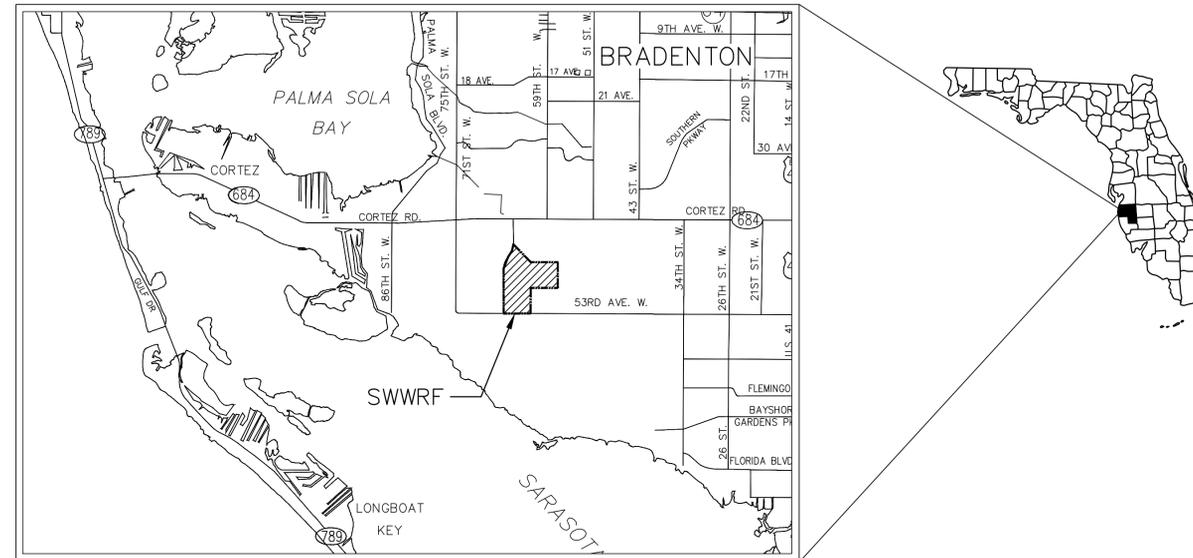


SOUTHWEST WATER RECLAMATION FACILITY EQUALIZATION SYSTEM REHABILITATION AND COVER ADDITION

COUNTY PROJECT No. 6071781
ISSUED FOR BID
SEPTEMBER 2023



MANATEE COUNTY, FLORIDA



PROJECT VICINITY MAP
SECTION 35S, TOWNSHIP 18E, RANGE 1



DAVID C. WEHNER, P.E.
No. 59541

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 THE WORK. CONTRACTORS ARE DIRECTED TO CONDUCT WHATEVER INVESTIGATION THEY DEEM NECESSARY, PRIOR TO BIDDING, TO DETERMINE THE ACTUAL CONDITIONS THAT WILL BE ENCOUNTERED.
- LOCATIONS, ELEVATIONS AND DIMENSIONS OF EXISTING UTILITIES, STRUCTURES, AND OTHER FEATURES ARE SHOWN BASED ON 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 WRITTEN CLARIFICATION BEFORE COMMENCING WITH CONSTRUCTION.
- 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 ACTIVITIES AT NO ADDITIONAL COST TO THE OWNER.
- 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.
- 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.
- THE CONTRACTOR SHALL INCLUDE IN HIS BID; BY-PASS PUMPING FACILITIES, PUMPS, FITTINGS, LABOR, ETC, AS NECESSARY, BASED ON METHOD AND SEQUENCE OF CONSTRUCTION TO COMPLETE ALL WORK WHILE MAINTAINING THE EXISTING WASTEWATER TREATMENT PLANT OPERATIONS AT ALL TIMES.
- 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 TO THE ENGINEER FOR APPROVAL OF ALL PIPE CONNECTIONS, TRANSITIONS, AND SPECIALS PRIOR TO FABRICATION OR DELIVERY TO THE JOB SITE.
- CONNECTIONS TO EXISTING FACILITIES SHALL BE ACCOMPLISHED IN A NEAT WORKMANLIKE 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 JOINTS SHALL BE FULLY RESTRAINED.
- ALL PIPELINES SHALL HAVE A MINIMUM COVER OF 36" BELOW EXISTING GRADE UNLESS OTHERWISE NOTED OR DIRECTED.
- WATER SHALL NOT BE PERMITTED IN EXCAVATIONS AND 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 TRANSFERRED BY THE CONTRACTOR TO THE PLANT DRAIN PUMP STATION AT THE WASTEWATER TREATMENT PLANT.
- ALL EXPOSED PIPING 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.
- ALL CONCRETE THRUST BLOCKS INSTALLED FOR TESTING PURPOSES AND NOT REQUIRED FOR THE PIPELINE SHALL BE REMOVED AND DISPOSED OF BY THE CONTRACTOR PRIOR TO FINAL ACCEPTANCE.
- 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 OF THE STAGING AREA.
- CONTRACTOR SHALL SUBMIT A DEWATERING PLAN FOR APPROVAL PRIOR TO BEGINNING CONSTRUCTION. DEWATERING SHALL BE CONDUCTED IN ACCORDANCE WITH THE BMPs IDENTIFIED IN CHAPTER 4, 4.40 "DEWATERING" OF "THE FLORIDA STORMWATER EROSION AND SEDIMENTATION CONTROL INSPECTOR'S MANUAL".
- CONTRACTOR SHALL COORDINATE WORK SUCH THAT THE PLANT SHALL STAY IN OPERATION AT ALL TIMES.
- LINE INACTIVATIONS SHALL BE CONCLUDED AT OFF PEAK TIMES AS DICTATED BY PLANT OPERATIONS STAFF.
- CONTRACTOR SHALL EMPLOY A PROFESSIONAL SURVEYOR, LICENSED IN THE STATE OF FLORIDA TO PERFORM CONSTRUCTION STAKING IN ACCORDANCE WITH RULE 61G17-6.004 (3) OF THE FLORIDA ADMINISTRATIVE CODE.

RESTORATION AND MISCELLANEOUS NOTES

- 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 OF MATERIAL THAT WAS REMOVED DURING CONSTRUCTION OR AS DIRECTED BY THE ENGINEER.
- ALL RESTORATION WORK PERFORMED THROUGHOUT THE PROJECT SHALL CONFORM TO EXISTING LINES AND GRADES UNLESS OTHERWISE NOTED.
- ALL EXISTING FENCES DISTURBED DURING CONSTRUCTION SHALL BE REPLACED AND REINSTALLED BY THE CONTRACTOR AT NO ADDITIONAL COST TO THE OWNER UNLESS SHOWN TO BE REMOVED ON CONSTRUCTION PLANS.
- LIMITS OF PROPOSED ROADWAY OVERLAY SHOWN ARE APPROXIMATE. CONTRACTOR SHALL OVERLAY ALL DISTURBED AREAS OF ACCESS ROAD AS PART OF THIS PROJECT IN ACCORDANCE WITH THE DETAILS.
- CONTRACTOR SHALL RESTORE ALL IRRIGATION SYSTEM COMPONENTS TO PRE-CONSTRUCTION CONDITIONS.
- THE CONTRACTOR SHALL RAISE EXISTING MANHOLE FRAMES AND COVERS TO MATCH FINAL GRADE.
- CONTRACTOR SHALL RESTORE GRADE TO PRECONSTRUCTION ELEVATIONS UNLESS OTHERWISE NOTED.
- THE CONTRACTOR SHALL PROVIDE A 10'x20' TEMPORARY STORAGE UNIT ONSITE 30 DAYS PRIOR TO COMMENCING ANY MODIFICATION TO THE PROPOSED ELECTRICAL ROOM. STORAGE UNIT SHALL REMAIN ONSITE DURING ACTIVE CONSTRUCTION PERIOD.

SIDEWALK NOTES

- ALL SIDEWALKS SHALL BE CONSTRUCTED WITH 4 INCH THICK 3000 PSI CLASS I CONCRETE REINFORCED WITH 6X6 NO. 10 MESH.
- SIDEWALKS SHALL BE CONSTRUCTED TO THE SPECIFICATIONS OF THE MANATEE COUNTY DEVELOPMENT STANDARDS AND A MINIMUM OF FIVE (5) FEET WIDE.
- THE CONCRETE SHALL BE GIVEN A BROOM FINISH. THE SURFACE VARIATIONS SHALL NOT BE MORE THAN 1/2 INCH UNDER A TEN-FOOT STRAIGHTEDGE, NOR MORE THAN 1/8 INCH 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 INCH.
- EXPANSION JOINT: EXPANSION JOINTS BETWEEN THE SIDEWALK AND DRIVEWAYS OR AT FIXED OBJECTS AND SIDEWALK INTERSECTIONS SHALL BE 1/2 INCH JOINTS.
- CONTRACTION JOINTS: FIXED 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 SHAPE OF THE JOINT, THE BULKHEAD SHALL BE REMOVED. AFTER THE SIDEWALK HAS BEEN FINISHED OVER THE JOINT, THE SLOT SHALL BE EDGED WITH A TOOL HAVING A 1/2 INCH RADIUS. SAWED JOINTS: A SLOT APPROXIMATELY 3/16 INCH WIDE AND NOT LESS THAN 1-1/2 INCHES DEEP SHALL BE CUT WITH A CONCRETE SAW AFTER THE CONCRETE HAS SET.

UTILITY NOTES

- THE CONTRACTOR SHALL BE RESPONSIBLE FOR COORDINATING WITH THE FOLLOWING JURISDICTIONAL BODIES AND UTILITY COMPANIES:

<p>SUNSHINE STATE ONE CALL OF FLORIDA 1-(800) 432-4770</p>  <p>CALL LOCAL PUBLIC UTILITY NOTIFICATION CENTER TOLL FREE 1-800-432-4770 MIN. 48 HOURS BEFORE YOU EXCAVATE</p> <p>SOUTHWEST FLORIDA WATER MANAGEMENT DISTRICT SARASOTA SERVICE OFFICE STEVE LOPES 6750 FRUITVILLE ROAD SARASOTA, FL 34240 (941) 377-3722 FAX: (941) 373-7660</p> <p>FLORIDA GAS TRANSMISSION 7804 ANDERSON ROAD TAMPA, FL 33634 CHAD HARREL PH. (813) 466-3327 E-mail: chadharrel@sug.com</p> <p>CHARTER COMMUNICATION 5413 E. STATE ROAD 64 BRADENTON, FL 34208-5535 TOM WRIGHT (941) 748-3816 EXT. 21348 tom.wright@charter.com</p> <p>PARAGON CABLE - BRIGHTHOUSE NETWORK, LLC WALTER KROL 5413 S.R. 64 E BRADENTON, FL 34208 (941) 748-3816 EXT. 24053</p>	<p>MANATEE COUNTY PUBLIC WORKS DEPT. 1022 26TH AVENUE EAST BRADENTON, FL 34208 SCOTT MAY, P.E. (941) 708-7450 EXT. 7650 FAX: (941) 708-7415</p> <p>TECO/PEOPLES GAS CO. 8261 VICO COURT SARASOTA, FL 34240 (941) 342-4030 DAN SHANAHAN FAX: (941) 342-4011 EMERGENCY: 1-877-832-6911</p> <p>ATMS. 2101 47TH TERRACE EAST BRADENTON, FL 34203 VISHAL KAKAAD, P.E. (941) 749-3500 EXT. 7812 FAX: (941) 749-3571 visha.kakad@mymanatee.org</p> <p>PEACE RIVER ELECTRIC COOPERATIVE, INC. P.O. BOX 1310 WACHULA, FL 33873 KENDALL COKER (863) 767-4660 kendall.coker@preco.coop</p> <p>MANATEE COUNTY TRANSPORTATION DEPARTMENT ALLEN BRENTLEY 2904 12TH STREET COURT E BRADENTON, FL 33208 (941) 708-7509</p>	<p>FRONTIER 1701 RINGLING BLVD. SARASOTA, FL 34236 JOHN PLOTT (941) 906-6707 FAX: (941) 906-6706 john.plott@fr.com</p> <p>FLORIDA POWER & LIGHT 1253 12TH AVENUE EAST PALMETTO, FL 34221 GREG COKER (941) 723-4430 FAX: (941) 723-4444 EMERGENCY: 1-800-4-OUTAGE greg_coker@fpl.com</p> <p>MANATEE COUNTY HEALTH DEPT. 410 6TH AVENUE EAST BRADENTON, FL 34208 (941) 748-0747 EXT. 1355 FAX: (941) 750-9364</p> <p>DEPARTMENT OF ENVIRONMENTAL PROTECTION 13051 N. TELECOM PKWY. TEMPLE TERRACE, FL 33637 ED WATSON PH: (813) 470-5975 FAX: (813) 470-5993</p>
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UTILITY NOTES CONT.

- ALL UTILITY CONSTRUCTION SHALL BE IN CONFORMANCE WITH THE LATEST VERSION OF THE MANATEE COUNTY UTILITY STANDARDS.
- ALL BELOW GROUND DUCTILE IRON PIPE SHALL BE ENCASED IN A POLYETHYLENE WRAP IN ACCORDANCE WITH AWWA STANDARDS.
- 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.

Sheet List Table	
Sheet Number	Sheet Title
GENERAL	
G-01	COVER SHEET
G-02	SIGNATURE SHEET
G-03	GENERAL NOTES AND INDEX OF SHEETS
G-04	SYMBOLS AND ABBREVIATIONS
G-05	EXISTING SITE PLAN
DEMO	
D-01	DEMOLITION SITE PLAN
D-02	YARD PIPING DEMOLITION PLAN
D-03	RETURN ACTIVATED SLUDGE TRANSFER PUMP STATION DEMOLITION PLAN
D-04	EQ TANK RETURN PUMP STATION AND WET WELL DEMO PLAN AND SECTION
D-05	DAF TANK DEMOLITION PLAN AND SECTION
D-06	THICKENED SLUDGE HOLDING TANK- SLUDGE BOX DEMO PLAN AND SECTION
D-07	DAF TANK DEMOLITION PHOTOS
D-08	THICKENED SLUDGE PUMP STATION DEMOLITION PLAN
D-09	DAF BUILDING EQUIPMENT DEMOLITION PLAN
D-10	SUBNATANT PUMP STATION DEMOLITION PLAN AND SECTION
D-11	EQUALIZATION TANK DEMOLITION PLAN
CIVIL	
C-01	PROPOSED SITE PLAN
C-02	PROPOSED YARD PIPING PLAN
C-03	CIVIL DETAILS I
C-04	CIVIL DETAILS II
STRUCTURAL	
S-01	STRUCTURAL GENERAL NOTES, DESIGN LOADS, DESIGN CRITERIA & LEGEND
S-02	EQ RETURN PS PLAN
S-03	EQ TANK FLOWMETER PLAN AND SECTIONS
S-04	EQ RETURN PUMP STATION PLAN & SECTIONS
S-05	EQ RETURN PS SECTION AND DETAILS
S-06	GENERAL STRUCTURAL SECTIONS & DETAILS
S-07	GENERAL SECTIONS & DETAILS ACCESS PLATFORMS & STAIRS
S-08	DAF BUILDING PLAN
MECHANICAL	
M-01	EQ RETURN PS PLAN
M-02	EQ RETURN PS SECTIONS
M-03	NOT USED
M-04	EQ TANK AND FLOWMETER SECTIONS
M-05	MECHANICAL DETAILS

SURVEY NOTES

- THIS SURVEY IS REFERENCED TO A GRID PROJECTION OF THE STATE PLANE COORDINATE SYSTEM OF FLORIDA WEST ZONE (NAD 83/11 ADJUSTMENT).
- THE FOLLOWING NGS VERTICAL CONTROL POINT WAS RECOVERED AND UTILIZED FOR THE ELEVATIONS INDICATED HEREON: "SABAL PALM" NAVD 1988 ELEVATION 14.62'.
- THIS IS NOT A BOUNDARY SURVEY.
- THIS SURVEY IS SUBJECT TO PERTINENT EASEMENTS, ADDITIONAL 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.
- ELEVATIONS SHOWN ARE BASED ON NORTH AMERICAN VERTICAL DATUM, 1988 (NAVD 88). CONTRACTOR SHALL NOTE THAT ELEVATIONS ON RECORD DRAWINGS FOR THIS FACILITY MAY BE BASED ON NATIONAL GEODETIC VERTICAL DATUM, 1929 (NGVD 1929). THE CONVERSION OF VERTICAL DATUM FOR THIS SITE IS NGVD=NAVD 88+0.99 FT.

ELECTRICAL	
E-01	ELECTRICAL NOTES, ABBREVIATIONS AND LEGEND
E-02	ELECTRICAL PARTIAL SITE PLAN
E-03	MEDIUM VOLTAGE SINGLE LINE DIAGRAM
E-04	SOUTH BLOWER BUILDING SINGLE LINE DIAGRAM
E-05	SOUTH BLOWER BUILDING ELECTRICAL PLAN
E-06	EQ RETURN PS PLAN
E-07	LIGHTING PLAN
E-08	SCHEDULES AND TABLES
E-09	SCHEDULES AND TABLES
E-10	ELECTRICAL SCHEMATICS
E-11	ELECTRICAL AREA CLASSIFICATION
E-12	ELECTRICAL INTERCONNECTION DIAGRAM
E-13	ELECTRICAL DETAILS I
E-14	ELECTRICAL DETAILS II
E-15	ELECTRICAL DETAILS III
INSTRUMENTATION	
I-01	PROCESS & INSTRUMENTATION DIAGRAM LEGEND AND SYMBOLS
I-02	INSTRUMENTATION DETAILS
I-03	CONTROL PANEL DETAILS
I-04	NETWORK DIAGRAM MODIFICATIONS
I-05	PROCESS & INSTRUMENTATION DIAGRAM FLOW EQUALIZATION TANK
I-06	PROCESS & INSTRUMENTATION DIAGRAM WETWELL & RETURN PUMP STATION
HVAC	
H-01	HVAC DATA SHEET
H-02	HVAC FLOOR PLAN
H-03	HVAC DETAILS

SOIL EROSION & SEDIMENTATION CONTROL NOTES:

- ALL SOIL EROSION AND SEDIMENTATION CONTROL MEASURES SHALL BE IN PLACE PRIOR TO THE START OF ANY CONSTRUCTION, DEMOLITION, DEWATERING, OR MOBILIZATION ACTIVITIES, MAINTAINED THROUGHOUT CONSTRUCTION AND SHALL REMAIN IN PLACE UNTIL WORK IS COMPLETE.
- CONTRACTOR SHALL FOLLOW BEST MANAGEMENT PRACTICES THROUGHOUT DEMOLITION AND CONSTRUCTION.
- HAY BALES AND/OR SILT SCREENS SHALL BE INSTALLED ADJACENT TO THE WORK AREAS TO PREVENT SEDIMENT TRANSPORT PRIOR TO THE COMMENCEMENT OF WORK.
- INLET PROTECTION SHALL BE PLACED AT ALL INLETS IN OR ADJACENT TO THE PROJECT AREA.
- AS SOON AS PRACTICAL, ALL DRESSED SLOPES AND DISTURBED AREAS SHALL BE SODDED OR SEEDED AND MULCHED TO PREVENT EROSION.
- NO EXCAVATION SHALL EXTEND BELOW THE DEPTHS/ELEVATIONS SHOWN ON THE DRAWINGS OR IN THE SPECIFICATIONS WITHOUT PRIOR APPROVAL.
- CONTRACTOR SHALL PREPARE AND SUBMIT A STORM WATER POLLUTION PREVENTION PLAN (SWPPP) FOR REVIEW AND APPROVAL PRIOR TO COMMENCEMENT OF ANY CONSTRUCTION ACTIVITIES AND PROVIDE APPROVED FDEP NOI TO COUNTY.
- CONTRACTOR SHALL PREPARE AND SUBMIT A DISPOSAL PLAN FOR EXCAVATION MATERIAL INCLUDING THE LOCATION OF DISPOSAL SITE(S) AND DISPOSAL PLANS SHOWING APPLICABLE BEST MANAGEMENT PRACTICES FOR REVIEW AND APPROVAL PRIOR TO ANY EARTHWORK ACTIVITIES.

REVNO.	DESCRIPTIONS REVISIONS	DATE

SEAL

DAVID C. WEHNER, P.E.
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SEAL



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**SWRWF
EQUALIZATION SYSTEM REHABILITATION
AND COVER ADDITION**

GENERAL NOTES AND INDEX OF SHEETS

DATE: MAY 2023	SCALE:	DRAWING NUMBER:
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DRAWN: DMP	VERTICAL: NA	
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PROJ. MGR: DCW		
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NOTICE: THE OFFICIAL RECORD OF THIS SHEET IS THE ELECTRONIC FILE DIGITALLY SIGNED AND SEALED UNDER RULE 61G15-23.004, F.A.C.

GENERAL ABBREVIATIONS

⊙	AT	LN.	LANE
ABW	AUTOMATIC BACKWASH	LP	LIGHT POLE
A/C	AIR CONDITIONER UNIT	LS	LICENSED SURVEYOR
AC	ACRES	MAS	MASONRY
AC	ASPHALTIC CONCRETE	MAX.	MAXIMUM
ABD	ABANDONED	MCC	MOTOR CONTROL CENTER
AL./ALUM.	ALUMINUM	MES	MITERED END SECTION
ANCH.	ANCHOR	MG	MILLION GALLONS
APPROX.	APPROXIMATE	MGD	MILLION GALLONS PER DAY
BLDG.	BUILDING	MES	MITERED END SECTION
BM.	BEAM	MHW	MEAN HIGH WATER
BOT./BOTT.	BOTTOM	M.O.	MOTOR OPERATED
(C)	CALCULATED DATA	MON.	MONUMENT
C	CHANNEL	NG	NATURAL GROUND
C.	CONDUIT	N.T.S.	NOT TO SCALE
CARV	COMBINATION AIR RELEASE VALVE	NO.	NUMBER
C.B.	CATCH BASIN	NP	NORMAL POOL
CCR	CERTIFIED CORNER RECORD	⊕	DIAMETER/PHASE
CHKR	CHECKERED	O/A	OVERALL
CIR.	CIRCLE	OPNG.	OPENING
CLF	CHAIN LINK FENCE	OR	OFFICIAL RECORDS BOOK
⊕	CENTERLINE	(P)	PLAT BOOK
CMP	CORRUGATED METAL PIPE	PCCP	PRE-STRESSED CYLINDRICAL CONCRETE PIPE
COL.	COLUMN	PG	PAGE
CONN.	CONNECTOR/CONNECTION	PLCS.	PLACES
CONC.	CONCRETE	PLS	PROFESSIONAL LAND SURVEYOR
COR	CORNER	POB	POINT OF BEGINNING
CPB	CONDOMINIUM PLAT BOOK	POC	POINT OF COMMENCEMENT
C/T	CURB TIE	POT	POTABLE
CJ.	COPPER	PP	POWER POLE
(D)	DEED DATA	PRM	PERMANENT REFERENCE MONUMENT
D.	DEEP DRAIN	PROP.	PROPOSED
DB	DEED BOOK	PSM	PROFESSIONAL SURVEYOR & MAPPER
DBL.	DOUBLE	P/T	PAVEMENT TIE
DHW.	DESIGN HIGH WATER	P.V.	PLUG VALVE
DISCH.	DISCHARGE	PVMT	PAVEMENT
DN.	DOWN	R.	RADIUS/RISER/RELAY
DRWY	DRIVEWAY	RCP	REINFORCED CONCRETE PIPE
E.W.	EACH WAY	REF.	REFERENCED
EA.	EACH	REINF.	REINFORCED/REINFORCING
ECMP	ELLIPTICAL CORRUGATED METAL PIPE	REQ'D	REQUIRED
EL./ELEV.	ELEVATION	RESTR.	RESTRAINED
ELEC.	ELECTRICAL CONDUIT	RLS	REGISTERED LAND SURVEYOR
EP	EDGE OF PAVEMENT	RW/R/W	RIGHT-OF-WAY
ERCP	ELLIPTICAL REINFORCED CONCRETE PIPE	SAN.	SANITARY
ETC.	AND SO FORTH	SEC.	SECTION
EXIST.	EXISTING	SGL	SINGLE
EXP.	EXPANSION	SHW	SEASONAL HIGH WATER
(F)	FIELD DATA	SIR	SET IRON ROD 1/2" LB 6113
FCM	FOUND CONCRETE MONUMENT	SND	SET NAIL & DISC LB 6113
FDOT	FLORIDA DEPARTMENT OF TRANSPORTATION	SPRK	SPRINKLER
FF	FINISHED FLOOR	SQ.	SQUARE
FIR	FOUND IRON ROD	SN.	SIGN
FND	FOUND NAIL & DISC	SR	STATE ROAD
FOP	FOUND OPEN PIPE	SSMH	SANITARY SEWER MANHOLE
FPP	FOUND PINCHED PIPE	S/T	SIDEWALK TIE
FRRS	FOUND RAILROAD SPIKE	STL.	STEEL
F/T	FENCE TIE	STY	STORY
FT.	FOOT	S/W;SWK	SIDEWALK
FTG.	FOOTING	SYM.	SYMBOL
FXC	FOUND X-CUT	TBM	TEMPORARY BENCH MARK
GALV.	GALVANIZED	TOB	TOP OF BANK
GDRL	GUARDRAIL	T.&B.	TOP & BOTTOM
GE	GRATE ELEVATION	TEL	TELEPHONE
GEN	GENERATOR	TEMP.	TEMPORARY
GI	GRATED INLET	THK	THICK
GPM	GALLONS PER MINUTE	TOS	TOE OF SLOPE
GRTG.	GRATING	TYP.	TYPICAL
G.S.	GALVANIZED STEEL	UG	UNDERGROUND GAS
GST	GROUND STORAGE TANK	UP	UTILITY POLE
GR./GRD.	GRADE	UT	UNDERGROUND TELEPHONE
GWP	GUY WIRE POLE	VCP	VITRIFIED CLAY PIPE
HDWALL	HEADWALL	VERT.	VERTICAL
H.R.	HANDRAIL	W	WIDE FLANGE/WIDE/WATT
HWL	HIGH WATER LEVEL	W/	WITH
IE	INVERT ELEVATION	WF	WOOD FENCE
IN.	INCH	W/L	WATER LINE
INV.	INVERT	W.L.	WATER LEVEL
IP	IRON PIPE	W/M	WATER MAIN
IR	IRON ROD	W.M.	WATER METER
J.B.	JUNCTION BOX	WRF	WATER RECLAMATION FACILITY
JT.	JOINT	W.P.	WEATHER PROOF
(L)	LEGAL DESCRIPTION DATA	W.S.	WALL SLEEVE/WATER STOP/WATER SERVICE
LB	LICENSED BUSINESS	W/T	WALL TIE
LG.	LONG		

