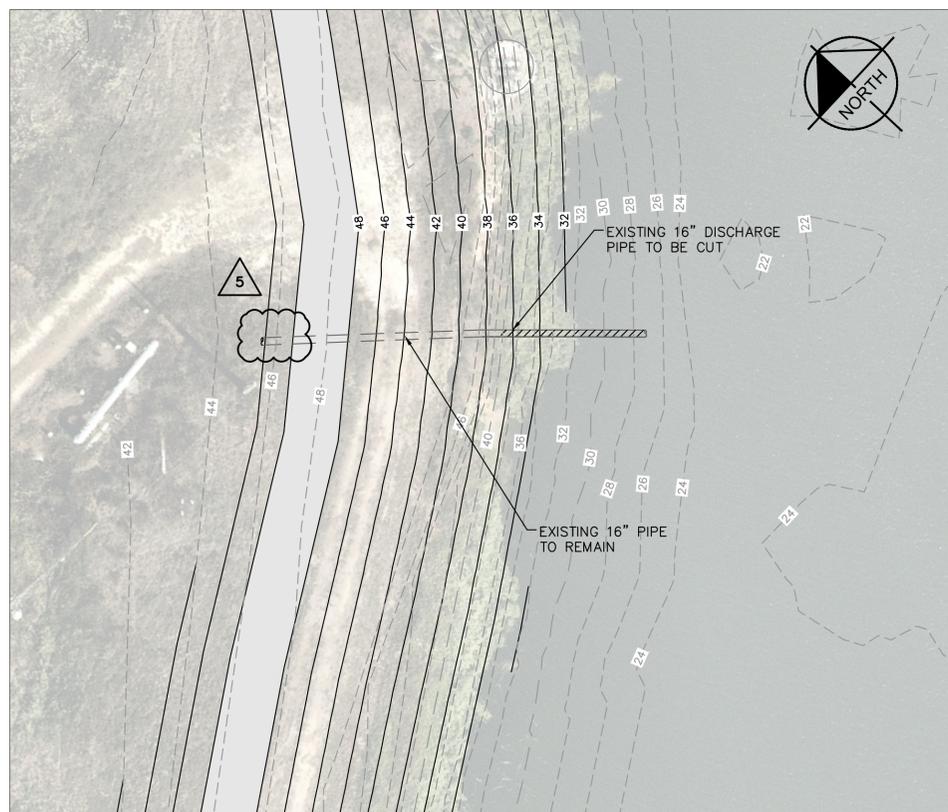
This document, together with the concepts and designs presented herein, is intended only for the specific purpose and client for which it was prepared. Reuse of any improper reliance on this document without written authorization and adaptation by Kimley-Horn and Associates, Inc. shall be without liability to Kimley-Horn and Associates, Inc.



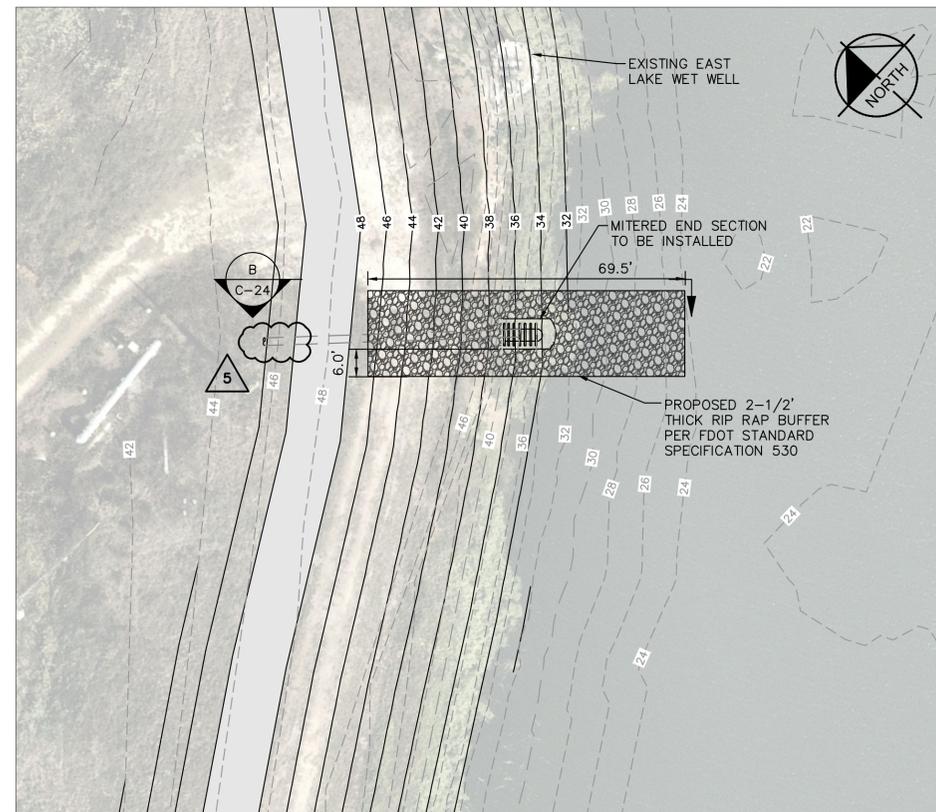
**B** PROPOSED EAST LAKE DISCHARGE  
 -- SCALE: 1" = 10'



DISCHARGE LOCATION MAP OVERVIEW



EAST LAKE DISCHARGE DEMOLITION PLAN



PROPOSED EAST LAKE DISCHARGE PLAN

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

**Kimley >> Horn**

© 2020 KIMLEY-HORN AND ASSOCIATES, INC.  
 100 2ND AVENUE SOUTH, SUITE 105N  
 ST. PETERSBURG, FL 33701  
 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



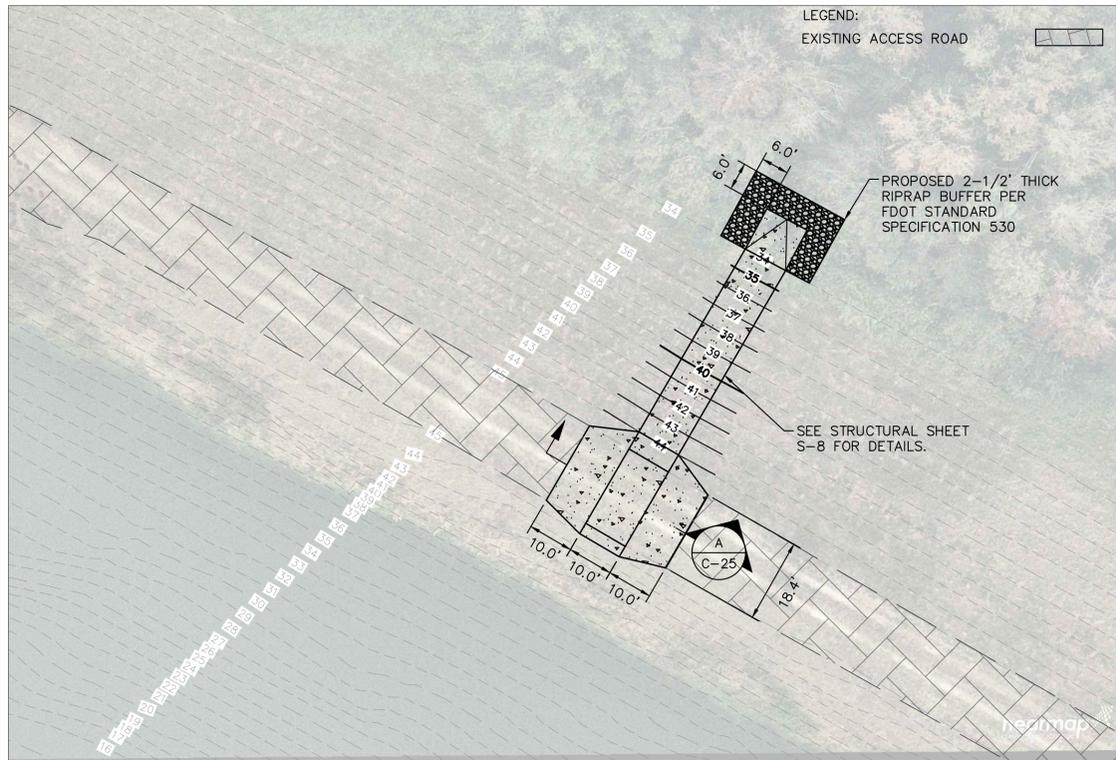
SEWRF RECLAIMED  
 PUMP BACK STATION

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

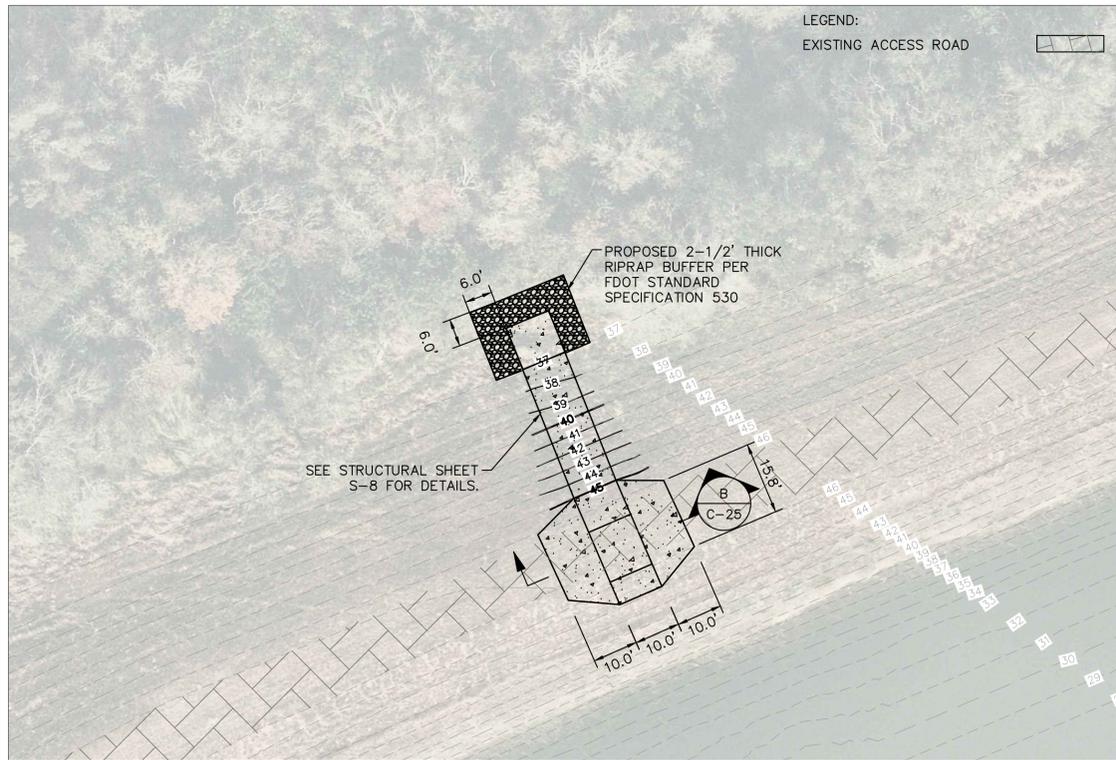
EAST LAKE ENERGY DISSIPATION  
 STRUCTURE

SHEET NUMBER  
**C-24**

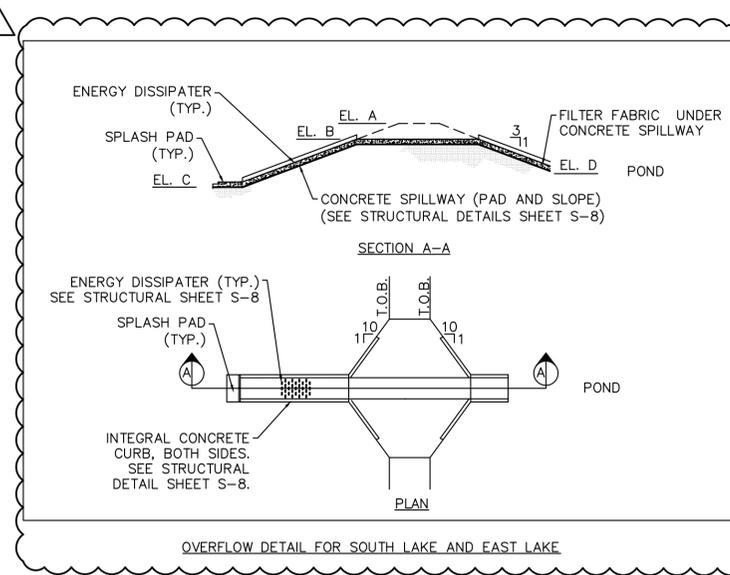
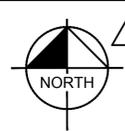
This document, together with the concepts and designs presented herein, is intended only for the specific purpose and client for which it was prepared. Reuse of any improper reference on this document without written authorization and adaptation by Kimley-Horn and Associates, Inc. shall be without liability to Kimley-Horn and Associates, Inc.



