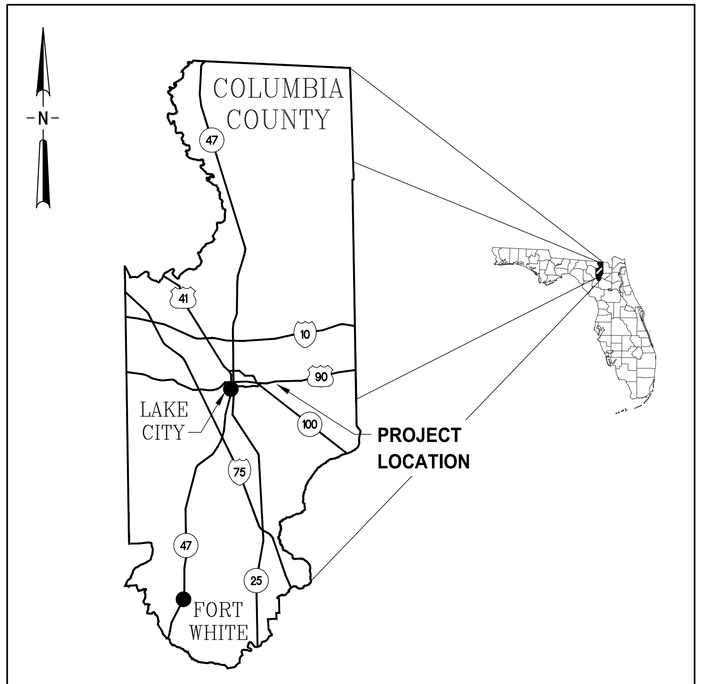
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NORTH FLORIDA MEGA INDUSTRIAL PARK
WASTEWATER TREATMENT PLANT
VE GMP-2

COLUMBIA COUNTY, FLORIDA



SITE VICINITY MAP

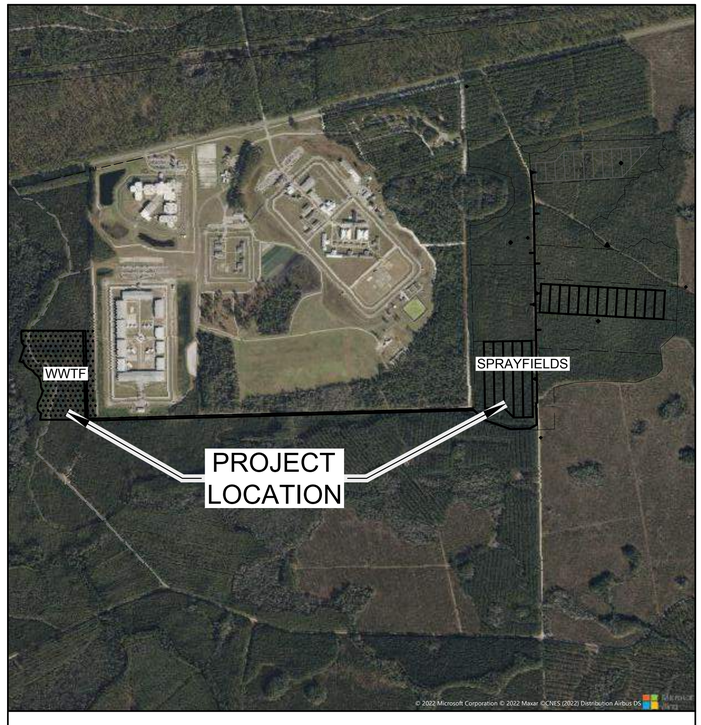
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FLORIDA'S GATEWAY SINCE 1832

COMMISSIONERS

RON WILLIAMS	DISTRICT 1
ROCKY FORD	DISTRICT 2
ROBBY HOLLINGSWORTH (CHAIRMAN)	DISTRICT 3
EVERETT PHILLIPS	DISTRICT 4
TIM MURPHY	DISTRICT 5

PREPARED BY:

JonesEdmunds
730 NE WALDO ROAD, GAINESVILLE, FLORIDA 32641 / (352) 377-5821



PROJECT LOCATION
153 SOUTHEAST TYRE ROAD
LAKE CITY, FLORIDA 32025

PROJECT No. 03780-001-01

Digitally signed by Thomas W. Friedrich
Date: 2023.05.04 18:07:06-04'00'

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DECEMBER 2022

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VE GMP-2

LTR.	DATE	REVISIONS	BY	APPRD.
VE	1/1/2022	VE GMP-1	LYC	TWF

DESIGNED TFRIEDRICH
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730 NE WALDO ROAD, GAINESVILLE, FLORIDA 32641 / (352) 377-5821

NORTH FLORIDA MEGA INDUSTRIAL PARK
WASTEWATER TREATMENT PLANT
COLUMBIA COUNTY, FLORIDA

DRAWING INDEX

Thomas W. Friedrich, State of Florida, Professional Engineer, License No. 61281

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DWG NO: G2

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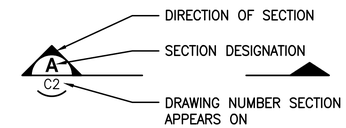
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STANDARD ABBREVIATIONS

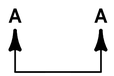
&	AND
AASHTO	AMERICAN ASSOCIATION OF STATE HIGHWAY AND TRANSPORTATION OFFICIALS
AC	ALTERNATING CURRENT
ACI	AMERICAN CONCRETE INSTITUTE
AFF	ABOVE FINISHED FLOOR
ALUM	ALUMINUM
AMPS	AMPERES
ANSI	AMERICAN NATIONAL STANDARDS INSTITUTE
APPROX	APPROXIMATE
ARV	AIR RELEASE VALVE
ASD	ADJUSTABLE SPEED DRIVE
ASTM	AMERICAN SOCIETY FOR TESTING AND MATERIALS
ATS	AUTOMATIC TRANSFER SWITCH
AUTO	AUTOMATIC
AUX	AUXILIARY
AVE	AVENUE
AWG	AMERICAN WIRE GAUGE
AWS	AMERICAN WELDING SOCIETY
AWWA	AMERICAN WATER WORKS ASSOCIATION
BE	BURIED ELECTRICAL
BF	BLIND FLANGE
BFP	BACKFLOW PREVENTER
BFV	BUTTERFLY VALVE
BKR	BREAKER
BLDG	BUILDING
BLVD	BOULEVARD
BV	BALL VALVE
C	CONDUIT, CONDUCTOR, CLOSE
C/L, CL	CENTERLINE
CB	CIRCUIT BREAKER
CFWE	CABLE FURNISHED WITH EQUIPMENT
CI	CAST IRON
CLF	CHAIN LINK FENCE
CMP	CORRUGATED METAL PIPE
CONC	CONCRETE
CONSTR	CONSTRUCTION
CORP	CORPORATION
CP	CONTROL PANEL
CT	CURRENT TRANSFORMER, CABLE TRAY CONTACTOR
CV	CHECK VALVE
DB	DUCT BANK
DC	DIRECT CURRENT
DET	DETAIL
DI	DUCTILE IRON
DIA	DIAMETER
DIP	DUCTILE IRON PIPE
DIPS	DUCTILE IRON PIPE SIZE
DIV	DIVISION
DR	DIMENSION RATIO
DR	DRAIN OR DRIVE
DWG	DRAWING
E	EAST
EA	EACH
EL, ELEV	ELEVATION
ELB	ELBOW
ELEC	ELECTRICAL
EOP	EDGE OF PAVEMENT
EQ	EQUAL
ETC	ETCETERA
EW	EACH WAY
EXIST	EXISTING
FBC	FLORIDA BUILDING CODE
F, FU	FUSE
FAB	FABRICATED
FAC	FLORIDA ADMINISTRATIVE CODE
FCA	FLANGED COUPLING ADAPTER
FDEP	FLORIDA DEPARTMENT OF ENVIRONMENTAL PROTECTION
FDOT	FLORIDA DEPARTMENT OF TRANSPORTATION
FF	FINISHED FLOOR
FIG	FIGURE
FIN	FINISHED
FJ	FLANGED JOINT
FLG	FLANGE(D)
FREQ	FREQUENCY
FRP	FIBER REINFORCED PLASTIC
FS	FLORIDA STATUTES, FAR SIDE, FLOW SWITCH
FT	FOOT
G	GROUND
GAL	GALLON
GALV	GALVANIZED
GEN	GENERATOR
GFCI	GROUND FAULT CIRCUIT INTERUPTER
GND	GROUND
GPM	GALLONS PER MINUTE
GR	GRADE
GRTG	GRATING
GS	GALVANIZED STEEL
GSP	GALVANIZED STEEL PIPE
GST	GROUND STORAGE TANK
GV	GATE VALVE
H	HIGH
HD	HAND
HDD	HORIZONTAL DIRECTIONAL DRILL
HDNS	HARDNESS
HDPE	HIGH DENSITY POLYETHYLENE
HHWL	HIGH HIGH WATER LEVEL
HK	HOOK
HOA	HAND–OFF–AUTO
HOR	HAND–OFF–REMOTE
HORIZ	HORIZONTAL
HP	HORSEPOWER
HPS	HIGH PRESSURE SODIUM
HR	HANDRAIL
HSPS	HIGH SERVICE PUMP STATION
HT	HEIGHT
HWL	HIGH WATER LEVEL
I&C	INSTRUMENTATION AND CONTROL
IC	INTERRUPTING CAPACITY
ID	INSIDE DIAMETER
ID	IDENTIFICATION
IE	INVERT ELEVATION
IEEE	INSTITUTE OF ELECTRICAL AND ELECTRONIC ENGINEERS
IF	INSULATED FLANGE
IJ	ISOLATION JOINT
INC	INCORPORATED
IPS	IRON PIPE SIZE
J, JB	JUNCTION BOX
JT	JOINT
KA	KILOAMPERES
KB	KNEE BRACE
KCMIL	THOUSAND CIRCULAR MILS
KV	KILOVOLT
KVA	KILOVOLT AMPERES
KW	KILOWATTS
KWH	KILOWATT HOUR
L	LOWER
LB, LBS	POUND(S)
LE	LEVEL ELEMENT
LEL	LOWER EXPLOSIVE LIMIT
LF	LINEAR FEET
LG	LONG
LIT	LEVEL INDICATING TRANSMITTER
LIU	LIGHT INTERFACE UNIT
LLH	LONG LEG HORIZONTAL
LLV	LONG LEG VERTICAL
LLWL	LOW LOW WATER LEVEL
LOS	LOCKOUT STOP
LR	LONG RADIUS, LOCAL–REMOTE
LS	LIFT STATION
LSIG	LONG SHORT INSTANTANEOUS GROUND
LWL	LOW WATER LEVEL
M	MAGNETIC CONTACTOR COIL, MOTOR, MANUAL
M/F	MALE/FEMALE
MAX	MAXIMUM
MC	MODULATE–CLOSE
MCC	MOTOR CONTROL CENTER
MCJ	MASONRY CONTROL JOINT
MECH	MECHANICAL
MES	MITERED END SECTION
MFR	MANUFACTURER
MG	MILLION GALLON(S)
MH M/H	MANHOLE
MIN	MINIMUM
MISC	MISCELLANEOUS
MJ	MECHANICAL JOINT
MNPT	MALE NATIONAL PIPE THREAD
MO	MOTOR OPERATOR
MOT	MAINTENANCE OF TRAFFIC
MP	METERING PUMP
MPH	MILES PER HOUR
MS	MOTOR STARTER
MSC	MANUFACTURER SUPPLIED CABLE
MT, MTD	MOUNT(ED)
MTL	METAL
MV	MEDIUM VOLTAGE
N	NORTH(ING), NEUTRAL, NORMAL
N/A	NOT APPLICABLE
NAD	NORTH AMERICAN DATUM
NAVD	NORTH AMERICAN VERTICAL DATUM
NC	NORMALLY CLOSED
NE	NORTH EAST
NEC	NATIONAL ELECTRICAL CODE
NEMA	NATIONAL ELECTRICAL MANUFACTURERS ASSOCIATION
NEUT	NEUTRAL
NGVD	NATIONAL GEODETIC VERTICAL DATUM
NIC	NOT IN CONTRACT
No.	NUMBER
NO	NORMALLY OPEN
NOM	NOMINAL
NPDES	NATIONAL POLLUTANT DISCHARGE ELIMINATION SYSTEM
NPT	NATIONAL PIPE THREAD
NRS	NONRISING STEM
NS	NEAR SIDE
NSF	NATIONAL SANITATION FOUNDATION
NTS	NOT TO SCALE
NW	NORTH WEST
OC	ON CENTER(S), OPEN–CLOSE(D)
OCA	OPEN–CLOSE–AUTO
OCR	OPEN–CLOSE–REMOTE
OD	OUTSIDE DIAMETER
OFL	OVERFLOW
OO	ON–OFF
OOA	ON–OFF–AUTO
OOR	ON–OFF–REMOTE
OPP	OPPOSITE
OS&Y	OUTSIDE STEM AND YOKE
OSC	OPEN–STOP–CLOSE
OSHA	OCCUPATIONAL SAFETY AND HEALTH ADMINISTRATION
P&ID	PIPING AND INSTRUMENTATION DIAGRAM
P/L	PROPERTY LINE
PB	PULL BOX
PCCP	PRESTRESSED CONCRETE CYLINDER PIPE
PCV	PRESSURE CONTROL VALVE
PE	PLAIN END, POLYETHYLENE
PET	POLYETHYLENE TUBING
PF	POWER FACTOR
pH	HYDROGEN ION CONCENTRATION
PH	PHASE
PI	PRESSURE INDICATOR/GAUGE
PID	PROPORTIONAL INTEGRAL DERIVATIVE
PIT	PRESSURE INDICATING TRANSMITTER
PIV	POST INDICATOR VALVE
PL	PLATE
PLC	PROGRAMMABLE LOGIC CONTROLLER
PLCS	PLACES
POC	POINT OF CONNECTION
POE	POINT OF ENTRY
POJ	PUSH ON JOINT
PP	POWER POLE
PPE	PERSONAL PROTECTIVE EQUIPMENT
PRV	PRESSURE REDUCING VALVE
PSF	POUNDS PER SQUARE FOOT
PSI	POUNDS PER SQUARE INCH
PSIA	POUNDS PER SQUARE INCH ABSOLUTE
PSID	POUNDS PER SQUARE INCH DIFFERENTIAL
PSIG	POUNDS PER SQUARE INCH GAUGE
PSV	PRESSURE SUSTAINING VALVE
PT	PRESSURE TREATED, POTENTIAL TRANSFORMER
PV	PLUG VALVE
PVC	POLYVINYL CHLORIDE
PVMT	PAVEMENT
PWR	POWER
R	RADIUS
R/W, ROW	RIGHT–OF–WAY
RCP	REINFORCED CONCRETE PIPE
RCPT	RECEPTACLE
RD	ROAD
RED	REDUCER
REF	REFERENCE
REINF	REINFORCEMENT, REINFORCING
REQ, REQ'D	REQUIRED
RGS	RIGID GALVANIZED STEEL
RJ	RESTRAINED JOINT
RM	REMOTE MULTIPLEXING MODULE
RMS	ROOT MEAN SQUARE
RPZ	REDUCED PRESSURE ZONE
RT	RIGHT
RTU	REMOTE TELEMETRY UNIT
S	SOUTH
SARV	SURGE ANTICIPATOR RELIEF VALVE
SBC	STANDARD BUILDING CODE
SCH	SCHEDULE
SCJ	SAW CUT JOINT
SDI	STEEL DECK INSTITUTE
SE	SOUTH EAST
SEC	SECOND
SF	SLOWER–FASTER
SHEC	SHOULDERED–END COUPLING
SHT	SHEET
SIM	SIMILAR
SJI	STEEL JOINT INSTITUTE
SM	STATIC MIXER
SP	SPACING, SPACED
SPD	SURGE PROTECTIVE DEVICE
SQ	SQUARE
SR	STATE ROAD, SURGE RELIEF
SRV	SURGE RELIEF VALVE
SS	START–STOP
SS, SST	STAINLESS STEEL
SSC	SUPERVISORY SET POINT CONTROL
SSRV	SOLID STATE REDUCED VOLTAGE
ST	SHUNT TRIP
ST	STREET
STA	STATION
STD	STANDARD
STL	STEEL
STS	STORMWATER SEWER
SW	SOUTH WEST, SWITCH
SWD	SIDE WATER DEPTH
SWJ	SOLVENT WELD JOINT
SWPPP	STORM WATER POLLUTION PREVENTION PLAN
SY	SQUARE YARD
T, THK	THICK
T/	TOP OF
T/B,T&B	TOP AND BOTTOM
TBM	TEMPORARY BENCHMARK
TEMP	TEMPERATURE
TGS	THREADED GALVANIZED STEEL
TGSP	THREADED GALVANIZED STEEL PIPE
TH	TOTAL HEAD
THD	THREADED
TJB	TERMINAL JUNCTION BOX
TK	TANK
TOC	TOP OF CONCRETE
TOS	TOP OF STRCTURE
TOSJ	TOP OF STEEL JOIST
TOW	TOP OF WALL
TS	TUBULAR STEEL
TSF	THICKENED SLAB FOOTING
TSP	TWISTED SHIELDED PAIR
TURB	TURBIDITY
TYP	TYPICAL
UG	UNDERGROUND
UL	UNDERWRITER'S LABORATORIES
ULC	ULTRASONIC LEVEL CONTROLLER
UNO	UNLESS NOTED OTHERWISE
UPS	UNINTERRUPTIBLE POWER SUPPLY
V	VOLTAGE, VOLTS
VERT	VERTICAL
VFD	VARIABLE FREQUENCY DRIVE
VH	VAPOR HEATER
VIB	VIBRATION
VIF	VERIFY IN FIELD
VP	VAPORIZER
W	WIDE, WATT
W/	WITH
W/O	WITHOUT
WCJ	WALL CONTROL JOINT
WF	WALL FOOTING
WGT	WEIGHT
WP	WORK POINT, WEATHERPROOF
WSE, WSEL	WATER SURFACE ELEVATION
WT	WEIGHT
WV	WATER VALVE
WWF	WELDED WIRE FABRIC
XFMR	TRANSFORMER
XS	EXTRA STRONG

CUSTOM ABBREVIATIONS

A/L	ACCESS LID
RCW	RECLAIMED WATER
SWFWMD	SOUTHWEST FLORIDA WATER MANAGEMENT DISTRICT
NFMIP	NORTH FLORIDA MEGA INDUSTRIAL PARK

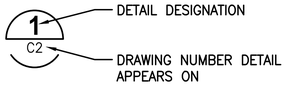


SECTION DESIGNATION



INDICATES ONE OR MORE SECTIONS CUT SHOWN ON THE SAME DETAIL

SECTION DESIGNATION



DETAIL DESIGNATION

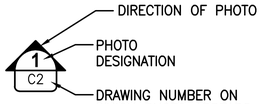


PHOTO DESIGNATION

NOTES:

1. SEE LEGENDS AND PIPE SCHEDULE FOR ADDITIONAL ABBREVIATIONS.
2. NOT ALL ABBREVIATIONS MAY BE USED FOR THIS PROJECT.

VE GMP-2

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LTR.	DATE	REVISIONS	BY	APPRD.
VE	11/2022	VE GMP-1	LYC	TWF

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DRAWN JKRAMER
CHECKED SMENARD

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NORTH FLORIDA MEGA INDUSTRIAL PARK
WASTEWATER TREATMENT PLANT
COLUMBIA COUNTY, FLORIDA

ABBREVIATIONS & DESIGNATIONS

Thomas W. Friedrich, State of Florida, Professional Engineer, License No. 61281

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PROJECT NO:	DATE:
03780-001-01	DEC. 2022
INDEX NO:	DWG NO: G3

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MECHANICAL LEGEND

CIVIL LEGEND

- 90 — CONTOURS
- CENTERLINE
- DEMO HATCH
- SF — SF — SILT FENCE
- FOC — FOC — FIBER OPTIC CONDUIT
- FM — FORCE MAIN
- SAN — SANITARY GRAVITY MAIN
- W — W — W — WATER MAIN
- SANITARY MANHOLE
- +100.00 — SPOT ELEVATION
- COORDINATE POINT
- CONCRETE
- COMPACTED SOIL
- GRAVEL
- CONCRETE SIDEWALK RESTORATION
- ASPHALT RESTORATION

NOTE:
EXISTING PIPE, EQUIPMENT, AND FEATURES ARE SHOWN IN THE DRAWINGS AS LIGHT–LINED AND/OR SCREENED. PROPOSED PIPE, EQUIPMENT, AND FEATURES ARE SHOWN IN THE DRAWINGS AS HEAVY–LINED. ABOVE GRADE PIPE, EQUIPMENT, AND FEATURES ARE SHOWN IN DRAWINGS AS SOLID–LINED. BELOW GRADE PIPE, EQUIPMENT, AND FEATURES ARE SHOWN IN DRAWINGS AS DASHED–LINED. SEE BELOW EXAMPLES:

- EXISTING PIPE (ABOVE GRADE)
- PROPOSED PIPE (ABOVE GRADE)
- PROPOSED PIPE (BELOW GRADE)
- 90 — EXISTING CONTOUR
- FIRE HYDRANT

DOUBLE LINE	SINGLE LINE	
		PIPE
		WELDED PIPE
		FLANGED JOINT
		MECHANICAL JOINT OR PUSH–ON JOINT
		FLEXIBLE COUPLING ADAPTER
		EXPANSION JOINT
		HUB & SPIGOT JOINT
		BALL JOINT
		FLANGED COUPLING ADAPTER W/ THRUST TIES
		FLEXIBLE COUPLING WITH THRUST TIES
		BLIND FLANGE
		ELBOW UP
		ELBOW DOWN
		TEE UP
		TEE DOWN
		FEMALE QUICK DISCONNECT FITTING
		MALE QUICK DISCONNECT FITTING

PIPING SYMBOLS

DOUBLE LINE	SINGLE LINE	
		LATERAL UP
		LATERAL DOWN
		CONCENTRIC REDUCER
		ECCENTRIC REDUCER
		UNION
		CAP
		ANCHOR
		WYE
		TEE
		CROSS
		ELBOW, 90 DEGREE
		ELBOW, 45 DEGREE
		ELBOW, 22.5 DEGREE
		ABANDON IN PLACE
		DEMOLISH (AND REMOVE)

VALVE SYMBOLS

- GATE
- BUTTERFLY
- BALL
- CHECK
- PLUG
- AIR RELEASE AND/ OR VACUUM RELIEF
- REGULATED SIDE
- HYDRAULIC CONTROL VALVE

ACTUATOR SYMBOLS

- M / XX — ELECTRIC MOTOR
- EH / XX — ELECTROHYDRAULIC
- P / XX — PNEUMATIC
- H / XX — HYDRAULIC
- S — SOLENOID
- MANUAL

NOTE:
ON LOSS OF PRIMARY POWER (PNEUMATIC, ELECTRICAL OR HYDRAULIC)
XX: FO = FAIL OPEN
FC = FAIL CLOSED
FLP = FAIL TO LAST POSITION

PIPE SUPPORT SYMBOLS

- ▲ U–BOLT PIPE SUPPORT
- △ FLANGED PIPE SUPPORT

PIPING DESIGNATION

EXAMPLE:

VALVE DESIGNATION

V100	AIR RELEASE VALVE
V200	BALL VALVE
V300	BUTTERFLY VALVE
V400	CHECK VALVE
V500	DIAPHRAGM VALVE
V600	GATE VALVE
V700	GLOBE OR ANGLE VALVE
V800	PINCH VALVE
V900	PLUG VALVE
V1000	SOLENOID VALVE
V1100	SPECIAL TYPE OF VALVE

VE GMP-2

VE LTR.	11/2022 DATE	VE GMP–1 REVISIONS	LYC BY	TWF APPRD.

DESIGNED TFRIEDRICH
DRAWN JKRAMER
CHECKED SMENARD

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NORTH FLORIDA MEGA INDUSTRIAL PARK
WASTEWATER TREATMENT PLANT
COLUMBIA COUNTY, FLORIDA

LEGENDS

Thomas W. Friedrich, State of Florida, Professional Engineer, License No. 61281

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PIPE SCHEDULE

ABBREVIATION	FLOW STREAM IDENTIFICATION	PIPE/DUCT MATERIAL	SCHEDULE/CLASS	PIPE MATERIAL ABBREV	SPECIFICATION NUMBER	PIPE LINING	NORMAL MAX OPERATING PRESSURE (PSIG)	FIELD TEST PRESSURE (PSIG)	EXPOSED PIPE PAINT SYSTEM	COLOR CODE *	SPECIFIC NOTES	RESTRAINT SYSTEM NOTES
CF–1	CARBON FEED	POLYVINYL CHLORIDE	SCH 80	PVC	15250	N/A	40	100		ORANGE		
DR–1	DRAIN	POLYVINYL CHLORIDE	SDR 35	PVC	15250	N/A	5	5		LT BROWN		(2)
DR–2	DRAIN	HIGH DENSITY POLYETHYLENE	DR 17	HDPE	15146	N/A	5	5		LT BROWN		(2)
DR–3	DRAIN	DUCTILE IRON	PC 150	DI	15062	EPOXY	5	5		LT BROWN		(2)
DS–1	DIGESTED SLUDGE	DUCTILE IRON	PC 250	DI	15155	EPOXY	15	100		BROWN		(2)
EQ–1	EQ EFFLUENT	DUCTILE IRON	PC 250	DI	15155	EPOXY	15	100		BROWN		(2)
IN–1	INFLUENT–FORCE MAIN	POLYVINYL CHLORIDE	C–900	PVC	15250	N/A	50	100	2, 51	BROWN		(2)
IN–2	INFLUENT	HIGH DENSITY POLYETHYLENE	DR 21	HDPE	15146	N/A	50	100	2	BROWN		(2)
IN–3	INFLUENT	DUCTILE IRON	PC 250	DI	15155	EPOXY	50	100	2	BROWN		(2)
IR–1	INTERNAL RECYCLE	DUCTILE IRON	PC 250	DI	15155	EPOXY	15	100		BROWN		(2)
LP–1	LEACHATE	POLYVINYL CHLORIDE	C–900	PVC	15250	N/A	50	100		GREEN		(2)
LP–2	LEACHATE	DUCTILE IRON	PC 250	DI	15155	EPOXY	50	100		GREEN		(2)
LP–3	LEACHATE	HIGH DENSITY POLYETHYLENE TUBING	DR 21	HDPE	15146	N/A	15	100		GREEN	DIPS	(2)
LPA–1	LOW PRESSURE AIR	STAINLESS STEEL	5 S	SST	15276	N/A	15	30		N/A		(2)
NaOCl–1	SODIUM HYPOCHLORITE FEED	POLYVINYL CHLORIDE	SCH 80	PVC	15250	N/A	80	100		YELLOW		(2)
PW–1	POTABLE WATER	POLYVINYL CHLORIDE	SCH 80	PVC	15250	N/A	50	100	6	DARK BLUE	(C)	(2)
PW–2	POTABLE WATER–FIRE	POLYVINYL CHLORIDE	SCH 80	PVC	15291	N/A	80	120	6	DARK BLUE	(C)	(2)
PSD–1	PLANT SITE DRAIN FM	DUCTILE IRON	PC 250	DI	15155	EPOXY	50	100		LT GRAY		(2)
RCW–1	RECLAIMED WATER	POLYVINYL CHLORIDE	C–900	C–900	15155	N/A	70	150		PURPLE	(D)	(2)
RCW–2	RECLAIMED WATER	POLYVINYL CHLORIDE	SCH 80	PVC	15250	N/A	70	150		PURPLE	(D)	(2)
RCW–3	RECLAIMED WATER / SPRAYFIELD	HIGH DENSITY POLYETHYLENE	DR 11–17	HDPE	15146	N/A	50	100	2	PURPLE	(D) (E)	
SA–1	CHLORINE SAMPLE LINE	POLYVINYL CHLORIDE	SCH 80	PVC	15250	N/A	40	100		YELLOW		(2)
SA–2	INFLUENT SAMPLE LINE	POLYVINYL CHLORIDE	SCH 80	PVC	15250	N/A	40	100		GREEN		(2)
SE–1	SECONDARY EFFLUENT	DUCTILE IRON	PC 250	DI	15155	EPOXY	15	50		LT GRAY		(2)
SE–2	SECONDARY EFFLUENT	POLYVINYL CHLORIDE	C–900	PVC	15291	N/A	15	50	51	LT GRAY		(2)

GENERAL NOTES:

1. COAT EXTERIOR OF BURIED PIPE PER SPECIFICATIONS.
2. TEST LINES PER PROCEDURE IN SECTION 15144 UNLESS SPECIFIED AND/OR NOTED OTHERWISE.
3. PAINT SYSTEM PRESENTED IN SECTION 09900.
4. ALL HDPE PIPING SHALL BE IN ACCORDANCE WITH SPECIFICATION 15146, UNLESS NOTED OTHERWISE.
5. FLOW STREAM IDENTIFICATION SHALL BE PAINTED ON ALL ABOVE GRADE PIPING AS SPECIFIED.
6. FIELD TEST PRESSURE SHALL BE EITHER 1.5 MAX PRESSURE OR 100 PSI PER SPECIFICATIONS, SECTION 15.144–1.06 A.
7. LABEL ALL PIPING PER SECTION 15075.

RESTRAINT SYSTEM NOTES:

(1) RESTRAIN AT FITTINGS AND VALVES.
(2) RESTRAIN ALL JOINTS, FITTINGS, AND VALVES, ETC. INCLUDING NEW TO EXISTING.
(3) RESTRAIN JOINTS, FITTINGS, VALVES, ETC. IN ACCORDANCE WITH THRUST RESTRAIN SCHEDULE IN THE DETAIL DRAWINGS.

SPECIFIC NOTES:

(A) HYDROSTATIC PRESSURE TEST.
(B) PNEUMATIC PRESSURE TEST.
(C) DISINFECTION PIPING PER SPEC.
(D) PANTONE PURPLE
(E) 12" HDPE IS INSTALLED BELOW GRADE.

* SPECIFIC COLORS TO MATCH SPECIFICATIONS.

VE GMP-2

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NORTH FLORIDA MEGA INDUSTRIAL PARK
WASTEWATER TREATMENT PLANT
COLUMBIA COUNTY, FLORIDA

PIPE SCHEDULE

Thomas W. Friedrich, State of Florida, Professional Engineer, License No. 61281

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GENERAL NOTES

REFERENCED DATA

1. TOPOGRAPHIC SURVEY PERFORMED BY MOORE BASS CONSULTING, A FLORIDA LICENSED PROFESSIONAL LAND SURVEYOR, DATED 04/20/2020.
2. ALL ELEVATIONS ARE BASED ON THE NORTH AMERICAN VERTICAL DATUM (NAVD 88) AND REFERENCED TO COUNTY BENCHMARK. THE HORIZONTAL DATUM IS BASED ON STATE PLANE WEST ZONE, NAD83 (1990), 3RD ORDER.
3. THE SURVEY INFORMATION CONTAINED HEREIN WAS OBTAINED FOR DESIGN PURPOSES AND MAY NOT BE AN ADEQUATE REPRESENTATION OF ACTUAL CONDITIONS FOR PROJECT CONSTRUCTION. EXISTING CONTOURS SHOWN REPRESENT INTERPOLATIONS/EXTRAPOLATIONS FROM THE BEST AVAILABLE SURVEY DATA. ALL RISKS RESULTING FROM THE USE OR INTERPRETATION OF THE SURVEY DATA SHOWN SHALL BE BORNE BY THE CONTRACTOR.
4. GEOTECHNICAL INVESTIGATION AND RECOMMENDATIONS PERFORMED BY GSE ENGINEERING & CONSULTING, INC. REFER TO REPORTS DATED DECEMBER 2021.
5. LAND LEASE FOR SPRAYFIELD PROPERTY IN ACCORDANCE WITH WEYERHAEUSER AGREEMENT DATED DECEMBER 2021.

GENERAL

6. THE CONTRACTOR SHALL COMPLY WITH ALL CONDITIONS AND REQUIREMENTS OF ALL PERMITS (FDEP, SWFWMD, ETC) OBTAINED FOR THIS PROJECT.
7. CONSTRUCTION MATERIALS QUALITY AND WORKMANSHIP SHALL BE IN ACCORDANCE WITH THE PROJECT AND THE REGULATIONS AND ORDINANCES OF THE VARIOUS GOVERNMENTAL AGENCIES HAVING JURISDICTION OVER THE WORK.
8. THE CONTRACTOR IS ADVISED NOT TO SCALE FROM DRAWINGS BUT TO FIELD VERIFY ALL DIMENSIONS. THE DIMENSIONS OF SPECIFIED AND FURNISHED PRODUCTS AND MATERIALS TAKE PRECEDENCE OVER DIMENSIONS INDICATED ON THE DRAWINGS. IF SIGNIFICANT DEVIATIONS OCCUR, THE CONTRACTOR SHALL NOTIFY THE ENGINEER AT LEAST 72 HOURS PRIOR TO CONSTRUCTION FOR A DETERMINATION AND RESOLUTION.
9. THE CONTRACTOR SHALL BE RESPONSIBLE FOR DOCUMENTING AND MAINTAINING AS-BUILT INFORMATION WHICH SHALL BE RECORDED AS CONSTRUCTION PROGRESSES OR AT THE COMPLETION OF APPROPRIATE CONSTRUCTION INTERVALS AND SHALL BE RESPONSIBLE FOR PROVIDING CERTIFIED AS-BUILT RECORD DRAWINGS TO THE OWNER AND ENGINEER FOR THE PURPOSE OF CERTIFICATION TO JURISDICTIONAL AGENCIES AS REQUIRED. ALL AS-BUILT DATA SHALL BE COLLECTED BY A STATE OF FLORIDA PROFESSIONAL LAND SURVEYOR WHOSE SERVICES ARE ENGAGED BY THE CONTRACTOR. ALL SURVEY COSTS WILL BE THE CONTRACTOR'S RESPONSIBILITY.

CONSTRUCTION LAYOUT/LIMITS OF CONSTRUCTION

10. THE CONTRACTOR SHALL OBTAIN THE SERVICES OF A FLORIDA LICENSED LAND SURVEYOR FOR LAYOUT. PROOF OF LICENSE SHALL BE SUBMITTED TO THE ENGINEER BEFORE BEGINNING LAYOUT.
11. NO DISTURBANCE SHALL BE ALLOWED OUTSIDE OF THE RIGHT OF WAYS AND/OR THE LIMITS OF CONSTRUCTION SHOWN ON THE DRAWINGS UNLESS APPROVED BY THE OWNER OR SPECIFICALLY NOTED ON THE DRAWINGS.

EXISTING CONDITIONS

12. EXISTING UTILITIES SHOWN ARE LOCATED ACCORDING TO THE BEST INFORMATION AVAILABLE TO THE ENGINEER AT THE TIME OF THE DESIGN AND HAVE NOT BEEN INDEPENDENTLY VERIFIED BY THE OWNER OR THE ENGINEER. NO GUARANTEE IS MADE THAT ALL EXISTING UNDERGROUND UTILITIES ARE SHOWN OR THAT THE LOCATIONS OF THOSE SHOWN ARE ENTIRELY ACCURATE. FINDING THE ACTUAL LOCATION OF ANY EXISTING UTILITIES IS THE CONTRACTOR'S RESPONSIBILITY AND SHALL BE DONE BEFORE HE COMMENCES ANY WORK IN THE VICINITY. FURTHERMORE, THE CONTRACTOR SHALL BE FULLY RESPONSIBLE FOR ANY AND ALL DAMAGES DUE TO THE CONTRACTOR'S FAILURE TO PRECISELY LOCATE AND PRESERVE ANY AND ALL UNDERGROUND UTILITIES. THE OWNER OR ENGINEER WILL ASSUME NO LIABILITY FOR ANY DAMAGES SUSTAINED OR COST INCURRED BECAUSE OF THE OPERATIONS IN THE VICINITY OF EXISTING UTILITIES OR STRUCTURES, NOR FOR TEMPORARY BRACING AND SHORING OF SAME. IF IT IS NECESSARY TO SHORE, BRACE, SWING OR RELOCATED A UTILITY, THE UTILITY COMPANY OR DEPARTMENT AFFECTED SHALL BE CONTACTED AND THEIR PERMISSION OBTAINED REGARDING THE METHOD OF USE FOR SUCH WORK.
13. PRIOR TO SHOP DRAWING PREPARATION AND SUBMITTAL AND PURCHASE OF RELATED MATERIALS, THE CONTRACTOR SHALL FIELD VERIFY EXISTING UTILITIES (LOCATION, SIZE, MATERIALS OF CONSTRUCTION, OUTSIDE DIAMETER, WALL THICKNESS, ROUNDNESS, ELEVATIONS, ETC.) TO WHICH CONNECTION(S) WILL BE MADE. CONTRACTOR SHALL INCLUDE FIELD MEASUREMENTS ON SHOP DRAWINGS.
14. THE CONTRACTOR SHALL NOTIFY THE OWNER AND ENGINEER IN WRITING IMMEDIATELY IF CONFLICTS BETWEEN THE DRAWINGS AND ACTUAL CONDITIONS ARE DISCOVERED. THE CONTRACTOR SHALL ACCURATELY RECORD ANY SUCH CONFLICTS ON THE RECORD DRAWINGS.
15. ANY PROPERTY CORNERS, MONUMENTS, OR BENCH MARKS WITHIN THE PROJECT AREA SHALL BE PROTECTED UNLESS OTHERWISE INDICATED FOR DEMOLITION. IF ANY SUCH ITEMS ARE IN DANGER OF DAMAGE OR HAVE BEEN DAMAGED, THE CONTRACTOR SHALL NOTIFY THE OWNER AND THE ENGINEER IMMEDIATELY AND REPLACE/RESTORE THESE ITEMS AT NO ADDITIONAL COST TO THE OWNER. IF OWNER CHOOSES TO SELF PERFORM THE WORK OR INCURS RELATED EXPENSES, THE CONTRACTOR SHALL REIMBURSE THE OWNER FOR ALL COSTS ASSOCIATED WITH THE EFFORT.

UTILITY COORDINATION

16. THE CONTRACTOR SHALL NOTIFY ALL UTILITIES NEAR THE PROJECT AREA AT LEAST 48 HOURS PRIOR TO CONSTRUCTION. THIS SHALL INCLUDE NOTIFYING "SUNSHINE STATE ONE CALL OF FLORIDA" AT LEAST 48 HOURS PRIOR TO ANY DIGGING WORK TO HAVE ALL EXISTING UTILITIES LOCATED. THE PHONE NUMBER IS 811 OR 1-800-432-4770 AND THE WEB SITE IS WWW.SUNSHINE811.COM. IN INSTANCES WHERE DIGGING OCCURS IN WETLANDS, THE NOTIFICATION PERIOD SHALL BE INCREASED FROM AT LEAST 48 HOURS TO AT LEAST 10 DAYS.
17. FLORIDA LAW (FS 553.851) REQUIRES THAT PERSONS MAKING EXCAVATIONS IN PUBLIC STREETS, ALLEYS, RIGHT-OF-WAYS OR UTILITY EASEMENTS MUST FIRST OBTAIN INFORMATION ON LOCATIONS OF UNDERGROUND GAS PIPELINES.
18. THE CONTRACTOR SHALL PRESERVE AND MAINTAIN EXISTING UTILITIES, STRUCTURES, AND OTHER FEATURES WITHIN THE PROJECT AREA. ANY DAMAGE SHALL BE REPAIRED BY AND AT THE EXPENSE OF THE CONTRACTOR TO THE SATISFACTION OF THE OWNER.
19. THE CONTRACTOR IS RESPONSIBLE FOR BRACING, SHORING, OR PROVIDING OTHER MEANS NECESSARY TO PROTECT AND SUPPORT EXISTING UTILITIES, STRUCTURES, AND OTHER FEATURES (EXPOSED OR UNEXPOSED) THAT MAY BE IMPACTED BY HIS WORK.
20. THE CONTRACTOR SHALL BE RESPONSIBLE FOR CONTACTING POWER/TELEPHONE COMPANIES AND ARRANGING TO HAVE UTILITIES POLES HELD AND/OR GUY WIRES REMOVED AND REPLACED, IF NECESSARY FOR CONSTRUCTION, AT NO ADDITIONAL COST TO THE OWNER.

SAFETY

21. IT IS THE RESPONSIBILITY OF THE CONTRACTOR TO BECOME FAMILIAR WITH THE OSHA EXCAVATION SAFETY STANDARDS AND TO ABIDE BY THEM AS COVERED UNDER THE FLORIDA TRENCH SAFETY ACT.
22. THE CONTRACTOR SHALL BE SOLELY RESPONSIBLE FOR CONSTRUCTION SAFETY.

RESTORATION

23. ALL PAVING, STABILIZED EARTH, DRIVEWAYS, CURBS, SIDEWALKS, FENCES, SOD, LANDSCAPING, CULVERTS, ETC. DISTURBED BY CONSTRUCTION ACTIVITIES SHALL BE RESTORED BY AND AT THE EXPENSE OF THE CONTRACTOR TO THE SATISFACTION OF THE OWNER.
24. ALL SODDING, SEEDING AND MULCHING SHALL INCLUDE WATERING AND FERTILIZATION AND CONTRACTOR SHALL BE RESPONSIBLE FOR MAINTAINING THESE AREAS UP TO AND INCLUDING THE INITIAL MOWING.

ACCESS/MAINTENANCE OF FACILITIES

25. THE CONTRACTOR SHALL PROVIDE ACCESS TO ALL EXISTING UTILITIES/FACILITIES AND MAINTAIN UNINTERRUPTED SERVICES THROUGHOUT THE CONTRACT PERIOD.

PIPING NOTES

26. LAY PIPE TO UNIFORM GRADE BETWEEN INDICATED ELEVATION POINTS. CONTRACTOR SHALL TAKE CARE TO PROVIDE PROPER GRADE ELEVATIONS AND ALIGNMENTS.
27. SIZE OF FITTINGS SHOWN ON PLANS SHALL CORRESPOND TO THE ADJACENT STRAIGHT RUN OF PIPE UNLESS NOTED OTHERWISE. TYPE OF JOINT AND FITTING MATERIAL SHALL BE AS SPECIFIED FOR THE ADJACENT STRAIGHT RUN OF PIPE UNLESS NOTED OTHERWISE.
28. PIPE HANGERS AND SUPPORTS SHOWN ARE THE MINIMUM REQUIRED. FINAL SUPPORTS, LOCATIONS, AND TYPES SHALL BE DETERMINED BY THE CONTRACTOR AND INCLUDED IN THE PIPELINE DRAWING SUBMITTALS FOR REVIEW AND APPROVAL BY THE ENGINEER PRIOR TO INSTALLATION. MAXIMUM SPACING SHALL BE AS SPECIFIED.
29. THE CONTRACTOR SHALL VERIFY IN THE FIELD THE LOCATION AND ELEVATION OF ALL EXISTING UTILITY CONNECTION POINTS PRIOR TO STARTING CONSTRUCTION AND SHALL IMMEDIATELY NOTIFY THE ENGINEER AND OWNER OF ANY DISCREPANCIES FOUND.
30. ALL PIPE 4" AND LARGER SHALL BE RESTRAINED UTILIZING MECHANICAL RESTRAINT DEVICES.
31. ALL ABOVE GROUND AND EXPOSED PSW PIPING 1 1/2" AND SMALLER SHALL BE INSULATED AND COVERED AS SPECIFIED.

UTILITY SEPARATION

32. EACH PROPOSED UTILITY SHALL BE LAID TO ACHIEVE THE MINIMUM HORIZONTAL SEPARATION BETWEEN IT AND OTHER UTILITIES IN ACCORDANCE WITH THE TYPICAL UTILITY HORIZONTAL SEPARATION DETAIL 2 SHEET ### AND FDEP REQUIREMENTS.
33. AT LOCATIONS WHERE A PROPOSED UTILITY CROSSES ANOTHER UTILITY, THE PROPOSED UTILITY SHALL BE INSTALLED IN ACCORDANCE WITH THE TYPICAL UTILITY CONFLICT DETAIL AND FDEP REQUIREMENTS (62-555-314).
34. THE LOWEST PIPE SHALL BE INSTALLED FIRST WHERE PROPOSED UTILITIES CROSS.
35. IN THE EVENT THAT A UTILITY CONFLICT CAN NOT BE RESOLVED BY MAKING A MINOR ROUTE ADJUSTMENT OR BY UTILIZING THE TYPICAL UTILITY CONFLICT DETAIL, THE CONTRACTOR SHALL SUBMIT A RELOCATION PLAN TO THE ENGINEER FOR APPROVAL PRIOR TO COMMENCING WORK. ALL RELOCATIONS EFFORTS SHALL BE SUBJECT TO THE APPROVAL OF THE ENGINEER AND ANY AFFECTED UTILITY COMPANIES.

UTILITY CONTACT INFORMATION:

ORGANIZATION	CONTACT AND TITLE	TELEPHONE NUMBER
COMCAST CABLE COMMUNICATIONS	ANDREW SWEENEY	904-738-6898
FLORIDA POWER & LIGHT - COLUMBIA	JOEL BRAY	386-586-6403
CITY OF LAKE CITY UTILITIES	BRIAN SCOTT	386-758-5456
LAKE CITY NATURAL GAS / PUBLIC WORKS	DIANE HUNT	386-758-5405
MCI	MCIU01 INVESTIGATIONS	469-886-4091
TECO PEOPLES GAS JACKSONVILLE	-	877-832-6747
AT&T DISTRIBUTION	DINO FARRUGGIO	561-683-2729
CORECIVIC, LAKE CITY CORRECTIONAL FACILITY FOR YOUTHFUL OFFENDERS 7906 EAST HWY. 90 LAKE CITY, FL 32055	RICKY BELL MAINTENANCE SUPERVISOR	386-755-3379
COLUMBIA CORRECTIONAL INSTITUTE, FDC	JOHN GOODWIN, WARDEN	386-754-7600

VE GMP-2

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WASTEWATER TREATMENT PLANT
COLUMBIA COUNTY, FLORIDA

GENERAL NOTES

Thomas W. Friedrich, State of Florida, Professional Engineer, License No. 61281

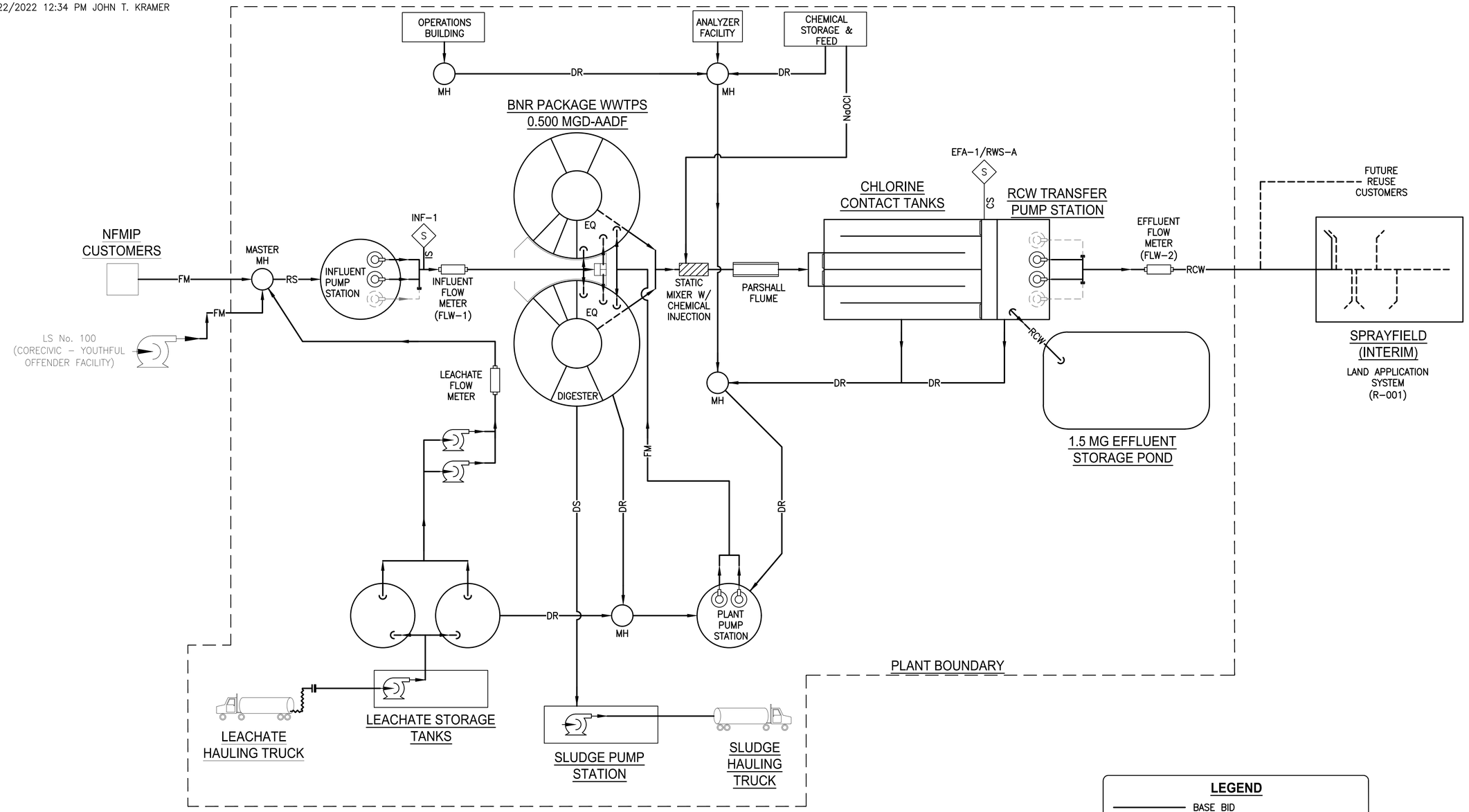
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FLOWSTREAM IDENTIFICATION	
—CS—	CHLORINE SAMPLE
– –DR–	DRAIN
– –DS–	DIGESTED SLUDGE
– – FM –	FORCE MAIN
– –IS– –	INFLUENT SAMPLE
— NaOCl —	SODIUM HYPOCHLORITE
– –RS–	RAW SEWAGE
– –RCW–	RECLAIMED WATER

LEGEND

- BASE BID
- FUTURE
- ELECTROMAGNETIC FLOWMETER
- PUMP (DRY PIT)
- PUMP (WET PIT)
- S — SAMPLE
- INF-01 — MONITORING SITE NUMBER

VE GMP-2

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WASTEWATER TREATMENT PLANT
COLUMBIA COUNTY, FLORIDA

PROCESS FLOW SCHEMATIC

Thomas W. Friedrich, State of Florida, Professional Engineer, License No. 61281

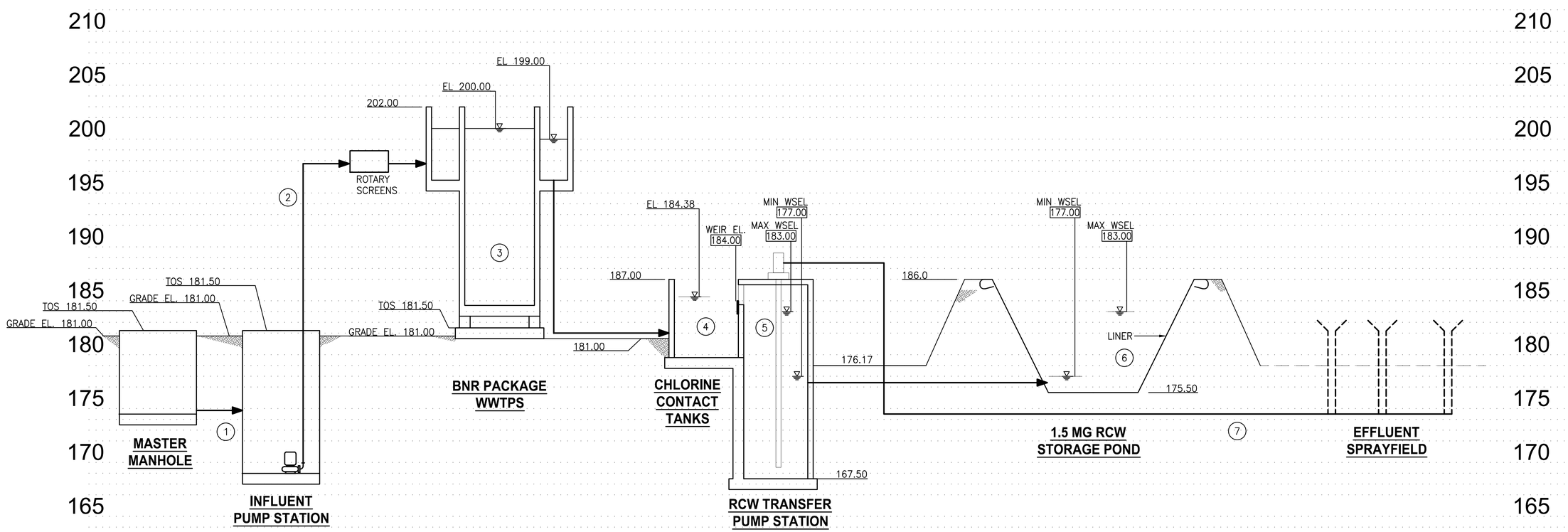
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TREATMENT PLANT DESIGN FLOW

DESIGN FLOW	MGD
AADF	0.50
PHF	1.50
START UP	0.15
PLANT PS	0.04
LEACHATE FLOW	0.01
TRANSFER PUMP STA.	0.50

NOTES:

1. DESIGN FLOWS SHOWN REPRESENT THE TOTAL FLOWS BEING TREATED BY THE NUMBER OF UNITS IN SERVICE FOR EACH UNIT PROCESS STRUCTURE.
2. ACCOUNTS FOR 0.500 MG OF EQUALIZATION TANKS.
3. PROJECT DESIGNED FOR FUTURE EXPANSIONS. PHASE I BEING CONSTRUCTION. PHASE 3 ELEMENTS THAT WILL REMAIN ARE REFERENCED ABOVE AND USE A PHF OF 4.5 MGD.

FLOW SEGMENT SUMMARY - PHASE 1

FLOW SEGMENT No	UNIT PROCESS STRUCTURE	DESIGN FLOW (MGD)	No OF UNITS IN SERVICE	DESIGN FLOW CRITERIA
(1)	INFLUENT PUMPING STATION	1.50	1	PHF
(2)	SCREENS & SPLITTER BOX	1.55	1	PHF + PLANT PS + LEACHATE
(3)	BNR PACKAGE WWTP	0.375 EA.	2	PHF + MAX RAS FLOW + PLANT PS + LEACHATE
(4)	CHLORINE CONTACT TANKS (SEE NOTE 3)	1.5	1	PHF
(5)	TRANSFER PUMP STATION	1	1	PHF
(6)	RCW STORAGE POND	1.50	1	PHF
(7)	EFFLUENT SPRAYFIELD	0.50	1	AADF

LEGEND

- XX.XX — WSEL AT DESIGN FLOW (NAVD88)
- WSEL
- PROPOSED GRADE
- EXISTING GRADE
- (XX) — FLOW SEGMENT NO.

VE GMP-2

LTR.	DATE	REVISIONS	BY	APPRD.
VE	11/2022	VE GMP-1	LYC	TWF

DESIGNED TFRIEDRICH
DRAWN JKRAMER
CHECKED SMENARD

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NORTH FLORIDA MEGA INDUSTRIAL PARK
WASTEWATER TREATMENT PLANT
COLUMBIA COUNTY, FLORIDA

HYDRAULIC PROFILE

Thomas W. Friedrich, State of Florida, Professional Engineer, License No. 61281

This item has been digitally signed and sealed by Thomas W. Friedrich on the date indicated on the Cover Page (G1) and M1.

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PROJECT NO: 03780-001-01
DATE: DEC. 2022
INDEX NO:
DWG NO: G8

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GENERAL NOTES:

1. EXISTING TOPOGRAPHY AND IMPROVEMENTS SHOWN ARE BASED ON SURVEY BY MOORE BASS CONSULTING AND LIDAR (BY OTHERS).

2. ALL CONSTRUCTION SHALL BE IN ACCORDANCE WITH:
   - FDOT SPECIFICATIONS FOR ROAD AND BRIDGE CONSTRUCTION, CURRENT EDITION;
   - FDOT MANUAL OF UNIFORM MINIMUM STANDARDS FOR DESIGN, CONSTRUCTION AND MAINTENANCE FOR STREETS AND HIGHWAYS (GREEN BOOK);

3. THE FDOT DESIGN STANDARDS (CURRENT EDITION) ARE INCORPORATED IN THESE PLANS BY REFERENCE.

4. IN THE EVENT OF CONFLICTING SPECIFICATIONS, THE MORE CONSERVATIVE OR RESTRICTIVE SPECIFICATION SHALL GOVERN.

5. CONTRACTOR IS RESPONSIBLE TO BE FAMILIAR WITH THE EXISTING CONDITIONS OF THE SITE PRIOR TO CONSTRUCTION.

6. CONTRACTOR SHALL RETURN ALL AREAS DISTURBED DURING THE CONSTRUCTION TO ORIGINAL OR BETTER CONDITION. ITEMS TO BE REPLACED INCLUDE BUT ARE NOT LIMITED TO: CONCRETE PAVEMENT, BASE, ASPHALT PAVEMENT, SOD, LANDSCAPING, WALKS, PAVEMENT MARKINGS, ETC. ALL REPLACEMENT ITEMS SHALL BE INSTALLED TO MATCH EXISTING REMAINDER WITH REGARD TO COLOR, FINISH SIZE, DEPTH, THICKNESS, TYPE AND QUALITY.

7. CONTRACTOR SHALL OBTAIN (FROM ENGINEER OF RECORD) AND REVIEW ALL AVAILABLE GEOTECHNICAL REPORTS PRODUCED FOR THE SITE PRIOR TO COMMENCEMENT OF CONSTRUCTION INCLUDING GEOTECHNICAL REPORT(S) NOTED ABOVE. THE CONTRACTOR IS RESPONSIBLE FOR DETERMINING SITE SOIL CONDITIONS AND PREPARATION OF DEWATERING PLAN FOR APPROVAL BY THE SUWANNEE RIVER WATER MANAGEMENT DISTRICT AND COLUMBIA COUNTY ENGINEER PRIOR TO CONSTRUCTION.

8. ALL DIMENSIONS ARE FROM EDGE OF PAVEMENT UNLESS OTHERWISE NOTED.

9. CONTRACTOR IS RESPONSIBLE FOR CONSTRUCTION STAKEOUT AND TESTING. COPIES OF ALL TEST RESULTS FOR SITE WORK SHALL BE PROVIDED TO THE ENGINEER OF RECORD AND COUNTY ENGINEER.

10. THE LOCATION OF ALL EXISTING UTILITIES SHALL BE VERIFIED BY THE CONTRACTOR PRIOR TO CONSTRUCTION COMMENCEMENT. ANY CONFLICTS WITH PROPOSED IMPROVEMENTS SHALL BE REPORTED TO THE ENGINEER OF RECORD IMMEDIATELY. (SUNSHINE ONE 1-800-432-4770)

11. CONTRACTOR IS RESPONSIBLE FOR PROVIDING SIGNED AND SEALED AS-BUILTS SHOWING ALL IMPROVEMENTS CONSTRUCTED UNDER THIS CONTRACT. AS-BUILTS SHALL INCLUDE BOTH ABOVE GROUND AND BURIED UTILITIES INCLUDING ANY EXISTING UTILITIES NOT SHOWN ON THESE PLANS BUT ENCOUNTERED DURING CONSTRUCTION PROCESS. AS-BUILTS SHALL BE SIGNED AND SEALED BY A FLORIDA REGISTERED SURVEYOR. CONTRACTOR SHALL CONTACT ENGINEER OF RECORD FOR SPECIFIC REQUIREMENTS. CONTRACTOR SHALL ALSO PROVIDE FULL AS-BUILT SURVEY IN AUTOCAD ELECTRONIC FORMAT.

12. CONTRACTOR IS RESPONSIBLE FOR MAINTAINING SAFE VEHICULAR AND PEDESTRIAN ACCESS ROUTED AROUND THE PROPOSED CONSTRUCTION AREA THROUGHOUT THE CONSTRUCTION SEQUENCE. A MAINTENANCE OF TRAFFIC PLAN SHALL BE PREPARED BY THE CONTRACTOR AND SUBMITTED TO THE FDOT DISTRICT 2 OFFICE FOR APPROVAL PRIOR TO COMMENCEMENT OF CONSTRUCTION ACTIVITIES.

13. THE CONTRACTOR SHALL NOT SUBSTITUTE ANY ARTICLE, DEVICE, PRODUCT, MATERIAL, FIXTURE, OR ANY FORM OR TYPE OF CONSTRUCTION, FOR THAT WHICH IS INDICATED IN THE APPROVAL PLANS WITHOUT THE WRITTEN APPROVAL BY THE ENGINEER OF RECORD AND/ OR COUNTY ENGINEER.

14. IN THE EVENT THAT A STRUCTURAL FAILURE (SINK FEATURE) OCCURS DURING CONSTRUCTION, ALL CONSTRUCTION ACTIVITY SHALL CEASE AND A FLORIDA REGISTERED GEOTECHNICAL ENGINEER SHALL BE CONTACTED IMMEDIATELY. A CORRECTIVE MEASURES PLAN MUST BE APPROVED BY THE SUWANNEE RIVER WATER MANAGEMENT DISTRICT AND IMPLEMENTED PRIOR TO RESUMING CONSTRUCTION.

15. IF PREHISTORIC OR HISTORIC ARTIFACTS, SUCH AS POTTERY OR CERAMICS, STONE TOOLS, METAL IMPLEMENTS, DUGOUT CANOES OR ANY OTHER PHYSICAL REMAINS THAT COULD BE ASSOCIATED WITH NATIVE AMERICAN CULTURES OR EARLY COLONIAL OR AMERICAN SETTLEMENT ARE ENCOUNTERED AT ANY TIME WITHIN THE PROJECT SITE AREA, THE PERMITTED PROJECT SHOULD CEASE ALL ACTIVITIES INVOLVING SUBSURFACE DISTURBANCE IN THE IMMEDIATE VICINITY OF SUCH DISCOVERIES. THE PERMITTEE OR OTHER DESIGNEE, SHOULD CONTACT THE FLORIDA DEPARTMENT OF STATE, DIVISION OF HISTORICAL RESOURCES, REVIEW AND COMPLIANCE SECTION, AT (850) 245-6333 OR (800) 847-7278, AS WELL AS THE APPROPRIATE PERMITTING AGENCY OFFICE. PROJECT ACTIVITIES SHOULD NOT RESUME WITHOUT VERBAL AND/OR WRITTEN AUTHORIZATION FROM THE DIVISION OF HISTORICAL RESOURCES. IN THE EVENT THAT UNMARKED HUMAN REMAINS ARE ENCOUNTERED DURING PERMITTED ACTIVITIES, ALL WORK SHALL STOP IMMEDIATELY, AND THE PROPER AUTHORITIES NOTIFIED IN ACCORDANCE WITH SECTION 872.05, FLORIDA STATUTES.

DEMOLITION & EROSION CONTROL:

1. CONTRACTOR IS RESPONSIBLE FOR THE CONSTRUCTION (AND MAINTENANCE DURING CONSTRUCTION) OF ALL SEDIMENTATION AND EROSION CONTROL DEVICES.

2. CONTRACTOR SHALL REFER TO SEDIMENTATION AND EROSION CONTROL PLAN FOR LIMITS OF CLEARING AND EROSION CONTROLS.

3. SEDIMENTATION AND EROSION CONTROL DEVICES SHALL BE CONSTRUCTED AS NECESSARY, IN ADDITION TO THOSE SHOWN ON THE PLANS, TO PROTECT ADJACENT PROPERTY OWNERS FROM RECEIVING SEDIMENTATION DURING CONSTRUCTION.

4. CONTRACTOR SHALL FOLLOW BEST MANAGEMENT PRACTICES FOR EROSION & SEDIMENT CONTROL AS DETAILED IN CHAPTER 6 OF THE FLORIDA DEVELOPMENT MANUAL: A GUIDE TO SOUND LAND AND WATER MANAGEMENT, FLORIDA DEPARTMENT OF ENVIRONMENTAL PROTECTION (1988).

5. CONTRACTOR IS RESPONSIBLE FOR CONTACTING THE COUNTY ENGINEER (OR THEIR DESIGNEE) TO INSPECT SEDIMENTATION CONTROLS PRIOR TO CONSTRUCTION COMMENCEMENT.

6. CONTRACTOR SHALL PROVIDE THE NAME OF A DESIGNATED EROSION CONTROL OFFICER WHO HAS BEEN CERTIFIED UNDER THE FLORIDA STORMWATER, EROSION, AND SEDIMENTATION CONTROL INSPECTOR TRAINING PROGRAM. THIS PERSON SHALL IDENTIFIED DURING THE PRE-CONSTRUCTION CONFERENCE AND SHALL BE AVAILABLE AT ALL TIMES DURING CONSTRUCTION ACTIVITIES.

7. WHEN NECESSARY, VEHICLES SHALL BE CLEANED TO REMOVE SEDIMENT PRIOR TO ENTRANCE ONTO U.S. HIGHWAY 90. IF WASHING IS REQUIRED, IT SHALL BE DONE IN AN AREA WHICH DRAINS INTO AN APPROVED SEDIMENT TRAP OR BASIN. ALL SEDIMENT SHALL BE PREVENTED FROM ENTERING ANY STORM PIPE, DITCH OR WATERCOURSE THROUGH THE USE OF SAND BAGS, HAYBALES, GRAVEL, BOARDS OR OTHER APPROVED METHODS.

8. CONTRACTOR SHALL PROVIDE STREET SWEEPING AS NECESSARY TO ENSURE US HIGHWAY 90 IS SEDIMENT FREE. MACHINE SWEEPING SHALL OCCUR WITHIN 24 HOURS OF TRACKING ANY SEDIMENT ON THE ROADWAY.

9. A SITE-SPECIFIC STORMWATER POLLUTION PREVENTION PLAN (SWPPP) SHALL BE PREPARED BY THE CONTRACTOR AND PROVIDED TO THE COUNTY ENGINEER FOR APPROVAL PRIOR TO CONSTRUCTION COMMENCEMENT. SWPPP SHALL BE SUBMITTED TO FDEP/EPA AS A PART OF NPDES AND THE NOTICE OF INTENT SUBMITTAL.

10. CLEARING AND CONSTRUCTION DEBRIS SHALL BE DISPOSED OF IN A LEGAL MANNER AND LOCATION.

11. CONTRACTOR SHALL BE RESPONSIBLE TO PROTECT EXISTING UTILITIES FROM DAMAGE AND SHALL BE RESPONSIBLE FOR REPAIR OR REPLACEMENT OF ANY EXISTING UTILITIES IMPACTED BY CONSTRUCTION.

12. CONTRACTOR SHALL BE RESPONSIBLE FOR REMOVAL OF UNFORESEEN MATERIALS CONFLICTING WITH CONSTRUCTION INDICATED ON PLANS.

13. IF WELLS ARE ENCOUNTERED ON SITE, THEY SHALL BE ABANDONED BY A FLORIDA CERTIFIED WELL DRILLER USING ABANDONMENT PROCEDURES AND PERMITTING PROCESS OF THE SUWANNEE RIVER WATER MANAGEMENT DISTRICT OR OTHER APPLICABLE REGULATORY AGENCY.

14. ALL EXCAVATED SOILS SHALL BE STOCKPILED IN LOCATION(S) INDICATED ON PLANS. NO STOCKPILE OR STAGING SHALL OCCUR IN THE FDOT RIGHT-OF-WAY. APPROPRIATE SEDIMENTATION CONTROLS SHALL BE INSTALLED AROUND THE STOCKPILE(S) AND STAGING AREA(S). ALTERNATE STOCKPILE LOCATIONS MAY BE COORDINATED WITH THE COUNTY ENGINEER (OR THEIR DESIGNEE).

STABILIZATION NOTES:

1. CONTRACTOR SHALL SOD ALL DISTURBED AREAS WITH 6:1 SLOPE OR GREATER AND SHALL LAP & PIN SOD ON ALL SLOPES 2:1 AND GREATER

2. CONTRACTOR SHALL SOD ALL DISTURBED AREAS WITHIN U.S. HIGHWAY 90 RIGHT OF WAY.

3. CONTRACTOR SHALL SOD 1' WIDTH ADJACENT TO ALL PERIMETER PAVED AREAS.

4. CONTRACTOR SHALL SOD SWMF SIDE SLOPES AND UNLINED PORTIONS OF THE EFFLUENT STORAGE POND.

5. ALL SOD SHALL BE CENTIPEDED SOD.

6. ALL DISTURBED AREAS NOT PAVED, SODDED OR OTHERWISE LANDSCAPED SHALL BE SEEDED, FERTILIZED AND MULCHED PER FDOT SPECIFICATIONS, SECTION 570. SEEDING RATE AND MIX SHALL COMPLY WITH THE SEEDING RATE TABLE OF FDOT STANDARD INDEX 105.

7. ALL DISTURBED AREAS, NOT OTHERWISE STABILIZED AND TO BE LEFT IDLE LONGER THAN 14 DAYS MUST BE STABILIZED WITH QUICK GROW GRASS SEED AND MULCH. UPON COMPLETION OF GRADING ACTIVITIES, CONTRACTOR SHALL STABILIZE ALL DISTURBED AREAS EXCEPT OTHER AREAS STABILIZED WITH SOD. STABILIZATION SHALL CONSIST OF SEED AND MULCH PER F.D.O.T. SPECIFICATIONS.

LINETYPE LEGEND

- EXISTING FEATURES
- PROPOSED FEATURES
- EXISTING RIGHT-OF-WAY
- PROPOSED RIGHT-OF-WAY
- EXISTING UNDERGROUND TELECOMMUNICATIONS
- PROPOSED UNDERGROUND TELECOMMUNICATIONS
- EXISTING UNDERGROUND ELECTRIC
- PROPOSED UNDERGROUND ELECTRIC
- EXISTING FIBER OPTIC
- PROPOSED FIBER OPTIC
- EXISTING GAS MAIN
- PROPOSED GAS MAIN
- EXISTING SANITARY SEWER MAIN
- PROPOSED SANITARY SEWER MAIN
- EXISTING FORCE MAIN
- PROPOSED FORCE MAIN
- EXISTING STORM SEWER
- PROPOSED STORM SEWER
- EXISTING WATER MAIN
- PROPOSED WATER MAIN
- EXISTING FENCE
- PROPOSED FENCE

SYMBOLS LEGEND

EXISTING	PROPOSED	
PP	PP	POWER POLE
PP/TP	PP/TP	COMBINATION POLE
TP	TP	TELEPHONE POLE
TEL PED	TEL PED	TELEPHONE PEDESTAL
SIG-P	SIG-P	SIGNAL POLE
LP	LP	LIGHT POLE
		GUY ANCHOR
GM	GM	GAS METER
GV	GV	GAS VALVE
S	S	SANITARY SEWER MANHOLE
		SANITARY SEWER FLOW ARROW
		FIRE HYDRANT
WV	WV	WATER VALVE
M	M	WATER METER
		STORM MANHOLE
		CURB INLET
		GRATE INLET
		STORM FLOW ARROW

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LTR.	DATE	REVISIONS	BY	APPRD.

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CHECKED BDAVIS

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NORTH FLORIDA MEGA INDUSTRIAL PARK
WASTEWATER TREATMENT PLANT
COLUMBIA COUNTY, FLORIDA

MooreBass CONSULTING TALLAHASSEE ATLANTA
www.moorebass.com

GENERAL NOTES

This item has been digitally signed and sealed by Amir Darabi on the date indicated here.
Printed copies of this document are not considered signed and sealed and the signature must be verified on any electronic copies.

Amir Darabi,
State of Florida, Professional Engineer,
License No. 68298
Amir Darabi
Digitally signed by Amir Darabi
Date: 2023.05.03 11:54:11 -04'00'
805 N. GADSDEN STREET
TALLAHASSEE, FL 32303
CERTIFICATE OF AUTHORIZATION NO. 00006108

PROJECT NO: 03780-001-01
DATE: NOVEMBER 2022
INDEX NO:
DWG NO: C1

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UTILITY NOTES:

1. PIPE LENGTHS SHOWN ARE FROM CENTER OF STRUCTURE TO CENTER OF STRUCTURE.
2. ALL MANHOLES, INLETS AND CLEANOUTS SUBJECT TO VEHICULAR LOADING, INCLUDING THOSE AREAS REQUIRING FUTURE MAINTENANCE, SHALL HAVE TRAFFIC BEARING (H-20) RINGS, COVERS, GRATES, ETC.
3. CONTRACTOR IS RESPONSIBLE TO PROTECT EXISTING UTILITIES FROM DAMAGE DURING CONSTRUCTION.