FLOW ABBREVIATIONS

WTR.	WATER
AL	ALUM SOLUTION
AB	AERATION BASIN
AD	AEROBIC DIGESTER
AX	ANOXIC BASIN
BA	BLOWER AIR
BP	BYPASS
BW	BACKWASH
CA	COMPRESSED AIR
CCC	CHLORINE CONTACT CHAMBER
CCE	CHLORINATED EFFLUENT
CF	CLOTH FILTER
CLE	CLARIFIER EFFLUENT
CLG	CHLORINE GAS
CLS/CL2S	CHLORINE SOLUTION
D/DR	DRAIN
DAF	DISSOLVED AIR FLOTATION
DF	NEW CLOTH FILTER
DS	DEWATERED SLUDGE
EFF	EFFLUENT
EXP	EXPANSION
FBW	FILTER BACKWASH
FC	FINAL CLARIFIER
FE	FILTER EFFLUENT
FLE	FILTERED LAKE EFFLUENT
FLW	FLOCCULATED WATER
FM	FLOW METER
FW	FILTERED WATER
GBT	GRAVITY BELT THICKENER
GR	GRIT
HW	HOT WATER
HDW	HEADWORKS
INF	INFLUENT
IR	INTERNAL RECYCLE
HSBFP	HIGH SOLIDS BELT FILTER PRESS
ML	MIXED LIQUOR
OF	OVERFLOW
P	POLYMER
PD	PLANT DRAIN
PDFM	PLANT DRAIN FORCE MAIN
PS	PUMP STATION
PW	POTABLE WATER
RAS	RETURNED ACTIVATED SLUDGE
RAW	RAW SEWAGE
RCW	RECLAIMED WATER
REJ	REJECT
RML	RECIRCULATED MIXED LIQUOR
RS	RAW SEWAGE
RW	REUSE WATER
SAM	SAMPLE
SB	SPLITTER BOX
SC	SCUM
SDR	STORMWATER DRAINAGE
SL	SAMPLE LINE
SPW	STORAGE POND WATER
SRS	STORED RAW SEWAGE
SS	SANITARY SEWER
TS	THICKENED SLUDGE
WAS	WASTE ACTIVATED SLUDGE
WBW	WASTE BACKWASH WATER
WW	WASTEWATER

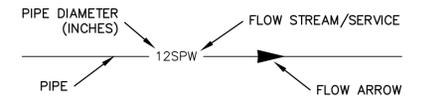
PIPING ABBREVIATIONS

ARV	AIR RELEASE VALVE
ABD	ABANDONED
BFV	BUTTERFLY VALVE
BV	BALL VALVE
CB	CATCH BASIN
CO	CLEANOUT
CORP	CORPORATION
CV	CHECK VALVE
D.I.	DUCTILE IRON
DIA	DIAMETER
D.I.P.	DUCTILE IRON PIPE
ELEC.	ELECTRICAL
EXIST.	EXISTING
FHA	FIRE HYDRANT ASSEMBLY
FL	FLANGED
GS	GALVANIZED STEEL
GV	GATE VALVE
HB	HOSE BIBB
HDPE	HIGH DENSITY POLYETHYLENE
HFAC	HARNESSES FLANGE ADAPTER COUPLING
MH	MANHOLE
MJ	MECHANICAL JOINT
PE	PLAIN END
PS	PUMP STATION
PV	PLUG VALVE
PVC	POLYVINYLCHLORIDE
RED.	REDUCER
SCH	SCHUCULE
SDR.	DIAMETER RATIO
SS.	STAINLESS STEEL
TBR	TO BE REMOVED
UE	UNDERGROUND ELECTRIC
VERT.	VERTICAL
WM	WATER METER

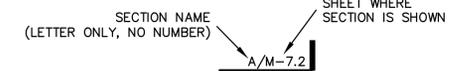
LEGEND

EXISTING		PROPOSED
	PIPE 12" OR LARGER (ABOVE GROUND)	
	PIPE 12" OR LARGER (UNDERGROUND)	
	PIPE SMALLER THAN 12" (ABOVE GROUND)	
	PIPE SMALLER THAN 12" (UNDERGROUND)	
	GATE VALVE	
	BUTTERFLY VALVE	
	BALL VALVE	
	PLUG VALVE	
	REDUCER	
	MANHOLE	
	CATCH BASIN	
	TOP OR TOE OF BANK	
	PIPING, STRUCTURES OR EQUIPMENT TO BE REMOVED	
	CONTOURS	

PIPE IDENTIFICATION



SECTION DESIGNATION



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REVNO.	DESCRIPTIONS	DATE

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No. 59541

SEAL

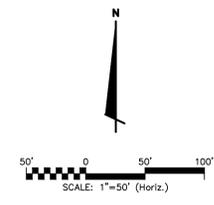
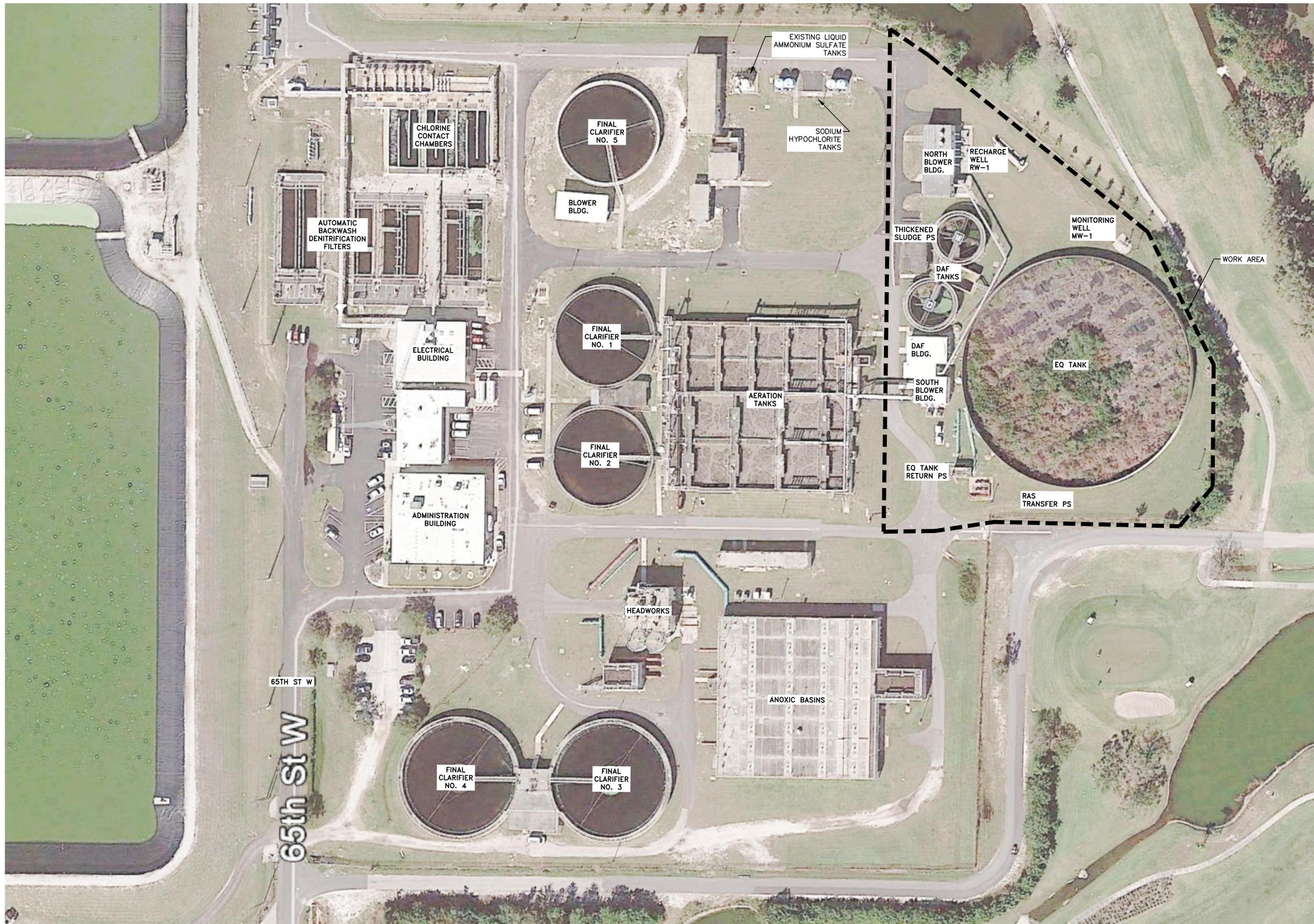
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**SWWRF
EQUALIZATION SYSTEM REHABILITATION
AND COVER ADDITION**

SYMBOLS AND ABBREVIATIONS

DATE: MAY 2023	SCALE	DRAWING NUMBER
MCE PROJ. # 1024-0174	HORIZONTAL: NA	G-04
DRAWN: DMP	VERTICAL: NA	
DESIGNED: VH		
CHECKED: DCW		
PROJ. MGR: DCW		REVISION
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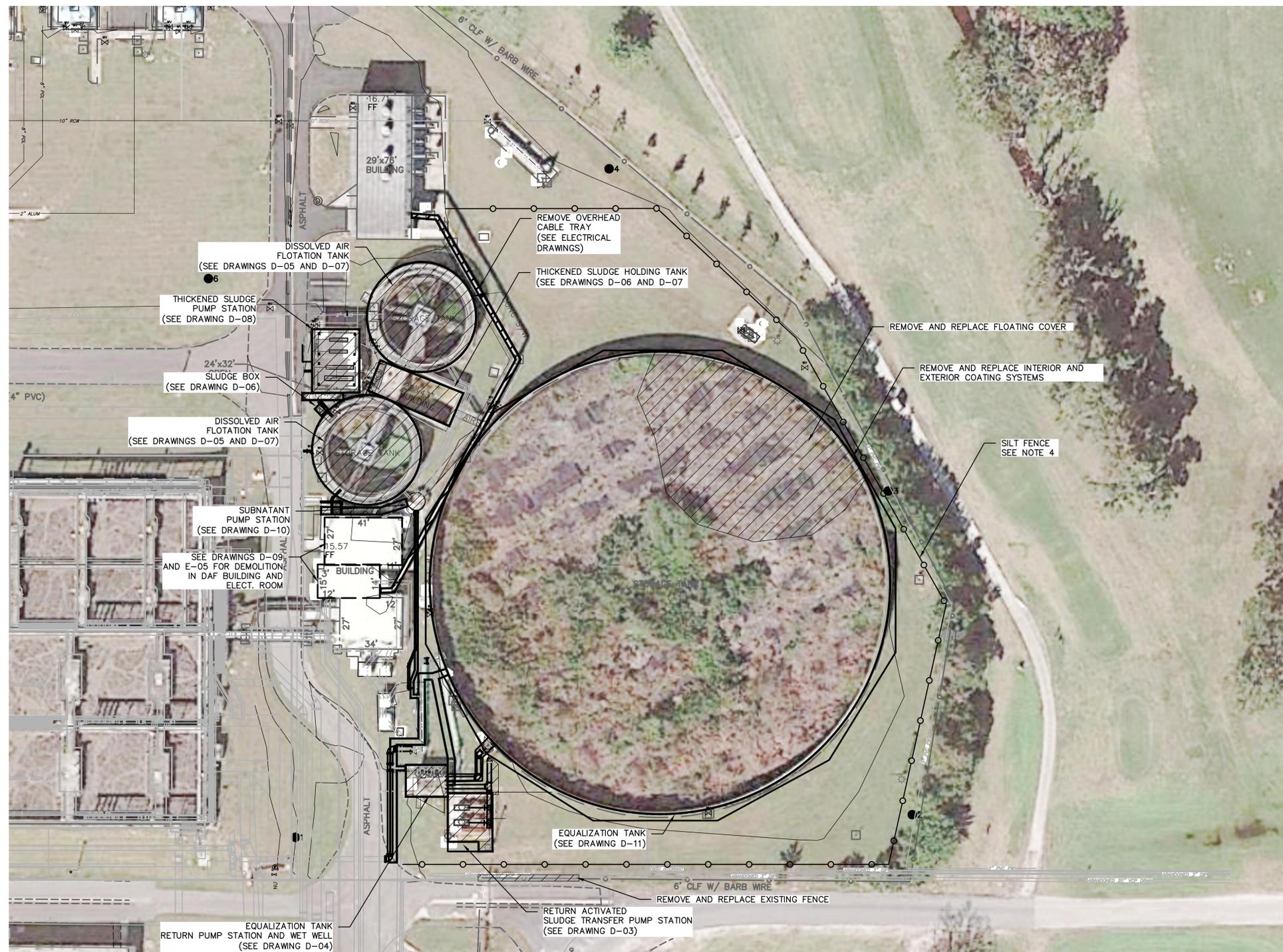
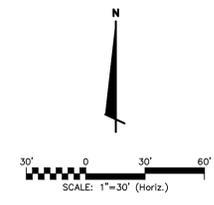
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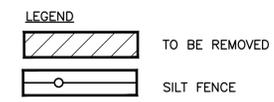
EXISTING SITE PLAN

DATE: MAY 2023	SCALE:	DRAWING NUMBER:
MCE PROJ. # 1024-0174	HORIZONTAL: NA	G-05
DRAWN: DMP	VERTICAL: NA	
DESIGNED: YH	STATUS: ISSUED FOR BID	REVISION:
CHECKED: DCW		
PROJ. MGR: DCW		



NOTES:

1. DAF SYSTEM, SLUDGE TRANSFER PUMP STATION, SUBNATANT PUMP STATION AND RAS PUMP STATION ARE NO LONGER IN SERVICE AND CAN BE DEMOLISHED INDEPENDENTLY FROM OTHER PROCESSES ONCE ISOLATED.
2. THE EQ TANK, EQ RETURN PS, AND CABLE TRAY ARE IN-SERVICE. COORDINATE DEMOLITION WITH SPECIAL PROVISIONS OUTLINED IN SPECIFICATION SECTION 01013 SPECIAL PROJECT PROVISIONS.
3. SEE SPECIFICATION SECTION 02050 DEMOLITION FOR ADDITIONAL INFORMATION.
4. IT IS ANTICIPATED THAT THERE WILL BE MULTIPLE ARRANGEMENTS OF EROSION CONTROL BASED UPON THE CONTRACTOR'S IMMEDIATE WORK EFFORT AND THE NECESSITY TO MAINTAIN OPERATION OF THE TREATMENT PLANT. CONTRACTOR SHALL PROVIDE AND MAINTAIN EROSION AND SEDIMENT CONTROL PROCEDURES UTILIZING THE PROVIDED DETAILS AS REQUIRED TO PREVENT THE TRANSPORTATION OF SEDIMENT DOWNSTREAM INTO STREETS, STORM SEWERS, DITCHES, PONDS, ETC.



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DEMOLITION SITE PLAN

DATE: MAY 2023	SCALE:	DRAWING NUMBER:
MCE PROJ. # 1024-0174	HORIZONTAL: NA	D-01
DRAWN: DMP	VERTICAL: NA	
DESIGNED: VH		
CHECKED: DCW		
PROJ. MGR: DCW		
STATUS: ISSUED FOR BID		REVISION:

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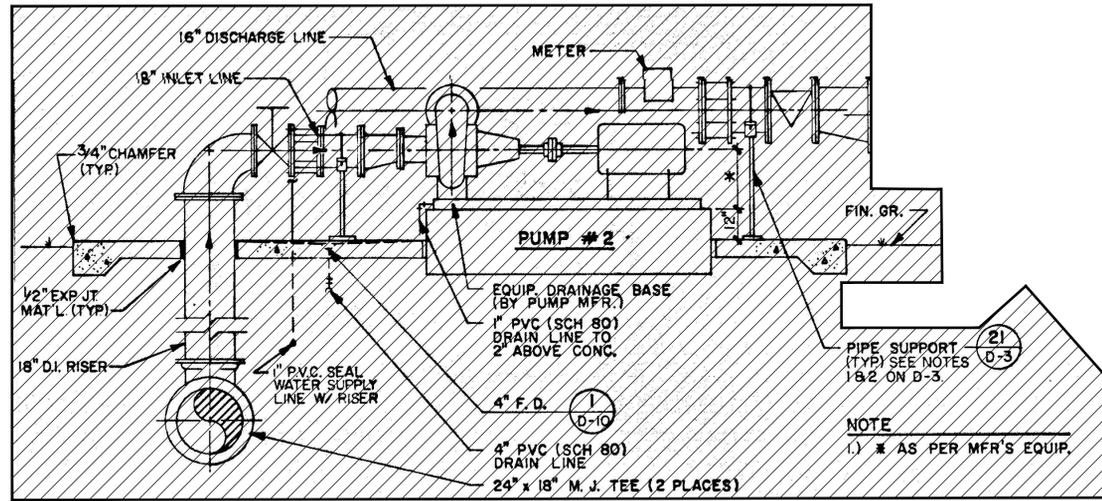
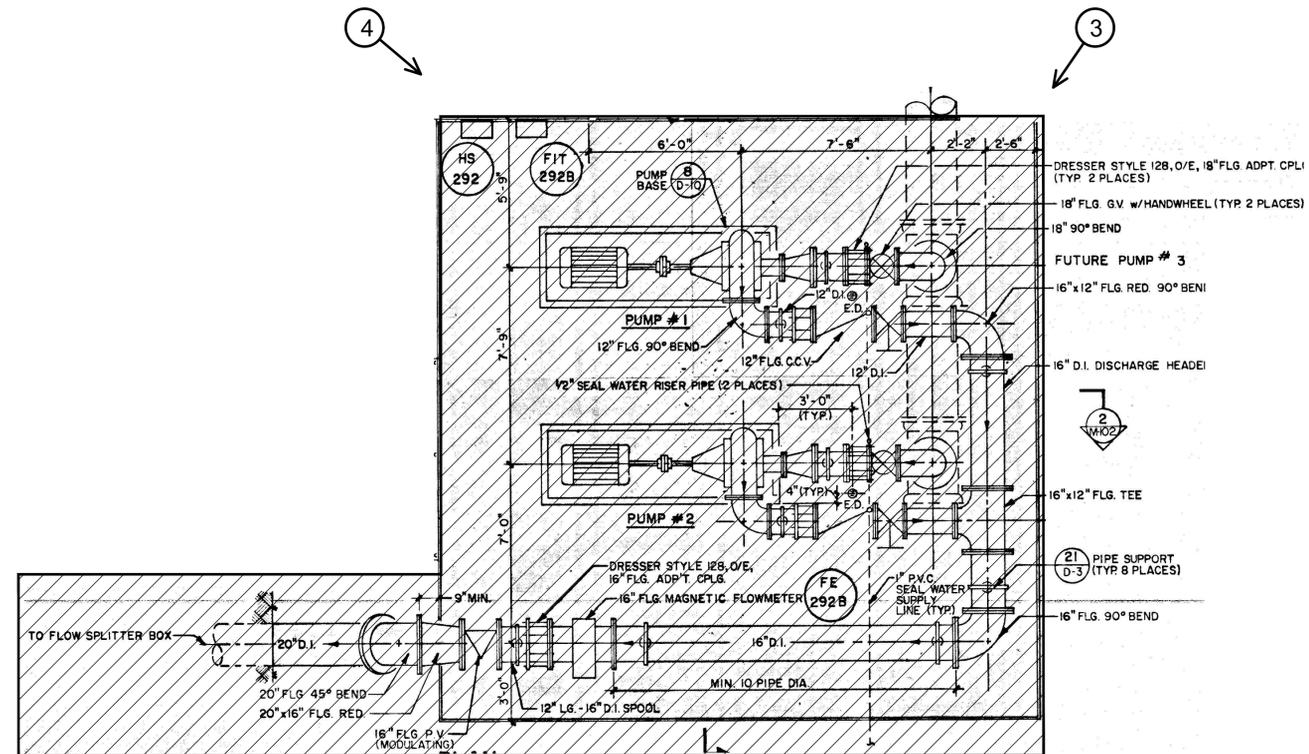


PHOTO 3



PHOTO 4



- NOTES:
- CONTRACTOR SHALL DEMOLISH PUMP STATION TO ITS ENTIRETY. DEMOLITION INCLUDES ALL SLABS, EQUIPMENT, PIPING AND ELECTRICAL.
 - SEE SPECIFICATION SECTION 02050 DEMOLITION FOR ADDITIONAL INFORMATION.

LEGEND
 TO BE REMOVED

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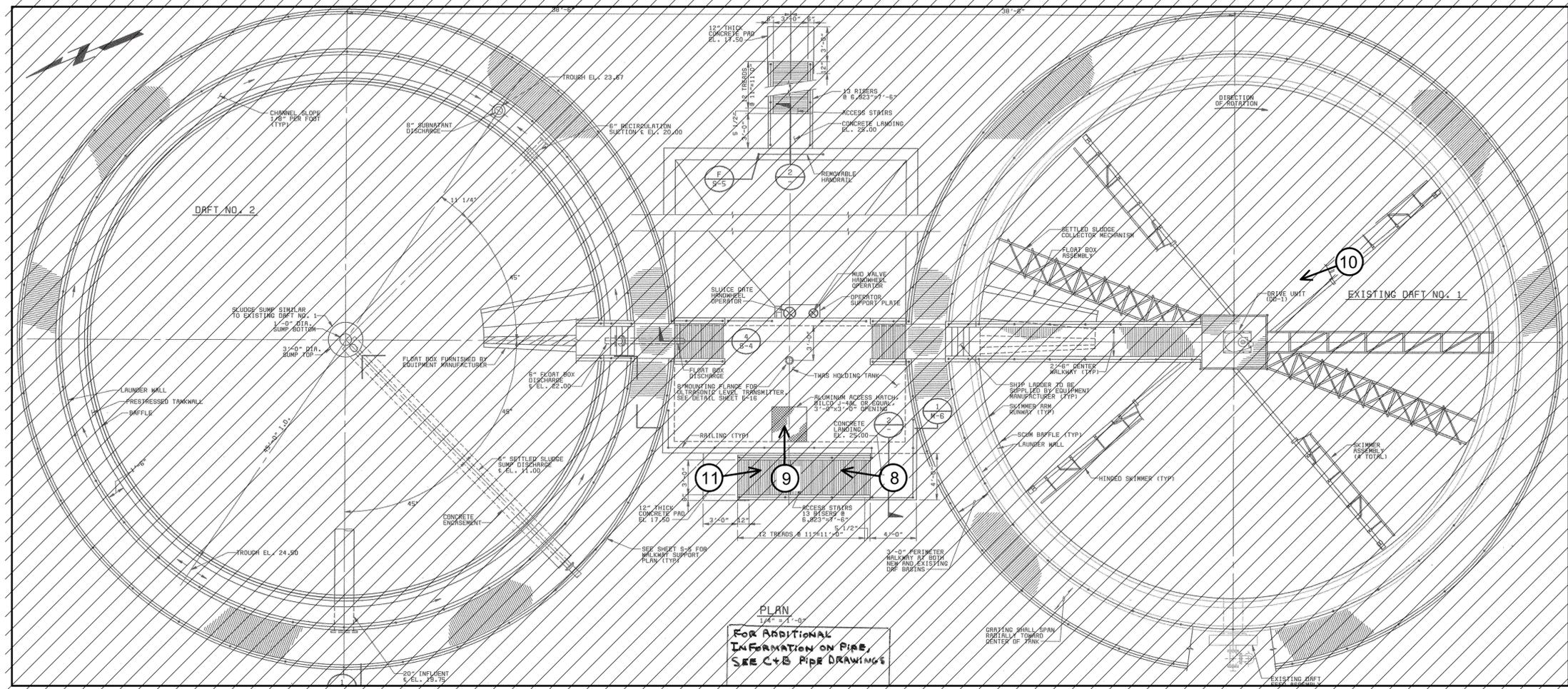
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EQUALIZATION SYSTEM REHABILITATION
AND COVER ADDITION

RETURN ACTIVATED SLUDGE TRANSFER
PUMP STATION DEMOLITION PLAN

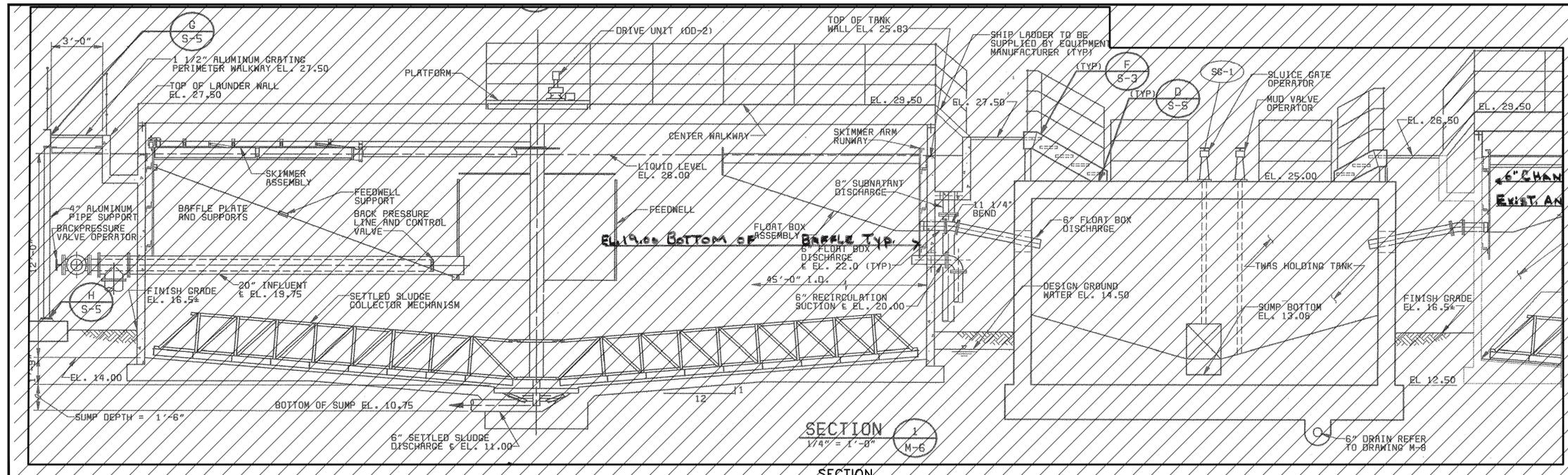
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PLAN
1/4" = 1'-0"
For Additional Information on Pipe, See C+8 Pipe Drawings

PLAN
NOT TO SCALE



SECTION
1/4" = 1'-0"
M-6

SECTION
NOT TO SCALE

- NOTES:
1. CONTRACTOR SHALL DEMOLISH DAF SYSTEM TO ITS ENTIRETY. DEMOLITION INCLUDES ALL SLABS, WALLS, EQUIPMENT, PIPING AND ELECTRICAL.
 2. SEE SPECIFICATION SECTION 02050 DEMOLITION FOR ADDITIONAL INFORMATION.