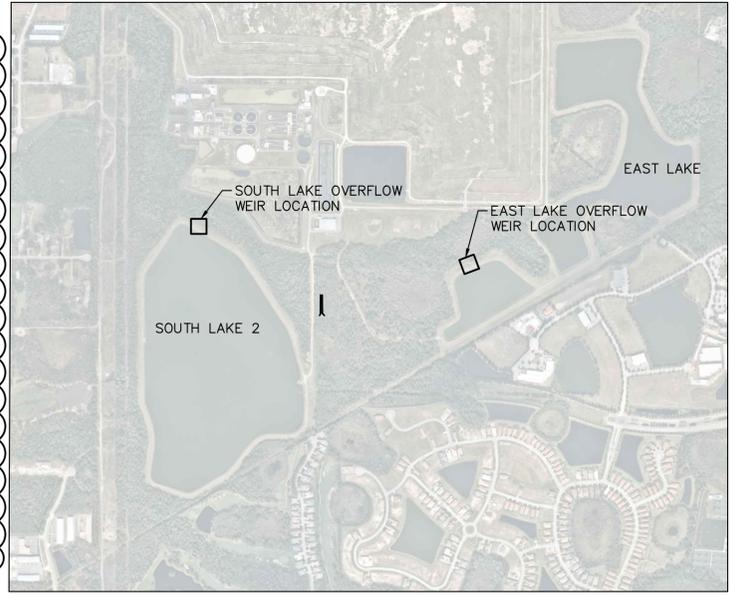
SOUTH LAKE WEIR LOCATION



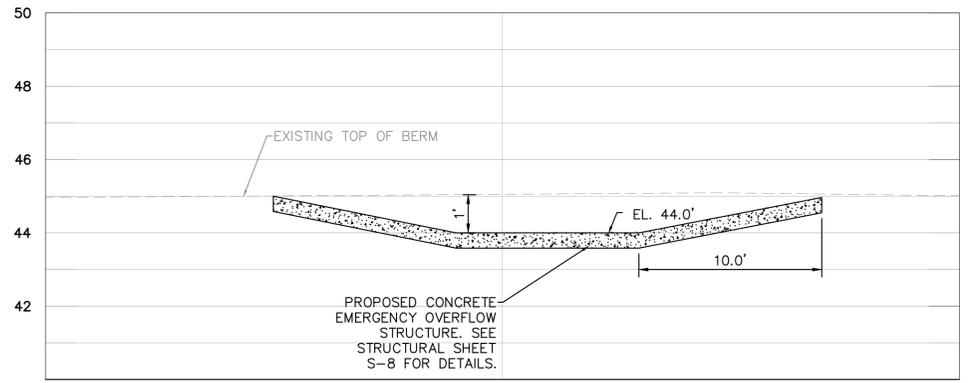
EAST LAKE WEIR LOCATION



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'

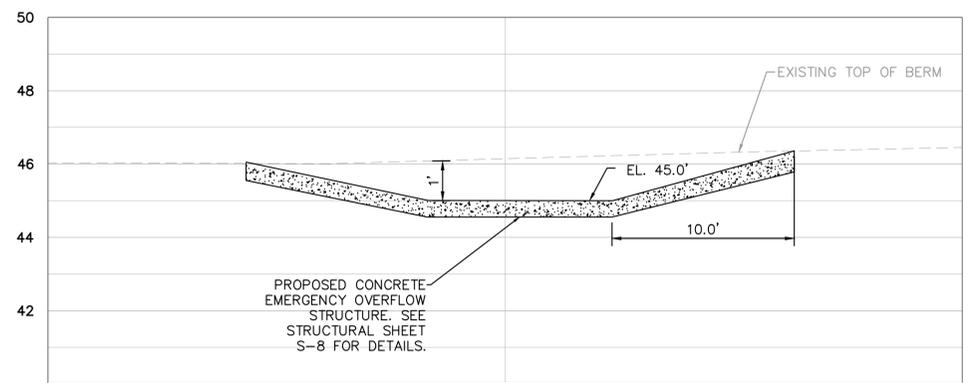


OVERFLOW STRUCTURE LOCATION MAP



SOUTH LAKE - SECTION A

0+50



EAST LAKE - SECTION B

0+50

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

**Kimley»Horn**

© 2020 KIMLEY-HORN AND ASSOCIATES, INC.  
 100 2ND AVENUE SOUTH, SUITE 105N  
 ST. PETERSBURG, FL 33701  
 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

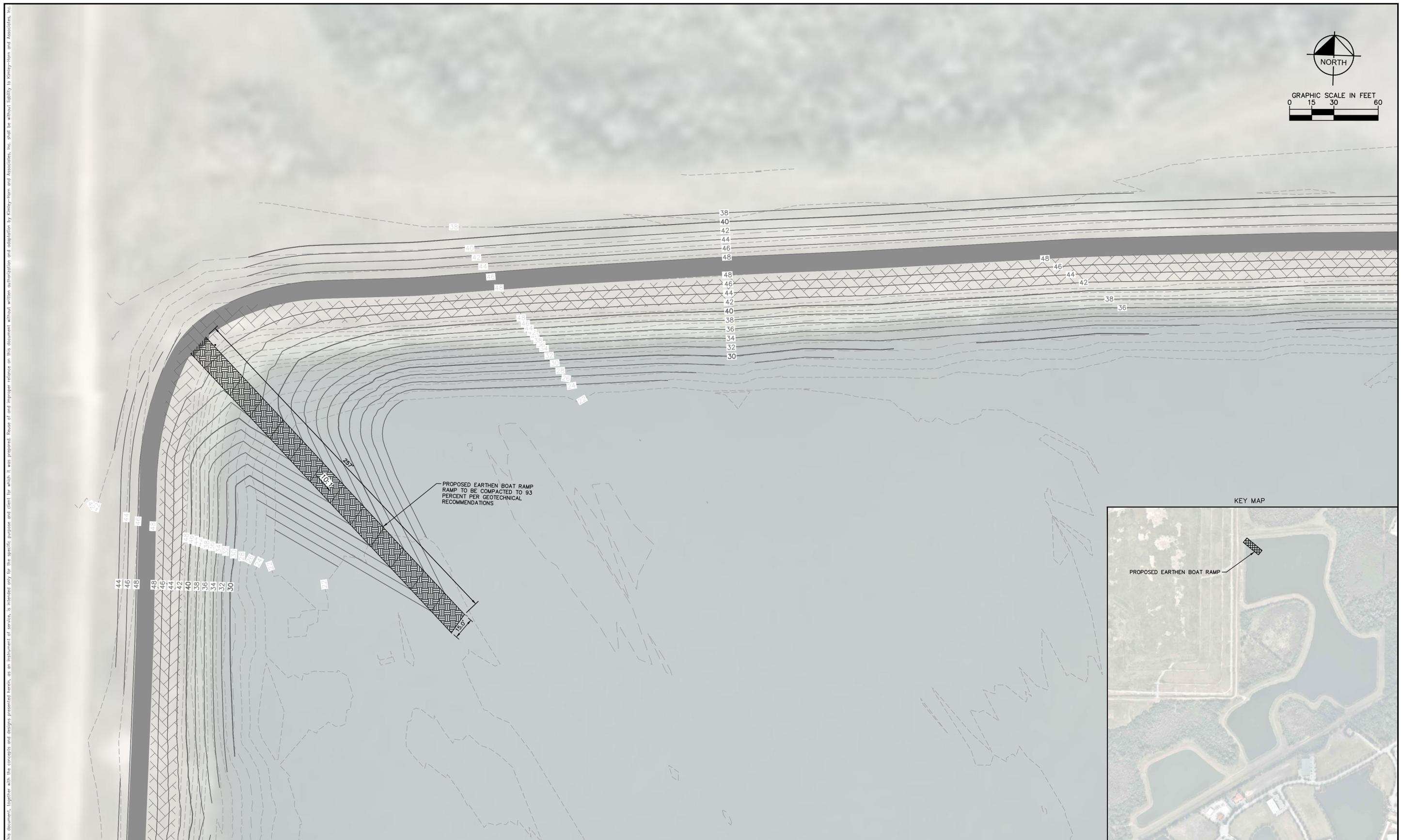
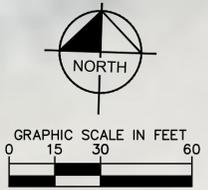
**SEWRF RECLAIMED PUMP BACK STATION**

MANATEE COUNTY

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

**OVERFLOW STRUCTURES**

SHEET NUMBER	C-25
--------------	------



PROPOSED EARTHEN BOAT RAMP  
RAMP TO BE COMPACTED TO 93  
PERCENT PER GEOTECHNICAL  
RECOMMENDATIONS



No.	REVISIONS	DATE	BY

**Kimley»Horn**  
 © 2020 KIMLEY-HORN AND ASSOCIATES, INC.  
 100 2ND AVENUE SOUTH, SUITE 105N  
 ST. PETERSBURG, FL 33701  
 PHONE: 727-547-3999  
 WWW.KIMLEY-HORN.COM CA 0000696

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

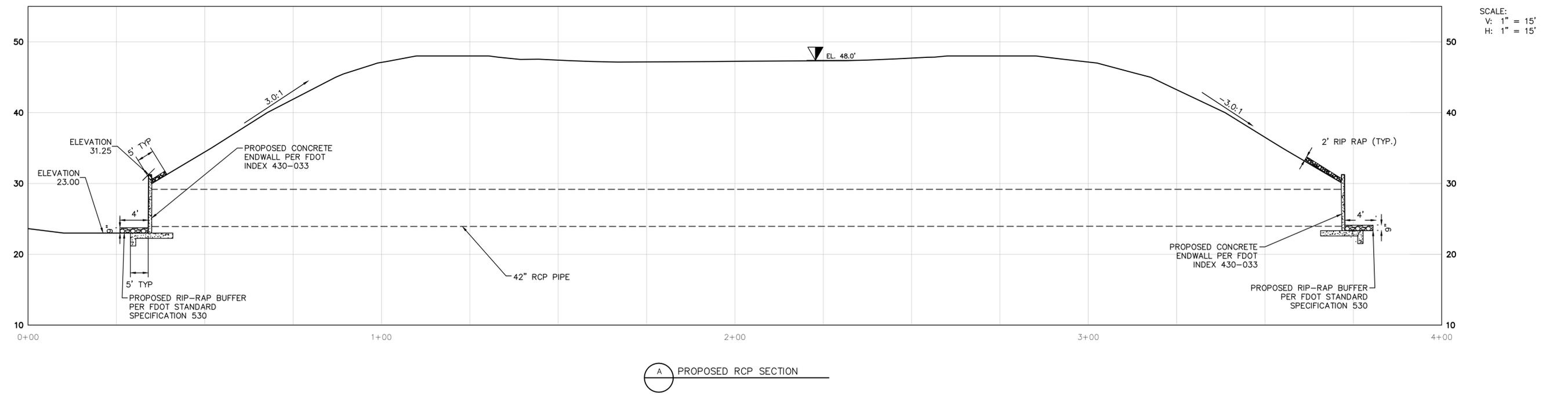
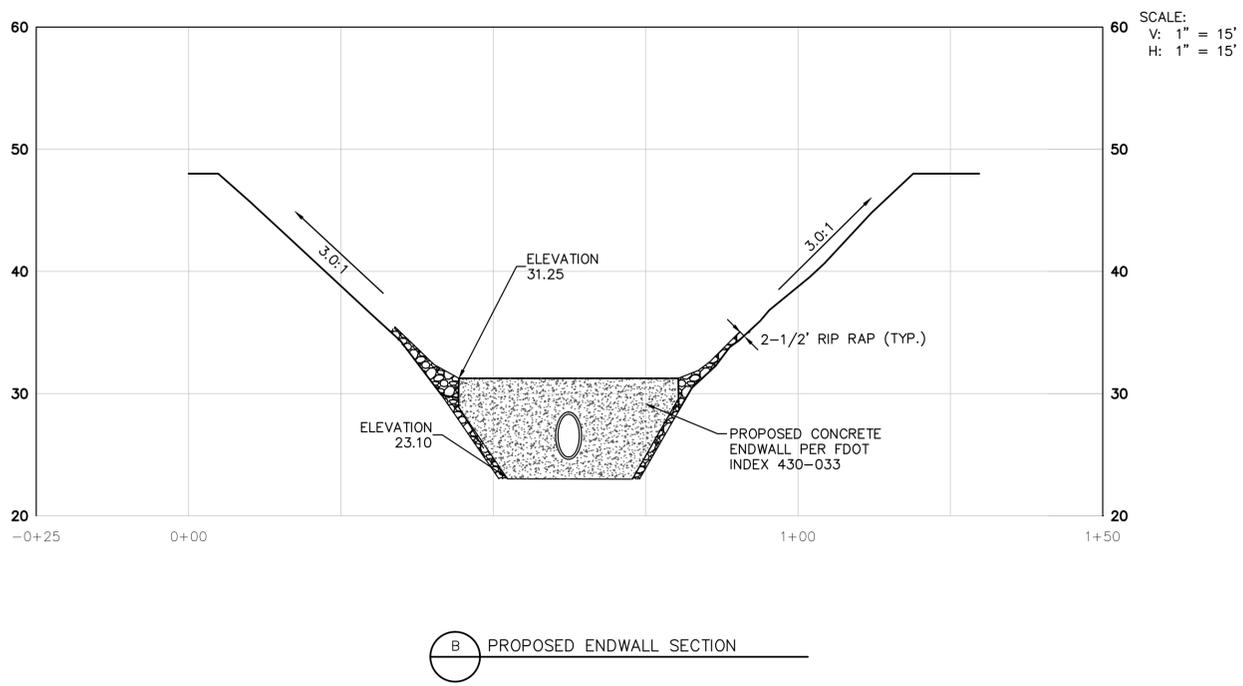
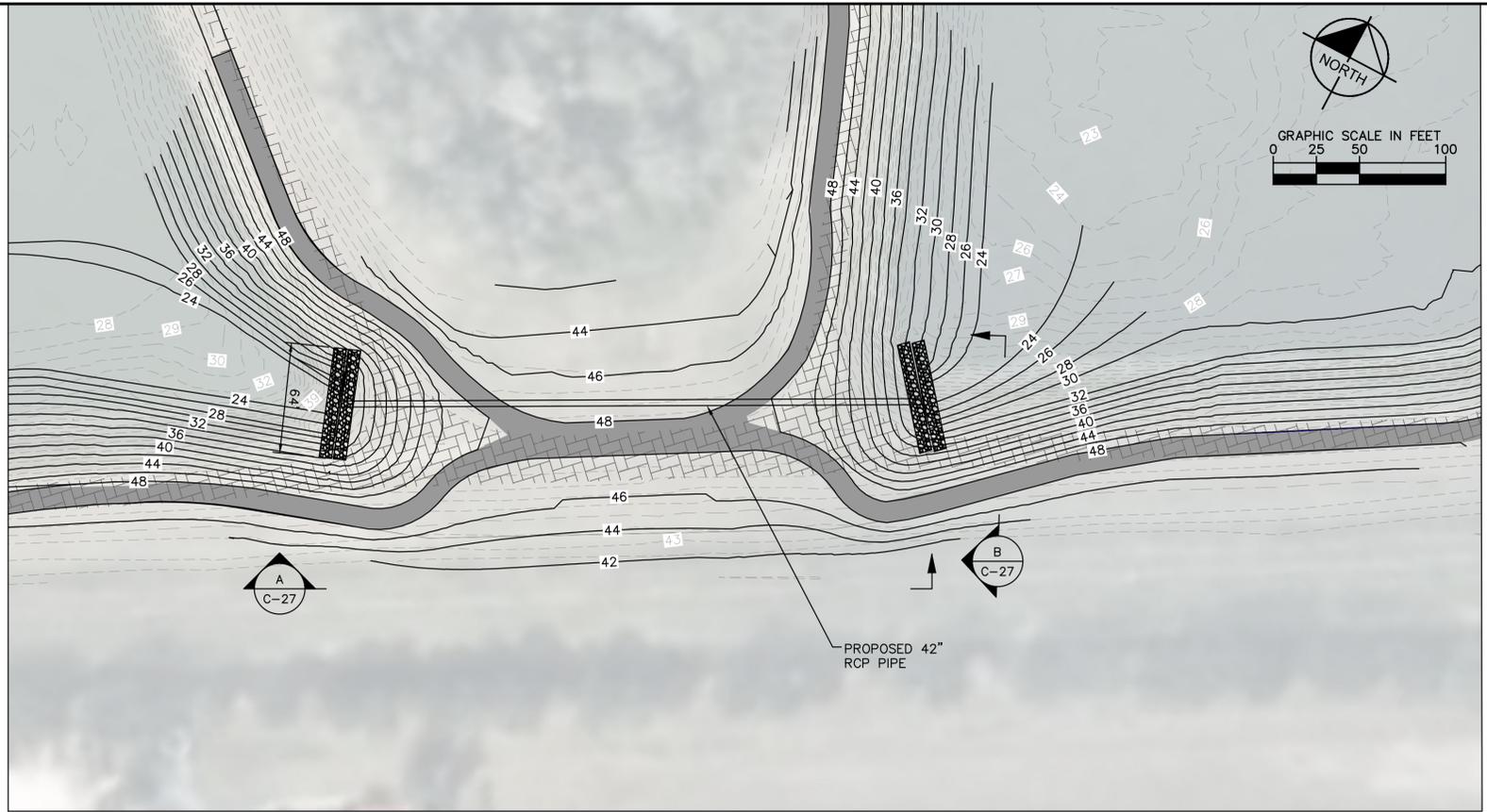
LICENSED PROFESSIONAL  
 STEPHEN N. ROMANO, P.E.  
 FL LICENSE NUMBER  
 57579