GRADING NOTES:

1. CONTRACTOR SHALL REVIEW GEOTECHNICAL REPORT FOR EARTHWORK AND GRADING RECOMMENDATIONS AND REQUIREMENTS FOR THIS PROJECT WHICH MAY EXCEED THE NOTES SPECIFIED HEREIN. IN THE EVENT OF CONFLICTING SPECIFICATIONS, THE GEOTECHNICAL REPORT SHALL GOVERN.
2. GROUND SURFACE PREPARATION: REMOVE VEGETATION INCLUDING GRASS, ROOTS AND SURFICIAL ORGANICS, DEBRIS, UNSATISFACTORY SOIL MATERIALS, OBSTRUCTIONS, AND DELETERIOUS MATERIALS FROM GROUND SURFACE PRIOR TO PLACEMENT OF FILL. PLOW STRIP OR BREAK UP SLOPED SURFACES STEEPER THAN 1 VERTICAL TO 2 HORIZONTAL SO THAT FILL MATERIAL WILL BOND WITH EXISTING SURFACE.
3. AREAS OF CUT AND FILL SHALL BE STRIPPED OF ALL VEGETATION, SOD, AND TOPSOIL. OVER-EXCAVATION SHALL BE PERFORMED WHEREVER ORGANIC MATERIALS WILL CREATE A WEAK ZONE IN THE EARTH MASS. AS SPECIFIED IN THE GEOTECHNICAL REPORT(S), AREAS WHERE ORGANIC CONTENT EXCEEDS THE ALLOWABLE REQUIREMENT SHALL BE OVER EXCAVATED AND BACKFILLED.
4. REMOVE AND REPLACE OR SCARIFY AND AIR-DRY SOIL MATERIAL THAT IS TOO WET TO PERMIT COMPACTION TO SPECIFIED DENSITY. DO NOT PLACE BACKFILL OR FILL MATERIAL ON SURFACES THAT ARE MUDDY, FROZEN OR CONTAIN FROST OR ICE.
5. MOISTURE CONTROL: WHERE SUBGRADE OR LAYER OF SOIL MATERIAL MUST BE MOISTURE CONDITIONED BEFORE COMPACTION, UNIFORMLY APPLY WATER TO SURFACE OF SUBGRADE OR LAYER OF SOIL MATERIAL. APPLY WATER IN MINIMUM QUANTITY AS NECESSARY TO PREVENT FREE WATER FROM APPEARING ON SURFACE DURING OR SUBSEQUENT TO COMPACTION OPERATIONS. COMPACT EACH LAYER TO REQUIRED PERCENTAGE OF MAXIMUM DRY DENSITY OR RELATIVE DRY DENSITY FOR EACH AREA CLASSIFICATION, AS SPECIFIED IN THE GEOTECHNICAL REPORTS OR HEREIN.
6. SPREAD SOIL MATERIAL THAT HAS BEEN REMOVED BECAUSE IT IS TOO WET TO PERMIT COMPACTION. ASSIST DRYING BY DISCING, HARROWING, OR PULVERIZING UNTIL MOISTURE CONTENT IS REDUCED TO A SATISFACTORY VALUE.
7. PLACE BACKFILL AND FILL MATERIALS IN LAYERS NOT MORE THAN 12 INCHES IN LOOSE DEPTH FOR MATERIAL COMPACTED BY HEAVY COMPACTION EQUIPMENT, AND NOT MORE THAN 6 INCHES IN LOOSE DEPTH FOR MATERIAL COMPACTED BY HAND-OPERATED TAMPERS. COMPACT SUBGRADE AND EACH LAYER OF BACKFILL OR FILL MATERIAL TO AT LEAST 95% OF THE STANDARD PROCTOR MAXIMUM DRY DENSITY. REFER TO GEOTECHNCIAL REPORT(S) FOR FURTHER DETAIL AND INSTRUCTION.
8. ALL AREAS UNDER PROPOSED PAVEMENTS AND STRUCTURES SHALL BE COMPACTED TO A MINIMUM OF 98% OF MODIFIED PROCTOR MAXIMUM DRY DENSITY. REFER TO GEOTECHNCIAL REPORT(S) FOR FURTHER DETAIL AND INSTRUCTION.
9. QUALITY CONTROL TESTING DURING CONSTRUCTION: CONTRACTOR SHALL BE RESPONSIBLE FOR GEOTECHNICAL TESTING (BY A FLORIDA REGISTERED GEOTECHNICAL ENGINEER) TO INSPECT AND APPROVE EACH SUBGRADE AND BACKFILL OR FILL LAYER BEFORE FURTHER BACKFILL OR CONSTRUCTION WORK IS PERFORMED. TEST SHALL BE PERFORMED EVERY 10,000 SQUARE FEET OF AREA PER ONE FOOT LIFT.

CONSTRUCTION SEQUENCE:

1. A PRE-CONSTRUCTION MEETING SHALL BE CALLED PRIOR TO INITIATING ANY SITE WORK, INCLUDING CLEARING AND GRUBBING. AT A MINIMUM, THE ATTENDEES SHALL BE REPRESENTATIVES FROM: COLUMBIA COUNTY PUBLIC WORKS DEPARTMENT, SUWANNEE RIVER WATER MANAGEMENT DISTRICT, MOORE BASS CONSULTING, INC., FDOT DISTRICT 2, WEYERHAEUSER, AND JONES EDMUNDS AND ASSOCIATES.
2. CONTRACTOR SHALL SUBMIT A NOTICE OF COMMENCEMENT TO THE SUWANNEE RIVER WATER MANAGEMENT DISTRICT IN ORDER TO SECURE APPROVAL TO COMMENCE CONSTRUCTION. DUPLICATE NOTICE SHALL BE SUBMITTED TO THE COUNTY ENGINEER (OR THEIR DESIGNEE).
3. CONTRACTOR SHALL PREPARE AND SUBMIT MAINTENANCE-OF-TRAFFIC (MOT) PLAN TO FDOT DISTRICT 2 (FOR US90) FOR APPROVAL PRIOR TO INITIATING ANY CONSTRUCTION ACTIVITY IN THE US90 RIGHT-OF-WAY.
4. POST ALL APPLICABLE PERMIT PLACARDS. THE PERMIT PLACARDS SHALL NOT BE NAILED TO TREES.
5. INITIATE APPROVED MOT PLAN, AS REQUIRED.
6. CONSTRUCT GRAVEL CONSTRUCTION ENTRANCES.
7. FLAG OR STAKE THE PROPOSED LIMITS OF CLEARING PRIOR TO DEMOLITION COMMENCEMENT.
8. DESIGNATE EMPLOYEE PARKING AREAS (NOT LOCATED WITHIN THE U.S. HIGHWAY 90), MATERIALS STORAGE AREAS, AND TOPSOIL STORAGE AREAS.
9. DESIGNATE REFUELING AREAS (NOT LOCATED WITHIN THE U.S. HIGHWAY 90 RIGHT-OF-WAY). REFUELING AREAS TO BE LOCATED A SUITABLE DISTANCE AWAY FROM NEARBY WATER BODIES OR WETLANDS.
10. CONSTRUCT SEDIMENTATION CONTROL DEVICES ALONG THE LIMITS OF CLEARING AND AS INDICATED IN THE SEDIMENTATION AND EROSION CONTROL PLAN.
11. CLEAR & GRUB LIMITS OF CLEARING.
12. EXCAVATE STORMWATER MANAGEMENT FACILITY AREA.
13. IN FILL AREAS, PREPARE SUITABLE SOILS PER GEOTECHNICAL REPORT(S).
14. COORDINATE WITH COUNTY AND MECHANICAL ENGINEER FOR SEQUENCE AND TIMING OF UTILITY INSTALLATIONS.
15. IF DIRECTED BY BID ALTERNATE, INSTALL UTILITIES AS DIRECTED BY COUNTY (TIMING OF UTILITY TAPS/CONNECTIONS TO BE SPECIFIED BY COUNTY).
16. CONSTRUCT SWMF, STORMWATER CONVEYANCE SWALES, STORM DRAINS AND STRUCTURES. INSTALL INLET PROTECTION PER DETAIL.
17. CONSTRUCT SUBGRADE FOR ROAD AREAS IN ACCORDANCE WITH INCORPORATED SPECIFICATIONS AND GRADING NOTES ON THIS SHEET.
18. CONSTRUCT BASE FOR ROAD AREAS.
19. CONSTRUCT ASPHALT AND GRAVEL ROAD SURFACES.
20. INSTALL PAVEMENT MARKINGS AND SIGNAGE.
21. PERFORM FINE GRADING
22. SEED, MULCH AND/OR SOD ALL DISTURBED AREAS.
23. CONTRACTOR SHALL SUBMIT A VIDEO OF THE STORMWATER PIPES TO THE COUNTY ENGINEER IN ACCORDANCE WITH FDOT STANDARD SPECIFICATIONS JANUARY 2017 (SECTION 430 SUBARTICLE 4.8.1), PRIOR TO PLACING THE LAST LAYER OF ASPHALT.
24. REMOVE SEDIMENTS FROM STORMDRAIN PIPE AND ANY SEDIMENT WITHIN SWALES AND SWMF BOTTOMS.
25. APPROXIMATELY TWO WEEKS PRIOR TO REQUESTING THE FINAL ENVIRONMENTAL INSPECTION, AS-BUILT RECORD DRAWINGS AND THE COMPLIANCE REPORT MUST BE SUBMITTED TO THE COUNTY ENVIRONMENTAL INSPECTOR AND COLUMBIA COUNTY PUBLIC WORKS FOR REVIEW.
26. AS-BUILT CERTIFICATIONS SHALL BE SUBMITTED TO THE SUWANNEE RIVER WATER MANAGEMENT DISTRICT WITHIN 30 DAYS OF PROJECT COMPLETION.

DEWATERING PLAN:

1. THE PROJECT AREA CONTAINS A RELATIVELY HIGH GROUNDWATER TABLE AS REFERENCED IN THE GEOTECHNICAL REPORTS. THIS WILL HAVE A SIGNIFICANT INFLUENCE ON THE PROPOSED CONSTRUCTION ACTIVITIES, INCLUDING THE ABILITY TO ACHIEVE PROPER SOIL COMPACTION.
2. A DEWATERING PLAN SHALL BE PREPARED BY THE CONTRACTOR AND SUBMITTED TO THE SUWANNEE RIVER WATER MANAGEMENT DISTRICT AND COUNTY ENGINEER FOR APPROVAL PRIOR TO COMMENCEMENT OF CONSTRUCTION ACTIVITY.
3. CONTRACTOR MAY USE EITHER WELL-POINTING OR THE EXCAVATION OF SUMPS OR TRENCHES TO DEWATER AREAS FOR CONSTRUCTION OR OTHER METHOD APPROVED BY THE ENGINEER OF RECORD AND COUNTY ENGINEER (OR THEIR DESIGNEE).
4. ALL DEWATERING EFFLUENT SHALL MEET STATE WATER QUALITY STANDARDS BEFORE ENTERING WETLAND AREAS OR LEAVING THE PROJECT AREA.
5. EFFLUENT SHOULD BE DISCHARGED INTO VEGETATED AREAS AT A DISTANCE GREAT ENOUGH FROM DOWNSTREAM WETLANDS OR NATURAL CONVEYANCES THAT EFFLUENT HAS ADEQUATE TIME TO INFILTRATE INTO THE GROUND OR ALLOW SUSPENDED SOLIDS TO SETTLE OUT PRIOR TO ENTERING WETLAND OR CONVEYANCE.
6. AS AN ALTERNATIVE TO NOTE #5 ABOVE, CONTRACTOR MAY CONSTRUCT A TEMPORARY FILTER SYSTEM CAPABLE OF FILTERING EFFLUENT TO MEET STATE WATER QUALITY STANDARDS.
7. NO EXCAVATION, CLEARING, OR LAND DISTURBANCE SHALL OCCUR OUTSIDE THE LIMITS OF THE PROJECT AREA OR WITHIN WETLANDS NOT SHOWN AS IMPACTED.

STANDARD ABBREVIATIONS

AC	ACRE
ADT	AVERAGE DAILY TRAFFIC
AADT	ANNUAL AVERAGE DAILY TRAFFIC
AGG	AGGREGATE
ALT	ALTERNATE
ALUM	ALUMINUM
ANSI	AMERICAN NATIONAL STANDARDS INSTITUTE
APPROX	APPROXIMATE
ASPH	ASPHALT
ASSEM	ASSEMBLY
ASTM	AMERICAN SOCIETY FOR TESTING MATERIALS
AVE	AVENUE
B/C	BACK OF CURB
BCCMP	BITUMINOUS COATED CORRUGATED METAL PIPE
BCPA	BITUMINOUS COATED PIPE ARCH CULVERT
BE	BURIED ELECTRIC
BL	BASE LINE
BLDG	BUILDING
BLVD	BOULEVARD
BM	BENCH MARK
BNDY	BOUNDARY
BT	BURIED TELEPHONE CABLE or DUCT
C & G	CURB AND GUTTER
CATV	CABLE TELEVISION
CB	CATCH BASIN
CF	CUBIC FOOT
CFS	CUBIC FEET PER SECOND
CI	CAST IRON
CIPL	CAST IN PLACE
CKT	CIRCUIT
CL	CENTER LINE
CM	CONCRETE MONUMENT
CMP	CORRUGATED METAL PIPE
CONC	CONCRETE
CONST	CONSTRUCT or CONSTRUCTION
CPE	CORRUGATED POLYETHYLENE PIPE
CSX	CSX TRANSPORTATION, INC.
CY	CUBIC YARD
D	DEGREE OF CURVATURE
DBI	DITCH BOTTOM INLET
DECEL	DECELERATION
DHW	DESIGN HIGH WATER
DIA	DIAMETER
e	RATE OF SUPERELEVATION
E	EAST
EA	EACH
ECR	ENGINEERED CONCRETE RUBBER (ECR), BY OMNI
EL OR ELEV	ELEVATION
ELEC	ELECTRIC
E.O.R.	ENGINEER OF RECORD
ESMT	EASEMENT
EXIST	EXISTING
FC	FRICTION COURSE
FDN	FOUNDATION
FDOT	FLORIDA DEPARTMENT OF TRANSPORTATION
FE	FLOOR ELEVATION
FES	FLARED END SECTION
FH	FIRE HYDRANT
FL	FLOW LINE
FL or FLA	FLORIDA
FT	FEET or FOOT
GM	GAS MAIN
HD	HIGH DENSITY OR HEAVY DUTY
HORIZ	HORIZONTAL
HWY	HIGHWAY
HYD	HYDRANT
IFC	INTERNATIONAL FIRE CODE
JB	JUNCTION BOX
JCT	JUNCTION
L	LENGTH or LENGTH OF CURVE
LB	POUND
LBR	LIMEROCK BEARING RATIO
LT	LEFT
MAX	MAXIMUM
MES	MITERED END SECTION
MG	MILLION GALLON
MH	MANHOLE
MHW	MEAN HIGH WATER
MIN	MINIMUM
MISC	MISCELLANEOUS
MON	MONUMENT
MOT	MAINTENANCE OF TRAFFIC
MUTCD	MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES
N	NORTH
NA or N/A	NOT AVAILABLE or NOT APPLICABLE
N & C	NAIL & CAP
NE	NORTHEAST
NGVD	NATIONAL GEODETIC VERTICAL DATUM of 1929
NGS	NATIONAL GEODETIC SURVEY
NIC	NOT IN CONTRACT
NO	NUMBER
NTS	NOT TO SCALE
NW	NORTHWEST
OC	ON CENTER
OE	OVERHEAD ELECTRIC
OT	OVERHEAD TELEPHONE
PAVT	PAVEMENT
PC	POINT OF CURVATURE
PCC	POINT OF COMPOUND CURVATURE
PED	PEDESTRIAN or PEDESTAL
PGL	PROFILE GRADE LINE
PI	POINT OF INTERSECTION
PKG	PARKING
PL	PROPERTY LINE
POC	POINT ON CURVE
PP	POWER POLE
PRC	POINT OF REVERSE CURVATURE
PSI	POUNDS PER SQUARE INCH
PT	POINT OF TANGENCY
PVC	POLYVINYL CHLORIDE
Q	PEAK DISCHARGE or FLOW VOLUME
R or RAD	RADIUS
RCP	REINFORCED CONCRETE PIPE
RCPA	REINFORCED CONCRETE PIPE ARCH
RDWY	ROADWAY
RPM	RAISED REFLECTIVE PAVEMENT MARKERS
RR	RAILROAD
RT	RIGHT
R/W	RIGHT OF WAY
S	SOUTH
SAN	SANITARY
SD	SIDE DRAIN, STORM DRAIN
SE	SOUTHEAST
SECT	SECTION
SERV	SERVICE
SH or SHT	SHEET
SPEC	SPECIFICATION
SF	SQUARE FOOT
SY	SQUARE YARD
SR	STATE ROAD
SRE	SKEEN RAILROAD ENGINEERING
SS	SANITARY SEWER
STA	STATION
STD	STANDARD
STY	STORY
SW	SOUTHWEST
T or TAN	TANGENT LENGTH OF CURVE or THICKNESS
T or TWP	TOWNSHIP
TBM	TEMPORARY BENCH MARK
TC	TANGENT TO CURVE
TCE	TEMPORARY CONSTRUCTION EASEMENT
TCP	TERRA COTTA PIPE
TCZ	TRAFFIC CONTROL ZONE
TEL	TELEPHONE
TN	TON
TYP	TYPICAL
UG	UNDERGROUND
USGS	US GEOLOGICAL SURVEY
UTIL	UTILITIES
VC	VERTICAL CURVE
VCP	VITRIFIED CLAY PIPE
VERT	VERTICAL
W	WEST
WB40	INTERMEDIATE SEMI TRAILER (40' WB)
WB50	LARGE SEMI TRAILER (50' WB)
WB60	TANDEM SEMI TRAILER (60' WB)
WM	WATER MAIN
WWF	WELDED WIRE FABRIC

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LTR.	DATE	REVISIONS	BY	APPRD.

DESIGNED RDARABI
DRAWN TDORN
CHECKED BDAVIS

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NORTH FLORIDA MEGA INDUSTRIAL PARK
WASTEWATER TREATMENT PLANT
COLUMBIA COUNTY, FLORIDA

MooreBass CONSULTING
TALLAHASSEE ATLANTA
www.moorebass.com

GENERAL NOTES

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Amir Darabi,
State of Florida, Professional Engineer,
License No. 68298

805 N. GADSDEN STREET
TALLAHASSEE, FL 32303
CERTIFICATE OF AUTHORIZATION NO. 00006108

PROJECT NO:	DATE:
03780-001-01	NOVEMBER 2022
INDEX NO:	DWG NO:
	C2

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NORTH

GRAPHIC SCALE

0 60 120 240

1 inch = 120 ft.

EXISTING UTILITY DETAIL WITHIN U.S. 90 CORRIDOR (N.T.S.)

- US 90 RIGHT-OF-WAY
- FO — BURIED FIBER OPTIC LINE (MCI)
- BT — BURIED TELEPHONE LINE (AT&T)

EXISTING U.S. HIGHWAY 90

- FO — BURIED FIBER OPTIC LINE (AT&T)
- OE — OVERHEAD ELECTRIC DISTRIBUTION LINE (FLORIDA POWER & LIGHT)
- NFMIP BOUNDARY / US 90 RIGHT-OF-WAY
- W — 12" PVC WATER MAIN (CITY OF LAKE CITY)
- FM — 6" SANITARY SEWER FORCE MAIN (CITY OF LAKE CITY)
- GAS — 6" GAS MAIN (CITY OF LAKE CITY)

GENERAL NOTES:

1. NO IMPROVEMENTS LOCATED OTHER THAN SHOWN HEREON.
2. ELEVATIONS ARE BASED ON NAVD 88 DATUM.
3. TWO BENCHMARKS HAVE BEEN ESTABLISHED AND ARE DENOTED HEREON.
4. THIS IS NOT A BOUNDARY SURVEY.
5. EXISTING UTILITY DETAIL BASED UPON PRIOR SOFT-DIG DATA PROVIDED BY CARDNO TBE FROM TESTING LOCATIONS ALONG NFMIP NORTHERN BOUNDARY.
6. WETLAND DELINEATION AND SURVEY BY OTHERS; WETLAND LINEWORK SHOWN IS FROM APPROVED NFMIP CONCEPTUAL ENVIRONMENTAL RESOURCE PERMIT.
7. CONTOURS SHOWN ARE A COMPILATION OF FIELD LOCATED TOPOGRAPHIC SURVEY BY MOORE BASS CONSUTLING AND LIDAR SCAN.
8. ADDITIONS OR DELETIONS TO SURVEY MAP OR REPORT BY OTHER THAN THE SIGNING PARTY OR PARTIES IS PROHIBITED WITHOUT WRITTEN CONSENT OF THE SIGNING PARTY OR PARTIES.
9. ALL UTILITIES SHOWN HEREON ARE BASED ON SURFACE EVIDENCE. ANY UTILITIES NOT SHOWN ARE LACKING SURFACE EVIDENCE TO MAKE A DETERMINATION OF LOCATION IN THE FIELD.

STANDARD ABBREVIATIONS:

#000	PROFESSIONAL LAND SURVEY CERTIFICATE
(D)	DEED INFORMATION
(S)	SURVEY INFORMATION
AC.	ACRES
Δ=	DELTA OR CENTRAL ANGLE
E	EAST
EL.	ELEVATION
FO	FIBER OPTIC
FPIP	FOUND PINCHED IRON PIPE (AS LABELED)
HDPE	HIGH-DENSITY POLYETHYLENE PIPE
INV.	INVERT
L=	ARC LENGTH
MES	MITERED END SECTION
N	NORTH
OE	OVERHEAD ELECTRIC
O.R./PG.	OFFICIAL RECORDS BOOK AND PAGE
OT	OVERHEAD TELEPHONE
OTV	OVERHEAD TELEVISION
OU	OVERHEAD UTILITY
PVC	POLYVINYL CHLORIDE PIPE
RCP	REINFORCED CONCRETE PIPE
R/W	RIGHT-OF-WAY
S	SOUTH
TYP	TYPICAL
TBM	TEMPORARY BENCHMARK
W	WEST

TREE ABBREVIATIONS:

ABBREVIATION	COMMON NAME
SHP	SLASH PINE

SYMBOL LEGEND

- FOUND IRON ROD (AS LABELED)
- FOUND CONCRETE MONUMENT (AS LABELED)
- SET 1/2" IRON PIN W/ CAP LB#7245
- UTILITY POLE
- E — ELECTRIC METER
- FIRE HYDRANT
- WATER VALVE
- GAS VALVE
- SINGLE SUPPORT SIGN

EXISTING LS 100

25' RIGHT-OF-WAY EASEMENT FOR PUBLIC UTILITIES OR BOOK 827, PAGE 2338

EXCLUSIVE UTILITY EASEMENT OR BOOK 1269, PAGE 1537

NFMIP BNDRY

U.S. HIGHWAY 90 (RW VARIES)

25' RIGHT-OF-WAY EASEMENT FOR PUBLIC UTILITIES OR BOOK 827, PAGE 2338

EXISTING WETLANDS

CONSERVATION AREA "D" WITH "WETLANDS"

EXISTING WETLANDS

WWTP SITE BNDRY

WASTEWATER TREATMENT FACILITY AREA 17.64 AC± (S)

WWTP SITE BNDRY

WWTP SITE BNDRY

EXISTING WETLANDS

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TALLAHASSEE ATLANTA
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EXISTING CONDITIONS MAP

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APPROXIMATE LOCATION OF NGS BENCHMARK PID BD2277 DESIGNATION "M 370" PUBLISHED ELEVATION: 187.17' (NAVD 88 - ORTHO HEIGHT)

N 81°00'42" E 465.57' (C)

25' RIGHT-OF-WAY EASEMENT FOR PUBLIC UTILITIES OR BOOK 827, PAGE 2338

EXCLUSIVE UTILITY EASEMENT OR BOOK 1268, PAGE 1537

FCM 4"X4" 1428

GAS PIPELINE MARKER

TBM ELEV: 187.02

SSS: STATE PRISONERS WORKING

SSS: TRUCKS ENTERING HIGHWAY

HYDRANT WITH WATER VALVES (2)

TBM ELEV: 184.03

GAS PIPELINE MARKER

25' RIGHT-OF-WAY EASEMENT FOR PUBLIC UTILITIES OR BOOK 827, PAGE 2338

U.S. HIGHWAY 90
R/W VARIES

SSS: CABLE ROUTE - SOUTHERN BELL

R/W

FIRC 5/8" F.D.O.T.

NFMIP BNDRY

TBM ELEV: 184.03

TBM ELEV: 181.20

6' CHAIN LINK FENCE

EXISTING WETLANDS

EXISTING WETLANDS

(SHEET C4) MATCHLINE (SHEET C5)

NORTH

GRAPHIC SCALE

0 30 60 120

1 inch = 60 ft.

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NORTH

GRAPHIC SCALE

0 30 60 120

1 inch = 60 ft.

6' CHAIN LINK FENCE

6' CHAIN LINK FENCE

NFMIP BNDRY

FCM 4"X4"
4432

TBM
ELEV: 177.13

WWTP SITE BNDRY

WWTP SITE BNDRY

WWTP SITE BNDRY

MATCHLINE (SHEET C4)
(SHEET C5)

WASTEWATER TREATMENT
FACILITY AREA
17.64 AC± (S)

EXISTING
WETLANDS

EXISTING
WETLANDS

EXISTING
WETLANDS

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NORTH

GRAPHIC SCALE

0 60 120 240

1 inch = 120 ft.

SEDIMENT AND EROSION CONTROL MAINTENANCE/INSPECTION PROCEDURES

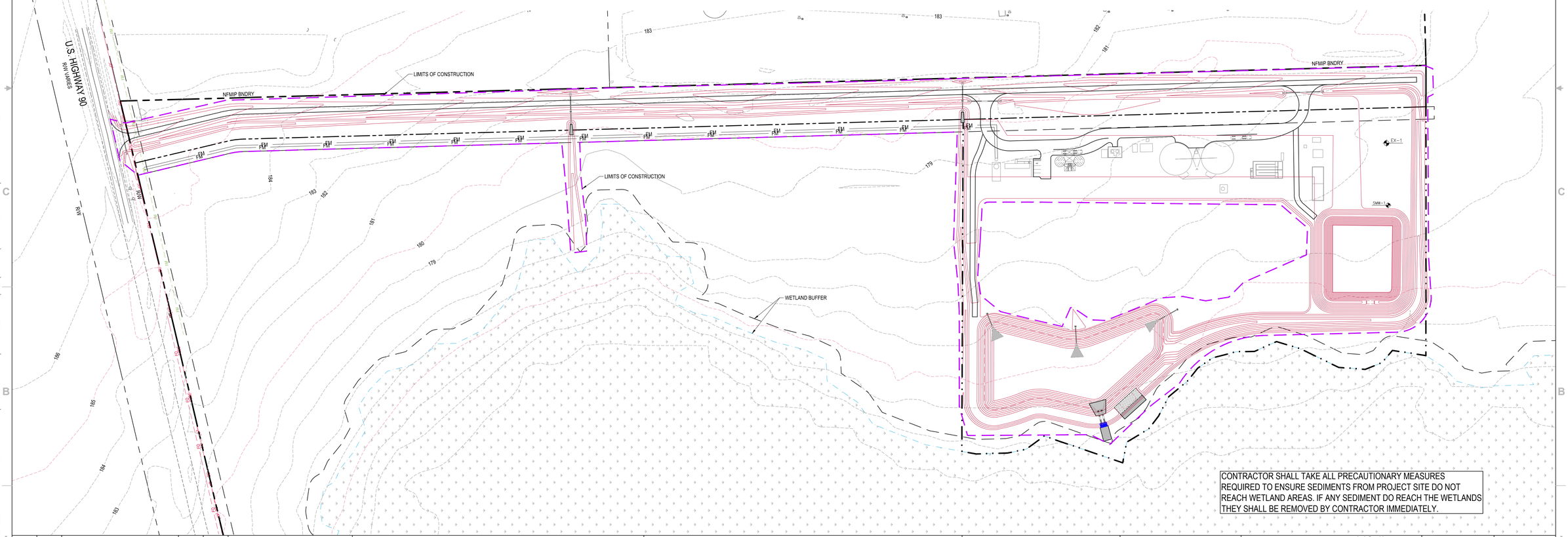
1. ALL CONTROL MEASURES SHALL BE INSPECTED AT LEAST ONCE EACH WEEK AND FOLLOWING ANY STORM EVENT OF 0.50 INCHES OR GREATER.
2. ALL MEASURES SHALL BE MAINTAINED IN GOOD WORKING ORDER; IF A REPAIR IS NECESSARY, IT SHALL BE INITIATED WITHIN 24 HOURS OF REPORT.
3. BUILT UP SEDIMENT SHALL BE REMOVED FROM SILT FENCE WHEN IT HAS REACHED ONE-THIRD THE HEIGHT OF THE FENCE.
4. SILT FENCE SHALL BE INSPECTED FOR DEPTH OF SEDIMENT, TEARS, TO SEE IF THE FABRIC IS SECURELY ATTACHED TO THE FENCE POSTS, AND TO SEE THAT THE FENCE POSTS ARE FIRMLY IN THE GROUND.
5. TEMPORARY AND PERMANENT SEEDING AND PLANTING SHALL BE INSPECTED FOR BARE SPOTS, WASHOUTS, AND HEALTHY GROWTH.
6. A MAINTENANCE INSPECTION REPORT SHALL BE MADE AFTER EACH INSPECTION.
7. THE PROJECT SUPERINTENDENT, SHALL SELECT AN INDIVIDUALS WHO SHALL BE RESPONSIBLE FOR INSPECTIONS, MAINTENANCE AND REPAIR ACTIVITIES, AND FILLING OUT THE INSPECTION AND MAINTENANCE REPORT.
8. PERSONNEL SELECTED FOR INSPECTION AND MAINTENANCE RESPONSIBILITIES SHALL RECEIVE TRAINING FROM THE PROJECT SUPERINTENDENT. THEY SHALL BE TRAINED IN ALL THE INSPECTION AND MAINTENANCE PRACTICES NECESSARY FOR KEEPING THE EROSION AND SEDIMENT CONTROLS USED ONSITE IN GOOD WORKING ORDER.

TEMPORARY SEDIMENT SUMP NOTES:

1. CONTRACTOR TO INSPECT SEDIMENT SUMP WEEKLY AND AFTER RAIN EVENTS GREATER THAN ½". REMOVE SEDIMENT ACCUMULATION WHEN DEPTH EXCEEDS 6".
2. SEDIMENT BERMS AND SUMPS TO REMAIN UNTIL SUCH TIME THAT MAJOR EARTHWORK AND STORMWATER FACILITIES, INCLUDING CONVEYANCES AND OUTFALL STRUCTURES ARE COMPLETE. INLETS MUST BE PROTECTED WITH INLET PROTECTION PRIOR TO SUMP REMOVAL.
3. ACTUAL LOCATIONS AND CONFIGURATIONS OF TEMPORARY SEDIMENT BERMS/SUMPS MAY VARY DUE TO SITE CONDITIONS AND CONSTRUCTION PHASING AND SHALL BE COORDINATED WITH THE ENVIRONMENTAL INSPECTOR. BERMS/SUMPS SHALL BE SIZED TO PROVIDE FOR A MINIMUM VOLUME EQUAL TO 134 CY PER ACRE OF CONTRIBUTING AREA. SIZE OF SUMP MAY BE REDUCED WITH THE APPROVAL OF THE ENGINEER ONCE UPSTREAM AREAS ARE STABILIZED.

NOTES:

1. CONTRACTOR SHALL SUBMIT NOTICE OF CONSTRUCTION COMMENCEMENT TO THE SUWANNEE RIVER WATER MANAGEMENT DISTRICT PRIOR TO ANY LAND CLEARING ACTIVITIES.
2. THE EROSION AND SEDIMENT CONTROLS SHOWN ON THE PLANS ARE THE MINIMUM REQUIRED. ADDITIONAL MEASURES MAY BE REQUIRED DEPENDING ON SITE CONDITIONS THROUGH THE PROJECT.
3. PERIMETER SILT FENCE TO BE INSTALLED PRIOR TO ANY OTHER EARTHWORK ACTIVITY.
4. IMPROVEMENTS ARE SHOWN FOR REFERENCE ONLY.
5. SILT FENCES ARE SHOWN OFF THE LIMITS OF CLEARING FOR CLARITY ONLY. THEY SHOULD BE LOCATED ON OR INSIDE THE LIMITS OF CLEARING LINE.
6. CONTRACTOR SHALL ENSURE THAT ALL INLETS ARE PROTECTED WITH INLET PROTECTION AS APPROPRIATE.
7. NO CONSTRUCTION TRAFFIC WILL BE PERMITTED TO ACCESS OR LEAVE THE SITE WITHOUT PASSING OVER THE TEMPORARY GRAVEL CONSTRUCTION ENTRANCE.
8. ON-SITE STORMWATER & EROSION CONTROL OFFICER TO BE NAMED AT PRE-CONSTRUCTION CONFERENCE.
9. WHEN NECESSARY, WHEELS SHALL BE CLEANED TO REMOVE SEDIMENT PRIOR TO ENTRANCE ONTO PUBLIC RIGHT OF WAY. WHEN WASHING IS REQUIRED, IT SHALL BE DONE ON AN AREA STABILIZED WITH CRUSHED STONE WHICH DRAINS INTO AN APPROVED SEDIMENT TRAP OR BASIN. ALL SEDIMENT SHALL BE PREVENTED FROM ENTERING ANY STORM DRAIN, DITCH OR WATERCOURSE THROUGH THE USE OF SAND BAGS, GRAVEL, BOARDS OR OTHER APPROVED METHODS.
10. THE CONTRACTOR SHALL ENSURE THAT A FOREMAN OR SUPERVISOR WHO HAS BEEN CERTIFIED UNDER FLORIDA STORMWATER, EROSION AND SEDIMENTATION CONTROL INSPECTOR TRAINING PROGRAM IS AVAILABLE IN PERSON OR BY TELEPHONE AT ALL TIMES DURING CONSTRUCTION ACTIVITIES.
11. ALL DISTURBED AREAS TO BE LEFT IDLE LONGER THAN 14 DAYS MUST BE STABILIZED WITH QUICK GROW GRASS SEED AND MULCH.
12. CONTRACTOR SHALL PROVIDE STREET SWEEPING AS NECESSARY TO ENSURE ADJACENT ROADWAYS ARE SEDIMENT FREE. ADJACENT ROADWAYS SHALL BE MACHINE SWEPT WITHIN 24 HOURS OF SEDIMENT TRACKING.
13. ADEQUATE EROSION CONTROL MEASURES SHALL BE PROVIDED FOR STOCKPILE AREAS.
14. HYDROSEEDING MAY BE USED IN LIEU OF SEED & MULCH FOR STABILIZATION OF TEMPORARY SLOPES AND OTHER NON-SODDED DISTURBED AREAS. HYDROSEEDING SHALL BE PER FDOT STANDARD SPECIFICATION 570-3.4. ALL PERMANENT SLOPES 4:1 AND STEEPER SHALL BE SODDED IMMEDIATELY UPON CONSTRUCTION.
15. IF A CONCENTRATION OF PREHISTORIC OR HISTORIC ARTIFACTS, SUCH AS POTTERY OR CERAMICS, STONE TOOL OR METAL IMPLEMENTS, OR ANY OTHER PHYSICAL REMAIN THAT COULD BE ASSOCIATED WITH NATIVE AMERICAN CULTURES, EARLY COLONIAL, TERRITORIAL OR AMERICAN SETTLEMENTS ARE ENCOUNTERED AT ANY TIME WITHIN THE PROJECT AREA, THE PERMITTED PROJECT SHOULD CEASE ALL ACTIVITIES INVOLVING SURFACE DISTURBANCE IN THE IMMEDIATE VICINITY OF SUCH DISCOVERIES. THE APPLICANT, OR OTHER DESIGNEE, SHOULD CONTACT THE FLORIDA DEPARTMENT OF STATE, DIVISION OF HISTORICAL RESOURCES, COMPLIANCE AND REVIEW SECTION AT 850-245-6333, AS WELL AS THE APPROPRIATE PERMITTING AGENCY OFFICE. PROJECT ACTIVITIES SHOULD NOT RESUME WITHOUT VERBAL AND/OR WRITTEN AUTHORIZATION FROM THE DIVISION OF HISTORICAL RESOURCES. IN THE EVENT THAT UNMARKED HUMAN REMAINS ARE ENCOUNTERED DURING PERMITTED ACTIVITIES, ALL WORK SHALL STOP IMMEDIATELY AND THE PROPER AUTHORITIES NOTIFIED IN ACCORDANCE WITH SECTION 872.05, FLORIDA STATUTES.



CONTRACTOR SHALL TAKE ALL PRECAUTIONARY MEASURES REQUIRED TO ENSURE SEDIMENTS FROM PROJECT SITE DO NOT REACH WETLAND AREAS. IF ANY SEDIMENT DO REACH THE WETLANDS THEY SHALL BE REMOVED BY CONTRACTOR IMMEDIATELY.

LTR.	DATE	REVISIONS	BY	APPRD.

DESIGNED RDARABI
DRAWN TDORN
CHECKED BDAVIS

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730 NE WALDO ROAD, GAINESVILLE, FLORIDA 32641 / (352) 377-5821

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SEDIMENTATION AND EROSION CONTROL PLAN

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PROJECT NO: 03780-001-01
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CONTRACTOR SHALL ENSURE 18' CLEARANCE FROM THE TOP OF PAVEMENT TO THE BOTTOM OF SAG IN ELECTRIC LINE AT THE DRIVEWAY CONNECTION. IF REQUIRED, ELECTRIC POLES MAY NEED TO BE RAISED TO PROVIDE REQUIRED CLEARANCE. IF POLES ARE TO BE RAISED, CONTRACTOR SHALL COORDINATE WITH WITH FLORIDA POWER & LIGHT (FPL) AND OTHER UTILITY PROVIDERS AS NEEDED.

LIMITS OF CONSTRUCTION

NFMIP BNDRY

TEMPORARY CONSTRUCTION ENTRANCE

PROPOSED R/W

30' PROPOSED UTILITY EASEMENT

STANDARD DUTY SILT FENCE

STAKED HAY BALE, TYP.

U.S. HIGHWAY 90
R/W VARIES

R/W

HEAVY DUTY SILT FENCE

CONTRACTOR SHALL TAKE ALL PRECAUTIONARY MEASURES REQUIRED TO ENSURE SEDIMENTS FROM PROJECT SITE DO NOT REACH WETLAND AREAS. IF ANY SEDIMENT DO REACH THE WETLANDS THEY SHALL BE REMOVED BY CONTRACTOR IMMEDIATELY.

35' WETLAND BUFFER

EXISTING WETLANDS

MATCHLINE (SHEET C7)
(SHEET C8)

NORTH

GRAPHIC SCALE

0 30 60 120

1 inch = 60 ft.

LTR.	DATE	REVISIONS	BY	APPRD.

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NFMIP BNDRY

PROPOSED R/W

30' PROPOSED UTILITY EASEMENT

TYPE 'A' INLET PROTECTION

STANDARD DUTY SILT FENCE

STAKED HAY BALE, TYP.

LIMITS OF CONSTRUCTION

EX-1

SMW-1

HEAVY DUTY SILT FENCE

MATCHLINE (SHEET C7)
(SHEET C8)

EXCAVATE TEMPORARY SEDIMENT SUMP 2' LOWER THAN INLET TOP

FILL AS NECESSARY TO PROVIDE POSITIVE DRAINAGE TO S-3

SOD FILL SLOPES ADJACENT TO WETLANDS IMMEDIATELY UPON CONSTRUCTION

30' WETLAND BUFFER

EXISTING WETLANDS

EXISTING WETLANDS LINE, LOCATED BY OTHERS

CONTRACTOR SHALL TAKE ALL PRECAUTIONARY MEASURES REQUIRED TO ENSURE SEDIMENTS FROM PROJECT SITE DO NOT REACH WETLAND AREAS. IF ANY SEDIMENT DO REACH THE WETLANDS THEY SHALL BE REMOVED BY CONTRACTOR IMMEDIATELY.

NORTH

GRAPHIC SCALE

0 30 60 120

1 inch = 60 ft.

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LEGEND

- ON-SITE ASPHALT PAVEMENT
- PROPOSED GRAVEL DRIVE
- EXISTING WETLAND AREA

NORTH

GRAPHIC SCALE

0 60 120 240

1 inch = 120 ft.

25' RIGHT-OF-WAY EASEMENT FOR PUBLIC UTILITIES OR BOOK 827, PAGE 2338

EXCLUSIVE UTILITY EASEMENT OR BOOK 1268, PAGE 1537

NFMIP BNDRY

R= 197.00'
L= 40.52'
Δ= 11°47'04"

N 13°20'54" W 228.58'

S 01°33'50" E 3154.68'

N 01°33'50" W 1738.16'

30' PROPOSED UTILITY EASEMENT

100' PROPOSED R/W

100' PROPOSED R/W

30' PROPOSED UTILITY EASEMENT

N 01°33'50" W 1118.29'

EQUIPMENT SHOWN FOR REFERENCE PURPOSES ONLY DESIGN BY OTHERS

EX-1

S 89°56'49" E 600.65'

N 89°56'49" W 49.48'

N 89°56'49" W 632.35'

1.5 MG EFFLUENT STORAGE POND

PROPOSED SWMF

S 24°06'51" E 58.92'
S 16°56'16" W 62.23'
S 26°03'58" W 100.84'
S 01°01'01" E 43.91'
S 14°29'49" E 58.58'
S 34°30'13" E 43.91'
S 08°45'15" W 81.85'
S 08°12'12" W 64.17'
S 21°35'34" E 43.97'
S 49°50'55" E 38.74'
S 51°38'01" E 40.24'
S 89°33'47" E 58.29'
S 62°13'32" E 53.10'
S 52°39'23" E 39.64'
S 30°42'38" E 61.66'
S 79°06'46" E 50.65'
S 19°16'42" W 54.22'
S 10°20'49" W 34.96'
S 01°45'51" E 75.82'
S 10°58'58" E 45.24'
S 36°10'35" E 54.77'

U.S. HIGHWAY 90
R/W (VARIES)

25' RIGHT-OF-WAY EASEMENT FOR PUBLIC UTILITIES OR BOOK 827, PAGE 2338

R/W

CONSERVATION AREA "D" WITH WETLANDS

EXISTING WETLANDS

LTR.	DATE	REVISIONS	BY	APPRD.

DESIGNED RDARABI
DRAWN TDORN
CHECKED BDAVIS

JonesEdmunds
730 NE WALDO ROAD, GAINESVILLE, FLORIDA 32641 / (352) 377-5821

NORTH FLORIDA MEGA INDUSTRIAL PARK WASTEWATER TREATMENT PLANT COLUMBIA COUNTY, FLORIDA

MooreBass CONSULTING
TALLAHASSEE ATLANTA
www.moorebass.com

GEOMETRY PLAN

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Amir Darabi,
State of Florida, Professional Engineer,
License No. 68298

805 N. GADSDEN STREET
TALLAHASSEE, FL 32303
CERTIFICATE OF AUTHORIZATION NO. 00006108

PROJECT NO:	DATE:
03780-001-01	NOVEMBER 2022
INDEX NO:	DWG NO: C9

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NORTH

GRAPHIC SCALE

0 30 60 120

1 inch = 60 ft.

LEGEND

- GRAVEL DRIVE
- WETLAND AREA

U.S. 90 R/W

25' RIGHT-OF-WAY EASEMENT FOR PUBLIC UTILITIES OR BOOK 827, PAGE 2338

EXISTING EDGE OF PAVEMENT

EXCLUSIVE UTILITY EASEMENT OR BOOK 1268, PAGE 1537

NFMIP BNDRY

STOP

W/ STREET SIGN

R/W

16' MINIMUM GRAVEL WIDTH IN FDOT ROW

MATCH EXISTING

R= 197.00'
L= 40.52'
Δ= 11°47'04"

N 13°20'54" W 228.56'

PROPOSED R/W

28'

60'

100' R/W

30' PROPOSED UITILITY EASEMENT

12' WIDE GRAVEL DRIVE

6' CHAIN LINK FENCE

S 01°33'50" E 3154.68'

N 01°33'50" W 1738.16'

30' PROPOSED UITILITY EASEMENT

SSS: STATE PRISONERS WORKING

SSS: TRUCKS ENTERING HIGHWAY

SSS: CABLE ROUTE - SOUTHERN BELL

U.S. HIGHWAY 90
(R/W VARIES)

25' RIGHT-OF-WAY EASEMENT FOR PUBLIC UTILITIES OR BOOK 827, PAGE 2338

30' WETLAND BUFFER

EXISTING WETLANDS

CONSERVATION AREA "D" WITH WETLANDS

MATCHLINE (SHEET C11)

(SHEET C10)

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NORTH

GRAPHIC SCALE

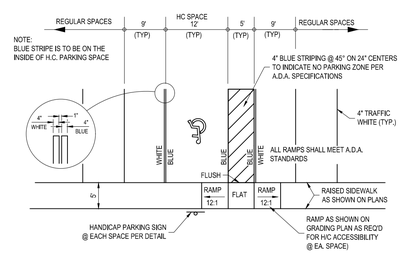
0 30 60 120

1 inch = 60 ft.

LEGEND

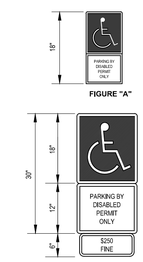
- ASPHALT PAVEMENT (SEE ON-SITE ASPHALT PAVEMENT DETAIL ON C-26)
- GRAVEL DRIVE
- WETLAND AREA

6' CHAIN LINK FENCE
NFMIP BNDRY
24' WHITE THERMOPLASTIC STOP BAR
STOP R1-1
6' CHAIN LINK FENCE (SEE JONES EDMUNDS PLANS FOR DETAILS)
SEE SHEET C27 FOR ON-SITE DETAIL
PROPOSED R/W
N 01°33'50" W 1118.29'
105' R/W
30' PROPOSED UTILITY EASEMENT
20' PROPOSED UTILITY EASEMENT
CANTILEVERED SLIDING GATE (SEE JONES EDMUNDS PLANS FOR DETAILS)
EQUIPMENT SHOWN FOR REFERENCE PURPOSES ONLY, DESIGN BY OTHERS
12' GRAVEL DRIVE FOR STORAGE POND ACCESS
EX-1
SMW-1
WWTP SITE BNDRY
S 89°36'49" E 600.05'
12' GRAVEL DRIVE FOR SWMF ACCESS
N 89°46'25" W 332.26'
1.5 MG EFFLUENT STORAGE POND
PROPOSED SWMF
35' WETLAND BUFFER
EXISTING WETLANDS
(SHEET C10)
MATCHLINE (SHEET C11)
CONSERVATION AREA "D" WITH WETLANDS
S 10°20'49" W 34.96'
S 01°49'51" E 75.82'
S 10°58'58" E 45.24'
S 36°10'35" E 54.77'
S 10°16'42" W 54.22'
S 30°42'38" E 61.66'
S 79°06'46" E 50.85'
S 52°39'23" E 39.64'
S 62°13'32" E 53.10'
S 39°33'47" E 58.29'
S 51°38'01" E 40.24'
S 34°30'13" E 43.91'
S 14°29'49" E 58.58'
S 01°01'01" E 43.97'
S 24°06'51" E 58.32'
S 16°56'18" W 62.23'
S 26°03'58" W 100.84'
S 08°45'15" W 81.85'
S 49°50'56" E 38.74'
S 21°35'34" E 43.97'
S 04°12'12" W 64.17'



HANDICAPPED PARKING

NOT TO SCALE



- TOP PORTION OF FIGURE "A" AND "B" SHALL HAVE A REFLECTIVE BLUE BACKGROUND WITH WHITE REFLECTIVE SYMBOL AND BORDER.
- BOTTOM PORTION OF FIGURE "A" AND "B" SHALL HAVE A REFLECTIVE WHITE BACKGROUND WITH BLACK OPAQUE LEGEND AND BORDER.
- FIGURE "A" AND "B" MAY BE FABRICATED ON ONE PANEL OR TWO.
- FIGURE A" MAY BE SUBSTITUTED FOR FIGURE "B" IN AREAS WHERE SPACE IS LIMITED.
- SIGNS ARE TO BE MOUNTED AT STANDARD HEIGHT.(7 FT. FROM PAVEMENT TO BOTTOM OF SIGN.)

HANDICAPPED PARKING SIGNAGE

NOT TO SCALE

LTR.	DATE	REVISIONS	BY	APPRD.

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GEOMETRY PLAN

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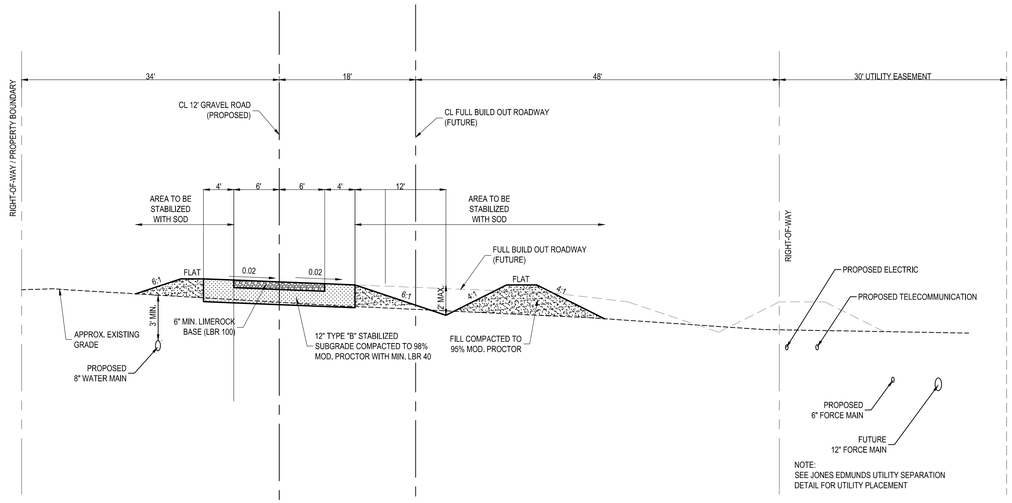
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805 N. GADSDEN STREET
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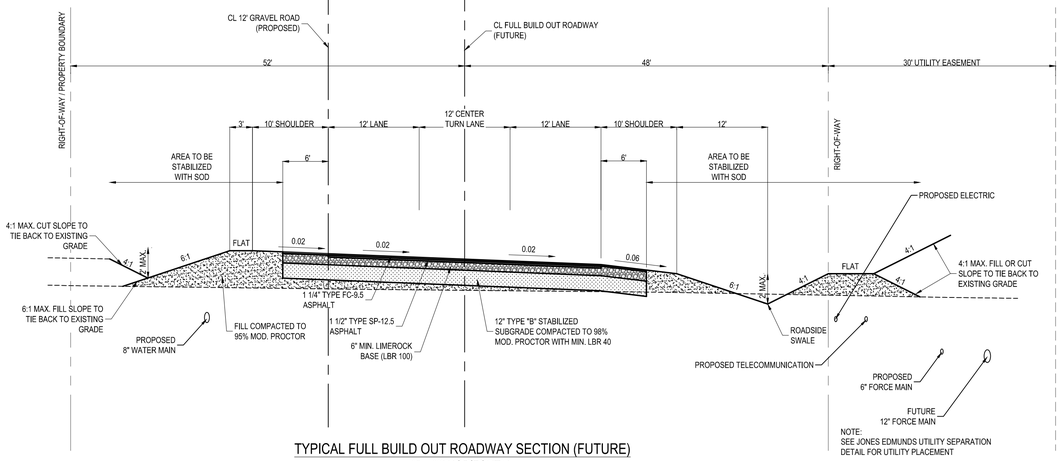
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TYPICAL 12' GRAVEL ROAD SECTION (PROPOSED)
1" = 10' HORIZONTAL
1" = 5' VERTICAL

NOTE: CONFIGURATION OF "TYPICAL 12' GRAVEL ROAD SECTION" PROVIDED BY COLUMBIA COUNTY.



TYPICAL FULL BUILD OUT ROADWAY SECTION (FUTURE)
1" = 10' HORIZONTAL
1" = 5' VERTICAL

NOTE: THIS FULL BUILD-OUT ROADWAY SECTION DEPICTS A FUTURE CONDITION OF THE ROADWAY FOR REFERENCE ONLY. THIS SECTION IS NOT A PART OF THIS PROJECT.

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TYPICAL SECTION SHEET

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	C12

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NORTH

GRAPHIC SCALE

0 60 120 240

1 inch = 120 ft.

25' RIGHT-OF-WAY EASEMENT FOR PUBLIC UTILITIES OR BOOK 827, PAGE 2338

EXCLUSIVE UTILITY EASEMENT OR BOOK 1268, PAGE 1537

NFMP BNDRY

PROPOSED CROSS DRAIN

25' RIGHT-OF-WAY EASEMENT FOR PUBLIC UTILITIES OR BOOK 827, PAGE 2338

U.S. HIGHWAY 90 (RW VARIES)

RW

30' PROPOSED UTILITY EASEMENT

100' PROPOSED R/W

30' PROPOSED UTILITY EASEMENT

100' PROPOSED R/W

NFMP BNDRY

WWTP SITE BNDRY

WWTP SITE BNDRY

EX-1

EQUIPMENT SHOWN FOR REFERENCE PURPOSES ONLY. DESIGN BY OTHERS

SWM-1

1.5 MG EFFLUENT STORAGE POND

PROPOSED SWMF

CONSERVATION AREA "D" WITH "WETLANDS"

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850 N. CADDEN STREET TALLAHASSEE, FL 32303 CERTIFICATE OF AUTHORIZATION NO. 00006108

PROJECT NO:	DATE:
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INDEX NO:	DWG NO: C13

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NORTH

GRAPHIC SCALE

0 30 60 120

1 inch = 60 ft.

US 90 R/W

25' RIGHT-OF-WAY EASEMENT FOR PUBLIC UTILITIES OR BOOK 827, PAGE 2338

EXISTING EDGE OF PAVEMENT

EXCLUSIVE UTILITY EASEMENT OR BOOK 1268, PAGE 1537

FCM 4"X4" 1428

NFMIP BNDRY

TBM ELEV: 187.82

MES INV.: 185.85'

75 LF OF 18" RCP CROSS DRAIN @ 0.50%

MES INV.: 185.48'

SSS: STATE PRISONERS WORKING

SSS: TRUCKS ENTERING HIGHWAY

TBM ELEV: 184.03

25' RIGHT-OF-WAY EASEMENT FOR PUBLIC UTILITIES OR BOOK 827, PAGE 2338

U.S. HIGHWAY 90 (R/W VARIES)

SSS: CABLE ROUTE - SOUTHERN BELL

FIRC 5/8" F.D.O.T.

US 90 R/W

US 90 R/W / NFMIP BNDRY

TBM ELEV: 184.03

30' UTILITY EASEMENT

46 LF OF 14" X 23" ELLIPTICAL RCP CROSS DRAIN @ 4.10%

MES INV.: 180.00

TBM ELEV: 181.20

FIP 2"

31 LF OF 18" RCP @ 0.75%

MES INV.: 177.90

S-4
CONST. INLET TYPE E
INDEX NO.: 425-052
GRATE: 182.00'
INV. IN: 178.12'
INV. OUT: 178.12'
CONST. ALUMINUM SKIMMER
PER FDOT INDEX #425-070 TOP: 182.50'

(SHEET C14) MATCHLINE (SHEET C15)

35' WETLAND BUFFER

EXISTING WETLANDS

35' WETLAND BUFFER

EXISTING WETLANDS

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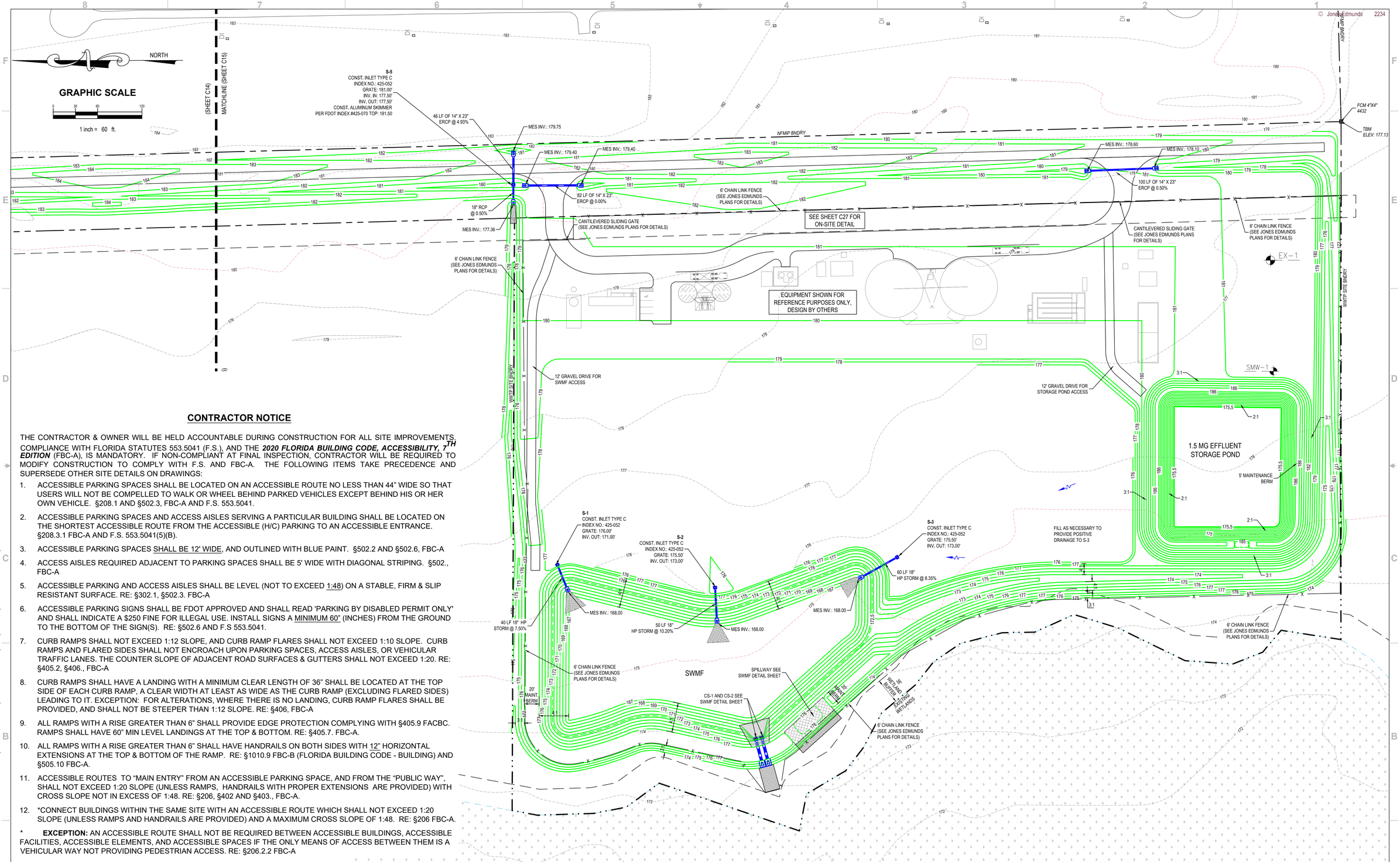
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CERTIFICATE OF AUTHORIZATION NO. 00006108

PROJECT NO: 03780-001-01
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INDEX NO:
DWG NO: C14



CONTRACTOR NOTICE

THE CONTRACTOR & OWNER WILL BE HELD ACCOUNTABLE DURING CONSTRUCTION FOR ALL SITE IMPROVEMENTS. COMPLIANCE WITH FLORIDA STATUTES 553.5041 (F.S.), AND THE ***2020 FLORIDA BUILDING CODE, ACCESSIBILITY, 7TH EDITION*** (FBC-A), IS MANDATORY. IF NON-COMPLIANT AT FINAL INSPECTION, CONTRACTOR WILL BE REQUIRED TO MODIFY CONSTRUCTION TO COMPLY WITH F.S. AND FBC-A. THE FOLLOWING ITEMS TAKE PRECEDENCE AND SUPERSEDE OTHER SITE DETAILS ON DRAWINGS:

1. ACCESSIBLE PARKING SPACES SHALL BE LOCATED ON AN ACCESSIBLE ROUTE NO LESS THAN 44" WIDE SO THAT USERS WILL NOT BE COMPELLED TO WALK OR WHEEL BEHIND PARKED VEHICLES EXCEPT BEHIND HIS OR HER OWN VEHICLE. §208.1 AND §502.3, FBC-A AND F.S. 553.5041.
2. ACCESSIBLE PARKING SPACES AND ACCESS AISLES SERVING A PARTICULAR BUILDING SHALL BE LOCATED ON THE SHORTEST ACCESSIBLE ROUTE FROM THE ACCESSIBLE (H/C) PARKING TO AN ACCESSIBLE ENTRANCE. §208.3.1 FBC-A AND F.S. 553.5041(5)(B).
3. ACCESSIBLE PARKING SPACES SHALL BE 12' WIDE, AND OUTLINED WITH BLUE PAINT. §502.2 AND §502.6, FBC-A
4. ACCESS AISLES REQUIRED ADJACENT TO PARKING SPACES SHALL BE 5' WIDE WITH DIAGONAL STRIPING. §502., FBC-A
5. ACCESSIBLE PARKING AND ACCESS AISLES SHALL BE LEVEL (NOT TO EXCEED 1:48) ON A STABLE, FIRM & SLIP RESISTANT SURFACE. RE: §302.1, §502.3. FBC-A
6. ACCESSIBLE PARKING SIGNS SHALL BE FDOT APPROVED AND SHALL READ 'PARKING BY DISABLED PERMIT ONLY' AND SHALL INDICATE A $250 FINE FOR ILLEGAL USE. INSTALL SIGNS A MINIMUM 60" (INCHES) FROM THE GROUND TO THE BOTTOM OF THE SIGN(S). RE: §502.6 AND F.S 553.5041.
7. CURB RAMPS SHALL NOT EXCEED 1:12 SLOPE, AND CURB RAMP FLARES SHALL NOT EXCEED 1:10 SLOPE. CURB RAMPS AND FLARED SIDES SHALL NOT ENCROACH UPON PARKING SPACES, ACCESS AISLES, OR VEHICULAR TRAFFIC LANES. THE COUNTER SLOPE OF ADJACENT ROAD SURFACES & GUTTERS SHALL NOT EXCEED 1:20. RE: §405.2, §406., FBC-A
8. CURB RAMPS SHALL HAVE A LANDING WITH A MINIMUM CLEAR LENGTH OF 36" SHALL BE LOCATED AT THE TOP SIDE OF EACH CURB RAMP, A CLEAR WIDTH AT LEAST AS WIDE AS THE CURB RAMP (EXCLUDING FLARED SIDES) LEADING TO IT. EXCEPTION: FOR ALTERATIONS, WHERE THERE IS NO LANDING, CURB RAMP FLARES SHALL BE PROVIDED, AND SHALL NOT BE STEEPER THAN 1:12 SLOPE. RE: §406, FBC-A
9. ALL RAMPS WITH A RISE GREATER THAN 6" SHALL PROVIDE EDGE PROTECTION COMPLYING WITH §405.9 FACBC. RAMPS SHALL HAVE 60" MIN LEVEL LANDINGS AT THE TOP & BOTTOM. RE: §405.7. FBC-A.
10. ALL RAMPS WITH A RISE GREATER THAN 6" SHALL HAVE HANDRAILS ON BOTH SIDES WITH 12" HORIZONTAL EXTENSIONS AT THE TOP & BOTTOM OF THE RAMP. RE: §1010.9 FBC-B (FLORIDA BUILDING CODE - BUILDING) AND §505.10 FBC-A.
11. ACCESSIBLE ROUTES TO "MAIN ENTRY" FROM AN ACCESSIBLE PARKING SPACE, AND FROM THE "PUBLIC WAY", SHALL NOT EXCEED 1:20 SLOPE (UNLESS RAMPS, HANDRAILS WITH PROPER EXTENSIONS ARE PROVIDED) WITH CROSS SLOPE NOT IN EXCESS OF 1:48. RE: §206, §402 AND §403., FBC-A.
12. *CONNECT BUILDINGS WITHIN THE SAME SITE WITH AN ACCESSIBLE ROUTE WHICH SHALL NOT EXCEED 1:20 SLOPE (UNLESS RAMPS AND HANDRAILS ARE PROVIDED) AND A MAXIMUM CROSS SLOPE OF 1:48. RE: §206 FBC-A.

* **EXCEPTION:** AN ACCESSIBLE ROUTE SHALL NOT BE REQUIRED BETWEEN ACCESSIBLE BUILDINGS, ACCESSIBLE FACILITIES, ACCESSIBLE ELEMENTS, AND ACCESSIBLE SPACES IF THE ONLY MEANS OF ACCESS BETWEEN THEM IS A VEHICULAR WAY NOT PROVIDING PEDESTRIAN ACCESS. RE: §206.2.2 FBC-A

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GRADING PLAN

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UTILITY NOTE: UTILITIES ALONG ROADWAY SECTION AND WITHIN WWTP SITE ARE SHOWN HERE FOR REFERENCE ONLY. REFER TO JONES EDMUNDS PLANS AND SPECS FOR PLACEMENT GUIDELINES AND UTILITY CONSTRUCTION DETAILS.

GRAPHIC SCALE

0 20 40 80

1 inch = 40 ft.

EXCLUSIVE UTILITY EASEMENT OR BOOK 1268, PAGE 1537

NFMIP BNDRY

PROPOSED 8" WATER MAIN (MAINTAIN 3' COVER) JONES EDMUNDS SPEC.S

8" GATE VALVE PER JONES EDMUNDS SPEC.S

GAS PIPELINE MARKER

TIE TO EXIST. WATER MAIN PER JONES EDMUNDS SPEC.S

U.S. HIGHWAY 90
R/W VARIES

NOTES:
1. EXISTING UTILITY LAYOUT BASED ON SOFT-DIG DATA PROVIDED BY CARDNO TBE FROM TESTING LOCATIONS ALONG NFMIP NORTHERN BOUNDARY IN AREAS WEST OF TYRE ROAD.
2. EXISTING UTILITY LOCATIONS AT PROPOSED UTILITY CONNECTIONS TO BE VERIFIED IN FINAL DESIGN.

30' UTILITY EASEMENT

FUTURE 12" SEWER FORCEMAIN

PROPOSED 6" SEWER FORCEMAIN JONES EDMUNDS SPEC.S

PROPOSED UNDERGROUND ELECTRIC

PROPOSED UNDERGROUND TELECOMMUNICATION

EXISTING FIRE HYDRANT WITH WATER VALVES,(2)

25' RIGHT-OF-WAY EASEMENT FOR PUBLIC UTILITIES OR BOOK 827, PAGE 2338

PROPOSED 8" WATER MAIN JONES EDMUNDS SPEC.S

MAINTAIN 3' MIN. COVER THROUGH DITCH CROSSING. INSTALL AIR RELIEF VALVES PER JONES EDMONDS SPEC.S

100' R/W

MATCHLINE

UTILITY NOTE: UTILITIES ALONG ROADWAY SECTION AND WITHIN WWTP SITE ARE SHOWN HERE FOR REFERENCE ONLY. REFER TO JONES EDMUNDS PLANS AND SPECS FOR PLACEMENT GUIDELINES AND UTILITY CONSTRUCTION DETAILS.

GRAPHIC SCALE

0 20 40 80

1 inch = 40 ft.

GATE VALVE PER JONES EDMUNDS SPEC.S

6' CHAIN LINK FENCE

NFMIP BNDRY

PROPOSED 8" WATER MAIN JONES EDMUNDS SPEC.S

MAINTAIN 3' MIN. COVER THROUGH DITCH CROSSING. INSTALL AIR RELIEF VALVES PER JONES EDMONDS SPEC.S

FIRE HYDRANT ASSEMBLY PER JONES EDMUNDS SPEC.S

WATER SERVICE W/ BACKFLOW SEE JONES EDMUNDS SPEC.S FOR SIZE AND DESIGN

100' R/W

30' UTILITY EASEMENT

FIRE HYDRANT ASSEMBLY PER JONES EDMUNDS SPEC.S

FUTURE 12" SEWER FORCEMAIN

PROPOSED 6" SEWER FORCEMAIN JONES EDMUNDS SPEC.S

PROPOSED UNDERGROUND TELECOMMUNICATION

PROPOSED UNDERGROUND ELECTRIC

PROPOSED 6" SEWER FORCEMAIN JONES EDMUNDS SPEC.S

MAINTAIN 3' MIN. COVER THROUGH DITCH CROSSING. INSTALL AIR RELIEF VALVES PER JONES EDMONDS SPEC.S

MASTER MANHOLE PER JONES EDMUNDS SPEC.S

MATCHLINE

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UTILITY PLAN

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NORTH

GRAPHIC SCALE

0 20 40 80

1 inch = 40 ft.

UTILITY NOTE: UTILITIES ALONG ROADWAY SECTION AND WITHIN WWTP SITE ARE SHOWN HERE FOR REFERENCE ONLY. REFER TO JONES EDMUNDS PLANS AND SPECS FOR PLACEMENT GUIDELINES AND UTILITY CONSTRUCTION DETAILS.

GATE VALVE PER JONES EDMUNDS SPEC.S

6' CHAIN LINK FENCE

NFMIP BNDRY

PROPOSED 8" WATER MAIN PER JONES EDMUNDS SPEC.S

GATE VALVE PER JONES EDMUNDS SPEC.S

FLUSH VALVE PER JONES EDMUNDS SPEC.S

FIRE HYDRANT ASSEMBLY PER JONES EDMUNDS SPEC.S

WATER SERVICE W/ BACKFLOW SEE JONES EDMUNDS SPEC.S FOR SIZE AND DESIGN

102' R/W

30' UTILITY EASEMENT

FM

RW

MASTER MANHOLE PER JONES EDMUNDS SPEC.S

FUTURE UNDERGROUND ELECTRIC

FUTURE UNDERGROUND TELECOMMUNICATION

EQUIPMENT SHOWN FOR REFERENCE PURPOSES ONLY, DESIGN BY OTHERS

WWTP SITE BNDRY

EX-1

SMW-1

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UTILITY PLAN

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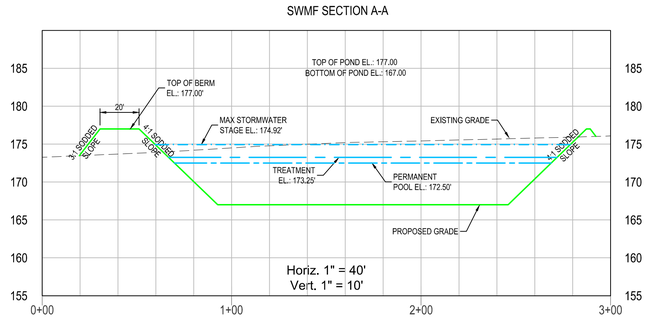
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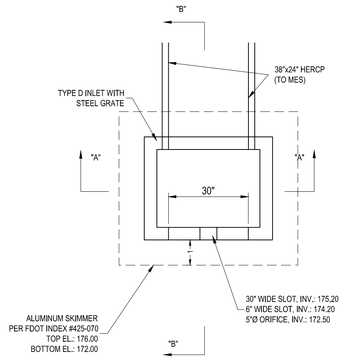
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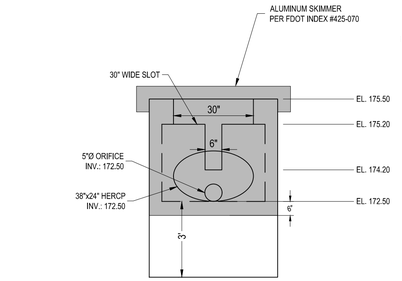
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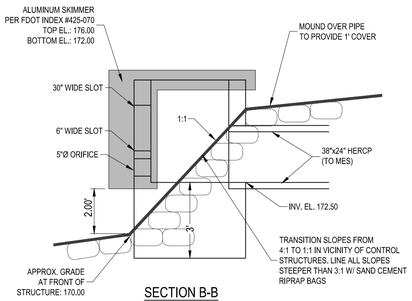


PLAN VIEW



NOTE: CS #1 AND CS #2 ARE IDENTICAL STRUCTURES.

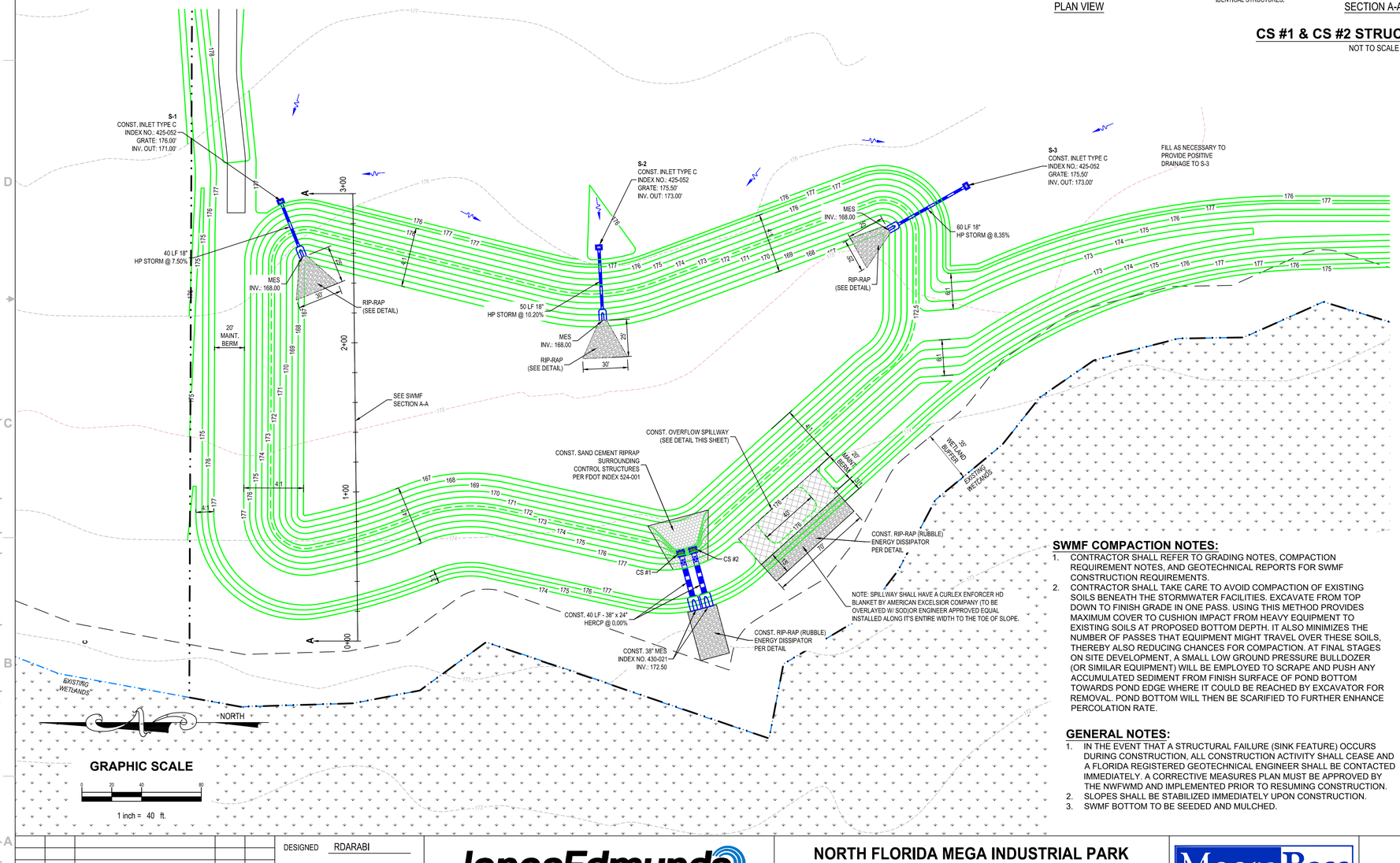
SECTION A-A



SECTION B-B

CS #1 & CS #2 STRUCTURE DETAILS

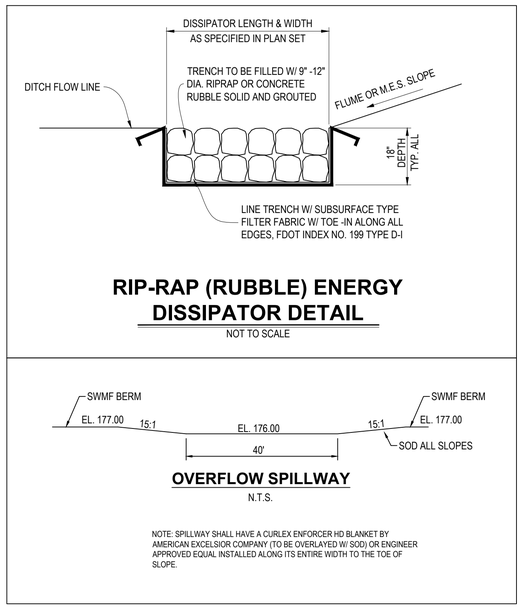
NOT TO SCALE



GRAPHIC SCALE

0 20 40 80

1 inch = 40 ft.