LEGEND
[Hatched Box] TO BE REMOVED

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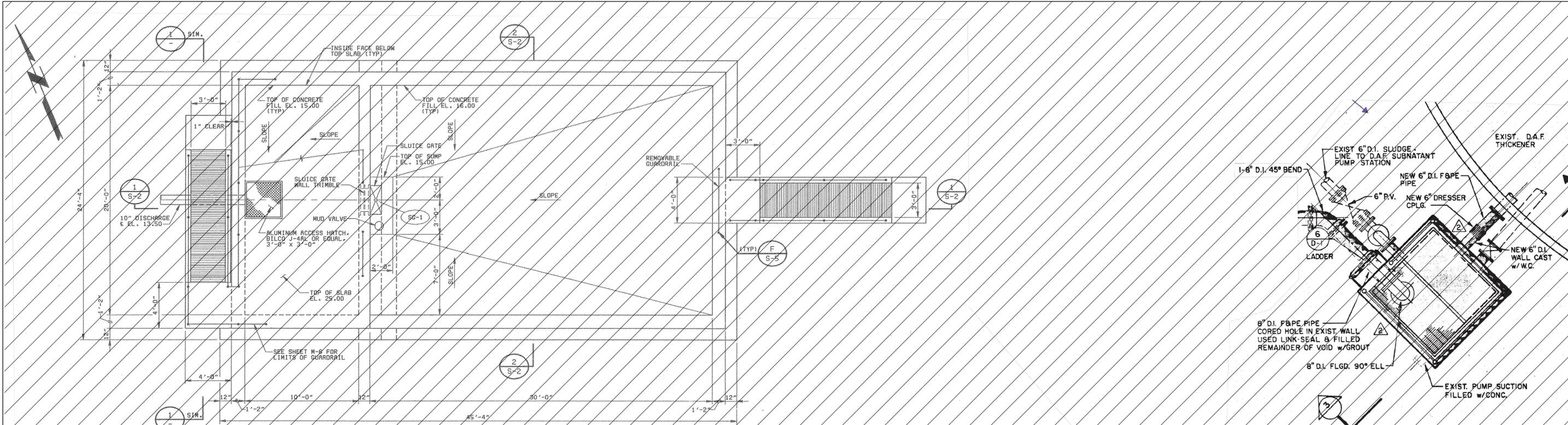
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EQUALIZATION SYSTEM REHABILITATION
AND COVER ADDITION**

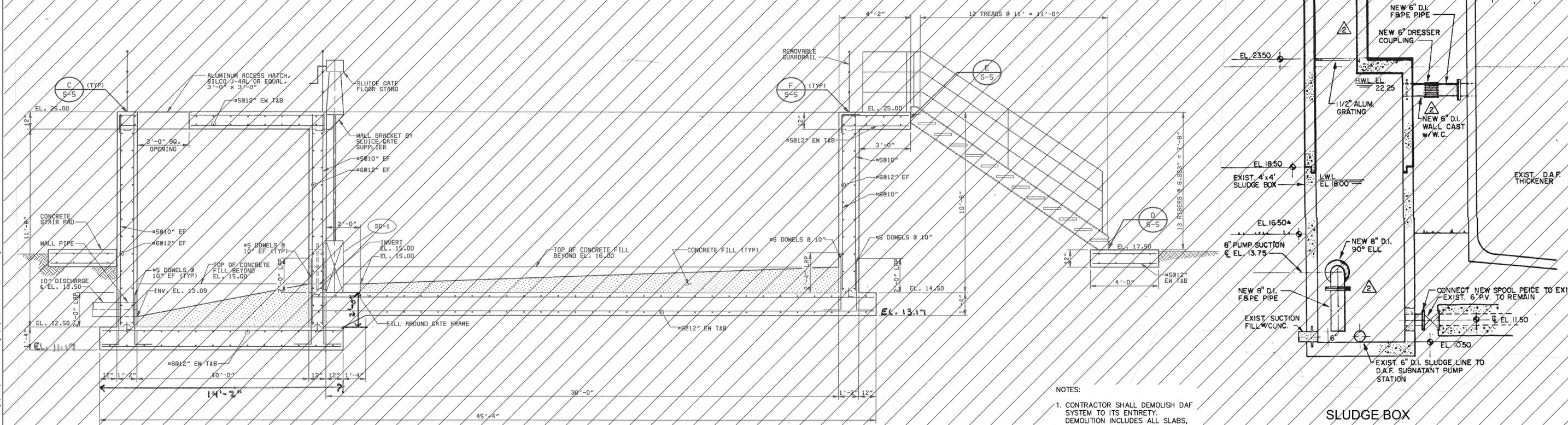
DAF TANK DEMOLITION PLAN AND SECTION

DATE: MAY 2023	SCALE:	DRAWING NUMBER:
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DESIGNED: VH	PROJ. MGR: DCW	REVISION:
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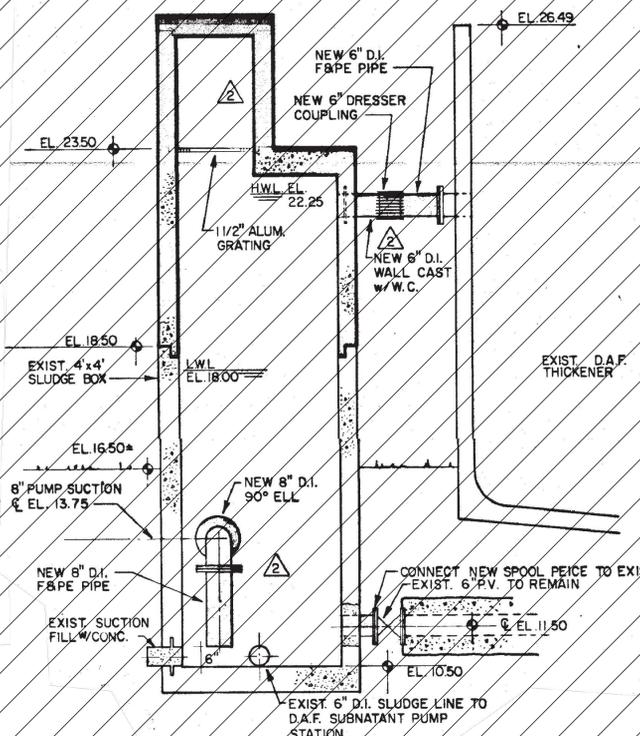
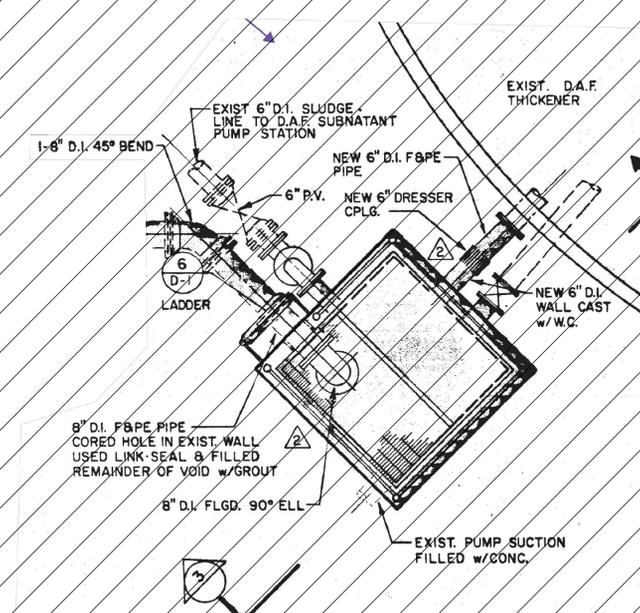
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THICKENED WAS HOLDING TANK PLAN
1/4" = 1'-0"



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



SLUDGE BOX
NOT TO SCALE

- NOTES:
1. CONTRACTOR SHALL DEMOLISH DAF SYSTEM TO ITS ENTIRETY. DEMOLITION INCLUDES ALL SLABS, WALLS, EQUIPMENT, PIPING AND ELECTRICAL.
 2. SEE SPECIFICATION SECTION 02050 DEMOLITION FOR ADDITIONAL INFORMATION.

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 EQUALIZATION SYSTEM REHABILITATION
 AND COVER ADDITION**

**THICKENED SLUDGE HOLDING TANK-
 SLUDGE BOX DEMO PLAN AND SECTION**

DATE: MAY 2023	SCALE: HORIZONTAL: NA	DRAWING NUMBER: D-06
MCE PROJ. # 1024-0174	VERTICAL: NA	
DRAWN: DMP		
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PHOTO 8



PHOTO 10



PHOTO 9



PHOTO 11

NOTES:

1. CONTRACTOR SHALL DEMOLISH DAF SYSTEM TO ITS ENTIRETY. DEMOLITION INCLUDES ALL SLABS, WALLS, EQUIPMENT, PIPING AND ELECTRICAL.
2. SEE SPECIFICATION SECTION 02050 DEMOLITION FOR ADDITIONAL INFORMATION.

LEGEND

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**SWWRF
EQUALIZATION SYSTEM REHABILITATION
AND COVER ADDITION**
**DAF TANK DEMOLITION
PHOTOS**

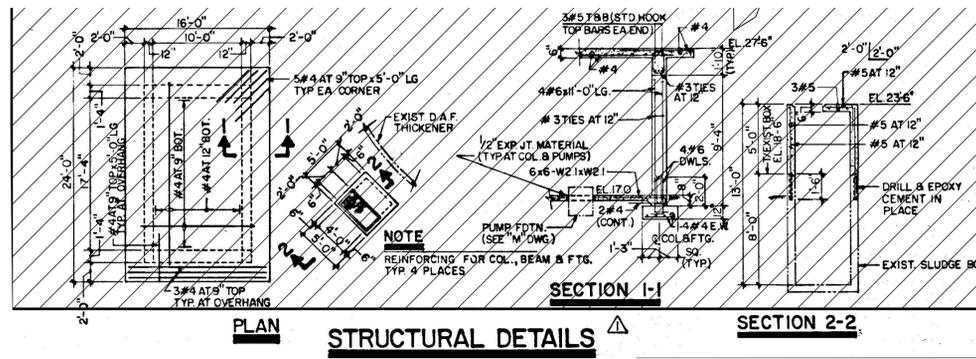
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MCE PROJ. #	1024-0174
DRAWN	DMP
DESIGNED	VH
CHECKED	DCW
PROJ. MGR.	DCW

SCALE	DRAWING NUMBER
HORIZONTAL: NA	D-07
VERTICAL: NA	

STATUS: ISSUED FOR BID

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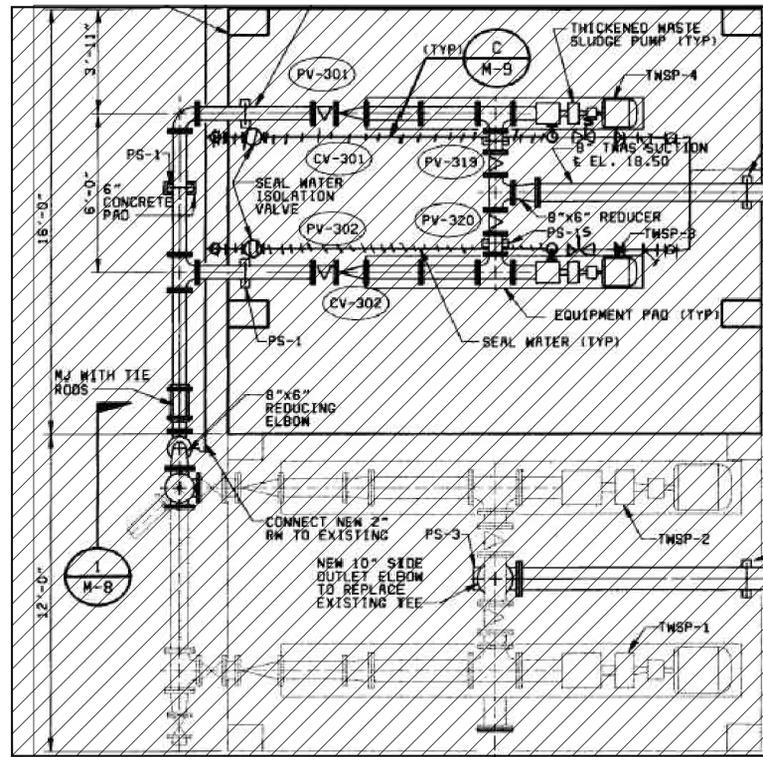


STRUCTURAL DETAILS

OLD STATION
NOT TO SCALE

13

12



PLAN
NOT TO SCALE

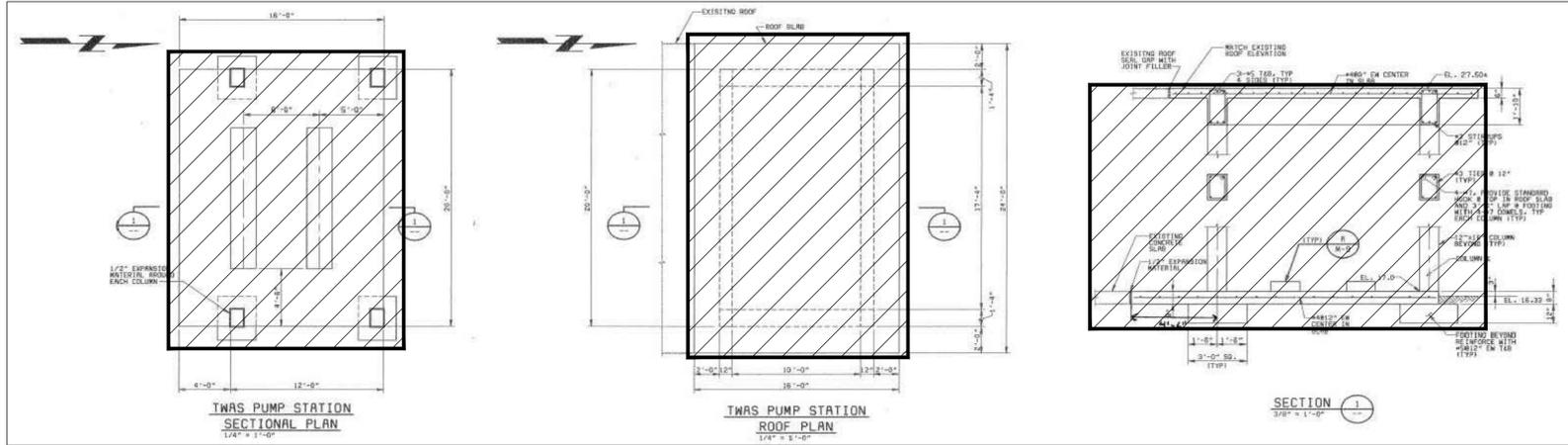
NEW STATION
↑
↓
OLD STATION



PHOTO 12



PHOTO 13



NEW STATION
NOT TO SCALE

- NOTES:
- CONTRACTOR SHALL DEMOLISH PUMP STATION TO ITS ENTIRETY. DEMOLITION INCLUDES ALL SLABS, WALLS, ROOF, EQUIPMENT, PIPING AND ELECTRICAL.
 - SEE SPECIFICATION SECTION 02050 DEMOLITION FOR ADDITIONAL INFORMATION.

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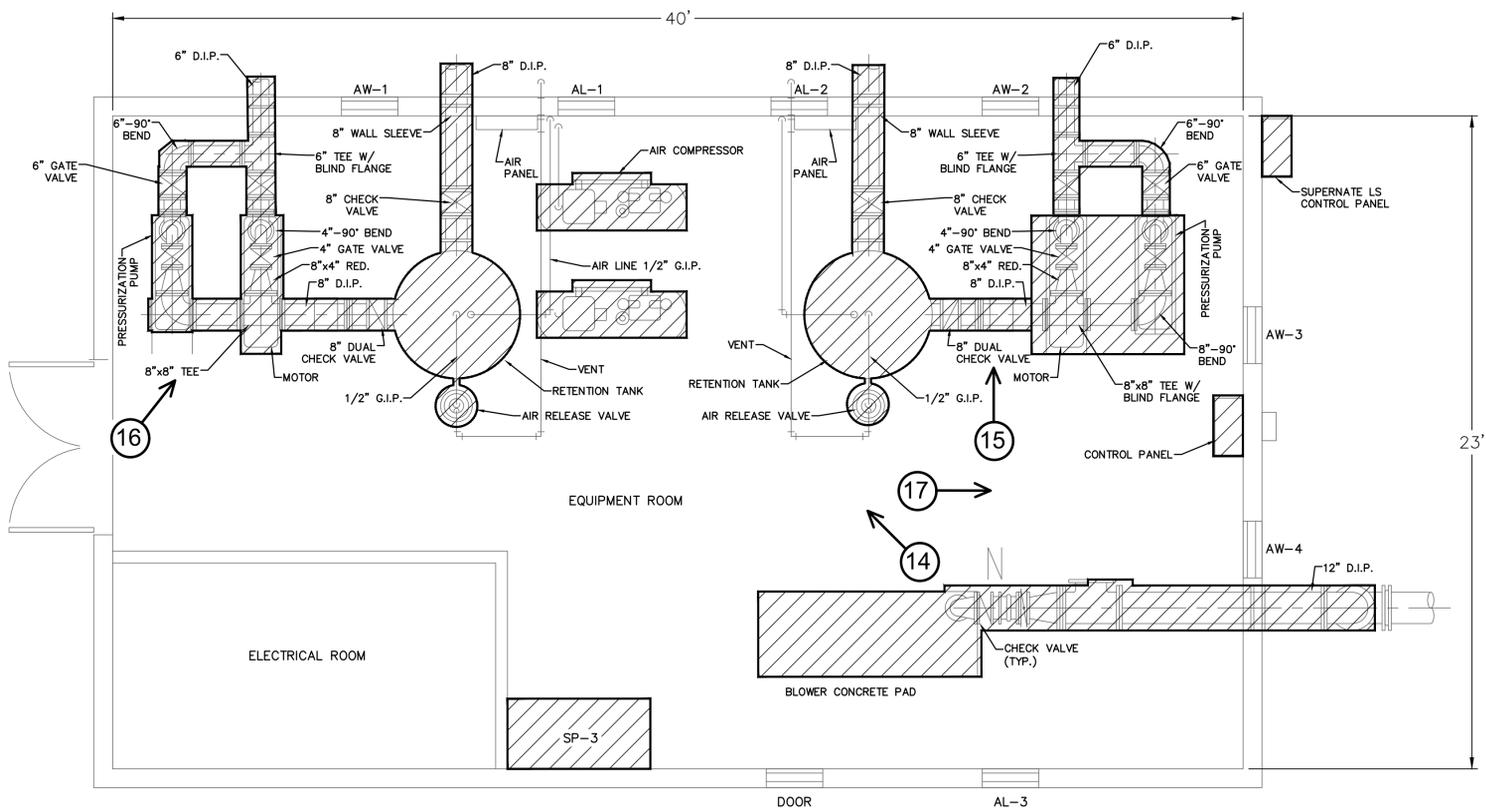
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SWRF
EQUALIZATION SYSTEM REHABILITATION
AND COVER ADDITION
THICKENED SLUDGE PUMP STATION
DEMOLITION PLAN

DATE: MAY 2023	SCALE:	DRAWING NUMBER:
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DRAWN: DMP	VERTICAL: NA	
DESIGNED: VH	PROJ. MGR: DCW	REVISION:
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PLAN
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PHOTO 14

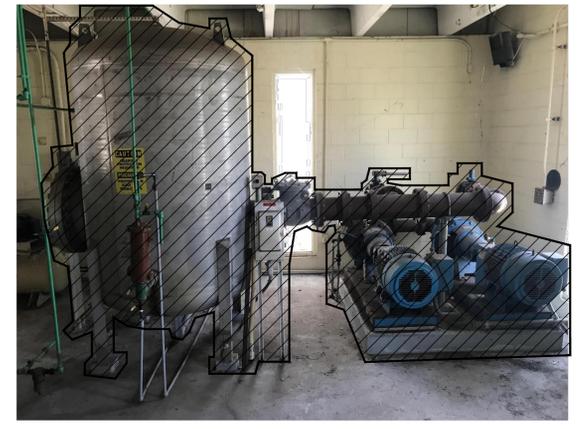


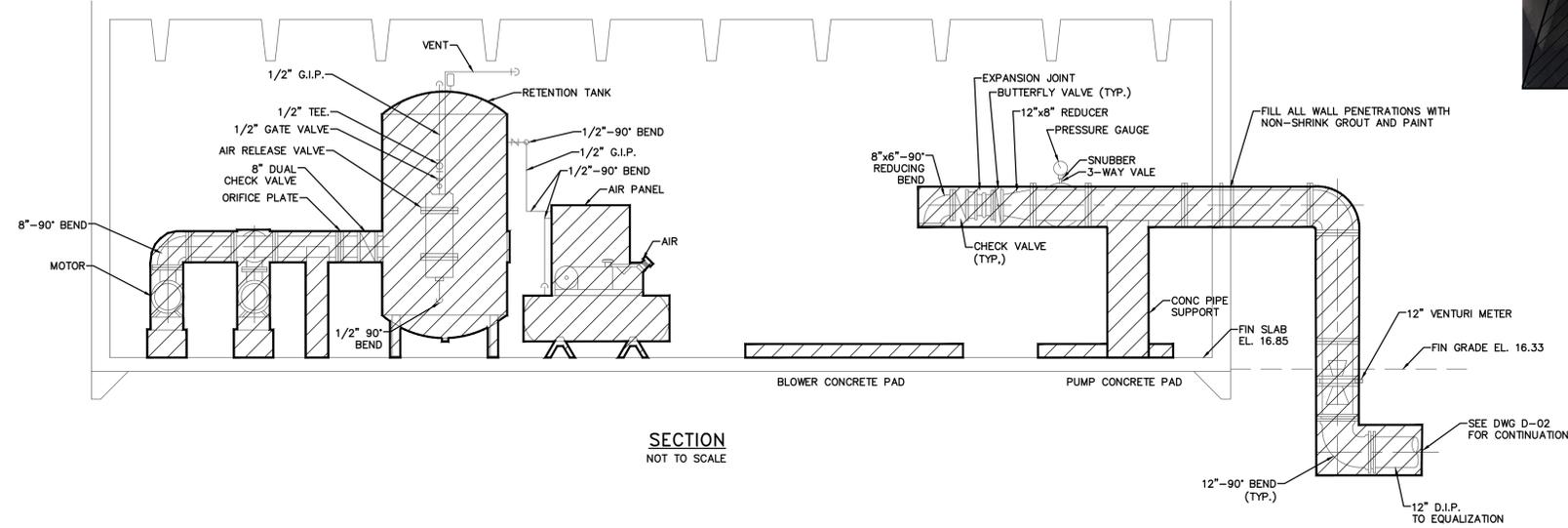
PHOTO 15



PHOTO 16



PHOTO 17



SECTION
NOT TO SCALE

NOTES:

1. CONTRACTOR SHALL REMOVE MECHANICAL EQUIPMENT AND ASSOCIATED PIPING, CONCRETE PADS, WIRE, AND CONDUITS.
2. SEE SPECIFICATION SECTION 02050 DEMOLITION FOR ADDITIONAL INFORMATION.
3. SEE DWG E-05 FOR ADDITIONAL DEMOLITION REQUIREMENTS.

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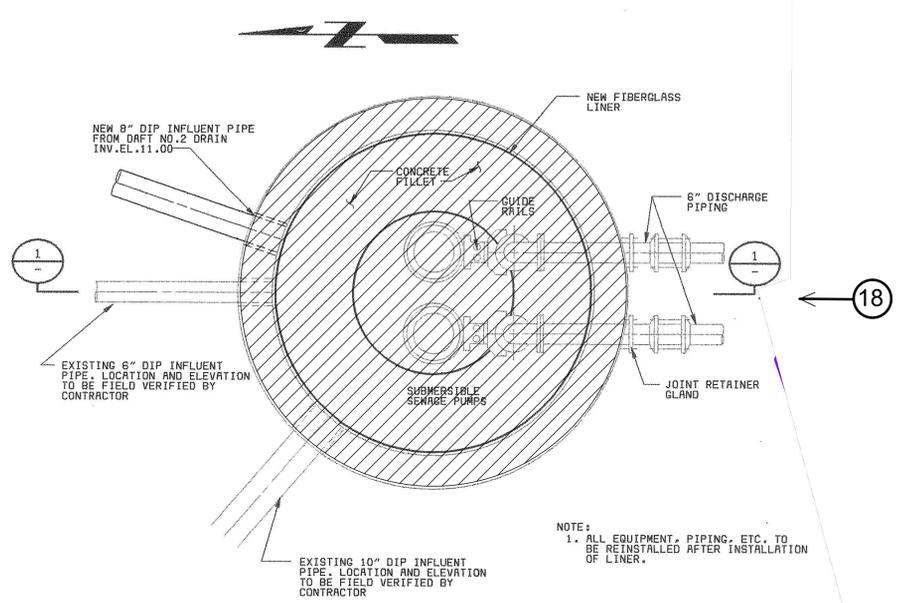
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DAF BUILDING EQUIPMENT
DEMOLITION PLAN

DATE: MAY 2023	SCALE: NA	DRAWING NUMBER: D-09
MCE PROJ. # 1024-0174	HORIZONTAL: NA	
DRAWN: DMP	VERTICAL: NA	
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SUBNATANT PS REHABILITATION PLAN
1/2" = 1'-0"

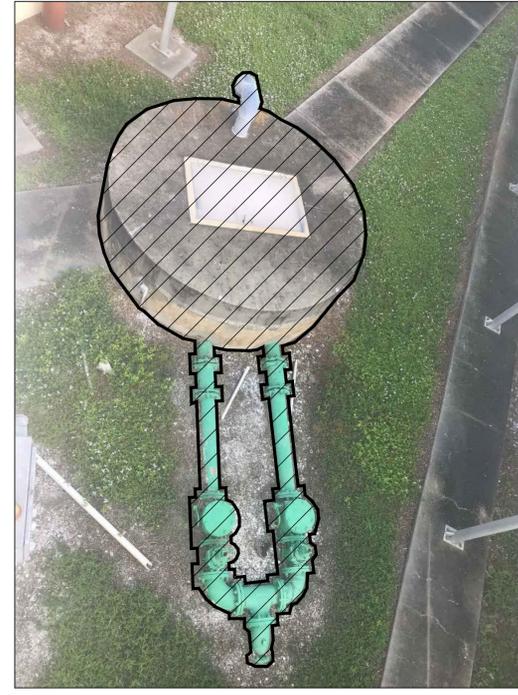
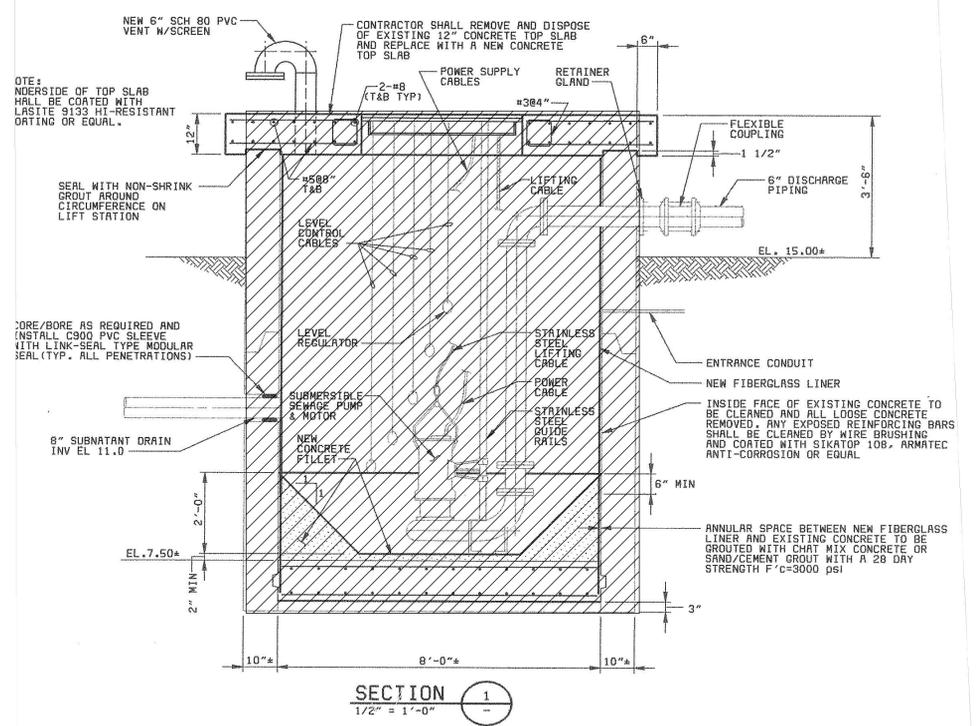


PHOTO 18



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

- NOTES:**
1. CONTRACTOR SHALL REMOVE PUMP EQUIPMENT AND ASSOCIATED PIPING, WIRE AND CONDUITS. CONCRETE WET WELL SHALL BE REMOVED TO 6'-FT BELOW GRADE. PENETRATE SLAB TO ALLOW WATER TO PASS THROUGH TO PREVENT FLOATATION BEFORE BACKFILLING AND COMPACTING.
 2. SEE SPECIFICATION SECTION 02050 DEMOLITION FOR ADDITIONAL INFORMATION.
 3. SEE D-05 AND D-07 FOR DAF DEMOLITION.