**EAST LAKE EARTHEN BOAT  
 RAMP**

SHEET NUMBER  
**C-26**

This document, together with the concepts and designs presented herein, is intended only for the specific purpose and client for which it was prepared. Reuse of and improper reliance on this document without written authorization and adaptation by Kimley-Horn and Associates, Inc. shall be without liability to Kimley-Horn and Associates, Inc.

This document, together with the concepts and designs presented herein, is an instrument of service, intended only for the specific purpose and client for which it was prepared. Reuse of and improper reliance on this document without written authorization and approval by Kimley-Horn and Associates, Inc. shall be without liability to Kimley-Horn and Associates, Inc.



No.	REVISIONS	DATE	BY

**Kimley»Horn**

© 2020 KIMLEY-HORN AND ASSOCIATES, INC.  
100 2ND AVENUE SOUTH, SUITE 105N  
ST. PETERSBURG, FL 33701  
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**

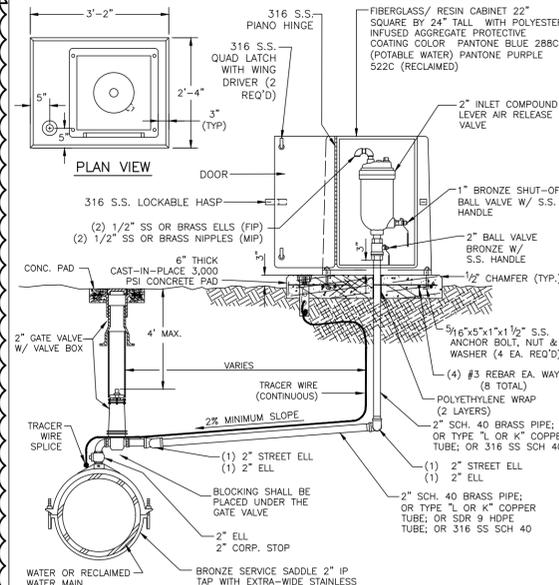
MANATEE COUNTY

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

**EAST LAKE CULVERT**

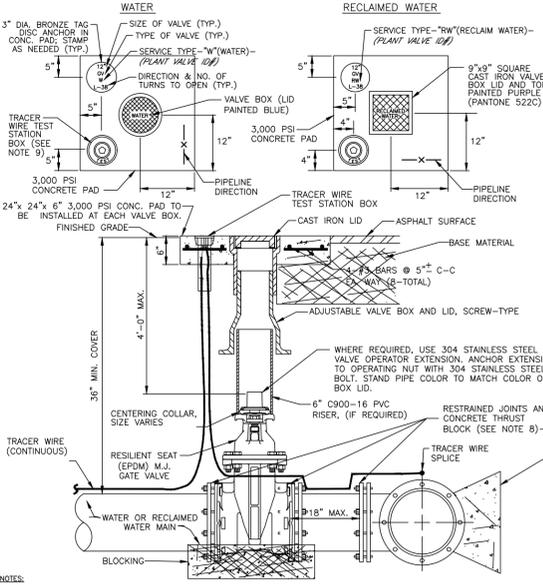
SHEET NUMBER <b>C-27</b>
-----------------------------

This document, together with the concepts and designs presented herein, is intended only for the specific purpose and client for which it was prepared. Reuse of any information contained on this document without written authorization and adaptation by Kimley-Horn and Associates, Inc. shall be without liability to Kimley-Horn and Associates, Inc.



- NOTES:**
- AIR RELEASE VALVES TO BE INSTALLED AT HIGH POINTS ALONG THE MAINS, WHERE ARE COULD BE TRAPPED.
  - ARY VENT ORIFICE TO BE SIZED IN ACCORDANCE WITH MANUFACTURER'S RECOMMENDATION FOR WATER MAIN SIZE.
  - ALL INCIDENTAL FITTINGS AND HARDWARE TO BE STAINLESS STEEL, BRASS OR COPPER.
  - ALL PIPE THREADS TO BE SEALED AIR TIGHT.
  - VENT PIPE TO BE LAID ACCURATELY ON SLOPE, WITHOUT HIGH OR LOW POINTS.
  - ARY SHALL BE INSTALLED MINIMUM 6 FT FROM EDGE OF PAVEMENT; 10 FT MAXIMUM FROM BACK OF CURB; 4 FT MIN. MAY BE APPROVED BY UTILITIES IN SOME EXISTING AREAS.
  - SEE UW-2 GATE VALVE, BOX, LID AND TAG STANDARD DETAIL. CENTERING COLLAR IS NOT REQUIRED ON 2" GATE VALVES.

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



- NOTES:**
- "W" OR "RW" TO BE IMPRESSED INTO THE NON-POURED CONCRETE CURB, ALONG WITH DISTANCE IN FEET TO THE VALVE. IF NO CURB, INSTALL A BLUE DISC WITH "W" OR PURPLE DISC WITH "RW" USING A 1/8" x 1" GALVANIZED STEEL SCREW IN THE EDGE OF PAVEMENT WITH THE FOOTAGE FROM THE DISC TO THE VALVE.
  - ALL EXISTING AND PROPOSED VALVE BOXES SHALL BE ADJUSTED TO FINISHED GRADES AS DETERMINED IN THE FIELD.
  - VALVES SHALL NOT BE PLACED IN HANDCAPPED RAMPS, CURBS, OR CUTTERS.
  - PRECAST CONCRETE PADS SHALL NOT BE USED.
  - ALL EXPOSED EDGES OF CONCRETE SHALL BE CHAMFERED 1/2".
  - PIPELINE DIRECTION TO BE IMPRESSED INTO NEWLY POURED CONCRETE PAD.
  - WHERE THRUST BLOCK NOT USED, RESTRAINED JOINTS MUST EXTEND FROM TEE FULL LENGTH SPECIFIED FOR TEES.
  - USE NON-TRAFFIC RATED BOXES FOR NORMAL YARD SERVICE WHERE VALVE WILL BE IN STREET OR PARKING UNDER VEHICLE TRAFFIC. USE TRAFFIC RATED BOXES WHERE POSSIBLE. LOCATE TRACER WIRE TESTING STATION OUTSIDE OF TRAVEL LANE OR IN MEDIAN. CENTERED IN SEPARATE CONCRETE PAD SIMILAR TO STANDARD VALVE BOX PAD.
  - THE BRASS TAG SHALL HAVE A TRACER WIRE OR WHEN VALVES ARE INSTALLED WITHIN THE COUNTY TREATMENT PLANT LINES, THE PLANT VALVE ID SHALL BE SHOWN ON THE CONSTRUCTION PLANS AND RECORD DRAWINGS.
  - REFER TO SECTION 13.1 GATE VALVES IN THE PUBLIC WORKS UTILITY STANDARDS MANUAL FOR FURTHER DETAILS.

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

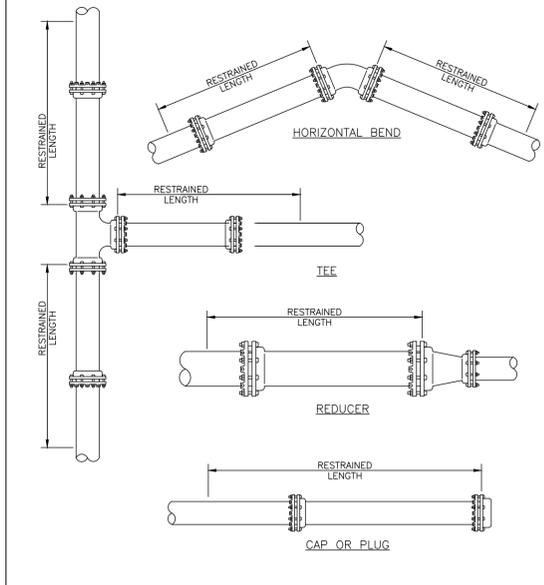
**REQUIRED LENGTH OF RESTRAINED JOINT PIPE FOR DIP (POLY-WRAPPED)**

MAIN PIPE SIZE	HORIZ. BENDS			TEES			REDUCERS			PLUGS & VALVES
	90°	45°	22.5°	SIZE	LENGTH	SIZE	LENGTH	SIZE	LENGTH	
36	142	59	28	x36	393	x30	314	x24	232	453
30	124	51	25	x30	333	x24	252	x18	198	391
24	106	44	21	x24	287	x18	216	x12	162	327
20	92	38	18	x20	252	x16	192	x10	144	280
16	77	32	15	x16	217	x12	162	x8	126	231
12	61	25	12	x12	172	x10	132	x6	96	181
10	52	22	10	x10	147	x8	112	x4	72	153
8	44	18	9	x8	122	x6	96	x4	60	128
6	34	14	7	x6	96	x4	72	x3	48	98
4	24	10	5	x4	72	x3	54	x2	36	69



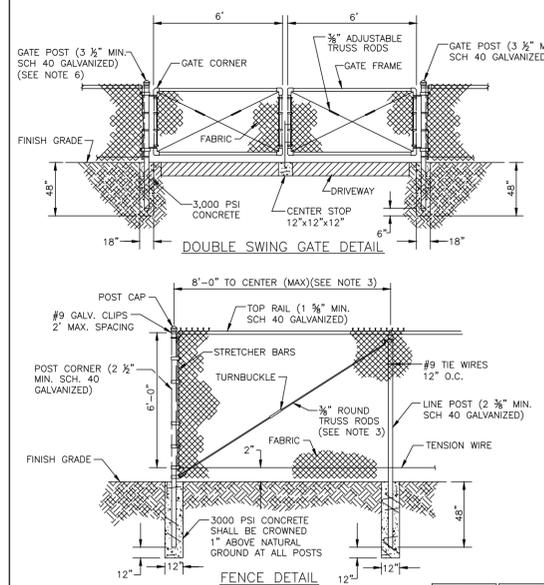
- NOTE:**
- SEE UG-8, RESTRAINED LENGTHS FOR PVC PIPE DETAIL FOR NOTES 1 THROUGH 9 THAT ARE ALSO APPLICABLE TO RESTRAINED LENGTHS FOR DIP.