RIP-RAP (RUBBLE) ENERGY DISSIPATOR DETAIL

NOT TO SCALE

OVERFLOW SPILLWAY

N.T.S.

NOTE: SPILLWAY SHALL HAVE A CURLEX ENFORCER HD BLANKET BY AMERICAN EXCELSIOR COMPANY (TO BE OVERLAYED W/ SOD) OR ENGINEER APPROVED EQUAL INSTALLED ALONG ITS ENTIRE WIDTH TO THE TOE OF SLOPE.

SWMF COMPACTION NOTES:

1. CONTRACTOR SHALL REFER TO GRADING NOTES, COMPACTION REQUIREMENT NOTES, AND GEOTECHNICAL REPORTS FOR SWMF CONSTRUCTION REQUIREMENTS.
2. CONTRACTOR SHALL TAKE CARE TO AVOID COMPACTION OF EXISTING SOILS BENEATH THE STORMWATER FACILITIES. EXCAVATE FROM TOP DOWN TO FINISH GRADE IN ONE PASS. USING THIS METHOD PROVIDES MAXIMUM COVER TO CUSHION IMPACT FROM HEAVY EQUIPMENT TO EXISTING SOILS AT PROPOSED BOTTOM DEPTH. IT ALSO MINIMIZES THE NUMBER OF PASSES THAT EQUIPMENT MIGHT TRAVEL OVER THESE SOILS, THEREBY ALSO REDUCING CHANCES FOR COMPACTION. AT FINAL STAGES ON SITE DEVELOPMENT, A SMALL LOW GROUND PRESSURE BULLDOZER (OR SIMILAR EQUIPMENT) WILL BE EMPLOYED TO SCRAPE AND PUSH ANY ACCUMULATED SEDIMENT FROM FINISH SURFACE OF POND BOTTOM TOWARDS POND EDGE WHERE IT COULD BE REACHED BY EXCAVATOR FOR REMOVAL. POND BOTTOM WILL THEN BE SCARIFIED TO FURTHER ENHANCE PERCOLATION RATE.

GENERAL NOTES:

1. IN THE EVENT THAT A STRUCTURAL FAILURE (SINK FEATURE) OCCURS DURING CONSTRUCTION, ALL CONSTRUCTION ACTIVITY SHALL CEASE AND A FLORIDA REGISTERED GEOTECHNICAL ENGINEER SHALL BE CONTACTED IMMEDIATELY. A CORRECTIVE MEASURES PLAN MUST BE APPROVED BY THE NWFWMD AND IMPLEMENTED PRIOR TO RESUMING CONSTRUCTION.
2. SLOPES SHALL BE STABILIZED IMMEDIATELY UPON CONSTRUCTION.
3. SWMF BOTTOM TO BE SEEDED AND MULCHED.

SOD NOTES:

1. SOD SHALL BE LAPPED AND PINNED ON ALL SLOPES OF 1:2(V:H) OR STEEPER IN THE FOLLOWING MANNER:
2. PLACE THE SOD ON THE PREPARED SURFACE AND STAGGER THE SOD PIECES TO AVOID A CONTINUOUS SEAM ALONG THE LINE OF FLOW. START AT THE BOTTOM OF THE SLOPE BREAK POINT AND WORK UP TO THE TOP OF THE SLOPE BREAK POINT, WITH THE UPPER ROW OF SOD OVERLAPPING THE LOWER ROW OF SOD BY 3 INCHES. EMBED SOD FIRMLY AND SMOOTHLY BY LIGHT TAMPING WITH APPROPRIATE TOOLS. INSTALL SOD PINS IN THE OVERLAP LOCATIONS, WITH NOT LESS THAN FOUR PINS PER SQUARE YARD AND AT LEAST ONE PIN FOR EACH PIECE OF SOD. PINS SHALL BE A MINIMUM OF 6 INCHES LONG AND SHALL BE INSTALLED SO THAT THEY HOLD THE SOD FIRMLY IN PLACE YET PRESENT NO DANGER TO PEDESTRIANS OR MOWING CREWS. THE TYPE OF PIN AND THE METHOD OF INSTALLATION SHALL MEET THE APPROVAL OF THE ENGINEER OR LANDSCAPE ARCHITECT.
3. ALL SOD ASSOCIATED WITH THE STORMWATER FACILITY SHALL BE PINNED. LAPPING IS NOT REQUIRED ON SLOPES 1:3 (V:H) OR FLATTER.
4. AT PROJECT CLOSE OUT, SOD MUST BE ROOTED AND WELL ESTABLISHED. DURING CONSTRUCTION, SOD SHOULD BE MONITORED FOR SLIPPAGE AND EROSION. IF EITHER OF THESE CONDITIONS OCCUR, CORRECTIVE ACTION SHALL BE IMMEDIATELY TAKEN.
5. DO NOT USE SOD WHICH HAS BEEN CUT FOR MORE THAN 48 HOURS.

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SWMF DETAIL SHEET

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EX-1

SMW-1

1.5 MG EFFLUENT STORAGE POND

5' MAINTENANCE BERM

OVERFLOW SPILLWAY (SEE DETAIL)

95' WETLAND BUFFER

EXISTING WETLANDS

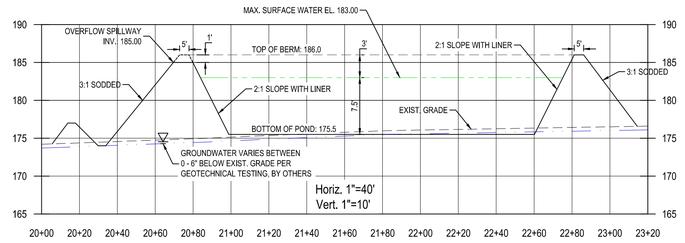
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GRAPHIC SCALE

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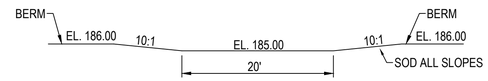
1 inch = 40 ft.

EFFLUENT STORAGE POND SECTION B-B



EFFLUENT STORAGE POND NOTES:

1. PERIMETER BERM SHALL BE CONSTRUCTED IN ACCORDANCE WITH SPECIFICATIONS PROVIDED IN THE GEOTECHNICAL REPORT (BY OTHERS).
2. THE CONTRACTOR SHALL FURNISH AND INSTALL A GEOMEMBRANE LINER SYSTEM CONSISTING OF A PRIMARY, SECONDARY, AND GEOSYNTHETIC CLAY LAYER PROTECTIVE 40-MIL, TEXTURED, HIGH-DENSITY POLYETHYLENE (HDPE) GEOMEMBRANE AS SPECIFIED IN SPECIFICATION SECTION 02071 BY JONES EDMUNDS.
3. SEE SHEET M-18 FOR LINER DETAILS.



OVERFLOW SPILLWAY

N.T.S.

NOTE: SPILLWAY SHALL HAVE A CURLEX ENFORCER HD BLANKET BY AMERICAN EXCELSIOR COMPANY (TO BE OVERLAYED W/ SOD) OR ENGINEER APPROVED EQUAL INSTALLED ALONG ITS ENTIRE WIDTH TO THE TOE OF SLOPE.

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EFFLUENT POND DETAIL SHEET

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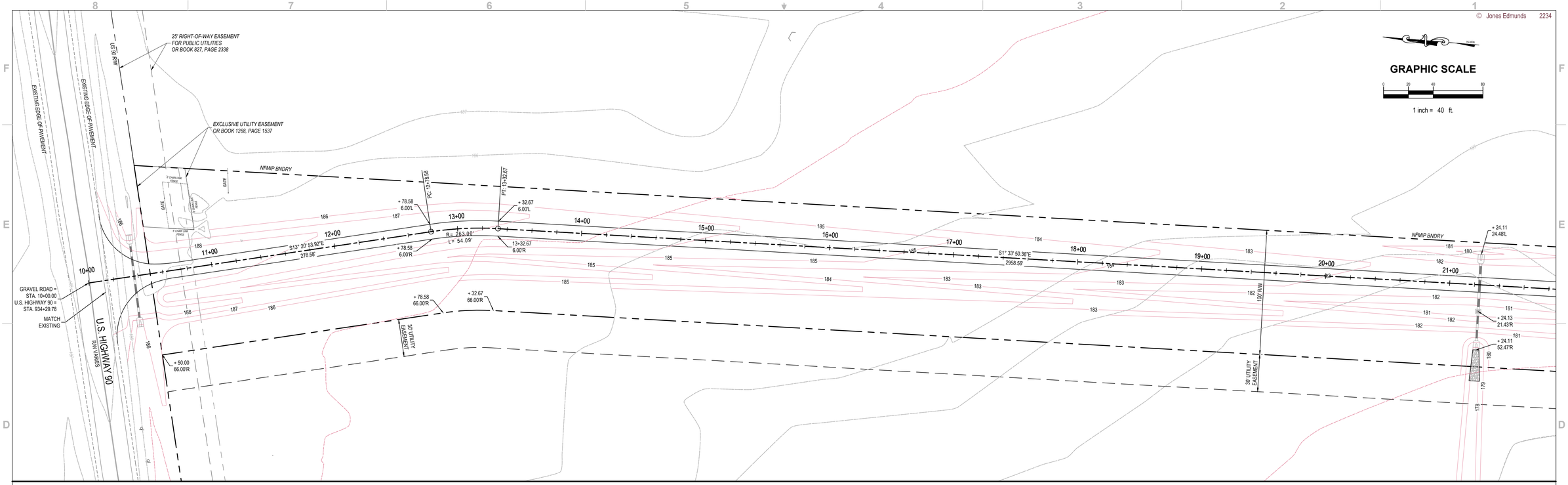
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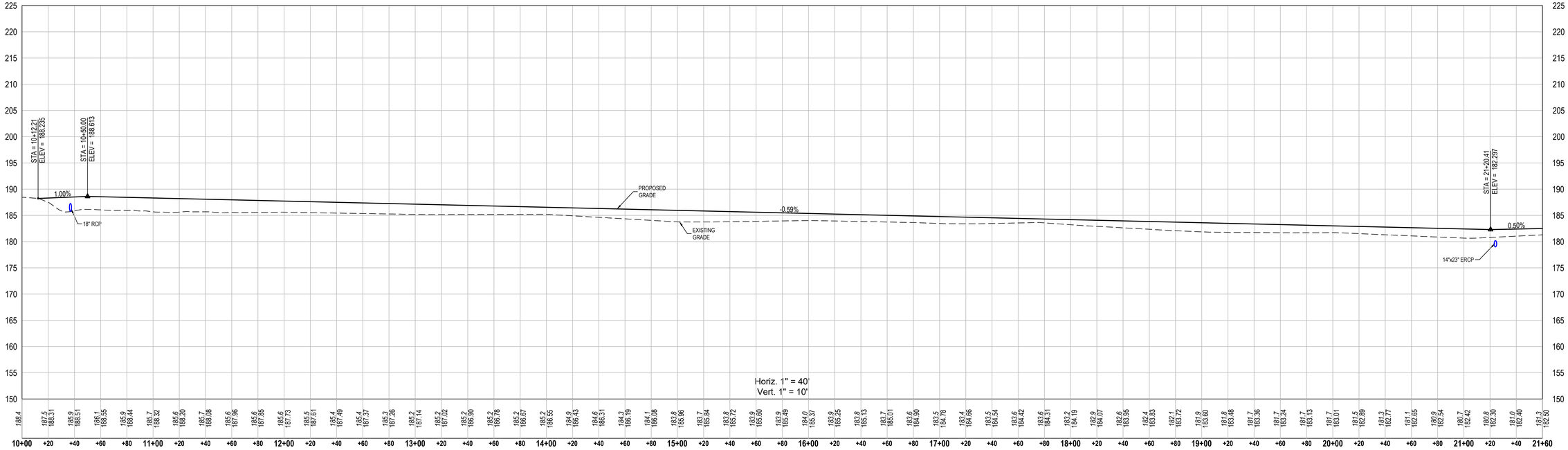
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GRAPHIC SCALE

0 20 40 80

1 inch = 40 ft.



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PLAN AND PROFILES

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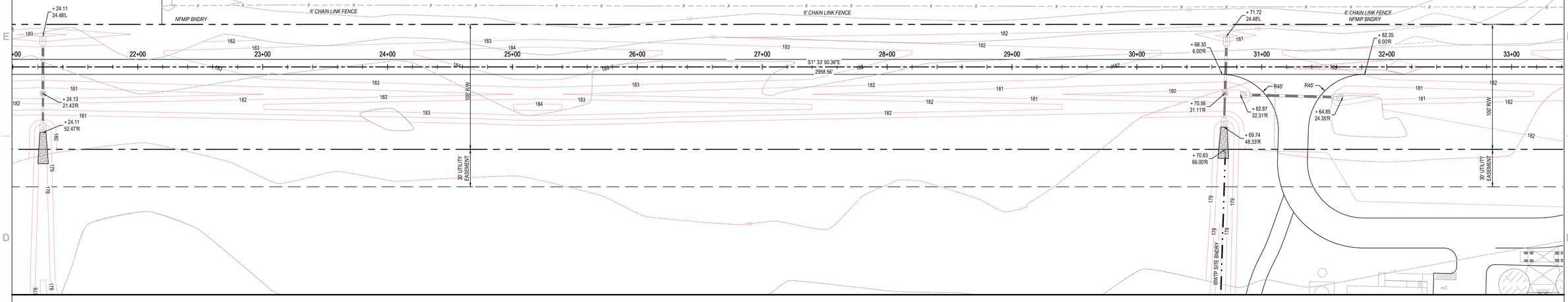
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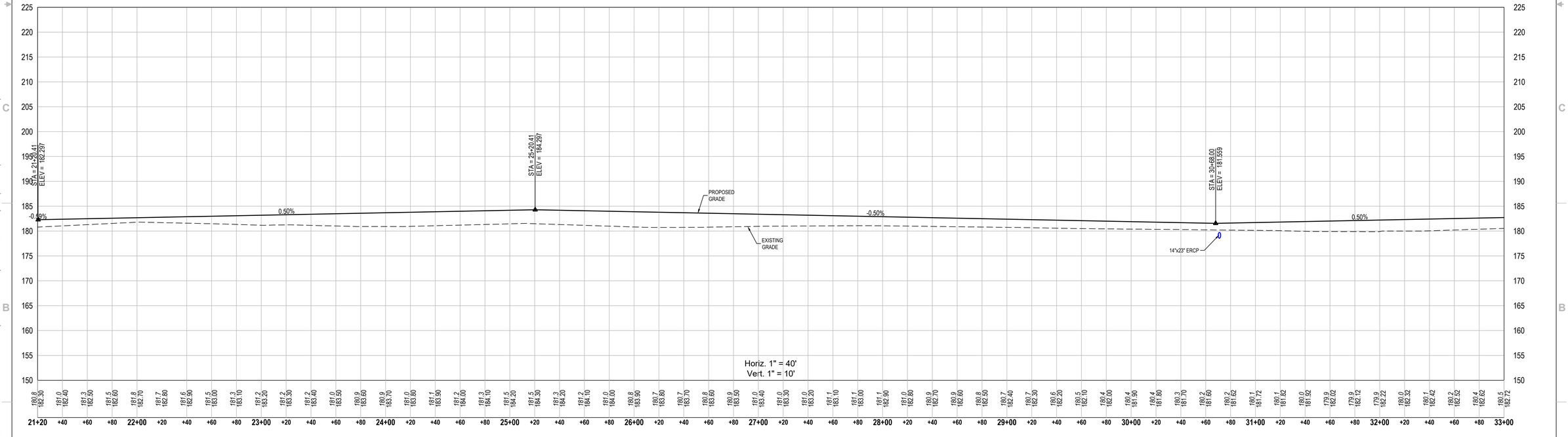
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GRAPHIC SCALE

0 20 40 80

1 inch = 40 ft.





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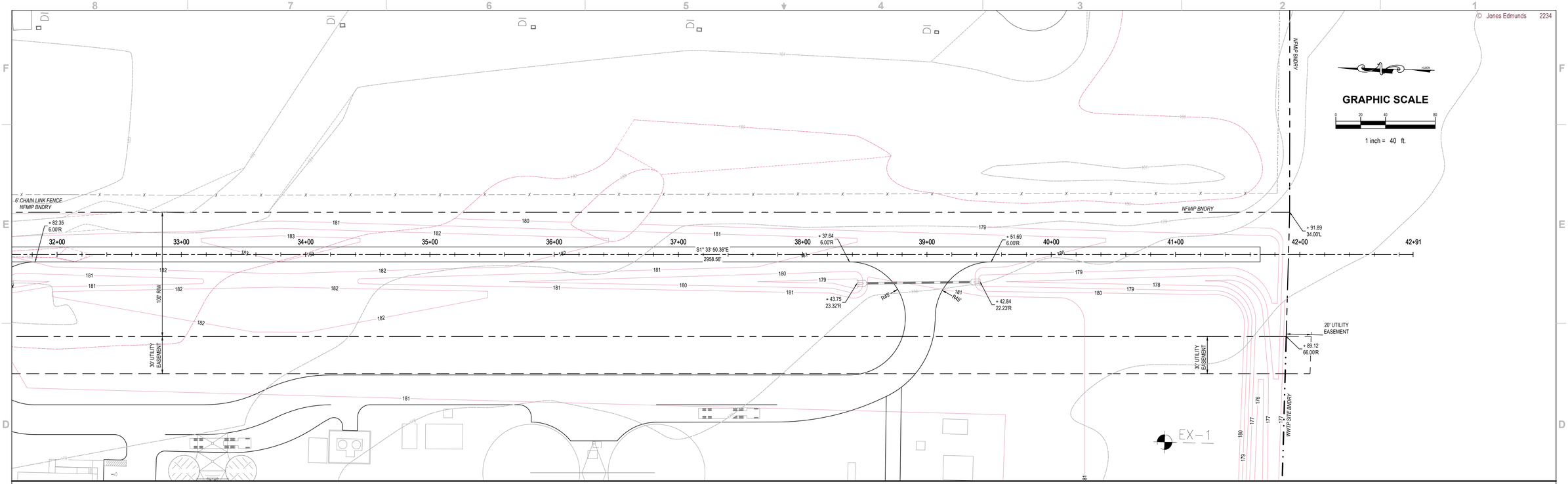
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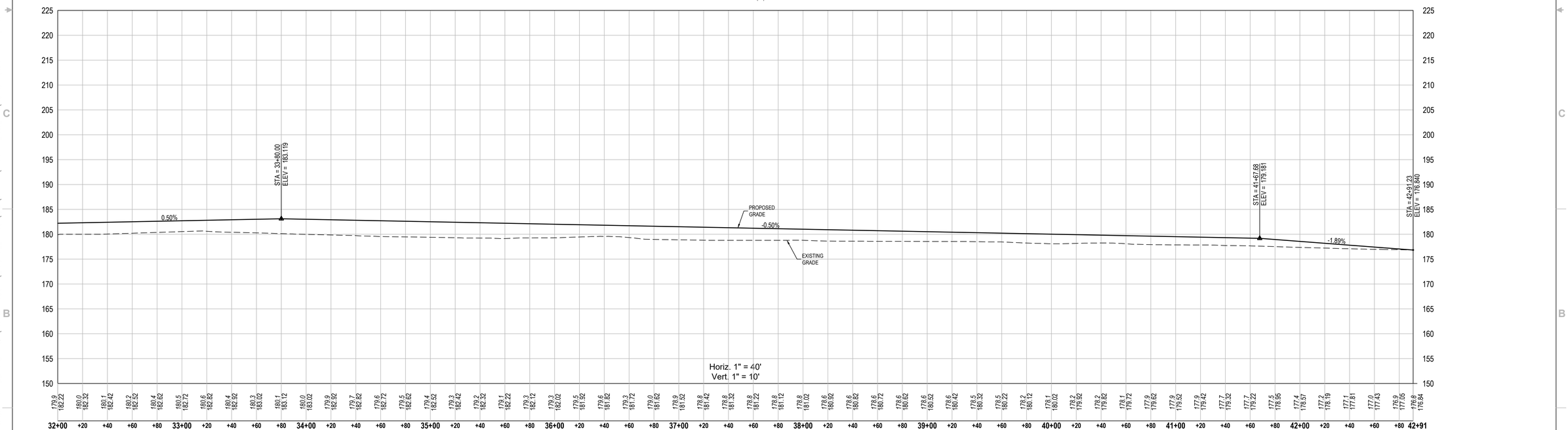
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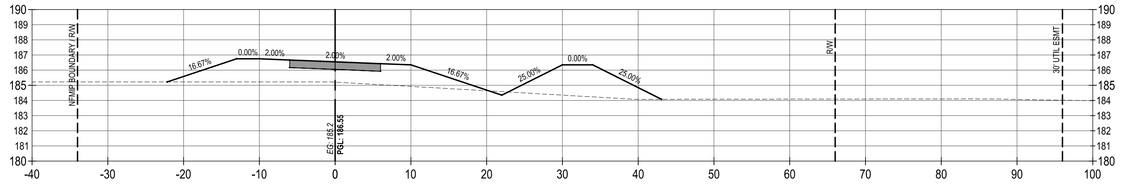
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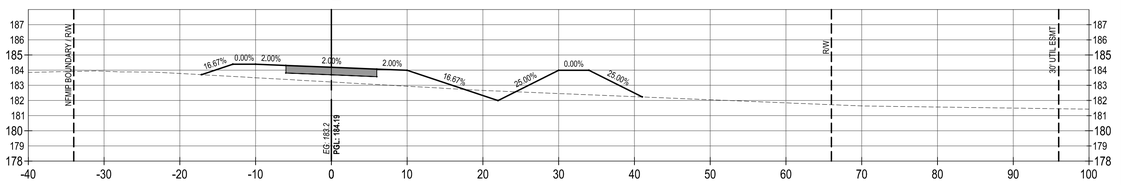
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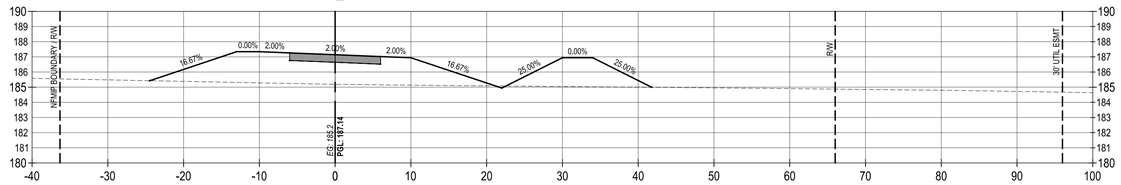
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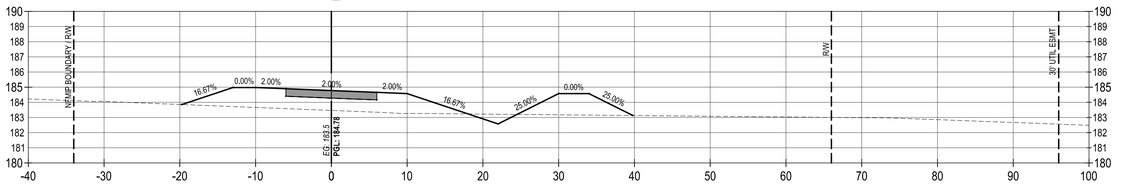
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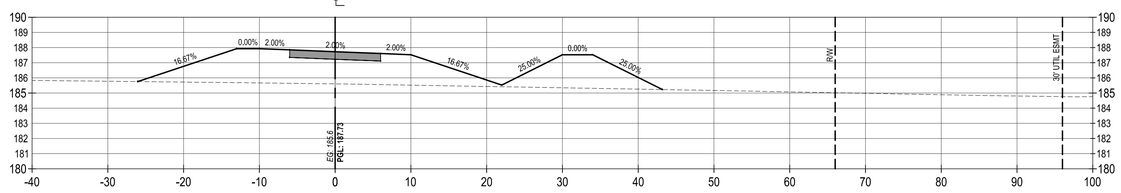
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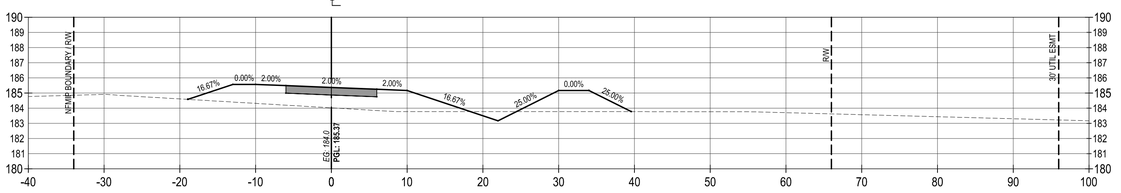
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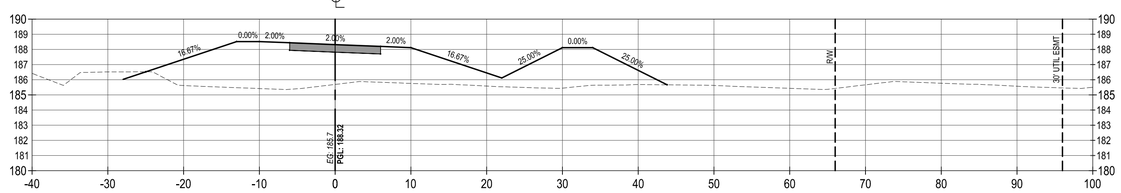
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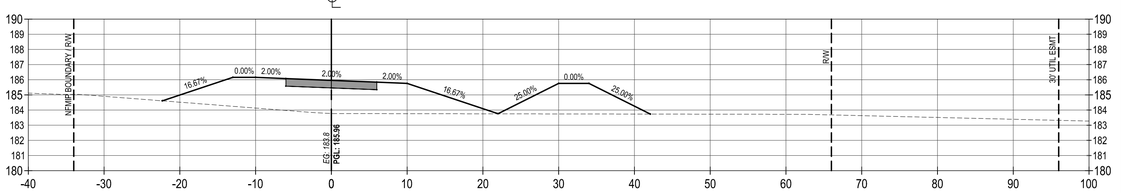
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11+00



15+00



HORZ. 1" = 10'
VERT. 1" = 5'

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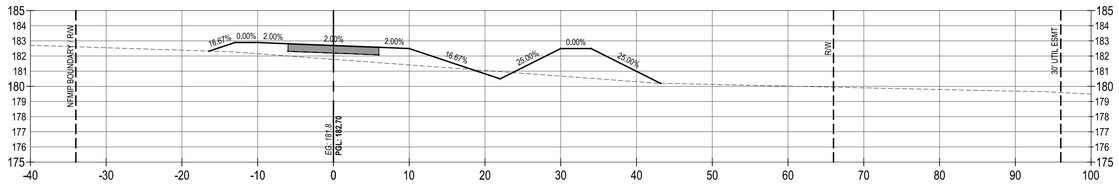
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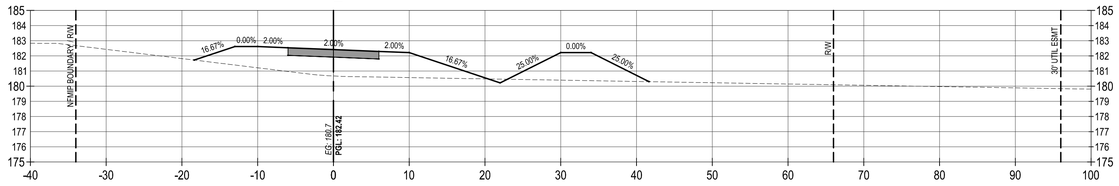
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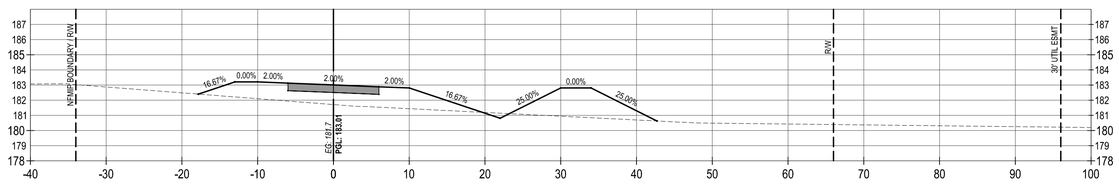
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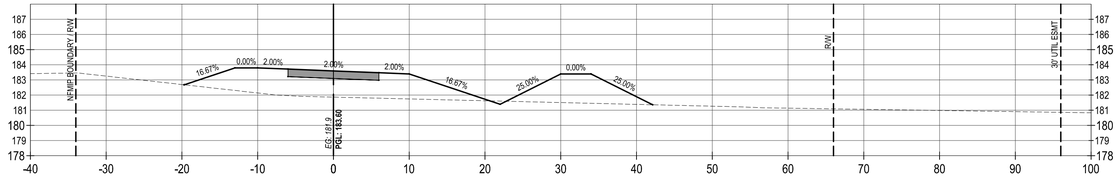
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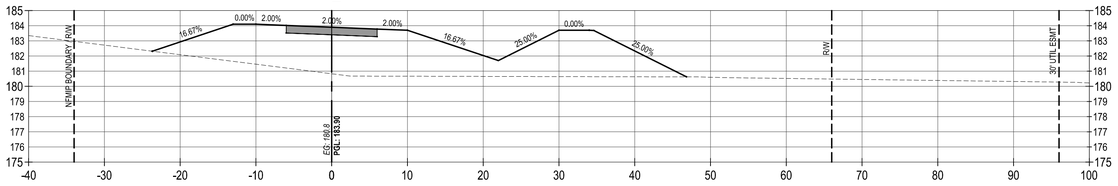
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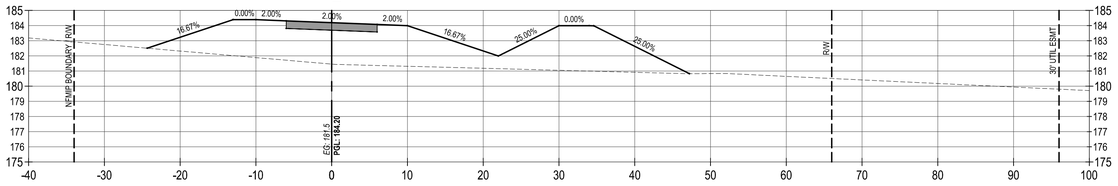
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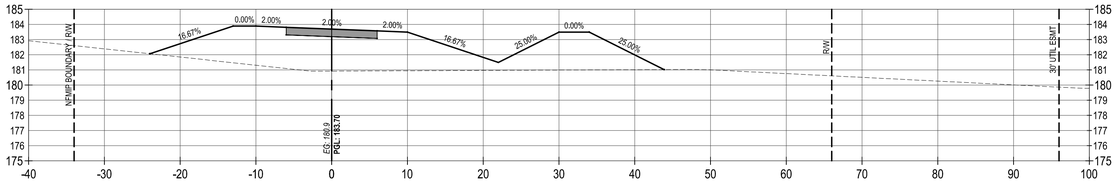
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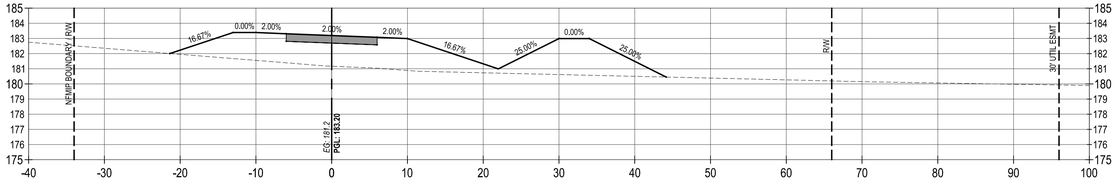
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24+00



23+00



HORZ. 1" = 10'
VERT. 1" = 5'

LTR.	DATE	REVISIONS	BY	APPRD.

DESIGNED RDARABI
DRAWN TDORN
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730 NE WALDO ROAD, GAINESVILLE, FLORIDA 32641 / (352) 377-5821

NORTH FLORIDA MEGA INDUSTRIAL PARK WASTEWATER TREATMENT PLANT COLUMBIA COUNTY, FLORIDA

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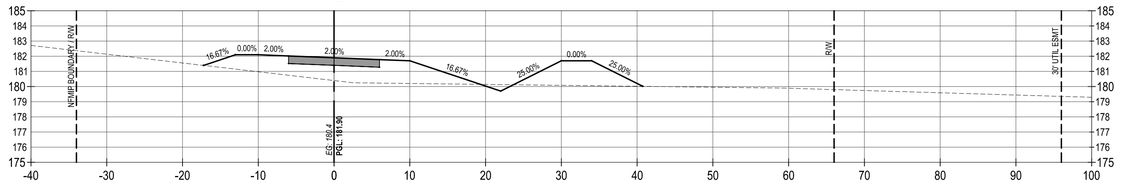
805 N. GADSDEN STREET
TALLAHASSEE, FL 32303
CERTIFICATE OF AUTHORIZATION NO. 00006108

PROJECT NO: 03780-001-01
DATE: NOVEMBER 2022
INDEX NO:
DWG NO: C24

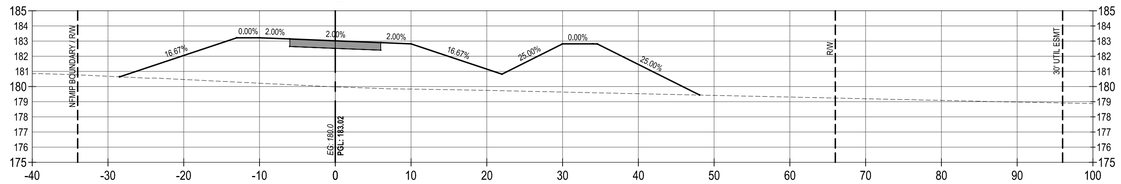
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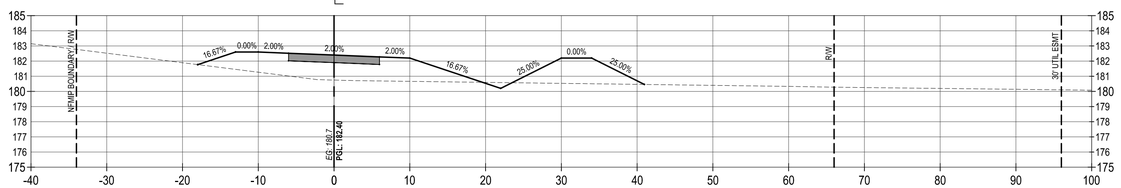
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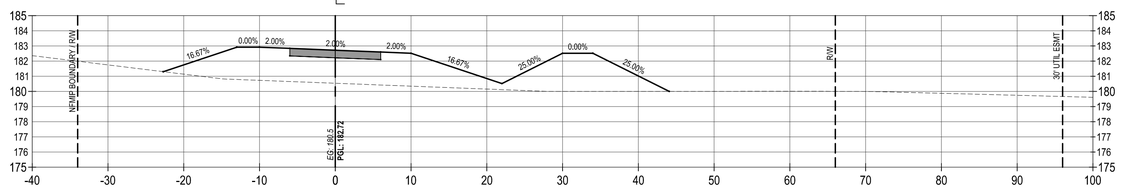
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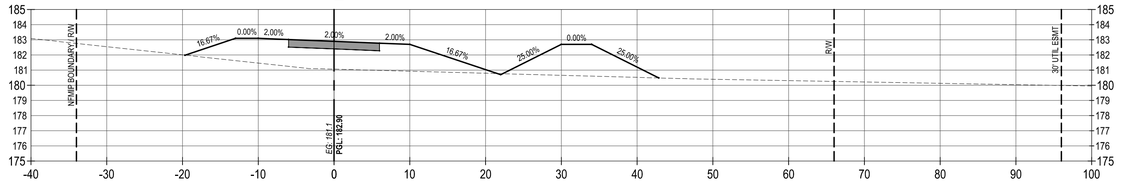
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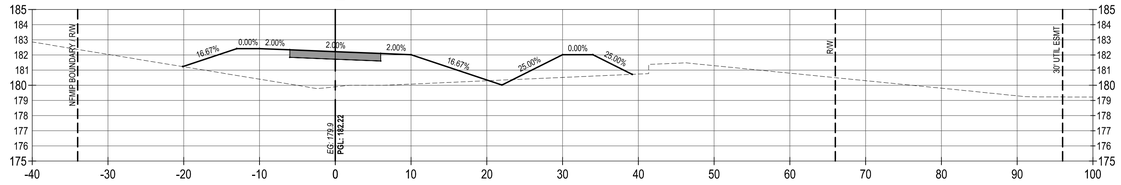
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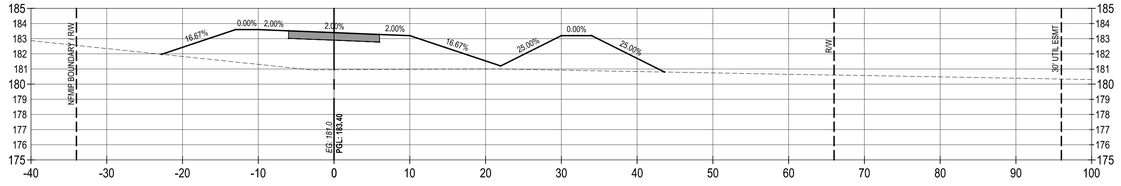
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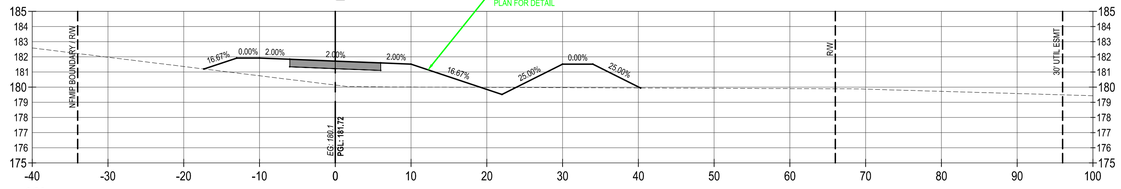
32+00



27+00



31+00



HORZ. 1" = 10'
VERT. 1" = 5'

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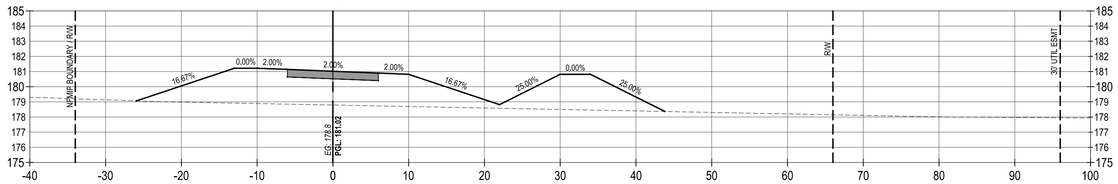
805 N. GADSDEN STREET
TALLAHASSEE, FL 32303
CERTIFICATE OF AUTHORIZATION NO. 00006108

PROJECT NO:	DATE:
03780-001-01	NOVEMBER 2022
INDEX NO:	DWG NO: C25

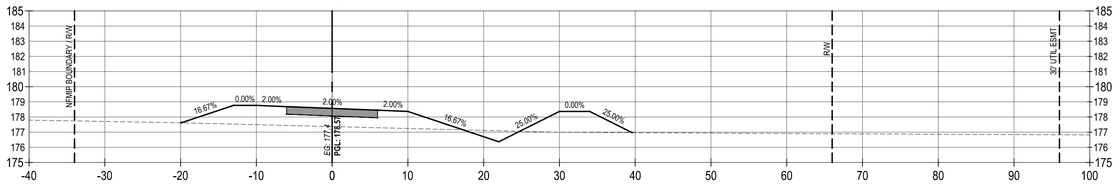
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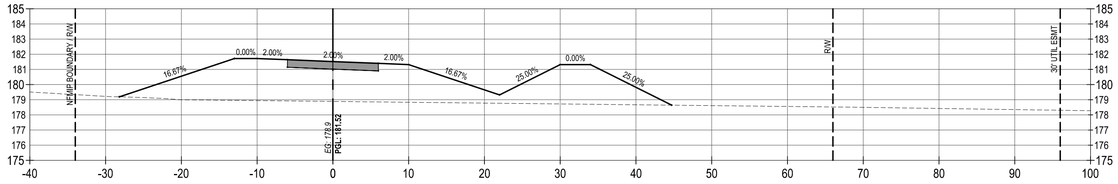
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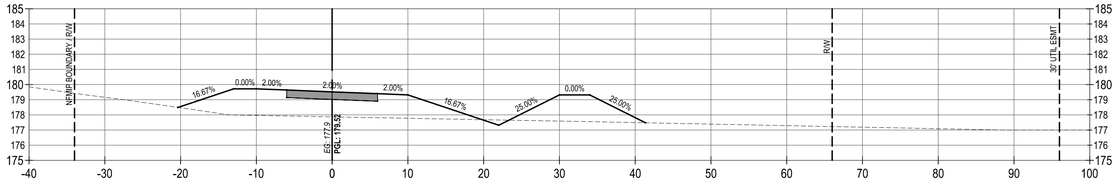
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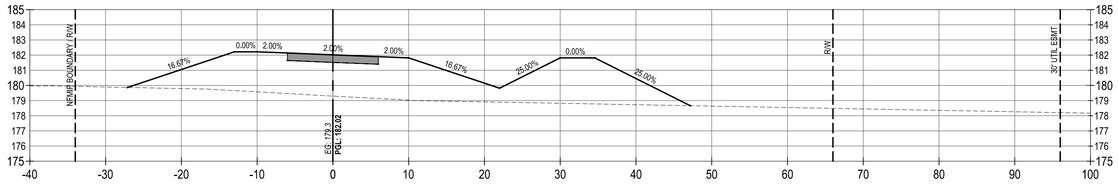
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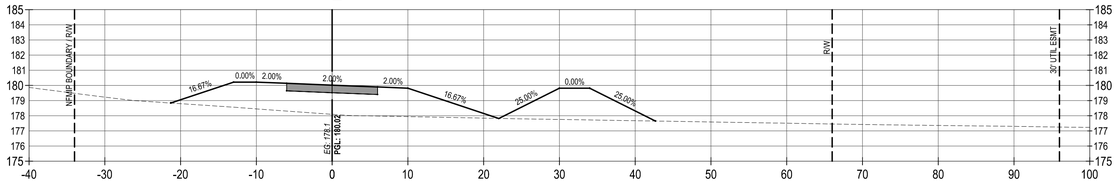
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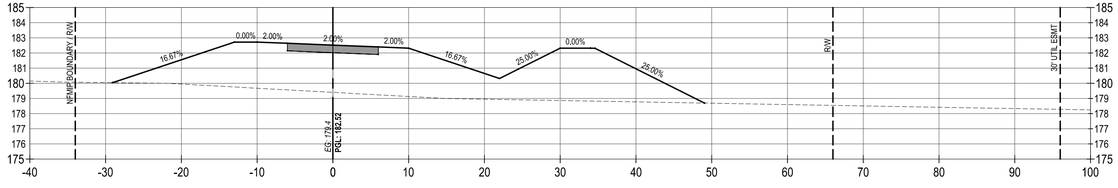
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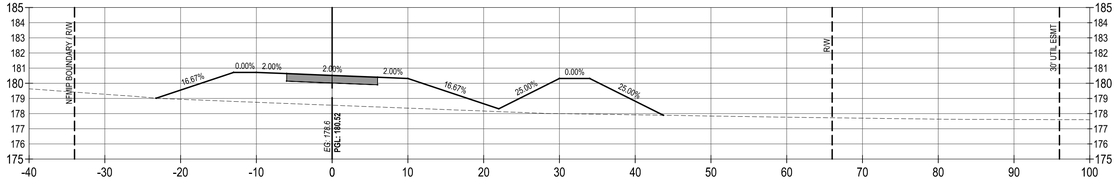
40+00



35+00



39+00



HORZ. 1" = 10'
VERT. 1" = 5'

LTR.	DATE	REVISIONS	BY	APPRD.

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CHECKED BDAVIS

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License No. 68298

805 N. GADSDEN STREET
TALLAHASSEE, FL 32303
CERTIFICATE OF AUTHORIZATION NO. 00006108

PROJECT NO: 03780-001-01
DATE: NOVEMBER 2022
INDEX NO:
DWG NO: C26

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GRAPHIC SCALE

0 15 30 60

1 inch = 30 ft.

EQUIPMENT SHOWN FOR REFERENCE PURPOSES ONLY, DESIGN BY OTHERS

12' GRAVEL DRIVE FOR SWMF ACCESS

12' GRAVEL DRIVE FOR STORAGE POND ACCESS

S1° 33' 50.36"E 2958.56'

31+00 32+00 33+00 34+00 35+00 36+00 37+00 38+00 39+00

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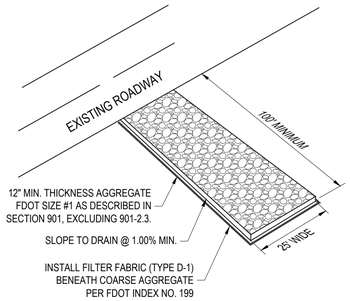
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805 N. GADSDEN STREET
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CERTIFICATE OF AUTHORIZATION NO. 00006108

PROJECT NO:	DATE:
03780-001-01	NOVEMBER 2022
INDEX NO:	DWG NO:
	C27

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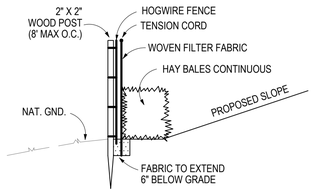


- THE ROAD CONSTRUCTION ACCESS SHALL BE STABILIZED USING 12" MINIMUM THICKNESS OF COARSE AGGREGATE TO REDUCE EROSION CAUSED BY CONSTRUCTION TRAFFIC, AND TO MINIMIZE TRANSPORT OF SEDIMENT ONTO THE EXISTING PAVED ROADWAY.
- AGGREGATE SHALL BE APPLIED IMMEDIATELY AFTER GRADING CONSTRUCTION ENTRANCE AREA.
- IN THE EVENT THAT #1 SIZE AGGREGATE IS NOT AVAILABLE, THE NEXT SMALLER AVAILABLE SIZE AGGREGATE MAY BE SUBSTITUTED WITH THE APPROVAL OF THE ENGINEER.
- THE CONSTRUCTION ENTRANCE SHALL BE MAINTAINED IN A CONDITION WHICH WILL PREVENT TRACKING OR DIRECT FLOW OF MUD AND SEDIMENTS ONTO THE PUBLIC STREETS OR GUTTERS. PERIODIC TOP-DRESSING WITH STONE WILL BE NECESSARY AND AN ADEQUATE SUPPLY SHOULD BE HANDY. ANY SEDIMENTS OR MUD SPILLED, DROPPED, WASHED, OR TRACKED FROM VEHICLES ONTO ROADWAYS OR INTO STORM DRAINS SHALL BE RECOVERED AND CLEANED UP IMMEDIATELY.

TEMPORARY GRAVEL CONSTRUCTION ENTRANCE DETAIL

NOT TO SCALE

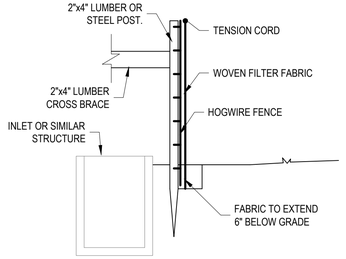
- DIG A 6" X 6" TRENCH AT DESIRED FENCE LOCATION.
- UNROLL SILT FENCE ALONG TRENCH. (SILT-LOK, ENVIROFENCE, OR ENGINEER- APPROVED EQUAL)
- DRIVE STAKE INTO THE DOWNHILL SIDE OF TRENCH W/FILTER FABRIC FACING UPHILL SIDE.
- STAPLE HOGWIRE TO POSTS, EXTENDING FROM TOP OF POSTS TO BOTTOM OF TRENCH.
- LAY THE BOTTOM 6" OF FABRIC INTO THE TRENCH AND FILL W/SOIL FOR PROPER TOE-IN.
- DRAW TENSION CORD AT TOP OF FENCE.



STANDARD SILT FENCE SEDIMENTATION & EROSION CONTROL

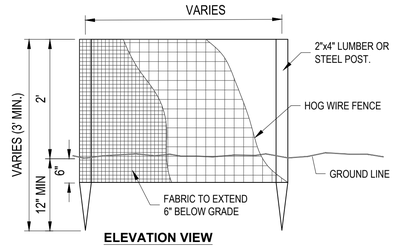
NOT TO SCALE

- DIG A 6" X 6" TRENCH AT DESIRED FENCE LOCATION.
- UNROLL SILT FENCE ALONG TRENCH. (SILT-LOK, ENVIROFENCE, OR ENGINEER- APPROVED EQUAL)
- DRIVE STAKE INTO THE DOWNHILL SIDE OF TRENCH W/FILTER FABRIC FACING UPHILL SIDE.
- STAPLE HOGWIRE TO POSTS, EXTENDING FROM TOP OF POSTS TO BOTTOM OF TRENCH.
- LAY THE BOTTOM 6" OF FABRIC INTO THE TRENCH AND FILL W/SOIL FOR PROPER TOE-IN.
- DRAW TENSION CORD AT TOP OF FENCE.

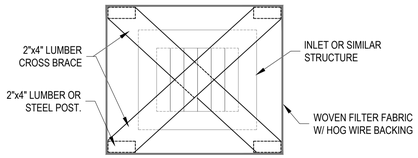


SECTION

NOTE:
STAKES OF OTHER MATERIAL OR SHAPE PROVIDING EQUIVALENT STRENGTH MAY BE USED IF APPROVED BY THE ENGINEER. STAKES OTHER THAN WOOD SHALL BE REMOVED UPON COMPLETION OF THE PROJECT. SEE FDOT INDEX NO. 102 FOR ADDITIONAL INFORMATION.



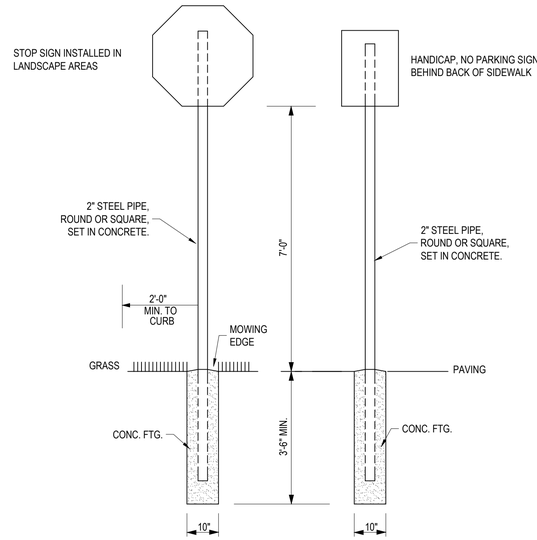
ELEVATION VIEW



PLAN

INLET PROTECTION - A

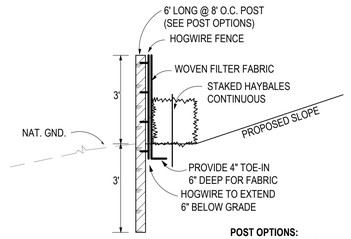
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TRAFFIC SIGNAGE DETAIL

NOT TO SCALE

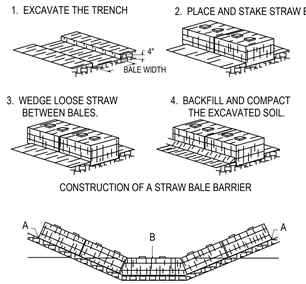
- HEAVY DUTY SILT FENCE INSTALLATION SHALL MEET OR EXCEED ALL REQUIREMENTS OF FDOT TYPE IV SILT FENCE.
- DIG A 6" X 6" TRENCH AT DESIRED BARRIER LOCATION. NO TRENCHING IN CPZ OF TREES TO REMAIN.
- INSTALL POSTS 8' O.C. ON DOWNHILL SIDE OF TRENCH.
- STAPLE HOGWIRE TO POSTS, EXTENDING FROM TOP OF POSTS TO BOTTOM OF TRENCH.
- FOLD TOP 2" OF FABRIC OVER TOP OF FENCE AND STAPLE IN PLACE. LAY FABRIC INTO BOTTOM OF TRENCH AND BACK FILL.
- STAKE HAYBALES CONTINUOUS ALONG UPHILL SIDE OF BARRIER.
- FILTER FABRIC SHALL BE IN CONFORMANCE WITH SECTION 985 FDOT SPEC.



POST OPTIONS:
SOFTWOOD 4" DIA. OR 4"x4"
HARDWOOD 3" DIA.
STEEL 1.33 LBS/FT MIN.

HEAVY DUTY SILT FENCE SEDIMENTATION & EROSION CONTROL

NOT TO SCALE

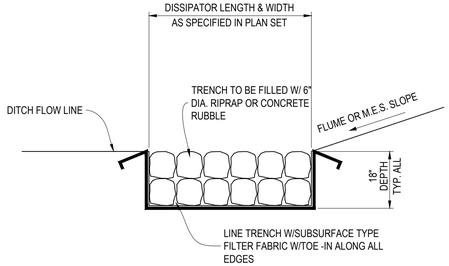


CONSTRUCTION OF A STRAW BALE BARRIER

POINTS A SHOULD BE HIGHER THAN POINT B

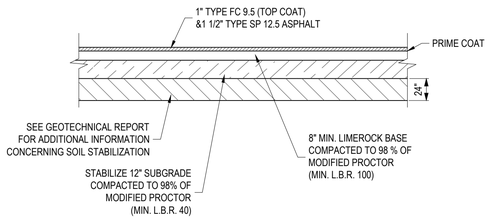
PROPER PLACEMENT OF STRAW BALE BARRIER IN DRAINAGE WAY

NOT TO SCALE



TYPICAL ENERGY DISSIPATOR SECTION

NOT TO SCALE



NOTE:
1) TOP COAT TO BE APPLIED AT THE COMPLETION OF CONSTRUCTION.
2) SEE GEOTECHNICAL REPORT (COLUMBIA COUNTY NORTH FLORIDA MEGA INDUSTRIAL PARK - PLANT, DATED 4/30/2021) FOR STABILIZED SUBGRADE.
3) THE BOTTOM OF THE BASE COURSE SHALL HAVE A MINIMUM SEPARATION OF 12" ABOVE THE SEASON HIGH GROUND WATER TABLE OR UTILIZED UNDERDRAINS (SEE GEOTECH REPORT)

ON-SITE ASPHALT PAVEMENT SECTION

NOT TO SCALE

LTR.	DATE	REVISIONS	BY	APPRD.

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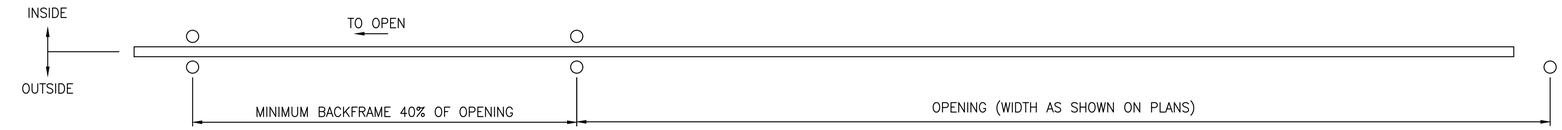
805 N. GADSDEN STREET TALLAHASSEE, FL 32303 CERTIFICATE OF AUTHORIZATION NO. 00006108

PROJECT NO: 03780-001-01
DATE: NOVEMBER 2022
INDEX NO:
DWG NO: C28

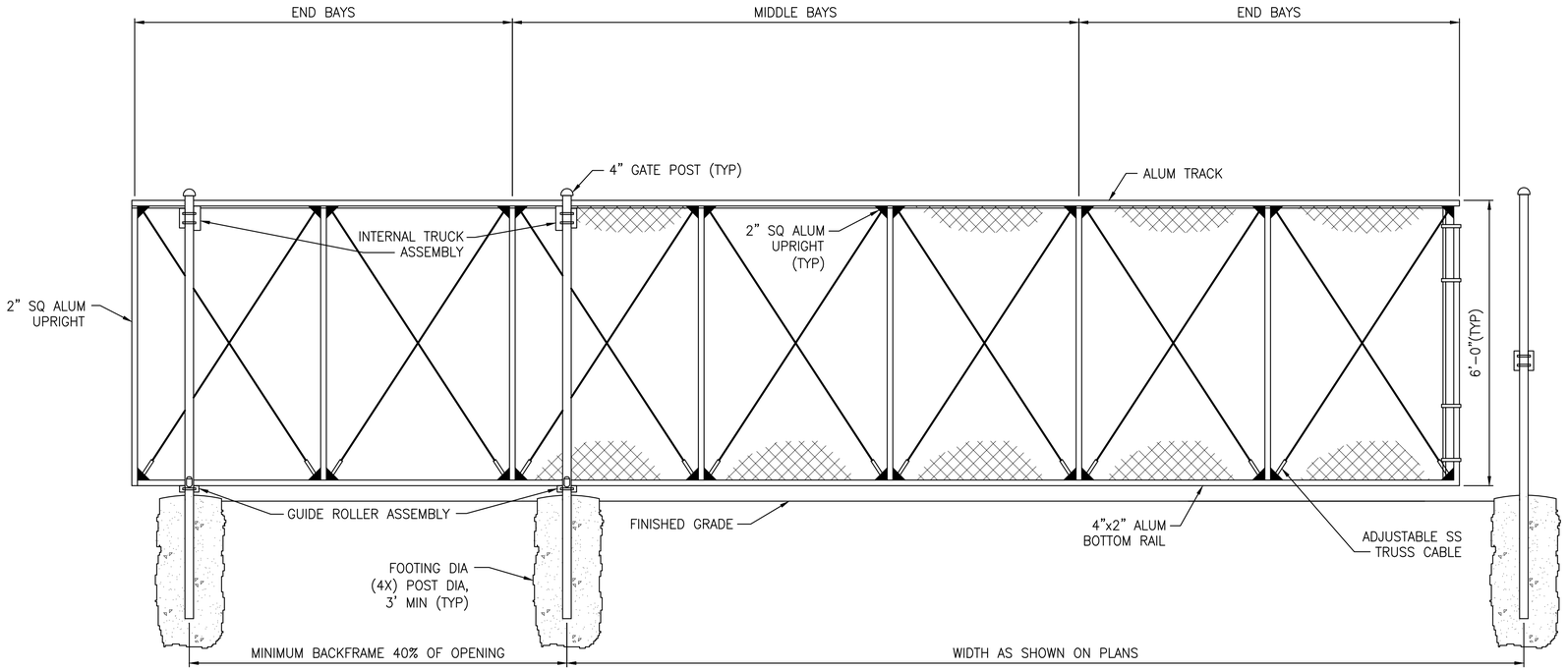
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PLAN

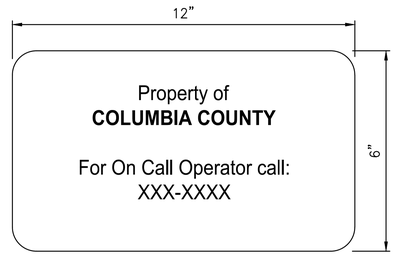


NOTE:
VERTICAL AND HORIZONTAL MEMBERS MAX 8' OC.

ELEVATION

CANTILEVERED SLIDING GATE DETAIL 1

NTS



NOTE:
SIGN TO BE MADE OF DURABLE WEATHER-RESISTANT MATERIAL

ON-CALL OPERATOR CONTACT SIGN 2

NTS

NOTE:
SIGN TO BE MADE OF DURABLE WEATHER-RESISTANT MATERIAL

FACILITY IDENTIFICATION SIGN 3

NTS

VE GMP-1

LTR.	DATE	REVISIONS	BY	APPRD.
VE	11/2022	VE GMP-1	LYC	TWF

DESIGNED TFRIEDRICH
DRAWN JKRAMER
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NORTH FLORIDA MEGA INDUSTRIAL PARK
WASTEWATER TREATMENT PLANT
COLUMBIA COUNTY, FLORIDA

MECHANICAL DETAILS

Thomas W. Friedrich, State of Florida, Professional Engineer, License No. 61281

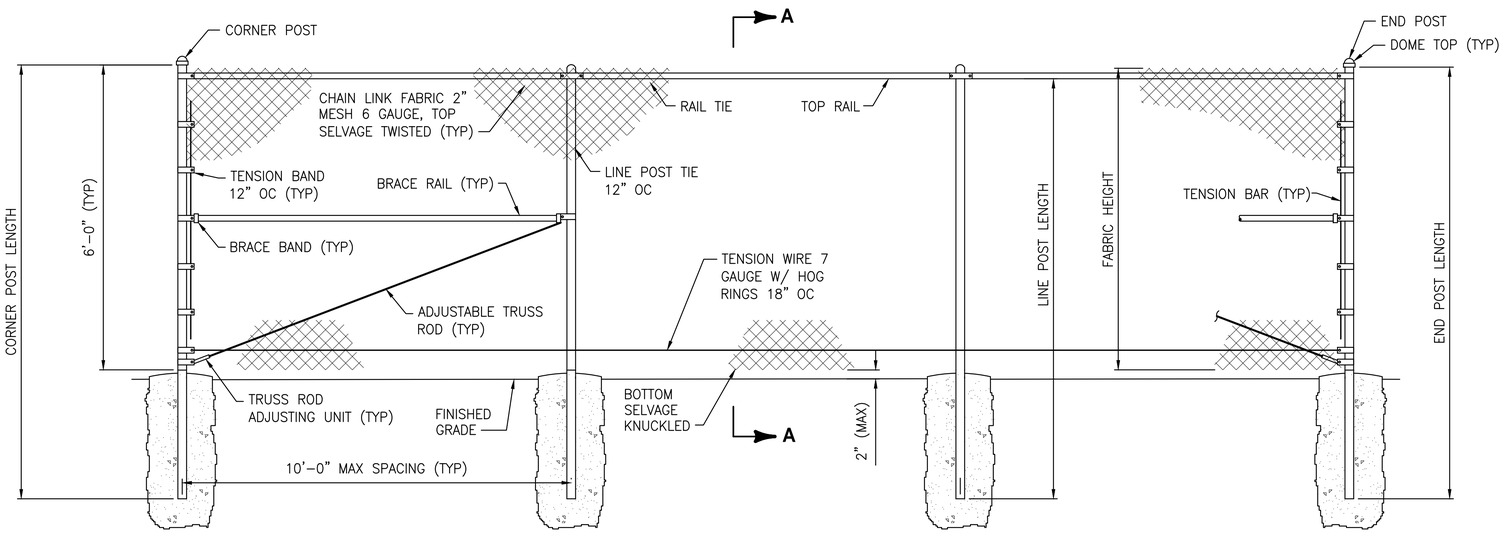
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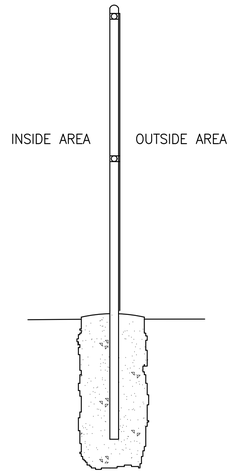
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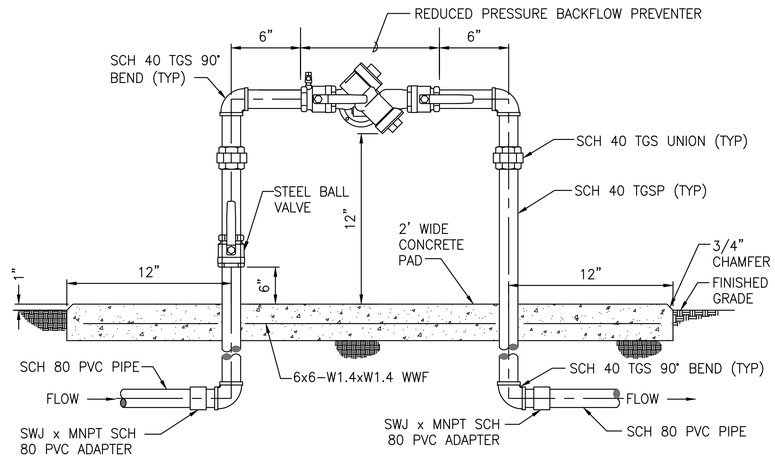
CHAIN LINK FENCE DETAIL 1
NTS



SECTION A-A

NOTES:

1. SIZE OF METER, ADAPTERS, ETC. SHALL BE THE SAME AS THE SERVICE LINE SHOWN ON THE PLAN.
2. INSULATE ABOVE GRADE PIPING AND BACKFLOW PREVENTER ASSEMBLY.
3. REDUCED PRESSURE BACKFLOW PREVENTER SHALL BE IN ACCORDANCE W/ SPECIFICATION 15145.
4. RESILIENT SEATED BALL VALVES REQUIRED ON ALL BACKFLOW PREVENTION DEVICES 2" AND SMALLER



TYPICAL REDUCED PRESSURE BACKFLOW PREVENTER DETAIL 2
NTS

VE GMP-1

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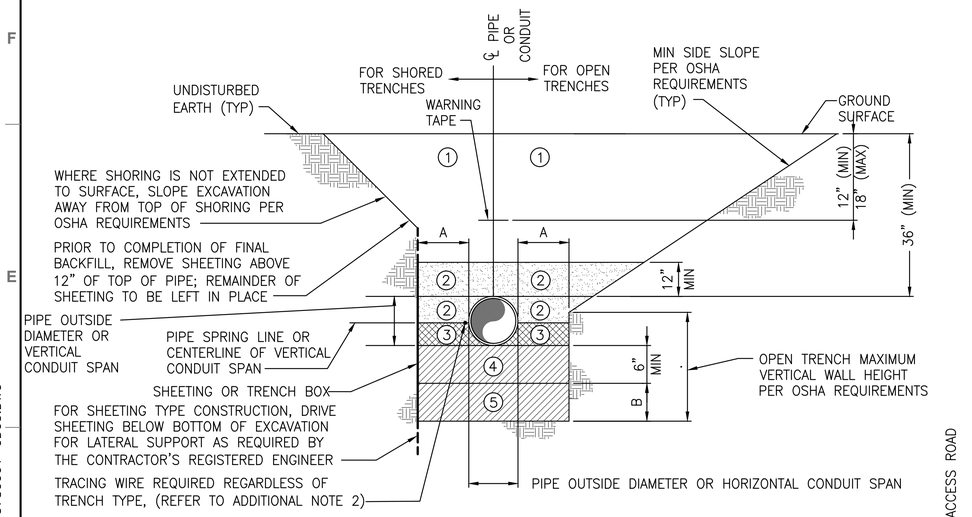
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NOMINAL PIPE DIAMETER OR HORIZONTAL CONDUIT SPAN (INCHES)	MINIMUM SIDEWALL CLEARANCE	ADDITIONAL EXCAVATION DEPTH (1)
	A (INCHES)	B (INCHES)
LESS THAN 24	12	12
24 AND GREATER	18	18

(1) REQUIRED WHERE UNSUITABLE MATERIAL IS ENCOUNTERED.

ZONE NO.	ZONE NAME	MATERIAL	ZONE 1 COMPACTION	ZONES 2–5 COMPACTION
①	FINAL BACKFILL	AS SPECIFIED	AT LEAST 98% MODIFIED PROCTOR MAXIMUM DRY DENSITY ASTM D–1557	AT LEAST 95% MODIFIED PROCTOR MAXIMUM DRY DENSITY ASTM D–1557
②	INITIAL BACKFILL			
③	HAUNCHING			
④	BEDDING			
⑤	FOUNDATION			

TRENCH ZONE NOTES:

① FINAL BACKFILL SHALL BE INSTALLED IN LIFTS NOT EXCEEDING 6 INCHES, LOOSE MEASUREMENT. REFER TO ADDITIONAL NOTE 3.

② INITIAL BACKFILL SHALL BE INSTALLED IN LIFTS NOT EXCEEDING 6 INCHES, LOOSE MEASUREMENT. ALL LIFTS SHALL BE COMPACTED BY HAND TAMPING OR AN APPROVED METHOD OF MECHANICAL TAMPING. REFER TO ADDITIONAL NOTE 3.

③ HAUNCHING SHALL BE IN COMPLETELY DEWATERED TRENCHES IN LIFTS NOT EXCEEDING 6 INCHES, LOOSE MEASUREMENT. ALL LIFTS SHALL BE COMPACTED BY HAND TAMPING. HAUNCHING SHALL BE BROUGHT UP EQUALLY ON BOTH SIDES OF THE PIPE.

④ BEDDING SHALL BE INSTALLED IN COMPLETELY DEWATERED TRENCHES IN LIFTS NOT EXCEEDING 6 INCHES, LOOSE MEASUREMENT, AND SHALL BE COMPACTED BY HAND OR MECHANICAL TAMPING. PROPERLY SHAPED BELL HOLES SHALL BE EXCAVATED IN THE BEDDING TO PERMIT ASSEMBLY OF THE PIPE. REFER TO ADDITIONAL NOTE 3.

NATIVE, UNDISTURBED MATERIAL IN COMPLETELY DEWATERED TRENCHES MEETING THE COMPACTION AND MATERIAL REQUIREMENTS FOR COMPACTED BEDDING MATERIAL NEED NOT BE REPLACED OR REWORKED, EXCEPT FOR SHAPING OF THE BELL HOLES, AND WHERE REFILL IS REQUIRED.

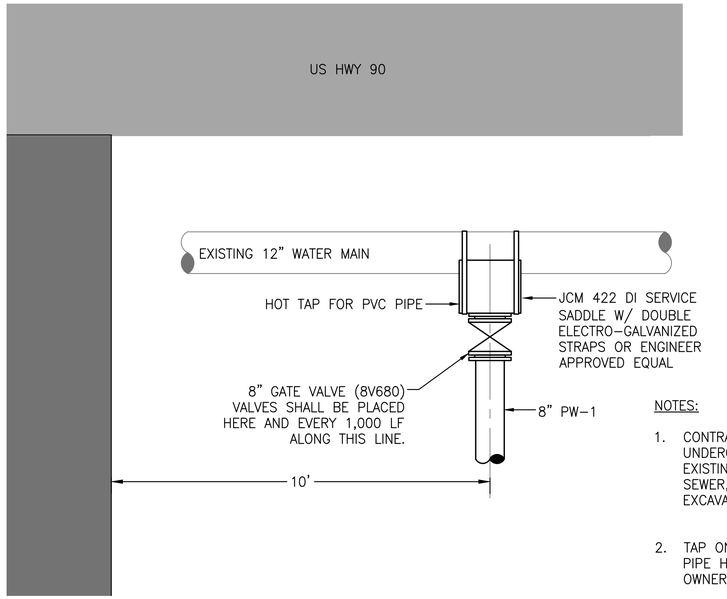
⑤ FOUNDATION SHALL BE REQUIRED WHERE UNSUITABLE MATERIAL IS ENCOUNTERED. FOUNDATION SHALL BE IN ACCORDANCE WITH THE REQUIREMENTS FOR BEDDING. REFER TO ADDITIONAL NOTE 3.

ADDITIONAL NOTES:

1. FOR TRENCHES IN VEHICULAR TRAFFIC AREAS OR BENEATH SURFACE IMPROVEMENTS (EG, SLAB, ETC.) SEE CONTRACT SPECIFICATIONS FOR ADDITIONAL COMPACTION REQUIREMENTS. SEE CIVIL DRAWINGS FOR ASPHALT RESTORATION DETAILS.
2. TRACING WIRE SHALL BE INSTALLED ON THE SIDE OF THE PIPE AND ATTACHED TO THE PIPE EVERY 10' W/ A NYLON WIRE TIE. IF THE WIRE IS DAMAGED OR NEEDS TO BE EXTENDED A 3M WATERPROOF TYPE UF SPLICE SHALL BE INSTALLED TO REPAIR THE WIRE. THE ENDS OF THE TRACING WIRE SHALL BE BROUGHT UP IN EVERY VALVE BOX ON THE LINE AND AT THE HYDRANT VALVES. THERE SHALL BE A MINIMUM COIL OF 3' LEFT UNDER THE VALVE BOX COVER. THE WIRE SHALL BE TESTED TO VERIFY CONDUCTIVITY.
3. ALTERNATIVE LIFT THICKNESSES, NOT EXCEEDING 12 INCHES LOOSE MEASUREMENT, ARE ACCEPTABLE IN TRENCH ZONES 1, 2, 4, AND 5 PROVIDED 1) THE LIFT THICKNESS DOES NOT EXCEED THE MAXIMUM VALUE RECOMMENDED IN WRITING BY THE APPLICABLE PIPE MANUFACTURER AND 2) FIELD TEST RESULTS CONFIRM THAT THE SPECIFIED COMPACTION REQUIREMENTS ARE BEING MET.