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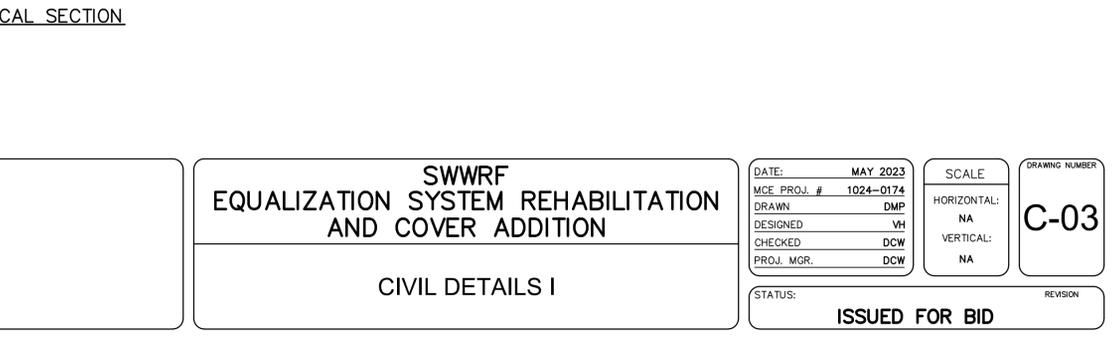
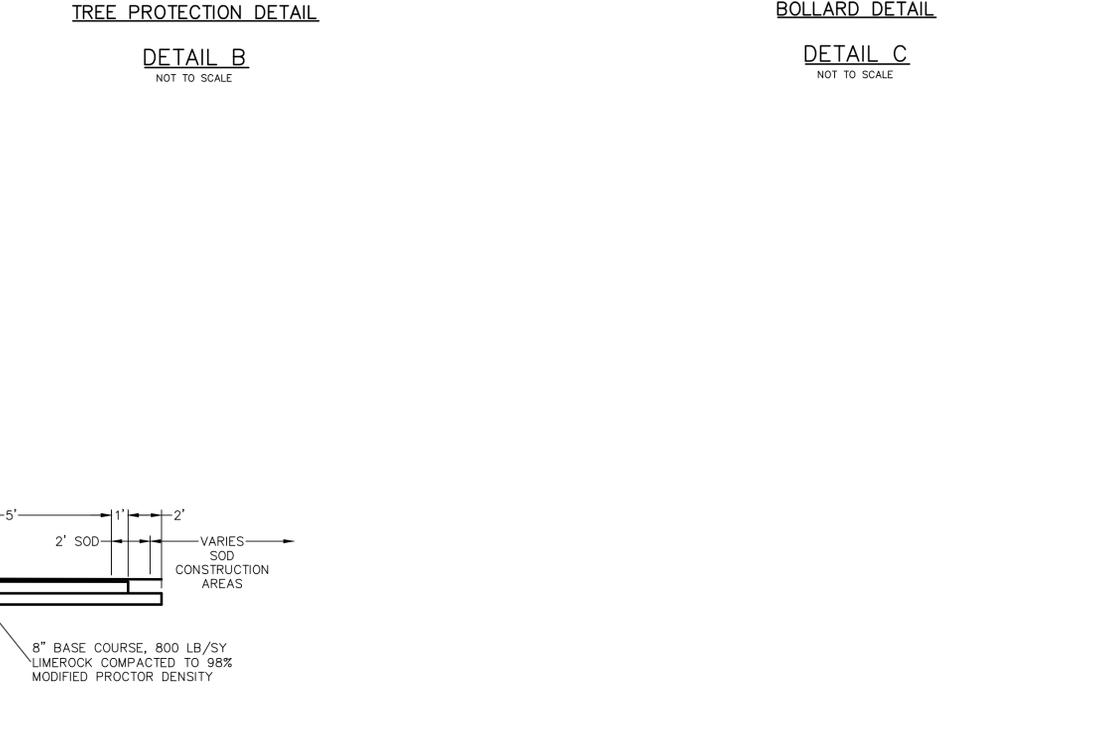
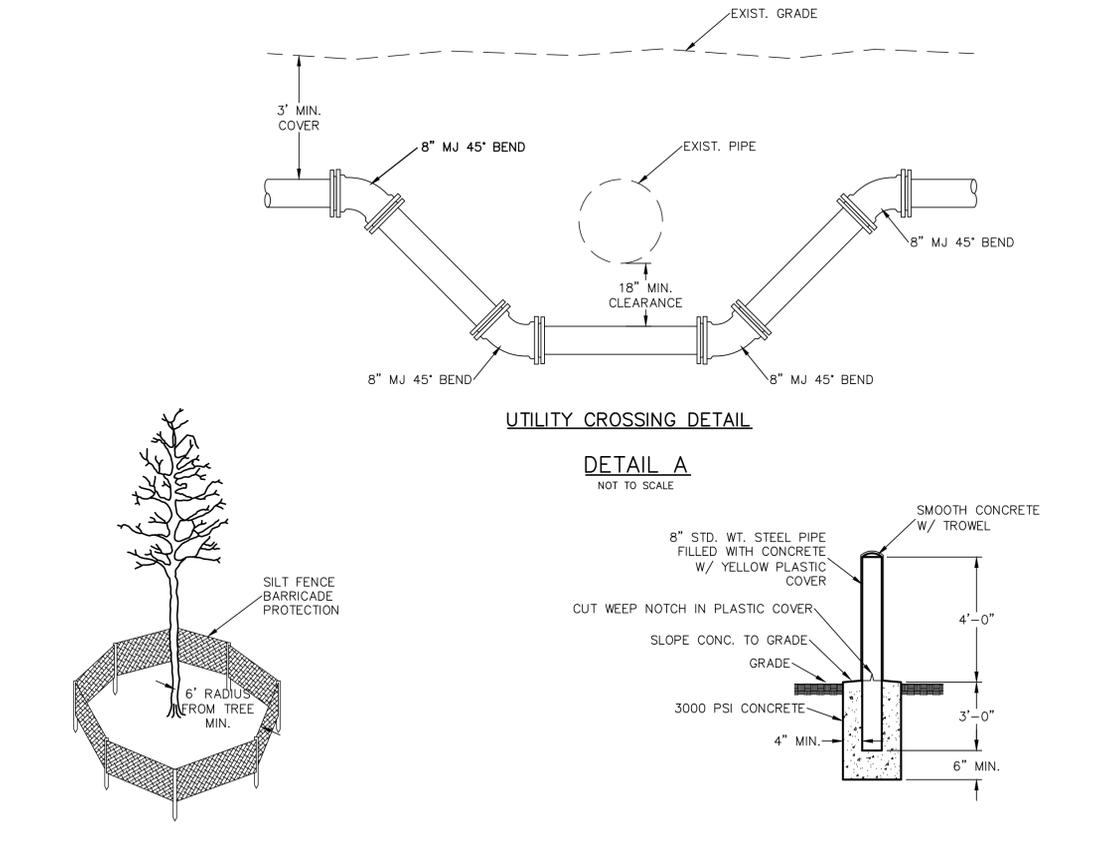
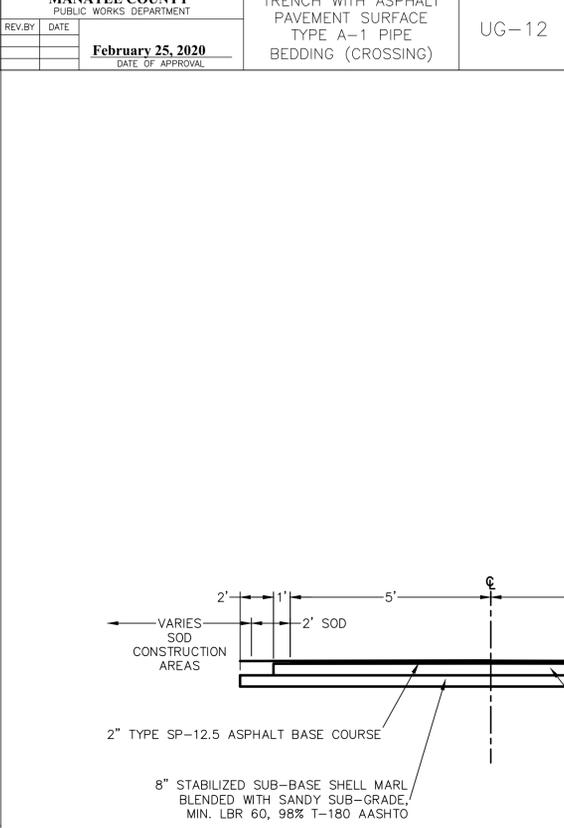
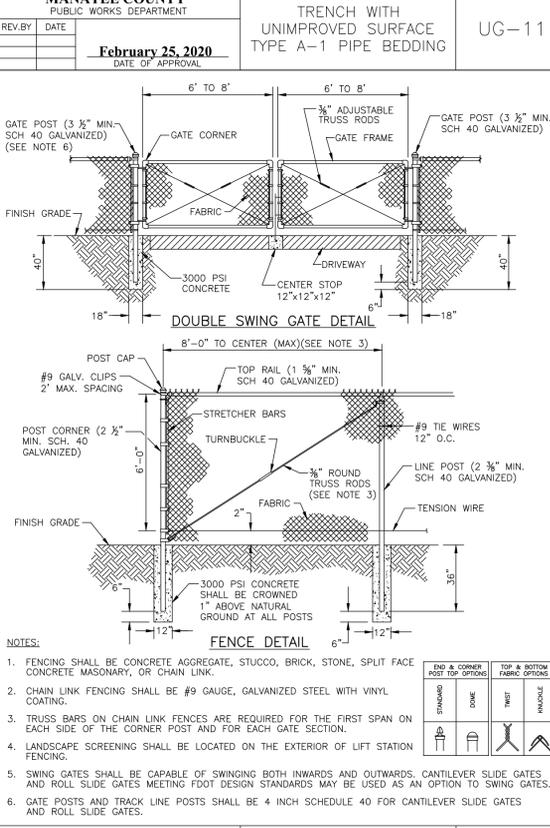
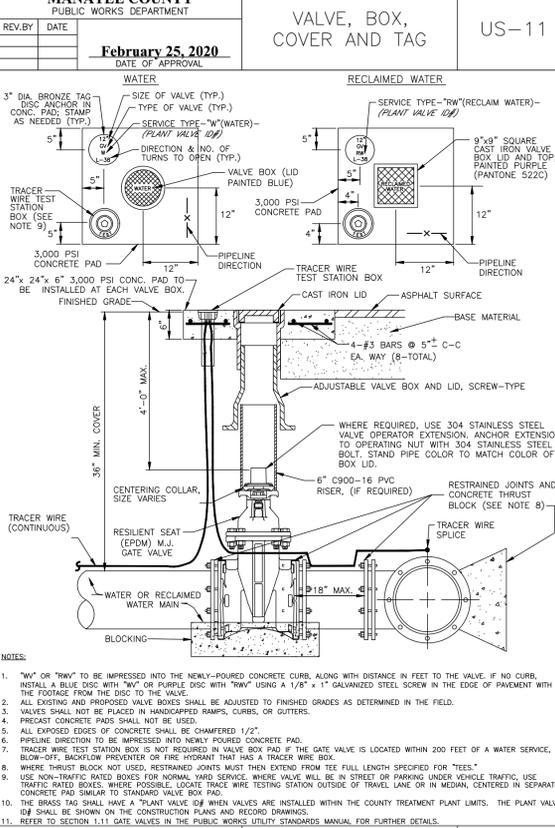
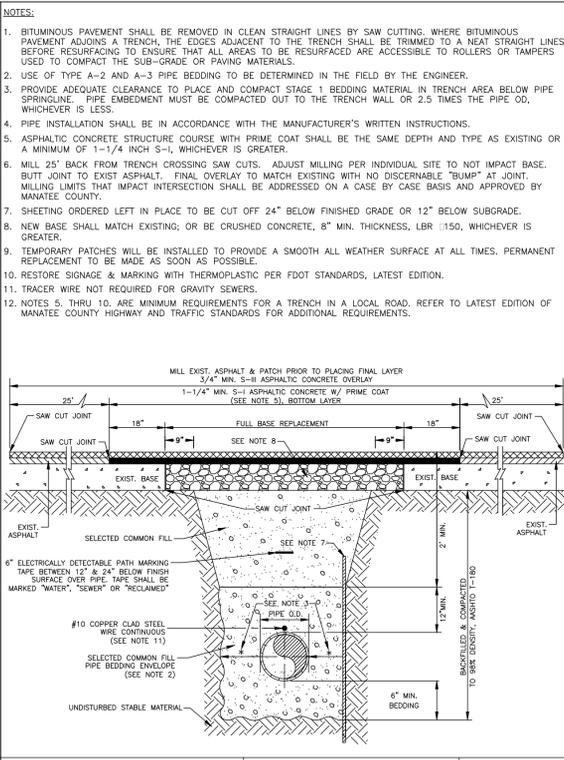
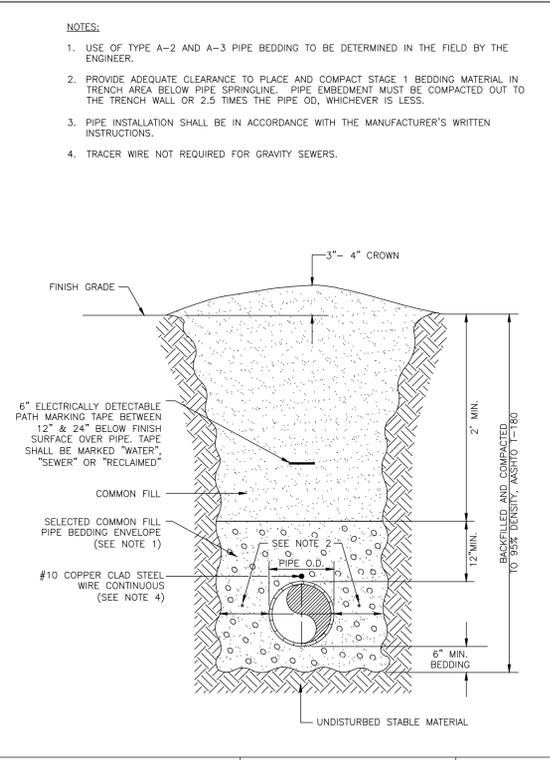
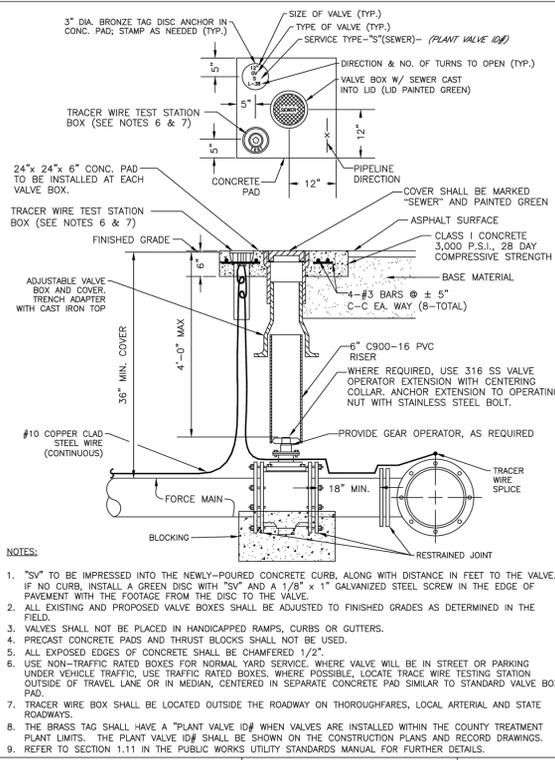
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County
FLORIDA

**SWWRF
EQUALIZATION SYSTEM REHABILITATION
AND COVER ADDITION**

**SUBNATANT PUMP STATION
DEMOLITION PLAN AND SECTION**

DATE: MAY 2023	SCALE: NA	DRAWING NUMBER: D-10
MCE PROJ. # 1024-0174	HORIZONTAL: NA	REVISION
DRAWN: DMP	VERTICAL: NA	
DESIGNED: VH	ISSUED FOR BID	
CHECKED: DCW		
PROJ. MGR: DCW		

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REV. NO.	DESCRIPTION	DATE

DAVID C. WEHNER, P.E.
No. 59541

SEAL

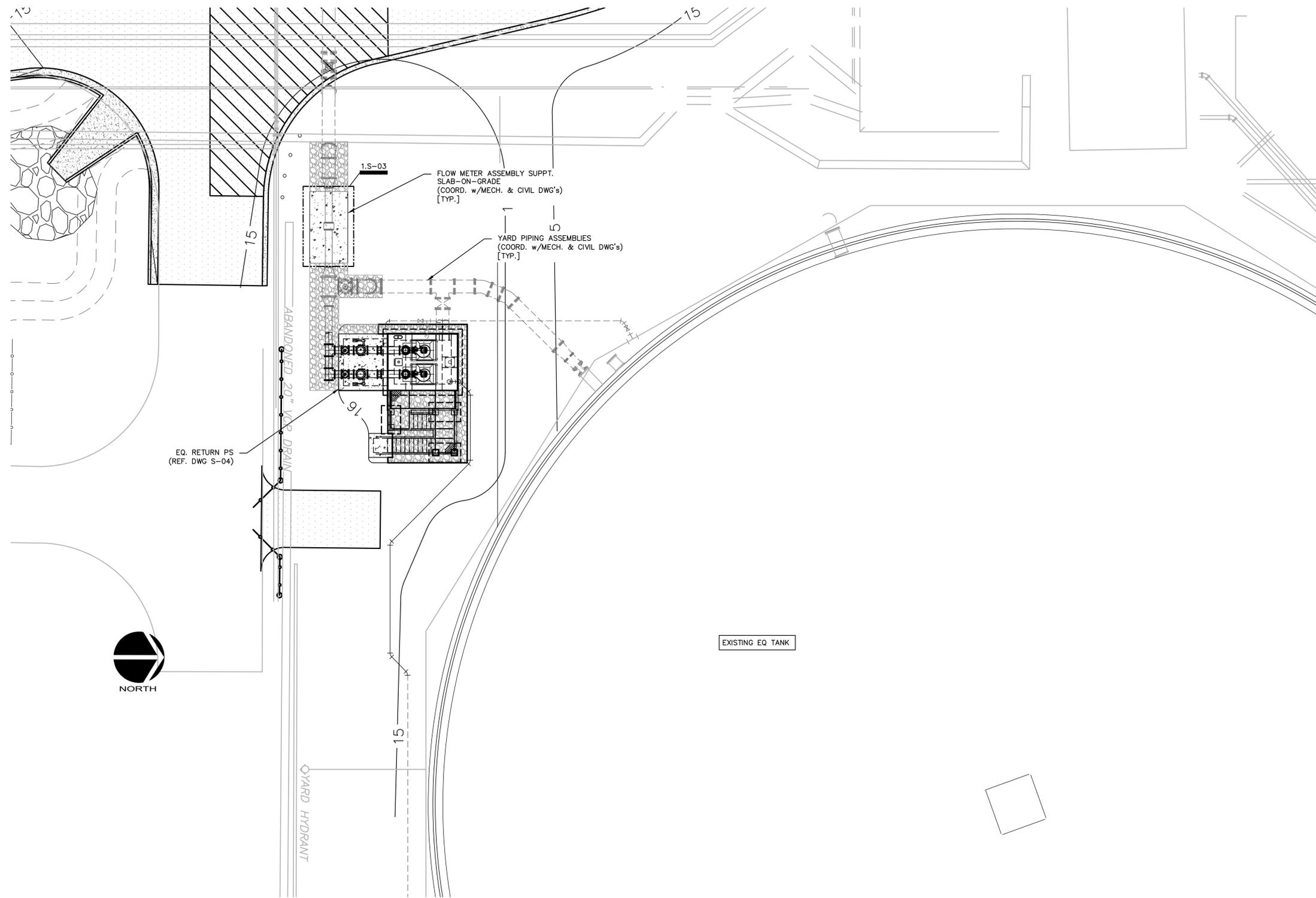
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FLORIDA

**SWRF
EQUALIZATION SYSTEM REHABILITATION
AND COVER ADDITION**

CIVIL DETAILS I

DATE: MAY 2023	SCALE:	DRAWING NUMBER:
MCE PROJ. # 1024-0174	HORIZONTAL: NA	C-03
DRAWN: DMP	VERTICAL: NA	
DESIGNED: VH		
CHECKED: DCW		
PROJ. MGR. DCW		
STATUS: ISSUED FOR BID		



1 - PLAN - PROPOSED EQ RETURN PS
SCALE: 3/32" = 1'-0"

NOTES:

1. THE EXISTING EQ TANK IS A PRESTRESSED CIRCULAR CONCRETE TANK MANUFACTURED BY THE CROM CORPORATION. REFERENCE SPECIFICATION 01030 SPECIAL PROJECT PROCEDURES FOR ADDITIONAL REQUIREMENTS.
2. REFERENCE DWG S-01 FOR ADDITIONAL GENERAL NOTES, MATERIAL SPECIFICATIONS & REQUIREMENTS, DESIGN LOAD INFORMATION, DESIGN CRITERIA AND LEGEND.

REV. NO.	DESCRIPTIONS	DATE

SEAL
A. EMMETT ANDERSON, P.E.
No. 34779

SEAL

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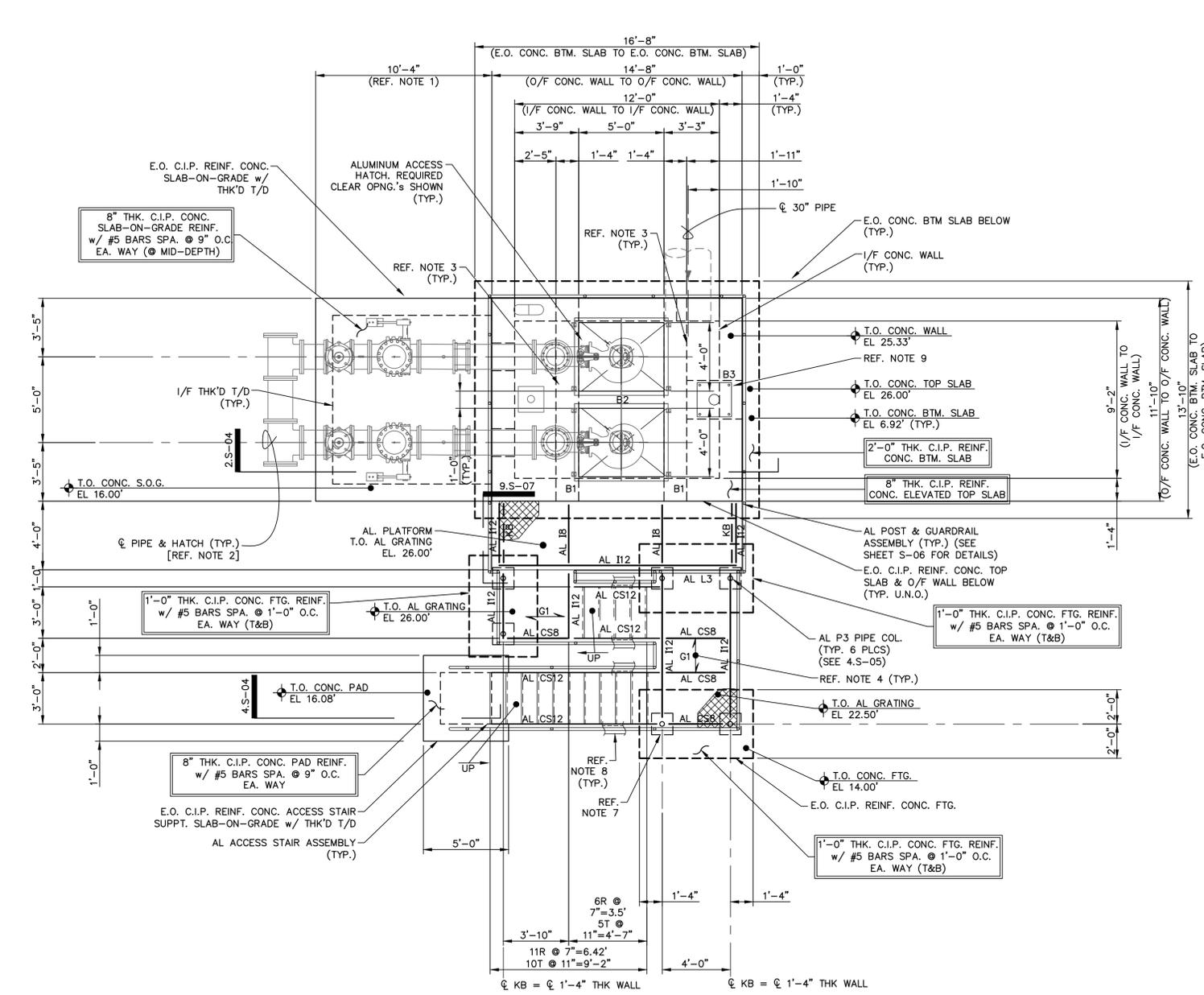


**SWRF
EQUALIZATION SYSTEM REHABILITATION
AND COVER ADDITION**

EQ RETURN PS PLAN

DATE: MAY 2023	SCALE	DRAWING NUMBER
MCE PROJ. # 1024-0174	HORIZONTAL: AS NOTED	S-02
DRAWN: DAR/WFB	VERTICAL: N/A	
DESIGNED: AEA	STATUS: ISSUED FOR BID	REVISION
CHECKED: AEA/WFB		
PROJ. MGR: DCW		

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1 - PLAN - EQ. RETURN PUMP STATION
SCALE: 1/4" = 1'-0"
NORTH

- PLAN NOTES:**
- DIMENSIONS SHOWN INDICATED O/F CONC. WALL TO E.O. SLAB-ON-GRADE.
 - PIPE ASSEMBLIES AT THE SLAB-ON-GRADE & PUMP ASSEMBLIES AT THE INTERIOR OF THE EQ RETURN PUMP STATION ARE SHOWN FOR GENERAL INFORMATION ONLY. CONTRACTOR IS RESPONSIBLE FOR REFERENCING & COORDINATING W/ MECH. DRAWINGS FOR ALL PIPING & PROCESS EQUIPMENT LAYOUTS FOR ASSEMBLIES THAT MAY NOT BE SHOWN FOR CLARITY & ANY ADDITIONAL INFORMATION AS REQUIRED.
 - E.O. C.I.P. REINF. CONC. BM.'S CONSTRUCTED MONOLITHIC W/ ELEVATED TOP SLAB.
 - "B1" = 16" WIDE x 18" DEEP C.I.P. REINF. CONC. BM..
 - "B2" = 12" WIDE x 18" DEEP C.I.P. REINF. CONC. BM..
 - "B3" = 27" WIDE x 18" DEEP C.I.P. REINF. CONC. BM. (REF. 3.S-04 FOR BM. LOCATION @ TOP SLAB).
 - REF. 5.S-05 FOR C.I.P. REINF. CONC. BM.'S REINF. REQ.'S.
 - SYMBOL ON PLAN INDICATES SPAN DIRECTION OF THE GRATING ASSEMBLIES MAIN BEARING BARS. IN GENERAL GRATING ASSEMBLIES ARE TO BE MANUFACTURED BY REPUTABLE VENDOR(S) EXPERIENCED IN MANUFACTURING THE ASSEMBLIES REQUIRED. GRATING ASSEMBLIES ARE TO INCLUDE RECTANGULAR MAIN BEARING BARS, RECTANGULAR CROSS BARS OR RODS, AND RECTANGULAR BANDING BARS ALONG PERIMETERS OF PANELS & AT OPENINGS. REFERENCE PROJECT SPECIFICATIONS, PLANS, SECTIONS & DETAILS FOR ADDITIONAL INFORMATION & REQUIREMENTS. NOTE THE FOLLOWING:
 - GRATING "G1" = 1 1/2" x 1 1/2" ALUMINUM IN ACCORDANCE W/ MFG.'S 19-4 "W" SERIES SPACE PROFILE.
 - GRATING PANELS SHALL BE ANCHORED TO ALUMINUM FRAMING TOP FLG'S W/ S.S. FASTENERS & TYPE AS RECOMMENDED BY THE MANUFACTURER.
 - COORDINATE W/ THE OWNER REGARDING REQUIREMENTS FOR SERRATED TOP SURFACE FINISH FOR SKID RESISTANCE.