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



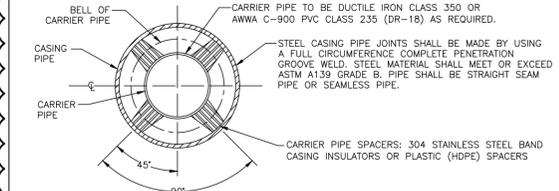
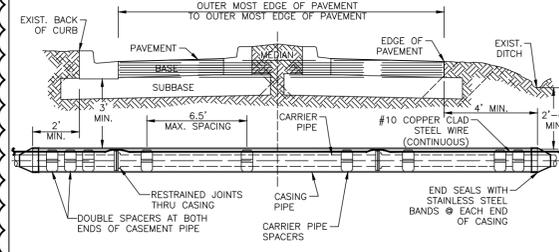
- NOTE:**
- SEE DETAIL UG-8 RESTRAINED LENGTHS FOR PVC PIPE FOR NOTES 1 THROUGH 9 THAT ARE ALSO APPLICABLE TO RESTRAINED LENGTHS FOR PIPE.

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



- NOTES:**
- FENCING SHALL BE CHAIN LINK, W/ PRIVACY DECORATIVE SLATS (COLOR MATCHED).
  - CHAIN LINK FENCING SHALL BE #9 GAUGE, GALVANIZED STEEL WITH VINYL COATING (BLACK OR GREEN).
  - TRUSS BARS ON CHAIN LINK FENCES ARE REQUIRED FOR THE FIRST SPAN ON EACH SIDE OF THE CORNER POST AND FOR EACH GATE SECTION.
  - LANDSCAPE SCREENING SHALL BE LOCATED ON THE EXTERIOR OF LIFT STATION FENCING.
  - SWING GATES SHALL BE CAPABLE OF SWINGING BOTH INWARDS AND OUTWARDS. CANTILEVER SLIDE GATES AND ROLL SLIDE GATES MEETING FOOT DESIGN STANDARDS MAY BE USED AS AN OPTION TO SWING GATES.
  - GATE POSTS AND TRACK LINK POSTS SHALL BE 4 INCH SCHEDULE 40 FOR CANTILEVER SLIDE GATES AND ROLL SLIDE GATES.

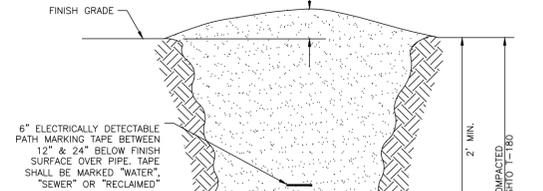
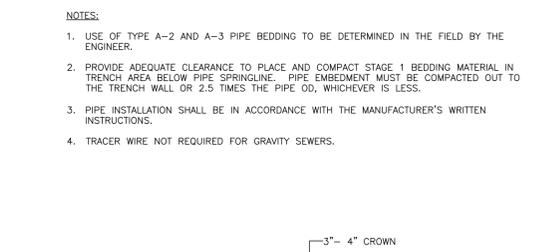
<b>MANATEE COUNTY</b> PUBLIC WORKS DEPARTMENT		SECURITY FENCING		US-17
REV. BY	DATE	REV. BY	DATE	
	February 25, 2020		February 25, 2020	
	DATE OF APPROVAL		DATE OF APPROVAL	



CARRIER	CARRIER SIZE & MINIMUM CASING SIZE					
	4"	6"	8"	10"	12"	16"
CASING	12"	14"	18"	20"	24"	30"
CASING / WALL THICKNESS	0.188	0.188	0.250	0.250	0.344	0.406

- NOTES:**
- THE ENGINEER OF RECORD MAY SELECT A LARGER CASING DIAMETERS, INCREASING WALL THICKNESS, AND/OR INCREASE DEPTH OF BURY DUE TO EXTERNAL LOADS WITH COUNTY APPROVAL PRIOR TO PERFORMING THE WORK.
  - ALL PIPES CROSSINGS OF FEDERAL OR STATE ROADS, OR RAILROADS SHALL BE INSTALLED IN A CASING PIPE.
  - ALL PIPES CROSSINGS OF COUNTY LOCAL, ARTERIAL, AND THROUGHFARE ROADWAYS SHALL BE IN A CASING PIPE.
  - SPLIT-STEEL CASINGS MAY BE USED ON EXISTING COUNTY MAINS ONLY.
  - FOR JACK & BORE SPECIFICATIONS UNDER STATE ROADS AND RAILROADS, REFER TO THE F.D.O.T. UTILITY ACCOMMODATION MANUAL, LATEST EDITION.
  - HOPE CASING SHALL HAVE ALL WELD BEADS REMOVED FROM THE INSIDE SURFACE SUCH THAT THE JOINT SURFACES SHALL BE SMOOTH.
  - \*14-INCH DIAMETER MAINS ARE NOT TO BE INSTALLED.

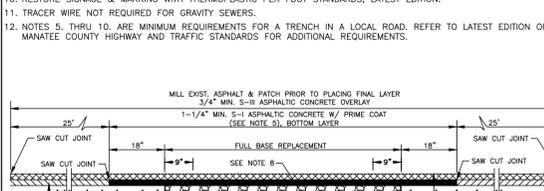
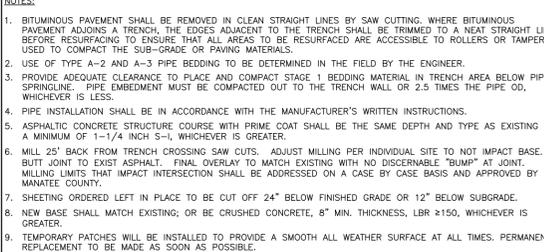
<b>MANATEE COUNTY</b> PUBLIC WORKS DEPARTMENT		CASING CROSSING		UG-3
REV. BY	DATE	REV. BY	DATE	
	February 25, 2020		February 25, 2020	
	DATE OF APPROVAL		DATE OF APPROVAL	



CARRIER	CARRIER SIZE & MINIMUM CASING SIZE					
	4"	6"	8"	10"	12"	16"
CASING	12"	14"	18"	20"	24"	30"
CASING / WALL THICKNESS	0.188	0.188	0.250	0.250	0.344	0.406

- NOTES:**
- THE ENGINEER OF RECORD MAY SELECT A LARGER CASING DIAMETERS, INCREASING WALL THICKNESS, AND/OR INCREASE DEPTH OF BURY DUE TO EXTERNAL LOADS WITH COUNTY APPROVAL PRIOR TO PERFORMING THE WORK.
  - ALL PIPES CROSSINGS OF FEDERAL OR STATE ROADS, OR RAILROADS SHALL BE INSTALLED IN A CASING PIPE.
  - ALL PIPES CROSSINGS OF COUNTY LOCAL, ARTERIAL, AND THROUGHFARE ROADWAYS SHALL BE IN A CASING PIPE.
  - SPLIT-STEEL CASINGS MAY BE USED ON EXISTING COUNTY MAINS ONLY.
  - FOR JACK & BORE SPECIFICATIONS UNDER STATE ROADS AND RAILROADS, REFER TO THE F.D.O.T. UTILITY ACCOMMODATION MANUAL, LATEST EDITION.
  - HOPE CASING SHALL HAVE ALL WELD BEADS REMOVED FROM THE INSIDE SURFACE SUCH THAT THE JOINT SURFACES SHALL BE SMOOTH.
  - \*14-INCH DIAMETER MAINS ARE NOT TO BE INSTALLED.

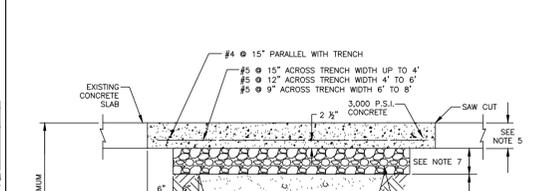
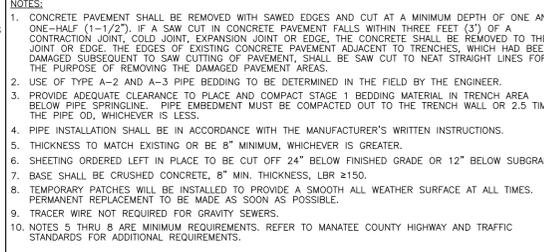
<b>MANATEE COUNTY</b> PUBLIC WORKS DEPARTMENT		TRENCH WITH ASPHALT PAVEMENT SURFACE TYPE A-1 PIPE BEDDING		UG-11
REV. BY	DATE	REV. BY	DATE	
	February 25, 2020		February 25, 2020	
	DATE OF APPROVAL		DATE OF APPROVAL	



CARRIER	CARRIER SIZE & MINIMUM CASING SIZE					
	4"	6"	8"	10"	12"	16"
CASING	12"	14"	18"	20"	24"	30"
CASING / WALL THICKNESS	0.188	0.188	0.250	0.250	0.344	0.406

- NOTES:**
- BITUMINOUS PAVEMENT SHALL BE REMOVED IN CLEAN STRAIGHT LINES BY SAW CUTTING. WHERE BITUMINOUS PAVEMENT ADJACENT TO THE TRENCH SHALL BE TRIMMED TO A NEAT STRAIGHT LINES BEFORE RESURFACING TO ENSURE THAT ALL AREAS TO BE RESURFACED ARE ACCESSIBLE TO ROLLERS OR TAMPERS USED TO COMPACT THE SUB-GRADE OR PAVING MATERIALS.
  - USE OF TYPE A-2 AND A-3 PIPE BEDDING TO BE DETERMINED IN THE FIELD BY THE ENGINEER.
  - PROVIDE ADEQUATE CLEARANCE TO PLACE AND COMPACT STAGE 1 BEDDING MATERIAL IN TRENCH AREA BELOW PIPE SPRINGLINE. PIPE EMBEDMENT MUST BE COMPACTED OUT TO THE TRENCH WALL OR 2.5 TIMES THE PIPE OD, WHICHEVER IS LESS.
  - PIPE INSTALLATION SHALL BE IN ACCORDANCE WITH THE MANUFACTURER'S WRITTEN INSTRUCTIONS.
  - ASPHALTIC CONCRETE STRUCTURE COURSE WITH PRIME COAT SHALL BE THE SAME DEPTH AND TYPE AS EXISTING OR A MINIMUM OF 1-1/4 INCH S-1, WHICHEVER IS GREATER.
  - MILL 25' BACK FROM TRENCH CROSSING SAW CUTS. ADJUST MILLING PER INDIVIDUAL SITE TO NOT IMPACT BASE. BUTT JOINT TO EXIST ASPHALT. FINAL OVERLAY TO MATCH EXISTING WITH NO DISCREPANCY "BUMP" AT JOINT. MILLING LIMITS THAT IMPACT INTERSECTION SHALL BE ADDRESSED ON A CASE BY CASE BASIS AND APPROVED BY MANATEE COUNTY.
  - SHEETING ORDERED LEFT IN PLACE TO BE CUT OFF 24" BELOW FINISHED GRADE OR 12" BELOW SUBGRADE.
  - NEW BASE SHALL MATCH EXISTING; OR BE CRUSHED CONCRETE, 8" MIN. THICKNESS, LBR #150, WHICHEVER IS GREATER.
  - TEMPORARY PATCHES WILL BE INSTALLED TO PROVIDE A SMOOTH ALL WEATHER SURFACE AT ALL TIMES. PERMANENT REPLACEMENT TO BE MADE AS SOON AS POSSIBLE.
  - RESTORE SIGNAGE & MARKING WITH THERMOPLASTIC PER FDOT STANDARDS, LATEST EDITION.
  - TRACER WIRE NOT REQUIRED FOR GRAVITY SEWERS.
  - NOTES 5, 7 THRU 10 ARE MINIMUM REQUIREMENTS FOR A TRENCH IN A LOCAL ROAD. REFER TO LATEST EDITION OF MANATEE COUNTY HIGHWAY AND TRAFFIC STANDARDS FOR ADDITIONAL REQUIREMENTS.