TYPICAL UTILITY TRENCH DETAIL 1

NTS



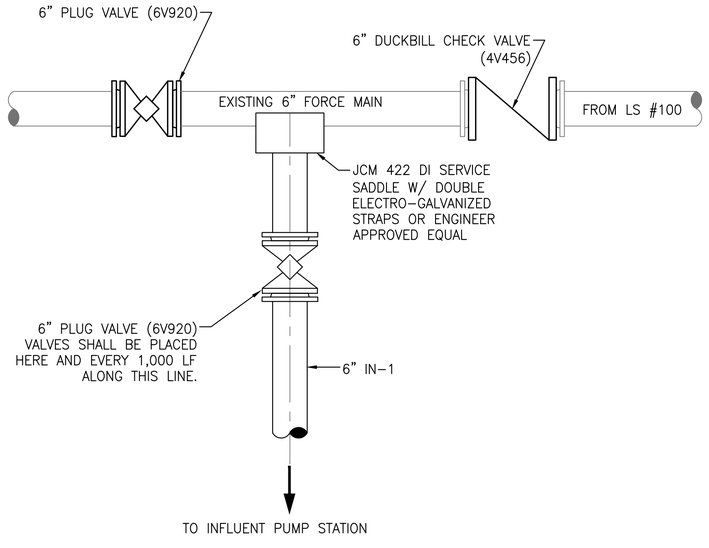
NOTES:

1. CONTRACTOR SHALL CONDUCT UNDERGROUND INVESTIGATION TO LOCATE EXISTING UTILITIES TO INCLUDE GAS, WATER, SEWER, FIBER OPTIC AND POWER PRIOR TO EXCAVATION.
2. TAP ONLY TO BE INSTALLED AFTER ALL PIPE HAS BEEN INSTALLED, AND WITH OWNER APPROVAL.

POTABLE WATER CONNECTION* 2

NTS

* NSF / ANSI 61 COMPLIANT



SANITARY FORCEMAIN CONNECTION @ US HWY 90 3

NTS

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WASTEWATER TREATMENT PLANT
COLUMBIA COUNTY, FLORIDA

MECHANICAL DETAILS

Thomas W. Friedrich, State of Florida, Professional Engineer, License No. 61281

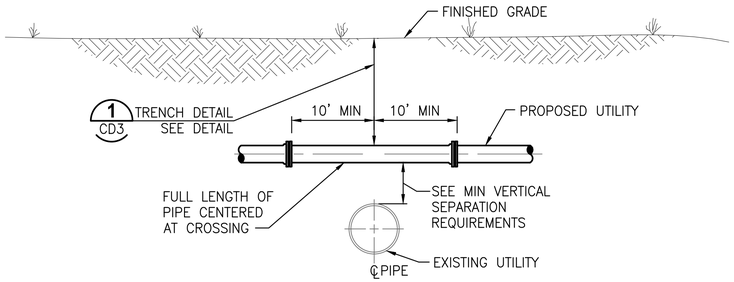
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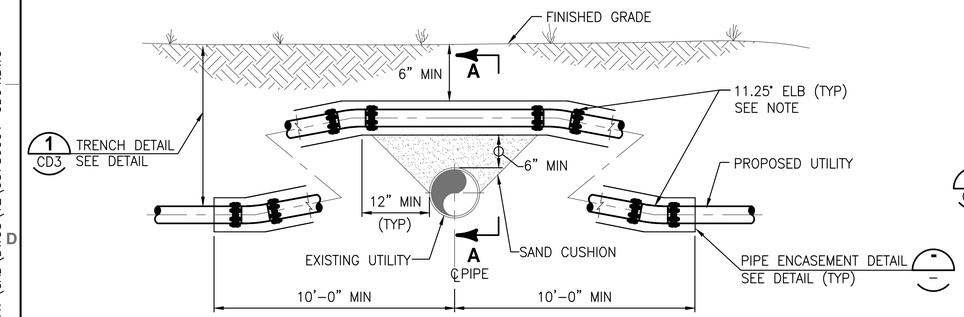
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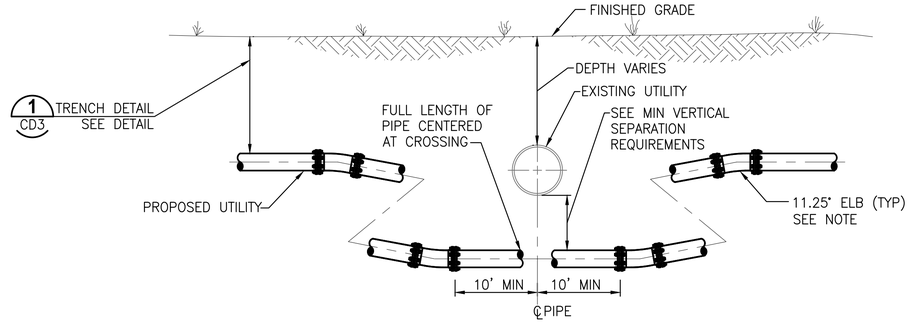


OPTION 1 (SUFFICIENT COVER AND SEPARATION AVAILABLE)



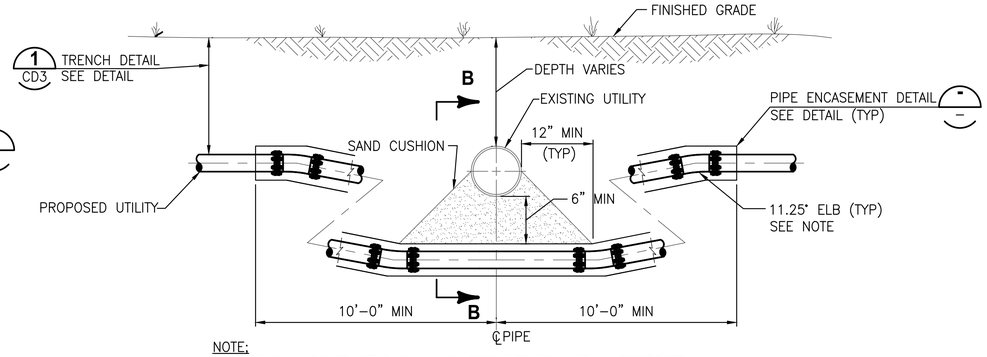
NOTE:
IF SUFFICIENT COVER IS NOT AVAILABLE, PROVIDE FITTINGS AS SHOWN.

ALTERNATE OPTION 1 (SUFFICIENT COVER OR SEPARATION NOT AVAILABLE)



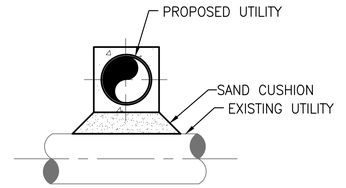
NOTE:
IF ADDITIONAL COVER BEYOND MIN IS REQUIRED TO INSTALL PROPOSED UTILITY BENEATH EXISTING UTILITY, PROVIDE FITTINGS AS SHOWN.

OPTION 2 (SUFFICIENT SEPARATION AVAILABLE)

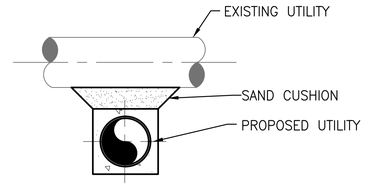


NOTE:
IF ADDITIONAL COVER BEYOND MIN IS REQUIRED TO INSTALL PROPOSED UTILITY BENEATH EXISTING UTILITY, PROVIDE FITTINGS AS SHOWN.

ALTERNATE OPTION 2 (SUFFICIENT SEPARATION NOT AVAILABLE)



SECTION A-A



SECTION B-B

PROPOSED UTILITY	EXISTING UTILITY						
	POTABLE WATER	GRAVITY SANITARY SEWER	SEWAGE FORCE MAIN	STORM	RECLAIMED WATER	ELECTRIC TELECOMMUNICATIONS	COMMENTS
POTABLE WATER	1'–0"	1'–6"	1'–6"	1'–0"	1'–6"	1'–0"	SEE NOTE 1
GRAVITY SANITARY SEWER	1'–6"	1'–0"	1'–0"	1'–6"	1'–6"	1'–0"	
SEWAGE FORCE MAIN	1'–6"	1'–0"	1'–0"	1'–6"	1'–6"	1'–0"	SEE NOTE 2
STORM	1'–0"	1'–6"	1'–6"	1'–0"	1'–0"	1'–0"	
RECLAIMED WATER	1'–6"	1'–6"	1'–6"	1'–0"	1'–0"	1'–0"	SEE NOTE 2
ELECTRIC TELECOMMUNICATIONS	1'–0"	1'–0"	1'–0"	1'–0"	1'–0"	1'–0"	

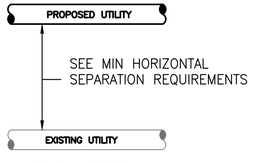
NOTES:
1. ONLY OPTION 1 CONSTRUCTION IS ALLOWED WITHOUT APPROVAL OF ENGINEER.
2. ONLY OPTION 2 CONSTRUCTION IS ALLOWED WITHOUT APPROVAL OF ENGINEER.
3. FITTINGS SHALL NOT BE USED ON GRAVITY SANITARY SEWER. GRAVITY SANITARY SEWER SHALL BE CONSTRUCTED AT A UNIFORM GRADE BETWEEN MANHOLE STRUCTURES

MINIMUM VERTICAL SEPARATION REQUIREMENTS

TYPICAL UTILITY CONFLICT DETAIL 1

NTS

PROPOSED UTILITY	EXISTING UTILITY						
	POTABLE WATER	GRAVITY SANITARY SEWER	SEWAGE FORCE MAIN	STORM	RECLAIMED WATER	ELECTRIC TELECOMMUNICATIONS	TREE
POTABLE WATER	1'–0"	10'–0"	10'–0"	3'–0"	3'–0"	3'–0"	10'–0"
GRAVITY SANITARY SEWER	10'–0"	1'–0"	1'–0"	5'–0"	5'–0"	3'–0"	
SEWAGE FORCE MAIN	10'–0"	1'–0"	1'–0"	3'–0"	3'–0"	3'–0"	
STORM	3'–0"	5'–0"	3'–0"	1'–0"	3'–0"	3'–0"	
RECLAIMED WATER	3'–0"	5'–0"	3'–0"	3'–0"	1'–0"	3'–0"	
ELECTRIC TELECOMMUNICATIONS	3'–0"	3'–0"	3'–0"	3'–0"	3'–0"	2'–0"	



PLAN VIEW

MINIMUM HORIZONTAL SEPARATION REQUIREMENTS

TYPICAL UTILITY HORIZONTAL SEPARATION DETAIL 2

NTS

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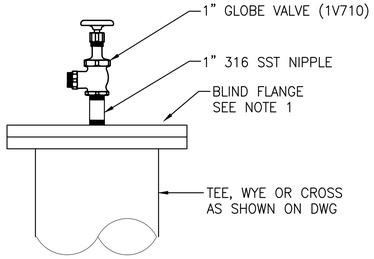
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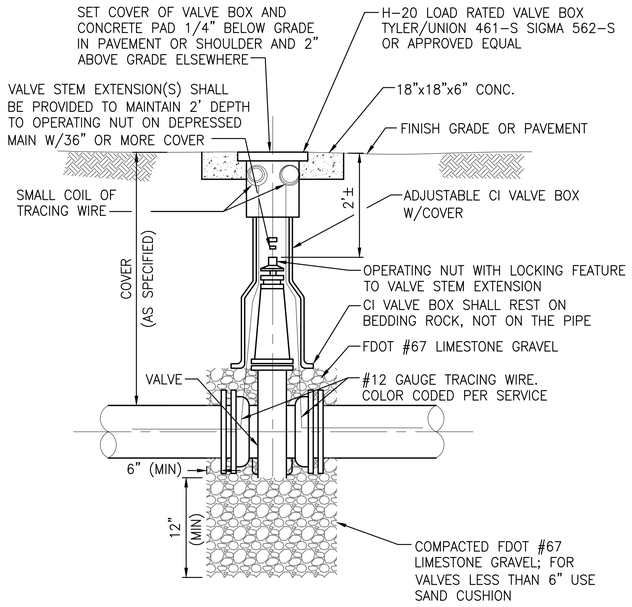
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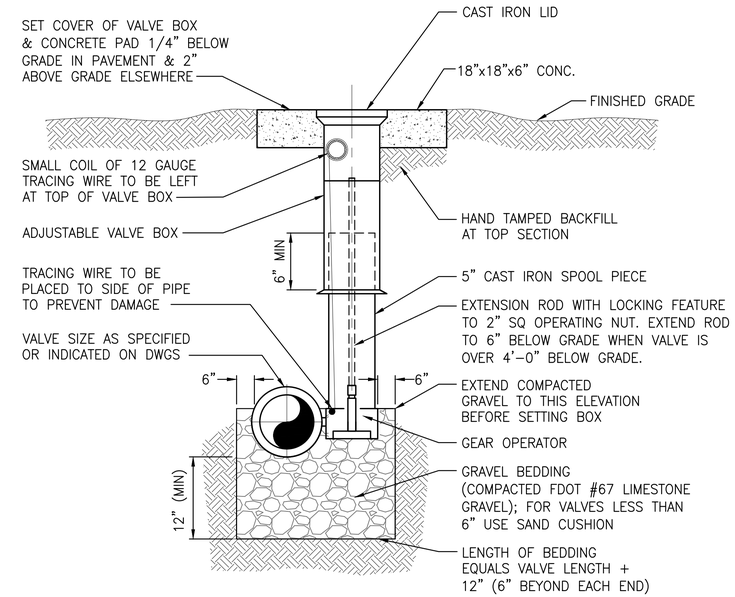
NOTE:

1. DRILL AND TAP FLANGE FOR 1 1/2" NPT NIPPLE.

TYPICAL HOSE CONNECTION DETAIL 1
NTS



TYPICAL GATE VALVE AND BOX DETAIL 2
NTS



TYPICAL BUTTERFLY OR PLUG VALVE DETAIL 3
NTS

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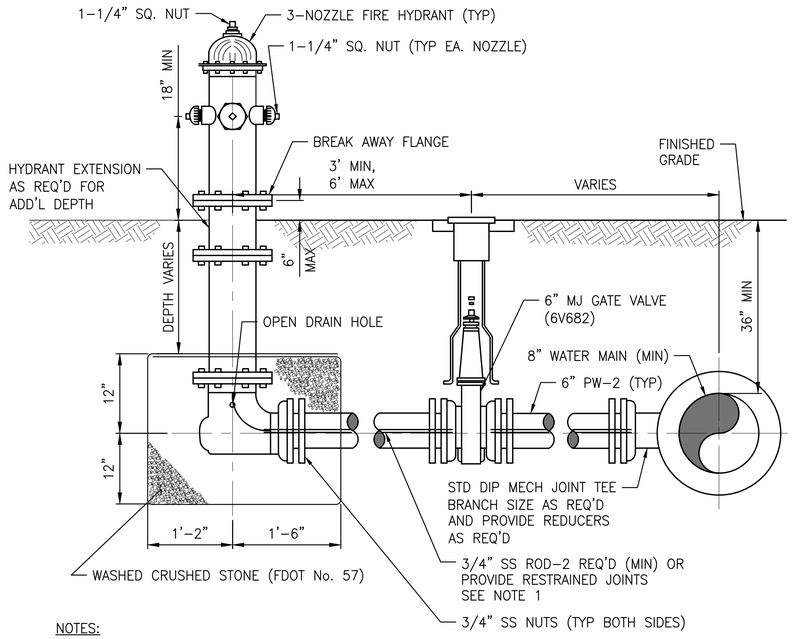
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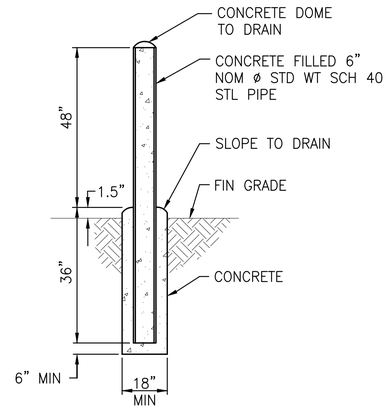


NOTES:

1. 3/4" STAINLESS STEEL ROD CUT AND THREADED AS REQUIRED, OR PROVIDE RESTRAINED JOINTS.
2. FIRE HYDRANTS SHALL BE INSTALLED AS SHOWN ON THE DRAWINGS OR AS DIRECTED IN FIELD.
3. TIE RODS, NUTS, WASHERS AND OTHER FASTENERS SHALL BE TYPE 316 STAINLESS STEEL
4. 4 1/2" PUMPER NOZZLE TO BE PERPENDICULAR TO CENTERLINE OF MAIN.
5. FIRE HYDRANT ASSEMBLY INCLUDES ALL THAT IS SHOWN INCLUDING DI PIPE TO MAIN, DIP TEE AT MAIN, HYDRANT, REDUCERS, VALVE, HYDRANT EXTENSIONS, VALVE EXTENSIONS, ALL PIPING AND MISCELLANEOUS APPURTENANCES REQUIRED FOR A COMPLETE INSTALLATION.

FIRE HYDRANT ASSEMBLY DETAIL 2

NTS



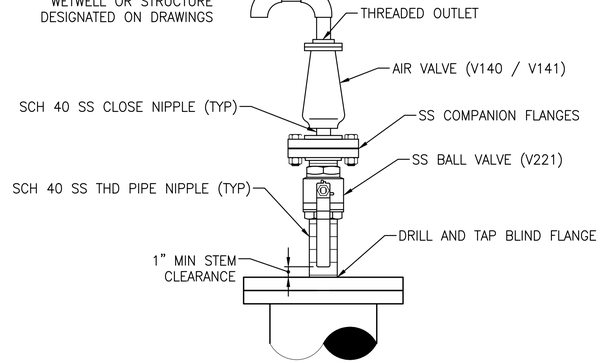
NOTES:

A. ACTUAL INSTALLATION LOCATION OF EACH BOLLARD SHALL BE AS SHOWN ON THE DRAWINGS OR AS DIRECTED IN THE FIELD.

B. PAINT ALL PIPING MATERIALS OSHA SAFETY YELLOW.

BOLLARD DETAIL 1

NTS



NOTES:

1. SEE DRAWINGS FOR AIR VALVE TYPE AND INLET DIAMETER.
2. BALL VALVE AND NIPPLES SHALL HAVE THE SAME DIAMETER AS THE AIR VALVE INLET.
3. VERIFY SIZE OF VALVE PRIOR TO ORDERING ANCILLARY PARTS, DRILLING OR TAPPING.

FLANGE MOUNTED AIR RELEASE VALVE 3

NTS

VE GMP-1

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MECHANICAL DETAILS

Thomas W. Friedrich, State of Florida, Professional Engineer, License No. 61281

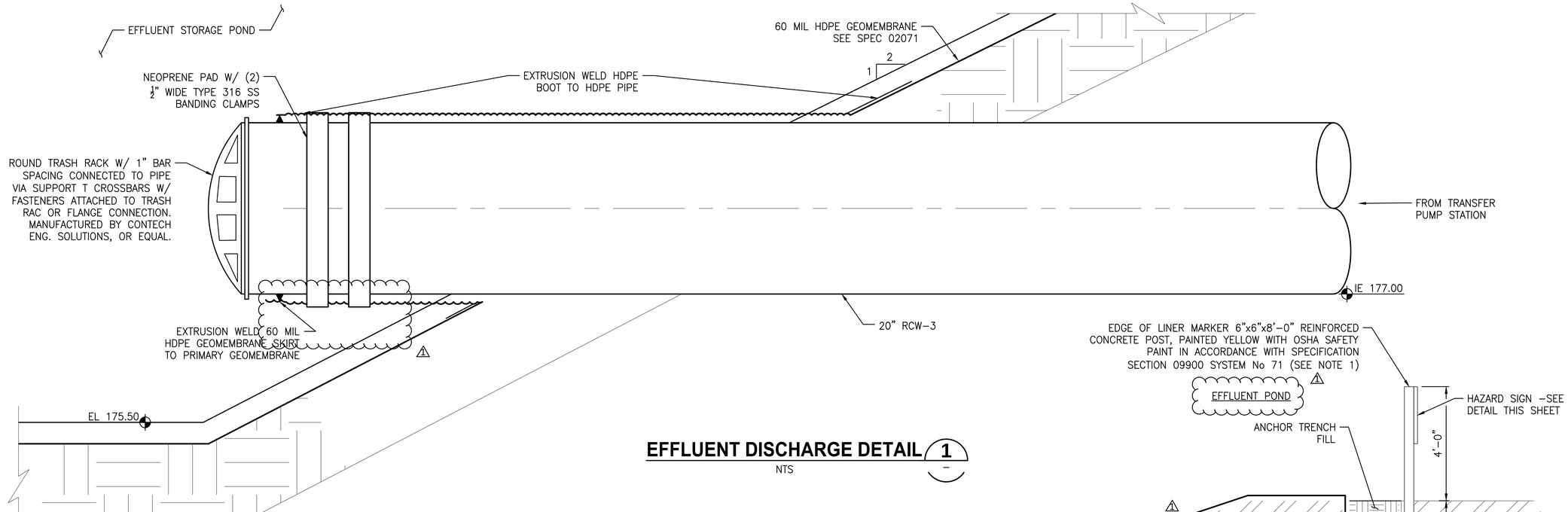
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PROJECT NO: 03780-001-01
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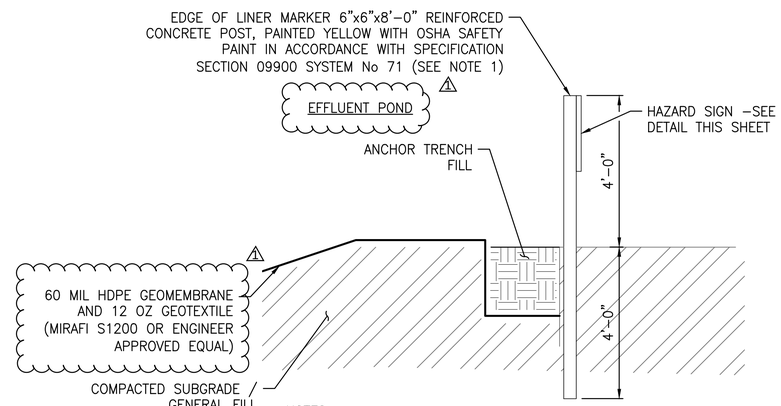
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EFFLUENT DISCHARGE DETAIL 1

NTS

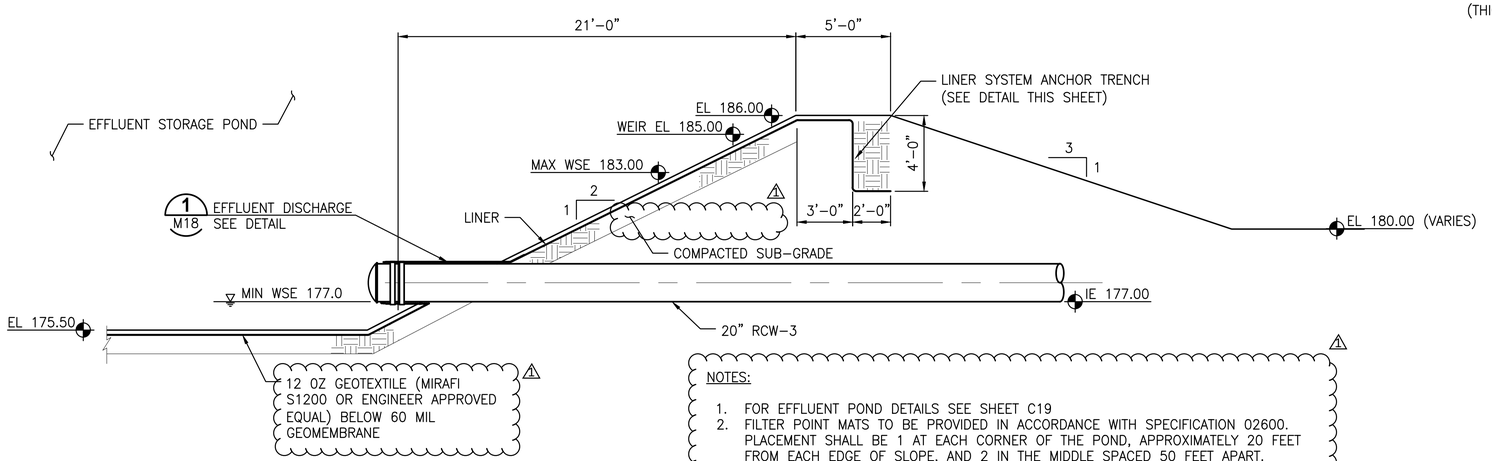


NOTES:

1. INSTALL POSTS WITH WARNING SIGNS AT 100'-0" INTERVALS AROUND PERIMETER.

LINER SYSTEM ANCHOR TRENCH DETAIL

NTS



NOTES:

1. FOR EFFLUENT POND DETAILS SEE SHEET C19
2. FILTER POINT MATS TO BE PROVIDED IN ACCORDANCE WITH SPECIFICATION 02600. PLACEMENT SHALL BE 1 AT EACH CORNER OF THE POND, APPROXIMATELY 20 FEET FROM EACH EDGE OF SLOPE, AND 2 IN THE MIDDLE SPACED 50 FEET APART.

SECTION A

1/4" = 1'-0"



DIMENSIONS: 2' WIDE BY 2' HIGH
TEXT SIZES: VARIES
COLORS: STANDARD OSHA DANGER SIGN COORDINATE W/ ENGINEER FOR COLOR SCHEME
SIGN STYLE: ~~PER FDOT SIGN SPECIFICATION 700~~ 1
SUBMITTALS: SUBMIT FABRICATION DRAWINGS FROM FDOT APPROVED SIGN VENDOR TO OWNER FOR APPROVAL BEFORE FABRICATION

NOTES:

1. INSTALL SIGNS ON EDGE OF LINER POSTS.

WARNING SIGN DETAIL

NTS

VE GMP-1

LTR.	DATE	REVISIONS	BY	APPRD.
1	12/2022	VE GMP-1 ADD	SPM	GAR
VE	11/2022	VE GMP-1	LYC	TWF

DESIGNED TFRIEDRICH
DRAWN JKRAMER
CHECKED SMENARD

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730 NE WALDO ROAD, GAINESVILLE, FLORIDA 32641 / (352) 377-5821

NORTH FLORIDA MEGA INDUSTRIAL PARK
WASTEWATER TREATMENT PLANT
COLUMBIA COUNTY, FLORIDA

POND LINER SECTION AND DETAIL

Thomas W. Friedrich, State of Florida, Professional Engineer, License No. 61281

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SAVED: 12/6/2022 1:46 PM SMENARD \\JEA.NET\PAN02\WORKSPACE\03780-COLUMBIACOUNTY\PROJECTS\001-01 NFMIP WWTF\CAD\DWGS\MECH\03780001-M18.DWG

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GENERAL NOTES:

1. THESE NOTES ARE GENERAL AND SUPPLEMENTAL TO THE SPECIFICATIONS. THESE NOTES APPLY TO THE ENTIRE PROJECT UNLESS MODIFIED OR NOTED OTHERWISE IN THE CONTRACT DOCUMENTS.

2. STANDARD DETAILS, SHOWN ON SHEETS SD1–SD7 SHALL BE USED WHEN REFERRED TO, UNLESS RESTRICTIVE OR DIFFERENT DETAILS ARE SPECIFICALLY SHOWN ON THE DRAWINGS.

3. DESIGN IS IN ACCORDANCE WITH AND CONSTRUCTION SHALL COMPLY WITH THE PROVISIONS OF THE 2020 FLORIDA BUILDING CODE, EXCEPT WHERE OTHER APPLICABLE CODES AND THE CONTRACT DOCUMENTS ARE MORE RESTRICTIVE.

4. LIVE LOADS UNLESS OTHERWISE CALLED OUT IN PLANS:
   ROOFS: 20 PSF
   PROCESS AREAS: 200 PSF
   STAIRS & PLATFORMS: 100 PSF

5. WIND DESIGN DATA:
   a. ULTIMATE WIND SPEED: Vult.=130 MPH, Vasd.=100 MPH
   b. RISK CATEGORY III
   c. WIND EXPOSURE: C
   d. APPLICABLE INTERNAL PRESSURE COEFFICIENT:
      ENCLOSED = +/– 0.18
      PARTIALLY ENCLOSED = +/– 0.55 UON
   e. COMPONENT & CLADDING WIND PRESSURES BASED ON 100 SQ. FEET OF TRIBUTARY AREA:
      ZONE 4 = 44 PSF
      ZONE 5 = 49 PSF
      OTHER STRUCTURES = 40 PSF
      DESIGN PRESSURES FOR SMALLER AREAS SHALL BE SUBMITTED FOR REVIEW PRIOR TO FABRICATION.

6. ALL DIMENSIONS INDICATED (*) ARE TO BE VERIFIED EITHER BY FIELD MEASUREMENTS FOR EXISTING STRUCTURES OR BY SHOP DRAWINGS FOR EQUIPMENT FURNISHED. STRUCTURAL DIMENSIONS NOT SHOWN BUT CONTROLLED BY OR RELATED TO EQUIPMENT SHALL BE VERIFIED WITH THE MANUFACTURER PRIOR TO CONSTRUCTION.

7. EQUIPMENT ANCHOR BOLT SIZES, TYPES, AND PATTERNS SHALL BE VERIFIED WITH THE MANUFACTURER. ALL BOLT PATTERNS SHALL BE TEMPLATED TO INSURE ACCURACY OF PLACEMENT.

8. STRUCTURAL DRAWINGS SHALL BE USED IN COORDINATION WITH DRAWINGS OF ALL OTHER DISCIPLINES AND MANUFACTURER'S SHOP DRAWINGS.

9. IF A CONFLICT IS FOUND BETWEEN DIFFERENT PORTIONS OF THE CONTRACT DOCUMENTS, NOTIFY THE OWNER IMMEDIATELY. CONTINUED CONSTRUCTION OF THE AREA IN CONFLICT SHALL BE AT THE CONTRACTOR'S OWN RISK UNTIL THE CONFLICT IS RESOLVED BY THE OWNER.

10. STRUCTURES HAVE BEEN DESIGNED FOR OPERATIONAL LOADS ON THE COMPLETED STRUCTURE. DURING CONSTRUCTION, THE STRUCTURES SHALL BE PROTECTED BY BRACING AND TEMPORARY SUPPORTS WHEREVER EXCESSIVE CONSTRUCTION LOADS MAY OCCUR. OVERSTRESSING OF ANY STRUCTURAL ELEMENT IS PROHIBITED.

11. NO BACK FILL SHALL BE PLACED AGAINST ANY WALL UNLESS ALL SUPPORTING ELEMENTS OF THE STRUCTURE HAVE BEEN CONSTRUCTED AND HAVE REACHED THE SPECIFIED MINIMUM CONCRETE STRENGTH.

12. DO NOT SCALE THESE DRAWINGS, USE DIMENSIONS.

13. CONTRACTOR'S CONSTRUCTION AND/OR ERECTION SEQUENCES SHALL RECOGNIZE AND CONSIDER THE EFFECTS OF THERMAL MOVEMENTS OF STRUCTURAL ELEMENTS DURING THE CONSTRUCTION PERIOD.

14. PROVIDE ADDITIONAL REINFORCEMENT AT OPENINGS AND AT WALL INTERSECTIONS AS SHOWN IN STANDARD DETAILS.

15. FOR SIZES AND LOCATIONS OF EQUIPMENT SUPPORTS AND PIPE OPENINGS, SEE OTHER DISCIPLINE DRAWINGS, OPENINGS SIZES LESS THAN 12" ARE NOT SHOWN ON STRUCTURAL DRAWINGS, REFERENCE OTHER DISCIPLINE DRAWINGS FOR LOCATIONS.

16. FOR NUMBER, TYPE, SIZE, ARRANGEMENT, AND/OR LOCATION OF EQUIPMENT PADS, SEE OTHER DISCIPLINE DRAWINGS. COORDINATE WITH EQUIPMENT SUPPLIER PRIOR TO PLACING SLABS, WALLS, AND FOUNDATIONS. COORDINATE PIPING OPENINGS WITH OTHER DISCIPLINE DRAWINGS.

17. STANDARD DETAILS ARE INTENDED TO BE TYPICAL AND SHALL APPLY TO SIMILAR SITUATIONS OCCURRING THROUGHOUT THE PROJECT, WHETHER OR NOT THEY ARE INDIVIDUALLY CALLED OUT.

18. DO NOT CUT OR MODIFY STRUCTURAL MEMBERS FOR PIPES, DUCTS, ETC, UNLESS SPECIFICALLY DETAILED OR APPROVED IN WRITING BY THE ENGINEER.

19. VISITS TO THE JOB SITE BY THE ENGINEER TO OBSERVE THE CONSTRUCTION DO NOT IN ANY WAY MEAN THAT ENGINEER IS GUARANTOR OF CONSTRUCTOR'S WORK, NOR RESPONSIBLE FOR THE COMPREHENSIVE OR SPECIAL INSPECTIONS, COORDINATION, SUPERVISION, OR SAFETY AT THE JOB SITE.

FOUNDATION NOTES:

1. DESIGN OF FOUNDATION IS BASED ON THE SUMMARY REPORT OF A GEOTECHNICAL SITE EXPLORATION REVISION 2, COMPLETED BY GSE ENGINEERING AND CONSULTING, INC., DATED MARCH 2022, AND A DESIGN BEARING STRENGTH OF 2,000 PSF.

2. MINIMUM DEPTH FROM ADJACENT FINISHED GRADE TO BOTTOM OF EXTERIOR FOUNDATION 1'–6" UNLESS OTHERWISE NOTED.

3. FOUNDATION SLABS AND SLABS–ON–GRADE SHALL BEAR ON COMPACTED SOILS MEETING THE REQUIREMENTS OF THE GEOTECHNICAL REPORT UNLESS OTHERWISE NOTED IN FACILITY NOTES. PLACE 6 MIL VISQUEEN OVER COMPACTED SOILS PRIOR TO PLACING CHAIRS THAT SUPPORT REINFORCING MATS.

4. FOUNDATION BEARING SURFACES SHALL BE OBSERVED BY THE GEOTECHNICAL ENGINEER OR QUALIFIED DESIGNEE PRIOR TO THE PLACEMENT OF FORM WORK OR REINFORCING STEEL. THE OBSERVATION SHALL VERIFY IF THE ACTUAL EXPOSED SUBGRADE IS AS ANTICIPATED BY THE SITE SPECIFIC BORINGS, TEST PITS, TESTING AND DATA REPORTS.

5. AT BNR TANKS, ADDITIONAL GEOTECHNICAL EXPLORATION IS SCHEDULED TO BE COMPLETED IN FEBRUARY 2023. FINAL FOUNDATION RECOMMENDATION WILL BE PROVIDED AFTER COMPLETION.

CONCRETE NOTES:

1. CONCRETE 56–DAY COMPRESSIVE STRENGTH:
   CLASS A – 2500 PSI FOR CONCRETE FILL & DUCT ENCASEMENT
   CLASS B – 3000 PSI FOR SIDEWALKS, CURBS ETC.
   CLASS C – 4000 PSI ALL FOUNDATIONS AND STRUCTURAL WALLS, SLABS AND BEAMS
   CLASS D – 5000 PSI PRE–CAST CONCRETE

2. REINFORCEMENT: ASTM A615, GRADE 60.

3. CONCRETE COVER FOR REINFORCING:
   A) SURFACES CAST AGAINST SUBGRADE 3"
   B) TOP SURFACES OF SLABS WHERE PVC WATERSTOP IS REQUIRED IN WALLS 3"
   C) FORMED SURFACES IN CONTACT WITH WEATHER, SOIL, OR LIQUID 2"
   D) BOTTOM SURFACES OF SLABS OVER LIQUID 2"
   E) SURFACES NOT IN CONTACT WITH WEATHER, SOIL, OR LIQUID 1 1/2"

   ALLOWABLE TOLERANCES SHALL BE LESS THAN OR EQUAL TO ACI–117 REQUIREMENTS.

4. CONSTRUCTION JOINTS SHALL BE LOCATED AS SHOWN ON THE DRAWINGS. WHERE NOT SHOWN, CONSTRUCTION JOINTS SHALL BE LOCATED AT NO MORE THAN 40' ON CENTER SPACING. SUBMIT PROPOSED CONSTRUCTION JOINT LOCATIONS.

5. WHERE HORIZONTAL CONSTRUCTION JOINTS, LOCATED ABOVE THE FOUNDATION SLAB, EXTEND BEYOND WHERE NEEDED, TERMINATE AT A VERTICAL CONSTRUCTION JOINT AS APPROVED BY THE ENGINEER.

6. PROVIDE WATERSTOPS IN ALL FOUNDATIONS, TANKS AND OTHER SUBSTRUCTURES UP TO AN ELEVATION AT LEAST 12 INCHES ABOVE GRADE OR TO AN ELEVATION AT LEAST 12 INCHES ABOVE LIQUID LEVEL IN TANKS, WHICHEVER IS HIGHER, WHETHER SHOWN OR NOT. SEE STANDARD DETAILS. SEE MECHANICAL DRAWINGS FOR ALL REQUIRED PIPE ENCASEMENT. CONSTRUCT ENCASEMENT PER STANDARD DETAIL 25/SD3.

7. EQUIPMENT SUPPORTS, ANCHORAGES, OPENINGS, RECESSES AND REVEALS NOT SHOWN ON THE STRUCTURAL DRAWINGS BUT REQUIRED BY OTHER CONTRACT DOCUMENTS, SHALL BE PROVIDED FOR PRIOR TO PLACING CONCRETE.

8. AT ALL TYPICAL CURBS, EQUIPMENT PADS, AND PIPE SUPPORT PIERS, REINFORCING DOWELS SHOWN MAY BE REPLACED WITH MATCHING DOWELS SET IN EPOXY IN DRILLED HOLES AS SPECIFIED. DOWELS LOCATED CLOSER THAN 3 INCHES FROM ANY EDGE OF CONCRETE SHALL NOT BE REPLACED WITH DRILLED DOWELS.

9. WHERE DRILLED EPOXY DOWELS ARE PLACED INTO HARDENED CONCRETE, ADJUST THE DOWEL LOCATIONS AS NEEDED TO AVOID DRILLING THROUGH ANY REINFORCING BARS. IF THE DOWEL LOCATION NEEDS TO BE MODIFIED, CONTACT THE ENGINEER PRIOR TO DRILLING.

10. DOWELS, ANCHOR BOLTS, PIPES, AND OTHER EMBEDDED ITEMS SHALL BE HELD SECURELY IN POSITION WHILE CONCRETE IS PLACED.

11. CONDUITS AND PIPES EMBEDDED IN OR PENETRATING THROUGH CONCRETE SHALL BE SPACED ON CENTER NOT LESS THAN 3 TIMES THEIR OUTSIDE DIMENSION, BUT NOT LESS THAN 2 1/2 INCHES CLEAR. OUTSIDE DIMENSION OF EMBEDDED ITEMS SHALL NOT EXCEED 1/3 OF THE CONCRETE MEMBER THICKNESS. CLEAR SPACING REQUIREMENTS SHALL APPLY FOR EMBEDDED CONDUITS OR PIPES CROSSING AT AN ANGLE LESS THAN 60 DEGREES.

12. THE EFFECTIVE DIMENSION USED TO MEET MEMBER THICKNESS LIMITATIONS SHALL BE THE SUM OF THE OUTER DIMENSIONS OF CROSSING ELEMENTS.

13. EMBEDDED CONDUITS AND PIPES SHALL BE LOCATED BETWEEN THE LAYERS OF REINFORCEMENT AND A MINIMUM OF 2 1/2 INCHES CLEAR FROM APPROXIMATELY PARALLEL REINFORCING BARS. REQUIREMENTS FOR EMBEDDED ELEMENTS CROSSING REINFORCING BARS SHALL BE AS REQUIRED FOR CROSSING EMBEDDED ELEMENTS.

14. CONDUITS AND PIPES SHALL NOT BE EMBEDDED IN OR PASS THROUGH COLUMNS OR BEAMS UNLESS INDICATED OTHERWISE OR AUTHORIZED BY ENGINEER.

15. REINFORCING BARS AND ACCESSORIES SHALL NOT BE IN CONTACT WITH ANY METAL PIPE, PIPE IN FLANGE, METAL CONDUIT, OR OTHER METAL PARTS EMBEDDED IN CONCRETE. A MINIMUM CLEARANCE OF 2 INCHES SHALL BE PROVIDED.

16. PROVIDE 3/4 INCH CHAMFER USING WOOD CHAMFER STRIPS ON ALL EXPOSED CORNERS OF COLUMNS, BEAMS, AND WALLS.

17. LAP SPLICES SHALL BE IN ACCORDANCE WITH THE TABLE SHOWN ON STANDARD DETAIL 5/SD1.

18. SIZE AND SPACING OF WALL CORNER AND WALL INTERSECTION REINFORCING SHALL MATCH TYPICAL WALL REINFORCING UNLESS OTHERWISE SHOWN ON PLANS.

19. 90 DEGREE BENDS, UNLESS OTHERWISE SHOWN, SHALL BE ACI 350 STANDARD HOOKS.

20. WALL CORNERS AND WALL INTERSECTION REINFORCEMENT BARS SHALL BE CONTINUOUS AROUND CORNERS AND THROUGH COLUMNS. REINFORCEMENT SHALL BE EXTENDED INTO CONNECTING WALLS AND LAPPED ON THE OPPOSITE FACE OF THE CONNECTING WALLS, AS INDICATED IN STANDARD DETAIL 5/SD1.

21. WALL FOOTING CORNER AND INTERSECTION REINFORCEMENT BARS SHALL BE EXTENDED INTO CONNECTING FOOTINGS AND LAPPED ON THE OPPOSITE FACE OF THE CONNECTING FOOTING. OUTSIDE FACE WALL FOOTING REINFORCEMENT SHALL BE LAPPED WITH CORNER BARS. ALL WALL FOOTING REINFORCEMENT SHALL BE CONTINUOUS THROUGH COLUMN OR PILASTER FOOTINGS.

22. REINFORCING STEEL FOR FOOTINGS AND SLABS ON GRADE SHALL BE ADEQUATELY SUPPORTED ON BAR SUPPORTS WITH SPACERS TO KEEP REINFORCING ABOVE THE PREPARED GRADE. LIFTING REINFORCING OFF GRADE DURING CONCRETE PLACEMENT IS NOT PERMITTED.

23. PREPARE AND PATCH FORM SNAP–TIE HOLES AND ALTERNATE FORM–THROUGH BOLT HOLE BY DRY–PACKING WITH APPROVED NON–SHRANK GROUT.

24. SEE STANDARD DETAIL 4/SD1 FOR WALL BASE CONSTRUCTION JOINT TYPICAL UNLESS OTHERWISE NOTED.

25. PROVIDE VERTICAL WALL CONSTRUCTION JOINTS IN ACCORDANCE WITH STANDARD DETAIL 11/SD2 TYPICAL UNLESS OTHERWISE NOTED.

26. PROVIDE ADDITIONAL HORIZONTAL STEEL REINFORCEMENT AT HORIZONTAL CONSTRUCTION JOINTS. SEE STANDARD DETAIL 6/SD1 TYPICAL UNLESS OTHERWISE NOTED.

27. PROVIDE ADDITIONAL STEEL REINFORCEMENT AT OPENINGS AND PIPE PENETRATIONS. SEE STANDARD DETAIL 20/SD3 & 21/SD3 TYPICAL UNLESS OTHERWISE NOTED.

STRUCTURAL METAL NOTES:

1. DETAIL, FABRICATE, AND ERECT STRUCTURAL STEEL IN ACCORDANCE WITH AISC STEEL CONSTRUCTION MANUAL AND AISC SPECIFICATION FOR STRUCTURAL STEEL BUILDINGS, LATEST EDITION.

2. STEEL MATERIAL:
   A) STRUCTURAL TUBING, ASTM A500, GRADE B OR C
   B) STRUCTURAL PIPE, ASTM A53, GRADE B
   C) W SHAPES, ASTM A992
   D) STRUCTURAL CHANNELS, ASTM A536
   E) ALL OTHER SHAPES AND PLATES, ASTM A36 UON

3. BOLTS SHALL BE HIGH STRENGTH BOLTS CONFORMING TO THE FOLLOWING ASTM SPECIFICATIONS EXCEPT WHERE SPECIFICALLY INDICATED OTHERWISE:
   UNLESS SHOW OTHERWISE A325–N
   SLIP CONTROL A325–SC
   ANCHOR BOLTS (AB)
   STAINLESS STEEL F593, AISI TYPE 316, CONDITION CW
   STEEL F1554, GR 36
   GALVANIZED STEEL F1554, GR 36 / A153
   MACHINE BOLTS (MB) A307

4. PROVIDE TYPICAL STEEL BEAM CONNECTIONS FOR A CAPACITY OF NOT LESS THAN THE TOTAL UNIFORM LOAD CAPACITY TABULATED IN THE AISC TABLES FOR ALLOWABLE LOADS OF BEAMS.

5. DO NOT PAINT STEEL SURFACES WHICH ARE TO BE WELDED OR ENCASED IN CONCRETE.

6. FILLET WELD SIZES SHALL BE THE MINIMUM SIZE REQUIRED BY AISC AND AWS FOR PLATE SIZES TO BE CONNECTED AND SHALL BE APPLIED TO THE ENTIRE JOINT CONTACT LENGTH.

7. STAINLESS STEEL SHALL BE TYPE 316L–ASTM A276.

8. STAINLESS STEEL TYPE 316L SHALL BE USED IN ALL AREAS TO BE SUBMERGED AND AS SHOWN ON DWGS.

9. IF STAINLESS STEEL MEMBERS ARE NOT AVAILABLE, PROVIDE EQUIVALENT STAINLESS STEEL SECTIONS, BUILT UP OUT OF STAINLESS STEEL PLATES.

10. ALL BOLTS, ANCHOR BOLTS, AND CONCRETE ANCHORS CONNECTING STAINLESS STEEL SHALL BE TYPE 316 STAINLESS STEEL.

11. WHENEVER ONE MEMBER IS FASTENED TO ANOTHER WITH FASTENINGS (BOLTS, WELDS, ETC.) SET AT A UNIFORM SPACING, THERE SHALL BE A MINIMUM OF TWO FASTENINGS PER PIECE CONNECTED AND THE FIRST AND LAST FASTENINGS SHALL BE LOCATED NOT TO EXCEED 1/4 SPACE FROM EACH END.

12. ALL GRATING SHALL BE ALUMINUM UNLESS OTHERWISE NOTED.

13. ITEMS TO BE EMBEDDED IN CONCRETE SHALL BE CLEAN AND FREE OF OIL, DIRT AND PAINT.

14. NO HOLES OTHER THAN THOSE SPECIFICALLY DETAILED SHALL BE ALLOWED THROUGH STRUCTURAL STEEL MEMBERS. NO CUTTING OR BURNING OF STRUCTURAL STEEL IS PERMITTED WITHOUT THE APPROVAL OF THE ENGINEER.

MONRAD R THUE LICENSE No.32071 STATE OF FLORIDA PROFESSIONAL ENGINEER

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CERTIFICATE OF AUTHORIZATION #27430

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VE GMP-2

SAVED: 1/10/2023 1:25 PM JGALLER C:\USERS\JGALLER\DESKTOP\14987B ACAD\SG1 STRUCTURAL GENERAL NOTES.DWG

LTR.	DATE	REVISIONS	BY	APPRD.
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NORTH FLORIDA MEGA INDUSTRIAL PARK
WASTEWATER TREATMENT PLANT
COLUMBIA COUNTY, FLORIDA

STRUCTURAL NOTES

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ALUMINUM PLATFORMS, STAIRS, AND HANDRAIL NOTES:

1. ALL PLATFORMS AND STAIRS SHALL BE DESIGNED BY THE MANUFACTURER'S SPECIALTY ENGINEER AND SHALL MEET THE GENERAL REQUIREMENTS AND MINIMUM SIZES SHOWN IN THESE DRAWINGS AND STANDARD DETAILS. CALCULATIONS FROM A SPECIALTY ENGINEER SHALL BE SUBMITTED DEMONSTRATING THAT ALL RAILINGS, STAIRS, AND PLATFORMS WILL RESIST THE LOADS SPECIFIED IN THE FBC AND THE DESIGN DOCUMENTS. CALCULATIONS SHALL BE SIGNED AND SEALED BY A REGISTERED ENGINEER IN THE STATE OF FLORIDA.
2. ALL PLATFORM DESIGN SHALL MEET THE MINIMUM REQUIREMENTS DETAILED IN THE DRAWINGS AND STANDARD DETAILS, AND AS REQUIRED TO SUPPORT A MINIMUM LIVE LOAD OF 200 PSF.
3. DEFLECTIONS SHALL BE LIMITED TO L/360, WITH L = SPAN OF MEMBER.
4. RAILING SYSTEMS SHALL MEET THE MINIMUM REQUIREMENTS DETAILED IN THE DRAWINGS AND STANDARD DETAILS, AND AS REQUIRED TO SUPPORT THE CODE SPECIFIED LOADINGS.
5. SUBMIT CERTIFICATION THAT THE RAILING SYSTEM(S) MEET THE REQUIREMENTS OF OSHA AND THE FBC.

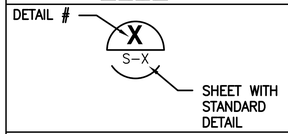
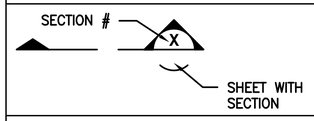
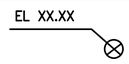
WELDING NOTES:

1. WELDS SHALL CONFORM TO AMERICAN WELDING SOCIETY (AWS), LATEST EDITION:
   - D1.1, STRUCTURAL WELDING CODE – STEEL
   - D1.2, STRUCTURAL WELDING CODE – ALUMINUM
   - D1.3, STRUCTURAL WELDING CODE – SHEET STEEL
   - D1.4, STRUCTURAL WELDING CODE – REINFORCING STEEL
   - D1.6, STRUCTURAL WELDING CODE – STAINLESS STEEL
2. REPAIR WELD FOUND DEFECTIVE IN ACCORDANCE WITH AWS D1.1 SECTION 5.26.
3. USE INTERMITTENT WELDS AT FIELD WELDS OF EMBED PLATES AND ANGLES TO AVOID SPALLING OR CRACKING OF THE EXISTING CONCRETE.
4. WELDING OF BUTT JOINT SHALL BE COMPLETE JOINT PENETRATION CJP UNLESS INDICATED OTHERWISE.

LEAK TESTING OF ALL WATER HOLDING BASINS:

1. PURPOSE: DETERMINE INTEGRITY AND WATERTIGHTNESS OF FINISHED EXTERIOR AND INTERIOR WATER HOLDING CONCRETE SURFACES.
2. POTABLE WATER SUPPLY RESERVOIRS: CLEAN AND STERILIZE PRIOR TO CONDUCTING TEST AS SPECIFIED IN SECTION 33 13 00, DISINFECTING OF WATER UTILITY DISTRIBUTION.
3. WATER–HOLDING STRUCTURES:
   - A. PERFORM LEAKAGE TESTS AFTER CONCRETE STRUCTURE IS COMPLETE AND CAPABLE OF RESISTING HYDROSTATIC PRESSURE OF WATER TEST. CONCRETE SHALL HAVE ACHIEVED ITS FULL STRENGTH DESIGN.
   - B. PERFORM LEAKAGE TEST BEFORE BACKFILL, BRICK FACING, GROUT TOPPING SLAB, COATINGS, OR OTHER WORK THAT WILL COVER CONCRETE SURFACES HAS BEGUN.
   - C. INSTALL TEMPORARY BULKHEADS, COFFERDAMS, AND PIPE BLIND FLANGES, AND CLOSE VALVES. INSPECT EACH TO SEE THAT IT PROVIDES COMPLETE SEAL.
   - D. FILL WITH WATER TO TEST LEVEL SHOWN, OR MAXIMUM LIQUID LEVEL IF NO TEST LEVEL IS GIVEN. MAINTAIN THIS LEVEL FOR 72 HOURS PRIOR TO START OF TEST TO ALLOW WATER ABSORPTION, STRUCTURAL DEFLECTION, AND TEMPERATURE TO STABILIZE.
   - E. MEASURE EVAPORATION AND PRECIPITATION BY FLOATING A PARTIALLY FILLED, TRANSPARENT, CALIBRATED, OPEN TOP CONTAINER.
   - F. MEASURE WATER SURFACE AT TWO POINTS 180 DEGREES APART WHEN POSSIBLE WHERE ATTACHMENTS, SUCH AS LADDERS EXIST, AT 24–HOUR INTERVALS. USING SHARP POINTED HOOK GAUGE AND FIXED METAL MEASURE CAPABLE OF READING TO 1/100 OF AN INCH. CONTINUE TEST FOR PERIOD OF TIME SUFFICIENT TO PRODUCE AT LEAST 1/2–INCH DROP IN WATER SURFACE BASED ON ASSUMPTION THAT LEAKAGE WOULD OCCUR AT MAXIMUM ALLOWABLE RATE SPECIFIED OR FOR 72 HOURS, WHICHEVER IS LESSER TIME.
4. ACCEPTANCE CRITERIA:
   - A. VOLUME LOSS SHALL NOT EXCEED 0.050 PERCENT OF CONTAINED LIQUID VOLUME IN 24–HOUR PERIOD, CORRECTING FOR EVAPORATION, PRECIPITATION, AND SETTLEMENT.
   - B. NO DAMP SPOTS OR SEEPAGE VISIBLE ON EXPOSED SURFACES. DAMP SPOT IS DEFINED AS SUFFICIENT MOISTURE TO BE TRANSFERRED TO DRY HAND UPON TOUCHING.
5. REPAIRS WHEN TESTS FAILS: DEWATER STRUCTURE; FILL LEAKING CRACKS WITH CRACK REPAIR EPOXY AS SPECIFIED IN SECTION 03 64 23, CRACK REPAIR EPOXY INJECTION GROUTING. PATCH AREAS OF DAMP SPOTS PREVIOUSLY RECORDED, AND REPEAT WATER LEAKAGE TEST IN ITS ENTIRETY UNTIL THE STRUCTURE SUCCESSFULLY PASSES THE TEST.

LEGEND

SYMBOL	MEANING
	CONCRETE COLUMN OR WALL BELOW
	DETAIL
	COLUMN DESIGNATION X
	SLOPE LINE WITH ARROW IN DOWNWARD DIRECTION
	CROSS–SECTION
	ELEVATION
	HEIGHT OF WATER
℄	CENTERLINE

ABBREVIATIONS

AL	ALUMINUM
ALT	ALTERNATE
BAL	BALANCE
BOT	BOTTOM
CJ	CONTROL JOINT
CONT	CONTINUOUS
CONST JT	CONSTRUCTION JOINT
COORD	COORDINATE
EF	EACH FACE
EL	ELEVATION AT TOP OF STRUCTURAL ELEMENT
EW	EACH WAY
FBC	FLORIDA BUILDING CODE
FDN	FOUNDATION
HORIZ	HORIZONTAL
MANUF	MANUFACTURER
O.F.	OUTER FACE
PERIM	PERIMETER
PJF	PRE–MOLDED JOINT FILLER
REINF	REINFORCING
SIM	SIMILAR
STD	STANDARD
T/CONC	TOP OF CONCRETE
T/GRATING	TOP OF GRADING
TYP	TYPICAL
UON/UNO	UNLESS OTHERWISE NOTED
VERT	VERTICAL
W.F.	WORKING POINT
W/	WITH
WS	WATERSTOP

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DESIGNED MTHUE
DRAWN JGALLER
CHECKED DHALLE

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730 NE WALDO ROAD, GAINESVILLE, FLORIDA 32641 / (352) 377-5821

NORTH FLORIDA MEGA INDUSTRIAL PARK
WASTEWATER TREATMENT PLANT
COLUMBIA COUNTY, FLORIDA

STRUCTURAL NOTES, SYMBOLS, AND LEGENDS

Monrad R. Thue, State of Florida, Professional Engineer, License No. 32071

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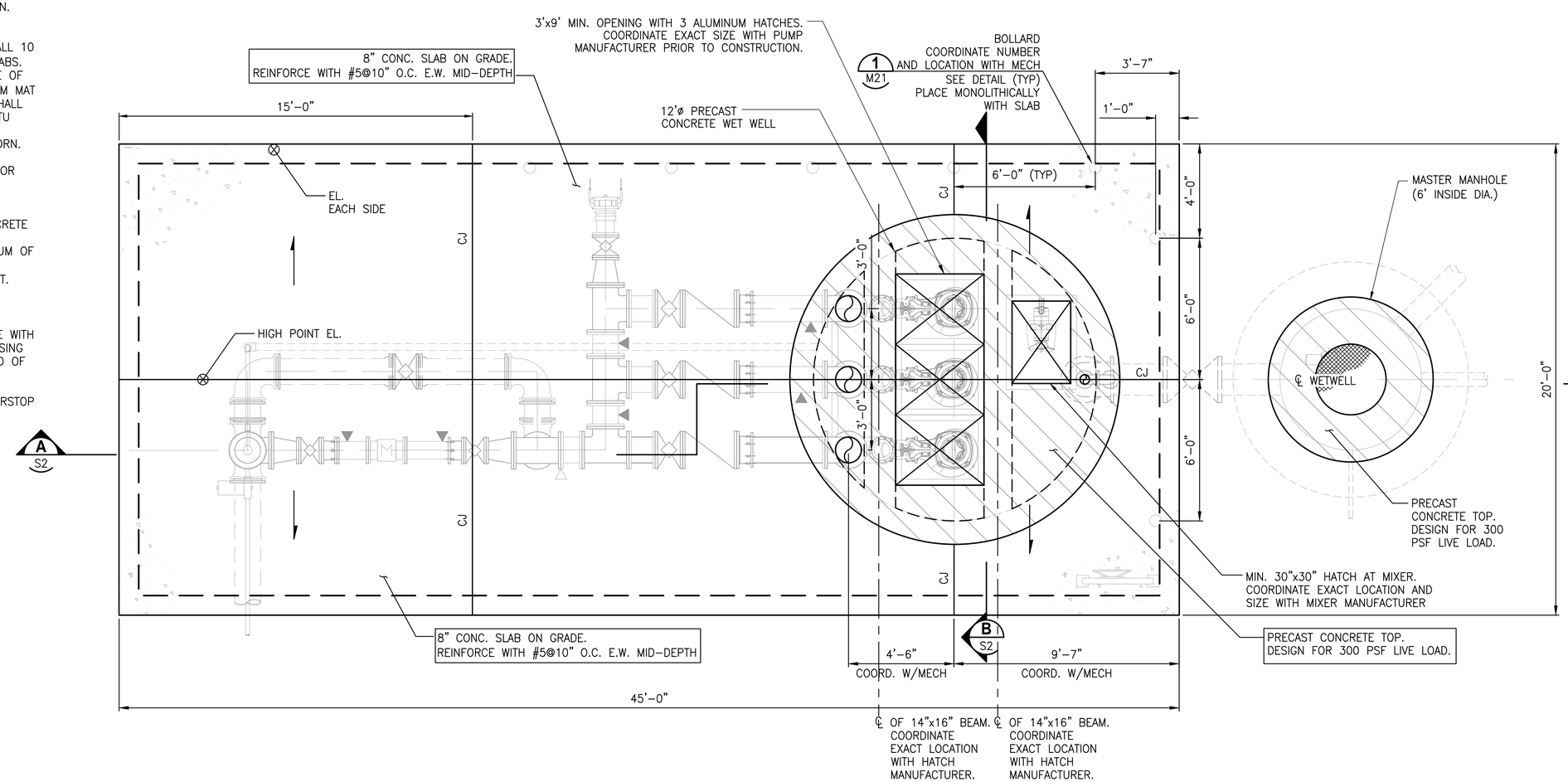
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INDEX NO:
DWG NO: SG2

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PUMP STATION NOTES

1. SEE SHEETS SG1 AND SG2 FOR GENERAL NOTES AND OTHER INFORMATION.
2. FOR STANDARD DETAILS, SEE SHEETS SD1 THROUGH SD7.
3. COORDINATE LOCATION OF ALL MECHANICAL EQUIPMENT AND PIPING WITH MECHANICAL DRAWINGS PRIOR TO CONSTRUCTION.
4. PRECAST CONCRETE STRUCTURE SHALL BE DESIGNED FOR A WATER TABLE AT TOP OF STRUCTURE (AT GRADE). TOP SLAB AND TOP HATCHES SHALL BE DESIGNED FOR A LIVE LOAD = 300 PSF. SUBMIT SHOP DRAWINGS FOR REVIEW INCLUDING ALL INFORMATION ON HATCHES PRIOR TO FABRICATION.
5. PREPARE SUBGRADE UNDER SLAB ON GRADE AS DESCRIBED IN GEOTECHNICAL REPORT AND INSTALL 10 MIL PLASTIC/VISQUEEN SHEETING UNDER ALL SLABS. CONTRACTOR SHALL USE THE APPROPRIATE TYPE OF CHAIRS TO PROVIDE 4" CLEAR COVER TO BOTTOM MAT OF SLAB REINFORCING. MEANS AND METHODS SHALL INCLUDE ANY REQUIRED STABILIZATION OF IN-SITU SOILS TO PREVENT THE SETTLEMENT OF CHAIRS. PLASTIC SHEETING SHALL BE REPAIRED WHEN TORN. ALTERNATELY AT CONTRACTORS OPTION USE REINFORCED PLASTIC SHEETING BY TUFF SCRIM OR APPROVED EQUAL TO LIMIT TEARS DURING CONSTRUCTION.
6. UNDER THE FOUNDATION OF THE PRECAST CONCRETE PUMP STATIONS, COMPACT SUBGRADE AND FILL MATERIALS BELOW ROCK SUB-BASE TO A MINIMUM OF 98% OF THE MODIFIED PROCTOR MAXIMUM DRY DENSITY (ASTM D1557) FOR A DEPTH OF 2 FEET. COMPACT IN MAXIMUM LIFTS OF 1 FOOT.
7. PROVIDE 12" THICK ROCK SUB-BASE. ROCK SUB-BASE SHALL BE COMPACTED No. 57 STONE WITH A MINIMUM OF 2 PASSES IN EACH DIRECTION USING A VIBRATING SLED OR OTHER APPROVED METHOD OF COMPACTION.
8. CONSTRUCT CONST JT PER (10/SD2) WITHOUT WATERSTOP AND CJ PER (9/SD2)



GRAPHIC SCALE
0 1 2 4
SCALE IN FEET
3/8"=1'-0"

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NORTH FLORIDA MEGA INDUSTRIAL PARK
WASTEWATER TREATMENT PLANT
COLUMBIA COUNTY, FLORIDA

INFLUENT PUMP STATION FOUNDATION PLAN

Monrad R. Thue, State of Florida, Professional Engineer, License No. 32071
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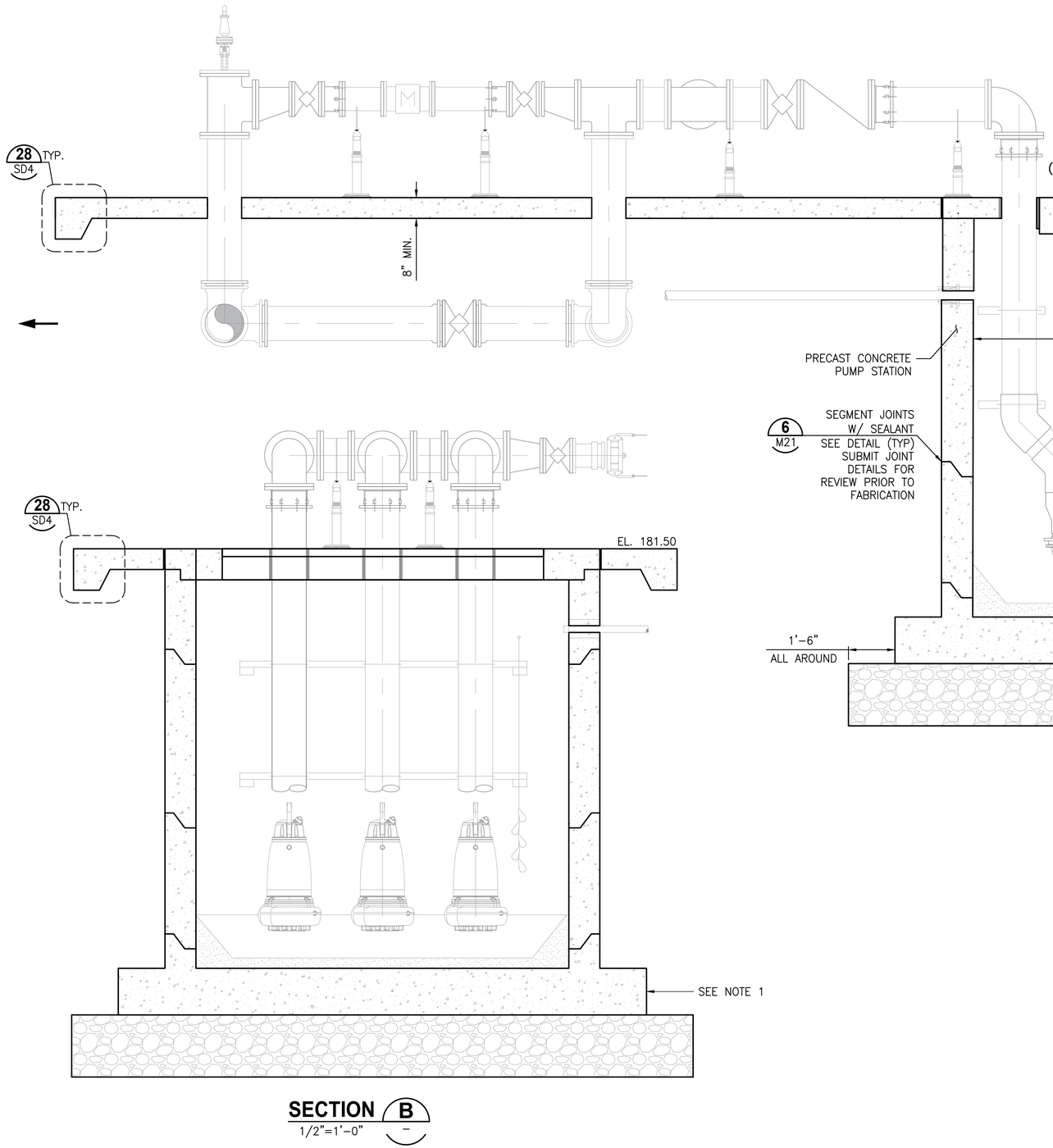
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GRAPHIC SCALE

0 1 2 4

SCALE IN FEET
1/2"=1'-0"



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

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

NOTES:

1. CONTRACTOR TO COORDINATE W/ PRECAST CONCRETE MANUFACTURER FOR BASE CIRCUMFERENCE WIDTH AND THICKNESS REQUIREMENTS FOR BUOYANCY. MANUFACTURER SHALL PROVIDE AND SUBMIT BUOYANCY CALCULATIONS THAT HAVE BEEN SIGNED AND SEALED BY A FLORIDA REGISTERED PROFESSIONAL ENGINEER W/ CONSTRUCTION SUBMITTAL PACKAGE. IF CAST-IN-PLACE REINFORCED CONCRETE BASE IS REQUIRED, EOR WILL COORDINATE AND PROVIDE DESIGN AT NO EXTRA COST.

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NORTH FLORIDA MEGA INDUSTRIAL PARK
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INFLUENT PUMP STATION SECTIONS

Monrad R. Thue, State of Florida, Professional Engineer, License No. 32071

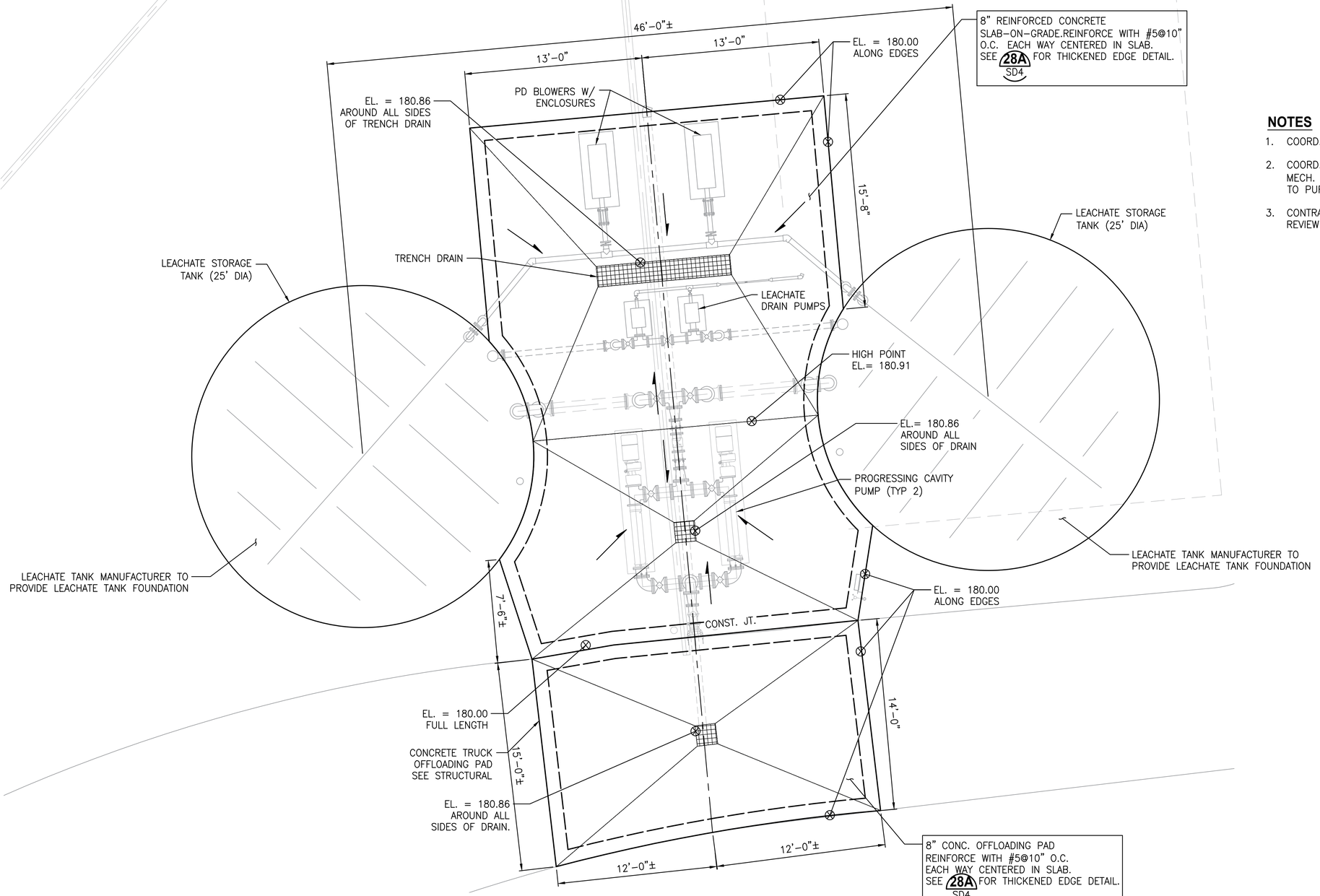
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LEACHATE TANKS FOUNDATION PLAN

1" = 4'

GRAPHIC SCALE

0 2 4 8

SCALE IN FEET

NOTES

1. COORD. SLAB ELEVATIONS AND SLOPES WITH CIVIL.
2. COORD. DRAIN MODELS AND MANUFACTURER WITH MECH. SUBMIT SHOP DRAWING(S) FOR REVIEW PRIOR TO PURCHASE.
3. CONTRACTOR TO SUBMIT CONTROL JOINT LAYOUT FOR REVIEW PRIOR TO CONSTRUCTION.