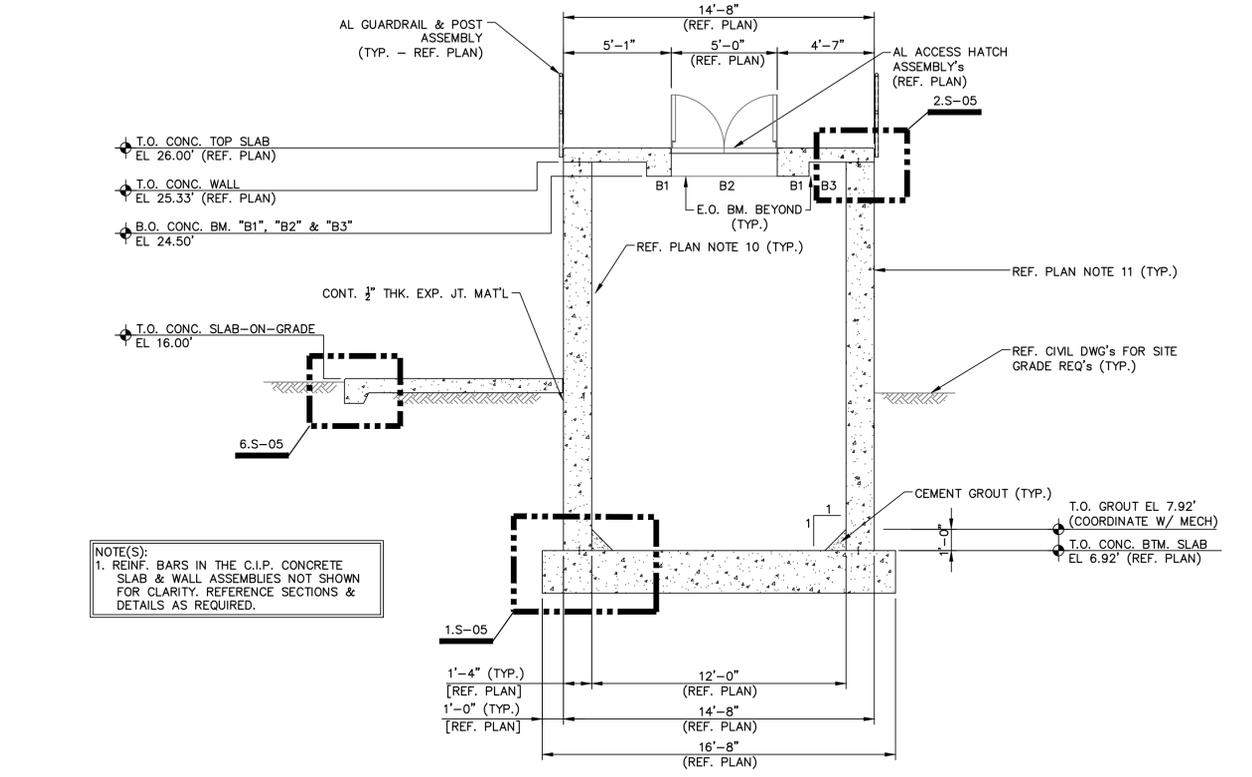
REV. NO.	DESCRIPTIONS	DATE

SEAL
A. EMMETT ANDERSON, P.E.
No. 34779

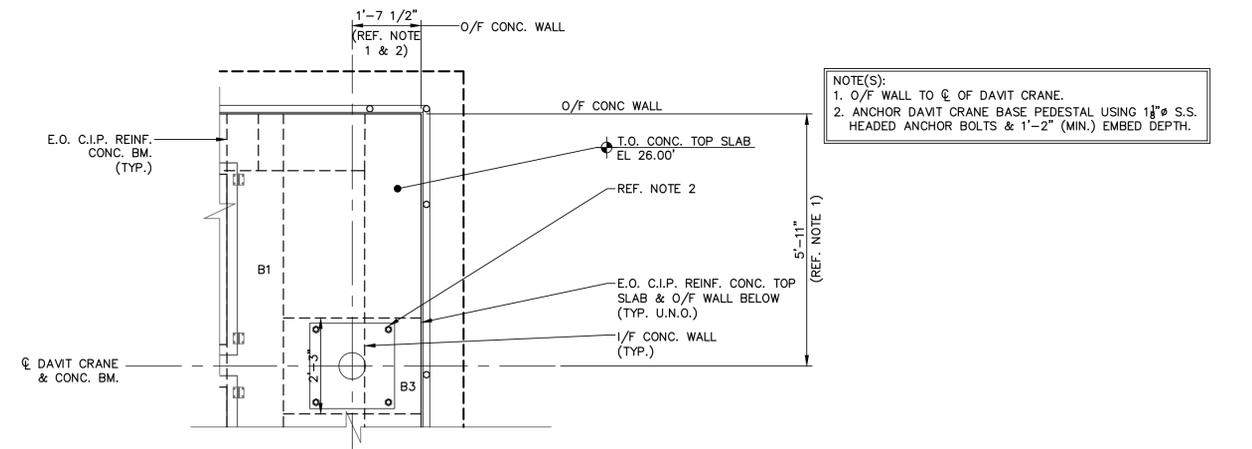
SEAL

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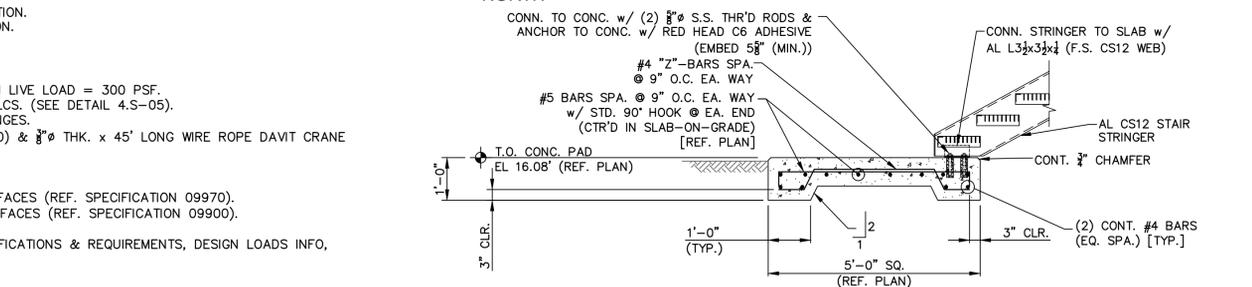
Manatee County
FLORIDA



2 - SECTION - THRU EQ. RETURN PUMP STATION
SCALE: 1/4" = 1'-0"



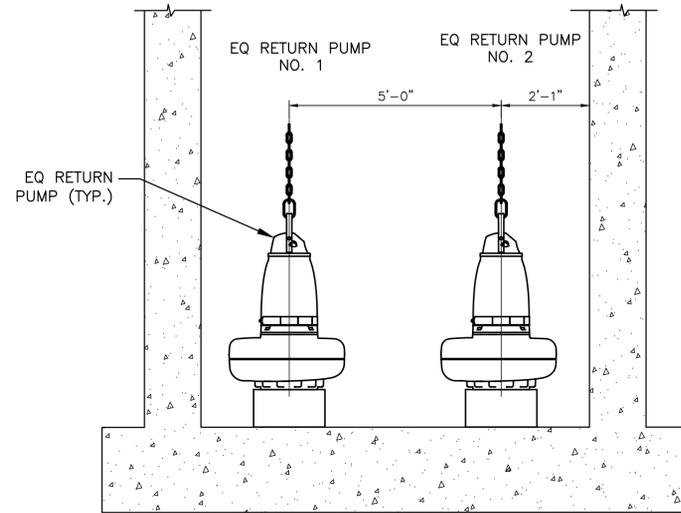
3 - PLAN - DAVIT CRANE / CONC. TOP SLAB CONN.
SCALE: 1/2" = 1'-0"
NORTH



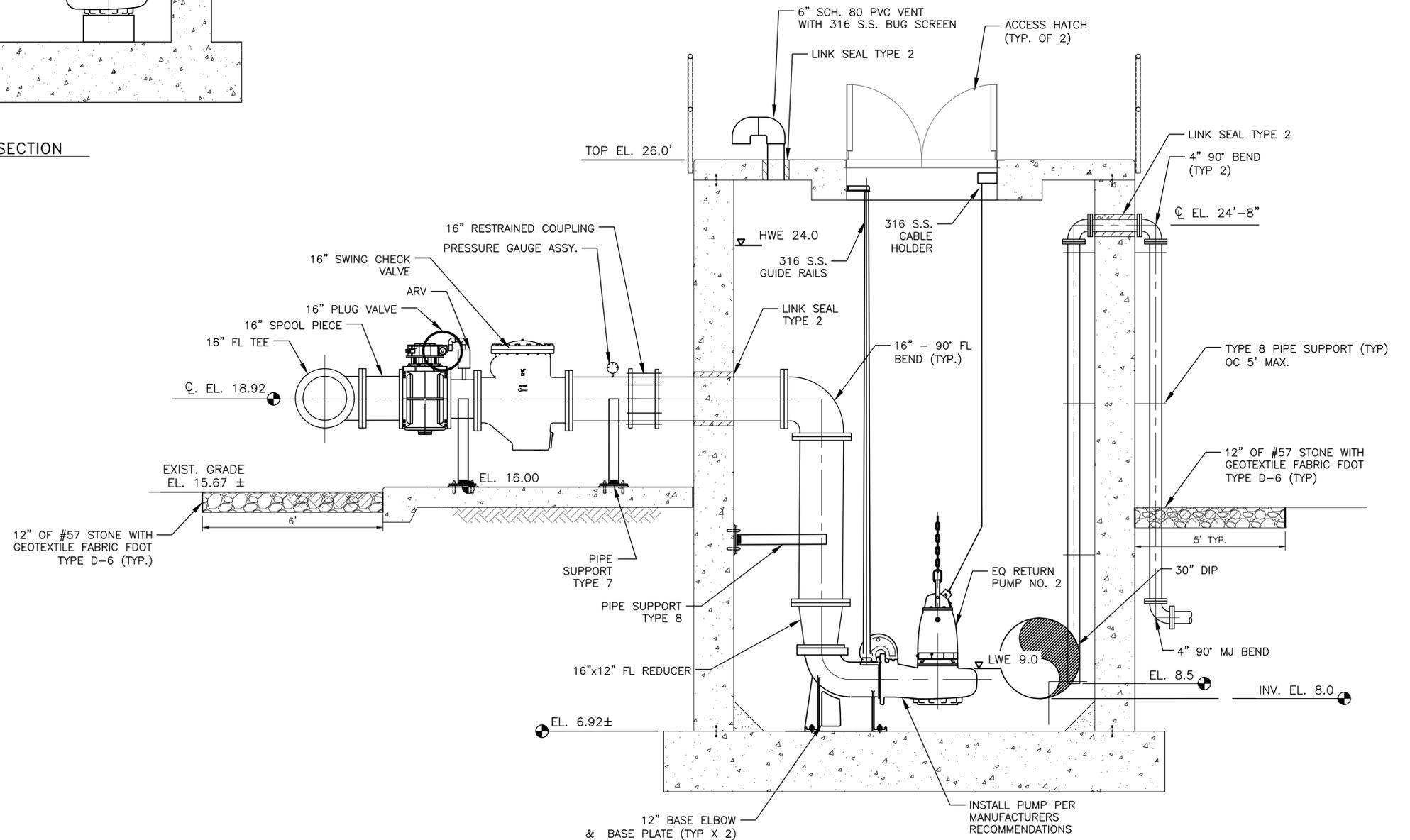
4 - SECTION - TYP. AL ACCESS STAIR SUPPT. SLAB-ON-GRADE / PAD
SCALE: 1/2" = 1'-0"

SWRF
EQUALIZATION SYSTEM REHABILITATION AND COVER ADDITION
EQ RETURN PS PLAN AND SECTIONS

DATE: MAY 2023	SCALE	DRAWING NUMBER
MCE PROJ. # 1024-0174	HORIZONTAL: AS NOTED	S-04
DRAWN: DAR/WFB	VERTICAL: N/A	REVISION
DESIGNED: AEA		
CHECKED: AEA/WFB		
PROJ. MGR: DCW		
STATUS: ISSUED FOR BID		



B SECTION
M-01



A SECTION
M-01

REV. NO.	DESCRIPTIONS	DATE

SEAL

DAVID C. WEHNER, P.E.
No. 59541

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**SWRF
EQUALIZATION SYSTEM REHABILITATION
AND COVER ADDITION**

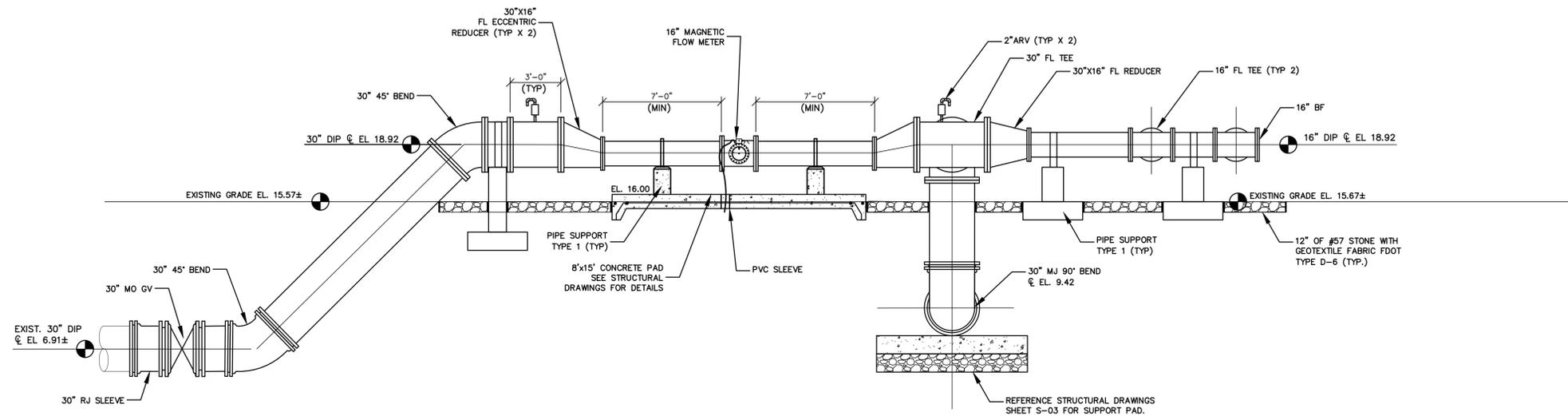
EQ RETURN PS SECTIONS

DATE:	MAY 2023
MCE PROJ. #	1024-0174
DRAWN:	DMP
DESIGNED:	VH
CHECKED:	DCW
PROJ. MGR.	DCW

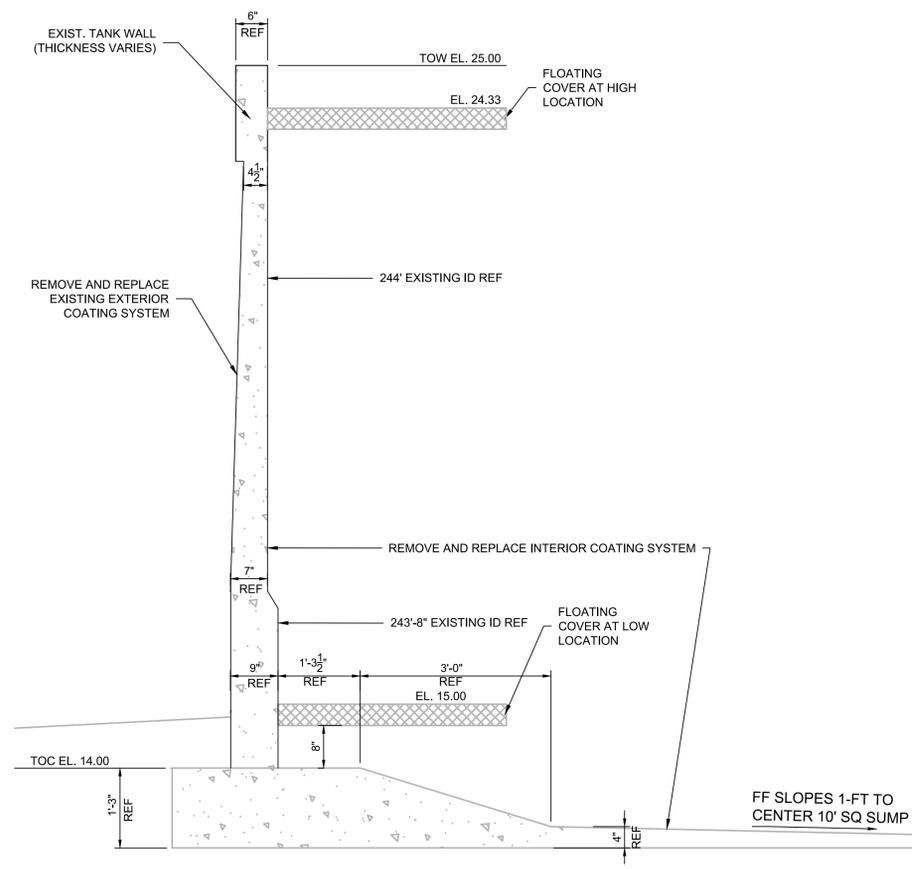
SCALE	HORIZONTAL:	NA
	VERTICAL:	NA

DRAWING NUMBER
M-02

STATUS: **ISSUED FOR BID**



A FLOWMETER SECTION
 C-02 SCALE: 1/4"=1'-0"



B EQ TANK SECTION
 C-02 SCALE: 3/4"=1'-0"

REV. NO.	DESCRIPTIONS / REVISIONS	DATE

SEAL
 DAVID C. WEHNER, P.E.
 No. 59541

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**SWWRF
 EQUALIZATION SYSTEM REHABILITATION
 AND COVER ADDITION**
**EQ TANK AND FLOWMETER
 SECTIONS**

DATE:	MAY 2023
MCE PROJ. #	1024-0174
DRAWN	DMP
DESIGNED	VH
CHECKED	DCW
PROJ. MGR.	DCW

SCALE	HORIZONTAL:	NA
	VERTICAL:	NA

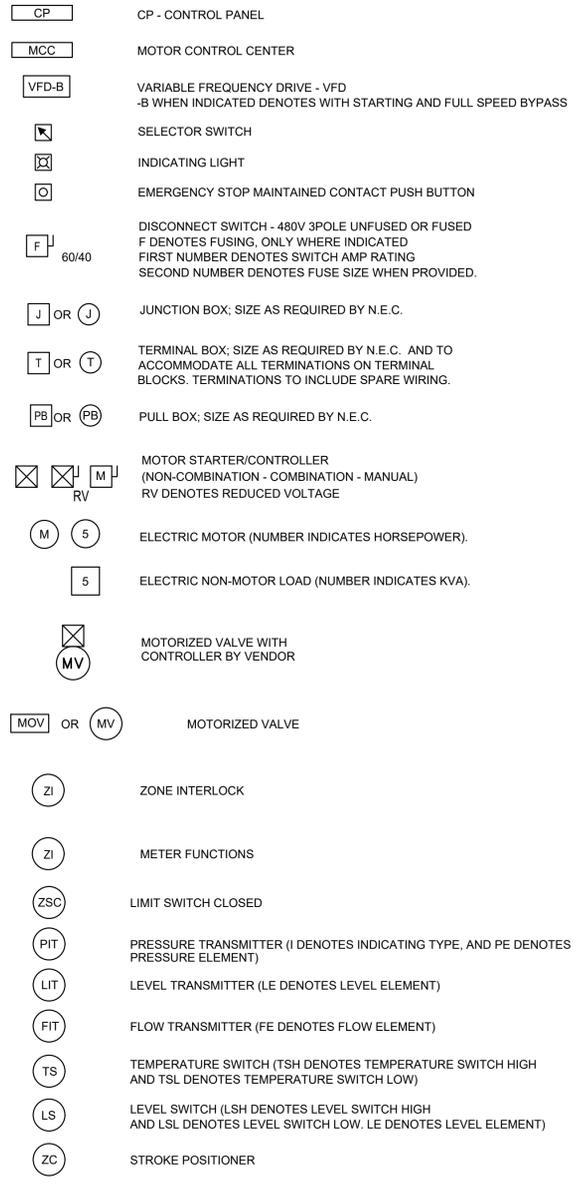
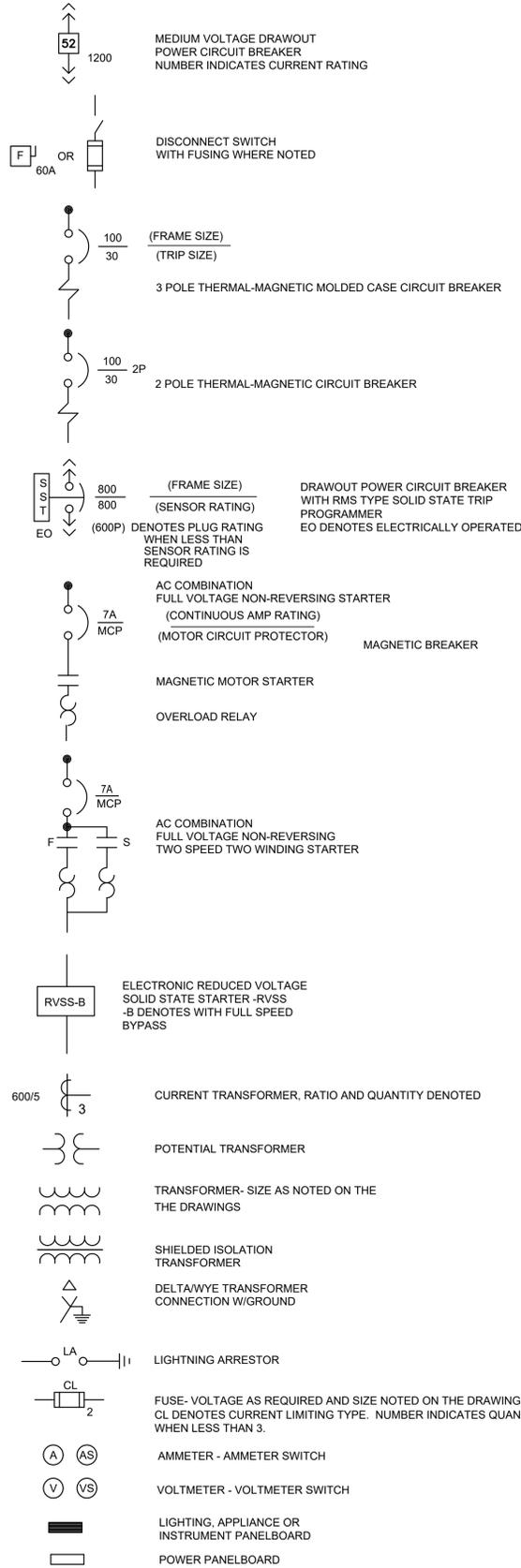
DRAWING NUMBER
M-04
 REVISION

STATUS: **ISSUED FOR BID**

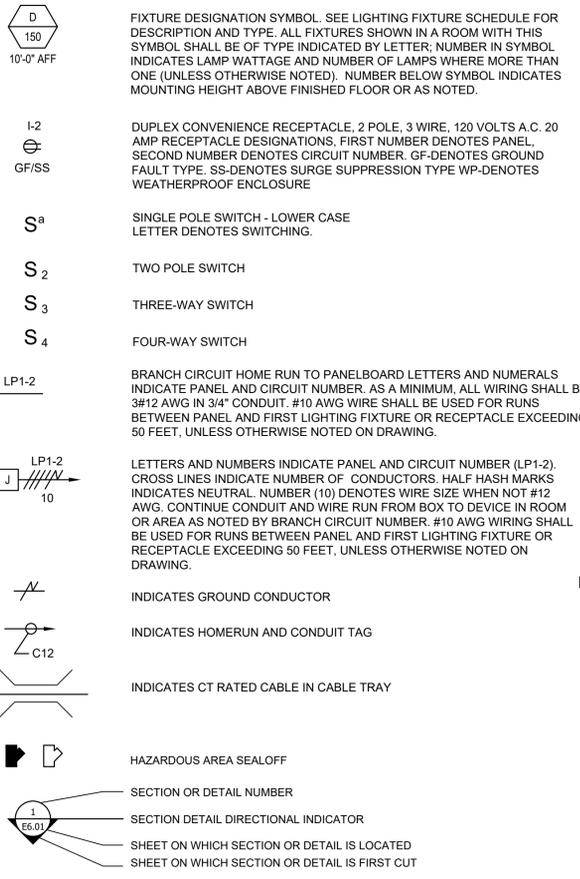
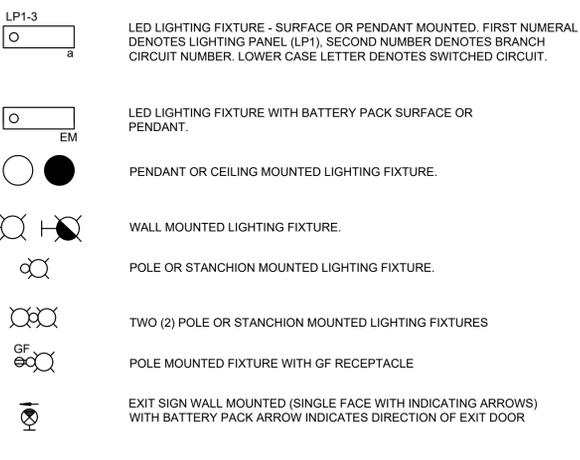
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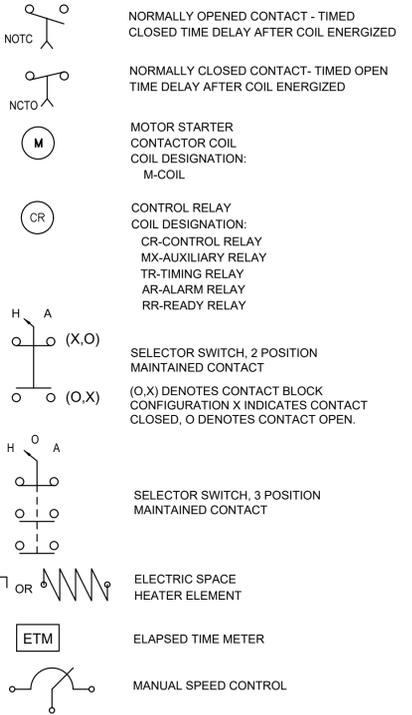
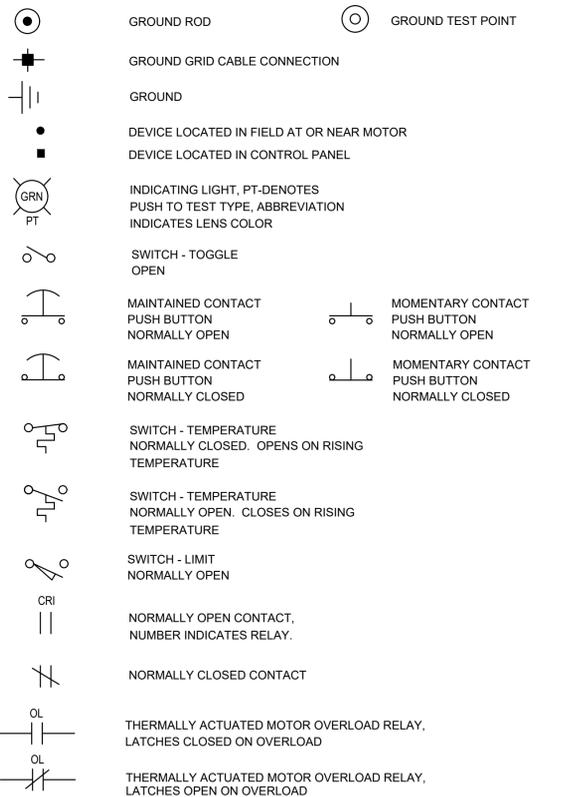
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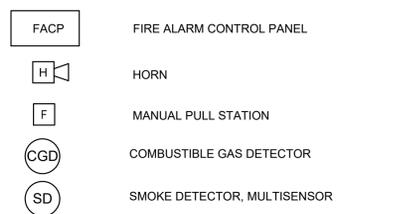
LIGHTING SYSTEM