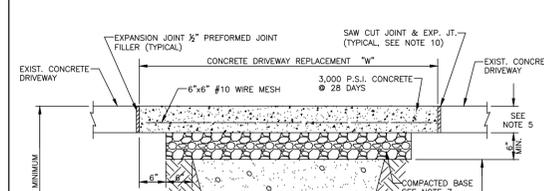
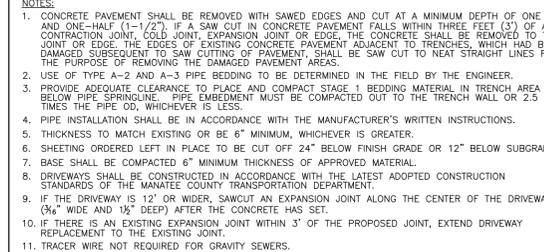
<b>MANATEE COUNTY</b> PUBLIC WORKS DEPARTMENT		TRENCH WITH ASPHALT PAVEMENT SURFACE TYPE A-1 PIPE BEDDING (CROSSING)		UG-12
REV. BY	DATE	REV. BY	DATE	
	February 25, 2020		February 25, 2020	
	DATE OF APPROVAL		DATE OF APPROVAL	



CARRIER	CARRIER SIZE & MINIMUM CASING SIZE					
	4"	6"	8"	10"	12"	16"
CASING	12"	14"	18"	20"	24"	30"
CASING / WALL THICKNESS	0.188	0.188	0.250	0.250	0.344	0.406

- NOTES:**
- CONCRETE PAVEMENT SHALL BE REMOVED WITH SAWS EDGES AND CUT AT A MINIMUM DEPTH OF ONE AND ONE-HALF (1-1/2"). IF A SAW CUT IN CONCRETE PAVEMENT FALLS WITHIN THREE FEET (3') OF A CONTRACTION JOINT, COLD JOINT, EXPANSION JOINT OR EDGE, THE CONCRETE SHALL BE REMOVED TO THE JOINT OR EDGE. THE EDGES OF EXISTING CONCRETE PAVEMENT ADJACENT TO TRENCHES, WHICH HAD BEEN DAMAGED SUBSEQUENT TO SAW CUTTING OF PAVEMENT, SHALL BE SAW CUT TO NEAT STRAIGHT LINES FOR THE PURPOSE OF REMOVING THE DAMAGED PAVEMENT AREAS.
  - USE OF TYPE A-2 AND A-3 PIPE BEDDING TO BE DETERMINED IN THE FIELD BY THE ENGINEER.
  - PROVIDE ADEQUATE CLEARANCE TO PLACE AND COMPACT STAGE 1 BEDDING MATERIAL IN TRENCH AREA BELOW PIPE SPRINGLINE. PIPE EMBEDMENT MUST BE COMPACTED OUT TO THE TRENCH WALL OR 2.5 TIMES THE PIPE OD, WHICHEVER IS LESS.
  - PIPE INSTALLATION SHALL BE IN ACCORDANCE WITH THE MANUFACTURER'S WRITTEN INSTRUCTIONS.
  - THICKNESS TO MATCH EXISTING OR BE 6" MINIMUM, WHICHEVER IS GREATER.
  - SHEETING ORDERED LEFT IN PLACE TO BE CUT OFF 24" BELOW FINISHED GRADE OR 12" BELOW SUBGRADE.
  - BASE SHALL BE CRUSHED CONCRETE, 8" MIN. THICKNESS, LBR #150.
  - TEMPORARY PATCHES WILL BE INSTALLED TO PROVIDE A SMOOTH ALL WEATHER SURFACE AT ALL TIMES. PERMANENT REPLACEMENT TO BE MADE AS SOON AS POSSIBLE.
  - TRACER WIRE NOT REQUIRED FOR GRAVITY SEWERS.
  - NOTES 5 THRU 8 ARE MINIMUM REQUIREMENTS. REFER TO MANATEE COUNTY HIGHWAY AND TRAFFIC STANDARDS FOR ADDITIONAL REQUIREMENTS.
  - TRACER WIRE NOT REQUIRED FOR GRAVITY SEWERS.

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



CARRIER	CARRIER SIZE & MINIMUM CASING SIZE					
	4"	6"	8"	10"	12"	16"
CASING	12"	14"	18"	20"	24"	30"
CASING / WALL THICKNESS	0.188	0.188	0.250	0.250	0.344	0.406

- NOTES:**
- CONCRETE PAVEMENT SHALL BE REMOVED WITH SAWS EDGES AND CUT AT A MINIMUM DEPTH OF ONE AND ONE-HALF (1-1/2"). IF A SAW CUT IN CONCRETE PAVEMENT FALLS WITHIN THREE FEET (3') OF A CONTRACTION JOINT, COLD JOINT, EXPANSION JOINT OR EDGE, THE CONCRETE SHALL BE REMOVED TO THE JOINT OR EDGE. THE EDGES OF EXISTING CONCRETE PAVEMENT ADJACENT TO TRENCHES, WHICH HAD BEEN DAMAGED SUBSEQUENT TO SAW CUTTING OF PAVEMENT, SHALL BE SAW CUT TO NEAT STRAIGHT LINES FOR THE PURPOSE OF REMOVING THE DAMAGED PAVEMENT AREAS.
  - USE OF TYPE A-2 AND A-3 PIPE BEDDING TO BE DETERMINED IN THE FIELD BY THE ENGINEER.
  - PROVIDE ADEQUATE CLEARANCE TO PLACE AND COMPACT STAGE 1 BEDDING MATERIAL IN TRENCH AREA BELOW PIPE SPRINGLINE. PIPE EMBEDMENT MUST BE COMPACTED OUT TO THE TRENCH WALL OR 2.5 TIMES THE PIPE OD, WHICHEVER IS LESS.
  - PIPE INSTALLATION SHALL BE IN ACCORDANCE WITH THE MANUFACTURER'S WRITTEN INSTRUCTIONS.
  - THICKNESS TO MATCH EXISTING OR BE 6" MINIMUM, WHICHEVER IS GREATER.
  - SHEETING ORDERED LEFT IN PLACE TO BE CUT OFF 24" BELOW FINISHED GRADE OR 12" BELOW SUBGRADE.
  - BASE SHALL BE COMPACTED 6" MINIMUM THICKNESS OF APPROVED MATERIAL.
  - DRIVEWAYS SHALL BE CONSTRUCTED IN ACCORDANCE WITH THE LATEST ADOPTED CONSTRUCTION STANDARDS OF THE MANATEE COUNTY TRANSPORTATION DEPARTMENT.
  - IF THE DRIVEWAY IS 12" OR WIDER, SAWCUT AN EXPANSION JOINT ALONG THE CENTER OF THE DRIVEWAY (3/4" WIDE AND 1/4" DEEP) AFTER THE CONCRETE HAS SET.
  - IF THERE IS AN EXISTING EXPANSION JOINT WITHIN 3' OF THE PROPOSED JOINT, EXTEND DRIVEWAY REPLACEMENT TO THE EXISTING JOINT.
  - TRACER WIRE NOT REQUIRED FOR GRAVITY SEWERS.

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

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

**Kimley»Horn**

© 2020 KIMLEY-HORN AND ASSOCIATES, INC.  
100 2ND AVENUE SOUTH, SUITE 105N  
ST. PETERSBURG, FL 33701  
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

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

SHEET NUMBER  
**CIVIL DETAILS**  
C-28

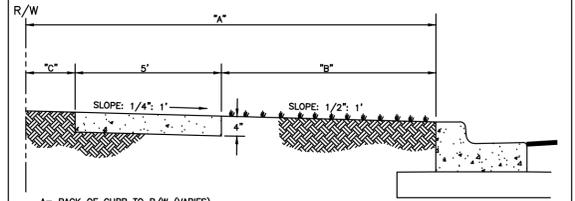
This document, together with the concepts and designs presented herein, is intended only for the specific purpose and client for which it was prepared. Reuse of any information contained herein for any other purpose without the written authorization and approval of Kimley-Horn and Associates, Inc. shall be without liability to Kimley-Horn and Associates, Inc.

**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.

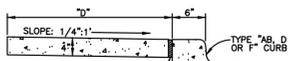
\*NOTE: FOR COMPLETE SIDEWALK DETAILS, SEE F.D.O.T. DESIGN STANDARDS, 2006 EDITION, INDEX 304, SHEETS 1 THROUGH 6 AND INDEX 310, SHEETS 1 & 2.

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

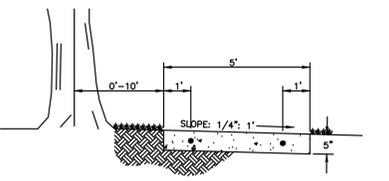
TYPICAL SIDEWALK LOCATION



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

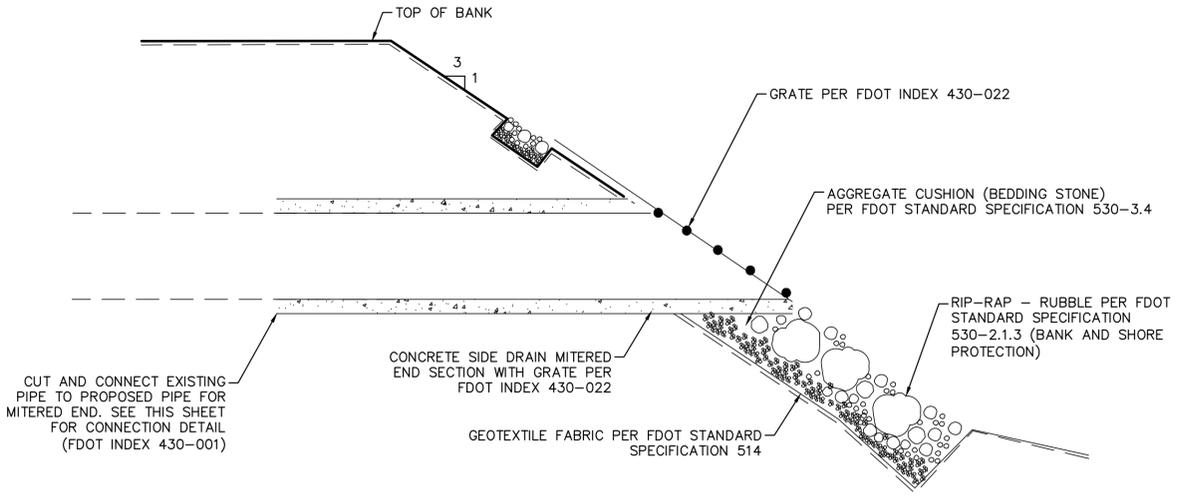
D= SIDEWALK WIDTH SHALL BE 6" STANDARD, WHERE WALK ABUTS TYPE "AB, D OR F" CURB. WHERE SPEED LIMIT IS 25 MPH OR LESS, WIDTH CAN BE 5'-6".  
\* SEE SHEET 300.1 "GENERAL NOTES" FOR FURTHER INFORMATION

ALTERNATE SIDEWALK LOCATION

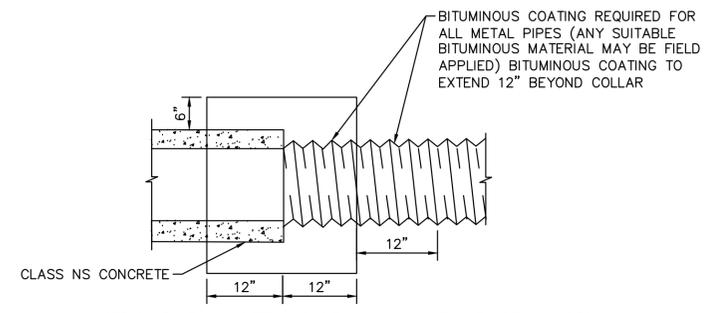


SIDEWALK LOCATION CLOSE TO TREES

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

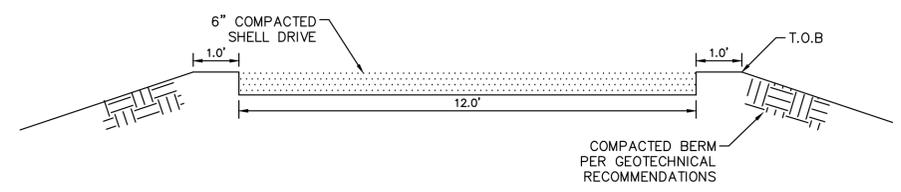


1 ENERGY DISSIPATION STRUCTURE DETAIL  
C-29 N.T.S.

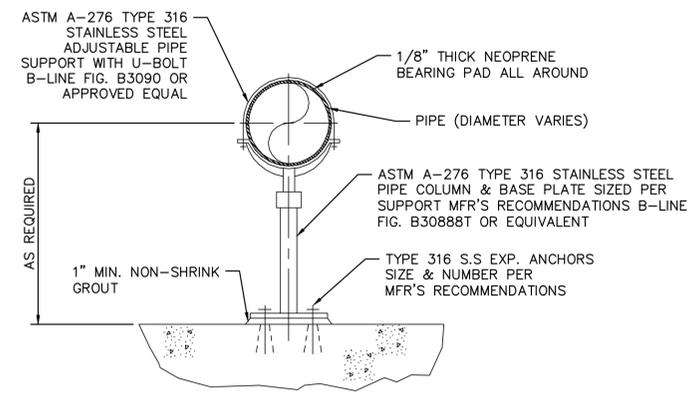


NOTE: COST OF CONCRETE AND BITUMINOUS COATING TO BE INCLUDED IN CONTRACT UNIT PRICE FOR EITHER NEW PIPE OR MITERED END SECTION. ALTERNATE CONNECTION MUST BE APPROVED BY THE STATE DRAINAGE ENGINEER. A CONCRETE JACKET SHALL NOT BE USED TO JOIN:  
A. METAL PIPE OF DISSIMILAR MATERIAL