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COLUMBIA COUNTY, FLORIDA

LEACHATE TANKS FOUNDATION PLAN

Monrad R. Thue, State of Florida, Professional Engineer, License No. 32071

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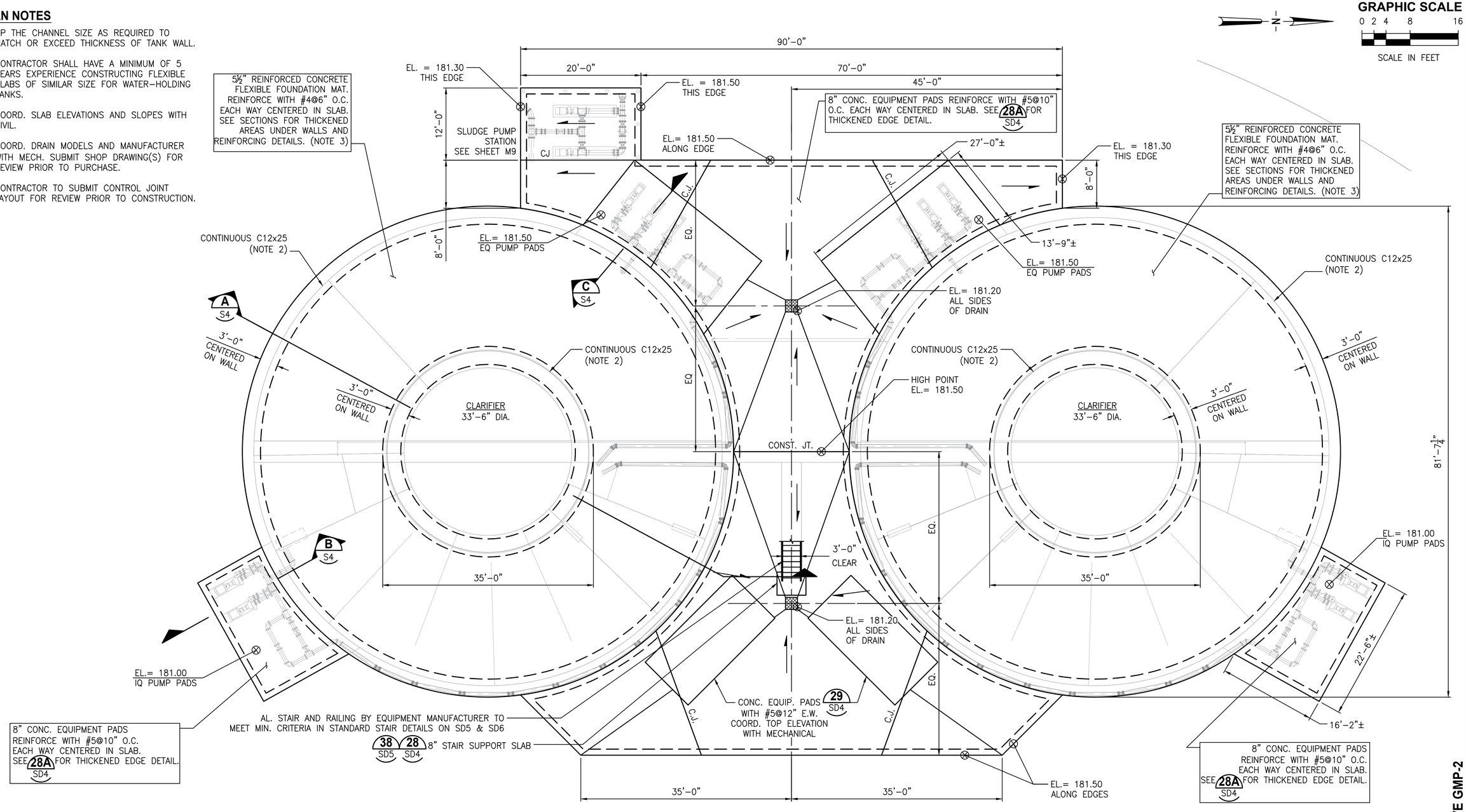
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PLAN NOTES

1. UP THE CHANNEL SIZE AS REQUIRED TO MATCH OR EXCEED THICKNESS OF TANK WALL.
2. CONTRACTOR SHALL HAVE A MINIMUM OF 5 YEARS EXPERIENCE CONSTRUCTING FLEXIBLE SLABS OF SIMILAR SIZE FOR WATER–HOLDING TANKS.
3. COORD. SLAB ELEVATIONS AND SLOPES WITH CIVIL.
4. COORD. DRAIN MODELS AND MANUFACTURER WITH MECH. SUBMIT SHOP DRAWING(S) FOR REVIEW PRIOR TO PURCHASE.
5. CONTRACTOR TO SUBMIT CONTROL JOINT LAYOUT FOR REVIEW PRIOR TO CONSTRUCTION.



BNR PACKAGE PLANT TANKS PLAN

1" = 8'

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NORTH FLORIDA MEGA INDUSTRIAL PARK
WASTEWATER TREATMENT PLANT
COLUMBIA COUNTY, FLORIDA

BNR PACKAGE PLANT TANKS FOUNDATION PLAN

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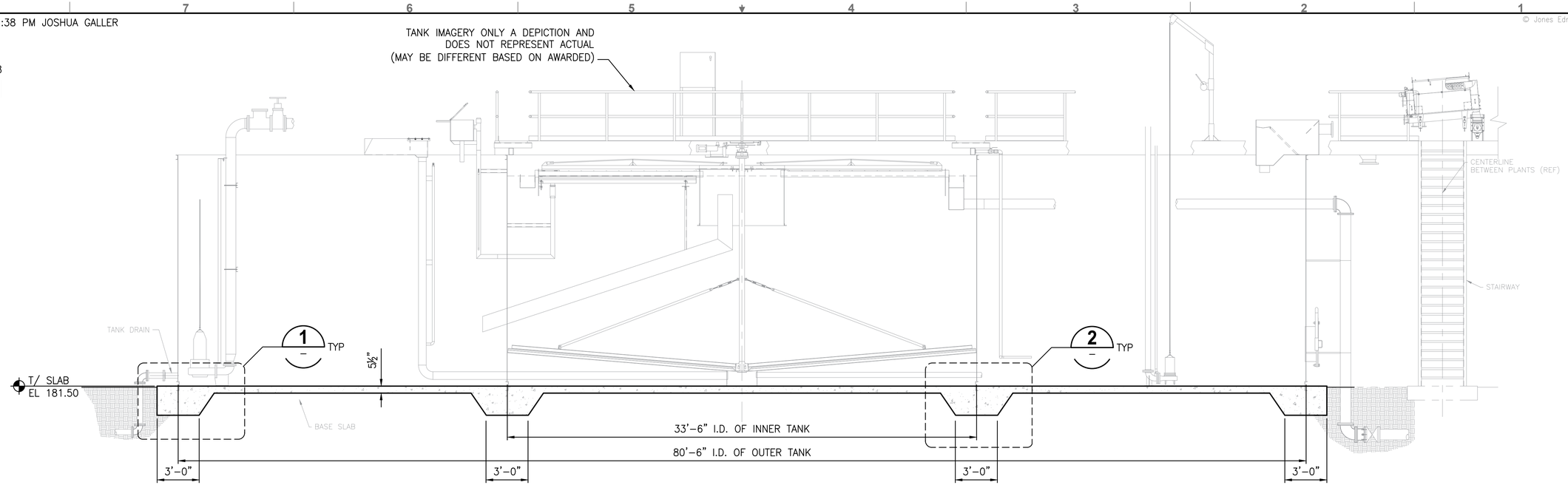
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GRAPHIC SCALE

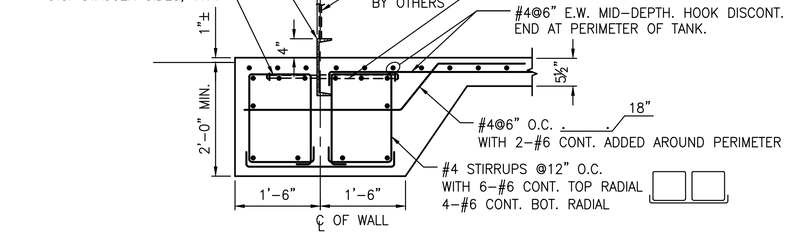
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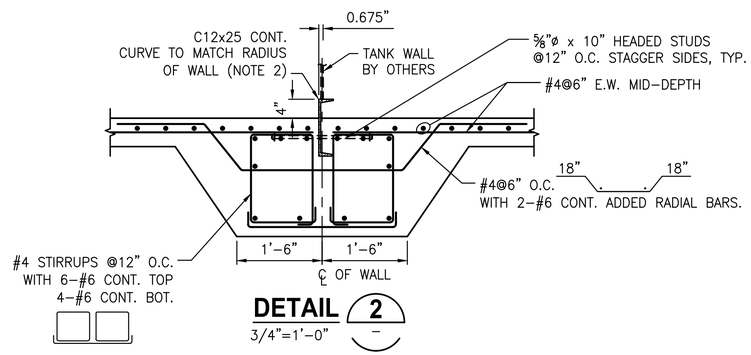
TANK IMAGERY ONLY A DEPICTION AND DOES NOT REPRESENT ACTUAL (MAY BE DIFFERENT BASED ON AWARDED)



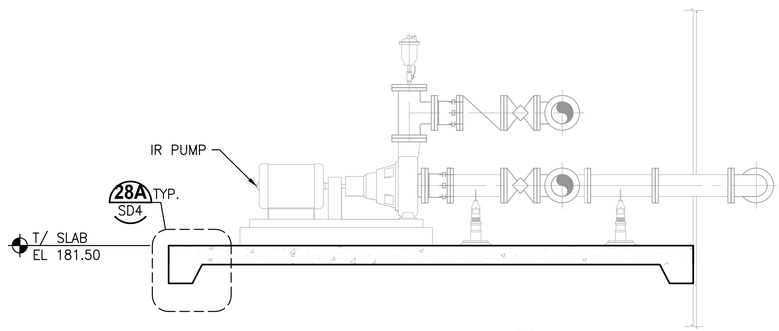
SECTION A
S1
1/4"=1'-0"



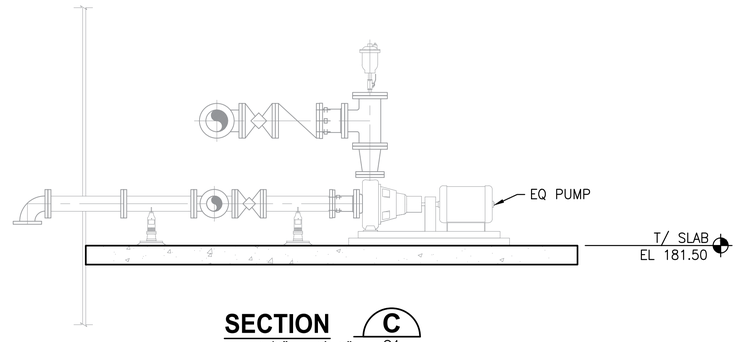
DETAIL 1
3/4"=1'-0"



DETAIL 2
3/4"=1'-0"



SECTION B
S4
1/2" = 1'-0"



SECTION C
S4
1/2" = 1'-0"

VE GMP-2

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NORTH FLORIDA MEGA INDUSTRIAL PARK
WASTEWATER TREATMENT PLANT
COLUMBIA COUNTY, FLORIDA

BNR PACKAGE PLANT TANKS SECTIONS AND DETAILS

Monrad R. Thue, State of Florida, Professional Engineer, License No. 32071

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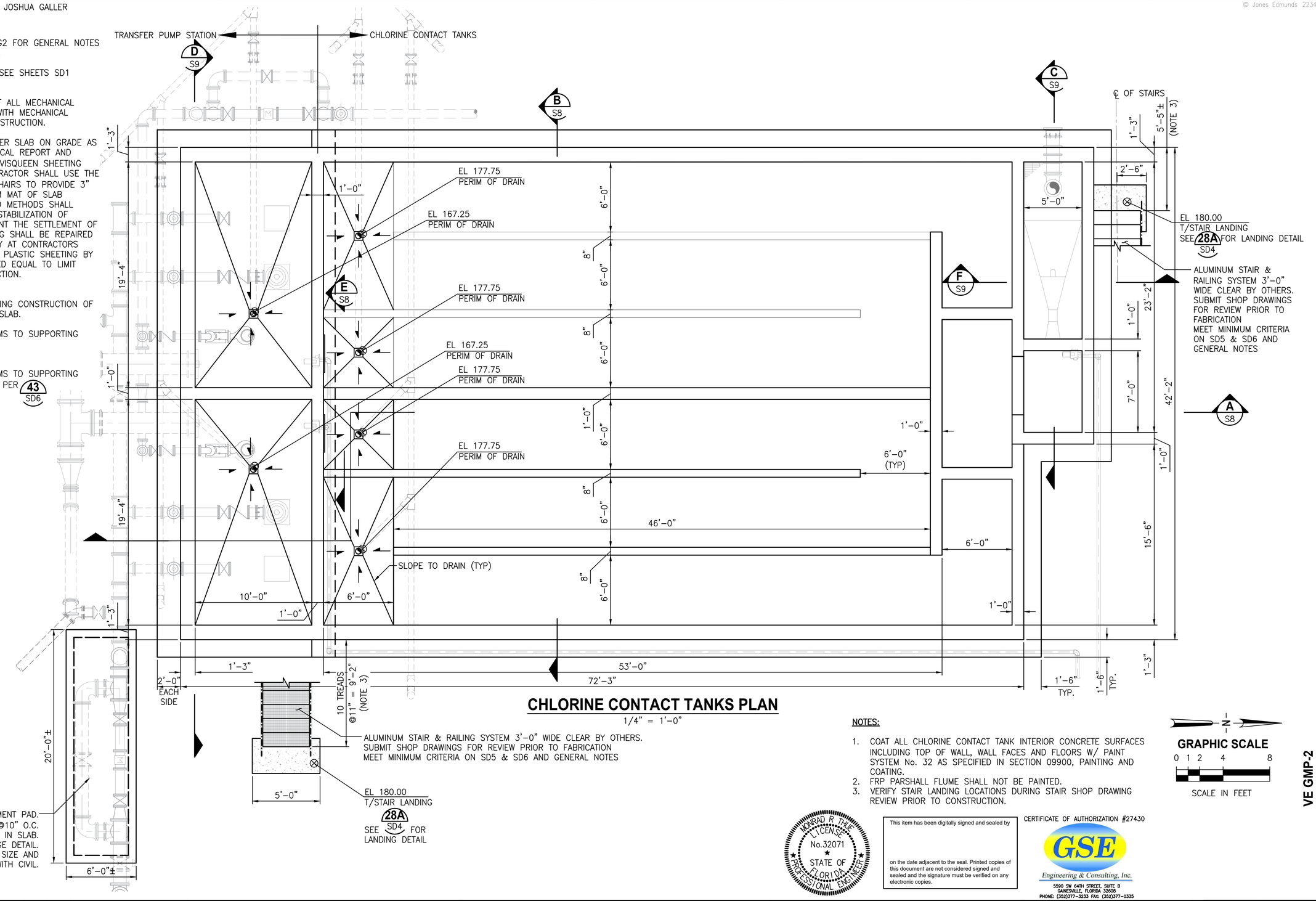
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FACILITY NOTES

1. SEE SHEETS SG1 AND SG2 FOR GENERAL NOTES AND OTHER INFORMATION.
2. FOR STANDARD DETAILS, SEE SHEETS SD1 THROUGH SD7.
3. COORDINATE LOCATION OF ALL MECHANICAL EQUIPMENT AND PIPING WITH MECHANICAL DRAWINGS PRIOR TO CONSTRUCTION.
4. PREPARE SUBGRADE UNDER SLAB ON GRADE AS DESCRIBED IN GEOTECHNICAL REPORT AND INSTALL 10 MIL PLASTIC/VISQUEEN SHEETING UNDER ALL SLABS. CONTRACTOR SHALL USE THE APPROPRIATE TYPE OF CHAIRS TO PROVIDE 3" CLEAR COVER TO BOTTOM MAT OF SLAB REINFORCING. MEANS AND METHODS SHALL INCLUDE ANY REQUIRED STABILIZATION OF IN-SITU SOILS TO PREVENT THE SETTLEMENT OF CHAIRS. PLASTIC SHEETING SHALL BE REPAIRED WHEN TORN. ALTERNATELY AT CONTRACTORS OPTION USE REINFORCED PLASTIC SHEETING BY TUFF SCRIM OR APPROVED EQUAL TO LIMIT TEARS DURING CONSTRUCTION.
5. SEE 8/SD1 FOR SEQUENCING CONSTRUCTION OF WALLS AND BASIN BASE SLAB.
6. CONNECT ALUMINUM BEAMS TO SUPPORTING BEAMS PER 42/SD6
7. CONNECT ALUMINUM BEAMS TO SUPPORTING CONCRETE WALLS/BEAMS PER 43/SD6



CHLORINE CONTACT TANKS PLAN

1/4" = 1'-0"

NOTES:

1. COAT ALL CHLORINE CONTACT TANK INTERIOR CONCRETE SURFACES INCLUDING TOP OF WALL, WALL FACES AND FLOORS W/ PAINT SYSTEM No. 32 AS SPECIFIED IN SECTION 09900, PAINTING AND COATING.
2. FRP PARSHALL FLUME SHALL NOT BE PAINTED.
3. VERIFY STAIR LANDING LOCATIONS DURING STAIR SHOP DRAWING REVIEW PRIOR TO CONSTRUCTION.

GRAPHIC SCALE
0 1 2 4 8
SCALE IN FEET

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COLUMBIA COUNTY, FLORIDA

CHLORINE CONTACT TANKS FOUNDATION PLAN

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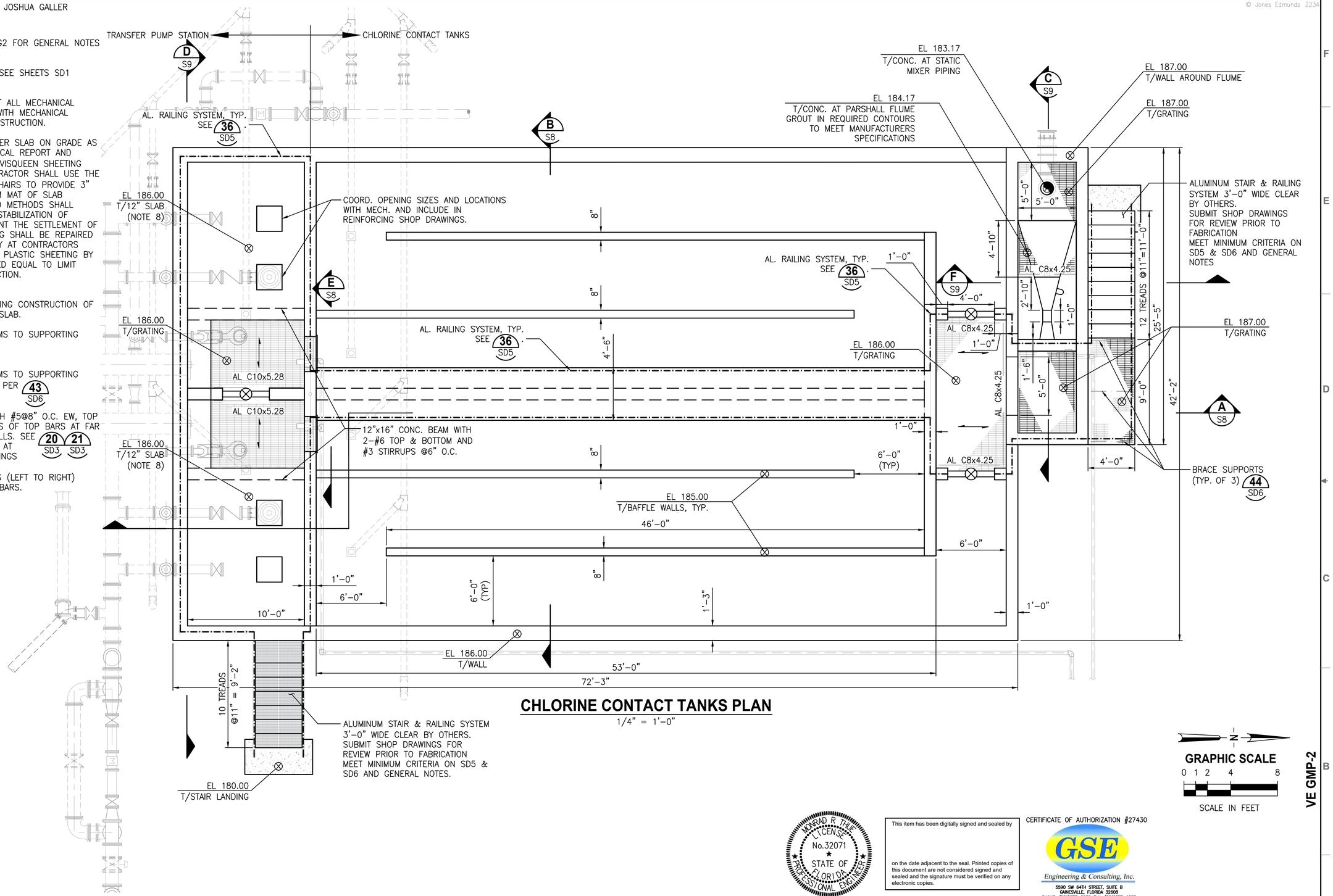
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FACILITY NOTES

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2. FOR STANDARD DETAILS, SEE SHEETS SD1 THROUGH SD7.
3. COORDINATE LOCATION OF ALL MECHANICAL EQUIPMENT AND PIPING WITH MECHANICAL DRAWINGS PRIOR TO CONSTRUCTION.
4. PREPARE SUBGRADE UNDER SLAB ON GRADE AS DESCRIBED IN GEOTECHNICAL REPORT AND INSTALL 10 MIL PLASTIC/VISQUEEN SHEETING UNDER ALL SLABS. CONTRACTOR SHALL USE THE APPROPRIATE TYPE OF CHAIRS TO PROVIDE 3" CLEAR COVER TO BOTTOM MAT OF SLAB REINFORCING. MEANS AND METHODS SHALL INCLUDE ANY REQUIRED STABILIZATION OF IN-SITU SOILS TO PREVENT THE SETTLEMENT OF CHAIRS. PLASTIC SHEETING SHALL BE REPAIRED WHEN TORN. ALTERNATELY AT CONTRACTORS OPTION USE REINFORCED PLASTIC SHEETING BY TUFF SCRIM OR APPROVED EQUAL TO LIMIT TEARS DURING CONSTRUCTION.
5. SEE (8 / SD1) FOR SEQUENCING CONSTRUCTION OF WALLS AND BASIN BASE SLAB.
6. CONNECT ALUMINUM BEAMS TO SUPPORTING BEAMS PER (42 / SD6)
7. CONNECT ALUMINUM BEAMS TO SUPPORTING CONCRETE WALLS/BEAMS PER (43 / SD6)
8. REINFORCE 12" SLAB WITH #5@8" O.C. EW, TOP AND BOTTOM. HOOK ENDS OF TOP BARS AT FAR SIDE OF SUPPORTING WALLS. SEE (20 / SD3) (21 / SD3) FOR ADDED REINFORCING AT OPENINGS. COORD. OPENINGS WITH MECH.
   TRANSVERSE ADDED BARS (LEFT TO RIGHT) SHALL BE FULL LENGTH BARS.



CHLORINE CONTACT TANKS PLAN

1/4" = 1'-0"

GRAPHIC SCALE
0 1 2 4 8
SCALE IN FEET

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WASTEWATER TREATMENT PLANT
COLUMBIA COUNTY, FLORIDA

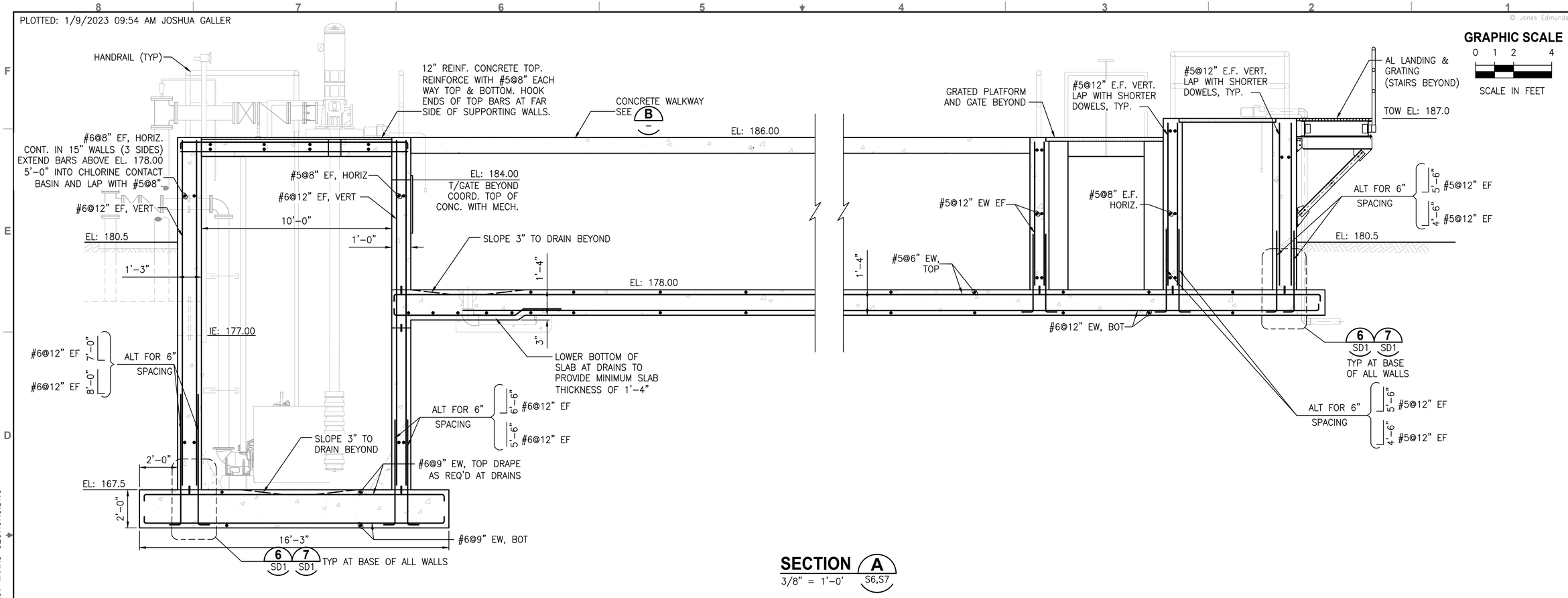
CHLORINE CONTACT TANKS TOP PLAN

Monrad R. Thue, State of Florida, Professional Engineer, License No. 32071
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PROJECT NO: 03780-001-01
DATE: DEC. 2022
INDEX NO:
DWG NO: S7

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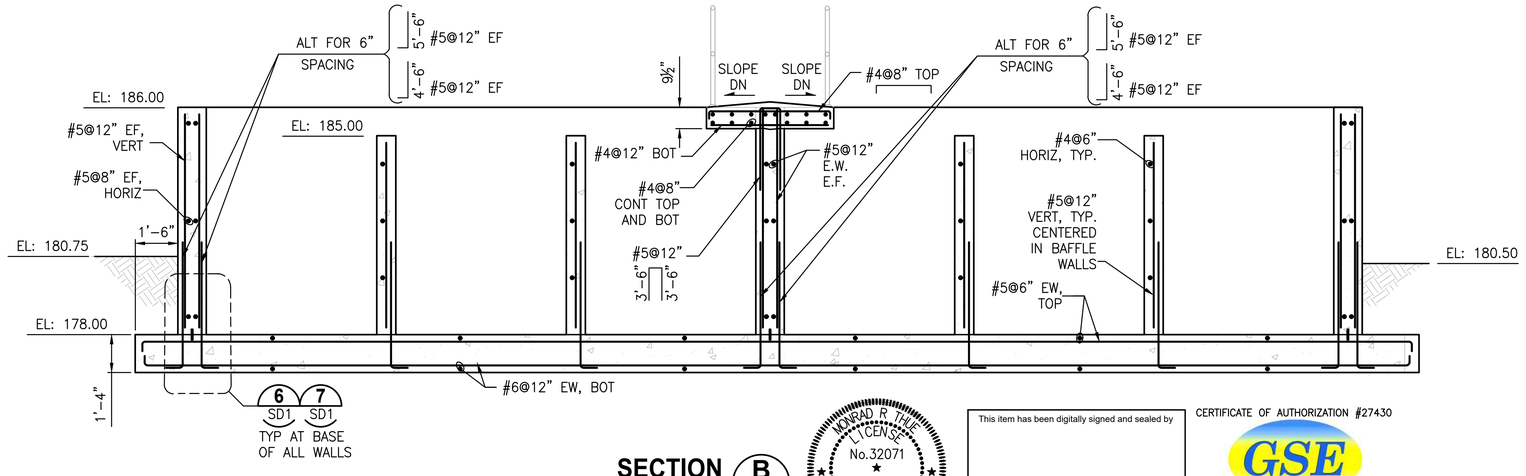
GRAPHIC SCALE

0 1 2 4

SCALE IN FEET

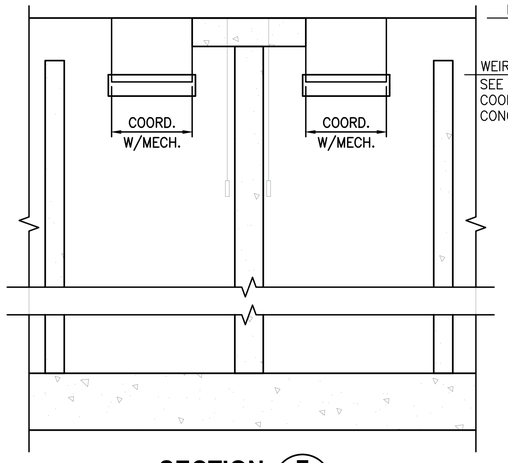
SECTION A

3/8" = 1'-0" S6,S7



SECTION B

3/8" = 1'-0" S6,S7



SECTION E

3/8" = 1'-0" S6,S7

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PHONE: (352)377-3233 FAX: (352)377-0335

LTR.	DATE	REVISIONS	BY	APPRD.
VE	11/2022	VE GMP-1	LYC	TWF

DESIGNED MTHUE
DRAWN JGALLER
CHECKED DHALLE

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730 NE WALDO ROAD, GAINESVILLE, FLORIDA 32641 / (352) 377-5821

NORTH FLORIDA MEGA INDUSTRIAL PARK
WASTEWATER TREATMENT PLANT
COLUMBIA COUNTY, FLORIDA

CHLORINE CONTACT TANKS SECTIONS

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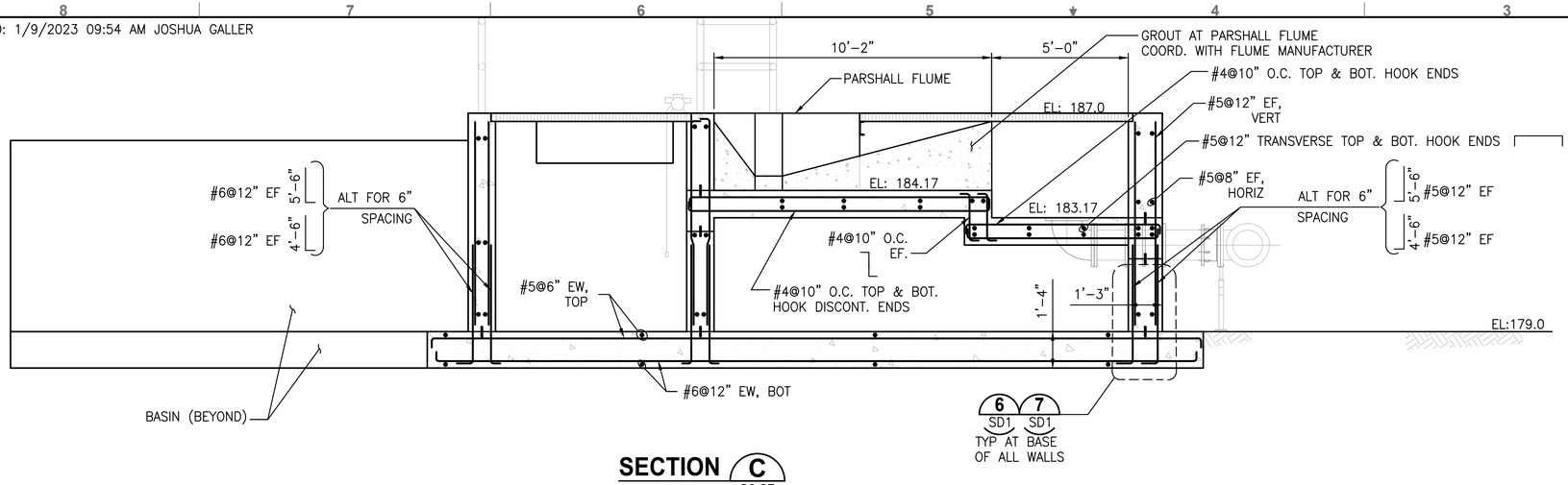
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PROJECT NO: 03780-001-01
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INDEX NO:
DWG NO: S8

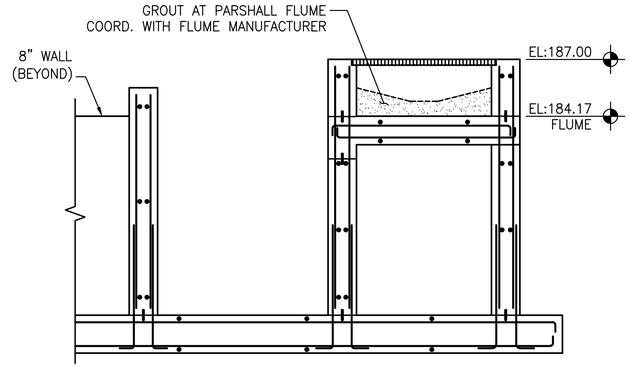
VE GMP-2

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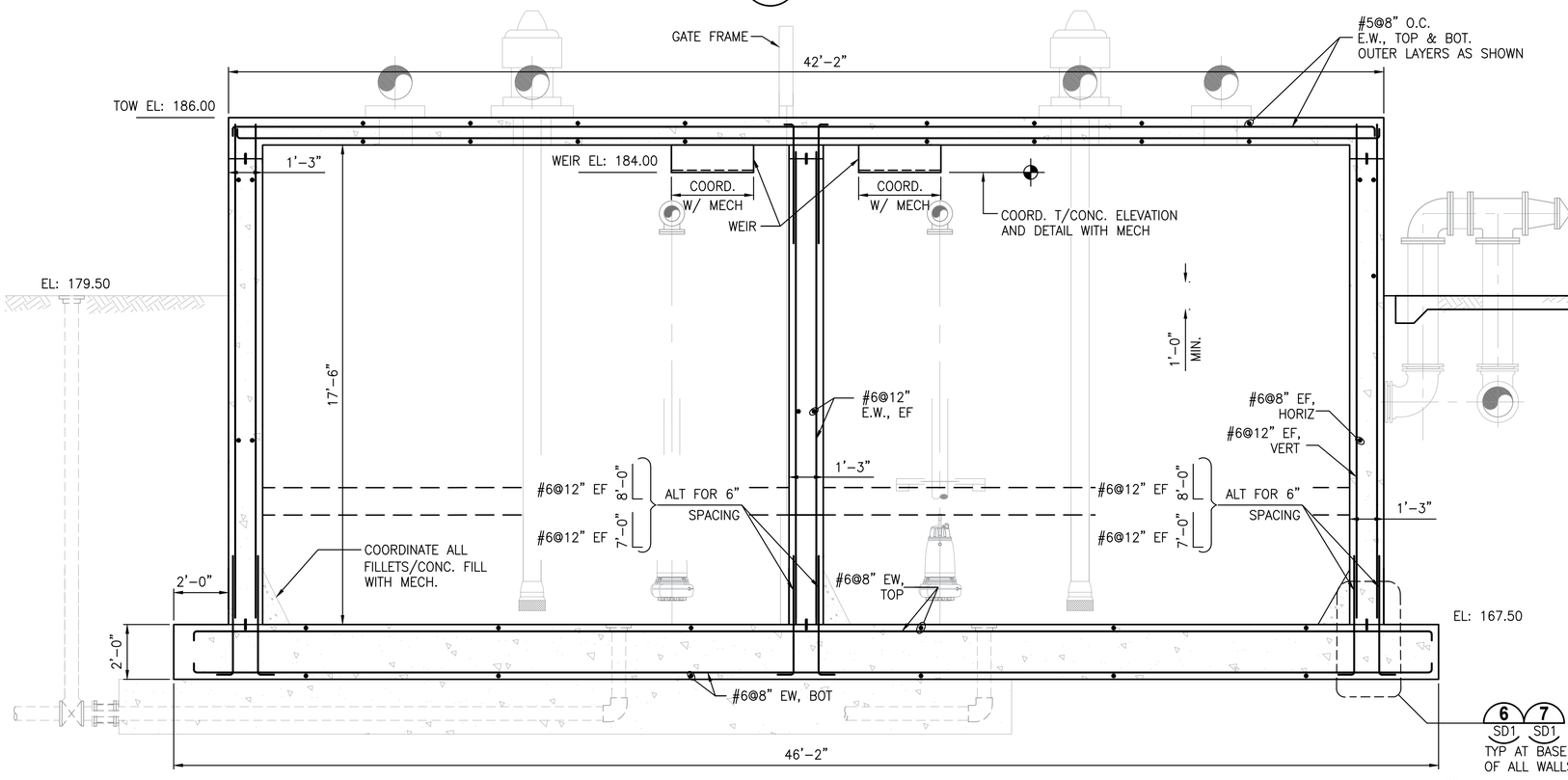
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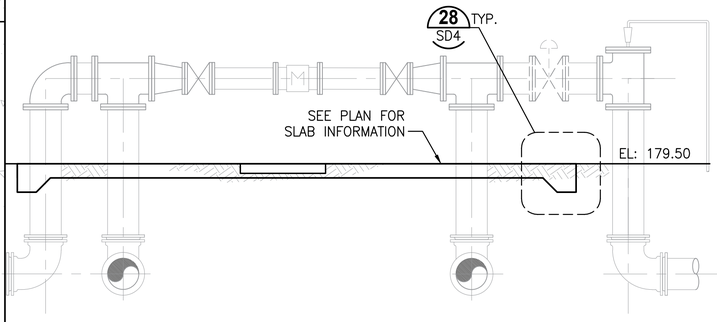
SECTION C (S6,S7)
3/8" = 1'-0"



SECTION F (S6,S7)
3/8" = 1'-0"



SECTION D (S6,S7)
3/8" = 1'-0"



GRAPHIC SCALE
0 1 2 4
SCALE IN FEET

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CHECKED DHALLE

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NORTH FLORIDA MEGA INDUSTRIAL PARK
WASTEWATER TREATMENT PLANT
COLUMBIA COUNTY, FLORIDA

CHLORINE CONTACT TANK SECTIONS

Monrad R. Thue, State of Florida, Professional Engineer, License No. 32071

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PROJECT NO: 03780-001-01
DATE: DEC. 2022
INDEX NO:
DWG NO: S9

VE GMP-2

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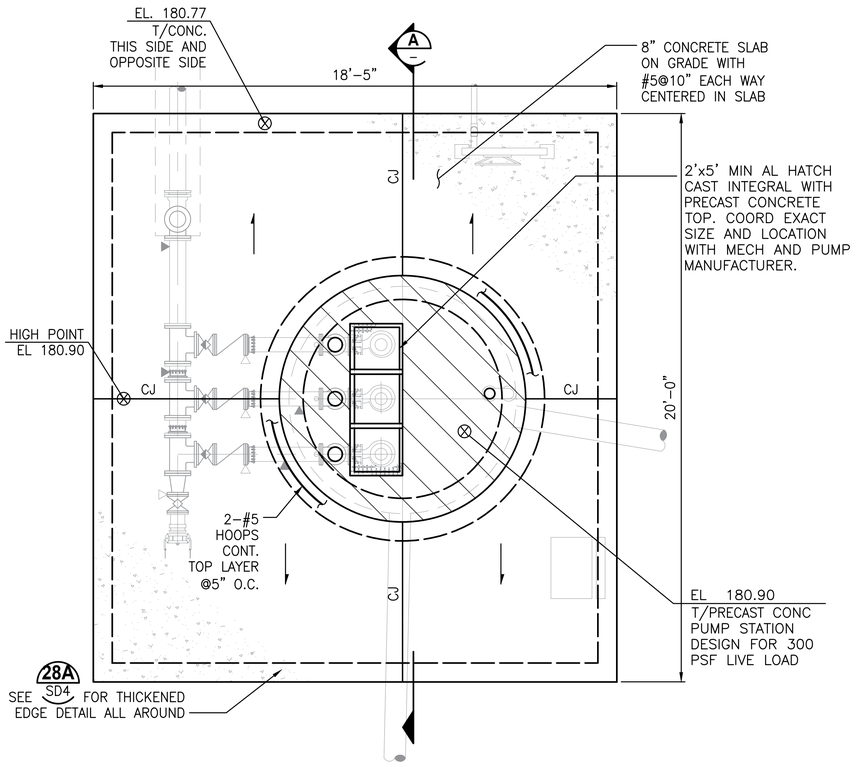
PUMP STATION NOTES

1. SEE SHEETS SG1 AND SG2 FOR GENERAL NOTES AND OTHER INFORMATION.
2. FOR STANDARD DETAILS, SEE SHEETS SD1 THROUGH SD7.
3. COORDINATE LOCATION OF ALL MECHANICAL EQUIPMENT AND PIPING WITH MECHANICAL DRAWINGS PRIOR TO CONSTRUCTION.
4. PRECAST CONCRETE STRUCTURE SHALL BE DESIGNED FOR A WATER TABLE AT TOP OF STRUCTURE (AT GRADE). TOP AND TOP HATCHES SHALL BE DESIGNED FOR A LIVE LOAD = 300 PSF. SUBMIT SHOP DRAWINGS FOR REVIEW INCLUDING ALL INFORMATION ON HATCHES PRIOR TO FABRICATION.
5. PREPARE SUBGRADE UNDER SLAB ON GRADE AS DESCRIBED IN GEOTECHNICAL REPORT AND INSTALL 10 MIL PLASTIC/VISQUEEN SHEETING UNDER ALL SLABS. CONTRACTOR SHALL USE THE APPROPRIATE TYPE OF CHAIRS TO PROVIDE 4" CLEAR COVER TO BOTTOM MAT OF SLAB REINFORCING. MEANS AND METHODS SHALL INCLUDE ANY REQUIRED STABILIZATION OF IN-SITU SOILS TO PREVENT THE SETTLEMENT OF CHAIRS. PLASTIC SHEETING SHALL BE REPAIRED WHEN TORN. ALTERNATELY AT CONTRACTORS OPTION USE REINFORCED PLASTIC SHEETING BY TUFF SCRIM OR APPROVED EQUAL TO LIMIT TEARS DURING CONSTRUCTION.
6. UNDER THE FOUNDATION OF THE PRECAST CONCRETE PUMP STATIONS, COMPACT SUBGRADE AND FILL MATERIALS BELOW ROCK SUB-BASE TO A MINIMUM OF 98% OF THE MODIFIED PROCTOR MAXIMUM DRY DENSITY (ASTM D1557) FOR A DEPTH OF 2 FEET. COMPACT IN MAXIMUM LIFTS OF 1 FOOT.
7. PROVIDE 12" THICK ROCK SUB-BASE. ROCK SUB-BASE SHALL BE COMPACTED No. 57 STONE WITH A MINIMUM OF 2 PASSES IN EACH DIRECTION USING A VIBRATING SLED OR OTHER APPROVED METHOD OF COMPACTION.
8. CONSTRUCT CONST JT PER (10 / SD2) WITHOUT WATERSTOP AND CJ PER (9 / SD2)

GRAPHIC SCALE

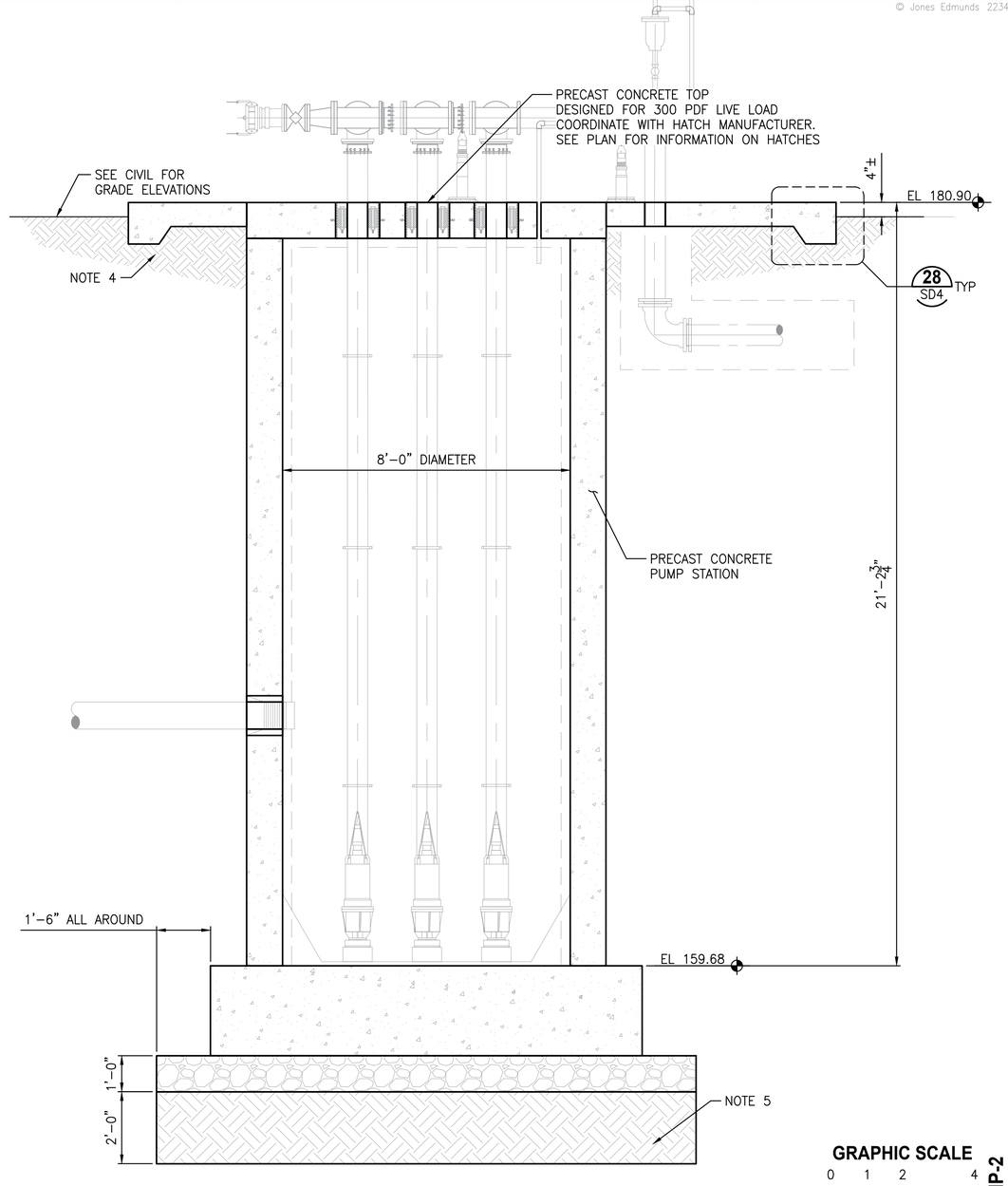
0 1 2 4

SCALE IN FEET
3/8"=1'-0"



FOUNDATION PLAN

3/8" = 1'-0"



SECTION A

1/2"=1'-0"

GRAPHIC SCALE

0 1 2 4

SCALE IN FEET
1/2"=1'-0"

VE GMP-2

MONRAD R. THUE
LICENSE
No.32071
STATE OF
FLORIDA
PROFESSIONAL ENGINEER

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VE	11/2022	VE GMP-1	LYC	TWF

DESIGNED MTHUE
DRAWN JGALLER
CHECKED DHALLE

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730 NE WALDO ROAD, GAINESVILLE, FLORIDA 32641 / (352) 377-5821

NORTH FLORIDA MEGA INDUSTRIAL PARK
WASTEWATER TREATMENT PLANT
COLUMBIA COUNTY, FLORIDA

PLANT DRAIN PUMP STATION FOUNDATION PLAN AND SECTIONS

Monrad R. Thue, State of Florida, Professional Engineer, License No. 32071

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INDEX NO:
DWG NO: S10

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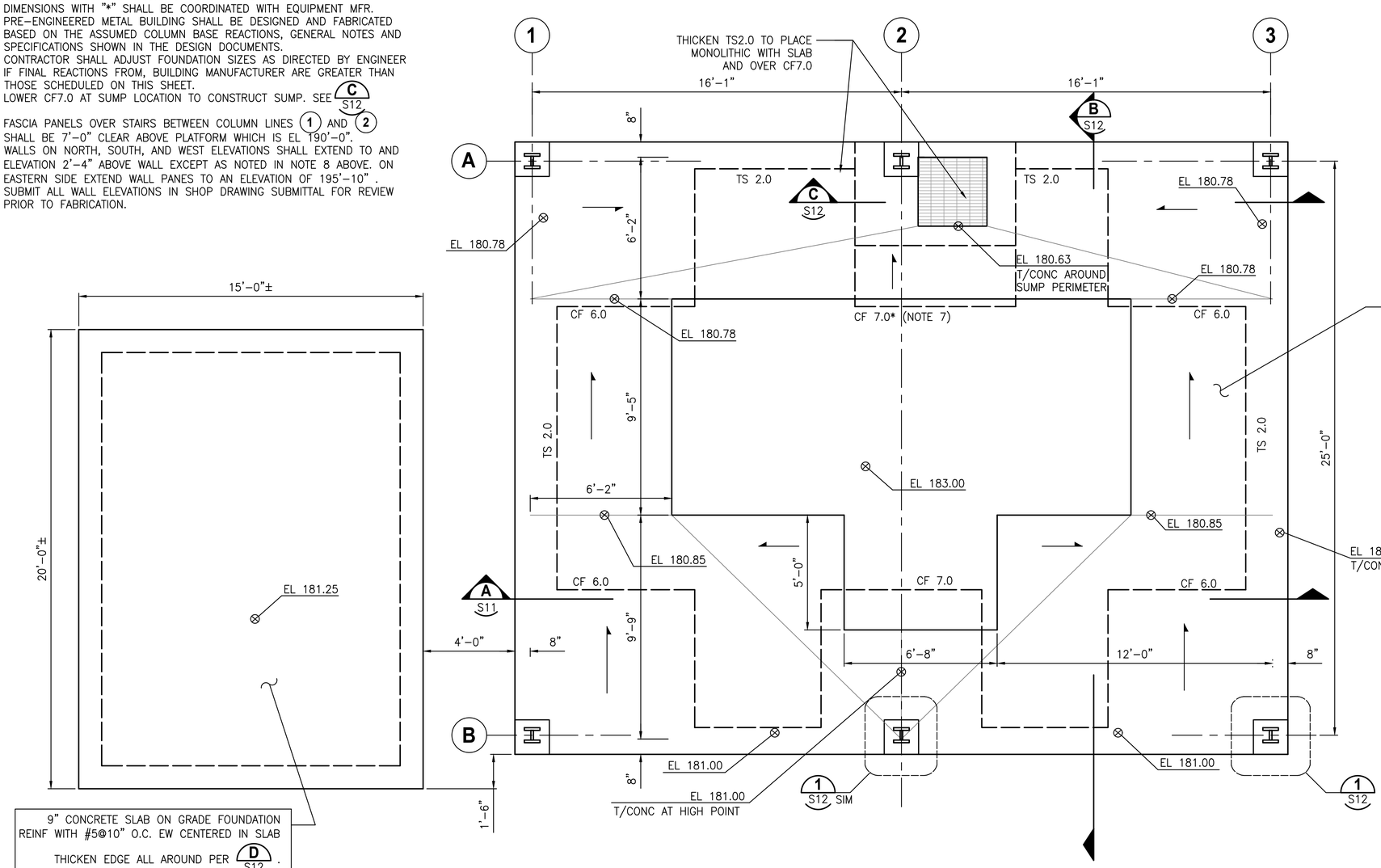
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FACILITY NOTES:

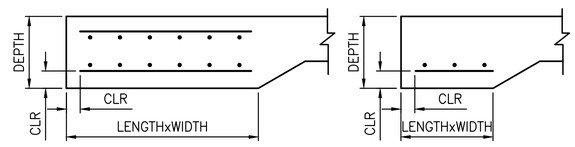
1. SEE SHEETS SG1 AND SG2 FOR GENERAL NOTES AND OTHER INFORMATION.
2. FOR STANDARD DETAILS, SEE SHEETS SD1 THROUGH SD7.
3. COORDINATE LOCATION OF ALL MECHANICAL EQUIPMENT AND PIPING WITH MECHANICAL DRAWINGS PRIOR TO CONSTRUCTION.
4. DIMENSIONS WITH "*" SHALL BE COORDINATED WITH EQUIPMENT MFR.
5. PRE-ENGINEERED METAL BUILDING SHALL BE DESIGNED AND FABRICATED BASED ON THE ASSUMED COLUMN BASE REACTIONS, GENERAL NOTES AND SPECIFICATIONS SHOWN IN THE DESIGN DOCUMENTS.
6. CONTRACTOR SHALL ADJUST FOUNDATION SIZES AS DIRECTED BY ENGINEER IF FINAL REACTIONS FROM, BUILDING MANUFACTURER ARE GREATER THAN THOSE SCHEDULED ON THIS SHEET.
7. LOWER CF7.0 AT SUMP LOCATION TO CONSTRUCT SUMP. SEE C/S12
8. FASCIA PANELS OVER STAIRS BETWEEN COLUMN LINES 1 AND 2 SHALL BE 7'-0" CLEAR ABOVE PLATFORM WHICH IS EL 190'-0".
9. WALLS ON NORTH, SOUTH, AND WEST ELEVATIONS SHALL EXTEND TO AND ELEVATION 2'-4" ABOVE WALL EXCEPT AS NOTED IN NOTE 8 ABOVE. ON EASTERN SIDE EXTEND WALL PANES TO AN ELEVATION OF 195'-10" . SUBMIT ALL WALL ELEVATIONS IN SHOP DRAWING SUBMITTAL FOR REVIEW PRIOR TO FABRICATION.

GRAPHIC SCALE
0 1 2 4
SCALE IN FEET
3/8"=1'-0"
N



FOUNDATION SCHEDULE

MARK	TYPE	WIDTH (ft)	LENGTH (ft)	DEPTH (ft)	LONGITUDINAL BARS	TRANSVERSE SIZE	TRANSVERSE SP (in)	REMARKS
CF6.0	A	6'-0"	6'-0"	1'-8"	(6)-#7	#7	12	TOP & BOT
CF7.0	A	7'-0"	7'-0"	1'-8"	(7)-#7	#7	12	TOP & BOT
TS2.0	B	2'-0"	CONT	1'-4"	(3)-#5	#5	16	



TYPE A SECTION

TYPE B SECTION

ASSUMED WORKING STRESS BASE COLUMN REACTIONS

COLUMN	VERTICAL REACTION	HORIZONTAL REACTION
A1, B1 A3, B3	± 15 KIPS	10 KIPS IN DIRECTION OF MAIN FRAME (N-S) 12 KIPS IN EAST-WEST DIRECTION
A2 B2	± 25 KIPS	20 KIPS IN DIRECTION OF MAIN FRAME (N-S) 12 KIPS IN EAST-WEST DIRECTION

FOUNDATION PLAN

3/8" = 1'-0"

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DRAWN JGALLER
CHECKED DHALLE

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NORTH FLORIDA MEGA INDUSTRIAL PARK
WASTEWATER TREATMENT PLANT
COLUMBIA COUNTY, FLORIDA

CHEMICAL STORAGE AND FEED SYSTEMS FOUNDATION PLAN

Monrad R. Thue, State of Florida, Professional Engineer, License No. 32071

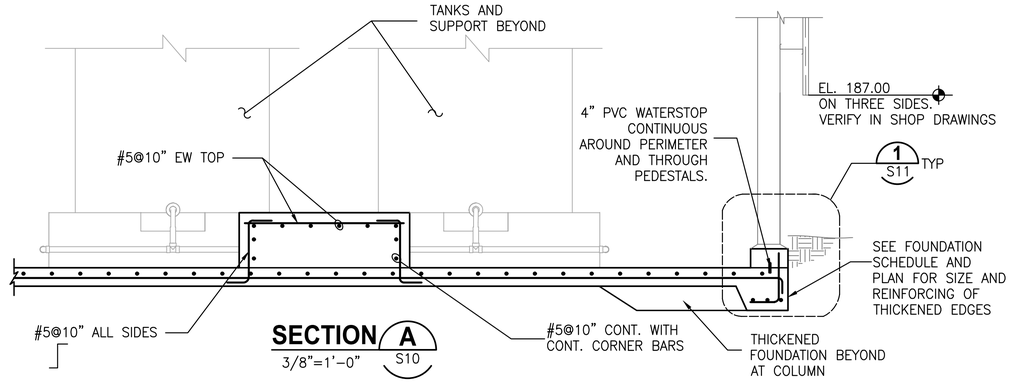
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PROJECT NO: 03780-001-01
DATE: DEC. 2022
INDEX NO:
DWG NO: S11

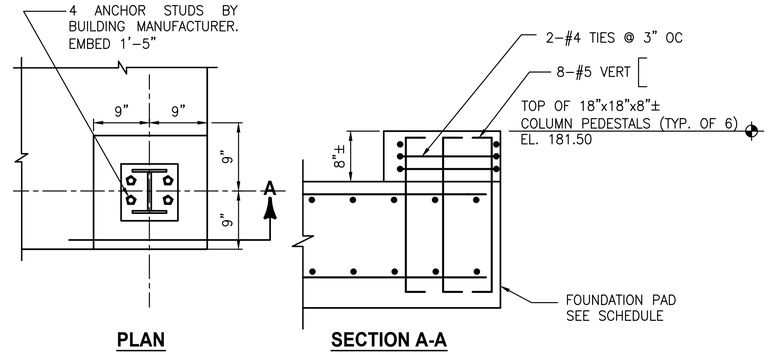
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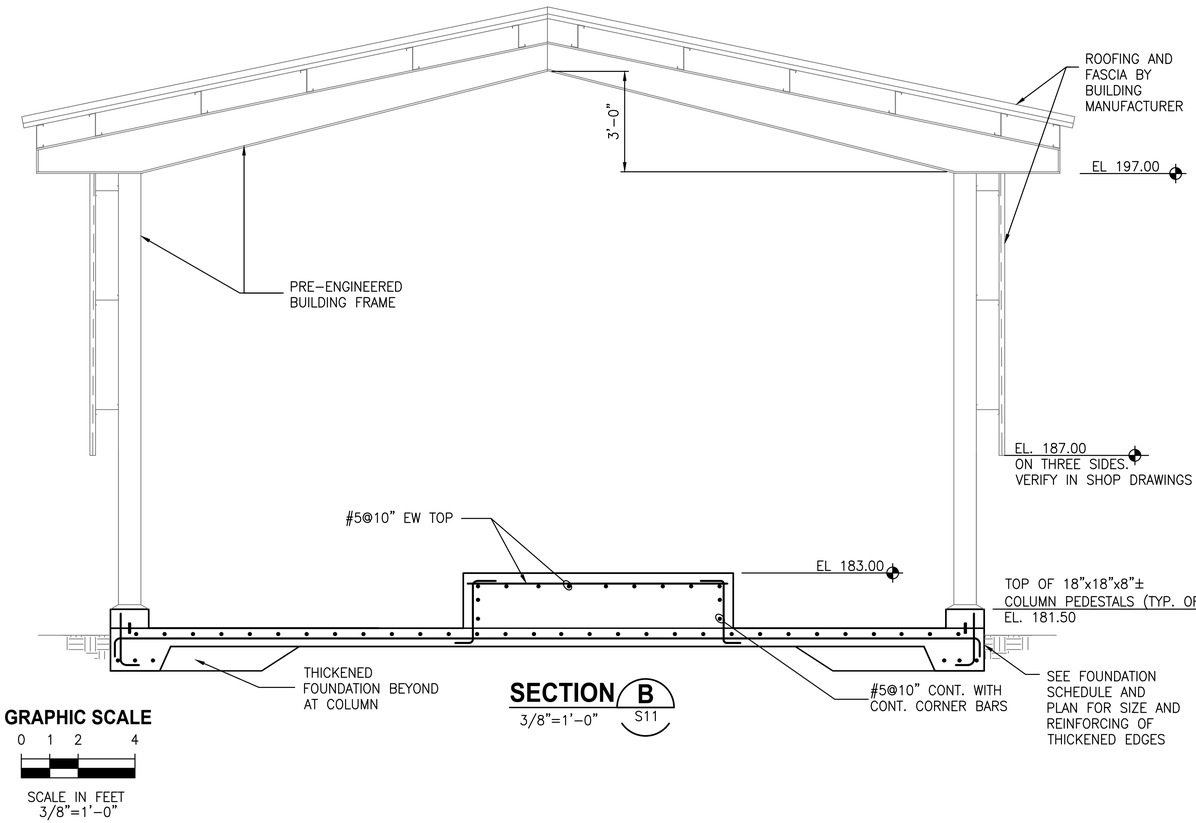


SECTION A
3/8"=1'-0" S10

NOTES: BUILDING NOT SHOWN FOR CLARITY

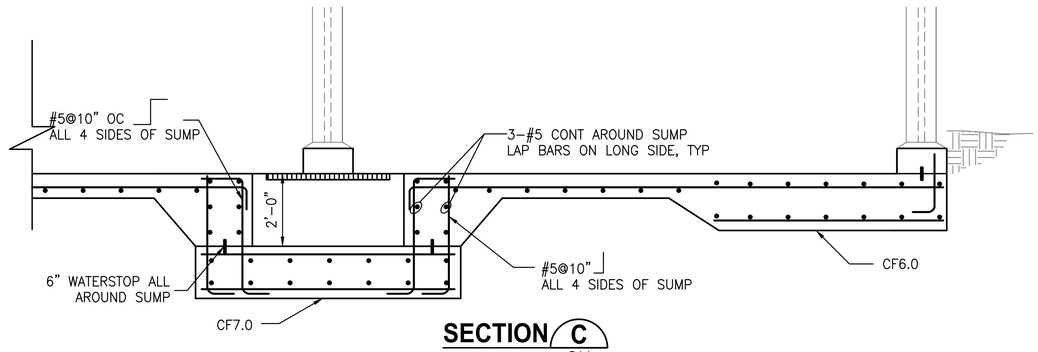


COLUMN PEDESTAL DETAIL 1
1"=1'-0" S11

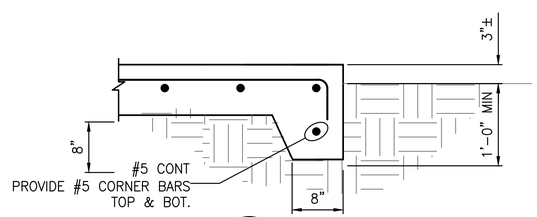


SECTION B
3/8"=1'-0" S11

GRAPHIC SCALE
0 1 2 4
SCALE IN FEET
3/8"=1'-0"



SECTION C
1/2"=1'-0" S11



SECTION D
1"=1'-0" S11

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VE GMP-2

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NORTH FLORIDA MEGA INDUSTRIAL PARK
WASTEWATER TREATMENT PLANT
COLUMBIA COUNTY, FLORIDA

CHEMICAL STORAGE AND FEED SYSTEMS SECTIONS

Monrad R. Thue, State of Florida, Professional Engineer, License No. 32071

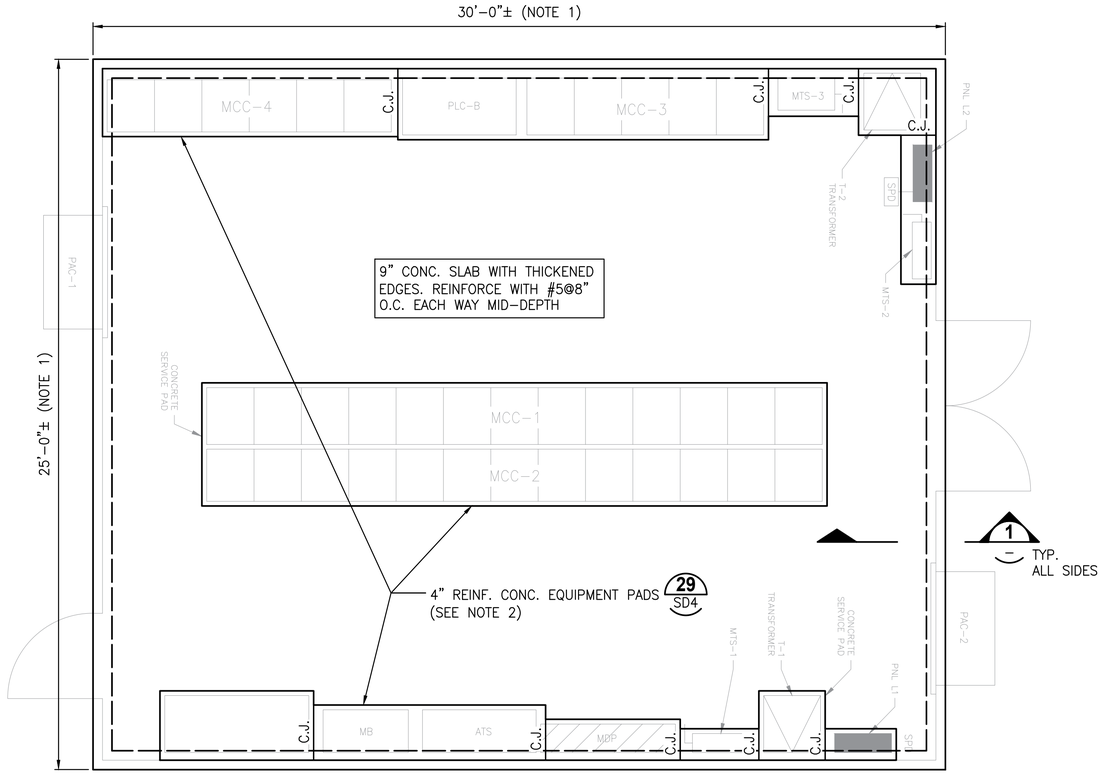
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PROJECT NO:	DATE:
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INDEX NO:	DWG NO: S12

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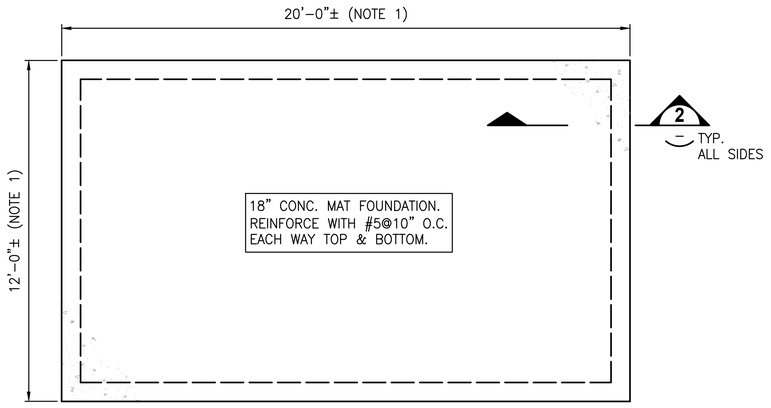


ELECTRICAL BUILDING 1 FOUNDATION PLAN

3/8" = 1'-0"

BUILDING PLAN NOTES

1. COORD. PAD SIZE WITH BUILDING SHOP DRAWING TO PROVIDE A MINIMUM EDGE DISTANCE TO ANCHOR BOLTS ≥ 5" OR OTHER CONNECTION REQUIREMENTS.
2. COORDINATE EXACT SIZE, LOCATION, AND NUMBER OF REQUIRED EQUIPMANT PADS WITH ELECTRICAL ENGINEER AND EQUIPMENT MANUFACTURER PRIOR TO CONSTRUCTION.

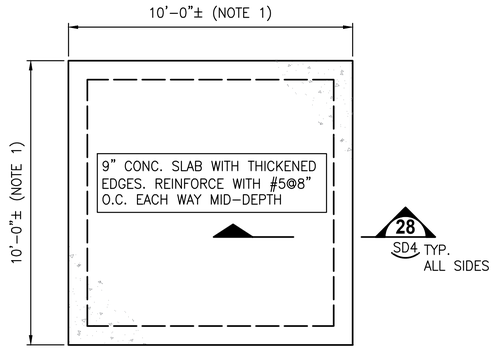


GENERATOR PAD PLAN

3/8" = 1'-0"

GENERATOR PAD PLAN NOTE

1. COORD. EXACT DIMENSIONS WITH GENERATOR MANUFACTURER. ENSURE 5" MIN. EDGE DISTANCE FOR ALL ANCHORS.



TRANSFORMER PAD PLAN

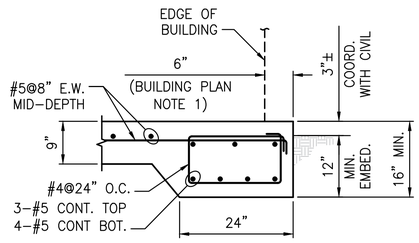
3/8" = 1'-0"

TRANSFORMER PAD PLAN NOTE

1. COORD. EXACT DIMENSIONS WITH GENERATOR MANUFACTURER. ENSURE 5" MIN. EDGE DISTANCE FOR ALL ANCHORS.

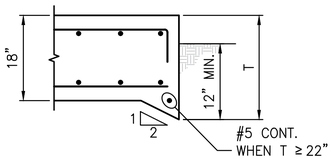
GENERAL FOUNDATIONS NOTES

1. SEE SHEETS SG1 AND SG2 FOR GENERAL NOTES AND OTHER INFORMATION.
2. FOR STANDARD DETAILS, SEE SHEETS SD1 THROUGH SD7.
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4. PREPARE SUBGRADE UNDER SLAB ON GRADE AS DESCRIBED IN GEOTECHNICAL REPORT AND INSTALL 10 MIL PLASTIC/VISQUEEN SHEETING UNDER ALL SLABS. CONTRACTOR SHALL USE THE APPROPRIATE TYPE OF CHAIRS TO PROVIDE 4" CLEAR COVER TO BOTTOM MAT OF SLAB REINFORCING. MEANS AND METHODS SHALL INCLUDE ANY REQUIRED STABILIZATION OF IN-SITU SOILS TO PREVENT THE SETTLEMENT OF CHAIRS. PLASTIC SHEETING SHALL BE REPAIRED WHEN TORN. ALTERNATELY AT CONTRACTORS OPTION USE REINFORCED PLASTIC SHEETING BY TUFF SCRIM OR APPROVED EQUAL TO LIMIT TEARS DURING CONSTRUCTION.



DETAIL 1

3/4"=1'-0"



DETAIL 2

3/4"=1'-0"

VE GMP-2

GRAPHIC SCALE

0 1 2 4

SCALE IN FEET
3/8"=1'-0"

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NORTH FLORIDA MEGA INDUSTRIAL PARK
WASTEWATER TREATMENT PLANT
COLUMBIA COUNTY, FLORIDA

ELECTRICAL FOUNDATIONS AND PADS PLANS AND DETAILS

Monrad R. Thue, State of Florida, Professional Engineer, License No. 32071

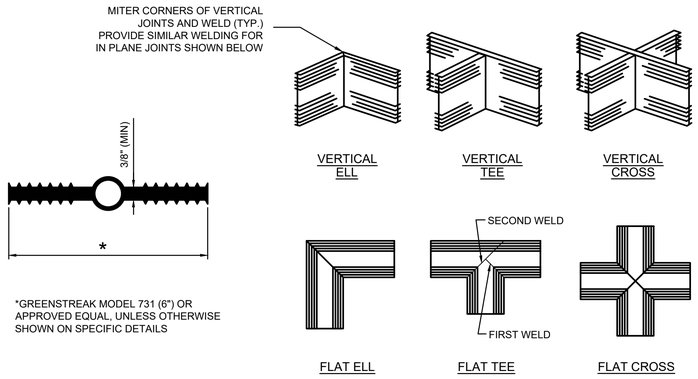
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PROJECT NO: 03780-001-01
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DWG NO: S13

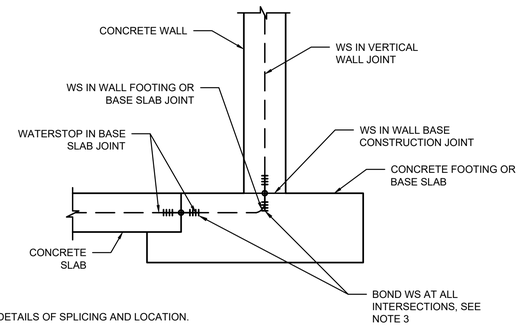
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*GREENSTREAK MODEL 731 (6") OR APPROVED EQUAL, UNLESS OTHERWISE SHOWN ON SPECIFIC DETAILS

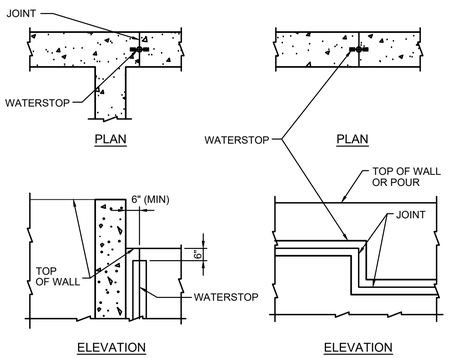
FABRICATED PVC WATERSTOP AND JOINTS 1



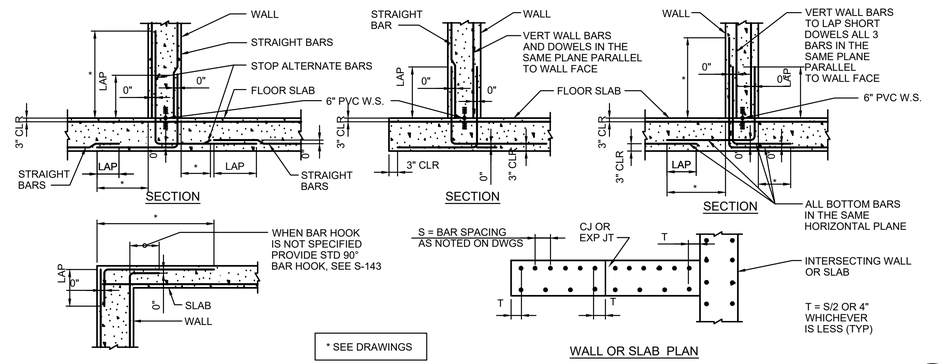
NOTES:

1. SUBMIT DETAILS OF SPLICING AND LOCATION.
2. BOND OR SPLICE ALL HORIZONTAL TRANSVERSE WATERSTOPS IN BASE SLAB JOINTS TO CONTINUOUS LONGITUDINAL WATERSTOP IN WALL BASE FOR COMPLETE SEAL.
3. BOND OR SPLICE ALL VERTICAL WATERSTOPS IN WALL JOINTS TO LONGITUDINAL WATERSTOP IN WALL BASE FOR COMPLETE SEAL.
4. FOR CONCRETE PLACEMENT SEQUENCE, SEE 19/SD2
5. FOR PLASTIC WATERSTOP DETAILS, SEE 1/–

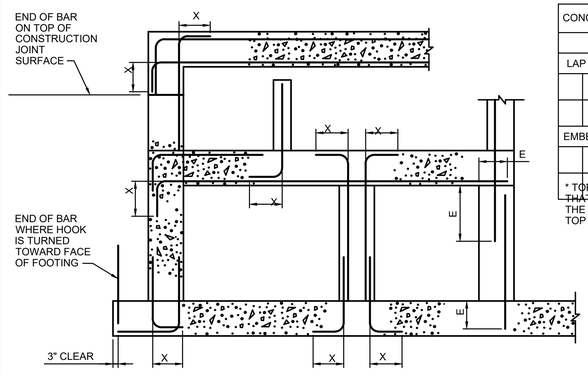
WATERSTOP CONNECTION 2



WATERSTOP DETAILS FOR WALL JOINTS 3



STANDARD FOR REINFORCING BAR DETAILING SECTIONS AND PLANS 4



CONCRETE DESIGN STRENGTH = 4,000 PSI		GRADE 60 REINFORCING STEEL							
BAR SIZE		#4	#5	#6	#7	#8	#9	#10	#11
LAP SPLICE LENGTH									
	TOP BAR*	2'-0"	3'-5"	4'-1"	5'-10"	7'-4"	7'-10"	8'-8"	10'-5"
	OTHER BAR	1'-7"	2'-7"	3'-2"	4'-6"	5'-8"	6'-1"	6'-9"	8'-1"
EMBEDMENT LENGTH									
	TOP BAR*	1'-7"	2'-7"	3'-2"	4'-6"	5'-2"	5'-10"	6'-7"	7'-3"
	OTHER BAR	1'-0"	1'-7"	2'-0"	2'-10"	3'-7"	4'-5"	5'-0"	5'-7"

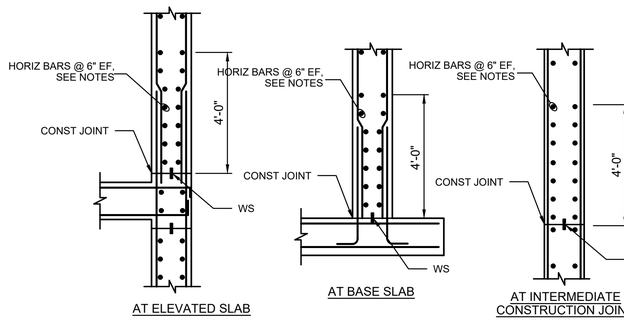
* TOP BARS SHALL BE DEFINED AS ANY HORIZONTAL BARS PLACED SUCH THAT MORE THAN 12" OF FRESH CONCRETE IS CAST IN THE MEMBER BELOW THE BAR IN ANY SINGLE POUR. HORIZONTAL WALL BARS ARE CONSIDERED TOP BARS.