CONTROL DIAGRAM



FIRE ALARM SYSTEM



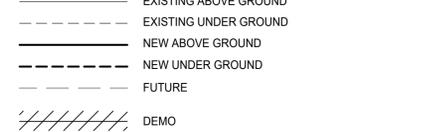
ABBREVIATIONS

A	AMPERES	LTG	LIGHTING
AC	ALTERNATING CURRENT	LV	LOW VOLTAGE
AL	ALUMINUM	mA	MILLIAMPERE
AMB	AMBER	M	MOTOR
BKR	BREAKER	MCC	MOTOR CONTROL CENTER
BLU	BLUE	MDP	MAIN DISTRIBUTION PANEL
C, GND	CONDUIT	MFR	MANUFACTURER
CA	CONDUIT, ANALOG	MIN	MINIMUM
CB	CIRCUIT BREAKER	MTG	MOUNTING
CBV	CABLE BY VENDOR, INSTALLED BY CONTRACTOR	MV	MEDIUM VOLTAGE
CLG	CEILING	N/A	NOT APPLICABLE
CTRL	CONTROL	NC	NORMALLY CLOSED
CP	CONTROL PANEL	NO	NORMALLY OPEN
CPB	CONTROL PULL BOX (-X DISCRETE, -XA ANALOG)	NEC	NATIONAL ELECTRIC CODE
CS	CONTROL STATION	NTS	NOT TO SCALE
DC	DIRECT CURRENT	OL	OVERLOAD RELAY
DWG	DRAWING	PB	PULL BOX
EC	EMPTY CONDUIT	PLC	PROGRAMMABLE LOGIC CONTROLLER
EHH	ELECTRICAL HANDHOLE	PMS	PAD MOUNTED SWITCH, 5KV TYP.
EL, ELEV	ELEVATION	PNL	PANEL
EMH	ELECTRICAL MANHOLE	PRI	PRIMARY
EMT	ELECTRICAL METALLIC TUBING	PS	PRESSURE SWITCH
EXIST	EXISTING	PT	POTENTIAL TRANSFORMER
FDR	FEEDER	PVC	POLYVINYL CHLORIDE
FIXT	FIXTURE	RECP	RECEPTACLE
FS	FLOW SWITCH	RGS	RIGID GALVANIZED STEEL
FT	FEET OR FOOT	REQD	REQUIRED
FUT	FUTURE	SEC	SECONDARY
FVNR	FULL VOLTAGE NON-REVERSING	SP	SPARE
GALV	GALVANIZED	SPD	SURGE PROTECTION DEVICE
GEC	GROUNDING ELECTRODE CONDUCTOR	SS, SST	STAINLESS STEEL
G, GND	GROUND	SWBD	SWITCHBOARD
GF, GFI	GROUND FAULT INTERRUPTER	SWGR	SWITCHGEAR
GFCI	GROUND FAULT CIRCUIT INTERRUPTER	TEMP	TEMPERATURE
GRN	GREEN	TEW	THERMOCOUPLE EXTENSION WIRE
HH	HAND HOLE	TS	TEMPERATURE SWITCH
HOA	HAND/OFF/AUTO	TSP	TWISTED SHIELDED PAIR
HOR	HAND/OFF/REMOTE	TYP	TYPICAL
HTR	HEATER	UG	UNDERGROUND
IN, "	INCHES	UCN	UNLESS OTHERWISE NOTED
JB	JUNCTION BOX	UPS	UNINTERRUPTIBLE POWER SUPPLY
KAIC	THOUSAND AMPERES INTERRUPTING CURRENT	V	VOLTS
KCMIL	THOUSAND CIRCULAR MILS	VAC	VOLTS ALTERNATING CURRENT
KVA	THOUSAND VOLT AMPERES	VFD	VARIABLE FREQUENCY DRIVE
KW	KILOWATTS	WHI	WHITE
LA	LIGHTNING ARRESTOR	WP	WEATHERPROOF
LCP	LOCAL CONTROL PANEL	XFMR	TRANSFORMER
LS	LEVEL SWITCH	XP	EXPLOSION PROOF

GENERAL NOTES:

- THE SYMBOLS AND ABBREVIATIONS LIST ON THIS SHEET IS A COMPREHENSIVE STANDARD GUIDE INTENDED FOR GENERAL USE ON ALL PROJECTS. THEREFORE NOT ALL THE SYMBOLS AND ABBREVIATIONS CONTAINED IN THIS LIST ARE NECESSARILY USED ON THIS PARTICULAR PROJECT AND SHOULD BE USED FOR CLARIFICATION ONLY.
- THE CONTRACTOR SHALL READ AND UNDERSTAND THE ENTIRE SET OF CONSTRUCTION DOCUMENTS. THIS INCLUDES BUT IS NOT LIMITED TO THE PLANS AND SPECIFICATIONS FOR ALL DISCIPLINES. THIS WILL ENSURE THAT HE/SHE UNDERSTANDS THE FULL SCOPE OF WORK AND IS ABLE TO CONVEY THE REQUIRED MATERIALS AND METHODS OF INSTALLATION TO HIS ESTIMATORS, SUPPLIERS AND INSTALLERS.
- THE CONTRACTOR SHALL VISIT THE SITE AND FAMILIARIZE HIMSELF WITH THE EXISTING CONDITIONS.
- PROVIDE MEANS TO FURNISH AND INSTALL.
- COORDINATE ANY AND ALL WORK WITH OTHER TRADES PRIOR TO INSTALLATION IN ORDER TO AVOID CONFLICTS DURING CONSTRUCTION.
- THESE DRAWINGS ARE DIAGRAMMATIC IN NATURE. DO NOT SCALE FROM THESE DRAWINGS.
- WHERE JOB CONDITIONS REQUIRE CHANGES FROM THE CONTRACT DOCUMENTS THAT DO NOT CHANGE THE SCOPE OF INSTALLATION OR NATURE OF THE WORK REQUIRED, THE CONTRACTOR SHALL MAKE SUCH CHANGES WITHOUT ANY ADDITIONAL COST TO THE OWNER. NO OTHER CHANGES MAY BE MADE WITHOUT WRITTEN CONSENT FROM THE ENGINEER AND OWNER.
- ALL WORK SHALL BE DONE IN ACCORDANCE WITH THE REQUIREMENTS OF THE ENFORCED EDITION OF THE NATIONAL ELECTRIC CODE, NATIONAL ELECTRIC SAFETY CODE, LIFE SAFETY CODE, FLORIDA BUILDING CODE AND ALL LOCAL AND STATE CODES AND REGULATIONS. THE CONTRACTOR SHALL OBTAIN AND PAY FOR ALL PERMITS AND INSPECTIONS REQUIRED BY THE AUTHORITY HAVING JURISDICTION.
- MOUNTING HEIGHTS INDICATED ARE TO THE CENTER OF THE DEVICE U.O.N.
- ALL CIRCUIT BREAKERS SHALL BE 100% RATED.
- ALL CABLE AND POWER CIRCUIT TERMINATIONS SHALL BE 75°C RATED.
- IT IS NOTED THAT THE SOUTH BLOWER BUILDING'S MCC ROOM EXISTING DROP CEILING IS NOT IN GOOD CONDITION AND WILL REQUIRE REPLACEMENT. ELECTRICAL CONTRACTOR SHALL COORDINATE WITH THE GENERAL CONTRACTOR FOR THE REMOVAL AND IN-KIND REPLACEMENT OF THE EXISTING DROP CEILING.

LINE WEIGHT DESIGNATIONS



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LAUREL L. SMITH, PE
No. 91041

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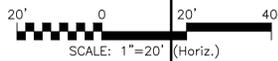
**SWRF
EQUALIZATION SYSTEM REHABILITATION
AND COVER ADDITION**

**ELECTRICAL NOTES,
ABBREVIATIONS AND LEGEND**

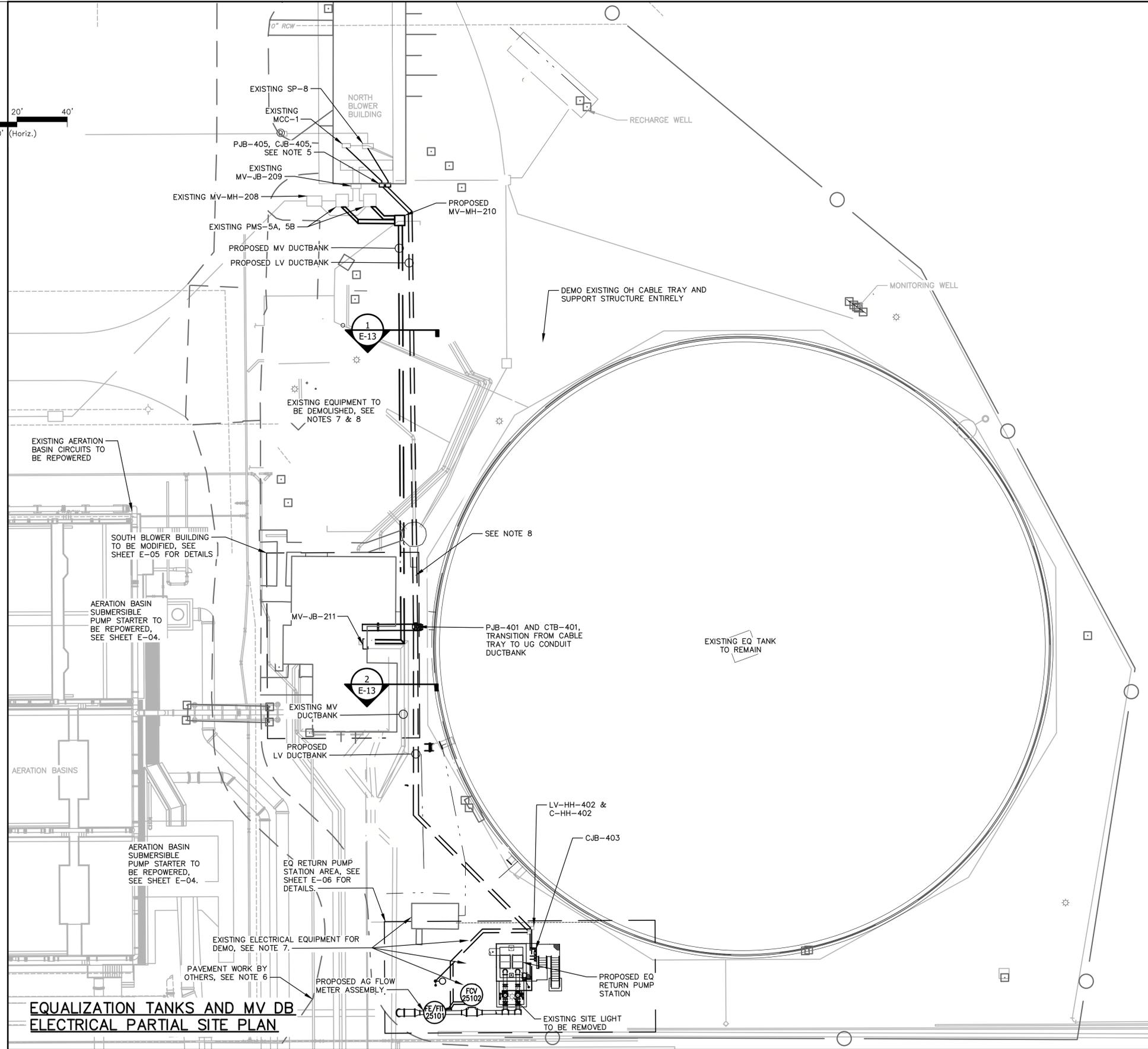
DATE: MAY 2023	SCALE:	DRAWING NUMBER:
MCE PROJ. # 1024-0174	HORIZONTAL: NA	E-01
DRAWN: AAL	VERTICAL: NA	
DESIGNED: LLS		
CHECKED: AAH		
PROJ. MGR: DCW		
STATUS: ISSUED FOR BID		REVISION:



NORTH

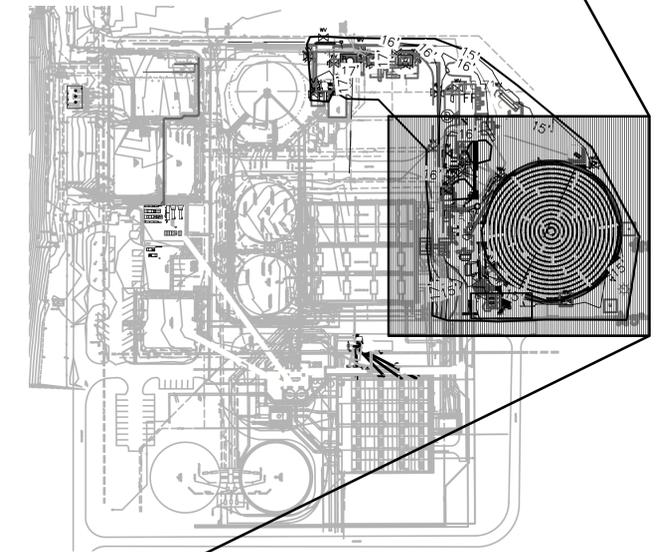


SCALE: 1"=20' (Horiz.)



NOTES:

1. DEMOLITION OF OVERHEAD CABLE TRAY BETWEEN NORTH AND SOUTH BLOWER BUILDINGS SHALL NOT COMMENCE UNTIL ALL EXISTING POWER AND CONTROL CIRCUITS UTILIZING TRAY HAVE BEEN REROUTED.
2. COORDINATE WITH COUNTY 2 WEEKS PRIOR TO ALL ELECTRICAL SHUTDOWNS. PROVIDE TEMPORARY POWER TO ANY LOADS IDENTIFIED BY COUNTY AS UNINTERRUPTIBLE DURING SHUTDOWN.
3. SEE SHEET E-14 FOR GROUNDING DETAILS.
4. SEE SHEET E-08 FOR LIGHT FIXTURE SCHEDULE.
5. WALL MOUNT PJB-405 AND CJB-405 AT CEILING LEVEL ON OUTSIDE WALL OF NORTH BLOWER BUILDING. PJB-405 SHALL BE 18"X18"X12 MINIMUM SIZE. CJB-405 SHALL BE 12"X12"X6" MINIMUM SIZE.
6. IDENTIFY AND PROTECT EXISTING CONDUIT DUCTBANKS AS NEEDED FOR DRIVEWAY MODIFICATIONS BY OTHERS.
7. CONTRACTOR SHALL DEMO ABANDONED ELECTRICAL EQUIPMENT ON OR ADJACENT TO EXISTING PROCESS EQUIPMENT ALSO PLANNED FOR REMOVAL. SEE SHEETS D-01 THRU D-11 FOR DEMOLITION WORK IN PROCESS AREAS.
8. DEMO ABANDONED CONCRETE ENCASED CONDUIT DUCTBANKS WHERE REQUIRED FOR NEW CONSTRUCTION.



KEY MAP

EQUALIZATION TANKS AND MV DB ELECTRICAL PARTIAL SITE PLAN

REV. NO.	DESCRIPTIONS / REVISIONS	DATE

SEAL

LAUREL L. SMITH, PE
No. 91041

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SWRF
EQUALIZATION SYSTEM REHABILITATION
AND COVER ADDITION

ELECTRICAL PARTIAL
SITE PLAN

DATE: MAY 2023	SCALE	DRAWING NUMBER
MCE PROJ. # 1024-0174	HORIZONTAL: 1" = 10'-0"	E-02
DRAWN: AAL	VERTICAL: NA	
DESIGNED: LLS		
CHECKED: AAH		
PROJ. MGR: DCW		
STATUS: ISSUED FOR BID		REVISION

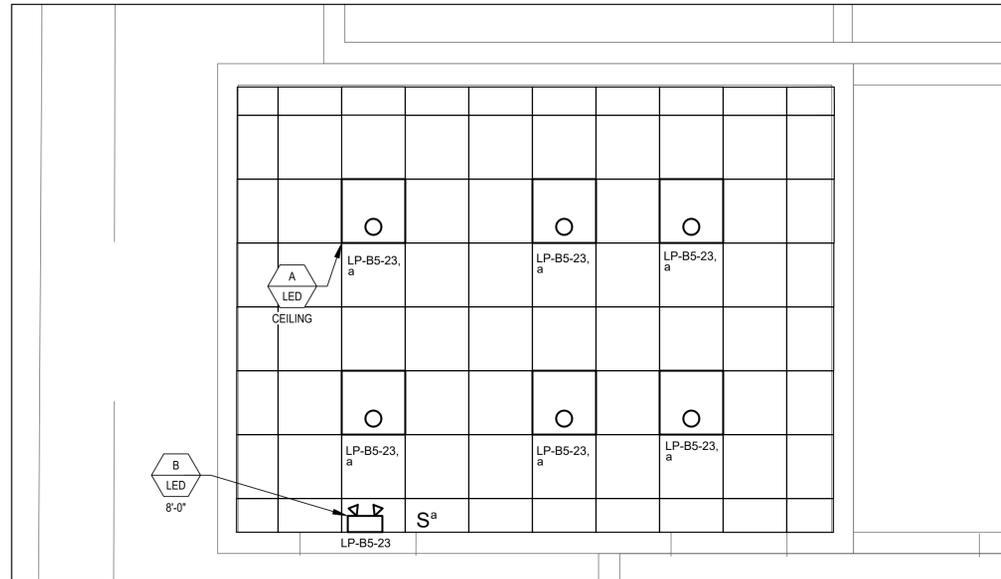
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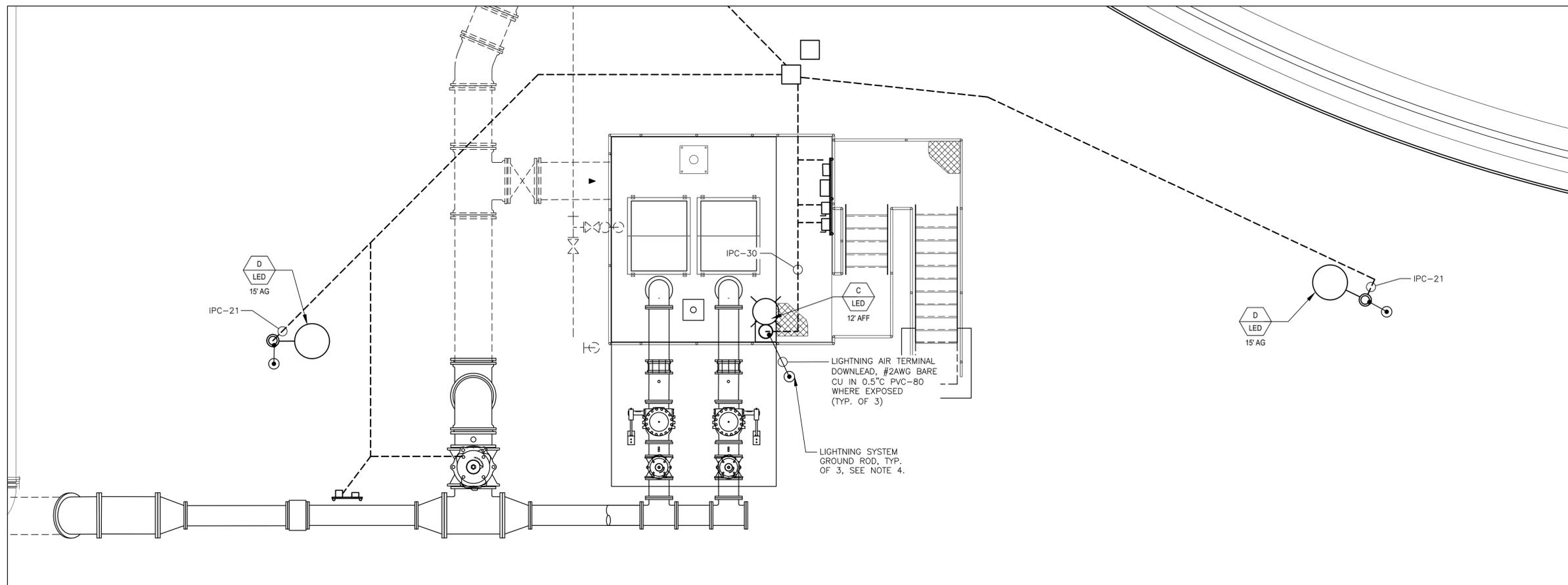
NOTES:

1. NEW CABLE TRAY SHALL BE ROUTED ABOVE NEW DROP CEILING.
2. EXISTING DROP CEILING AND LIGHT FIXTURES TO BE REMOVED AND REPLACED PER FIXTURE SCHEDULE.
3. NEW DROP CEILING T-BAR SYSTEM TO MATCH EXISTING OR BETTER. NEW DROP CEILING HEIGHT SHALL BE A MINIMUM OF 8.25' AFF. COORDINATE WITH OTHER DISCIPLINES AS REQUIRED.
4. PROVIDE LIGHTNING PROTECTION FOR EQ RETURN PUMP STATION IN ACCORDANCE WITH LPI STANDARDS. SEE DETAIL SHEET E-15 AND PROJECT SPECIFICATIONS.



LIGHTING SCHEDULE				
LETTER	DESCRIPTION	LAMPS	REMARKS	SYMBOL
A	2'X2' RECESSED HIGH PERFORMANCE TRANSMITTANCE DIFFUSER, ONE PIECE ROLLED CONSTRUCTION, CONCAVE RIBBED REFRACTOR, HINGED DOOR OPTICAL ASSEMBLY FOR INSTALLATION IN T-BAR SYSTEM. SUITABLE FOR DAMP LOCATIONS. POWDER-PAINT WHITE FINISH.	LED L90/60,000HRS, 4000K, 120V, 18W INPUT, 2000 LUMENS	LAMAR LIGHTING SERIES R1L, LITHONIA LIGHTING SERIES ZALL2, OR APPROVED ALTERNATE	
B	EMERGENCY EXIT/EGRESS COMBO, INJECTION-MOLDED, ENGINEERING-GRADE, 5VA FLAME RETARDANT, HIGH-IMPACT, THERMOPLASTIC IN WHITE FINISH. PUSH TO TEST, 90 MIN BATTERY BACKUP.	WHITE LED, RED LETTERS 1.6W (MIN) 120V	SEELEDXCU2 BY EMERGENSEE, ECR LED M6 BY LITHONIA OR APPROVED ALTERNATE	
C	LED OUTDOOR POLE MOUNTED AREA LIGHT. EPA 1.23qft. DK BRONZE FINISH. TYPE 3 DISTRIBUTION. PROVIDE POLE AND BASE PER DETAIL SHEET E-15. WIND RATING 158MPH IN ACCORDANCE WITH SHEET S-01.	30 LED L90/80,000HRS, 69WATTS, 700mA, 4000K	LITHONIA LIGHTING MOD. KAD LED OR APPROVED EQUAL.	
D	LED OUTDOOR POLE MOUNTED AREA LIGHT. EPA 1.23qft. DK BRONZE FINISH. TYPE 4 DISTRIBUTION. PROVIDE POLE AND BASE PER DETAIL SHEET E-15. WIND RATING 158MPH IN ACCORDANCE WITH SHEET S-01.	60 LED L90/80,000HRS, 137WATTS, 700mA, 4000K	LITHONIA LIGHTING MOD. KAD LED OR APPROVED EQUAL.	

SOUTH BLOWER BUILDING REFLECTIVE CEILING PLAN
SCALE: 3/8" = 1'-0"



EQ RETURN PUMP STATION PROPOSED LIGHTING PLAN
SCALE: 1/4" = 1'-0"

REVNO.	DESCRIPTIONS	DATE

SEAL

LAUREL L. SMITH, PE
No. 91041

SEAL

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Manatee
County
FLORIDA

**SWRF
EQUALIZATION SYSTEM REHABILITATION
AND COVER ADDITION**

LIGHTING PLAN

DATE: MAY 2023
MCE PROJ. # 1024-0174
DRAWN: JG
DESIGNED: LLS
CHECKED: AAH
PROJ. MGR: DCW

SCALE: HORIZONTAL: AS SHOWN, VERTICAL: NA

DRAWING NUMBER: E-07

STATUS: ISSUED FOR BID

NOTICE: THE OFFICIAL RECORD OF THIS SHEET IS THE ELECTRONIC FILE DIGITALLY SIGNED AND SEALED UNDER RULE 61G15-23.004, F.A.C.

CKT NO.	TRIP AMPS	DESCRIPTION OF LOAD	LOAD KVA	AMPS	POLES	KVA PER PHASE			POLES	AMPS	LOAD KVA	DESCRIPTION OF LOAD	TRIP AMPS	CKT NO.
						A	B	C						
1	60	XFMR/PANELBOARD LP-B5	30	36.1	3	10.0	10.0	10.0	1			SPACE		2
												SPACE		4
												SPACE		6
7	30	827-AC-1	19.2	23.1	3	6.7	6.7	6.7	3	1.2	1	510-FCV-030-01	15	8
13	30	827-AC-2	19.2	23.1	3	6.7	6.7	6.7	3	1.2	1	510-FCV-030-02	15	14
19	30	FCV-25102	1	1.2	3	0.7	0.7	0.7	3	1.2	1	510-FCV-030-03	15	20
25	30	SPARE			3	0.3	0.3	0.3	3	1.2	1	510-FCV-30-04	15	26
31	15	SPARE			3	0.0	0.0	0.0	1			SPACE		32
												SPACE		34
												SPACE		36
37	20	SURGE PROTECTION DEVICE			3	0.0	0.0	0.0	1			SPACE		38
												SPACE		40
												SPACE		42
PANEL DP-B5 LOCATION MCC-B5/B6 ROOM BUILDING SOUTH BLOWER BUILDING NOTES: EXISTING PANEL DUAL FED FROM MCC-B5 & MCC-B6, KIRK KEY INTERLOCKED BKRS						TOTAL KVA 24.5 24.5 24.5 GRAND CONNECTED TOTAL KVA 73.4			SERVICE CHARACTERISTICS VOLTS: 480Y/277 150 A MLO PHASE: 3 100 A MCB WIRE: 4 42k MIN AIC SYMM, FULLY RATED ASSEMBLY					

NOTES:

- NEW BREAKERS IN EXISTING PANELS SHALL MATCH KAIC RATING OF EXISTING PANEL BREAKERS.
- PROVIDE MULTI-CONDUCTOR TRAY CABLE RATED SUNLIGHT AND MOISTURE RESISTANT FOR ALL CIRCUITS TO BE PLACED DIRECTLY IN CABLE TRAY. CONDUIT SIZES SHOWN ARE FOR USE OUTSIDE OF CABLE TRAY OR INSIDE TRAY WITH NON-TC RATED CABLE.
- TYPICAL PANEL CIRCUIT WIRING SHALL BE 2#12, 1#12G, 0.75"C. EXCEPTIONS ARE LISTED BELOW:
 - DP-B5 CIRCUIT 19: 3#10, 1#10G, 0.75"C
 - LP-B5 CIRCUIT 17: 2#6, 1#10G, 0.75"C
 - LP-B5 CIRCUIT 20: 3#12, 1#12G, 0.75"C
 - LP4: ALL CIRCUITS OVER 200' TO FIRST DEVICE SHALL UTILIZE MIN. #8AWG. CIRCUITS 100' - 200' TO FIRST DEVICE SHALL UTILIZE #10AWG.