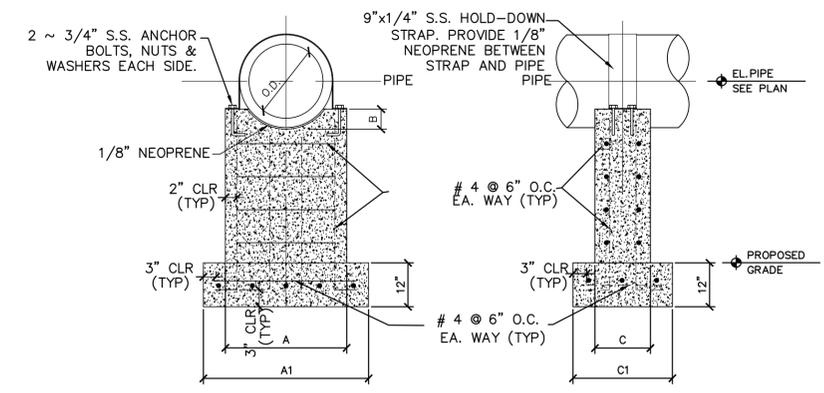
2 FDOT INDEX 430-001 - CONCRETE JACKET FOR CONNECTING DISSIMILAR PIPES DETAIL  
C-29



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



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



5 CONCRETE PIPE SUPPORT DETAIL  
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"

**Kimley Horn**  
© 2020 KIMLEY-HORN AND ASSOCIATES, INC.  
100 2ND AVENUE SOUTH, SUITE 105N  
ST. PETERSBURG, FL 33701  
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**  
**SEWRF RECLAIMED PUMP BACK STATION**  
MANATEE COUNTY

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

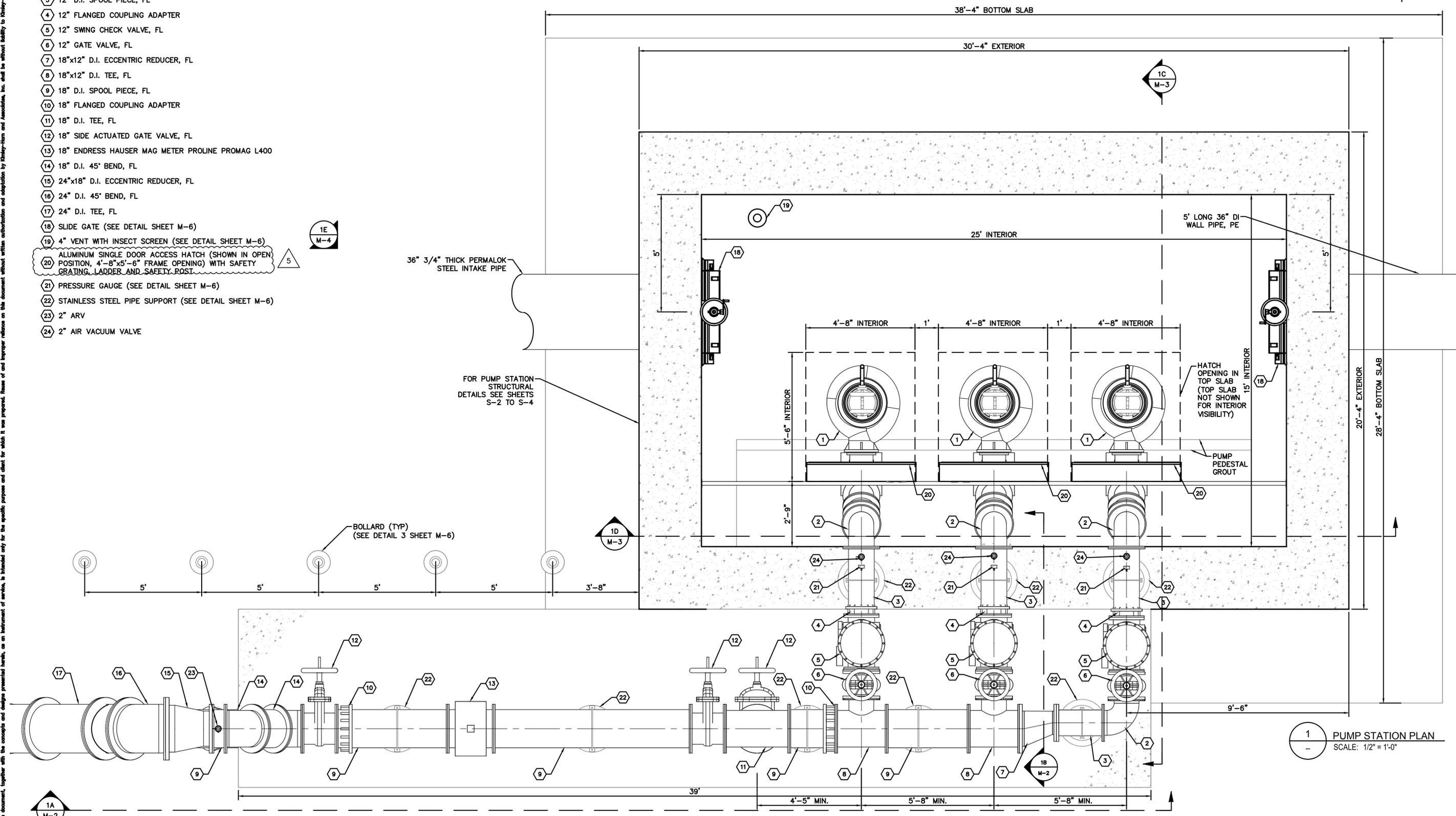
**CIVIL DETAILS**

SHEET NUMBER <b>C-29</b>
-----------------------------



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



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

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

**Kimley»Horn**

© 2020 KIMLEY-HORN AND ASSOCIATES, INC.  
100 2ND AVENUE SOUTH, SUITE 105N  
ST. PETERSBURG, FL 33701  
PHONE: 727-547-3999  
WWW.KIMLEY-HORN.COM CA 0000696

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.

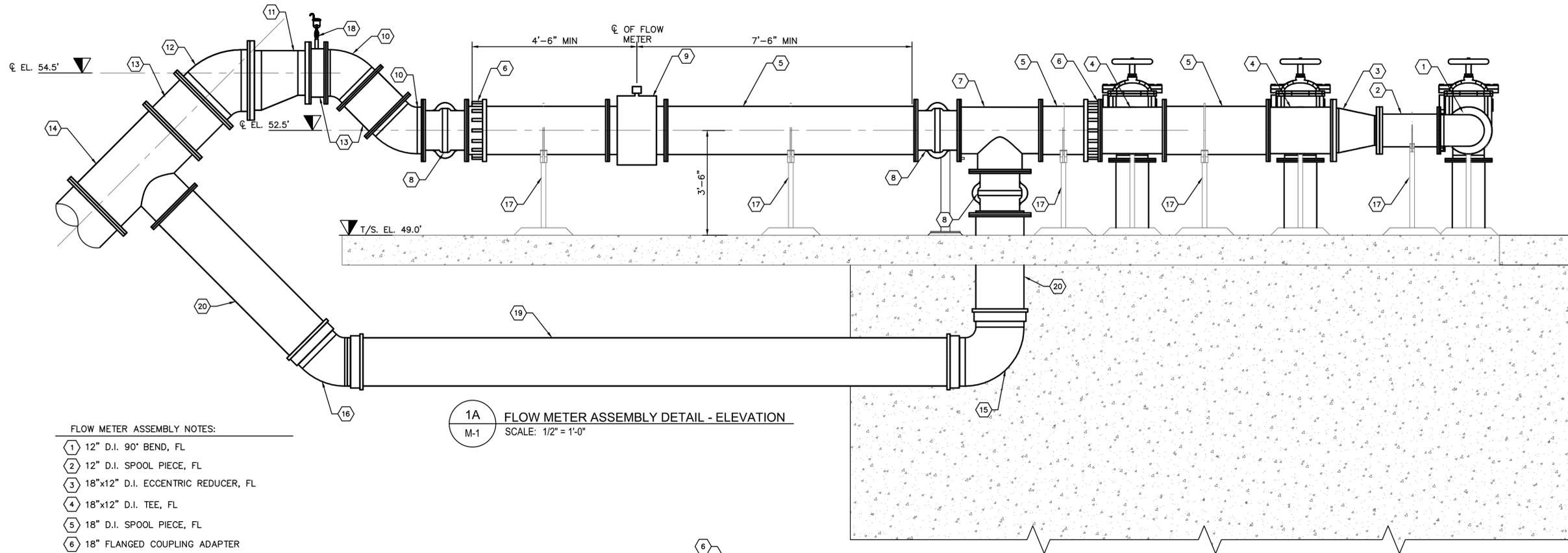
FL LICENSE NUMBER  
57579

FL DATE:

CENTRAL PUMP STATION  
PLAN

SHEET NUMBER  
M-1

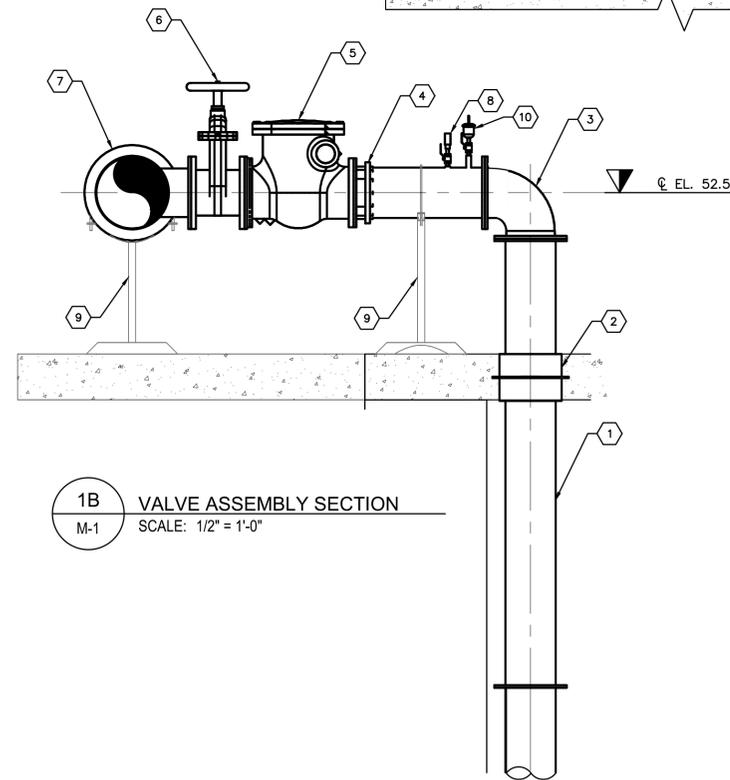
This document, together with the concepts and designs presented herein, is intended only for the specific purpose and client for which it was prepared. Reuse of and improper reliance on this document without written authorization and adaptation by Kimley-Horn and Associates, Inc. shall be without liability to Kimley-Horn and Associates, Inc.



**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

No.	REVISIONS	DATE	BY

**Kimley»Horn**

© 2020 KIMLEY-HORN AND ASSOCIATES, INC.  
100 2ND AVENUE SOUTH, SUITE 105N  
ST. PETERSBURG, FL 33701  
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  
**SEWRF RECLAIMED  
PUMP BACK STATION**  
FL DATE:

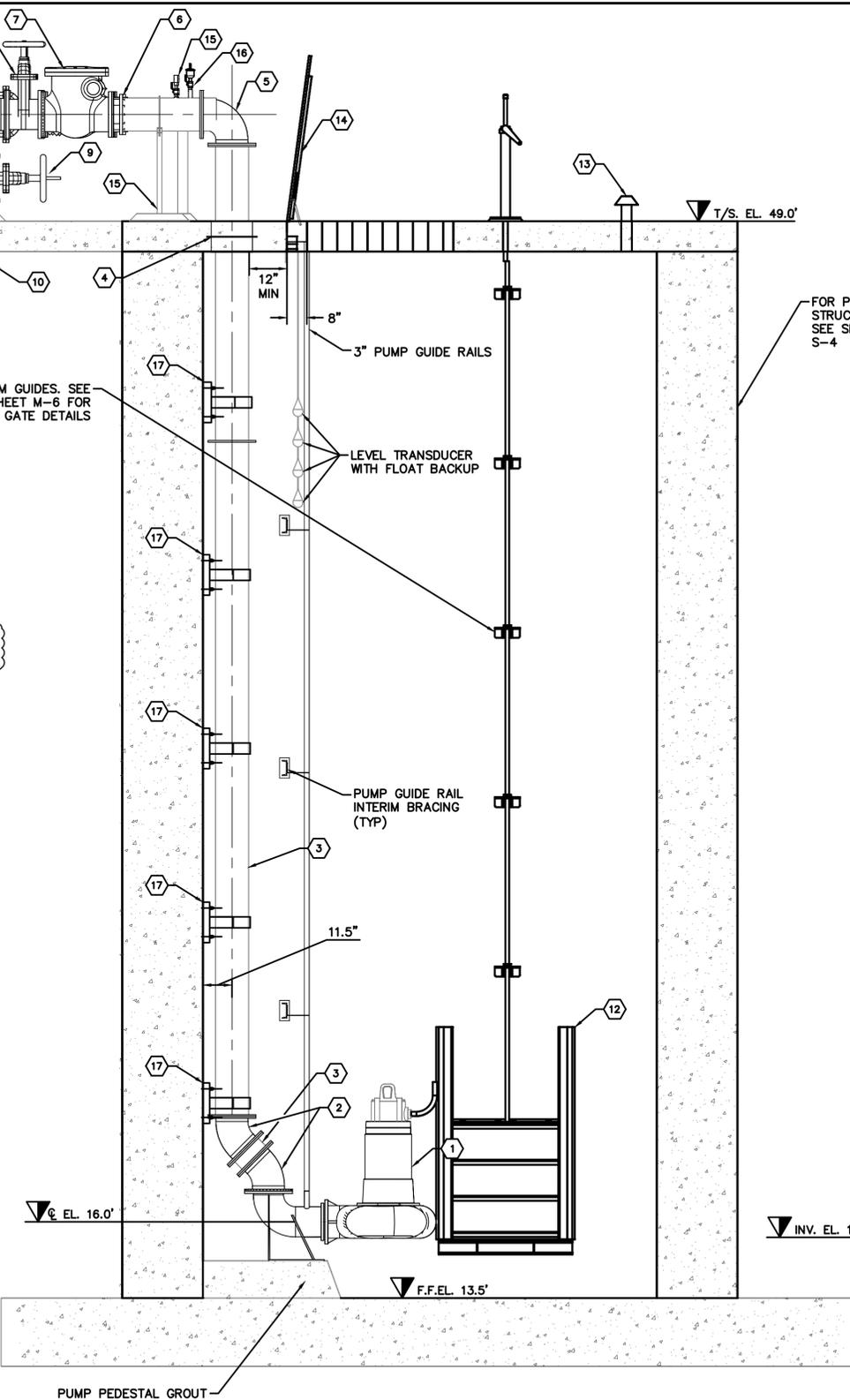
LICENSED PROFESSIONAL  
STEPHEN N. ROMANO, P.E.  
FL LICENSE NUMBER  
57579

**CENTRAL PUMP STATION  
SECTIONS**

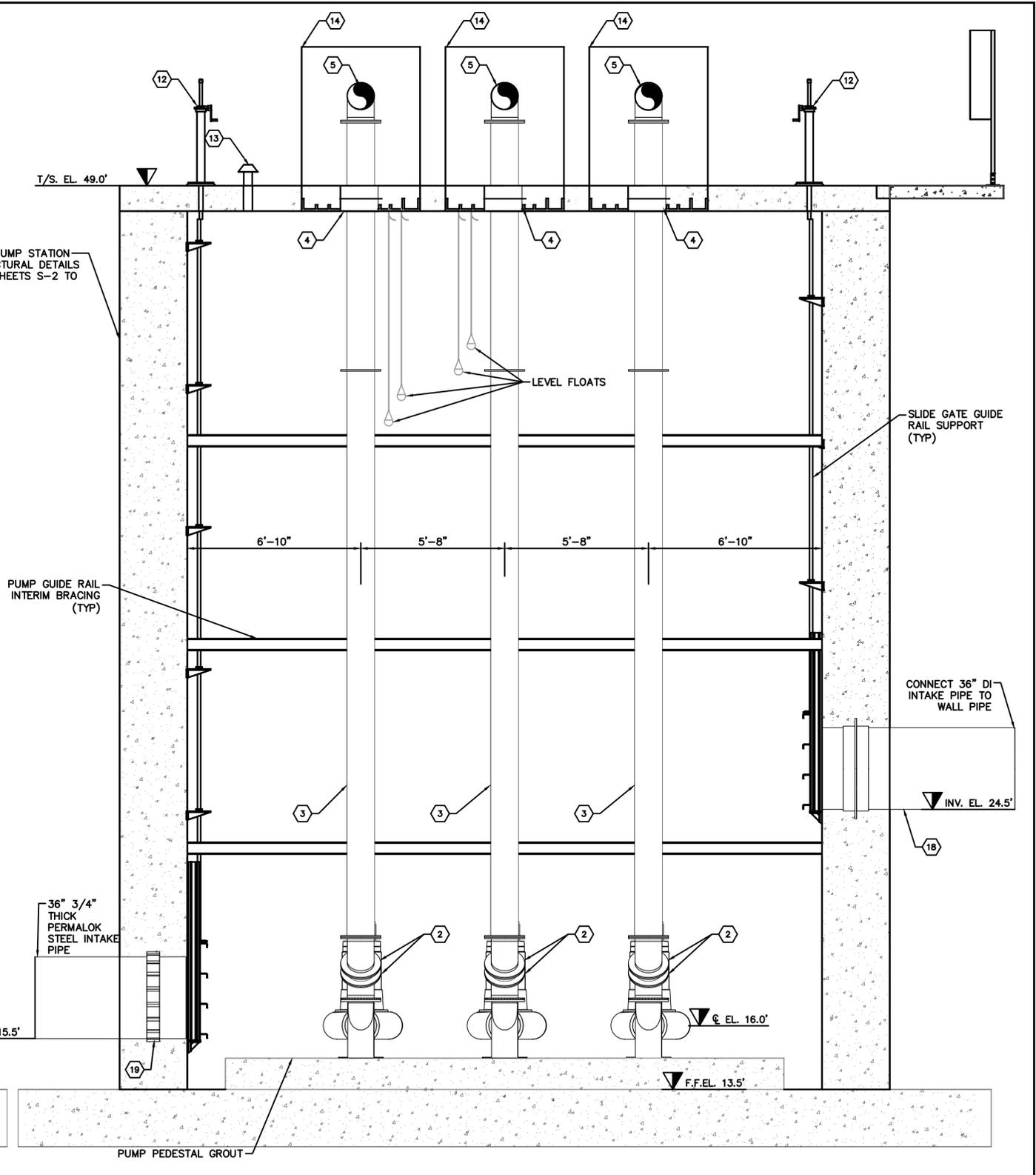
SHEET NUMBER  
**M-2**

This document, together with the concepts and designs presented herein, is an instrument of service, in intended only for the specific purpose and client for which it was prepared. Reuse of and improper reliance on this document without written authorization and approval by Kimley-Horn and Associates, Inc. shall be without liability to Kimley-Horn and Associates, Inc.

- 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"

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

**Kimley >> Horn**

© 2020 KIMLEY-HORN AND ASSOCIATES, INC.  
100 2ND AVENUE SOUTH, SUITE 105N  
ST. PETERSBURG, FL 33701  
PHONE: 727-547-3999  
WWW.KIMLEY-HORN.COM CA 0000696

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

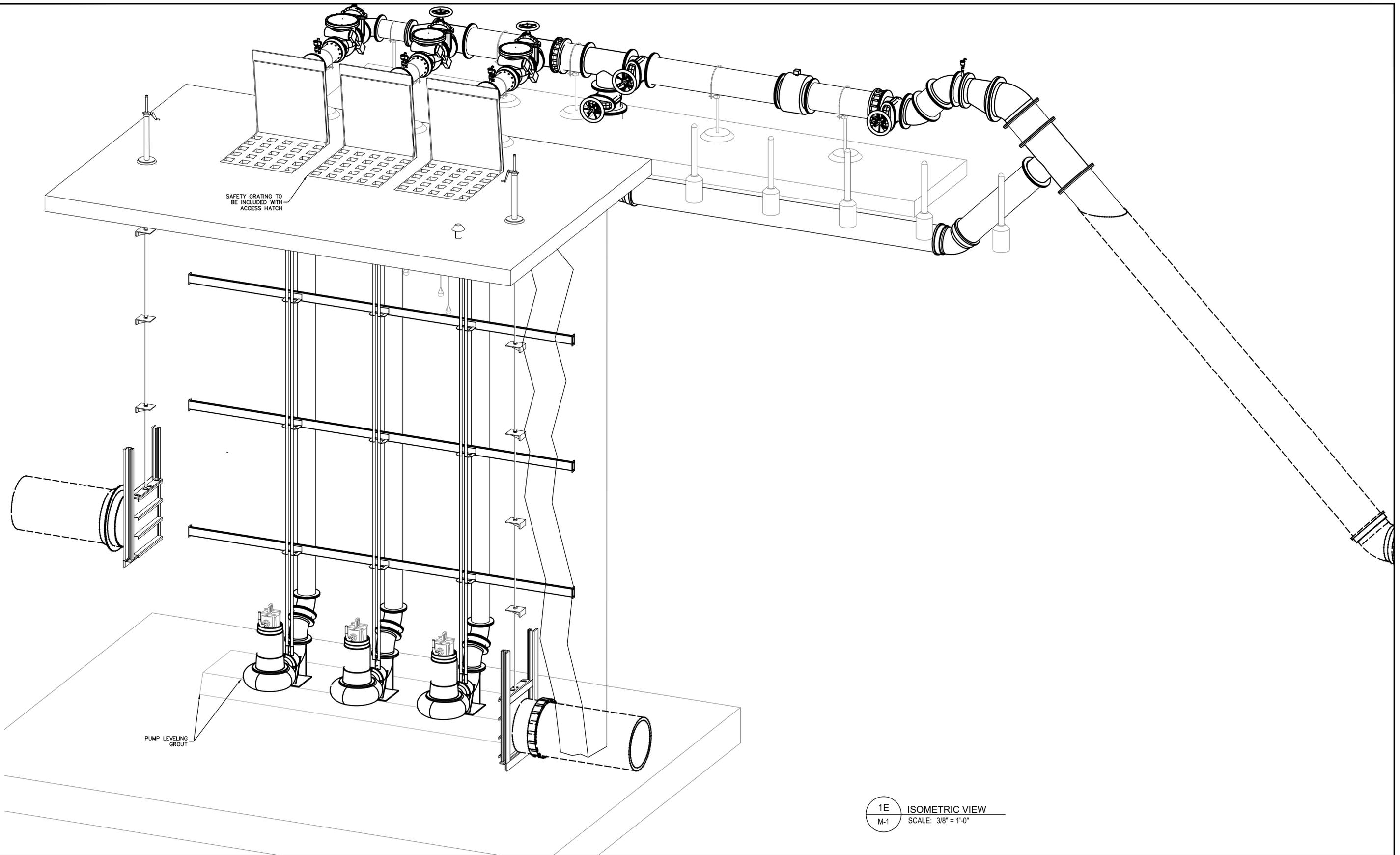
MANATEE COUNTY

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

CENTRAL PUMP STATION  
SECTIONS

SHEET NUMBER
M-3

This document, together with the concepts and designs presented herein, is intended only for the specific purpose and client for which it was prepared. Reuse of and improper reliance on this document without written authorization and adaptation by Kimley-Horn and Associates, Inc. shall be without liability to Kimley-Horn and Associates, Inc.



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

No.	REVISIONS	DATE	BY

**Kimley»Horn**

© 2020 KIMLEY-HORN AND ASSOCIATES, INC.  
100 2ND AVENUE SOUTH, SUITE 105N  
ST. PETERSBURG, FL 33701  
PHONE: 727-547-3999  
WWW.KIMLEY-HORN.COM CA 0000696

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  
FL DATE:

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

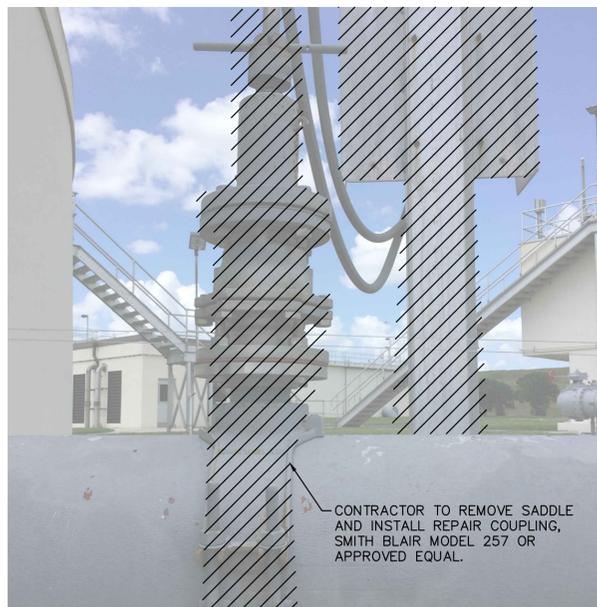
**CENTRAL PUMP STATION  
ISOMETRIC VIEW**

SHEET NUMBER  
**M-4**

This document, together with the concepts and designs presented herein, is intended only for the specific purpose and client for which it was prepared. Reuse of and improper reliance on this document without written authorization and approval by Kimley-Horn and Associates, Inc. shall be without liability to Kimley-Horn and Associates, Inc.