NOTES:

1. CONTINUOUS WATERSTOP, AS SPECIFIED, SHALL BE INSTALLED IN ALL CONSTRUCTION JOINTS IN WALLS OF WATER HOLDING BASINS AND CHANNELS, EXCEPT WHERE INDICATED OTHERWISE.
2. WHEN BARS OF DIFFERENT SIZES ARE LAP SPLICED, LAP LENGTH SHALL BE THE LARGER OF:

   EMBEDMENT LENGTH OF LARGER BARS
   LAP LENGTH OF SMALLER BAR
3. UNLESS NOTED OTHERWISE USE REBAR COUPLERS FOR SPLICES OF #11 AND LARGER BARS.
4. ALL DOWEL BARS SHALL EXTEND AN EMBEDMENT LENGTH E INTO ANOTHER MEMBER OR ACROSS A CONSTRUCTION JOINT UNLESS SHOWN TO SPLICE WITH OTHER BARS OR TO EXTEND TO THE FAR FACE OF THE MEMBER AND END WITH A STANDARD HOOK.

STANDARD 90 BAR HOOKS, EMBEDMENT LENGTHS, AND LAP LENGTHS 5

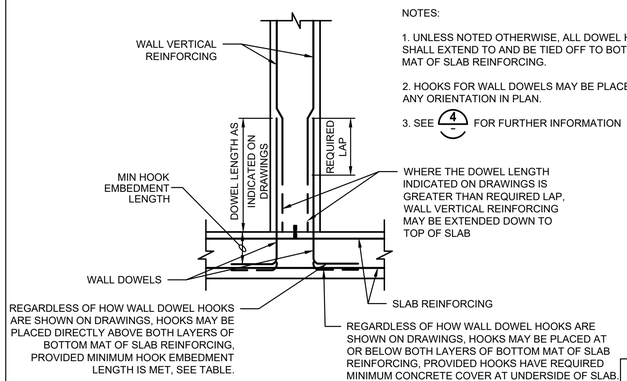


NOTES:

1. PROVIDE HORIZONTAL BARS AT 6" SPACING EACH FACE (OR 1/2 TYPICAL SPACING, WHICHEVER IS LESS) IN THE FIRST 4'-0" ABOVE ALL HORIZONTAL WALL CONSTRUCTION JOINTS IN LIQUID CONTAINING AND BELOW-GRADE STRUCTURES. WHERE TYPICAL WALL HORIZONTAL BARS ARE AT 12" SPACING, PROVIDE ADDITIONAL BARS FOR 6" SPACING.
2. HORIZONTAL BAR SIZE FOR THE 4'-0" ZONE SHALL BE THE TYPICAL WALL HORIZONTAL BAR SIZE SHOWN ON THE DRAWINGS OR THE MINIMUM BAR SIZE IN THE TABLE BELOW, WHICHEVER IS GREATER.
3. SEE 4/– AND 7/– FOR FURTHER INFORMATION

WALL THICKNESS (INCHES)	MINIMUM BAR SIZE
10	#5
12, 14	#6
16, 18, 20	#7
≥ 22	#8

REINFORCING AT HORIZONTAL CONSTRUCTION JOINTS 6



NOTES:

1. UNLESS NOTED OTHERWISE, ALL DOWEL HOOKS SHALL EXTEND TO AND BE TIED OFF TO BOTTOM MAT OF SLAB REINFORCING.
2. HOOKS FOR WALL DOWELS MAY BE PLACED IN ANY ORIENTATION IN PLAN.
3. SEE 4/– FOR FURTHER INFORMATION

WHERE THE DOWEL LENGTH INDICATED ON DRAWINGS IS GREATER THAN REQUIRED LAP, WALL VERTICAL REINFORCING MAY BE EXTENDED DOWN TO TOP OF SLAB

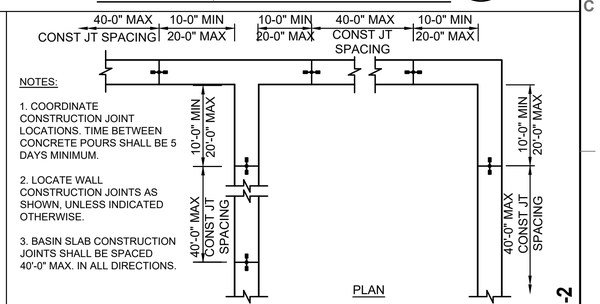
REGARDLESS OF HOW WALL DOWEL HOOKS ARE SHOWN ON DRAWINGS, HOOKS MAY BE PLACED DIRECTLY ABOVE BOTH LAYERS OF BOTTOM MAT OF SLAB REINFORCING, PROVIDED MINIMUM HOOK EMBEDMENT LENGTH IS MET, SEE TABLE.

REGARDLESS OF HOW WALL DOWEL HOOKS ARE SHOWN ON DRAWINGS, HOOKS MAY BE PLACED AT OR BELOW BOTH LAYERS OF BOTTOM MAT OF SLAB REINFORCING, PROVIDED HOOKS HAVE REQUIRED MINIMUM CONCRETE COVER AT UNDERSIDE OF SLAB.

ACI MINIMUM HOOK EMBEDMENT LENGTH	
BAR SIZE	MIN EMBEDMENT
#4	7"
#5	9"
#6	11"
#7	12"
#8	14"
#9	16"
#10	17"

WALL SECTION

VERTICAL WALL REINFORCING DOWEL PLACEMENT 7



NOTES:

1. COORDINATE CONSTRUCTION JOINT LOCATIONS. TIME BETWEEN CONCRETE POURS SHALL BE 5 DAYS MINIMUM.
2. LOCATE WALL CONSTRUCTION JOINTS AS SHOWN, UNLESS INDICATED OTHERWISE.
3. BASIN SLAB CONSTRUCTION JOINTS SHALL BE SPACED 40'-0" MAX. IN ALL DIRECTIONS.

WALL CONSTRUCTION JOINT SPACING (CONST JT) 8

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NORTH FLORIDA MEGA INDUSTRIAL PARK
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STRUCTURAL STANDARD DETAILS

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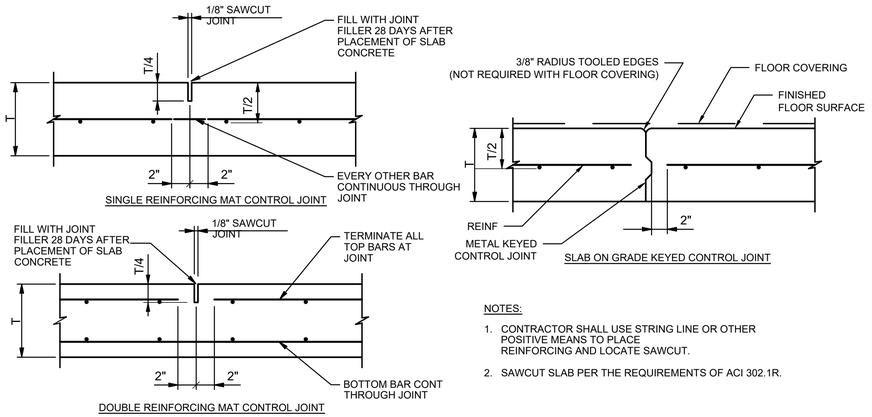
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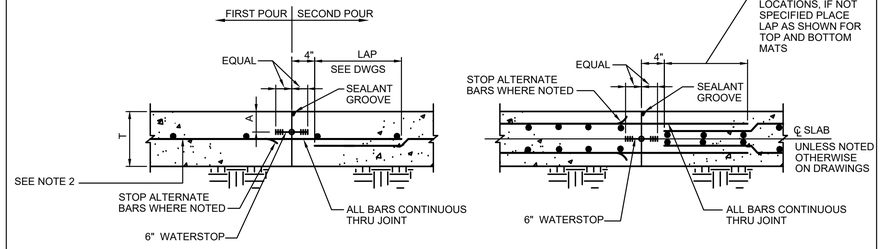
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NOTES:

1. CONTRACTOR SHALL USE STRING LINE OR OTHER POSITIVE MEANS TO PLACE REINFORCING AND LOCATE SAWCUT.
2. SAWCUT SLAB PER THE REQUIREMENTS OF ACI 302.1R.

SLAB ON GRADE CONTROL JOINTS (CJ) 9



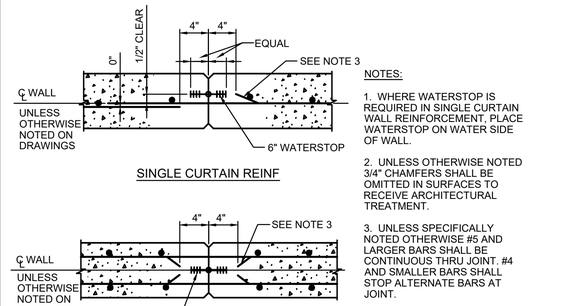
SINGLE MAT REINF - CONTINUOUS THRU JOINT
(ONLY WHEN SPECIFIED ON DRAWINGS)

DOUBLE MAT REINF

NOTES:

1. WATERSTOPS AND SEALANT GROOVES TO BE PROVIDED IN ALL WATER RETAINING SLABS, SEE DRAWINGS, FOR OTHER LOCATIONS WHERE THEY MAY BE REQUIRED.
2. STAGGER SPLICES UNLESS NOTED OTHERWISE.

SLAB ON GRADE CONSTRUCTION JOINTS 10



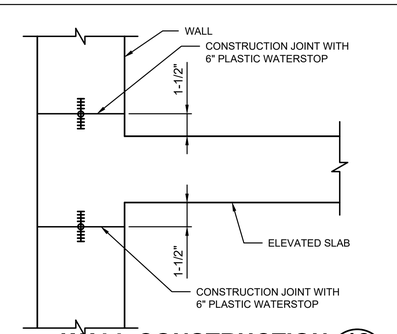
SINGLE CURTAIN REINF

DOUBLE CURTAIN REINF

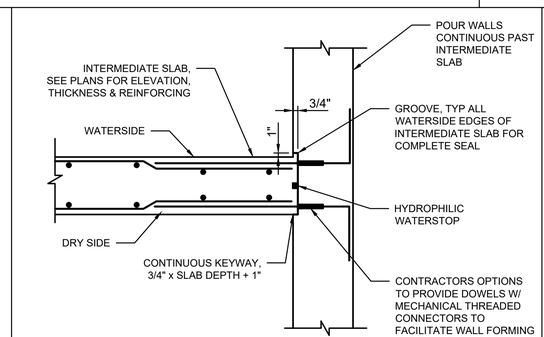
NOTES:

1. WHERE WATERSTOP IS REQUIRED IN SINGLE CURTAIN WALL REINFORCEMENT, PLACE WATERSTOP ON WATER SIDE OF WALL.
2. UNLESS OTHERWISE NOTED 3/4" CHAMFERS SHALL BE OMITTED IN SURFACES TO RECEIVE ARCHITECTURAL TREATMENT.
3. UNLESS SPECIFICALLY NOTED OTHERWISE #5 AND LARGER BARS SHALL BE CONTINUOUS THRU JOINT. #4 AND SMALLER BARS SHALL STOP ALTERNATE BARS AT JOINT.
4. STAGGER SPLICES UNLESS NOTED OTHERWISE.

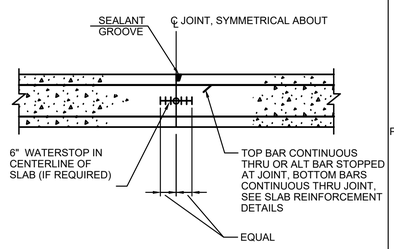
VERTICAL WALL CONSTRUCTION JOINT 11



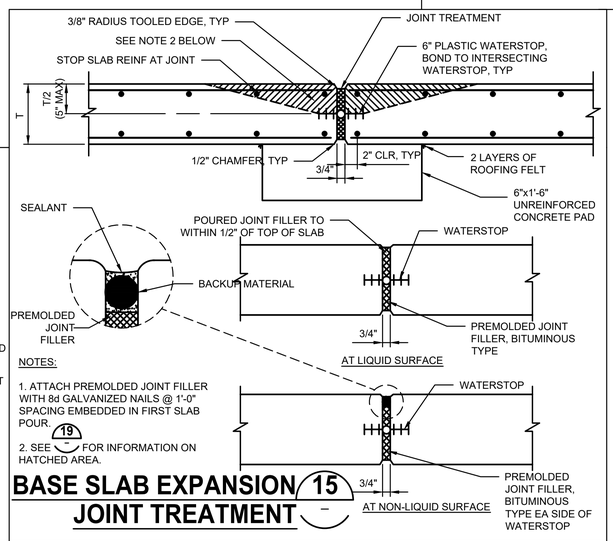
WALL CONSTRUCTION JOINT AT ELEVATED SLAB 12



SLAB CONSTRUCTION JOINT AT WALL 13



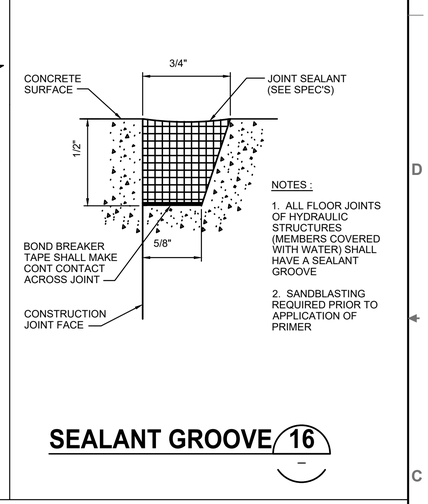
SUSPENDED SLAB CONSTRUCTION JOINT 14



NOTES:

1. ATTACH PREMOLDED JOINT FILLER WITH 8d GALVANIZED NAILS @ 1'-0" SPACING EMBEDDED IN FIRST SLAB POUR
2. SEE (19) FOR INFORMATION ON HATCHED AREA.

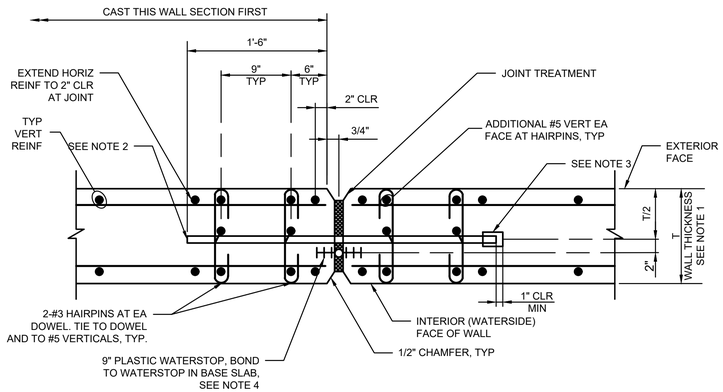
BASE SLAB EXPANSION JOINT TREATMENT 15



NOTES :

1. ALL FLOOR JOINTS OF HYDRAULIC STRUCTURES (MEMBERS COVERED WITH WATER) SHALL HAVE A SEALANT GROOVE
2. SANDBLASTING REQUIRED PRIOR TO APPLICATION OF PRIMER

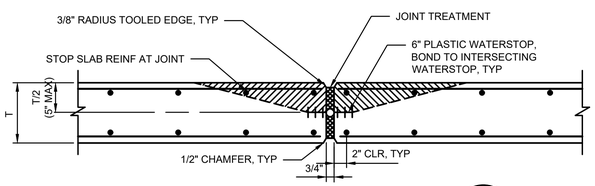
SEALANT GROOVE 16



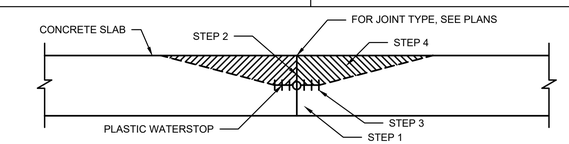
NOTES:

1. FOR WALLS WITH THICKNESS OF 10" THRU 24". FOR 10" WALLS LOCATE DOWELS 4" FROM FACE OF WALL INSTEAD OF T/2 INDICATED.
2. 1" DIA x 3'-0" SMOOTH COATED BAR DOWELS. LOCATE AT 1'-0" MAX FROM TOP AND 2'-0" FROM BOTTOM OF WALL AND AT 2'-0" MAX SPACING. ALIGN AND TIE-IN-PLACE TO REINF. COATING SHALL BE CONSIST OF A CORROSION RESISTANT COATING PLUS A LUBRICANT COATING AS SPECIFIED.
3. 1" ID x 2" PLASTIC CAP WITH 1" POLYSTYRENE BETWEEN END OF DOWEL AND END CAP. TAPE TO BAR FOR WATERTIGHT SEAL.
4. BEND VERTICAL JOINT WATERSTOP OVER TO CENTERLINE OF WALL IN BOTTOM 2'-0" OF WALL, AND SPLICE TO WATERSTOP IN WALL BASE CONSTRUCTION JOINT.

WALL VERTICAL EXPANSION JOINT 17



SUSPENDED SLAB EXPANSION JOINT 18



NOTES:
PLACEMENT SEQUENCE SHOWN REQUIRED ON BOTH SIDES OF JOINTS, IN ALL CONCRETE SLAB AND FOOTING POURS WITH HORIZONTALLY PLACES PLASTIC WATERSTOPS.

STEP 1: PLACE CONCRETE BELOW WATERSTOP FIRST, REMOVE ALL AIR VOIDS BY VIBRATING THOROUGHLY.
STEP 2: TO CONFIRM THERE ARE NO AIR VOIDS, LIFT WATERSTOP. A CONTINUOUS IMPRESSION OF THE WATERSTOP, INCLUDING EDGE OF BULB, SHOULD BE VISIBLE IN THE FRESH CONCRETE. CONTINUE THIS PROCEDURE ALONG THE ENTIRE POURED JOINT, END TO END. IF A CONTINUOUS IMPRESSION IS CONFIRMED, PROCEED WITH STEP 4. IF A VOID LARGER THAN 1/4 INCH IN DIAMETER IS PRESENT ANYWHERE IN THE WATERSTOP IMPRESSION, PROCEED WITH STEP 3.
STEP 3: IF A VOID LARGER THAN 1/4 INCH IN DIAMETER IS PRESENT IN THE WATERSTOP IMPRESSION, ADDITIONAL CONCRETE SHALL BE PLACED UNDER THE WATERSTOP, VIBRATED, AND STEP 2 REPEATED.
STEP 4: FINISH PLACING CONCRETE ABOVE THE WATERSTOP TO TOP OF SLAB.

CONCRETE PLACEMENT SEQUENCE 19

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NORTH FLORIDA MEGA INDUSTRIAL PARK
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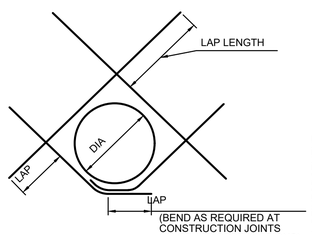
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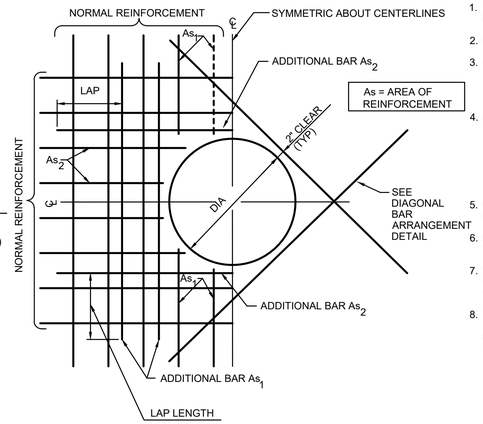
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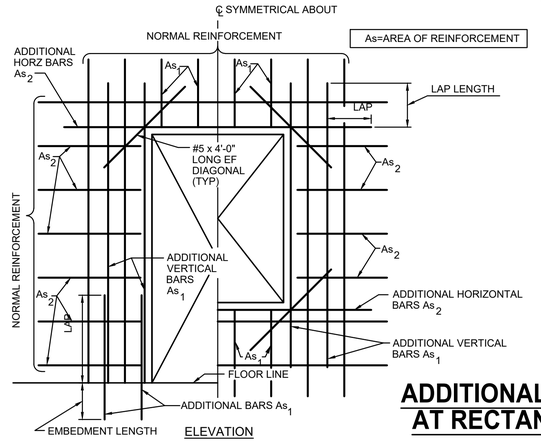
DIAGONAL BAR ARRANGEMENT



NOTES:

1. THIS DETAIL TO BE USED AT ALL CIRCULAR OPENINGS EXCEPT WHEN OTHER DETAILING IS INDICATED ON THE DRAWINGS.
2. CUT TYPICAL REINFORCEMENT 2" CLEAR OF OPENING.
3. CUT TYPICAL REINFORCEMENT AT OPENINGS:
   A. AS_1 AND AS_2= 1/2 AREA OF TOTAL CUT BARS TO BE ADDED ON EACH SIDE OF OPENING.
4. DIAGONAL AND ADDITIONAL BARS AS_1 AND AS_2 TO BE PLACED.
   A. AT CENTERLINE OF WALLS OR SLABS WHERE ONE LAYER OF REINFORCEMENT IS PROVIDED.
   B. AT EACH FACE OF WALLS OR SLABS WHERE TWO LAYERS OF REINFORCEMENT ARE PROVIDED.
5. UNLESS OTHERWISE NOTED, SIZE OF DIAGONAL BARS SHALL BE THE SIZE OF THE LARGEST NORMAL REINFORCING BAR CUT.
6. INCREASE SIZE OF ADDITIONAL BARS AS NEEDED TO FIT WITHIN A DISTANCE OF 2X WALL/ SLAB THICKNESS FROM OPENING, PROVIDE 2" MIN CLEAR BETWEEN BARS.
7. WHERE A SLAB OR INTERSECTING WALL CONNECTS WITHIN ONE WALL THICKNESS OF THE OPENING, ADDITIONAL BARS ON THAT SIDE OF THE OPENING MAY BE OMITTED.
8. WHEN THE LAP LENGTH OF THE ADDITIONAL BARS CANNOT BE ACHIEVED DUE TO AN ADJACENT WALL OR SLAB, ADDITIONAL CORNER BARS OR SLAB DOWELS, REPECTIVELY, MATCHING THE CUT BARS, ARE TO BE INCLUDED IN THE ADJACENT WALL OR SLAB TO LAP WITH THE ADDITIONAL BARS.

ADDITIONAL REINFORCEMENT AT CIRCULAR OPENINGS — 20



ELEVATION

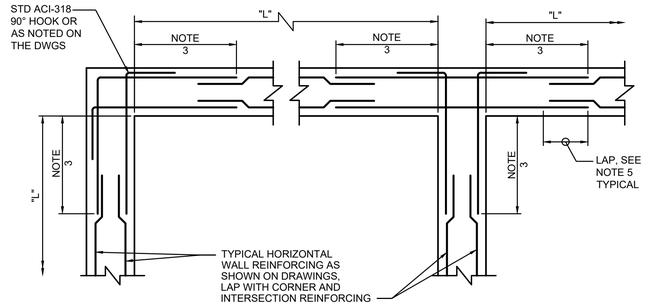
NOTES:

1. CUT NORMAL REINFORCEMENT AT OPENING: As_1 AND As_2 = 1/2 AREA OF CUT BARS TO BE ADDED ON EACH SIDE OF OPENING.
2. ADDITIONAL BARS As_1 AND As_2 TO BE PLACED:
   A) AT CENTERLINE OF WALLS OR SLABS WHERE ONE LAYER OF REINFORCEMENT IS PROVIDED.
   B) AT EACH FACE OF WALLS OR SLABS WHERE TWO LAYERS OF REINFORCEMENT ARE PROVIDED.
3. INCREASE SIZE OF ADDITIONAL BARS AS NEEDED TO FIT WITHIN A DISTANCE OF 2 X WALL / SLAB THICKNESS FROM OPENING. PROVIDE 2" MIN CLEAR BETWEEN BARS.
4. THIS DETAIL TO BE USED ONLY WHEN NO OTHER DETAIL IS INDICATED ON THE DRAWINGS.
5. WHERE A SLAB OR INTERSECTING WALL CONNECTS WITHIN ONE WALL THICKNESS OF THE OPENINGS, ADDITIONAL BARS ON THAT SIDE MAY BE OMITTED.

ADDITIONAL REINFORCEMENT AT RECTANGULAR OPENINGS — 21

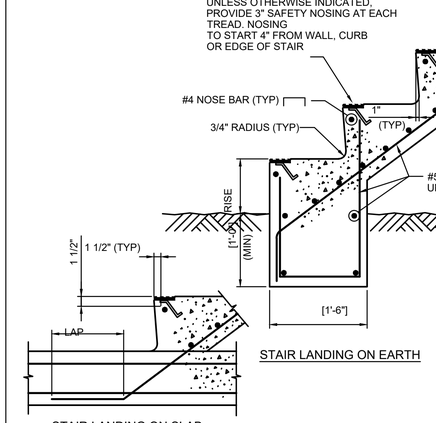
NOTES:

1. TYPICAL HORIZONTAL WALL CORNER AND INTERSECTION REINFORCING LAYOUT IS SHOWN TO AVOID CONGESTION AND PERMIT PROPER PLACEMENT, FOR SIZE AND SPACING SEE PLANS. ALL HORIZONTAL REINFORCING AT CORNERS AND INTERSECTIONS SHALL BE FABRICATED AND INSTALLED WITH SPLICES LOCATED WHERE SHOWN REGARDLESS OF BAR SIZE AND SPACING.
2. WHERE THE CORNER OR INTERSECTION REINFORCING SIZE AND SPACING IS NOT SHOWN, NOTED OR TABULATED ON THE PLANS, THE SIZE AND SPACING SHALL BE THE SAME AS THE WALL HORIZONTAL REINFORCING SHOWN ON THE WALL SECTIONS OR AS NOTED FOR THE REINFORCING BETWEEN THE CORNERS OR INTERSECTIONS.
3. EXCEPT WHERE OTHERWISE SHOWN ON THE DRAWINGS, THE LENGTH INDICATED AS "NOTE 3" SHALL BE THE LESSER OF L/4, 10 FEET, OR 1.0 TIMES THE HEIGHT OF THE WALL, EXCEPT THAT IN NO CASE SHALL IT BE LESS THAN 2 FEET.
4. L = LENGTH OF WALL PARALLEL TO THE BAR LENGTH IN QUESTION.
5. EXCEPT WHERE OTHERWISE SHOWN ON THE DRAWINGS, THE LENGTH INDICATED AS "NOTE 5" SHALL BE EQUAL TO ONE "LAP LENGTH" AS REQUIRED BY THE GENERAL STRUCTURAL NOTES. USE THE LAP LENGTH AS REQUIRED FOR THE SMALLER OF THE TWO REINFORCING BARS BEING SPLICED.

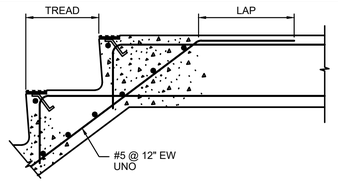


DOUBLE REINFORCING MAT

HORIZONTAL REINFORCEMENT AT WALL INTERSECTIONS — 22



STAIR LANDING ON SLAB



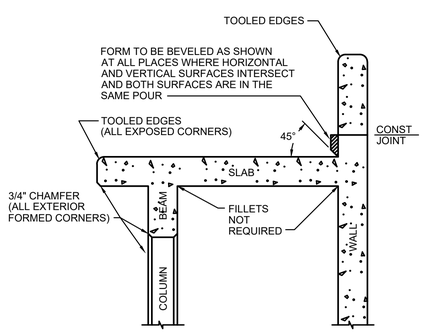
STAIR TOP

STAIR LANDING ON EARTH

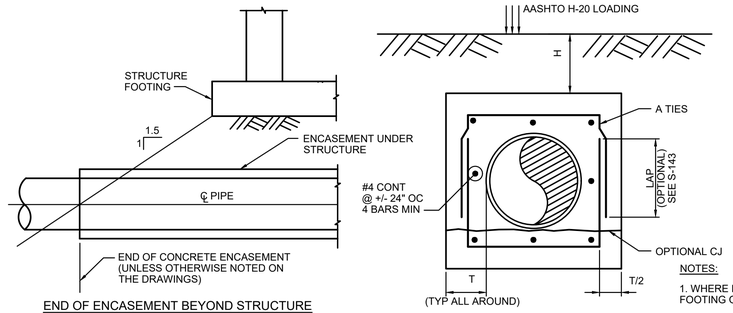
NOTES:

1. TREAD SHALL RECEIVE A STEEL TROWEL FINISH. IMMEDIATELY THEREAFTER, THE SURFACE SHALL BE SLIGHTLY ROUGHENED BY DRAWING A STIFF BROOM OVER THE SURFACE AT A RIGHT ANGLE TO THE DIRECTION OF TRAFFIC TO PRODUCE A NONSKID SURFACE.

CONCRETE STAIR — 23



FORMING DETAILS — 24



END OF ENCASEMENT BEYOND STRUCTURE

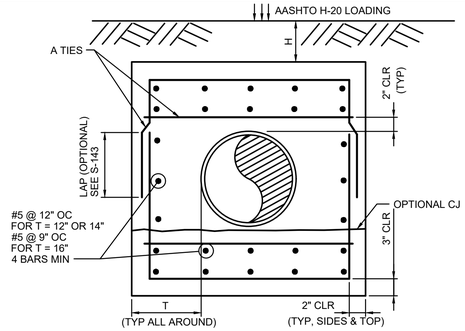
T= 6" OR 8" ENCASEMENT

COVER H	PIPE OUTSIDE DIAMETER 8"-24" A	T	30"-32" A	T	36" A	T	42"-54" A	T	60"-72" A	T
2' MIN	#4@12"	6"	#4@12"	6"	#4@9"	6"	#5@12"	8"	#4@9"	12"
3'					#4@12"		#4@9"		#5@12"	8"
4'							#4@12"		#5@10"	
5'							#4@12"		#5@10"	
6'							#4@9"		#5@10"	
7'					#4@12"		#4@9"		#6@12"	
8'			#4@12"		#4@9"		#5@12"		#6@10"	8"
9'			#4@9"	6"	#4@9"	6"	#5@10"		#4@9"	12"
10'		6"	#4@12"	8"	#4@9"	8"	#5@10"	8"	#5@12"	
12'		8"		12"	#4@12"	12"	#4@9"	12"	#5@10"	
14'		12"			#4@12"		#4@9"		#6@12"	
16'					#4@12"		#5@12"		#6@10"	12"
18'			#4@12"		#4@9"	12"	#5@10"	12"	#6@10"	14"
20'	#4@12"	12"	#4@9"	12"	#4@9"	14"	#6@12"	14"	#6@10"	16"

NOTES:

1. WHERE ENCASEMENT PASSES UNDER SPREAD FOOTING OR MAT FOUNDATION, USE H=20' UNO
2. ALL ENCASEMENTS UNDER STRUCTURES SHALL BE SEPARATED FROM THE STRUCTURE FOUNDATIONS BY BACKFILL OR 2 LAYERS OF 40# FELT UNO
3. WHEN ENCASEMENTS TERMINATE @ STRUCTURE, ENCASEMENT REINFORCING SHALL BE DOWELED INTO THE STRUCTURE
4. CONTINUE ENCASEMENT ALONG VERTICAL RUNS OF PIPE,UNO FOR T = 12" TO 16" ENCASEMENTS, PROVIDE 2 MATS OF REINF ON ALL FOUR SIDES OF ENCASEMENT. EXTEND VERT REINF FULL DEPTH INTO HORIZ ENCASEMENT AND TERMINATE BARS WITH STD HOOKS.

PIPE ENCASEMENT — 25



T= 12" - 16" ENCASEMENT

MONRAD R THUE LICENSE No.32071 STATE OF FLORIDA PROFESSIONAL ENGINEER

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CERTIFICATE OF AUTHORIZATION #27430

GSE Engineering & Consulting, Inc.

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GAINESVILLE, FLORIDA 32608
PHONE: (352)377-3233 FAX: (352)377-0335

VE GMP-2

VE LTR.	11/2022 DATE	VE GMP-1 REVISIONS	LYC BY	TWF APPRD.

DESIGNED MTHUE
DRAWN JGALLER
CHECKED DHALLE

JonesEdmunds
730 NE WALDO ROAD, GAINESVILLE, FLORIDA 32641 / (352) 377-5821

NORTH FLORIDA MEGA INDUSTRIAL PARK
WASTEWATER TREATMENT PLANT
COLUMBIA COUNTY, FLORIDA

STRUCTURAL STANDARD DETAILS

Monrad R. Thue, State of Florida, Professional Engineer, License No. 32071

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PROJECT NO: 03780-001-01
DATE: DEC. 2022
INDEX NO:
DWG NO: SD3

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PLOTTED: 1/9/2023 09:57 AM JOSHUA GALLER

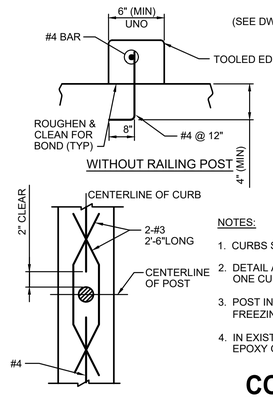
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ANCHOR BOLT DIAMETER (INCHES)	MINIMUM EMBEDMENT	
	TOP OF COLUMNS	OTHER APPLICATIONS
1/4	5	3
3/8	5	3
1/2	6	4
5/8	6	4.5
3/4	7	6
7/8	8	6
1	9	8
1 1/8	10	10
1 1/4	11	10

NOTES:

1. USE ONLY HEADED ANCHORS, J-BOLTS ARE NOT ALLOWED
2. THIS DETAIL APPLIES TO BOTH CONCRETE AND MASONRY
3. IN MASONRY PROVIDE A 1" ANNULAR SPACE IN BLOCK SHELL AROUND ANCHOR. GROUT TO SURFACE
4. FOR ADHESIVE ANCHORS USE THE TOP OF COLUMN EMBEDMENTS UNLESS THE MANUFACTURER'S LITERATURE CALLS OUT LONGER LENGTHS

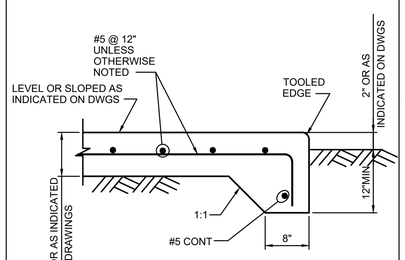
ANCHOR BOLT EMBEDMENT 26



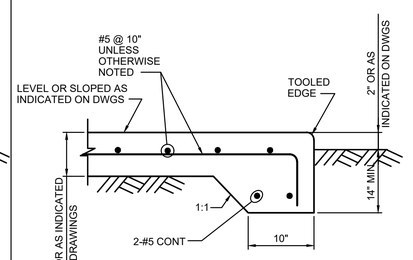
NOTES:

1. CURBS SHALL BE OF EQUAL WIDTH IN THEIR ENTIRE LENGTH.
2. DETAIL ALSO APPLIES TO TOPS OF WALL REINFORCED WITH ONE CURTAIN OF STEEL.
3. POST INSERTS NOT ALLOWED IN APPLICATIONS SUBJECT TO FREEZING.
4. IN EXISTING SLABS USE #4 @ 12" W/ 4" EMBED, DRILL AND EPOXY GROUT INTO SLAB

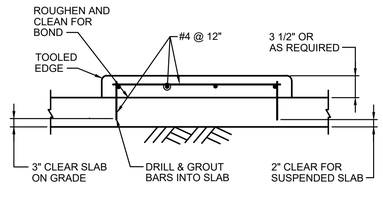
CONCRETE CURB 27



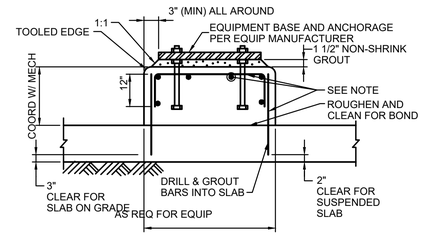
SLAB-ON-GRADE 28



SLAB-ON-GRADE 28A



HOUSE KEEPING PAD 29



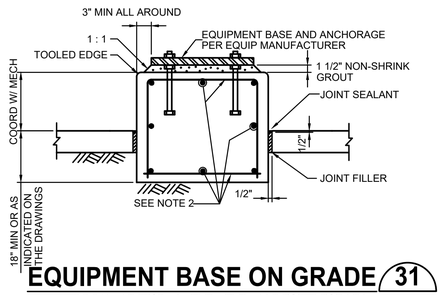
NOTE:

#5@12" UNO
PROVIDE CORNER BARS TO ENSURE CONT HORIZ REINF.

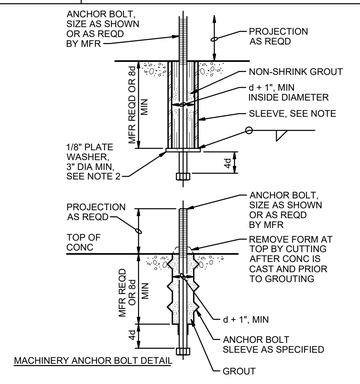
EQUIPMENT BASE 30

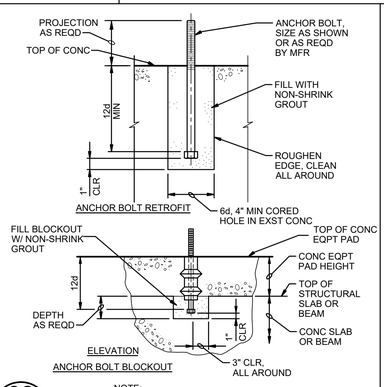
NOTES:

1. WHERE NO DIMENSION IS INDICATED ON THE DRAWINGS, BASE DEPTH SHALL BE SET SO THAT THE BASE WEIGHS AT LEAST TWICE THE WEIGHT OF THE EQUIPMENT SUPPORTED
2. #5@12" UNO PROVIDE CORNER BARS TO ENSURE CONT HORIZ REINF



EQUIPMENT BASE ON GRADE WITH SEPARATING JOINT 31

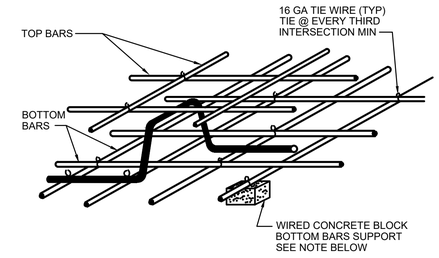




NOTE:

MATERIAL TO MATCH BOLT.

EQUIPMENT ANCHOR BOLTS 32



NOTE:

METAL BAR SUPPORTS, IF USED IN SLABS NOT ON GROUND, SHALL NOT MAKE CONTACT WITH FORMS

REINFORCING SUPPORT 33

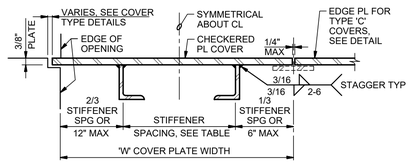
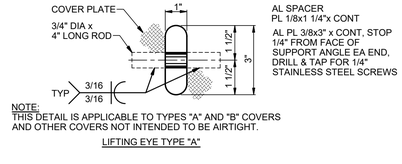


TABLE			
OPENING SPAN LENGTH 'L'	STIFFENER SIZE	MAX STIFFENER SPACING	MAX PLATE WIDTH 'W'
L<2'-6"	NONE	-	5'-0"
2'-6"<L<3'-6"	L2x1 1/2x1/4	1'-6"	4'-0"
3'-6"<L<4'-0"	L2 1/2x1 1/2x1/4	1'-6"	4'-0"
4'-0"<L<4'-6"	L2 1/2x1 1/2x1/4	1'-3"	4'-0"
4'-6"<L<5'-0"	L3x2x1/4	1'-6"	4'-0"
5'-0"<L<5'-6"	L3x2x1/4	1'-3"	3'-0"
5'-6"<L<6'-0"	L3 1/2x2 1/2x1/4	1'-6"	3'-0"
6'-0"<L<6'-6"	L3 1/2x2 1/2x1/4	1'-3"	2'-6"
6'-6"<L<7'-0"	L4x3x1/4	1'-3"	2'-6"
7'-0"<L<7'-6"	L4x3x1/4	1'-0"	2'-0"

NOTES:

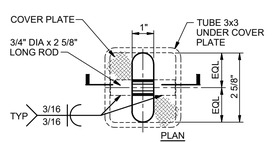
1. STIFFENERS TO BE PLACED LONG LEG VERTICAL.
2. SPAN DIRECTION OF PLATE TO BE PARALLEL TO STIFFENERS, AND SHALL BE SHORT DIMENSION OF OPENING UNLESS NOTED OTHERWISE ON PLANS.
3. MAXIMUM ALLOWABLE UNIFORM DESIGN LOAD = 300psf.
4. MAXIMUM WEIGHT OF COVER PLATE TO BE 125 POUNDS.
5. COVER PLATES AND STIFFENERS ARE ALUMINUM PLATES AND ANGLES.
6. ALL COVER PLATES TO HAVE A MINIMUM OF TWO EYES AS SHOWN IN LIFTING EYE DETAILS.
7. SEE 35 FOR INFORMATION ON ANGLE FRAME EDGE SUPPORTS.

COVER STIFFENERS



NOTE:
THIS DETAIL IS APPLICABLE TO TYPES "A" AND "B" COVERS AND OTHER COVERS NOT INTENDED TO BE AIRTIGHT.

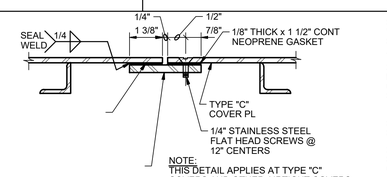
LIFTING EYE TYPE "A"



NOTE:
THE DETAIL IS APPLICABLE TO TYPE "C" COVERS AND OTHER AIR TIGHT COVERS.

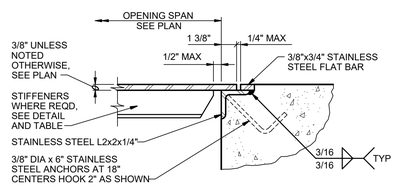
LIFTING EYE TYPE "B"

ALUMINUM CHECKERED FLOOR PLATE 34

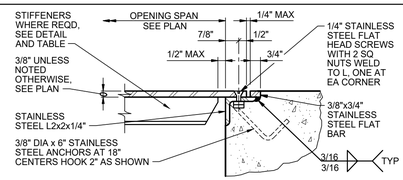


NOTE:
THIS DETAIL APPLIES AT TYPE "C" COVERS AND OTHER AIRTIGHT COVERS.

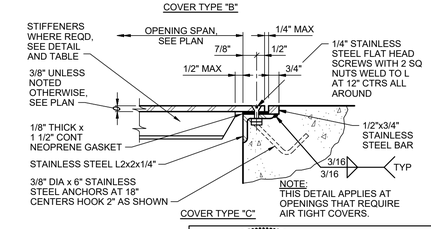
EDGE PLATE DETAIL



COVER TYPE "A"



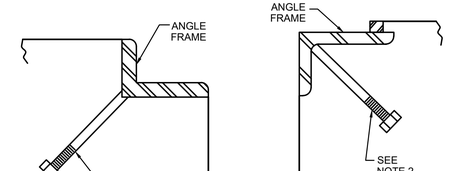
COVER TYPE "B"



NOTE:
THIS DETAIL APPLIES AT OPENINGS THAT REQUIRE AIR TIGHT COVERS.

COVER TYPE "C"

ALUMINUM CHECKERED FLOOR PLATE 34



NOTES:

1. NELSON 3/8"DIA x 4" LONG HBA ALUMINUM STUD @ 18" MAX, STUD WELDING ASSOCIATES 3/8"DIA x 4" LONG NON-FLANGED CD ALUMINUM STUD (OR EQUAL) @ 18" MAX WELDED TO ANGLE FRAME WITH 3/8-16 ALUMINUM HEX NUT. TACK WELD NUT TO HEADED STUD.
2. USE MIN OF 2 STUDS PER ANGLE FRAME SECTION.
3. ALUMINUM IN CONTACT WITH CONCRETE SHALL BE COATED PER SPECIFICATIONS.

ALUMINUM WELDED STUD 35

VE GMP-2

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LTR.	DATE	REVISIONS	BY	APPRD.
VE	11/2022	VE GMP-1	LYC	TWF

DESIGNED MTHUE
DRAWN JGALLER
CHECKED DHALLE

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730 NE WALDO ROAD, GAINESVILLE, FLORIDA 32641 / (352) 377-5821

NORTH FLORIDA MEGA INDUSTRIAL PARK
WASTEWATER TREATMENT PLANT
COLUMBIA COUNTY, FLORIDA

STRUCTURAL STANDARD DETAILS

Monrad R. Thue, State of Florida, Professional Engineer, License No. 32071

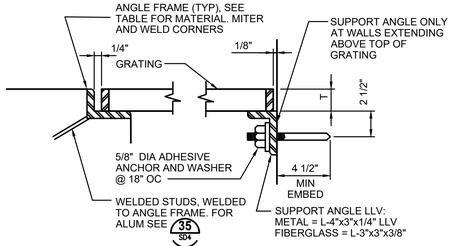
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PROJECT NO: 03780-001-01
DATE: DEC. 2022
INDEX NO:
DWG NO: SD4

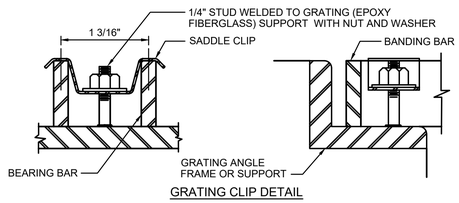
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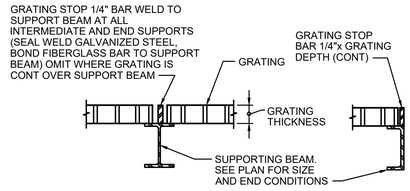


GRATING FRAME TABLE SIZED TO MATCH GRATING (FOR FIBERGLASS USE CONTINUOUS PULTRUDED FIBERGLASS SEAT & ANCHOR)			
GRATING DEPTH T	ANGLE FRAME	GRATING DEPTH T	ANGLE FRAME
1"	1 3/4"x1 1/4"x1/4" (1 1/4"x1 1/4"x1/4")	2"	*2 1/2"x2 1/2"x1/2"
1 1/4"	2"x1 1/2"x1/4" (1 1/2"x1 1/2"x1/4")	2 1/4"	2 1/2"x2 1/2"x1/4"
1 1/2"	1 3/4"x1 3/4"x1/4"	2 1/2"	3"x3"x1/2"
1 3/4"	2"x2"x1/4"		

* OR USE 2 1/2"x2 1/2"x1/4" W/ 1/4" SHIM PLATE WELDED TO BOTTOM



GRATING CLIP DETAIL



GRATING STOP DETAIL

NOTES:

1. UNLESS INDICATED OTHERWISE, ALL GRATING SHALL BE ALUMINUM.
2. GRATING DEPTH TO BE DETERMINED BY MANUFACTURER AND APPROVED BY ENGINEER (UNO).
3. ALL ENDS AND OPENINGS SHALL BE BANDED.
4. WEIGHT OF GRATING SECTION SHALL NOT EXCEED 80 LBS.
5. METAL BEARING BARS SHALL BE DEPTH T x3/16" @1 3/16" OC CROSS BARS SHALL BE @ 4" OC.
6. PROVIDE A MINIMUM OF 4 CLIPS PER GRATING PANEL, APPROX 4" FROM PANEL CORNERS. MAXIMUM CLIP SPACING AT 36" OC.
7. MATERIALS:

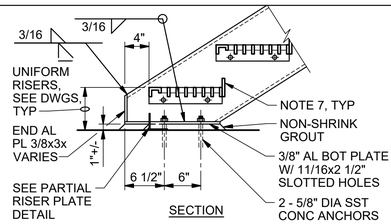
GRATING MATERIAL	SUPPORT ANGLE	ANGLE FRAME	WELDED STUDS	GRATING CLIPS AND STUDS	ADHESIVE ANCHORS
ALUMINUM	ALUMINUM	ALUMINUM	ALUMINUM PER DETAIL 35/S-41	ALUMINUM	TYPE 316 SS
GALV STEEL	GALV STEEL	GALV STEEL	GALV STEEL, 1/2" DIA x4" @12" OC MAX	GALV STEEL	ASTM F1554 GR 36, GALV
STAINLESS STEEL	TYPE 316L SS	TYPE 316L SS	TYPE 316L SS, 1/2" DIA x4" @12" OC MAX	TYPE 316 SS	TYPE 316 SS
FIBERGLASS	FIBERGLASS	FIBERGLASS	FIBERGLASS	FIBERGLASS	TYPE 316 SS

8. ALL GALVANIZED MATERIAL TO BE GALVANIZED AFTER FABRICATION.
9. SEE S-504 FOR ALUMINUM WELDED STUD DETAIL.
10. ALUMINUM IN CONTACT WITH CONCRETE SHALL BE COATED PER THE PROTECTIVE COATING SPECIFICATIONS.
11. FIBERGLASS GRATING - ALL CUT EDGES SHALL BE SEALED WITH RESIN. FOR BONDING, USE AN EPOXY ADHESIVE BONDING AGENT.
12. PROVIDE ANGLE FRAME OR SUPPORT ANGLES AT ALL SIDES OF OPENINGS (UNO).

GRATING 36

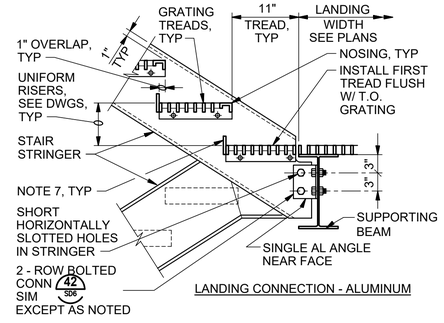
NOTES:

1. PROVIDE PROTECTION FOR DISSIMILAR METALS AND CONCRETE AS SPECIFIED.
2. AMERICAN STANDARD C12x7.41 ALUMINUM STRINGERS TYPICAL EXCEPT WHERE OTHERWISE NOTED ON PLANS.
3. STAIR HANDRAIL NOT SHOWN.
4. STAIR MANUFACTURER TO COORDINATE BOLTED TREADS AND HANDRAIL CONNECTIONS.
5. ALL FASTENERS SHALL BE STAINLESS STEEL.
6. FIELD VERIFY DIMENSIONS AND ELEVATIONS PRIOR TO FABRICATION.
7. CLEARANCE BETWEEN TOP OF RISER PLATE AND BOTTOM OF TREAD TO BE 3 3/4" MAX.

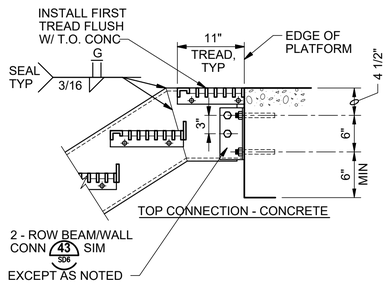


SECTION

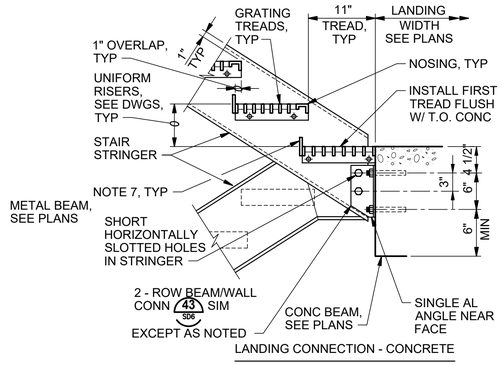
BOTTOM CONNECTION



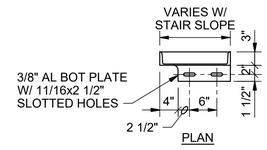
LANDING CONNECTION - ALUMINUM



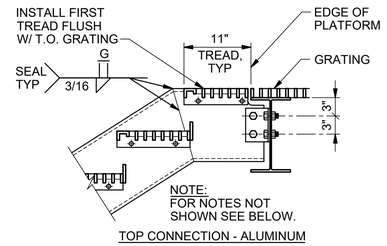
TOP CONNECTION - CONCRETE



LANDING CONNECTION - CONCRETE



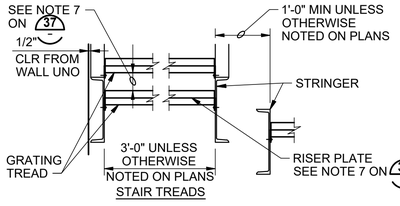
PLAN



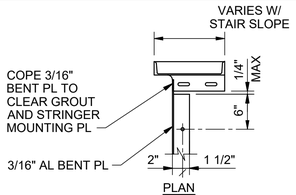
TOP CONNECTION - ALUMINUM

ALUMINUM STAIR DETAILS 37

STAIRWAY WIDTH	TREAD BEARING BARS
	ALUMINUM TREAD
2'-3" OR LESS	1" x 3/16"
2'-9" OR LESS	1 1/4" x 3/16"
3'-3" OR LESS	1 1/2" x 3/16"
4'-7" OR LESS	1 3/4" x 3/16"

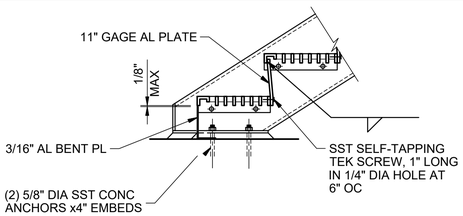


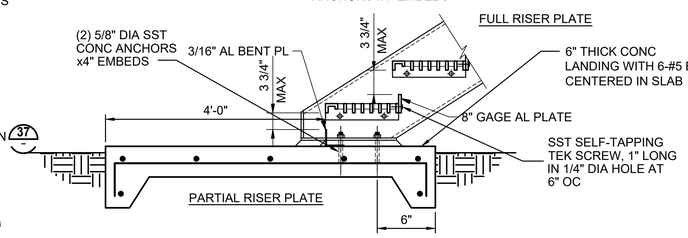
STAIR TREADS



PLAN

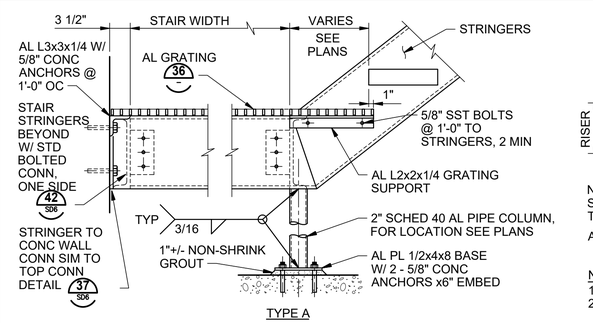
BOTTOM CLOSURE PLATE



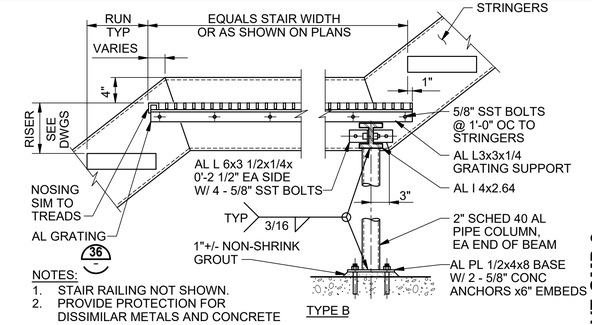


PARTIAL RISER PLATE

ALUMINUM STAIR DETAILS 38



TYPE A



NOTES:

1. STAIR RAILING NOT SHOWN.
2. PROVIDE PROTECTION FOR DISSIMILAR METALS AND CONCRETE

TYPE B

ALUMINUM STAIR LANDING WITH SUPPORTS 39

MONRAD R. THUE LICENSE No.32071 STATE OF FLORIDA PROFESSIONAL ENGINEER

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GSE Engineering & Consulting, Inc.

5590 SW 64TH STREET, SUITE B
GAINESVILLE, FLORIDA 32608
PHONE: (352)377-3233 FAX: (352)377-0335

VE GMP-2

LTR.	DATE	REVISIONS	BY	APPRD.
VE	11/2022	VE GMP-1	LYC	TWF

DESIGNED MTHUE
DRAWN JGALLER
CHECKED DHALLE

JonesEdmunds
730 NE WALDO ROAD, GAINESVILLE, FLORIDA 32641 / (352) 377-5821

NORTH FLORIDA MEGA INDUSTRIAL PARK
WASTEWATER TREATMENT PLANT
COLUMBIA COUNTY, FLORIDA

STRUCTURAL STANDARD DETAILS

Monrad R. Thue, State of Florida, Professional Engineer, License No. 32071

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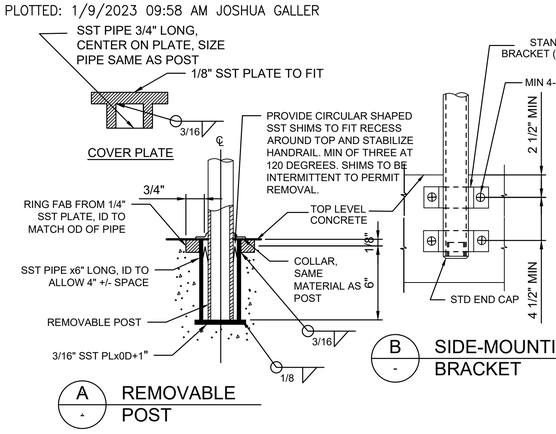
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PROJECT NO: 03780-001-01
DATE: DEC. 2022
INDEX NO:
DWG NO: SD5

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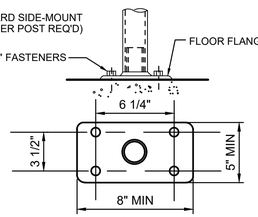
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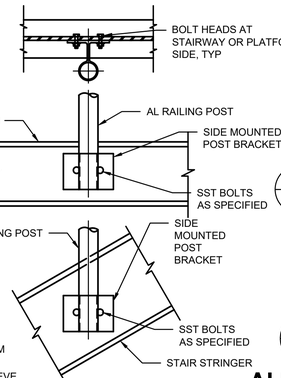
A REMOVABLE POST

B SIDE-MOUNTING BRACKET

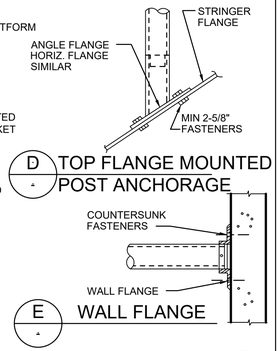


C FLOOR FLANGE (WHEN REQUIRED)

NOTES:
1. IF FASTENING INTO CONCRETE, FASTENERS SHALL BE ADHESIVE ANCHORS.
2. CONTRACTOR REQUIRED TO DESIGN RAILING SYSTEM PER SPECIFICATIONS.
3. PROVIDE COVER PLATE FOR EACH ANCHORAGE SLEEVE



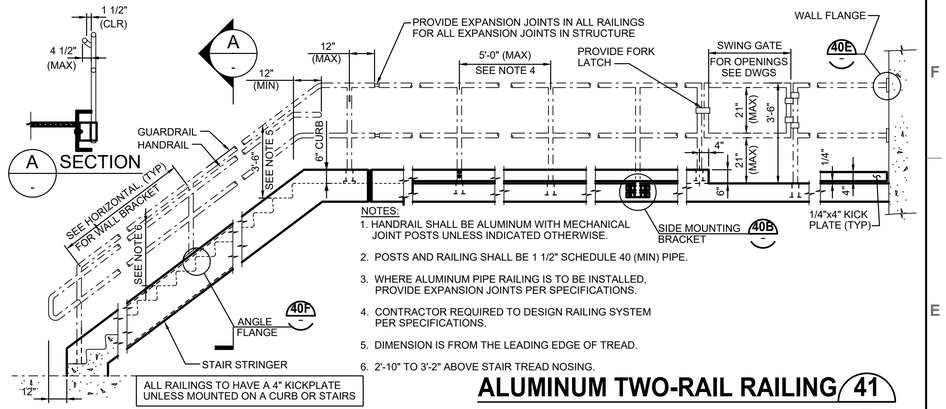
F SIDE MOUNTED POST ANCHORAGE



D TOP FLANGE MOUNTED POST ANCHORAGE

E WALL FLANGE

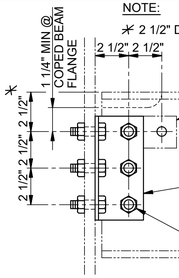
ALUMINUM RAILING ANCHORAGE 40



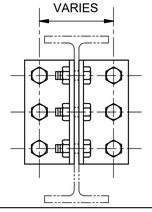
A SECTION

NOTES:
1. HANDRAIL SHALL BE ALUMINUM WITH MECHANICAL JOINT POSTS UNLESS INDICATED OTHERWISE.
2. POSTS AND RAILING SHALL BE 1 1/2" SCHEDULE 40 (MIN) PIPE.
3. WHERE ALUMINUM PIPE RAILING IS TO BE INSTALLED, PROVIDE EXPANSION JOINTS PER SPECIFICATIONS.
4. CONTRACTOR REQUIRED TO DESIGN RAILING SYSTEM PER SPECIFICATIONS.
5. DIMENSION IS FROM THE LEADING EDGE OF TREAD.
6. 2'-10" TO 3'-2" ABOVE STAIR TREAD NOSING.

ALUMINUM TWO-RAIL RAILING 41

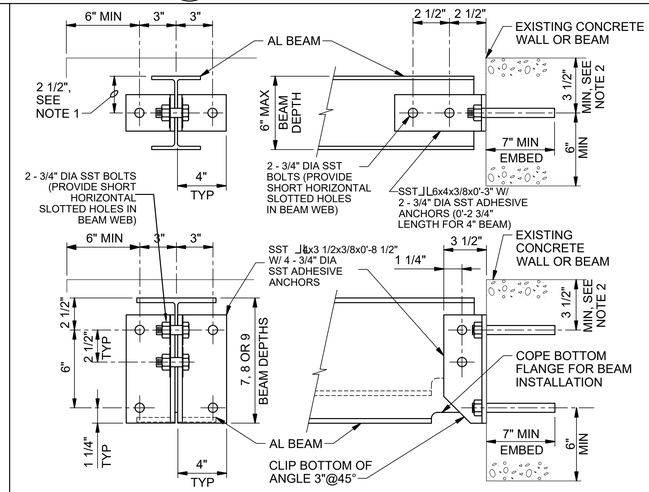


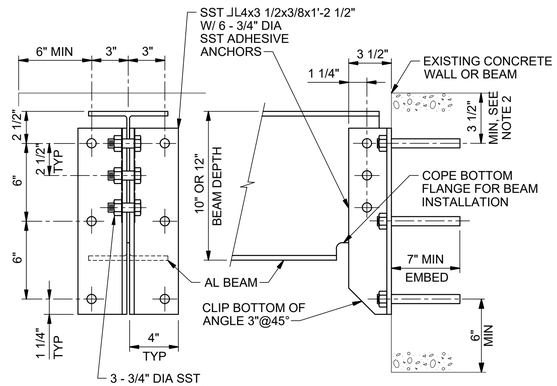
ALUMINUM		
NOMINAL BEAM DEPTH, INCHES	ROWS OF BOLTS	LENGTH OF ANGLE
10	3	7 1/2"
7-8-9	2	5"
5-6	1	3"
4	1	2 3/4"



NOTES:
1. NUMBER OF ROWS IS EQUAL TO NUMBER OF BOLTS TO ENCLOSED WEB.
2. ALL FRAMING CONNECTIONS SHALL CONFORM TO SCHEDULE UNLESS DETAILED OTHERWISE ON FRAMING PLANS.

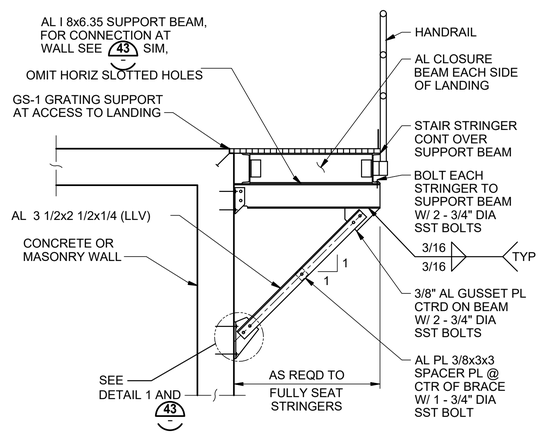
TYPICAL ALUMINUM BEAM CONNECTION 42

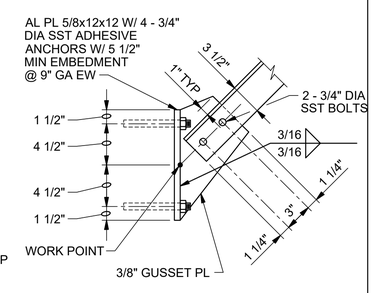




NOTES:
1. 2 1/2" DIMENSION TYPICAL EXCEPT 2" FOR 4" BEAMS.
2. DO NOT CUT EXISTING CONCRETE BEAM TOP REINFORCING DURING DRILL-IN ANCHOR INSTALLATION. FIELD LOCATE BEAM REINFORCING PRIOR TO FABRICATION. ADD LENGTH TO CLIP ANGLES AS REQUIRED TO LOWER ANCHORS TO CLEAR REINFORCING WHILE MAINTAINING SPACING AND EDGE DISTANCE AS SHOWN.
3. WHERE BOTH ENDS OF BEAM ARE ATTACHED TO A WALL, PROVIDE LONG HORIZONTALLY SLOTTED HOLES IN BEAM WEB AT ONE END. TIGHTEN NUTS SNUG TIGHT, BACK OFF 1/2 TURN, AND LOCK WITH DOUBLE NUT.
4. PROVIDE PROTECTION FOR ALUMINUM IN CONTACT WITH CONCRETE AS SPECIFIED.

ALUMINUM BEAM-WALL CONNECTION 43



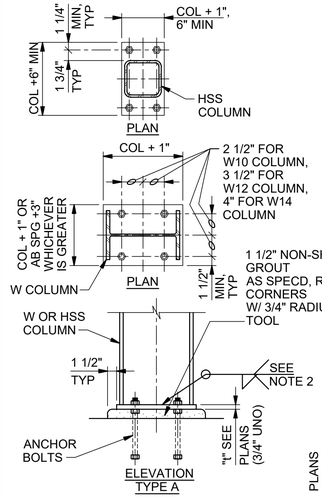


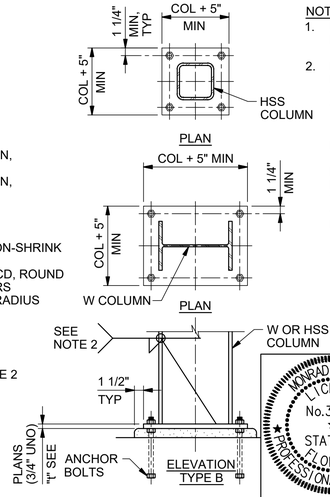
DETAIL 1

NOTE:

PROVIDE PROTECTION FOR ALUMINUM IN CONTACT WITH CONCRETE AS SPECIFIED.

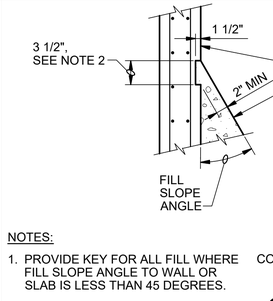
STAIR LANDING CANT. SUPPORT 44





NOTES:
1. UNLESS OTHERWISE NOTED, ANCHOR BOLTS SHALL BE 3/4" DIA x REQUIRED WITH
2. LEVELING NUTS AND 1'-0" MINIMUM EMBED AND BASEPLATES SHALL BE CENTERED ON COLUMN.
WELD SIZE SHALL BE DETERMINED ACCORDING TO AISC MINIMUM REQUIREMENT OR AS FOLLOWS:
WELD SIZE SHALL BE 3/16" FILLET FOR MATERIAL THICKNESSES UP TO AND INCLUDING 1/2", 1/4" FILLET FOR THICKNESSES OVER 1/2" TO 3/4", AND 5/16" FILLET FOR MATERIAL THICKNESSES OVER 3/4". ALL WELDS SHALL BE SINGLE-PASS WELDS.

COLUMN BASE 45



NOTES:
1. PROVIDE KEY FOR ALL FILL WHERE FILL SLOPE ANGLE TO WALL OR SLAB IS LESS THAN 45 DEGREES.
2. LENGTHEN 3 1/2" BLOCKOUT AS REQUIRED TO MAINTAIN 2" MINIMUM THICKNESS OF GROUT OR CONCRETE FILL.

CONCRETE FILL DETAIL 46

VE GMP-2

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5590 SW 64TH STREET, SUITE B
GAINESVILLE, FLORIDA 32608
PHONE: (352)377-3233 FAX: (352)377-0335

LTR.	DATE	REVISIONS	BY	APPRD.
VE	11/2022	VE GMP-1	LYC	TWF

DESIGNED MTHUE
DRAWN JGALLER
CHECKED DHALLE

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730 NE WALDO ROAD, GAINESVILLE, FLORIDA 32641 / (352) 377-5821

NORTH FLORIDA MEGA INDUSTRIAL PARK
WASTEWATER TREATMENT PLANT
COLUMBIA COUNTY, FLORIDA

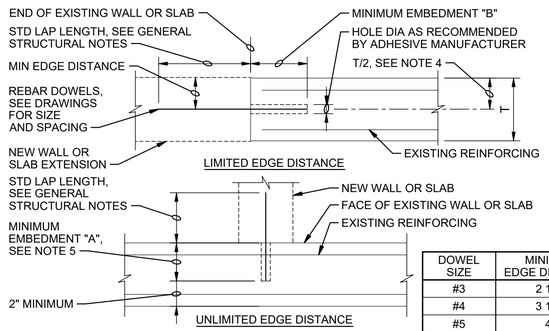
STRUCTURAL STANDARD DETAILS

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PROJECT NO: 03780-001-01
DATE: DEC. 2022
INDEX NO:
DWG NO: SD6

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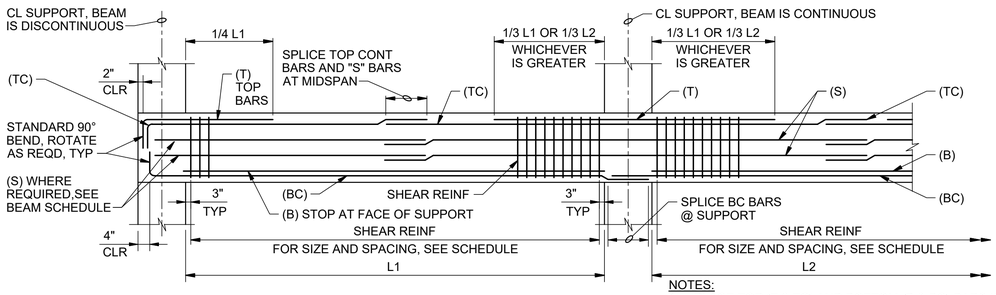
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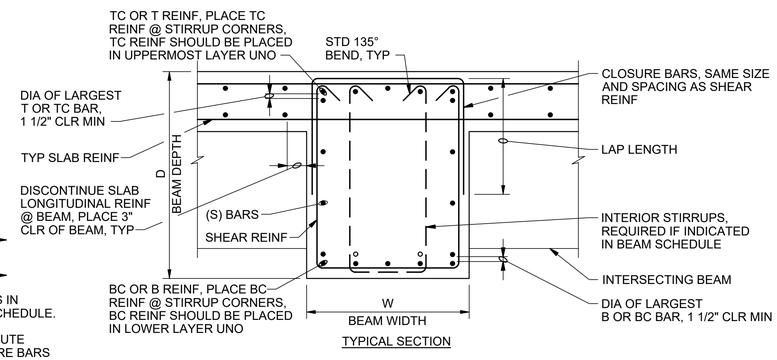
1. FOLLOW ADHESIVE MANUFACTURER'S INSTRUCTIONS FOR INSTALLATION.
2. USE MINIMUM EMBEDMENTS SHOWN, EXCEPT USE MANUFACTURER'S MINIMUM RECOMMENDED EMBEDMENT IF GREATER.
3. LOCATE DOWELS CENTERED IN WALL OR SLAB UNLESS OTHERWISE NOTED ON DRAWINGS. WHERE 2 ROWS OF DOWELS INDICATED, STAGGER SPACING & LOCATE ALTERNATING DOWELS AT MINIMUM EDGE DISTANCE FROM OPPOSITE FACES.
4. PROVIDE MINIMUM EMBEDMENT "A" SHOWN IN TABLE UNLESS SHORTER EMBEDMENT DEPTH IS CALLED OUT ON DRAWINGS.