CKT NO.	TRIP AMPS	DESCRIPTION OF LOAD	LOAD KVA	AMPS	POLES	KVA PER PHASE			POLES	AMPS	LOAD KVA	DESCRIPTION OF LOAD	TRIP AMPS	CKT NO.
						A	B	C						
1	15	510-FIT-030-01	0.3	2.5	1	0.6			1	2.5	0.3	AIT-001-01, AIT-002-01	15	2
3	15	510-FIT-030-02	0.3	2.5	1		0.6		1	2.5	0.3	AIT-003-01, AIT-004-01	15	4
5	15	510-FIT-030-03	0.3	2.5	1			1.3	1	8.3	1	SP-25	20	6
7	15	510-FIT-030-04	0.3	2.5	1	0.6			1	2.5	0.3	FIT-25101	15	8
9	20	510-MCP-025-01	0.3	2.5	1		0.3		1			SPARE	20	10
11	20	RECEPT. AT IP-85	0.3	2.5	1			0.5	1	1.5	0.18	CONVENIENCE OUTLET	20	12
13	20	EXISTING BUILDING FAN	1	4.8	2	1.0			2	4.8	1	MCC-4 ROOM AHU-3	15	14
17	60	EXISTING EXHAUST FAN	5	24.0	2		1.0	2.5	1	0.0	0	SPACE		18
						3.6			3	9.0	3.25	MCC-4 ROOM CU-3	20	20
21	15	EX. EXHAUST FAN CONTROL POWER	0.2	1.7	1		1.3							
23	20	LIGHTS MCC ROOM & SUBSTATION ROOM	0.5	4.2	1			1.6						
25	20	LIGHTS BLOWER ROOM	0.5	4.2	1	1.5			1	8.3	1	SP-3	20	26
27	20	SPARE			1		0.0		1			SPARE	15	28
29	20	SPARE			1		0.0		1			SPARE	15	30
31		SPACE			1	0.0			1			SPACE		32
33		SPACE			1		0.0		1			SPACE		34
35		SPACE			1			0.0	1			SPACE		36
37	30	SURGE PROTECTION DEVICE			3	0.0			1			SPACE		38
									1			SPACE		40
									1			SPACE		42
PANEL LP-B5 LOCATION MCC-B5/B6 ROOM BUILDING SOUTH BLOWER BUILDING NOTES: EXISTING PANEL FEED FROM DP-B5 VIA EXISTING 30KVA TRANSFORMER						TOTAL KVA 7.3 3.2 5.9 GRAND CONNECTED TOTAL KVA 16.3			SERVICE CHARACTERISTICS VOLTS: 208Y/120 100 A MLO PHASE: 3 100 A MCB WIRE: 4 22k MIN AIC SYMM, FULLY RATED ASSEMBLY					

CKT NO.	TRIP AMPS	DESCRIPTION OF LOAD	LOAD KVA	AMPS	POLES	KVA PER PHASE			POLES	AMPS	LOAD KVA	DESCRIPTION OF LOAD	TRIP AMPS	CKT NO.
						A	B	C						
1	*20	LIGHTS -AERATION BASIN	0.45	3.7	1	0.9			1	3.7	0.45	LIGHTS -AERATION BASIN	*20	2
3	*20	LIGHTS -AERATION BASIN	0.45	3.7	1		0.9		1	3.7	0.45	LIGHTS -AERATION BASIN	*20	4
5	*20	LIGHTS -AERATION BASIN	0.45	3.7	1			0.9	1	3.7	0.45	LIGHTS -AERATION BASIN	*20	6
7	*20	LIGHTS -AERATION BASIN	0.6	5.0	1	1.2			1	5.0	0.6	LIGHTS -AERATION BASIN	*20	8
9	*20	LIGHTS -AERATION BASIN	0.6	5.0	1		1.2		1	5.0	0.6	LIGHTS -AERATION BASIN	*20	10
11	*20	LIGHTS -AERATION BASIN	0.6	5.0	1			1.2	1	5.0	0.6	LIGHTS -AERATION BASIN #3 EAST	*20	12
13	20	RECEPT -AERATION BASIN	0.54	4.5	1	0.8			1	2.5	0.3	LIGHTS -AERATION BASIN	*20	14
15	20	RECEPT -AERATION BASIN	0.54	4.5	1		1.1		1	4.5	0.54	RECEPT -AERATION BASIN	20	16
17	20	RECEPT -AERATION BASIN	0.54	4.5	1			1.1	1	4.5	0.54	RECEPT -AERATION BASIN	20	18
19	*20	OUTSIDE LIGHT SOUTH BLOWER BLDG	0.12	1.0	1	0.7			1	4.5	0.54	RECEPT -AERATION BASIN	20	20
21	*20	EQ PERIM. LIGHTS, SOUTH	0.48	4.0	1		1.2		1	6.0	0.72	RECEPT -AERATION BASIN	20	22
23	20	RECEPT -AERATION BASIN	0.72	6.0	1			1.4	1	6.0	0.72	RECEPT -AERATION BASIN	20	24
25	20	RECEPT -AERATION BASIN	0.72	6.0	1	1.4			1	6.0	0.72	RECEPT -AERATION BASIN, EAST	20	26
27	20	RECEPT -AERATION BASIN (OFF)	0.72	6.0	1		1.3		1	4.7	0.56	RECEPT -AERATION BASIN, RAS METER	20	28
29	20	SPARE			1			0.2	1	1.2	0.15	LIGHTS -EQ RETURN PS	*20	30
31	20	SPARE			1	0.2			1	1.5	0.18	RECEPT -EQ RETURN PS	20	32
33	20	PHOTOCELL CONTROL RELAY	0.2	1.7	1		0.2		1			RECEPT -LIGHT POLES NORTH POND ??	20	34
35	20	RECEPT -EQ FLOW METER ASSEMBLY	0.18	1.5	1			0.2	1			SPARE	20	36
37	20	SPARE			1	0.0			3			SURGE PROTECTION DEVICE	30	38
39	20	SPARE			1		0.0							
41	20	SPARE			1			0.0						
PANEL LP-4 LOCATION MCC-4 ROOM BUILDING SOUTH BLOWER BUILDING NOTES: FED FROM MCC-4 VIA 100A MTS AND 30KVA TRANSFORMER						TOTAL KVA 5.2 5.9 5.0 GRAND CONNECTED TOTAL KVA 16.0			SERVICE CHARACTERISTICS VOLTS: 208Y/120 100 A MLO PHASE: 3 100 A MCB WIRE: 4 22 MIN AIC SYMM, FULLY RATED ASSEMBLY					

* PHOTOCELL CONTROLLED THROUGH LIGHTING CONTACTOR

\v\mckim\creed\Projects\1024\0174\Drawings\Electronic\10-10240174 - PANEL DP-B5.dwg, 9/7/2023 4:28:20 PM, Laurel Smith

REV. NO.	DESCRIPTIONS	DATE

SEAL
 LAUREL L. SMITH, PE
 No. 91041

SEAL

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Manatee
 County
 FLORIDA

**SWRF
 EQUALIZATION SYSTEM REHABILITATION
 AND COVER ADDITION**

SCHEDULES AND TABLES

DATE: MAY 2023	SCALE:	DRAWING NUMBER:
MCE PROJ. # 1024-0174	HORIZONTAL: NA	E-08
DRAWN: JG	VERTICAL: NA	
DESIGNED: LLS		
CHECKED: AAH		
PROJ. MGR: DCW		
STATUS: ISSUED FOR BID		

NOTICE: THE OFFICIAL RECORD OF THIS SHEET IS THE ELECTRONIC FILE DIGITALLY SIGNED AND SEALED UNDER RULE 61G15-23.004, F.A.C.

NOTES:

- EXISTING LOADS APPROXIMATED BASED ON RECORD DRAWINGS.

LOAD TABLE						
		480V	1000 KVA		XFR	62%
			KW	GEN	-----	
MCC-6B (T-4B)		3 Ph	1200 AT	MCB	62%	
SOUTH BLOWER BUILDING		4 WIRE	1200 AF	BUSS	62%	
NAME	CONTINUOUS?	#DUTY	#CONNECTED	KVA	HP	FLA
BLOWER 6	Y	1	1		300.0	361.0
PANEL DP-B5	Y	1	1	73.4		88.1
SWBD-4A	NA	0.81	1	142	49.8	168.8
						0.0
						0.0
						0.0
						0.0
SUM				215.4	349.8	617.9
TOTAL CONNECTED LOAD (A)						656.2
TOTAL RUNNING LOAD						745.0

DUTY: 1.13529694 NEC 230.42 SE: 730.2 A

LOAD TABLE						
		480V	1000 KVA		XFR	47%
			KW	GEN	-----	
MCC-5B (T-4A)		3 Ph	1200 AT	MCB	47%	
SOUTH BLOWER BUILDING		4 WIRE	1200 AF	BUSS	47%	
NAME	CONTINUOUS?	#DUTY	#CONNECTED	KVA	HP	FLA
BLOWER 7	Y	1	1		300.0	361.0
TIE TO PANEL DP-B5	Y	0	1	73.4		0.0
SWBD-4B	NA	0.48	1	157	49.8	91.0
						0.0
						0.0
						0.0
						0.0
SUM				230.4	349.8	452.0
TOTAL CONNECTED LOAD (A)						637.6
TOTAL RUNNING LOAD						565.0

DUTY: 0.88616724 NEC 230.42 SE: 542.3 A

LOAD TABLE						
		480V	KVA		XFR	-----
			KW	GEN	-----	
SWBD-4A		3 Ph	600 AT	MCB	31%	
SOUTH BLOWER BUILDING		4 WIRE	800 AF	BUSS	23%	
NAME	CONTINUOUS?	#DUTY	#CONNECTED	KVA	HP	FLA
MCC-4A	NA	1.23	1	5	45.0	63.4
MCC-1	Y	0.77	1	107	4.8	105.4
TIE TO LP-4, LT2, MTS	N	0	1	30		0.0
						0.0
						0.0
						0.0
SUM				142.0	49.8	168.8
TOTAL CONNECTED LOAD (A)						225.4
TOTAL RUNNING LOAD						183.7

DUTY: 0.81483968

LOAD TABLE						
		480V	KVA		XFR	-----
			KW	GEN	-----	
SWBD-4B		3 Ph	600 AT	MCB	19%	
SOUTH BLOWER BUILDING		4 WIRE	800 AF	BUSS	14%	
NAME	CONTINUOUS?	#DUTY	#CONNECTED	KVA	HP	FLA
MCC-4B	N	1.07	1	20	45.0	69.4
LP-4, LT2, MTS	Y	0.6	1	30		21.6
TIE TO MCC-1	Y	0	1	107	4.8	0.0
						0.0
						0.0
						0.0
SUM				157.0	49.8	91.0
TOTAL CONNECTED LOAD (A)						235.6
TOTAL RUNNING LOAD						113.8

DUTY: 0.48277134

LOAD TABLE						
		480V	KVA		XFR	-----
			KW	GEN	-----	
MCC-4A		3 Ph	400 AT	MCB	19%	
SOUTH BLOWER BUILDING		4 WIRE	600 AF	BUSS	13%	
NAME	CONTINUOUS?	#DUTY	#CONNECTED	KVA	HP	FLA
EQ RETURN PUMPS	Y	1	1		45.0	57.4
HOIST	N	1	1	5		6.0
						0.0
						0.0
						0.0
SUM				5.0	45.0	63.4
TOTAL CONNECTED LOAD (A)						63.4
TOTAL RUNNING LOAD						77.8

DUTY: 1.22634069

LOAD TABLE						
		480V	KVA		XFR	-----
			KW	GEN	-----	
MCC-4B		3 Ph	400 AT	MCB	22%	
SOUTH BLOWER BUILDING		4 WIRE	600 AF	BUSS	14%	
NAME	CONTINUOUS?	#DUTY	#CONNECTED	KVA	HP	FLA
EQ RETURN PUMPS	Y	1	1		45.0	57.4
AER SUB PUMPS	Y	1	2	10.0		12.0
						0.0
						0.0
						0.0
SUM				20.0	45.0	69.4
TOTAL CONNECTED LOAD (A)						81.4
TOTAL RUNNING LOAD						86.8

DUTY: 1.06572445

TRANSFORMER (T4A, T4B)	
MAX XFMR RATING:	1000 KVA
PRIMARY VOLTS:	4,160 V
SECONDARY VOLTS:	480 V
IMPEDANCE FACTOR:	5.75%
FLA:	1202.8 A
MULTIPLIER:	19.324

CABLE TO MAIN (MCC-B5, B6)	
NUMBER OF SETS	4
WIRE SIZE	500 kCMIL
CONDUIT TYPE	PVC
CONDUCTOR TYPE	Copper
C VALUE	26706
DIST XFMR TO MAIN	50 ft
F VALUE	0.0393
MULTIPLIER	0.9622

CABLE TO LOAD (SWBD-4A, 4B)	
NUMBER OF SETS	3
WIRE SIZE	250 kCMIL
CONDUIT TYPE	PVC
CONDUCTOR TYPE	Copper
C VALUE	18594
DIST MAIN TO LOAD	10 ft
F VALUE	0.0150
MULTIPLIER	0.9857

Isc SYM RMS	23,243 A
@XFMR SECONDARY	23.24 kA
Isc MOTOR CONTRB.	4.811 A
@XFMR SECONDARY	4.81 kA
TOTAL Isc SYM RMS	28,055 A
@XFMR SECONDARY	28.05 kA

Isc SYM RMS	22,365 A
@MAIN BREAKER	22.37 kA
Isc MOTOR CONTRB.	4.811 A
@MAIN BREAKER	4.81 kA
Total Isc sym RMS	27,177 A
@MAIN BREAKER	27.18 kA

Isc SYM RMS	22,047 A
@LOAD	22.05 kA
Isc MOTOR CONTRB.	4.811 A
@LOAD	4.81 kA
TOTAL Isc SYM RMS	26,858 A
@LOAD	26.86 kA

REV. NO.	DESCRIPTIONS / REVISIONS	DATE

SEAL

LAUREL L. SMITH, PE
No. 91041

SEAL



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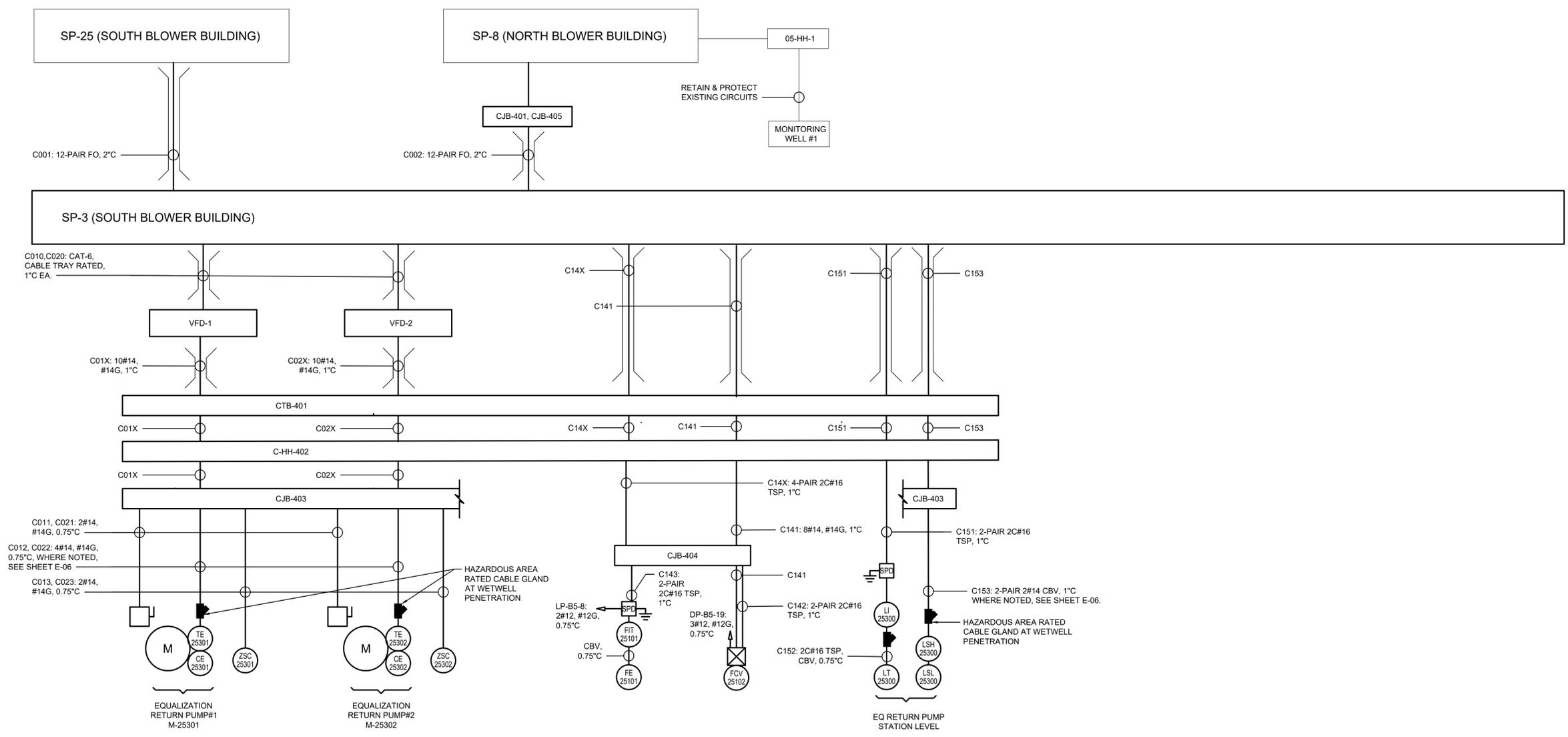
**SWRF
EQUALIZATION SYSTEM REHABILITATION
AND COVER ADDITION**

SCHEDULES AND TABLES

DATE:	MAY 2023	SCALE:		DRAWING NUMBER:	
MCE PROJ. #	1024-0174	HORIZONTAL:	NA	E-09	REVISION
DRAWN	AAL	VERTICAL:	NA		
DESIGNED	LLS				
CHECKED	AAH				
PROJ. MGR.	DCW				
STATUS:		ISSUED FOR BID			

NOTICE: THE OFFICIAL RECORD OF THIS SHEET IS THE ELECTRONIC FILE DIGITALLY SIGNED AND SEALED UNDER RULE 61G15-23.004, F.A.C.

- NOTES:**
1. SURGE PROTECTION DEVICES REQUIRED, WHICH MAY NOT BE SHOWN. REFER TO I-SHEETS AND CONTRACT SPECIFICATIONS FOR REQUIREMENT.
 2. CABLES SHALL BE MULTI-CONDUCTOR TYPE TC-ER OR ENCLOSED IN SCH-40 PVC CONDUIT WHERE ROUTED IN CABLE TRAY.
 3. CONDUIT SIZES SHOWN ARE MINIMUM. CONTRACTOR SHALL PROVIDE LARGER SIZE CONDUIT WHERE NEC REQUIRED DUE TO ACTUAL CABLE SELECTION OR CIRCUIT CONSOLIDATION.



\\mckimcreed.com\manateecounty\Projects\1024\1024-0174\Drawings\Electrical\1-13-10240174 - INTERCONNECT.dwg, 9/12/2023 5:05:00 PM, Laurel Smith

NOTICE: THE OFFICIAL RECORD OF THIS SHEET IS THE ELECTRONIC FILE DIGITALLY SIGNED AND SEALED UNDER RULE 61G15-23.004, F.A.C.

REV. NO.	DESCRIPTIONS	DATE

SEAL
 LAUREL L. SMITH, PE
 No. 91041

SEAL

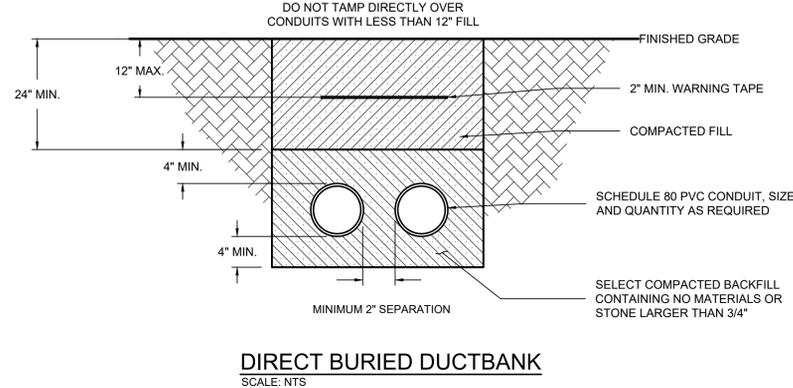
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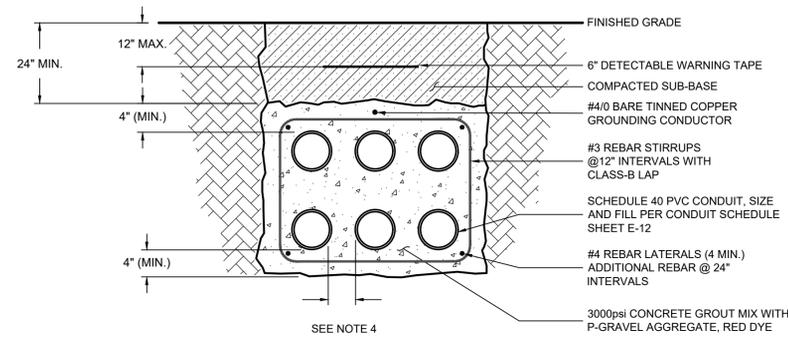
**SWRF
 EQUALIZATION SYSTEM REHABILITATION
 AND COVER ADDITION**

**ELECTRICAL
 INTERCONNECTION DIAGRAM**

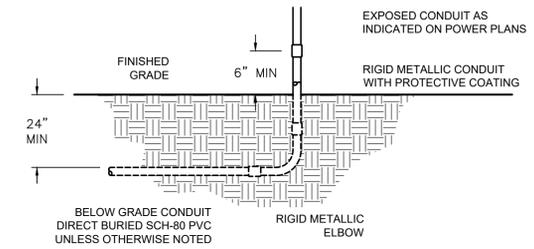
DATE: MAY 2023	SCALE	DRAWING NUMBER
MCE PROJ. # 1024-0174	HORIZONTAL: NA	E-12
DRAWN: JG	VERTICAL: NA	
DESIGNED: LLS	PROJ. MGR: DCW	REVISION
CHECKED: AAH	ISSUED FOR BID	



DIRECT BURIED DUCTBANK
SCALE: NTS



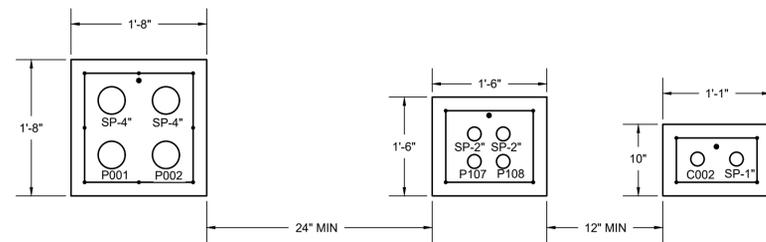
REINFORCED CONCRETE DUCTBANK
SCALE: NTS



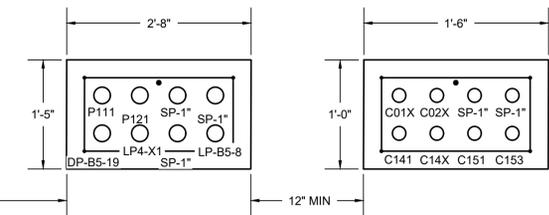
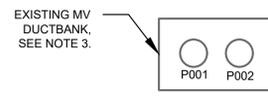
CONDUIT TRANSITION DETAIL
SCALE: NTS

NOTES:

1. MINIMUM WIRE SIZE FOR ALL POWER CIRCUITS IS #12AWG CU UNLESS OTHERWISE NOTED.
2. MINIMUM CONDUIT SIZE IS 3/4" TRADE SIZE EXPOSED AND 1" TRADE SIZE CONCEALED.
3. SWAB CLEAN EXISTING CONDUITS PRIOR TO PULLING NEW CIRCUITS.
4. FOR CONTROL CONDUIT DUCTBANKS MINIMUM SEPARATION BETWEEN CONDUITS SHALL BE 2". FOR POWER CONDUIT DUCTBANKS MINIMUM SEPARATION SHALL BE 7.5" CENTER TO CENTER.
5. FROM PUB-401 TO LV-HH-402 PANEL LP4 CIRCUITS 21 & 31 SHALL BE INCLUDED IN LP4 CIRCUITS 30, 32, & 35 SHALL BE INCLUDED IN LP4-X2.
6. ADDITIONAL CONTROL CONDUIT CIRCUIT CONSOLIDATION SHALL BE PERMITTED AS PER NEC. ANALOG & 120V DISCRETE WIRING SHALL BE MAINTAINED IN SEPARATE CONDUITS.