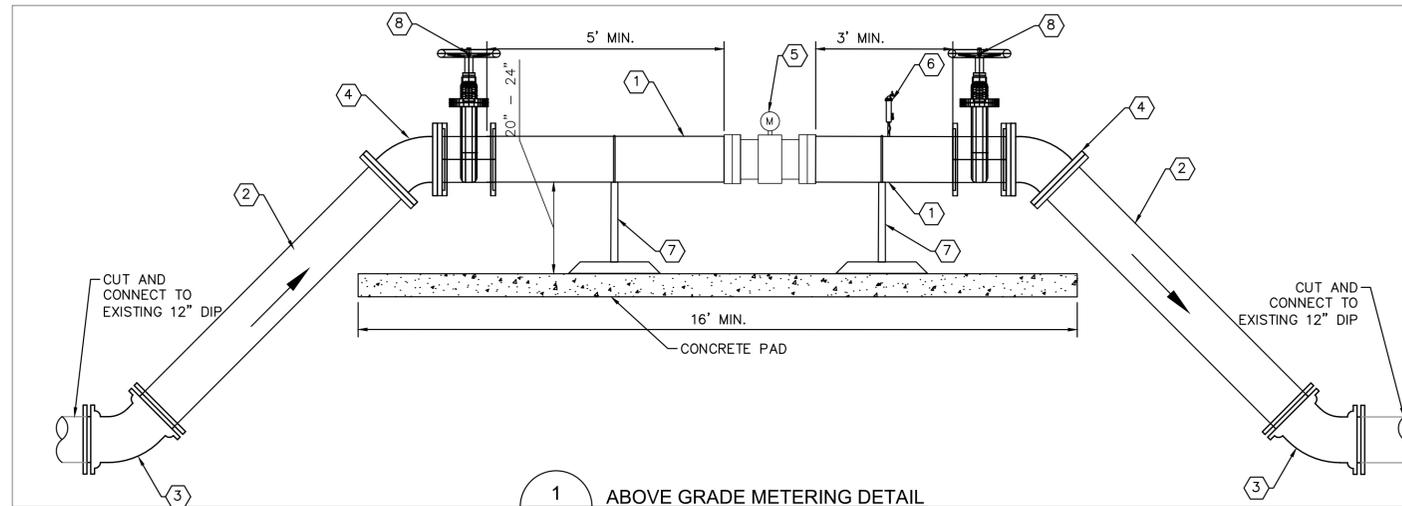
CONTRACTOR TO REMOVE FLOW METER, FLOW TRANSMITTER, SCADA PANEL AND ALL ASSOCIATED ELECTRICAL EQUIPMENT



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



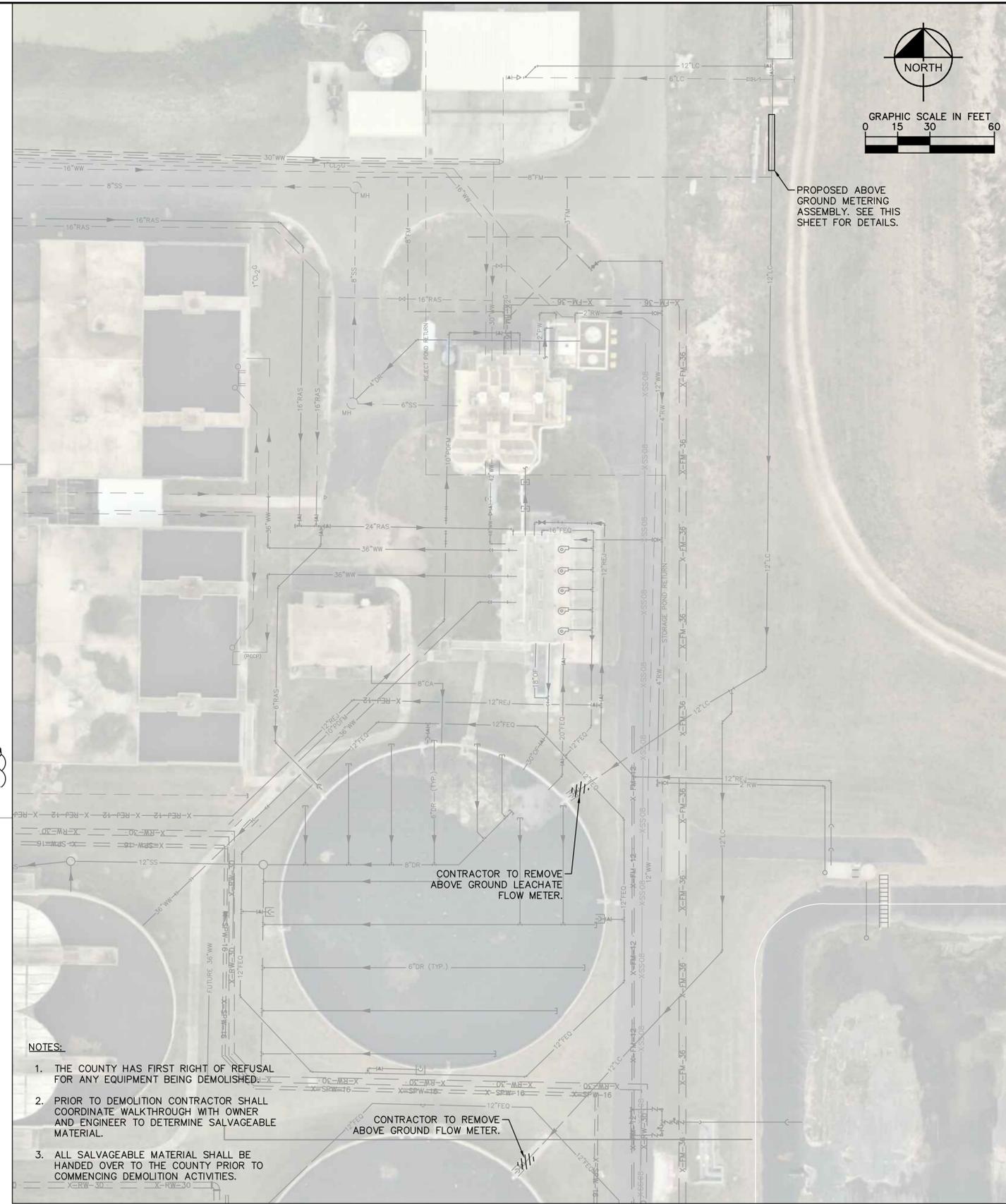
1 ABOVE GRADE METERING DETAIL  
M-5 SCALE: 1/2" = 1'-0"

**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

No.	REVISIONS	DATE	BY



© 2020 KIMLEY-HORN AND ASSOCIATES, INC.  
100 2ND AVENUE SOUTH, SUITE 105N  
ST. PETERSBURG, FL 33701  
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



SEWRF RECLAIMED  
PUMP BACK STATION

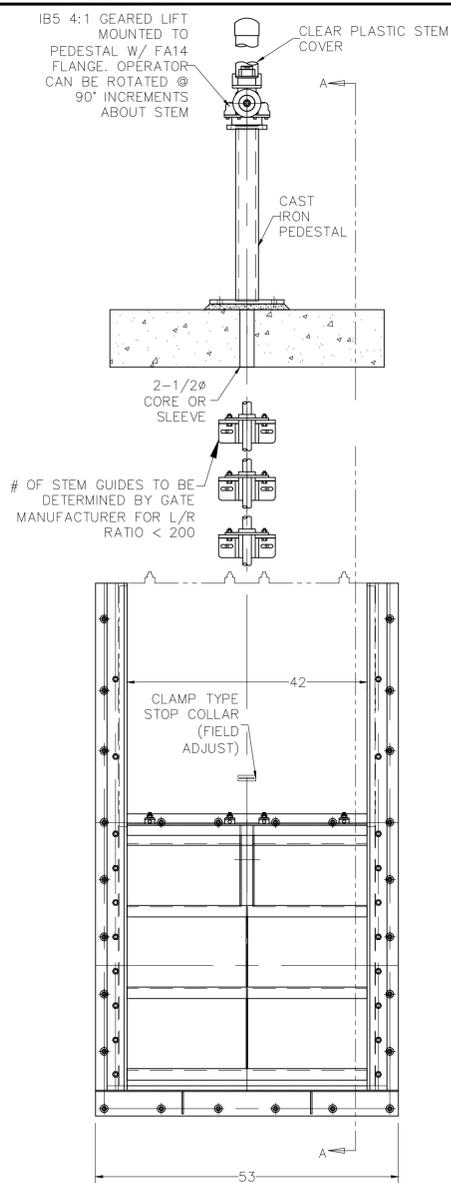
LICENSED PROFESSIONAL  
  
STEPHEN N. ROMANO, P.E.  
  
FL LICENSE NUMBER  
57579  
FL DATE:

LEACHATE PIPING  
IMPROVEMENTS

SHEET NUMBER

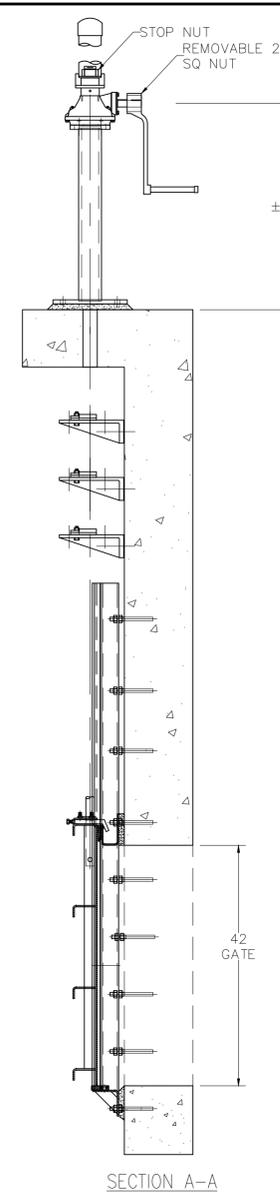
M-5

This document, together with the concepts and designs presented herein, is intended only for the specific purpose and client for which it was prepared. Reuse of any improper reliance on this document without written authorization and adaptation by Kimley-Horn and Associates, Inc. shall be without liability to Kimley-Horn and Associates, Inc.

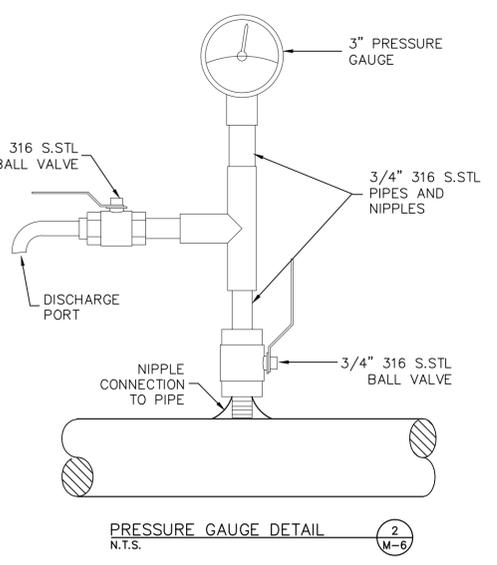


SLIDE GATE DETAIL  
3/4" = 1' - 0"  
1  
M-6

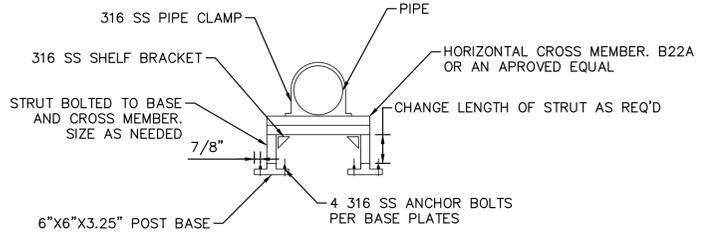
- NOTES:
1. ALL HARDWARE TO BE 316 SS
  2. CONTRACTOR TO FIELD VERIFY ALL MEASUREMENTS BEFORE ORDERING MATERIALS
  3. ALL GATE INSTALLATIONS SHALL PASS LEAKAGE TEST PER AWWA C563
  4. ALL GATE AND FRAME DIMENSIONS TO BE DESIGNED BY GATE MANUFACTURER
  5. DIMENSIONS SHOWN ABOVE IN INCHES



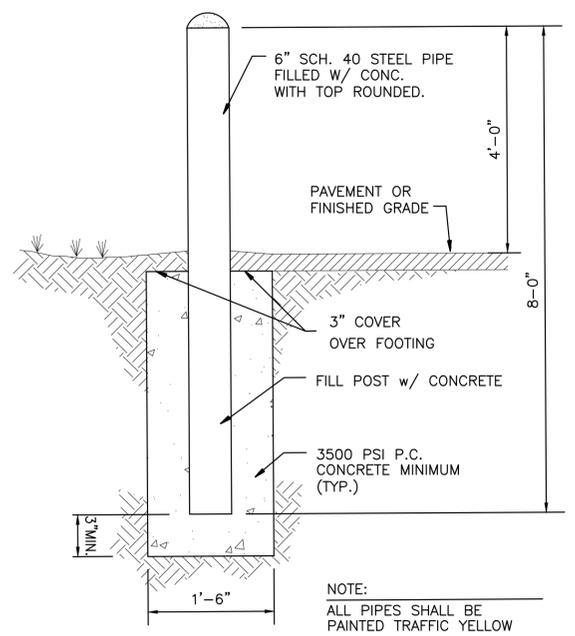
SECTION A-A



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

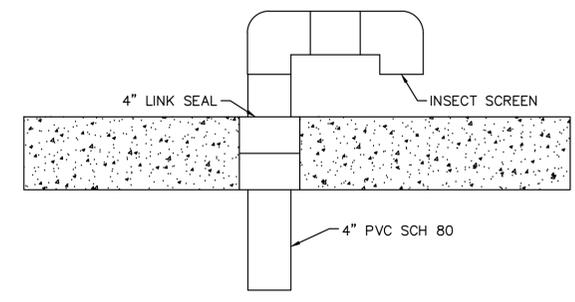


WALL MOUNTED PIPE SUPPORT  
5  
M-6  
N.T.S.



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

NOTE:  
ALL PIPES SHALL BE PAINTED TRAFFIC YELLOW



4\"/>

No.	REVISIONS	DATE	BY

**Kimley»Horn**

© 2020 KIMLEY-HORN AND ASSOCIATES, INC.  
100 2ND AVENUE SOUTH, SUITE 105N  
ST. PETERSBURG, FL 33701  
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



**SEWRF RECLAIMED  
PUMP BACK STATION**

MANATEE COUNTY

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

**MECHANICAL DETAILS**

SHEET NUMBER
<b>M-6</b>