DOWEL SIZE	MINIMUM EDGE DISTANCE	MINIMUM EMBEDMENT "A"	MINIMUM EMBEDMENT "B"
#3	2 1/2"	5"	8"
#4	3 1/2"	7"	11"
#5	4"	8"	13"
#6	5"	10 1/2"	16"
#7	6"	12 1/2"	20"
#8	7"	14"	22"
#9	7 1/2"	15"	24"

ADHESIVE DOWELS 47

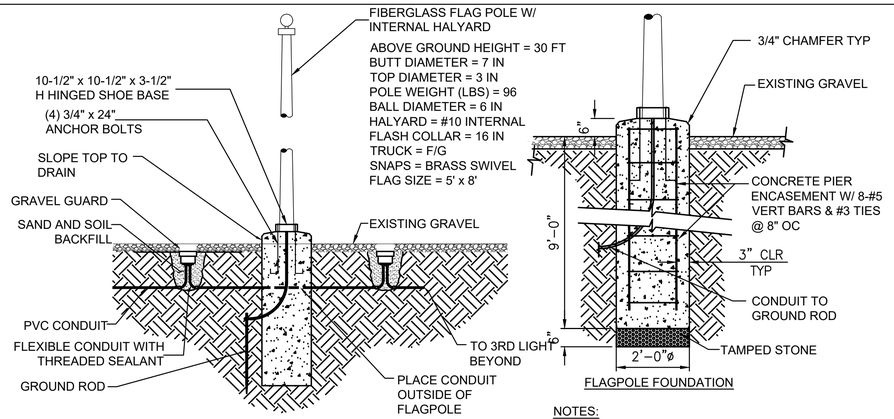


NOTES:
1. PLACE TOP (T & TC) AND BOTTOM (B & BC) BARS IN MULTIPLE ROWS ONLY WHERE INDICATED IN SCHEDULE.
2. WHEN INDICATED IN BEAM SCHEDULE, SUBSTITUTE CLOSED TIES ( ) FOR STIRRUPS AND CLOSURE BARS SHOWN ( ).
3. PROVIDE MINIMUM 1 - #5 CONTINUOUS AT EACH CORNER OF STIRRUPS.



TYPICAL SECTION

BEAM REINFORCING 48



FLAGPOLE FOUNDATION

NOTES:
1. INSTALL FLAG POLE PER MANUFACTURER'S RECOMMENDATIONS.
2. CONTRACTOR SHALL FURNISH AND INSTALL UNITED STATES OF AMERICA FLAG AND POW/MIA FLAG.

FLAGPOLE 49

MONRAD R THUE LICENSE No.32071 STATE OF FLORIDA PROFESSIONAL ENGINEER

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5590 SW 64TH STREET, SUITE B
GAINESVILLE, FLORIDA 32608
PHONE: (352)377-3233 FAX: (352)377-0335

VE GMP-2

LTR.	DATE	REVISIONS	BY	APPRD.
VE	11/2022	VE GMP-1	LYC	TWF

DESIGNED MTHUE
DRAWN JGALLER
CHECKED DHALLE

JonesEdmunds
730 NE WALDO ROAD, GAINESVILLE, FLORIDA 32641 / (352) 377-5821

NORTH FLORIDA MEGA INDUSTRIAL PARK
WASTEWATER TREATMENT PLANT
COLUMBIA COUNTY, FLORIDA

STRUCTURAL STANDARD DETAILS

Monrad R. Thue, State of Florida, Professional Engineer, License No. 32071

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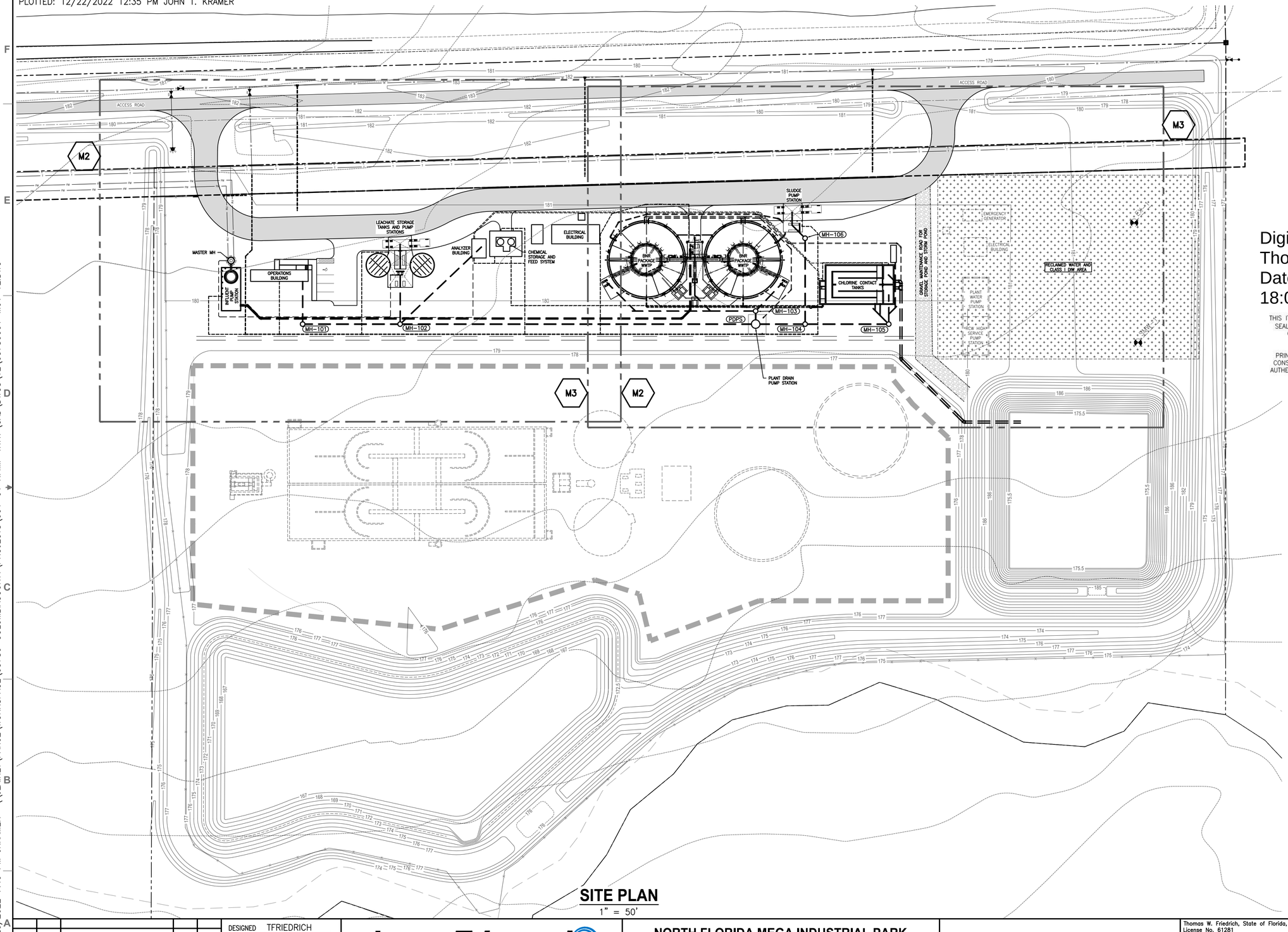
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DATE: DEC. 2022
INDEX NO:
DWG NO: SD7

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0 25 50 100

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Date: 2023.05.04
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THOMAS W. FRIEDRICH LICENSE No. 61281 STATE OF FLORIDA PROFESSIONAL ENGINEER

Structure Table	
Structure Name	Structure Details
INFLUENT PS BOT EL=168.00	RIM=181.00 INV EL=174.40 16" E
MASTER MH	RIM=181.00 INV EL=174.50 16" W
MH-101	RIM=180.50 INV EL=176.60 8" S INV EL=176.70 6" E
MH-102	RIM=180.50 INV EL=176.20 8" N INV EL=176.30 6" SE INV EL=176.10 8" S INV EL=176.30 6" E
MH-103	RIM=180.50 INV EL=173.60 8" W INV EL=173.70 6" N INV EL=174.50 6" SE
MH-104	RIM=180.50 INV EL=163.90 8" N INV EL=164.00 8" E INV EL=164.00 8" S
MH-105	RIM=180.50 INV EL=164.30 8" N INV EL=175.40 6" NE INV EL=164.40 6" E
MH-106	RIM=180.50 INV EL=164.40 8" W INV EL=174.30 6" NE
PDPS BOT EL=159.92	RIM=180.50 INV EL=174.60 8" N INV EL=163.70 8" S INV EL=173.60 8" E

SITE PLAN

1" = 50'

VE GMP-2

LTR.	DATE	REVISIONS	BY	APPRD.
VE	11/2022	VE GMP-1	LYC	TWF

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DRAWN JKRAMER
CHECKED SMENARD

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NORTH FLORIDA MEGA INDUSTRIAL PARK
WASTEWATER TREATMENT PLANT
COLUMBIA COUNTY, FLORIDA

MECHANICAL SITE PLAN

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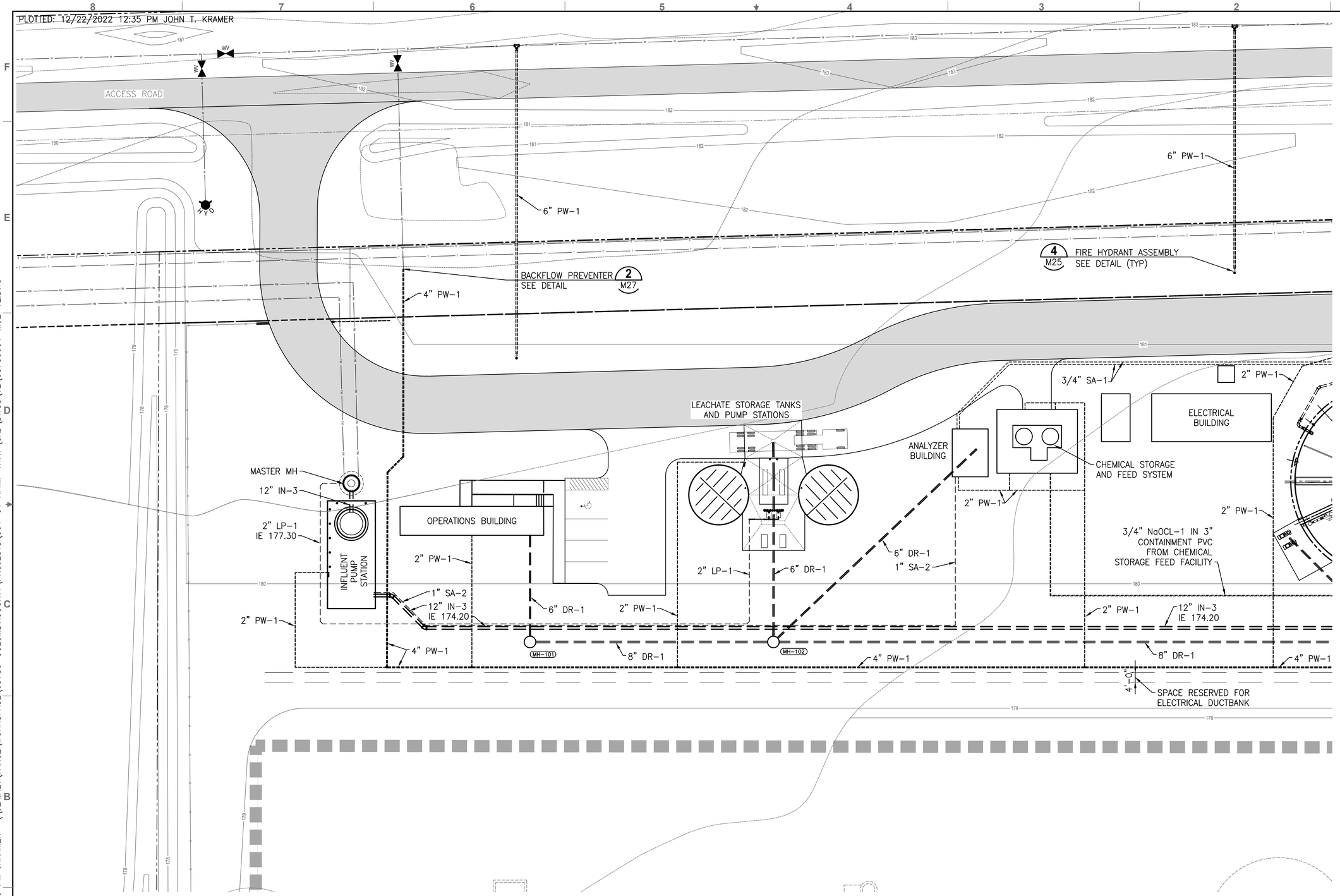
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SITE PLAN

1" = 50'

GRAPHIC SCALE

0 10 20 40

SCALE IN FEET

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COLUMBIA COUNTY, FLORIDA

YARD PIPING

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VE GMP-2

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GRAPHIC SCALE
0 10 20 40
SCALE IN FEET

6" PW-1

4 M25 FIRE HYDRANT ASSEMBLY SEE DETAIL

8" DS-1 IE 172.31

2" PW-1

3/4" SA-1

8" DS-1 IE 172.31

8" EQ-1

6" PSD-1 IE 177.00

SLUDGE PUMP STATION

6" DR-1 IE 174.50

MH-106

2" PW-1

8" EQ-1 IE 171.7

6" PSD-1 IE 177.00

8" DR-1

BNR PACKAGE WWTP

BNR PACKAGE WWTP

CHLORINE CONTACT TANKS

6" DR-1

12" IN-3 IE 174.20

8" SE-1

6" DR-1

MH-103

PDPS

8" DR-1

12" SE-1 IE 175.17

6" DR-1

2" PW-1

8" DR-1

MH-104

MH-105

8" DR-1

2" PW-1

4" PW-1

4" PW-1

SPACE RESERVED FOR ELECTRICAL DUCTBANK

PLANT DRAIN PUMP STATION

EMERGENCY GENERATOR

ELECTRICAL BUILDING

PLANT WATER PUMP STATION

RCW HIGH SERVICE PUMP STATION

GRAVEL MAINTENANCE ROAD FOR STORAGE POND AND STORM POND

RECLAIMED WATER AND CLASS I DIW AREA

EX-1

SMW-1

SMW-1

177

180

186

186

175.5

YARD PIPING PLAN
1" = 20'

VE GMP-2

VE LTR.	11/2022 DATE	VE GMP-1 REVISIONS	LYC BY	TWF APPRD.

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YARD PIPING

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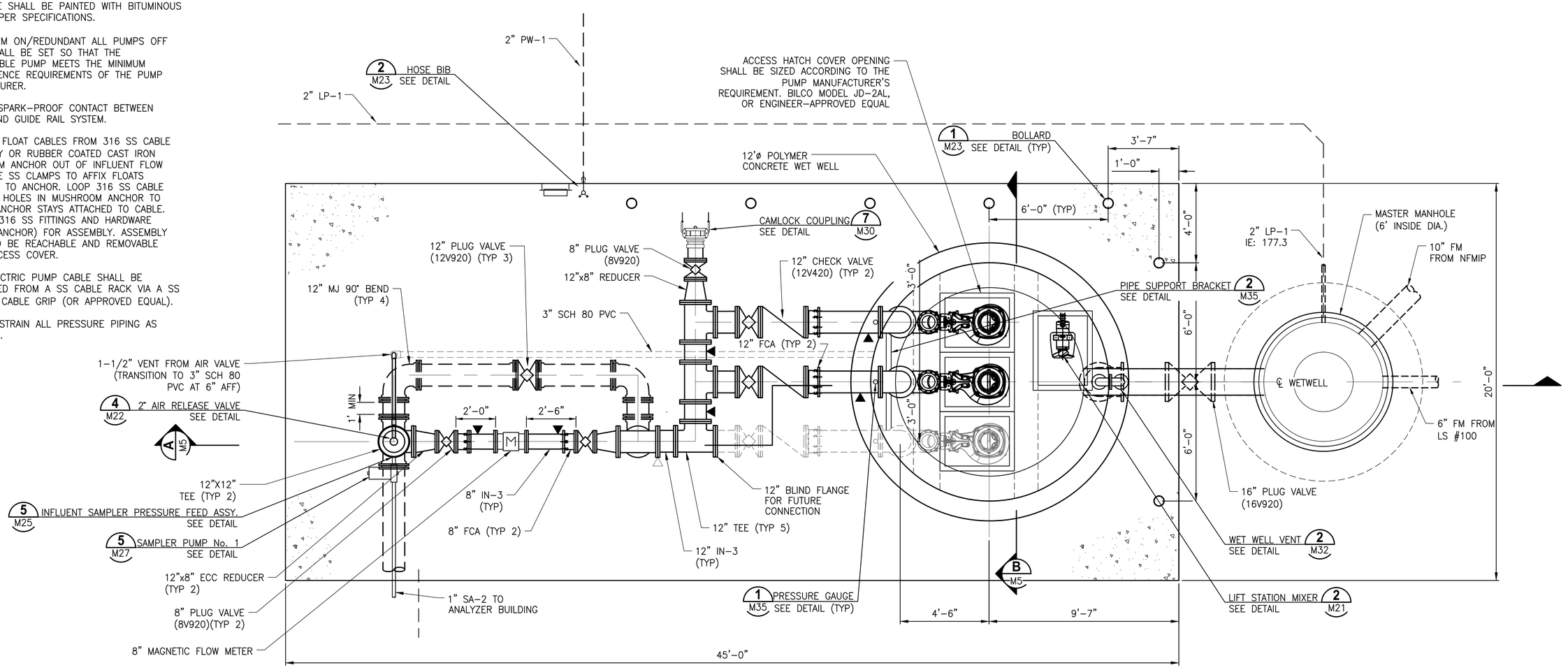
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PUMP STATION NOTES

1. PUMP PLACEMENT SHALL BE PER MANUFACTURER'S RECOMMENDATIONS.
2. CONTRACTOR SHALL VERIFY PUMP MANUFACTURER'S REQUIREMENTS FOR OPENING IN CONCRETE FOR CAST-IN PLACE ACCESS HATCH COVER FRAME.
3. ALL ALUMINUM SURFACES IN CONTACT WITH CONCRETE SHALL BE PAINTED WITH BITUMINOUS COATING PER SPECIFICATIONS.
4. LOW ALARM ON/REDUNDANT ALL PUMPS OFF LEVEL SHALL BE SET SO THAT THE SUBMERSIBLE PUMP MEETS THE MINIMUM SUBMERGENCE REQUIREMENTS OF THE PUMP MANUFACTURER.
5. PROVIDE SPARK-PROOF CONTACT BETWEEN PUMPS AND GUIDE RAIL SYSTEM.
6. SUSPEND FLOAT CABLES FROM 316 SS CABLE W/ EPOXY OR RUBBER COATED CAST IRON MUSHROOM ANCHOR OUT OF INFLUENT FLOW PATH. USE SS CLAMPS TO AFFIX FLOATS SECURELY TO ANCHOR. LOOP 316 SS CABLE THROUGH HOLES IN MUSHROOM ANCHOR TO ENSURE ANCHOR STAYS ATTACHED TO CABLE. USE ALL 316 SS FITTINGS AND HARDWARE (EXCEPT ANCHOR) FOR ASSEMBLY. ASSEMBLY NEEDS TO BE REACHABLE AND REMOVABLE FROM ACCESS COVER.
7. EACH ELECTRIC PUMP CABLE SHALL BE SUPPORTED FROM A SS CABLE RACK VIA A SS KELLUMS CABLE GRIP (OR APPROVED EQUAL).
8. FULLY RESTRAIN ALL PRESSURE PIPING AS SPECIFIED.



PIPE SUPPORT LEGEND

- ▲ U-BOLT TYPE — 1 M22
- △ FLANGE TYPE — 2 M22

INFLUENT PUMP STATION PLAN

3/8" = 1'-0"

VE GMP-2

LTR.	DATE	REVISIONS	BY	APPRD.
VE	11/2022	VE GMP-1	LYC	TWF

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WASTEWATER TREATMENT PLANT
COLUMBIA COUNTY, FLORIDA

INFLUENT PUMP STATION PLAN

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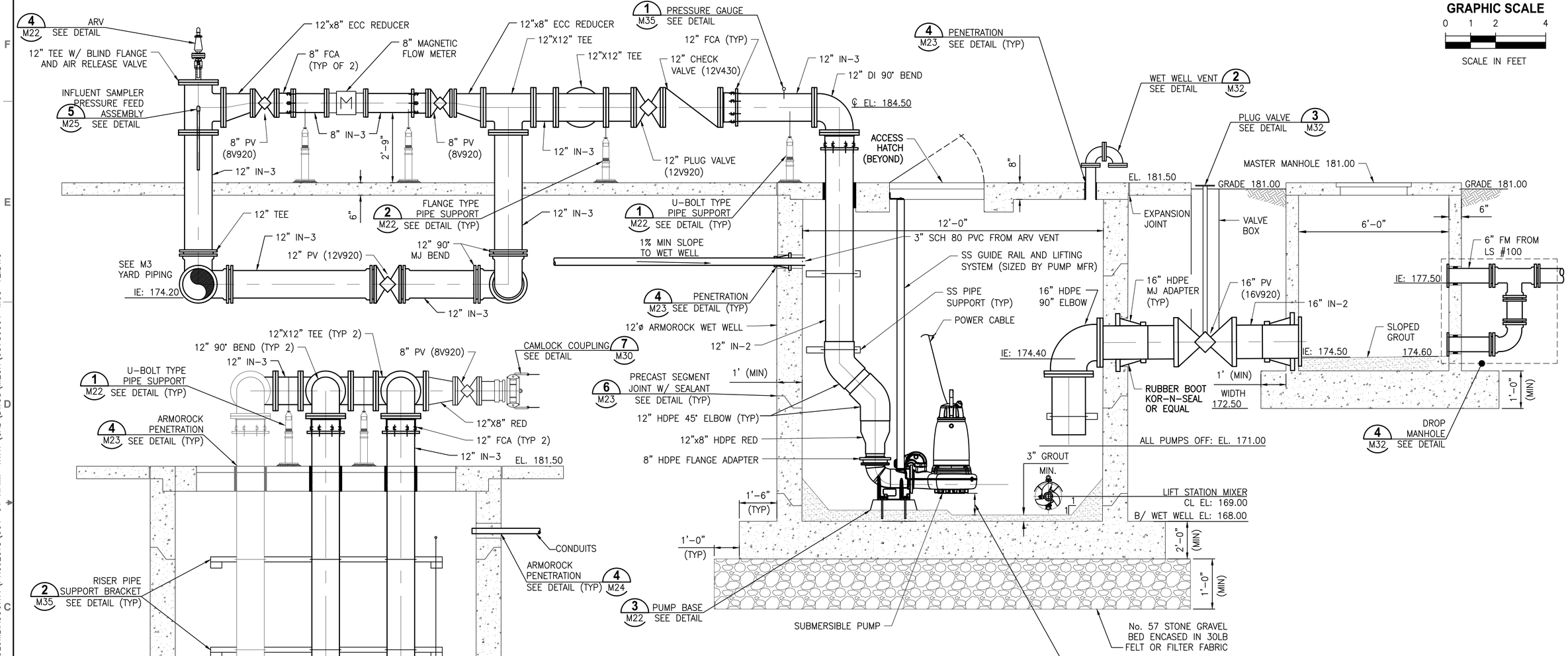
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GRAPHIC SCALE

0 1 2 4

SCALE IN FEET

FLOAT LEVEL CONTROL TABLE

EL	FUNCTION
174.50	HWL ALARM ON – ALARM
174.00	LAG PUMP ON
173.50	LEAD PUMP ON
171.00	ALL PUMPS OFF
169.50	EMERGENCY OFF – ALARM

NOTES:

1. CONTRACTOR TO COORDINATE W/ PRECAST CONCRETE MANUFACTURER FOR BASE CIRCUMFERENCE WIDTH AND THICKNESS REQUIREMENTS FOR BUOYANCY. CONTRACTOR SHALL PROVIDE AND SUBMIT BUOYANCY CALCULATIONS THAT HAVE BEEN SIGNED AND SEALED BY A FLORIDA REGISTERED PROFESSIONAL ENGINEER W/ CONSTRUCTION SUBMITTAL PACKAGE
2. FORCE MAIN RISER PIPE AND FITTINGS SHALL BE DIPS HDPE DR11. ALL JOINTS IN HDPE PIPE SHALL BE FUSED. HPDE FLANGE ADAPTERS SHALL HAVE 316 SS BACKING RING. ALL HARDWARE SHALL BE 316 SS.
3. FURNISH AND INSTALL HIGH-DENSITY POLYETHYLENE (HDPE) CONCRETE PROTECTION LINER (CPL) IN LIFT STATION AND MASTER MANHOLE IN ACCORDANCE WITH SPECIFICATION 3480.

VE GMP-2

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NORTH FLORIDA MEGA INDUSTRIAL PARK
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INFLUENT PUMP STATION SECTION

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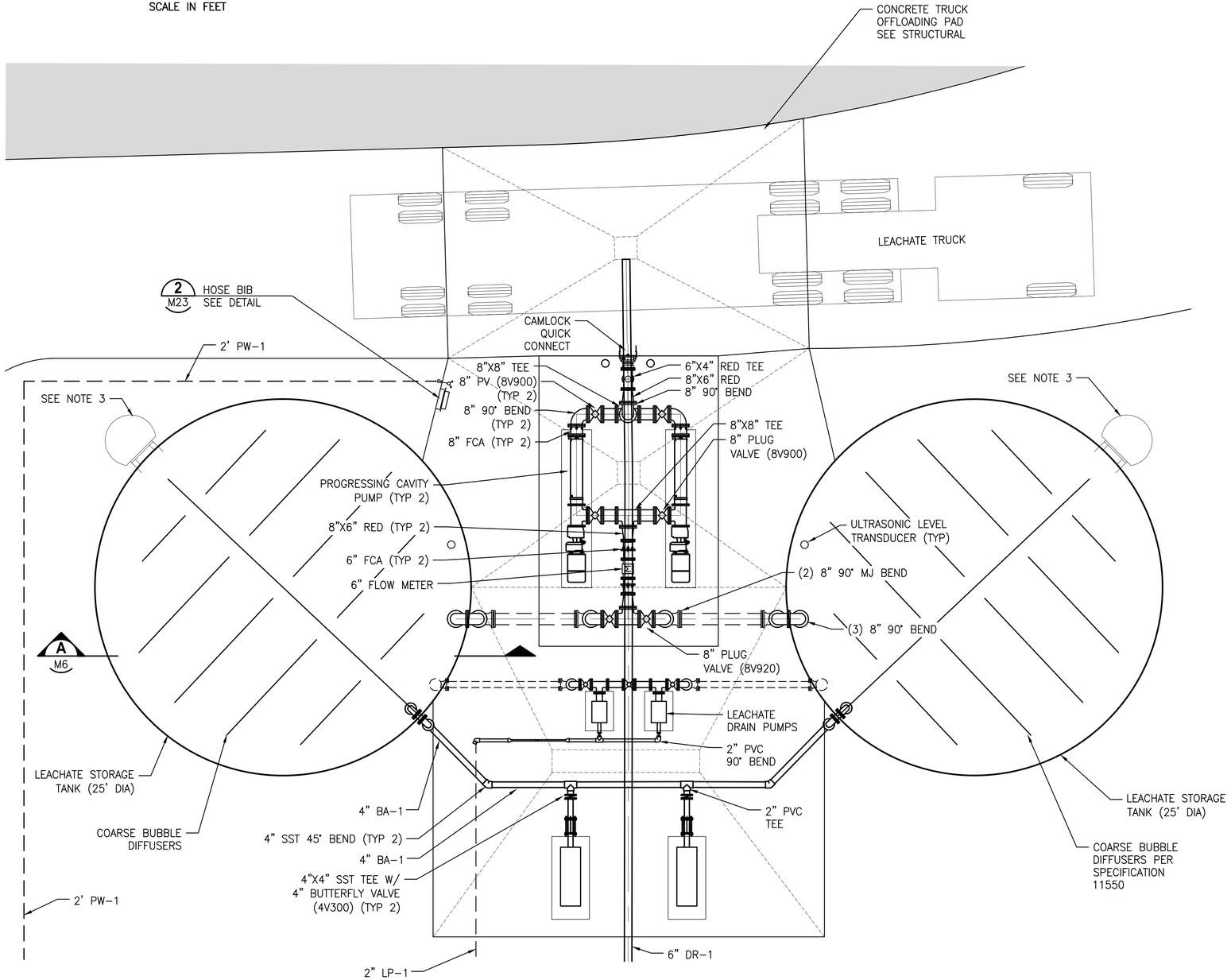
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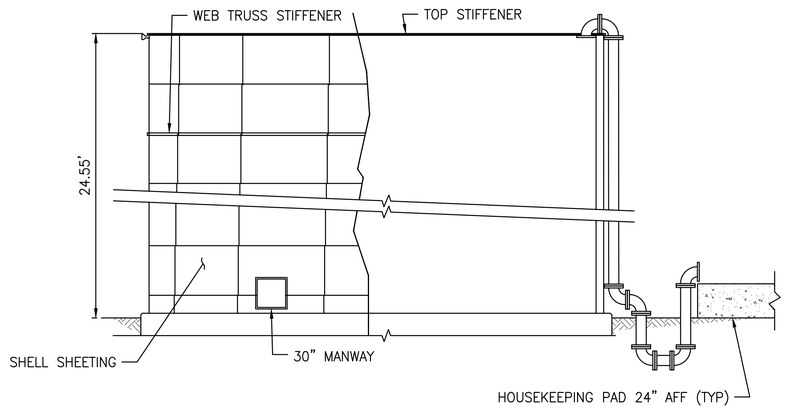
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GRAPHIC SCALE
0 2 4 8
SCALE IN FEET



LEACHATE TANKS PLAN
1" = 4'



TYPICAL LEACHATE TANK PROFILE
1" = 4'

FLOAT LEVEL CONTROL TABLE	
ELEV.	**FUNCTION**
205.50	TOP OF STRUCTURE
199.75	HIGH LEVEL FLOAT
182.25	LOW LEVEL FLOAT
180.75	FINISHED FLOOR ELEVATION (FFE)

NOTES:

1. LEACHATE STORAGE TANKS SHALL HAVE A CAPACITY OF 80,000 GALLONS EACH.
2. HOUSEKEEPING PADS SHALL EXTEND 24" AFF (TYP).
3. STANDARD TANK LADDER WITH OSHA FALL PROTECTION.

VE GMP-2

VE LTR.	11/2022 DATE	VE GMP-1 REVISIONS	LYC BY	TWF APPRD.

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COLUMBIA COUNTY, FLORIDA

LEACHATE TANKS PLAN

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GRAPHIC SCALE

0 2 4 8 16

SCALE IN FEET

2" PW-1
3/4" SA-1
8" MJ 11.25° BEND
8" MJ 45° BEND
8" DS-1
8" PLUG VALVE (8V920)
8" MJ 90° BEND
TANK FLG PIPE CONNECTION BY TANK MANUFACTURER (TYP)
HOSE BIB SEE DETAIL (TYP) 2/M23
WALKWAY (TYP)
EQUALIZATION 211,000 GAL
DIGESTER 80,944 GAL
CLARIFIER 33'-6" DIA.
CONTROL PANEL (TYP)
3/4" CF-1
CARBON FEED INJECTION POINT (TYP)
RE-AERATION 5,059 GAL
POST ANOXIC 35,413 GAL
PRE-ANOXIC BLENDING ZONE
RAS (AIR LIFT)
PRE-ANOXIC 1 37,099 GAL
PRE-ANOXIC 2 37,099 GAL
AERATION 187,182 GAL
D.O. PROBE (TYP)
A/M9
B/M9
C/M9
D/M9
EQ PUMPS
IR PUMPS
4" EQ-1
FLOW METER
6" 45° BEND
6" 22.5° BEND
6" EQ-1
6" 11.25° BEND (TYP)
3/M24 CARBON FEED PUMP SKID SEE DETAIL
FLOOR DRAIN SEE DETAIL (TYP) 2/M28
2 CY DUMPSTER
6"X6" MJ TEE
6" PLUG VALVE (6V920)
8"X8" MJ TEE
8" PLUG VALVE (8V920)
8" DS-1
8" EQ-1
6" PSD-1
8" MJ 11.25° & 22.5° BENDS
8" MJ 45° BEND
6" MJ 45° BEND
SLUDGE PUMP STATION SEE M10
6" DR-1
MH-106
8" PV (8V920)
8" EQ-1
INFLUENT SCREEN AND CONVEYOR SEE DETAIL (TYP) 1/M9
FLANGED CONNECTION (TO BE COORDINATED W/ TANK MFR -TYP)
8" LPA-1 (TYP)
8" LPA-1 (TYP) OVER TOP OF WALL. COORDINATE PIPE CONNECTION AND SUPPORT WITH TANK MANUFACTURER
EQ 25HP
AER 75HP
SWING 75HP
6" DR-1
8" LP-1 (CROSS CONNECTOR PIPE)
8" BUTTERFLY VALVE (8V360) (TYP OF 10)
8"X8" MJ TEE
8"X12" MJ RED
6" IR-1
6" 11.25° BEND (TYP)
8" SE-1
FLANGED CONNECTION (TO BE COORDINATED W/ TANK MFR -TYP)
12" IN-3
12" MJ 45° BEND
3/M21 POSITIVE DISPLACEMENT BLOWER SEE DETAIL (TYP)
CLEAN OUT SEE DETAIL (TYP) 3/M25
AIR PIPE SUPPORT SEE DETAIL (TYP) 1/M36
MH-103
MH-104
PDPS
PLANT DRAIN PUMP STATION SEE M14
8" DR-1
6" PSD-1
12" SE-1
3/4" NaOCL IN 3" CONTAINMENT PVC FROM CHEMICAL FEED FACILITY
4"X2" PVC RED TEE
4" PW-1
ELECTRICAL DUCTBANK
MIXER SEE DETAIL (TYP) 2/M21

NOTES:
PIPES AND FITTINGS FOR EQ-1 AND IR-1 ARE SIMILAR FOR BOTH TANKS

1 LOCATIONS FOR POTABLE WATER CONNECTIONS.

BNR PACKAGE PLANT TANKS PLAN

1" = 8'

VE GMP-2

VE LTR.	DATE	REVISIONS	BY	APPRD.
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COLUMBIA COUNTY, FLORIDA

BNR PACKAGE PLANT TANKS PLAN

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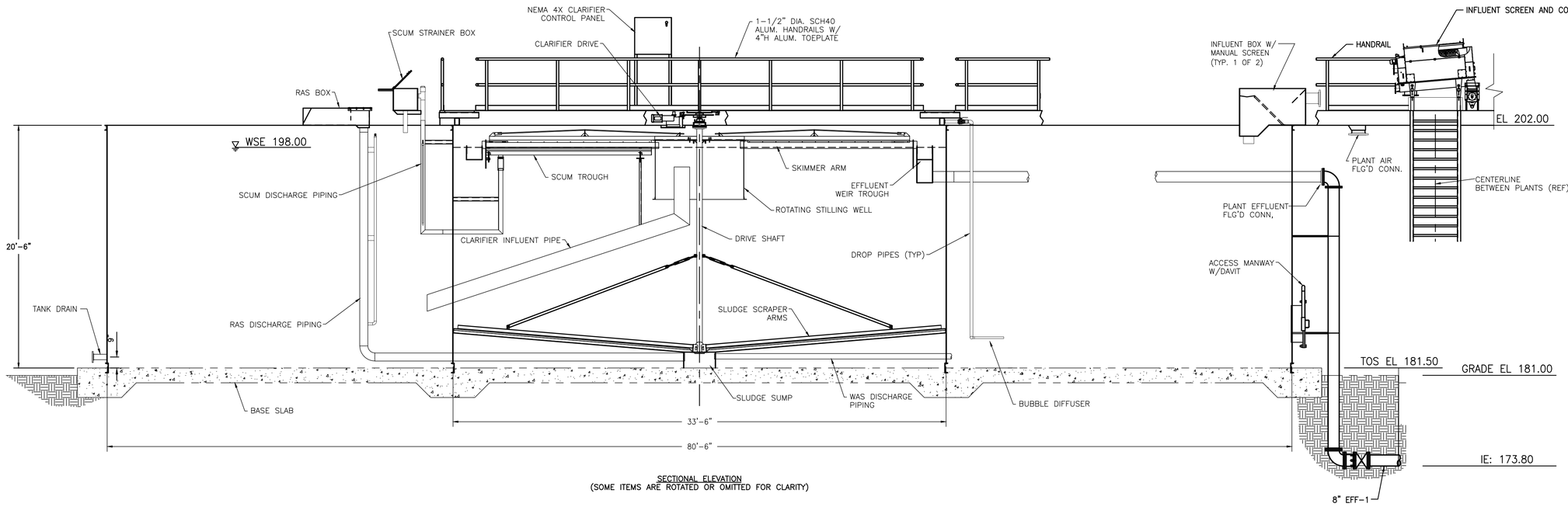
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GRAPHIC SCALE

0 1 2 4 8

SCALE IN FEET
1/4"=1'-0"



SECTIONAL ELEVATION
(SOME ITEMS ARE ROTATED OR OMITTED FOR CLARITY)

BNR PACKAGE PLANTS SECTION

1" = 4'-0"

VE GMP-2

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BNR PACKAGE PLANTS SECTION

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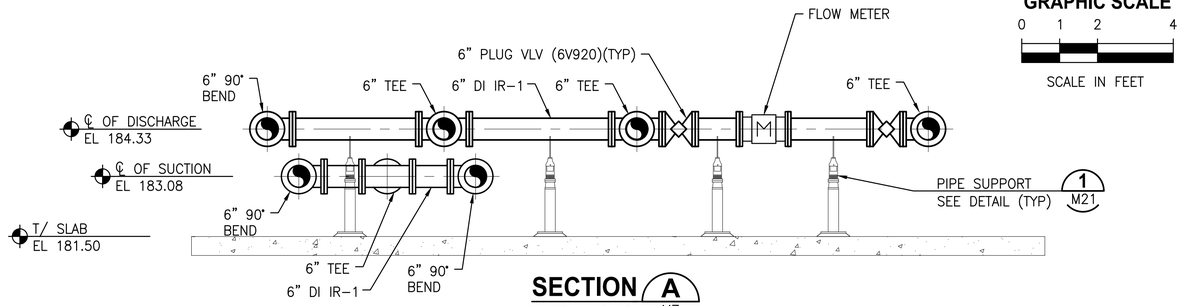
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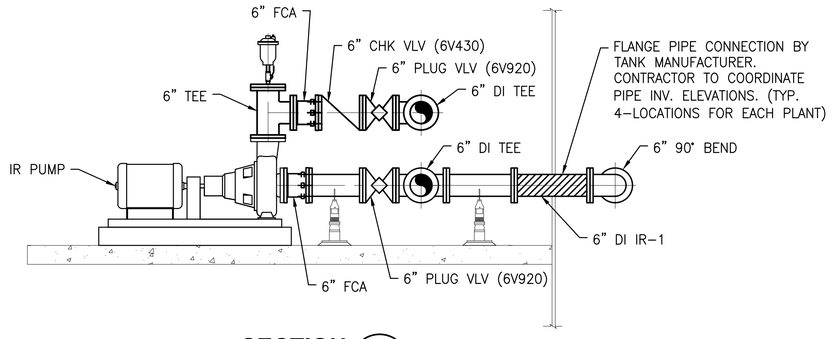
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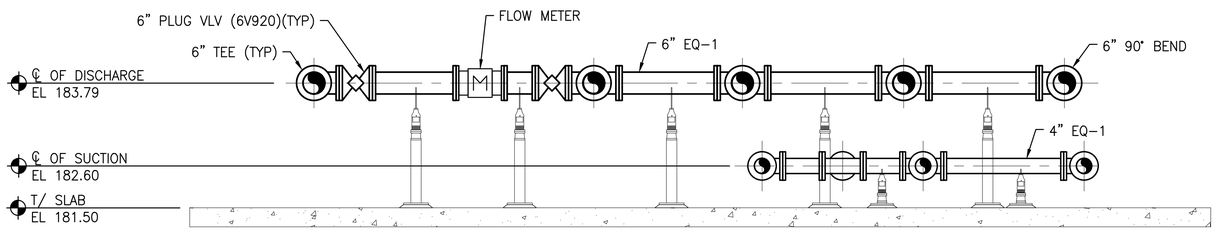
GRAPHIC SCALE
0 1 2 4
SCALE IN FEET



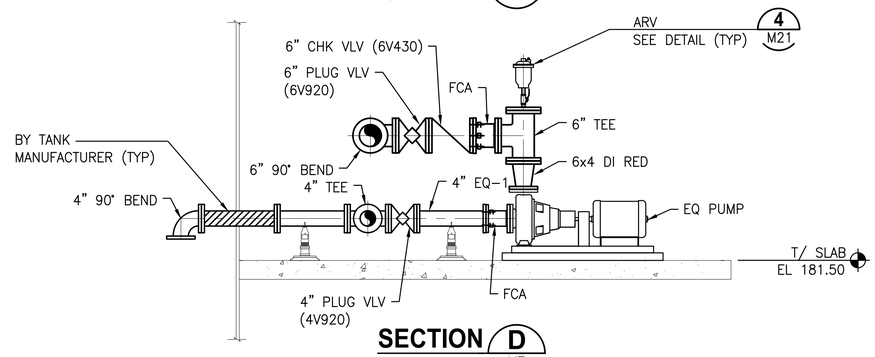
SECTION A
1/2" = 1'-0" M7



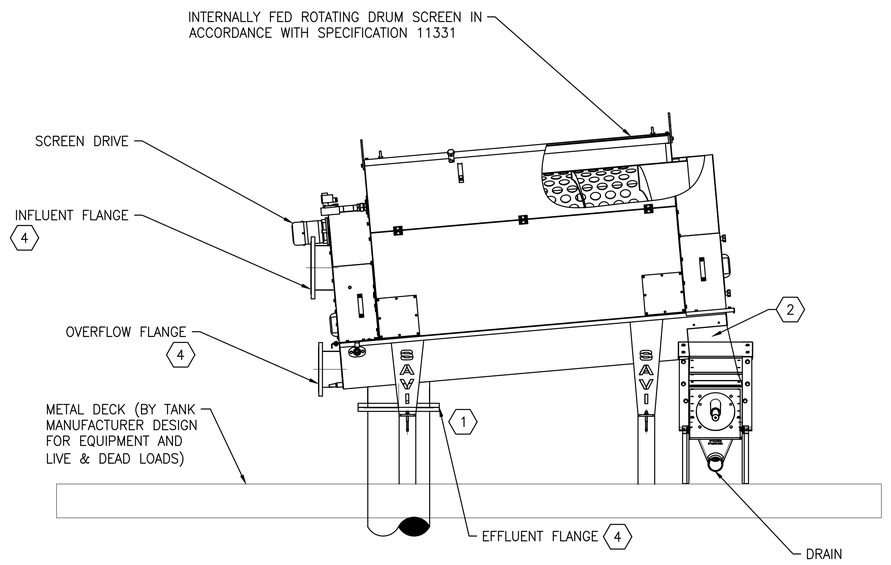
SECTION B
1/2" = 1'-0" M7

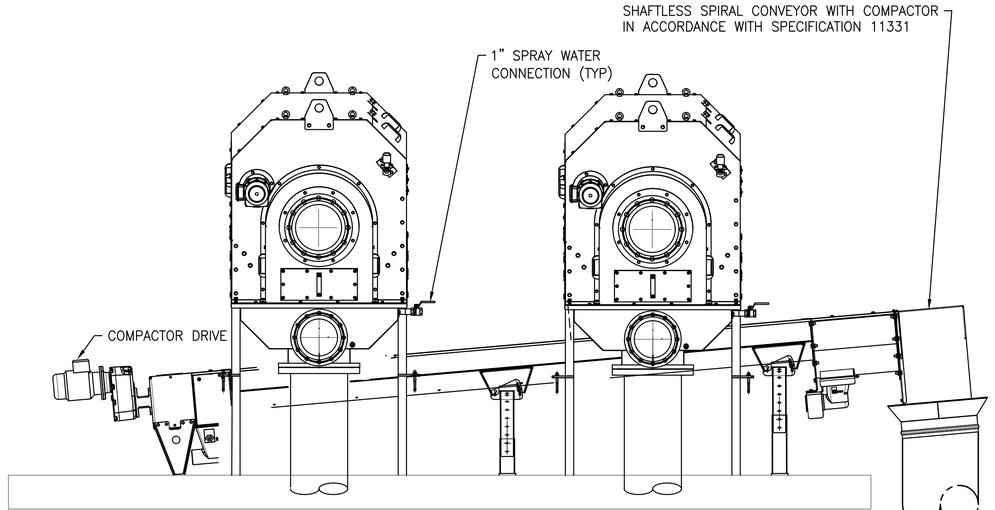


SECTION C
1/2" = 1'-0" M7



SECTION D
1/2" = 1'-0" M7





INFLUENT SCREEN AND CONVEYOR DETAIL 1
NTS

NOTES:

1. CONTRACTOR AND MANUFACTURER COORDINATE FINAL HEIGHT OF UNITS TO ALLOW PROPER DISCHARGE TO CONVEYOR.
2. CONTRACTOR AND MANUFACTURER TO COORDINATE CONNECTION LENGTH OF DISCHARGE CHUTES FOR EACH DRUM SCREEN CONNECTION.
3. STAINLESS STEEL DISCHARGE CHUTE TO DUMPSTER (BY CONVEYOR MANUFACTURER)
4. SEE PIPING AND VALVE SCHEMATIC FOR INFLUENT SCREEN AND MANUAL SCREEN.

SEE 3 M29

VE GMP-2

LTR.	DATE	REVISIONS	BY	APPRD.
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WASTEWATER TREATMENT PLANT
COLUMBIA COUNTY, FLORIDA

IR AND EQ PUMP STATION
SECTIONS

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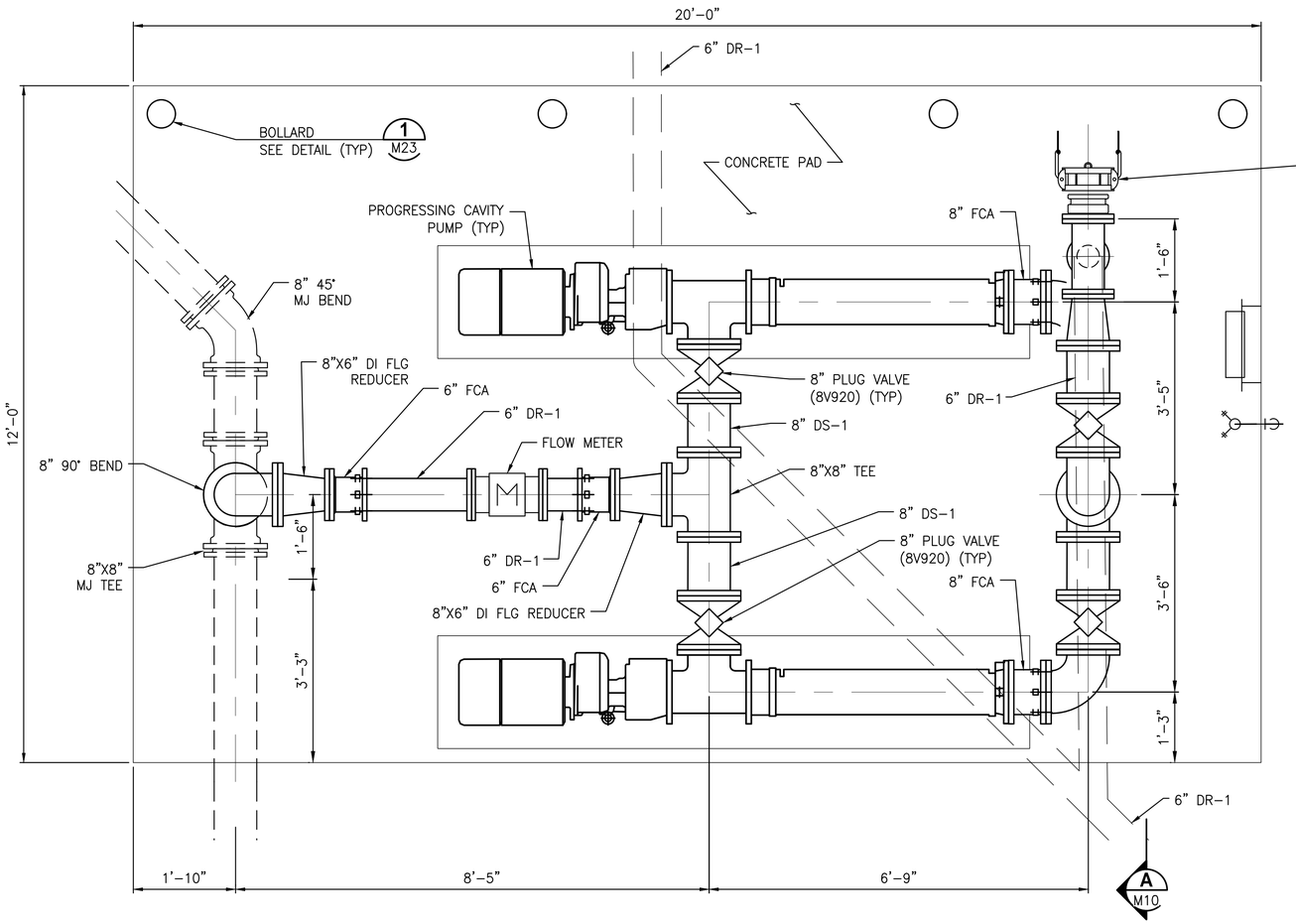
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03780-001-01	DEC. 2022
INDEX NO:	DWG NO: M9

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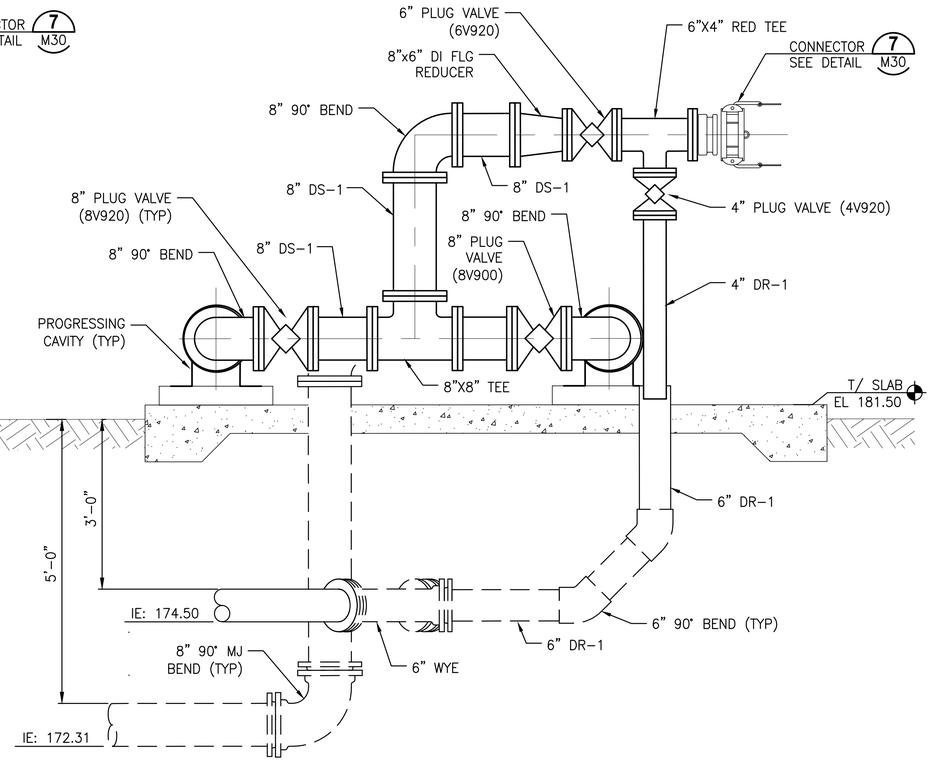
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GRAPHIC SCALE
0 0.5 1 2
SCALE IN FEET



SLUDGE PUMP STATION PLAN
3/4" = 1' 0"



SECTION A
3/4" = 1' 0" M10

VE GMP-2

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NORTH FLORIDA MEGA INDUSTRIAL PARK
WASTEWATER TREATMENT PLANT
COLUMBIA COUNTY, FLORIDA

SLUDGE PUMP STATION PLAN AND SECTION

Thomas W. Friedrich, State of Florida, Professional Engineer, License No. 61281

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8"X6" MJ TEE (TYP)
6"X6" FLG TEE W/ BLIND FLANGE (TYP)
B M13 SEE INSET BELOW
6" 45° BEND
8" 90° BEND
8" EQ-1
6" DR-1
8" TO EQUALIZATION BASIN TANKS
20" HDPE TO EFFLUENT STORAGE POND
B M12
20" PVC TO HDPE ADAPTER. POLYCAM SERIES 730, OR ENGINEER APPROVED EQUAL
2'-2"
2'-2"
TO RECLAIMED WATER STORAGE TANKS (FUTURE) (BF)
1'-0"
RECLAIMED WATER TRANSFER PUMP (TYP)
C M12
REJECT WATER PUMP (TYP)
6" GV (6V600) (TYP 2)
8"X6" MJ TEE
6"X6" FLG TEE W/ BLIND FLANGE
WEIR PLATE SEE DETAIL (TYP) 3 M33
20" SLUICE GATE (TYP 2)
20"X20" MJ TEE
6"X8" MJ RED
12" GATE VALVE (12V400)
6" EFF-1
3 M28 RESTRAINED CONNECTION (TYP)
CC-SG-1
CC-SG-2
CC-G-3
CC-W-1
CC-W-2
12" GATE VALVE (12V600)
20"X20" MJ TEE
6"X6" MJ TEE W/ BLIND FLANGE
6" MJ 90° BEND
20" PVC
20"x10" MJ RED
INFLUENT SAMPLE PUMP 5 M27
6" CV (6V430) (TYP 2)
8" CV (8V400) (TYP 2)
10" 22.5° MJ BEND
8" FCA (TYP 2)
BF (TYP)
4'-10"
4'-10"
6" DR-1
12"X8" RED TEE (TYP)
12" RCW-1
3'-0"
10'-0"
6'-0"
SLOPE TO DRAIN (TYP)
6'-0" (TYP)
8"
1'-3"
10" 22.5° DI BEND (CLEAN OUT)
BF
10" TO RECLAIMED WATER STORAGE TANKS (FUTURE)
(2) 12" 90° BENDS
8" GV (8V680)(TYP 6)
12" MJ 90° BEND (TYP)
HANDRAIL (TYP)
12"X8" REDUCER
8" GATE VALVE (8V682)(TYP 2)
STAIRS W/ STOOP (TYP)
12" GATE VALVE (12V682)
RCW FLOW METER
12"X8" REDUCER
12"X12" TEE (TYP)
FUTURE HYDRAULIC CONTROL GATE VALVE
12"X12" TEE W/ BLIND FLANGE
12" MJ 90° BEND
4 M22 FLANGE MOUNTED AIR RELEASE VALVE SEE DETAIL
TO SPRAYFIELD
6" CLEAN-OUT (TYP) 3 M25
53'-0"
72'-0"
3/4" SAMPLE LINE IN 3" CONTAINMENT PVC TO ANALYZER STRUCTURE
SLIDE GATE SEE SHEET M34
46'-0"
6'-0"
1'-0"

GRAPHIC SCALE
0 1 2 4 8
SCALE IN FEET

12" 80 PVC STATIFLO SERIES 400 W/ 3-15 GPH NaClO AND 100-3125 GPM WW FLOWRATES W/ 1" FNPT PVC INJECTION BOSS OR ENGINEER APPROVED EQUAL
6" 80 PVC STATIFLO CHEMICAL INJECTION QUILL W/ INTEGRATED CHECK VALVE, STAINLESS STEEL ISOLATION BALL 1/2" MNPT CHEMICAL FEED CONNECTION OR ENGINEER APPROVED EQUAL
12" 90° BEND
12" MJ 90° BEND
12" BF FOR FUTURE FILTER CONNECTION
12" SE-1 FROM BNR TANKS
12" 90° BEND
12" SE-1
12" FCA
D M12
12"X12" MJ TEE
GATE VALVE (12V900)
3/4" NaOCl IN 3" CONTAINMENT PVC FROM CHEMICAL STORAGE FEED FACILITY.
4 M24 WALL PIPE SEE DETAIL
12" 90° BEND
5'-0"
LIT TRANSMITTER LOCATED PER FLUME MANUFACTURER RECOMMENDATION
STILLING WELL
PARSHALL FLUME W/ 12" THROAT
CC-G-1
4'-0"
1'-0"
1'-0"
5'-0"
INFLUENT SAMPLE PUMP 5 M27
A M12
42'-2"
1'-0"
6'-0" (TYP)
A M13
4'-0"
CC-G-2
3/4" SAMPLE LINE IN 3" CONTAINMENT PVC TO ANALYZER STRUCTURE

NOTES:

1. COAT ALL CHLORINE CONTACT TANK INTERIOR CONCRETE SURFACES INCLUDING TOP OF WALL, WALL FACES AND FLOORS W/ PAINT SYSTEM No. 30 AS SPECIFIED IN SECTION 09900, PAINTING AND COATING.
2. FRP PARSHALL FLUME SHALL NOT BE PAINTED.

CHLORINE CONTACT TANKS PLAN
1/4" = 1'-0"

M/H 105
8" GV (8V600) (TYP 3)
±22'-0"
6" WYE (TYP)
6" CLEAN-OUT (TYP) 3 M25
8" 90° BENDS (TYP)
8" 90° BEND (TYP)
8"X8" TEE (TYP)
(2) 8" 90° BENDS
6" GATE VALVE (TYP) (6V982)
RESTRAINED CONNECTION 3 M26 SEE DETAIL
±2'-6"
FLANGE MOUNTED AIR RELEASE VALVE 4 M22 SEE DETAIL
REJECT FLOW METER
INSET NTS
8" 90° BEND
8"X8" TEE W/ BLIND FLANGE

VE GMP-2

VE LTR.	11/2022 DATE	VE GMP-1 REVISIONS	LYC BY	TWF APPRD.

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COLUMBIA COUNTY, FLORIDA

CHLORINE CONTACT TANKS PLAN AND SECTIONS

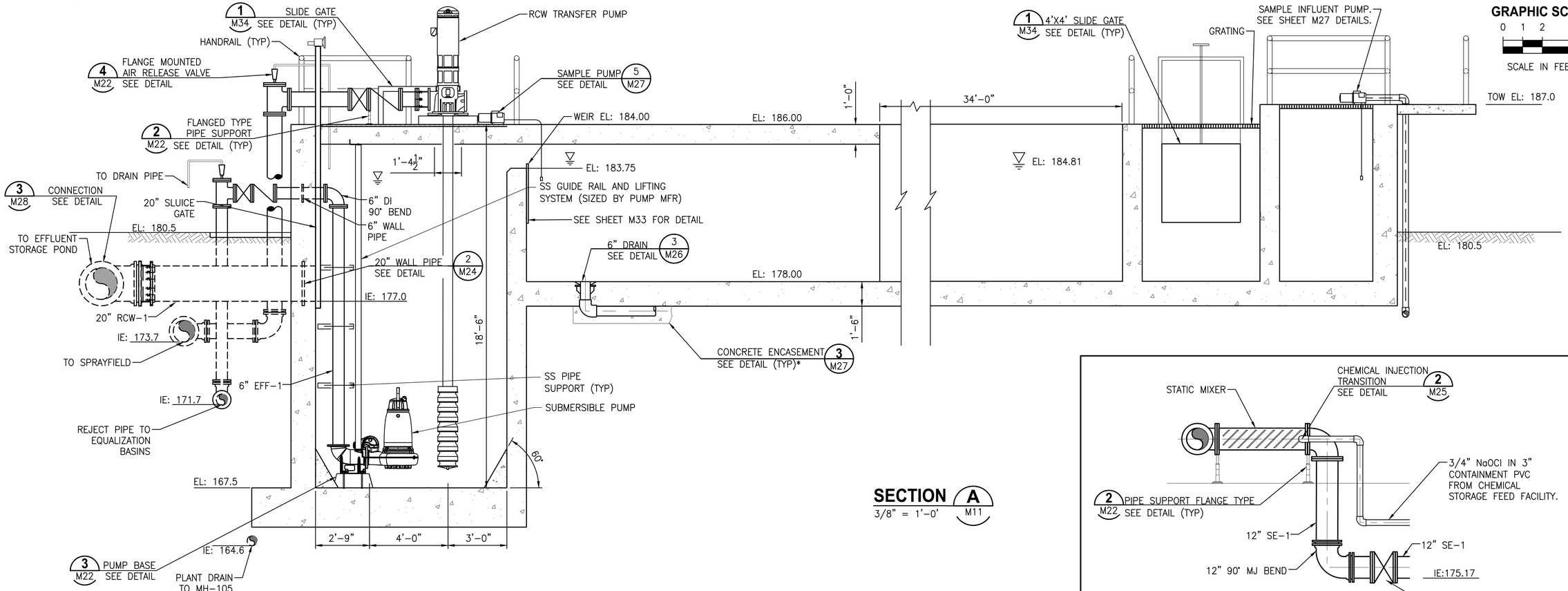
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INDEX NO:
DWG NO: M11

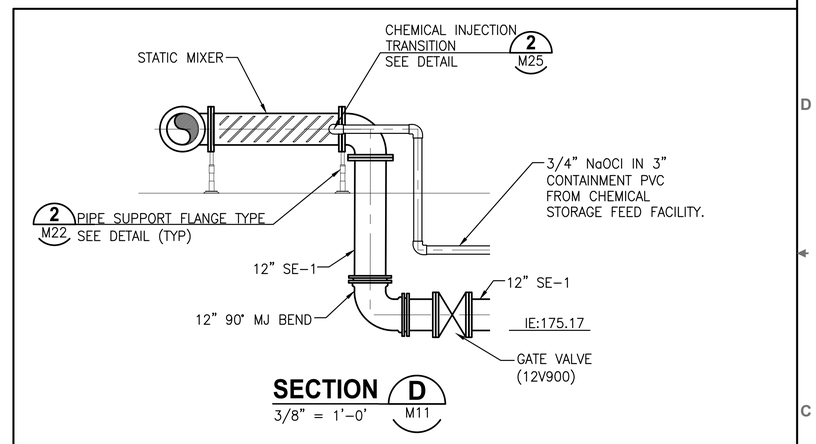
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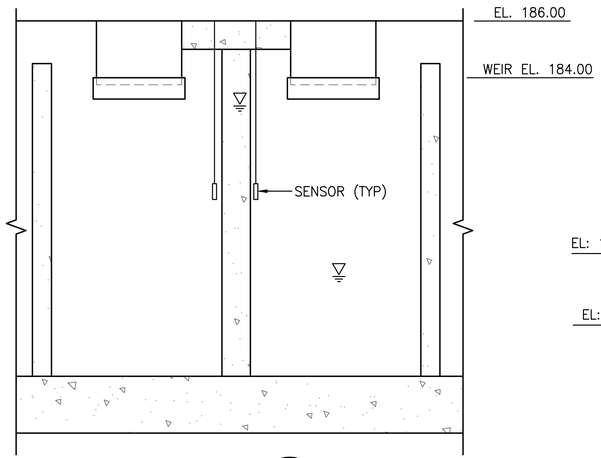
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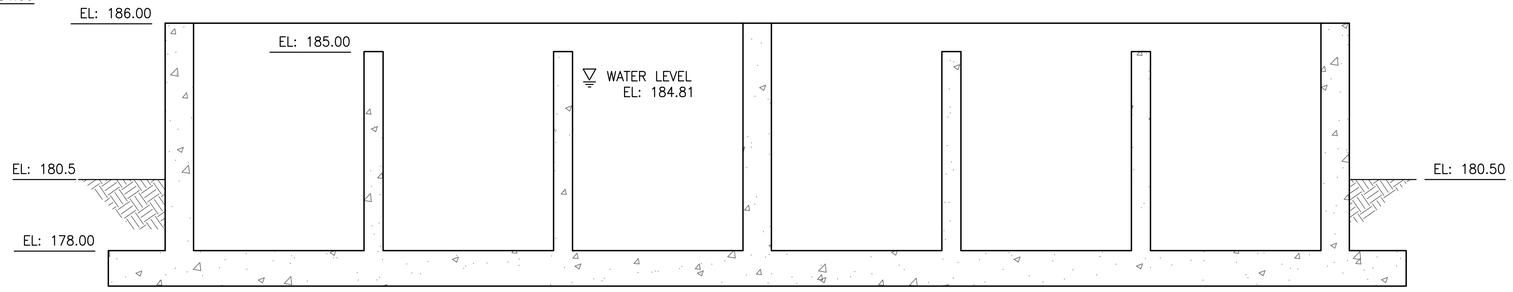
SECTION A (M11)
3/8" = 1'-0"



SECTION D (M11)
3/8" = 1'-0"



SECTION C (M11)
3/8" = 1'-0"



SECTION B (M11)
3/8" = 1'-0"

VE GMP-2

LTR.	DATE	REVISIONS	BY	APPRD.
VE	11/2022	VE GMP-1	LYC	TWF

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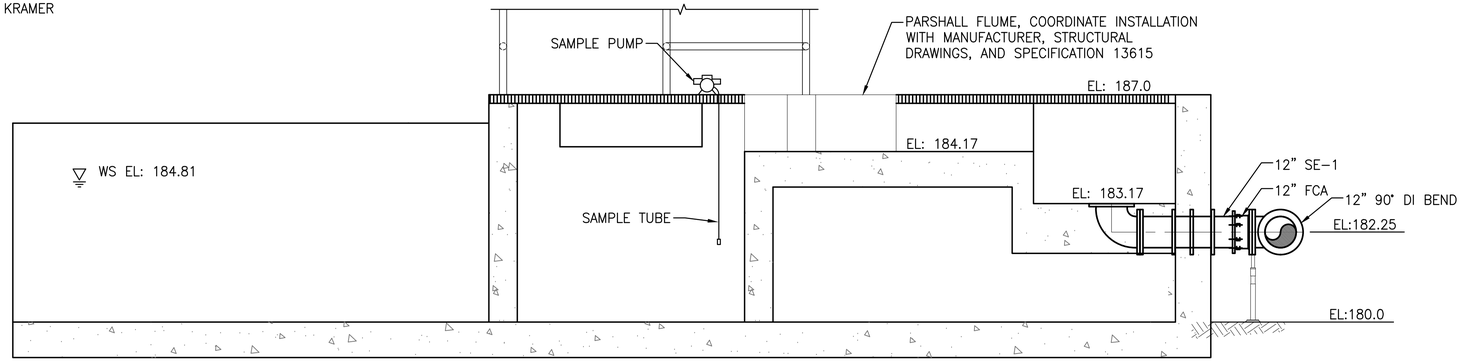
CHLORINE CONTACT TANKS SECTIONS

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DWG NO: M12

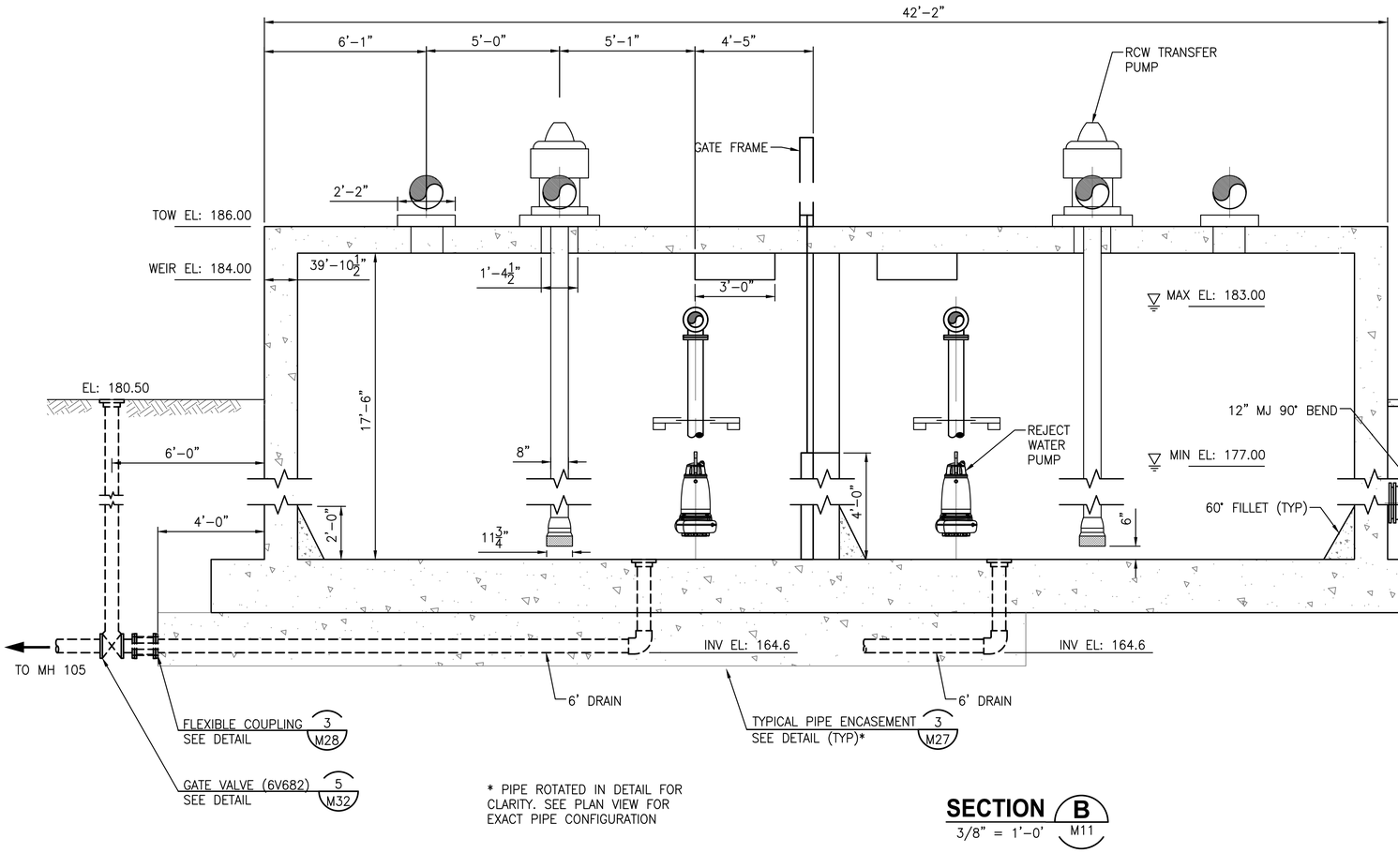
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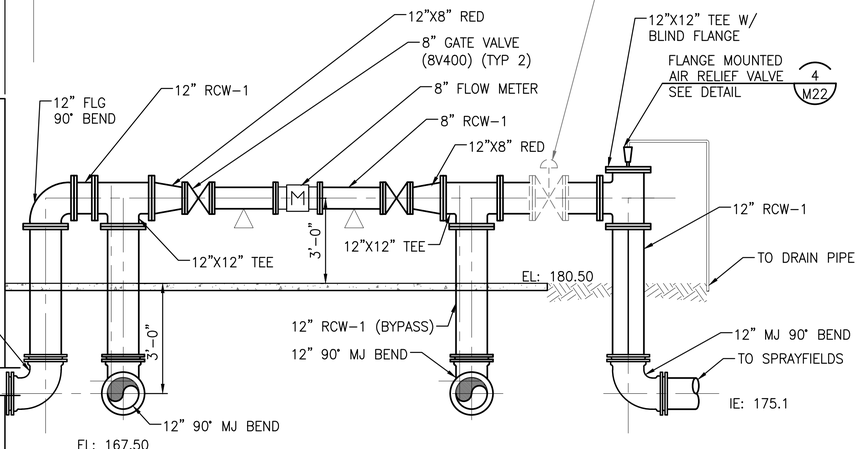
SECTION A
3/8" = 1'-0" (M11)

GRAPHIC SCALE
0 1 2 4
SCALE IN FEET



* PIPE ROTATED IN DETAIL FOR CLARITY. SEE PLAN VIEW FOR EXACT PIPE CONFIGURATION

SECTION B
3/8" = 1'-0" (M11)



VE GMP-2

VE LTR.	11/2022 DATE	VE GMP-1 REVISIONS	LYC BY	TWF APPRD.