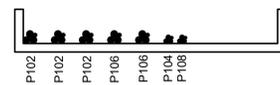
DUCTBANK SECTION 1
MV AND LV DUCTBANK DETAIL
NTS



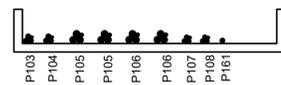
DUCTBANK SECTION 2
MV AND LV DUCTBANK DETAIL
NTS

1
E-02/E-13

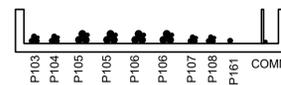
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E-02/E-13



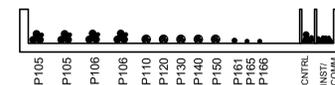
T1
SECTION T1
SCALE: NTS



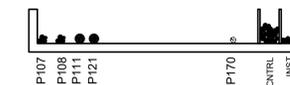
T2
SECTION T2
SCALE: NTS



T3
SECTION T3
SCALE: NTS



T4
SECTION T4
SCALE: NTS



T5
SECTION T5
SCALE: NTS

ELECTRICAL DETAILS I
SCALE: NTS

REV. NO.	DESCRIPTIONS REVISIONS	DATE

SEAL
LAUREL L. SMITH, PE
No. 91041

SEAL

MCKIM & CREED
1365 Hamlet Avenue
Clearwater, Florida 33756
Phone: (727)442-7196, Fax: (727)461-3827
CA LIC No. 29588
www.mckimcreed.com



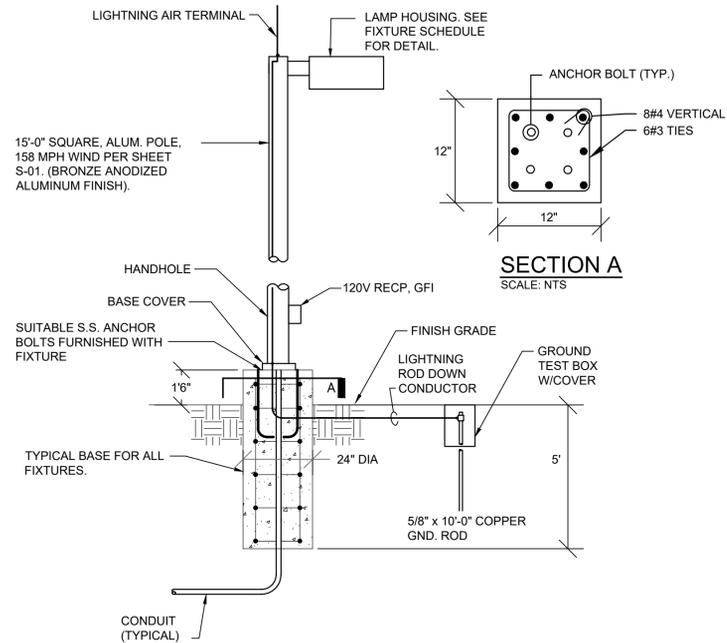
**SWRF
EQUALIZATION SYSTEM REHABILITATION
AND COVER ADDITION**

ELECTRICAL DETAILS I

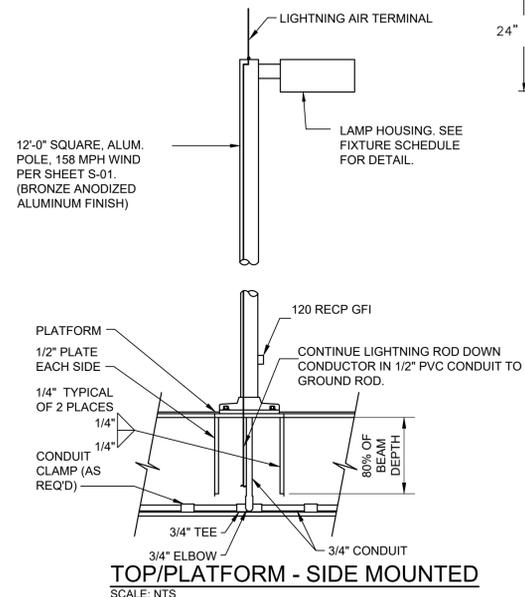
DATE: MAY 2023	SCALE: NA	DRAWING NUMBER: E-13
MCE PROJ. # 1024-0174	HORIZONTAL: NA	REVISION: ISSUED FOR BID
DRAWN: JG	VERTICAL: NA	
DESIGNED: LLS		
CHECKED: AAH		
PROJ. MGR: DCW		

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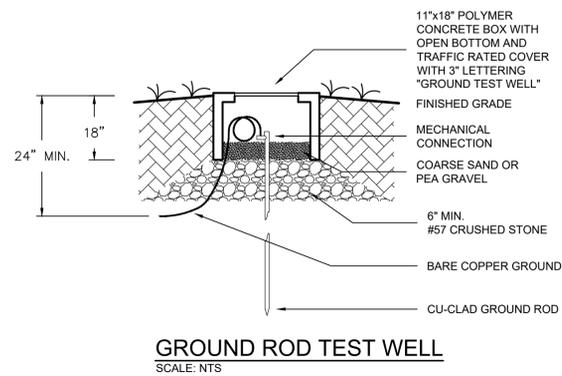
NOTICE: THE OFFICIAL RECORD OF THIS SHEET IS THE ELECTRONIC FILE DIGITALLY SIGNED AND SEALED UNDER RULE 61G15-23.004, F.A.C.



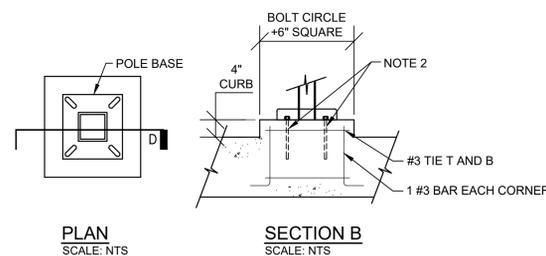
LIGHTING POLE BASE DETAILS
SCALE: NTS



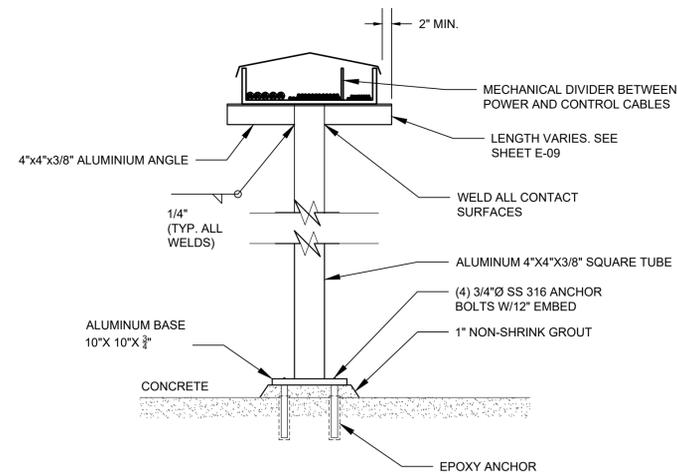
TOP/PLATFORM - SIDE MOUNTED
SCALE: NTS



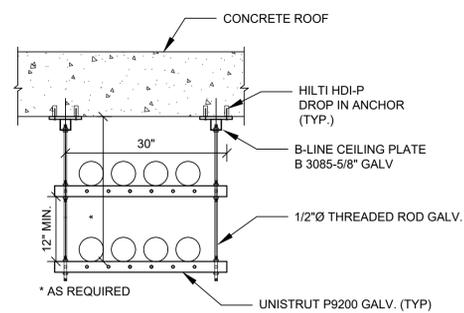
GROUND ROD TEST WELL
SCALE: NTS



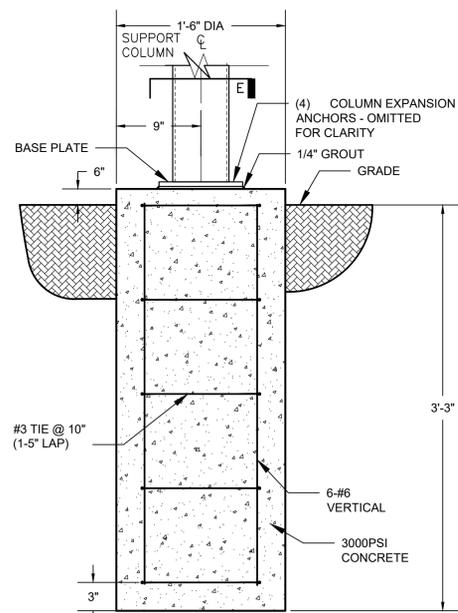
CONCRETE - TOP MOUNTED
SCALE: NTS



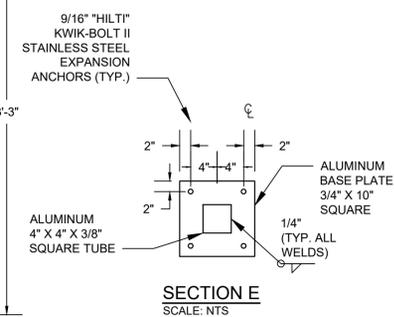
CABLE TRAY SUPPORT DETAIL
SCALE: NTS



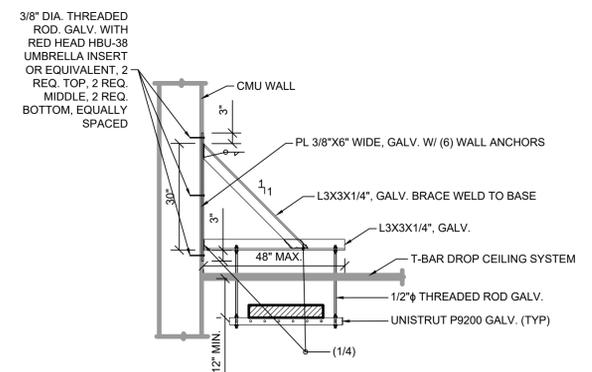
**CONDUIT SUPPORT DETAIL
(SUSPENDED SUPPORT)**
SCALE: NTS



CABLE TRAY POST FOUNDATION DETAIL
SCALE: NTS

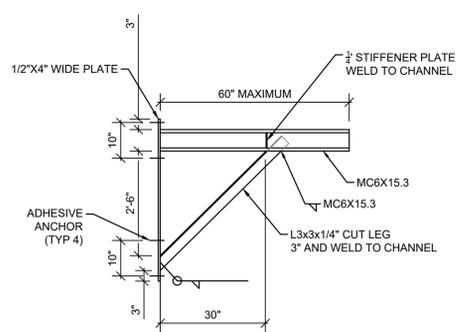


SECTION E
SCALE: NTS



CABLE TRAY: WALL SUPPORT ABOVE
SCALE: NTS

CABLE TRAY: WALL SUPPORT ABOVE
SCALE: NTS



CABLE TRAY: WALL SUPPORT BELOW
SCALE: NTS

- NOTES:**
- 316 STAINLESS STEEL ANCHOR BOLTS WITH LEVELING NUTS. BOLT SIZE AND BOLT CIRCLE RADIUS PER POLE MANUFACTURER REQUIREMENTS
 - CONCRETE 316 STAINLESS STEEL ANCHORS WITH LEVELING NUTS. BOLT SIZE AND BOLT CIRCLE RADIUS PER POLE MANUFACTURER REQUIREMENTS.
 - CONTRACTOR SHALL COORDINATE LUMINAIRE MOUNTING AND MATERIALS SIZING WITH HANDRAIL SYSTEMS AND OTHER TRADES AS NEEDED.
 - CABLE TRAY SIZED AS PER NEC 392.80. CONTRACTOR SHALL BE REQUIRED TO MEET THE MINIMUM SPACING OF THIS SECTION FOR ANY ADDITIONAL POWER AND LIGHTING PANEL CIRCUITS TO BE INCLUDED IN THE CABLE TRAY. SIZES SHOWN ARE MINIMUM, PROVIDE LARGER SIZE TRAY WHERE REQUIRED PER NEC.

- NOTES:**
- ALL MATERIAL AND HARDWARE SHALL BE SS316.
 - GROUT CMU CELL BEHIND ANCHOR PLATE BEFORE DRILLING FOR ANCHORS.

**ELECTRICAL
DETAILS III**
SCALE: NTS

REV. NO.	DESCRIPTIONS REVISIONS	DATE

MCKIM & CREED
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Clearwater, Florida 33756
Phone: (727)442-7196, Fax: (727)461-3827
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**Manatee County
FLORIDA**

**SWRF
EQUALIZATION SYSTEM REHABILITATION
AND COVER ADDITION**

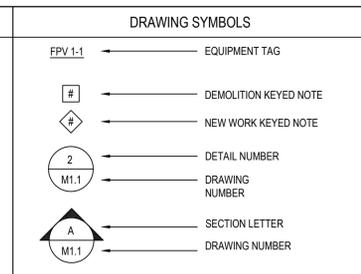
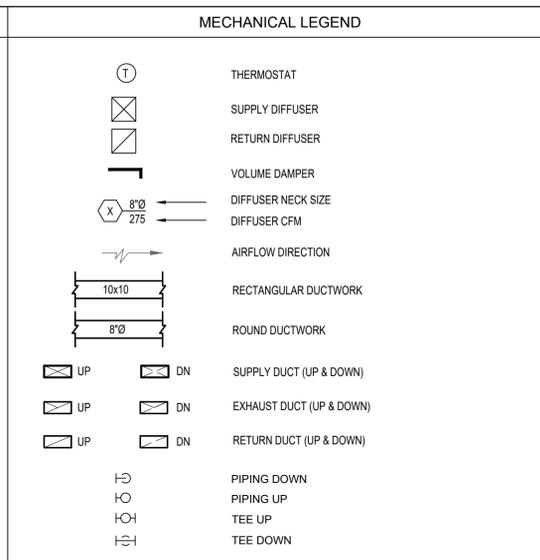
ELECTRICAL DETAILS III

DATE: MAY 2023	SCALE:	DRAWING NUMBER:
MCE PROJ. # 1024-0174	HORIZONTAL: NA	E-15
DRAWN: JG	VERTICAL: NA	
DESIGNED: LLS		
CHECKED: AAH		
PROJ. MGR: DCW		
STATUS: ISSUED FOR BID		

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MECHANICAL SYSTEMS AND EQUIPMENT	
DESIGN CRITERIA	
JOB NAME:	MANATEE COUNTY SWWRP EQUALIZATION SYSTEM REHABILITATION AND COVER ADDITION
LOCATION:	MANATEE COUNTY, FLORIDA
LOCAL BUILDING CODES:	2020 FLORIDA BUILDING CODE, MECHANICAL (7TH EDITION) 2020 FLORIDA BUILDING CODE, ENERGY CONSERVATION (7TH EDITION) NFPA 70
THERMAL ZONE:	2A
ELEVATION:	62' 4"
AMBIENT CONDITIONS:	SUMMER DB = 91° F SUMMER WB = 78° F WINTER DB = 40° F
COMMERCIAL	
COMMERCIAL SPACE INDOOR DESIGN:	OCCUPANCY = N/A SUMMER = 80° F WINTER = N/A
GLASS:	
- SHGC:	N/A
- U-VALUE:	N/A
WALL:	
- R-VALUE (OVERALL):	6.5 HR-SQ. FT.-F/BTU
ROOF:	
- R-VALUE (OVERALL):	14.7 HR-SQ. FT.-F/BTU
LIGHTING DENSITY:	0.5 WATT/SQ. FT.
INTERIOR LOAD:	24,000 BTU/H

MECHANICAL ABBREVIATIONS			
AFF	ABOVE FINISHED FLOOR	FPM	FEET PER MINUTE
AFG	ABOVE FINISHED GRADE	GPM	GALLONS PER MINUTE
AHU	AIR HANDLING UNIT	HHWS	HEATING HOT WATER SUPPLY
APD	AIRSIDE PRESSURE DROP	HHWR	HEATING HOT WATER RETURN
BLDG	BUILDING	HP	HORSEPOWER
CFM	CUBIC FEET PER MINUTE	HX	HEAT EXCHANGER
CV	CONSTANT VOLUME	IND	INDUCTION UNIT
CWR	CHILLED WATER SUPPLY	LAT	LEAVING AIR TEMPERATURE
CWS	DOWN	LWT	LEAVING WATER TEMPERATURE
DN	EXHAUST AIR	MC	MECHANICAL CONTRACTOR
EA	EXHAUST AIR	N/A	NOT AVAILABLE
EAT	ENTERING AIR TEMPERATURE	NTS	NOT TO SCALE
ETR	EXISTING TO REMAIN	OA	OUTSIDE AIR
EWT	ENTERING WATER TEMPERATURE	RA	RETURN AIR
EX	EXISTING	SA	SUPPLY AIR
FCU	FAN COIL UNIT	VAV	VARIABLE AIR VOLUME
FVAV	FAN POWERED VAV BOX	WPD	WATERSIDE PRESSURE DROP
GC	GENERAL CONTRACTOR		



- GENERAL NOTES**
- THE DRAWINGS SHALL NOT BE SCALED FOR CONSTRUCTION PURPOSES. THE SCALE, WHEN INDICATED IS INTENDED FOR GENERAL REFERENCE ONLY.
 - THE MECHANICAL CONTRACTOR SHALL MAKE A COMPLETE REVIEW OF THE PROJECT PLANS, SCHEDULES, AND DETAILS PRIOR TO INSTALLATION OF THE MECHANICAL SYSTEMS AND REVIEW ANY CONFLICTS WITH THE ENGINEER.
 - ALL WORK SHALL CONFORM TO ALL LOCAL, STATE, AND NATIONAL CODES. EQUIPMENT SHALL BE INSTALLED IN ACCORDANCE WITH MANUFACTURER'S WRITTEN RECOMMENDATIONS. ANY EQUIPMENT OR MATERIAL DEVIATIONS FROM THAT SPECIFIED OR DETAILED ON THIS DRAWING SHALL BE SUBJECT TO THE APPROVAL OF THE ARCHITECT/ENGINEER. ALL PROPOSED EQUIPMENT DEVIATIONS SUBMITTED SHALL BE SIMILAR BOTH IN QUALITY AND CAPACITY TO THAT EQUIPMENT SPECIFIED.
 - DESIGN IS BASED ON THE MANUFACTURER AND MODEL SCHEDULED OR THE FIRST MANUFACTURER LISTED IN THE DRAWINGS AND SPECIFICATIONS. CONTRACTOR SHALL BEAR ANY AND ALL COSTS FOR ALTERING ANY OTHER CONTRACT OR SUB-CONTRACT RESULTING FROM THE USE OF ANY MANUFACTURER OR MODEL OTHER THAN THE DESIGN BASIS INCLUDING LISTED EQUALS.
 - PRIOR TO CONSTRUCTION, FABRICATING DUCTWORK, ORDERING EQUIPMENT, ETC., THE CONTRACTOR SHALL FIELD VERIFY SPACE LIMITATIONS AT THE JOB SITE AND COORDINATE WITH OTHER TRADES.
 - ALL MATERIALS, EQUIPMENT AND PRODUCTS INCORPORATED IN THE WORK UNDER THE CONTRACT SHALL BE NEW, OF A SUITABLE GRADE FOR THE PURPOSES INTENDED, AND TO THE EXTENT POSSIBLE, STANDARD PRODUCTS OF THE VARIOUS MANUFACTURERS EXCEPT WHERE SPECIAL CONSTRUCTION OR PERFORMANCE FEATURES ARE CALLED FOR. THEY SHALL BE INSTALLED IN ACCORDANCE WITH THE MANUFACTURER'S REQUIREMENTS.
 - ALL MATERIALS AND EQUIPMENT SHALL BE NEW UNLESS OTHERWISE NOTED AND SHALL BE FURNISHED AND INSTALLED IN ACCORDANCE WITH THE MANUFACTURER'S REQUIREMENTS.
 - THE MECHANICAL CONTRACTOR IS RESPONSIBLE FOR ANY DAMAGE CAUSED BY THEIR ACTIONS. SUCH DAMAGE SHALL BE RETURNED TO ORIGINAL NORMAL WORKING CONDITION, SUBJECT TO ACCEPTANCE OF THE OWNER AND ENGINEER, WITHOUT EXTRA COST TO THE OWNER.
 - THE MECHANICAL CONTRACTOR SHALL KEEP THEIR WORK SITE AND ALL ACCESS POINTS OF THE BUILDING FREE OF RUBBISH AND WASTE MATERIAL. ALL ROOF OPENINGS IN THE BUILDING REQUIRED FOR THE MECHANICAL CONTRACT SHALL BE PROVIDED BY THE GENERAL CONTRACTOR. ALL FRAMING AROUND OPENINGS SHALL BE BY THE GENERAL CONTRACTOR. MECHANICAL CONTRACTOR SHALL COORDINATE SIZE OF OPENINGS AND LOCATION OF OPENINGS WITH THE GENERAL CONTRACTOR. ALL ROOF CURBS AND ROOF SUPPORT RAILS FOR MECHANICAL EQUIPMENT INSTALLED ON THE ROOF SHALL BE FURNISHED BY THE MECHANICAL CONTRACTOR AND INSTALLED BY THE GENERAL CONTRACTOR.
 - ALL OPENINGS IN WALLS AS REQUIRED BY THE MECHANICAL SYSTEM IN THE BUILDING SHALL BE PROVIDED BY THE GENERAL CONTRACTOR. IT IS THE MECHANICAL CONTRACTOR'S RESPONSIBILITY TO COORDINATE THE SIZE AND LOCATION OF ALL OPENINGS WITH THE GENERAL CONTRACTOR AT THE JOB SITE IN A TIMELY MANNER.
 - REFER TO ARCHITECTURAL DRAWINGS, AS AVAILABLE, FOR LOCATIONS OF ALL RATED WALL AND FLOOR ASSEMBLIES PROVIDE FIRE DAMPERS AND/OR U.L. LISTED ASSEMBLIES AND/OR SEALANTS PER DRAWINGS, SPECIFICATIONS, AND APPLICABLE CODES AT ALL PENETRATIONS.
 - THE MECHANICAL CONTRACTOR SHALL FURNISH ACCESS DOORS FOR ALL GYPSUM BOARD CEILINGS AT VOLUME DAMPERS, EQUIPMENT, MOTOR OPERATED DAMPERS, FIRE DAMPERS, BALANCING DEVICES OR OTHER ITEMS REQUIRING BALANCING OR SERVICE. ACCESS DOORS SHALL BE INSTALLED BY THE GENERAL CONTRACTOR. SEE PLANS AND GENERAL CONSTRUCTION SPECIFICATIONS FOR ACCESS DOOR REQUIREMENTS.
 - MECHANICAL CONTRACTOR SHALL PROVIDE 6" HIGH HOUSEKEEPING PADS UNDER MAJOR MECHANICAL EQUIPMENT (I.E. CHILLERS) AND 4" HIGH HOUSEKEEPING PADS UNDER ALL OTHER FLOOR MOUNTED EQUIPMENT UNLESS NOTED OTHERWISE. PADS SHALL EXTEND BEYOND EQUIPMENT BY THE SAME DIMENSION AS THE HEIGHT OF THE PAD, UNLESS NOTED OTHERWISE.
 - ALL PIPING AND DUCTWORK (EXCEPT IN MECHANICAL ROOMS, BOILER ROOM, ETC.) SHALL BE CONCEALED UNLESS OTHERWISE SHOWN OR NOTED.
 - DO NOT INSTALL PIPING OR DUCTWORK OVER ANY ELECTRICAL SWITCHGEAR; SEE MECHANICAL DETAIL SHEET(S).
 - MC SHALL BLANK OFF UNUSED PORTIONS OF LOUVERS WITH DOUBLE WALL INSULATED PANELS.
 - REFER TO SPECIFICATIONS FOR EQUIPMENT STARTUP PROCEDURES AND REQUIREMENTS.

SPLIT SYSTEM AIR CONDITIONING SCHEDULE																		
TAG	LOCATION	INDOOR UNIT DATA							OUTDOOR CONDENSING UNIT DATA							SEER	NOTES	
		TOTAL SPACE TEMP (°F)	CFM	COOLING SENS./TOTAL (MBH)	VOLTS/Ø	MCA	MOCP	FLA	MANUFACTURER/ MODEL #	TAG	COOLING CAP. TOTAL (MBH)	HEATING CAP. (MBH)	VOLTS/Ø	MCA	MOCP			MANUFACTURER/ MODEL #
AHU-1	SOUTH BLOWER BUILDING ELECTRICAL ROOM	80.0	1200	36.0	208V/1PH	5	15	4.3	TRANE TEM6A0C36H31	CJ-1	36.0	N/A	208V/3PH	12	20	TRANE 4TTA4036A3	16.0	ALL

NOTES:

- PROVIDE ACCUMULATOR FOR EXTENDED REFRIGERANT PIPING AND LOW AMBIENT CONTROL DOWN TO 10° F.
- REFRIGERANT PIPING SHALL BE PROVIDED AS RECOMMENDED BY THE MANUFACTURER. MC SHALL ROUTE THE PIPING IN THE MOST EFFICIENT AND SHORTEST MANNER POSSIBLE.
- COOLING CAPACITY IS LISTED IN BTUH AND BASED ON 95° F AMBIENT.
- PROVIDE WITH R410A REFRIGERANT. PROVIDE 4" TALL EQUIPMENT PAD FOR OUTDOOR UNIT THAT EXTENDS 6" PAST ALL SIDES OF EQUIPMENT. PROVIDE 24" TALL STAND FOR INDOOR UNIT TO ALLOW SPACE FOR DUCT CONNECTION TO BOTTOM RETURN AIR INLET.
- PROVIDE WITH WIND BAFFLE FOR OPERATION DOWN TO 0° F.
- DISCONNECT PROVIDED BY MECHANICAL CONTRACTOR. MECHANICAL CONTRACTOR TO PROVIDE WIRING FROM DEDICATED CIRCUITS IN ELECTRICAL PANELS TO IDUS. SEE ELECTRICAL DRAWINGS FOR WIRE SIZE.
- PROVIDE MANUFACTURER'S WALL-MOUNTED THERMOSTAT.
- COOLING ONLY UNIT.

AIR DISTRIBUTION SCHEDULE	
TAG	DESCRIPTION
A	LAY-IN CEILING SUPPLY DIFFUSER; PRICE ASCD, ALUMINUM CONSTRUCTION, 24" x24" FACE. SQUARE 3-CONE DIFFUSER; BAKED OFF-WHITE ENAMEL FINISH. 4-WAY BLOW UNLESS SHOWN OTHERWISE. SEE PLAN FOR NECK SIZE AND CFM.
B	LAY-IN CEILING FILTERED RETURN GRILLE - PRICE 630FF SERIES 45° DEFLECTION, 3/4" BLADE SPACING, FIXED LOUVER FACE, ALUMINUM CONSTRUCTION. SUITABLE FOR TBAR LAY-IN. MERV 8 FILTER PROVIDED AND INSTALLED BY MECHANICAL CONTRACTOR SEE PLANS FOR NECK SIZE AND CFM.

NOTES:

- MECHANICAL CONTRACTOR SHALL PROVIDE MANUAL VOLUME DAMPER IN BRANCH TAKE-OFF FOR ALL AIR DISTRIBUTION DEVICES (UNLESS OTHERWISE NOTED).
- "BASIS OF DESIGN" SHALL BE PRICE OR APPROVED EQUIVALENT BY METAL-AIRE, CARNES, NAILOR, TITUS AND TUTTLE & BAILEY.

MECHANICAL SYSTEMS AND EQUIPMENT	
METHOD OF COMPLIANCE:	
PREScriptive <input checked="" type="checkbox"/>	ENERGY COST BUDGET <input type="checkbox"/>
THERMAL ZONE	2A
EXTERIOR DESIGN CONDITIONS	WINTER DRY BULB: 40° F SUMMER DRY BULB: 91° F
INTERIOR DESIGN CONDITIONS	WINTER DRY BULB: N/A SUMMER DRY BULB: 80° F RELATIVE HUMIDITY: 50%
BUILDING HEATING LOAD:	N/A
BUILDING COOLING LOAD:	32.9 MBH
MECHANICAL SPACE CONDITIONING SYSTEM:	UNITARY - NEW SPLIT DX AIR CONDITIONING UNIT. BOILER - NOT APPLICABLE TO THIS PROJECT. CHILLER - NOT APPLICABLE TO THIS PROJECT.
EQUIPMENT EFFICIENCIES:	EFFICIENCIES ARE LISTED ON EQUIPMENT SCHEDULES - SEE DRAWINGS.
EQUIPMENT SCHEDULES WITH MOTORS:	SEE DRAWINGS FOR EFFICIENCIES.
DESIGNER STATEMENT:	TO THE BEST OF MY KNOWLEDGE AND BELIEF, THE DESIGN OF THIS BUILDING COMPLIES WITH THE MECHANICAL SYSTEM AND EQUIPMENT REQUIREMENTS OF THE FLORIDA STATE BUILDING CODE, 2020 EDITION-ENERGY CONSERVATION.
SIGNED:	STERLING L. GRAHAM
NAME:	PROFESSIONAL ENGINEER
TITLE:	

REV. NO.	DESCRIPTIONS	DATE

STERLING L. GRAHAM, P.E.
No. 92360

SEAL



SWWRP
EQUALIZATION SYSTEM REHABILITATION
AND COVER ADDITION

HVAC DATA SHEET

DATE: MAY 2023	SCALE	DRAWING NUMBER
MCE PROJ. # 1024-0174	HORIZONTAL: SEE PLAN	H-01
DRAWN: SG	VERTICAL: NA	
DESIGNED: SG		
CHECKED: DCW		
PROJ. MGR: DCW		
STATUS: ISSUED FOR BID	REVISION	

Z:\1024\0174\1024-0174-01.dwg, 9/13/2023, 11:57:05 AM, Sterling Graham

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