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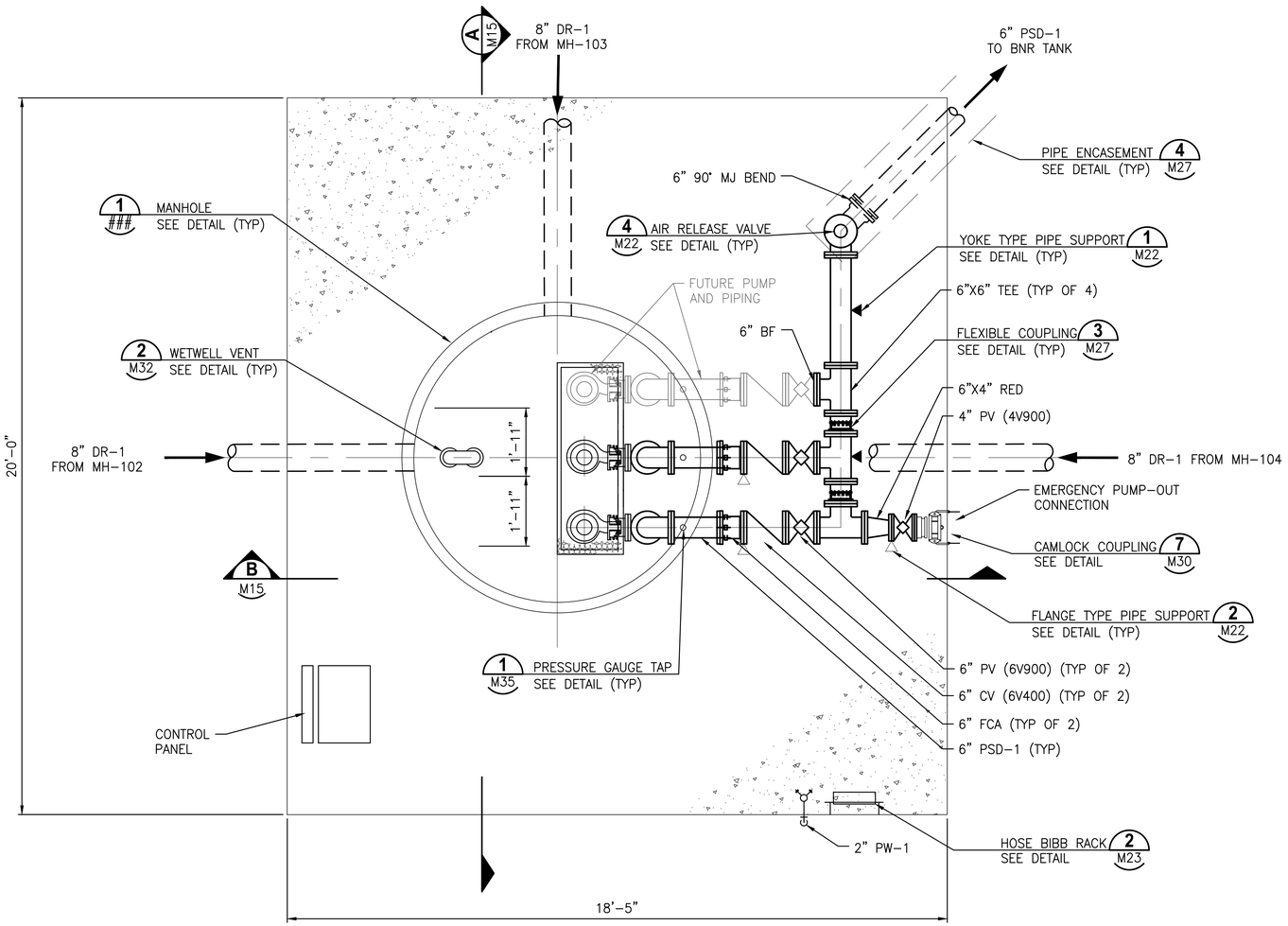
CHLORINE CONTACT TANKS SECTIONS

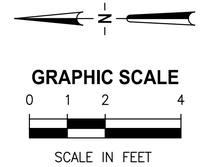
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NOTES:

1. ALL PUMP RAIL, PIPE SUPPORT, FASTENERS AND MATERIAL SHALL BE ANSI TYPE 304 SS
2. COORDINATE MOUNTING AND INSTALLATION OF PUMP GUIDE RAIL HANDLE WITH PUMP MANUFACTURER
3. COORDINATE ACCESS HATCH SIZE AND LOCATION W/ PUMP MANUFACTURER.
4. FIELD VERIFY ALL PIPE PENETRATION LOCATIONS AND SIZES.

PLANT DRAIN PUMP STATION PLAN

1/2" = 1'-0"

VE GMP-2

LTR.	DATE	REVISIONS	BY	APPRD.
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NORTH FLORIDA MEGA INDUSTRIAL PARK
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PLANT DRAIN PUMP STATION PLAN

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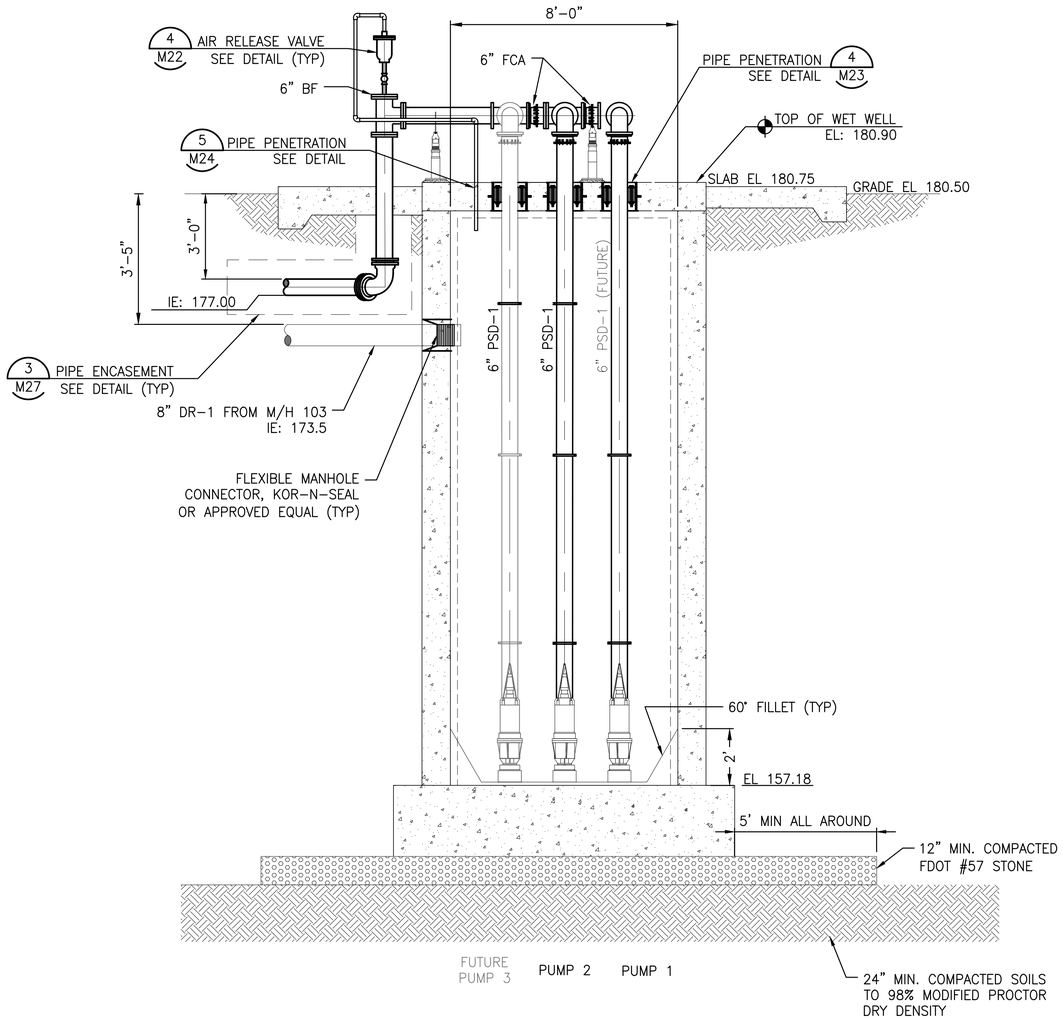
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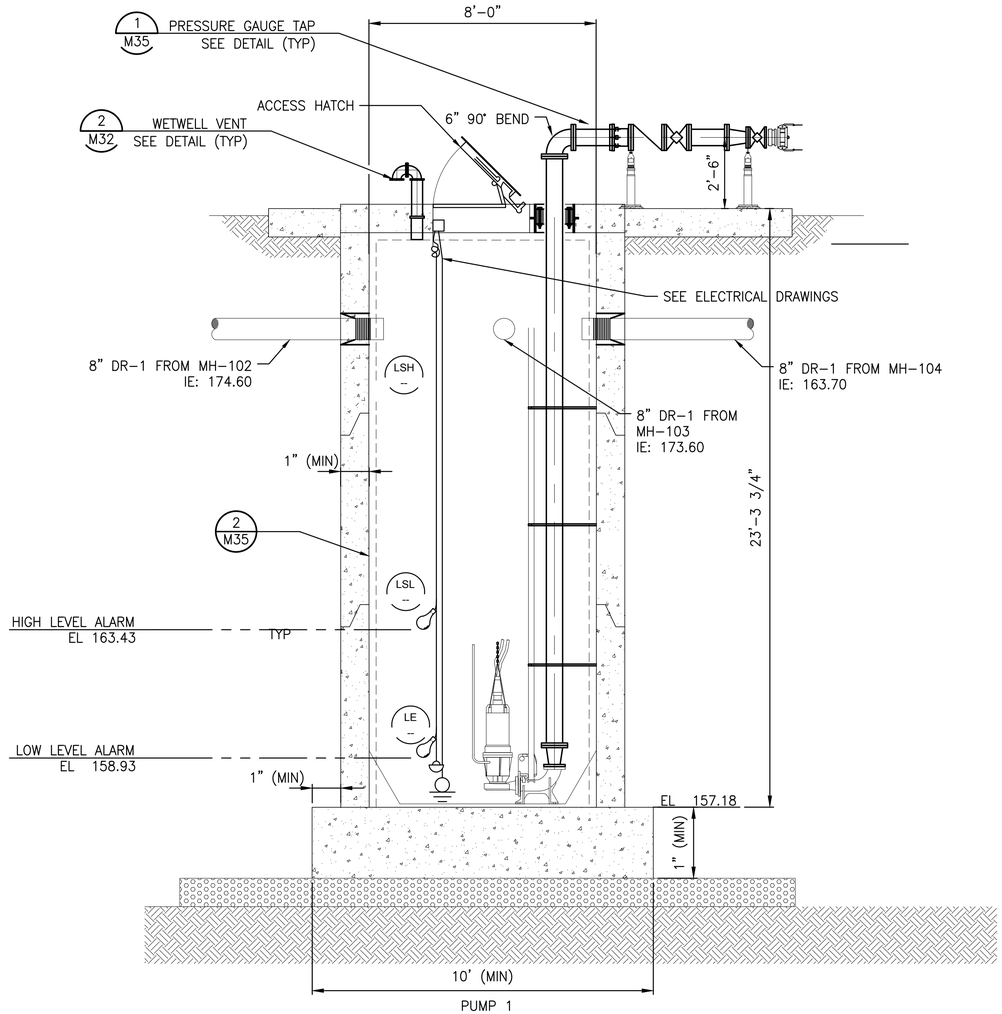
GRAPHIC SCALE

0 1 2 4

SCALE IN FEET



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



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

NOTES:

1. ALL PUMP RAIL, PIPE SUPPORT, FASTENERS AND MATERIAL SHALL BE ANSI TYPE 304 SS.
2. COORDINATE MOUNTING AND INSTALLATION OF SCUM PUMP GUIDE RAIL HANDLE WITH SCUM PUMP MANUFACTURER.
3. COORDINATE ACCESS HATCH SIZE AND LOCATION W/ PUMP MANUFACTURER.
4. CONTRACTOR TO COORDINATE W/ PRECAST CONCRETE MANUFACTURED FOR BASE CIRCUMFERENCE WIDTH AND THICKNESS REQUIREMENTS FOR BUOYANCY. CONTRACTOR SHALL PROVIDE AND SUBMIT BUOYANCY CALCULATIONS THAT HAVE BEEN SIGNED AND SEALED BY A FLORIDA REGISTERED PROFESSIONAL ENGINEER W/ CONSTRUCTION SUBMITTAL PACKAGE.
6. EXTERIOR OF WETWELL SHALL BE PAINTED WITH COAL TAR EPOXY AS SPECIFIED.
7. ALL ALUMINUM SURFACES IN CONTACT WITH CONCRETE SHALL BE PAINTED PER SPECIFICATIONS.
8. PROVIDE SPARK-PROOF CONTACT BETWEEN PUMPS AND GUIDE RAIL SYSTEM.
9. GROUT TOP OF PIPE PENETRATION HOLES FLUSH WITH TOP OF WETWELL PRECAST LID.

LTR.	DATE	REVISIONS	BY	APPRD.
VE	11/2022	VE GMP-1	LYC	TWF

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NORTH FLORIDA MEGA INDUSTRIAL PARK
WASTEWATER TREATMENT PLANT
COLUMBIA COUNTY, FLORIDA

PLANT DRAIN PUMP STATION SECTIONS

Thomas W. Friedrich, State of Florida, Professional Engineer, License No. 61281

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VE GMP-2

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NOTES:

1. CHEMICAL STORAGE TANKS EACH TO BE DUAL CONTAINMENT TANKS.
2. COAT SUMP CONTAINMENT AREA AND METERING PUMP AREA W/ SYSTEM 32 FROM SPECIFICATION 09900.

GRAPHIC SCALE
0 1 2 4
SCALE IN FEET

33'-8"
1-1/2" MALE QUICK CONNECT W/ CAP
CONTAINMENT AREA LEVEL SWITCH, SEE ELECTRICAL AND INSTRUMENTATION DRAWINGS
EMERGENCY SHOWER AND EYE WASH SEE DETAIL (TYP) 1/M24
1-1/2" DR-3
LSH 1-1/2"
2/M23 HOSE BIB SEE DETAIL (TYP)
SS-1
1-1/2" PW-1
3/4" SA-1 FROM CHLORINE CONTACT TANKS
2" MALE QUICK CONNECT W/ CAP @ 3' AFF
2" BALL VALVE (2V212) (TYP)
3'-0"
CAPPED FOR FUTURE CONNECTION C/M17
TIE INTO DRAIN FOR ANALYZER STRUCTURE
ULTRASONIC LEVEL SENSOR, SEE ELECTRICAL AND INSTRUMENTATION DRAWINGS
2" BAG FILTER
2" CL FILL
3" CL-1 OVERFLOW
SUMP W/ FRP GRATING
LEVEL INDICATOR (TYP) L1
1-1/2" DR-3
3/4" SA-1 TO COMPOSITE SAMPLER
2" FLG FILL NOZZLE W/ 2" DROP PIPE (TYP)
EFFLUENT COMPOSITE SAMPLER
1'-0" MIN
LE LIT
2" CL DRAIN
4" VENT
FUTURE TANK 2
3-WAY SS CABLE RESTRAINT SYSTEM W/ CLIP (TYP)
6'-10"
CAPPED FOR FUTURE CONNECTION
2550 GALLON BULK STORAGE TANK 1
TWO COMPARTMENT COMMERCIAL 16 GAUGE SS UTILITY SINK
1" SA-1 TO pH & CONDUCTIVITY ANALYZERS
24" MANWAY (TYP)
2" FLG TANK NOZZLE (TYP)
2" DIAPHRAM VALVE (2V525)
ANALYZER BOARD & TROUGH. SEE SHEET M31
2" PVC FLEXIBLE HOSE CONNECTION IN VERTICAL (TYP)
1/M17 TANK OUTLET NOZZLE CONCRETE BLOCK-OUT SEE DETAIL (TYP)
20'-0"
2" DR-3
1" VENT
B/M17
CAPPED FOR FUTURE CONNECTION
A/M17
FRP ANALYZER STRUCTURE SEE DETAIL 1/M31
PI PE METERING PUMP #1
SODIUM HYPOCHLORITE PUMP SKID. SEE SPECIFICATIONS
1" SA-1 TO CHLORINE RESIDUAL & pH ANALYZERS
PI PE METERING PUMP #2
PIPE ENCASEMENT
SS-2
INFLUENT COMPOSITE SAMPLER
3/4" SA-2 TO COMPOSITE SAMPLER
1" BALL VALVE (1V200)
6" DR-3
15'-0"
1" PW-1
EMERGENCY SHOWER AND EYEWASH SEE DETAIL (TYP) 1/M24
8'-5"
(2) 3/4" TUBING INSIDE 3" CONTAINMENT TO CHLORINE CONTACT TANK
1" PW-1
2" PW-1
1" PW-1
1" SA-2 FROM INFLUENT PUMP STATION
2'X2' CHEMICAL CONTAINMENT BOX WITH A DEPTH 3.4' BELOW GRADE
CHEMICAL CONTAINMENT BOX SEE DETAIL 6/M32
CAPPED FOR FUTURE CONNECTION
TO CHLORINE CONTACT TANKS
26'-8"
2" PW-1

VE GMP-2

VE	11/2022	VE GMP-1	LYC	TWF
LTR.	DATE	REVISIONS	BY	APPRD.

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COLUMBIA COUNTY, FLORIDA

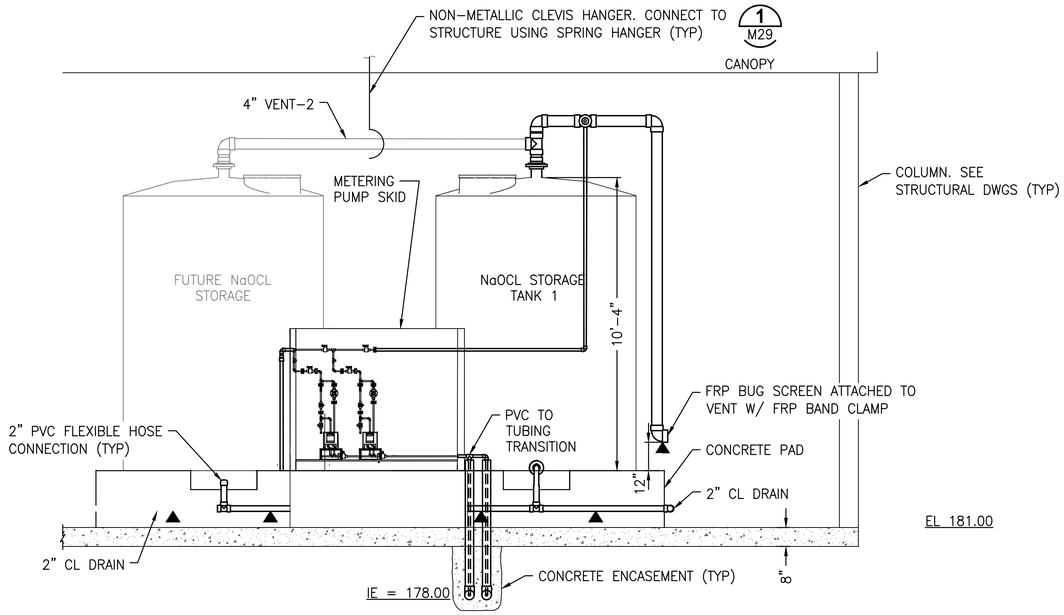
CHEMICAL STORAGE AND FEED SYSTEMS PLAN

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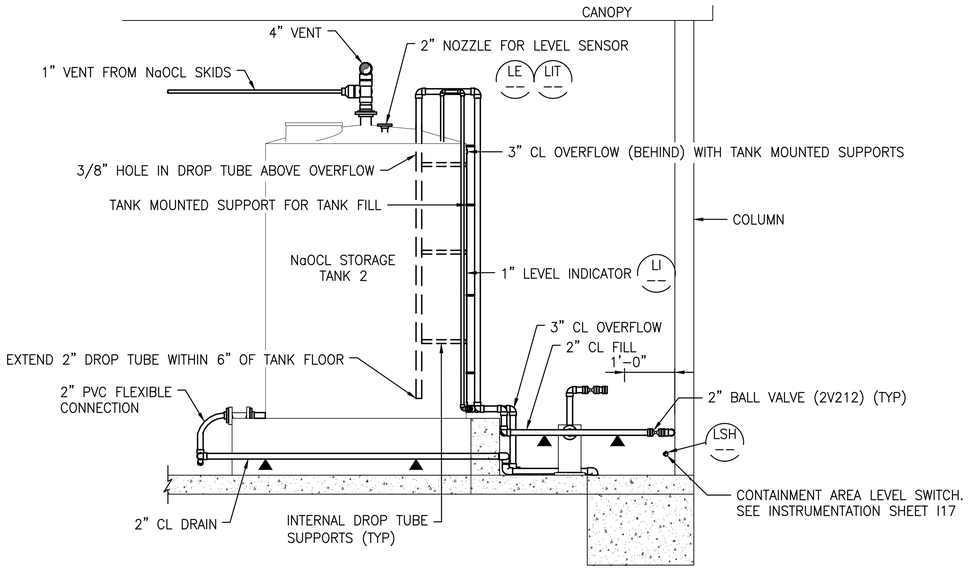
PROJECT NO: 03780-001-01
DATE: DEC. 2022
INDEX NO:
DWG NO: M16

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SECTION A (M16) — 3/8"=1'-0"

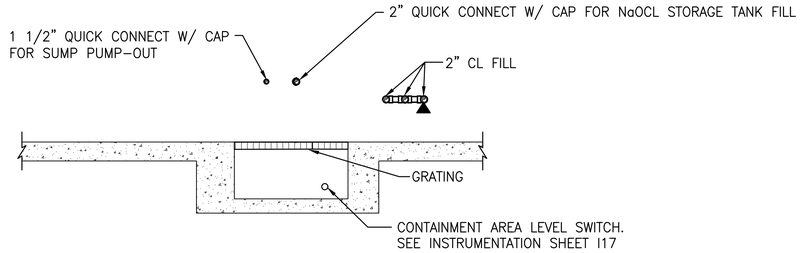


SECTION B (M16) — 3/8"=1'-0"

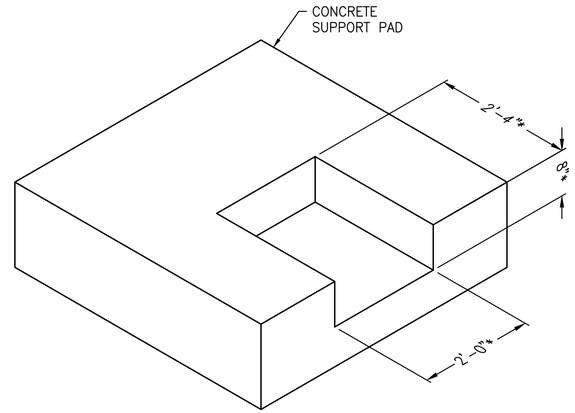
GRAPHIC SCALE

0 1 2 4

SCALE IN FEET



SECTION C (M16) — 3/8"=1'-0"



TANK OUTLET NOZZLE CONCRETE BLOCK OUT DETAIL (1 / M16) — NTS

NOTES:

1. * DENOTES VERIFICATION AND/OR COORDINATION BY CONTRACTOR IS REQUIRED WITH RESPECT TO APPROVED SHOP DRAWING PRIOR TO CONSTRUCTION.
2. SEE STRUCTURAL DWGS FOR PAD DIMENSIONS.

VE GMP-2

LTR.	DATE	REVISIONS	BY	APPRD.
VE	11/2022	VE GMP-1	LYC	TWF

DESIGNED TFRIEDRICH
DRAWN JKRAMER
CHECKED SMENARD

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NORTH FLORIDA MEGA INDUSTRIAL PARK
WASTEWATER TREATMENT PLANT
COLUMBIA COUNTY, FLORIDA

CHEMICAL STORAGE AND FEED SYSTEMS SECTIONS

Thomas W. Friedrich, State of Florida, Professional Engineer, License No. 61281

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INDEX NO:	DWG NO: M17

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NOTES:

1. THERE ARE FOUR MONITORING WELLS (MWB-1AS, MWI-2S, MWC-3S, AND MWC-4S) TO BE INSTALLED. THERE ARE TWO PIEZOMETERS TO BE ABANDONED. ALL LOCATIONS ARE SHOWN ON THIS SHEET.

2. BEFORE THE PROPOSED MONITORING WELLS ARE INSTALLED, AN SPT BORING WILL BE PERFORMED TO ACCURATELY DETERMINE THE LITHOLOGY OF THE ZONE TO BE MONITORED. TEST BORING METHODOLOGY SHOULD BE IN ACCORDANCE WITH ASTM D1586. THE SPT BOREHOLE WILL BE USED FOR INSTALLING THE WELLS.

3. THE WELLS WILL BE INSTALLED BY A LICENSED WATER-WELL CONTRACTOR AND THE INSTALLATION SUPERVISED BY A GEOLOGIST OR ENGINEER. WE RECOMMEND INSTALLING THE WELLS USING HOLLOW-STEM AUGERS. BEFORE THE WELLS ARE DRILLED OR INSTALLED, ALL DRILLING EQUIPMENT WILL BE DECONTAMINATED BY STEAM CLEANING.

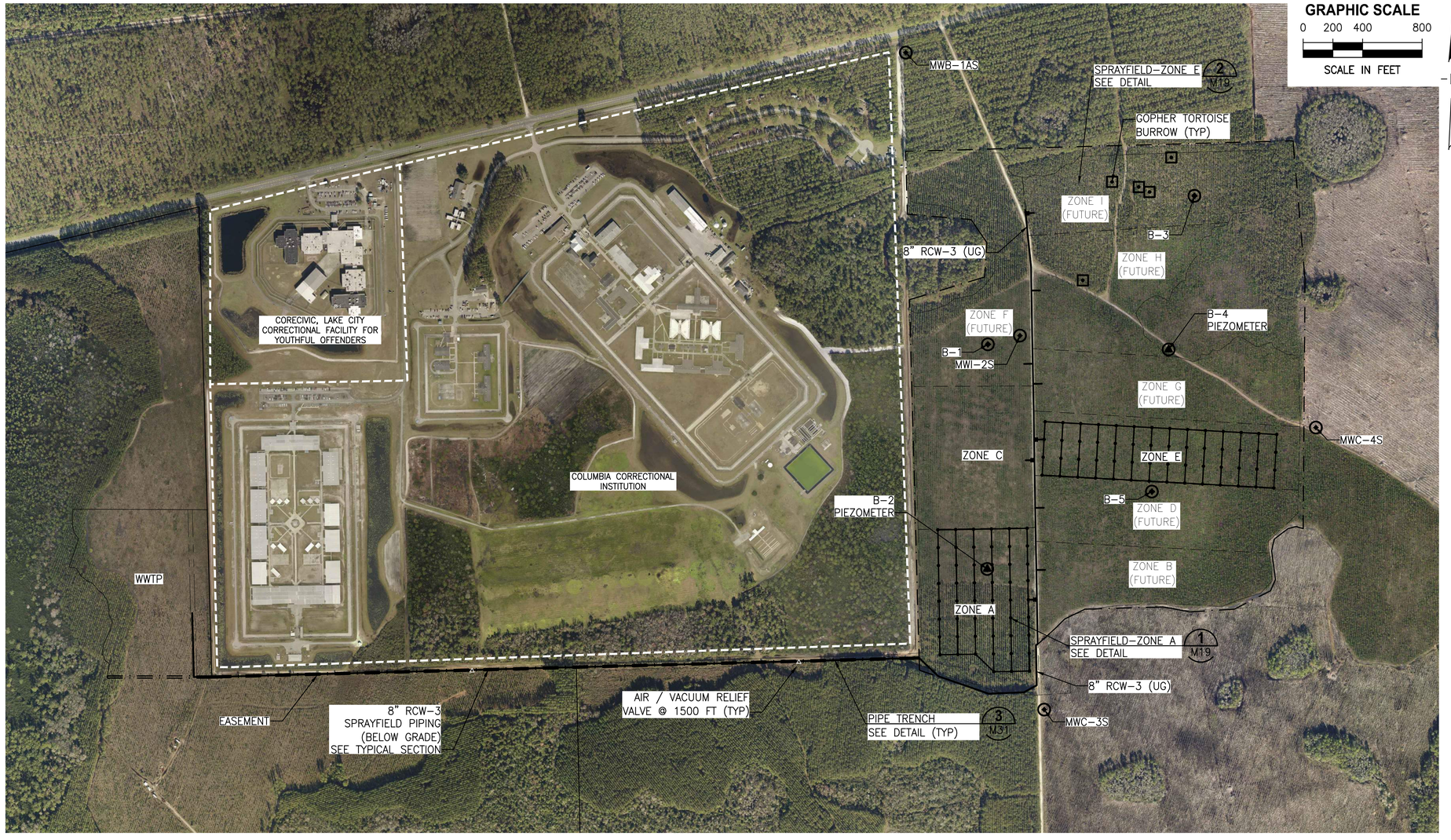
4. THE WELLS WILL BE 2 INCHES IN DIAMETER AND WILL BE CONSTRUCTED USING SCHEDULE 40 PVC PIPE WITH THREADED COUPLINGS. THE WELL SCREEN WILL CONSIST OF APPROXIMATELY 10 FEET OF 0.010-INCH SLOTTED PVC SCREEN. THE TOTAL DEPTH OF THE WELL SHOULD BE APPROXIMATELY 20 TO 30 FT-BLS.

5. THE ANNULAR SPACE FOR THE WELLS WILL BE PACKED WITH 20/30 SILICA FILTER SAND THAT SHOULD EXTEND AT LEAST 2 FEET ABOVE THE TOP OF THE WELL SCREEN. A 30/60 FINE-SILICA-SAND SEAL AND/OR BENTONITE SEAL WILL BE PLACED ABOVE THE FILTER PACK TO A MINIMUM THICKNESS OF 2 FEET. THE REMAINING ANNULAR SPACE ABOVE THE SEAL SHOULD BE GROUTED WITH CEMENT/BENTONITE GROUT (MAXIMUM 4-PERCENT BENTONITE) TO A MINIMUM OF 1 FT-BLS.

6. THE WELLS CASING SHOULD EXTEND APPROXIMATELY 2.5 FEET ABOVE GROUND SURFACE, AND A 1/8-INCH VENT HOLE SHOULD BE DRILLED AT THE TOP OF EACH WELL CASING. A LOCKING PROTECTIVE COVER AND CONCRETE PAD MEASURING 2 FEET BY 2 FEET BY 6 INCHES WILL BE INSTALLED AROUND THE WELL HEAD. TWO BOLLARDS SHALL BE INSTALLED IN FRONT OF EACH INSTALLATION. ALL WELLS SHALL BE LABELED. THE TOC ELEVATION AND HORIZONTAL LOCATION WILL BE SURVEYED BY A FLORIDA-REGISTERED SURVEYOR. THE MONITORING WELL WILL BE DEVELOPED USING THE PUMP-AND-SURGE METHOD UNTIL THE WELL PRODUCES CLEAN, CLEAR, SAND-FREE WATER.

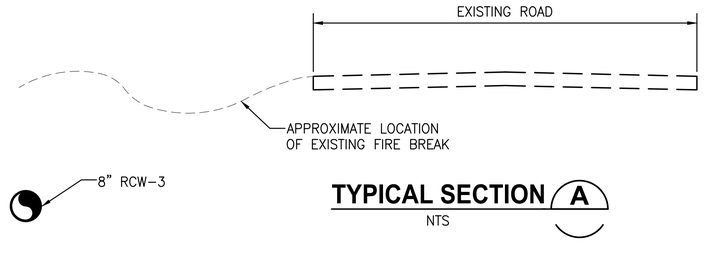
7. THE TWO PIEZOMETERS SHALL BE PLUGGED IN ACCORDANCE WITH F.A.C. 40B-3 BY FILLING THEM FROM BOTTOM TO TOP WITH GROUT. THE PLUGGING SHALL BE TO RESTORE OR IMPROVE THE HYDROLOGIC CONDITIONS WHICH EXISTED BEFORE THE WELL WAS CONSTRUCTED. THE WORK SHALL BE ACCOMPLISHED BY A LICENSED WATER WELL CONTRACTOR.

8. CONTRACTOR TO PROVIDE FOUR ADVISORY SIGNS TO DESIGNATE PROJECT IS A "PART II RESTRICTED ACCESS RECLAIM WATER SPRAYFIELD." POST AND INSTALL SIGNS AT SITE BOUNDARIES/ROADWAY ENTRANCES. CONSULT WITH ENGINEER FOR FINAL LOCATION.



SPRAYFIELD PLAN

1"=400'



TYPICAL SECTION A

NTS

VE GMP-2

LTR.	DATE	REVISIONS	BY	APPRD.
VE	11/2022	VE GMP-1	LYC	TWF

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CHECKED SMENARD

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NORTH FLORIDA MEGA INDUSTRIAL PARK
WASTEWATER TREATMENT PLANT
COLUMBIA COUNTY, FLORIDA

SPRAYFIELD PLAN

Thomas W. Friedrich, State of Florida, Professional Engineer, License No. 61281

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PROJECT NO: 03780-001-01
DATE: DEC. 2022
INDEX NO:
DWG NO: M18

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SPRAYFIELD NOTES:

1. DRAWING M18 SHOWS THE SPRAYFIELD PLAN AND THE APPROXIMATE IRRIGATION ZONES.

2. SPRAYFIELD BOUNDARY IS PROVIDED FOR GRAPHICAL PURPOSES ONLY. THE DATA PROVIDED ON THE DRAWING IS THE PRELIMINARY EASEMENT PROVIDED BY WEYERHAUSER AND DOES NOT REPRESENT A SURVEY.

3. THE CONTRACTOR SHALL SURVEY AND STAKE THE SPRAYFIELD EASEMENT BOUNDARY ON THE SITE PRIOR TO CONSTRUCTING THE RECLAIMED WATER MAIN OR SPRAYFIELD IRRIGATION SYSTEM.

4. THE SPRAYFIELD HAS 9 IRRIGATION ZONES WHICH ARE 18 +/– 2.5 ACRES. THE CONTRACTOR WILL INSTALL THREE ZONES (A, C, AND E) AS PART OF THIS CONTRACT. ZONES B, D, F, G, H AND I WILL BE INSTALLED IN THE FUTURE.

5. THE SPRAYFIELD BOUNDARY AND ZONES WERE DRAWN TO PROVIDE A 50 FT BUFFER FROM WETLANDS AS SHOWN ON DRAWING M18.

6. THE IRRIGATION SYSTEM WITHIN EACH IRRIGATION ZONE CONSISTS OF A LOOPED ABOVEGROUND PIPING SYSTEM WITH LATERALS FEEDING FIXED SPRAYHEADS.

7. ALL SPRAYFIELD PIPING SHALL BE HIGH DENSITY POLYETHYLENE (HDPE) AND SHALL MEET THE FOLLOWING SPECIFICATIONS:

   A. HDPE RESIN USED IN THE MANUFACTURE OF THE HDPE PIPE AND FITTINGS SHALL BE A HIGH DENSITY, EXTRA-HIGH MOLECULAR WEIGHT RESIN THAT IS CLASSIFIED AS A TYPE III, GRADE P34, CLASS C, CATEGORY 5, BY ASTM D1248. CELL CLASSIFICATION BY ASTM 3350 SHALL BE 345434C AND SHALL BE RATED AS PE 3408 BY THE PLASTIC PIPE INSTITUTE.

   B. THE HDPE PIPE SHALL HAVE AN OUTSIDE DIAMETER THAT CORRESPONDS TO THAT OF STEEL PIPE (IPS) OF THE SAME NOMINAL DIAMETER.

   C. THE HDPE PIPE SHALL HAVE THE DIMENSION RATIOS SPECIFIED AS FOLLOWS AND BE MANUFACTURED BY PLEXCO, DRISCOPIPE OR AN APPOVED EQUAL.

   D. ALL HDPE PIPE 2 INCH TO 6 INCH SHALL BE DR 17 AND INSTALLED ABOVE GRADE. ALL HDPE PIPE 8 INCH SHALL BE DR 11 AND INSTALLED BELOW GRADE.

   E. ALL HDPE FITTINGS AND ADAPTERS SHALL BE RATED FOR THE FULL WORKING PRESSURE OF THE HDPE PIPING.

   F. ALL REQUIRED REDUCERS, TEES AND FITTINGS ARE NOT SHOWN. PIPING SIZE CHANGES SHALL BE MADE AT PIPING JUNCTIONS WITH JUNCTION FITTINGS (E.G. TEES) OF SAME SIZE AS THE LARGEST CONNECTED LINE AND REDUCERS SIZED AS REQUIRED.

   G. THE MINIMUM ALLOWABLE BENDING RADIUS FOR ALL HDPE PIPING SHALL BE 25% IN EXCESS OF THE MANUFACTURER'S RECOMMENDED MINIMUM VALUE.

8. SPRAYHEAD IS SENNINGER MODEL 7025RD-1 WITH ¼ INCH NOZZLE (#16), OR APPROVED EQUAL. SPRAYHEAD WILL BE MOUNTED AT 6 FT HEIGHT, TO PROVIDE A SPRAY DIAMETER OF 131 FT AT A BASE PRESSURE OF 50 PSI W/ FLOW OF 10 GPM/HEAD.

9. THIS DRAWING SHOWS A TYPICAL PIPING LAYOUT FOR ZONE A. THE CONTRACTOR WILL FIELD LOCATE THE SPRAYHEADS TO MEET THE FOLLOWING DESIGN CRITERIA:

   A. SPRAYHEADS GRID SPACING AT 120 FT X 120 FT.

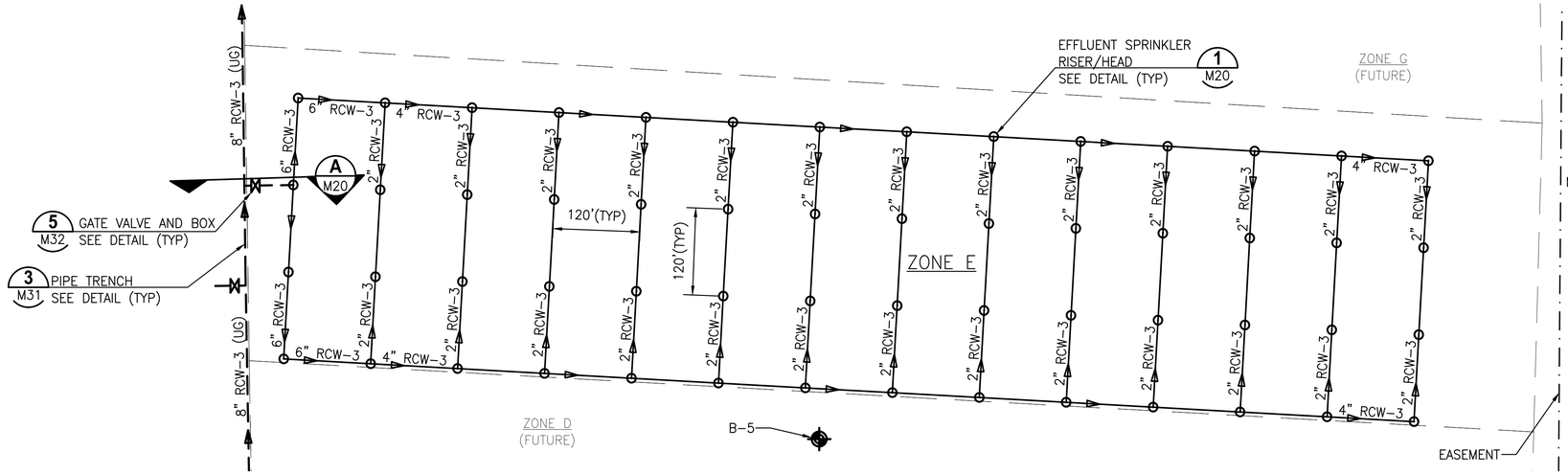
   B. SPRAYHEADS WILL BE INSTALLED TO MAINTAIN A 50 FT BOUNDARY TO THE OUTER PERIMETER OF THE SPRAYFIELD.

   C. THE ZONES WILL BE CONTROLLED BY A SINGLE VALVE LOCATED ALONG THE EXISTING FORESTRY ROAD THROUGH THE CENTER OF THE SPRAYFIELD.

   D. THE CONTRACTOR WILL FIELD ADJUST THE SPRAYHEADS SO THAT THEY ARE PLACED 170 FT FROM GOPHER TORTOISE BURROWS. THE KNOWN BURROWS ARE LOCATED ON DRAWING M18. THE CONTRACTOR WILL INFORM THE ENGINEER IF ANY ADDITIONAL BURROWS OR SUSPECTED BURROWS ARE NOTED DURING CONSTRUCTION.

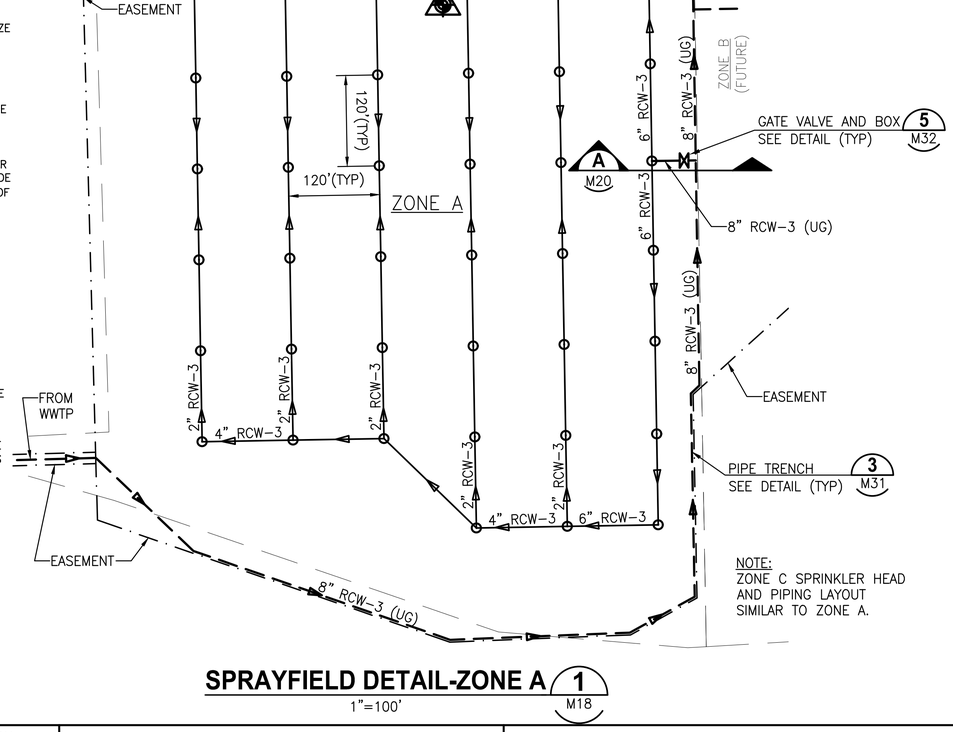
10. PIEZOMETERS AND SOIL BORINGS SHALL BE PLUGGED IN ACCORDANCE WITH F.A.C. 40B-3 BY FILLING THEM FROM BOTTOM TO TOP WITH GROUT. THE PLUGGING SHALL BE TO RESTORE OR IMPROVE THE HYDROLOGIC CONDITIONS WHICH EXISTED BEFORE THE WELL WAS CONSTRUCTED. THE WORK SHALL BE ACCOMPLISHED BY A LICENSED WATER WELL CONTRACTOR.

11. CONTRACTOR TO NOTIFY OWNER AND ENGINEER 14-DAYS PRIOR TO INSTALLATION OF GROUNDWATER MONITORING WELLS AND FOLLOW CONSTRUCTION AND TESTING REQUIREMENTS IN SECTION III A., 1 THROUGH 7 FROM PERMIT CONDITIONS IN FDEP WWTF OPERATING PERMIT NUMBER: FLAB07233.



SPRAYFIELD DETAIL-ZONE E 2 M18

1"=100'



SPRAYFIELD DETAIL-ZONE A 1 M18

1"=100'

VE GMP-2

				DESIGNED	TFRIEDRICH
				DRAWN	JKRAMER
VE	11/2022	VE GMP-1	LYC	TWF	CHECKED SMENARD
LTR.	DATE	REVISIONS	BY	APPRD.	

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NORTH FLORIDA MEGA INDUSTRIAL PARK
WASTEWATER TREATMENT PLANT
COLUMBIA COUNTY, FLORIDA

SPRAYFIELD DETAILS

Thomas W. Friedrich, State of Florida, Professional Engineer, License No. 61281

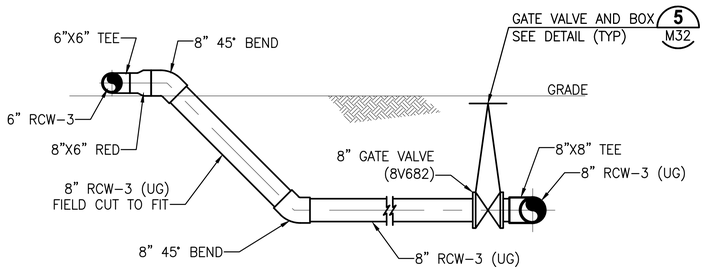
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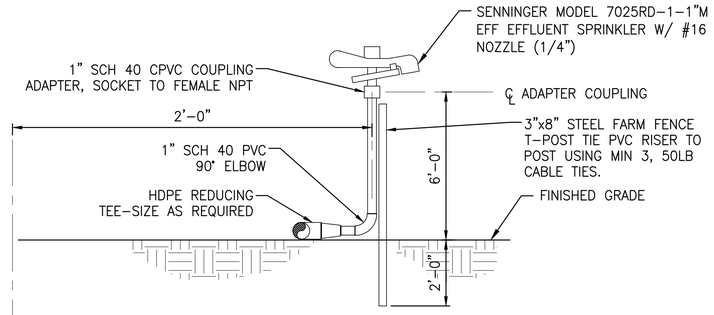
PROJECT NO:	DATE:
03780-001-01	DEC. 2022
INDEX NO:	DWG NO: M19

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SECTION A
NTS
###



TYPICAL EFFLUENT SPRINKLER RISER/HEAD DETAIL 1
NTS
–

VE GMP-2

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WASTEWATER TREATMENT PLANT
COLUMBIA COUNTY, FLORIDA

SPRAYFIELD DETAILS

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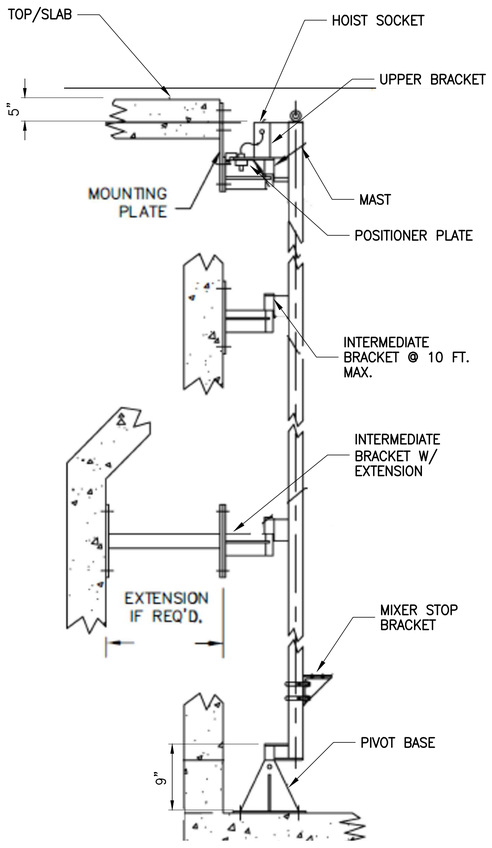
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DWG NO: M20

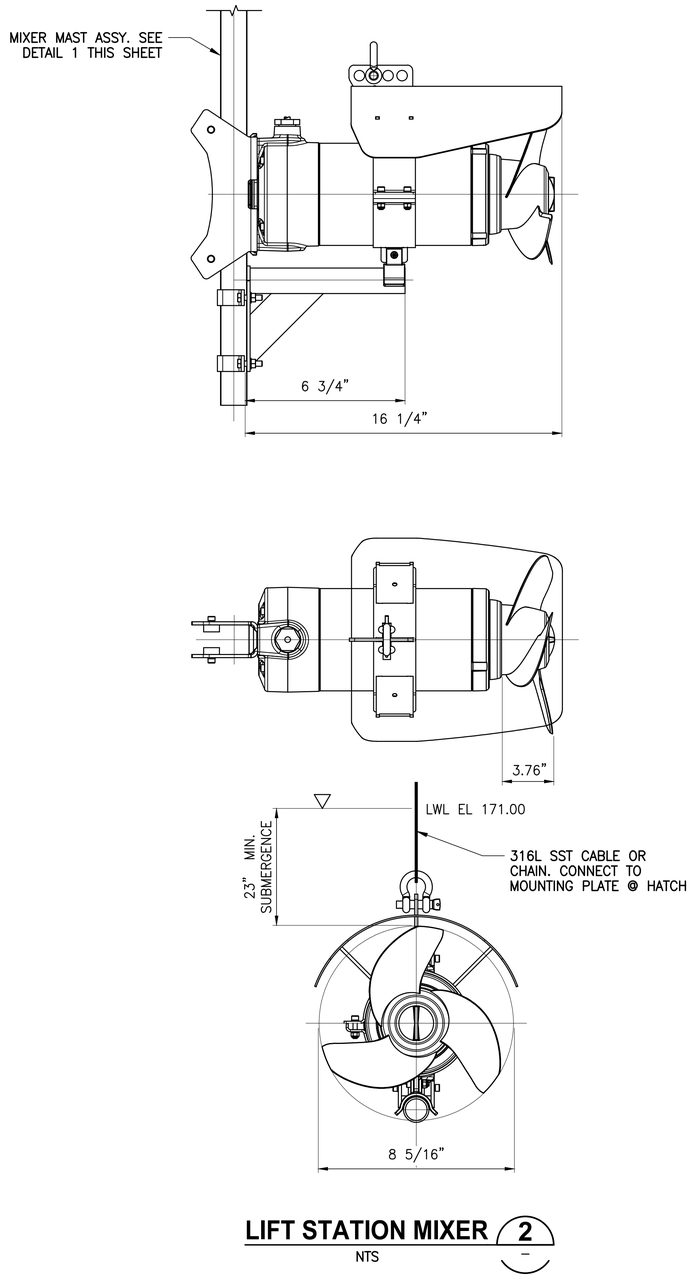
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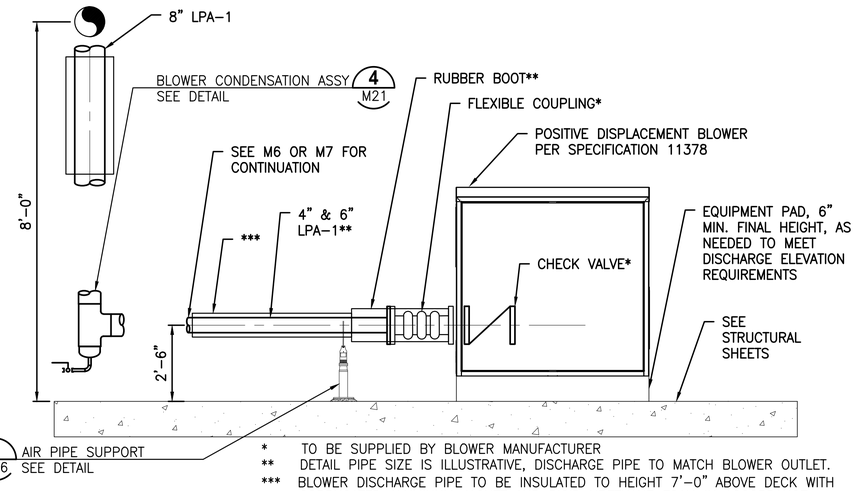
STAINLESS STEEL MIXER MAST ASSEMBLY 1

NTS



LIFT STATION MIXER 2

NTS



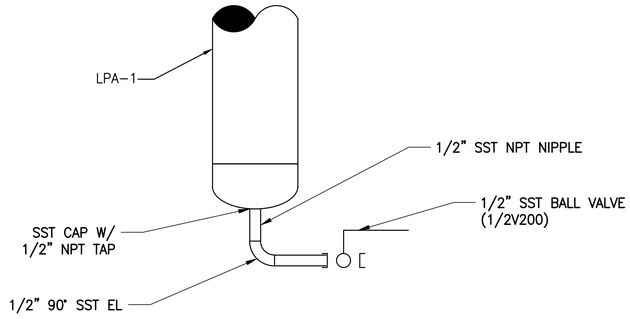
* TO BE SUPPLIED BY BLOWER MANUFACTURER

** DETAIL PIPE SIZE IS ILLUSTRATIVE, DISCHARGE PIPE TO MATCH BLOWER OUTLET.

*** BLOWER DISCHARGE PIPE TO BE INSULATED TO HEIGHT 7'-0" ABOVE DECK WITH CORRUGATED ALUMINUM JACKET AND RIGID URETHANE FOAM IN ACCORDANCE WITH SPECIFICATION 15080.

POSITIVE DISPLACEMENT BLOWER DETAIL 3

NTS



NOTE:

VERTICAL SECTIONS OF PIPE SHALL HAVE BLOWER CONDENSATION ASSEMBLY AT THE LOWEST PORTION OF THE PIPE RISE TO ALLOW FOR DRAINING OF CONDENSATE

BLOWER CONDENSATION ASSEMBLY DETAIL 4

NTS

VE GMP-2

LTR.	DATE	REVISIONS	BY	APPRD.
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COLUMBIA COUNTY, FLORIDA

MECHANICAL DETAILS

Thomas W. Friedrich, State of Florida, Professional Engineer, License No. 61281

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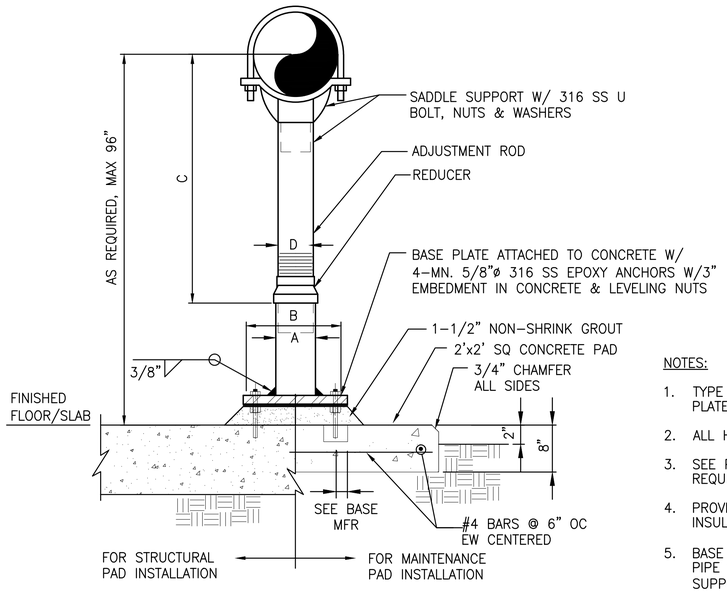
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PROJECT NO: 03780-001-01
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DWG NO: M21

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PIPE SUPPORT DIMENSION TABLE

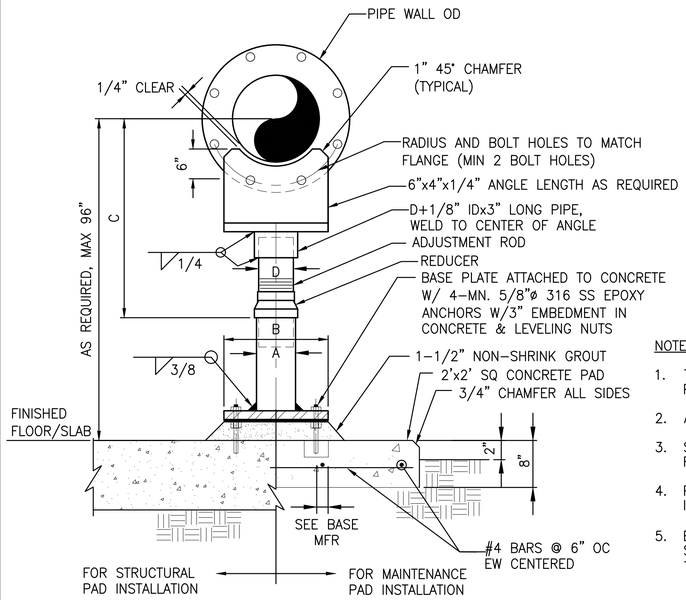
PIPE SIZE	A	B	C MIN	C MAX	D
INCHES					
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5	4	9	10	14 3/4	3
6	4	9	10 1/2	15 1/4	3
8	4	9	11 3/4	16 1/2	3
10	4	9	13 1/2	18 1/4	3
12	4	9	15	19 3/4	3
14	4	11	16 1/4	20 3/4	3
16	4	11	17 3/4	22 1/4	3
18	6	13 1/2	19 1/2	24	4
20	6	13 1/2	21	25 1/2	4
24	6	13 1/2	23 3/4	28 1/4	4

NOTES:

1. TYPE 1 PIPE SUPPORT: PIPE SADDLE, ADJUSTMENT ROD, BASE PLATE, ETC. SHALL BE 316L SS.
2. ALL HARDWARE SHALL BE 316 SS.
3. SEE PLANS AND SECTIONS FOR PIPE CENTERLINE ELEVATION REQUIREMENTS.
4. PROVIDE RIGID INSULATION PROTECTION SHIELD WHERE PIPING IS INSULATED.
5. BASE PLATES SHALL BE SQUARE AND BE 3/8–INCH THICK FOR PIPE SIZES THROUGH 10–INCH. FOR ALL LARGER PIPES BEING SUPPORTED, THE BASE PLATES SHALL BE 1/2–INCH THICK.

PIPE SUPPORT - U-BOLT TYPE 1

NTS



PIPE SUPPORT DIMENSION TABLE

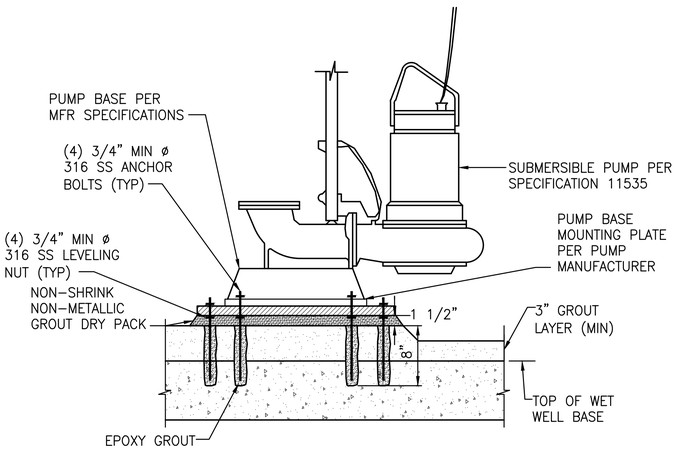
PIPE SIZE	A	B	C MIN	C MAX	D
INCHES					
4	4	9	9 1/4	14	3
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8	4	9	11 3/4	16 1/2	3
10	4	9	13 1/2	18 1/4	3
12	4	9	15	19 3/4	3
14	4	11	16 1/4	20 3/4	3
16	4	11	17 3/4	22 1/4	3
18	6	13 1/2	19 1/2	24	4
20	6	13 1/2	21	25 1/2	4
24	6	13 1/2	23 3/4	28 1/4	4

NOTES:

1. TYPE 1 PIPE SUPPORT: PLATE, PIPE SADDLE, ADJUSTMENT ROD, BASE PLATE, ETC. SHALL BE 316L SS.
2. ALL HARDWARE SHALL BE 316 SS.
3. SEE PLANS AND SECTIONS FOR PIPE CENTERLINE ELEVATION REQUIREMENTS.
4. PROVIDE RIGID INSULATION PROTECTION SHIELD WHERE PIPING IS INSULATED.
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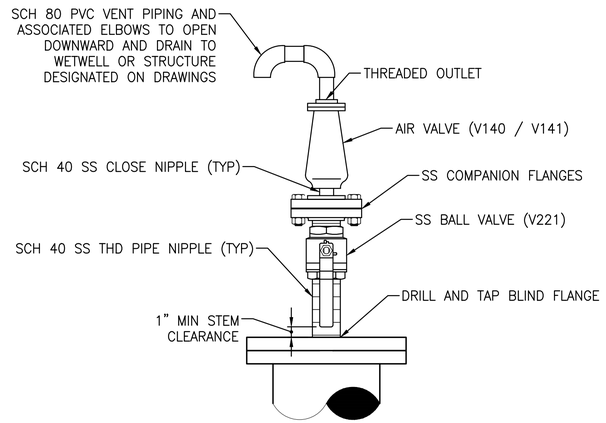
PIPE SUPPORT - FLANGE TYPE 2

NTS



PUMP BASE DETAIL 3

NTS



NOTES:

1. SEE DRAWINGS FOR AIR VALVE TYPE AND INLET DIAMETER.
2. BALL VALVE AND NIPPLES SHALL HAVE THE SAME DIAMETER AS THE AIR VALVE INLET.
3. VERIFY SIZE OF VALVE PRIOR TO ORDERING ANCILLARY PARTS, DRILLING OR TAPPING.

FLANGE MOUNTED AIR RELEASE VALVE 4

NTS

VE GMP-2

LTR.	DATE	REVISIONS	BY	APPRD.
VE	11/2022	VE GMP–1	LYC	TWF

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NORTH FLORIDA MEGA INDUSTRIAL PARK
WASTEWATER TREATMENT PLANT
COLUMBIA COUNTY, FLORIDA

MECHANICAL DETAILS

Thomas W. Friedrich, State of Florida, Professional Engineer, License No. 61281

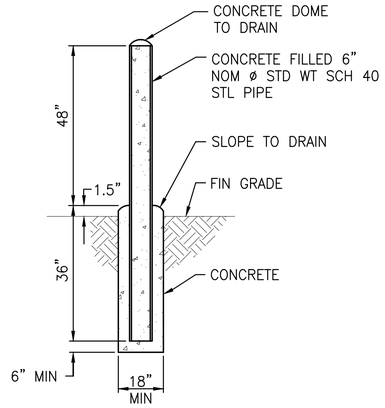
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PROJECT NO: 03780–001–01
DATE: DEC. 2022
INDEX NO:
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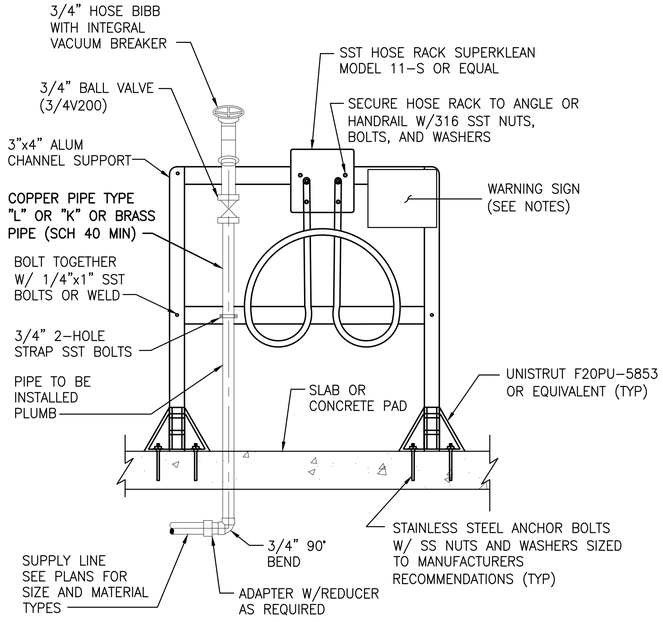


NOTES:

A. ACTUAL INSTALLATION LOCATION OF EACH BOLLARD SHALL BE AS SHOWN ON THE DRAWINGS OR AS DIRECTED IN THE FIELD.

B. PAINT ALL PIPING MATERIALS OSHA SAFETY YELLOW.

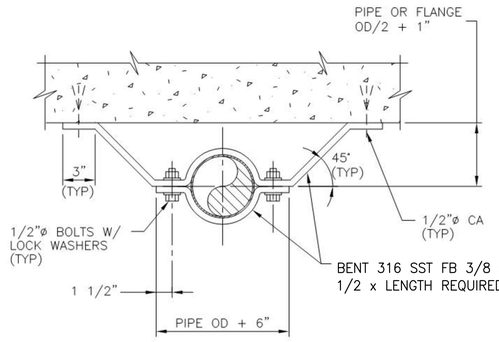
BOLLARD DETAIL 1
NTS



NOTES:

1. PROVIDE 50FT HEAVY DUTY 3/4" HOSE FOR EACH LOCATION.

HOSE BIBB DETAIL 2
NTS



NOTE:

1. ALL HARDWARE IN LIFT STATION WET WELLS SHALL BE 316 STAINLESS STEEL

WALL PIPE SUPPORT DETAIL 3
NTS

VE GMP-2

LTR.	DATE	REVISIONS	BY	APPRD.
VE	11/2022	VE GMP-1	LYC	TWF

DESIGNED TFRIEDRICH
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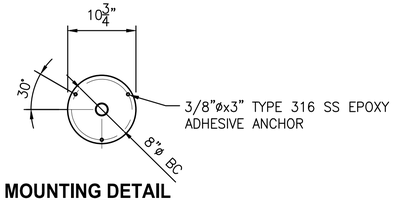
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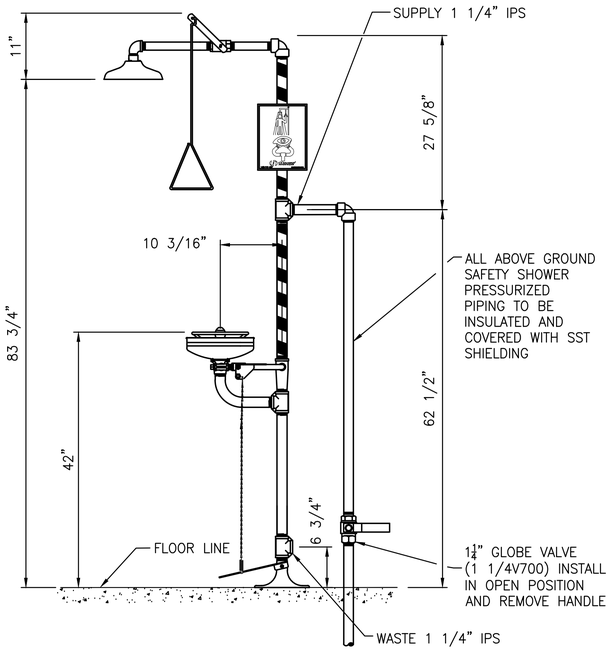
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DATE: DEC. 2022
INDEX NO:
DWG NO: M23

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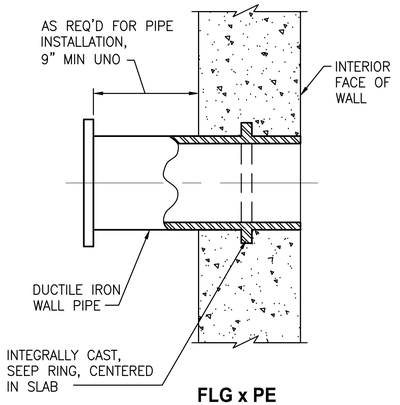


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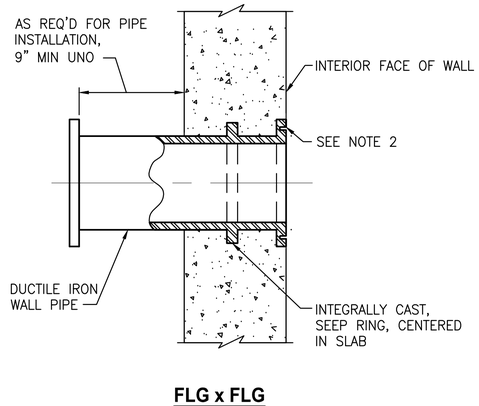


NOTES:
1. DIMENSIONS MAY VARY 1/2"±.
2. EMERGENCY SHOWER AND EYE WASH STATIONS SHALL BE HAWS MODEL 8336 (OR EQUAL). ALL ASSOCIATED PIPING SHALL BE SCH 80 PVC UNO.
3. MOUNTING PER MANUFACTURER'S RECOMMENDATIONS.
4. PROVIDE 3/4" THICK (NOMINAL) NON-SHRINK NON-METALLIC EPOXY GROUT AS NECESSARY TO PROVIDE LEVEL/ PLUMB INSTALLATION.

EMERGENCY SHOWER AND EYEWASH DETAIL 1
NTS



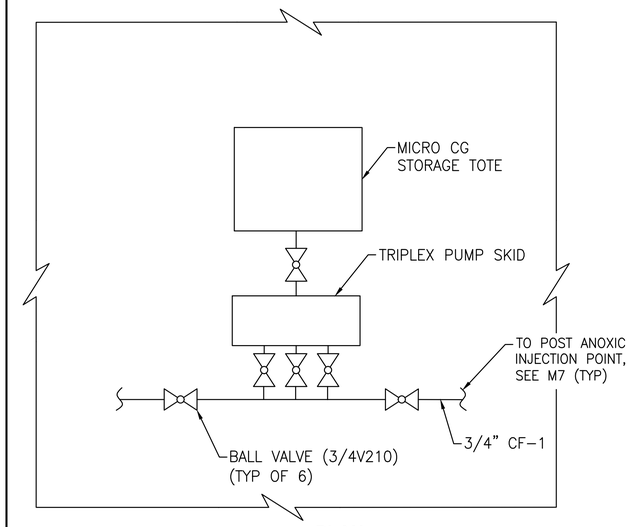
FLG x PE



FLG x FLG

NOTES:
1. COAT WALL PIPE WITH SPECIFIED PAINT SYSTEM PRIOR TO CONCRETE PLACEMENT.
2. DRILL AND TAP FLANGE TO RECEIVE THREADED BOLTS.

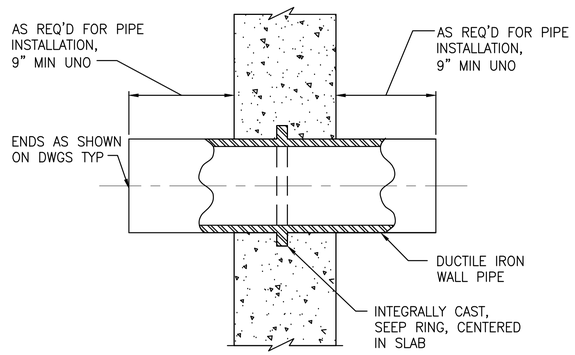
TYPICAL WALL PIPE (FLUSH MOUNTED) DETAIL 2
NTS



PLAN

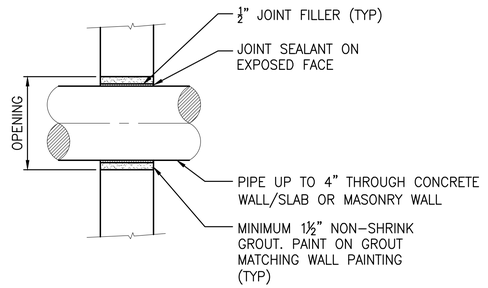
NOTES:
1. SEE SHEET M7 FOR LOCATION.
2. ATTACH TO WALL OF TANK OR WALKWAY W/ PIPE SUPPORT. SEE DETAIL. (2 / M29)
3. CARBON FEED PUMPS (No. 1, 2, 3) SHALL BE ELECTRONIC MECHANICALLY ACTUATED DIAPHRAGM PUMPS AS SPECIFIED IN SPECIFICATION 11290.
4. A 3/4V1196 CONTROL VALVE SHALL BE INSTALLED AT AN ACCESSIBLE LOCATION NEAR THE DISCHARGE POINT FOR EACH TANK.

CARBON FEED PUMP SKID DETAIL 3
NTS



NOTE:
1. COAT WALL PIPE WITH SPECIFIED PAINT SYSTEM PRIOR TO CONCRETE PLACEMENT.

TYPICAL WALL PIPE DETAIL 4
NTS



SMALL DIAMETER PENETRATION DETAIL 5
NTS

VE GMP-2

LTR.	DATE	REVISIONS	BY	APPRD.
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DRAWN JKRAMER
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WASTEWATER TREATMENT PLANT
COLUMBIA COUNTY, FLORIDA

MECHANICAL DETAILS

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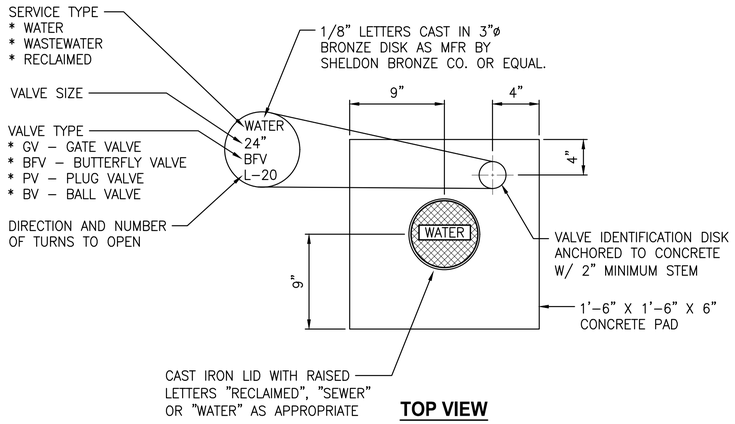
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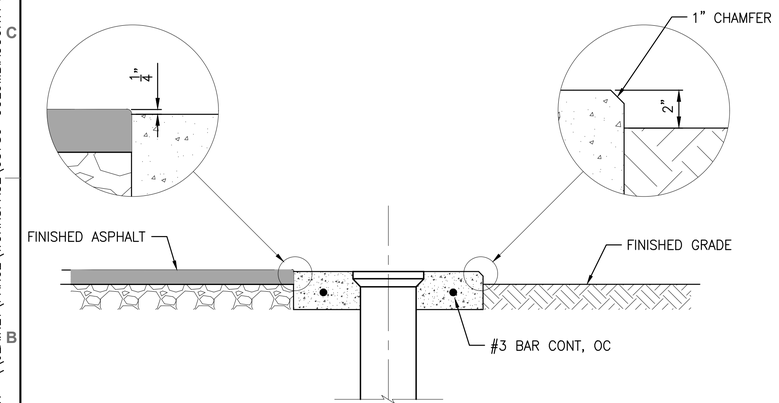
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DATE: DEC. 2022
INDEX NO:
DWG NO: M24

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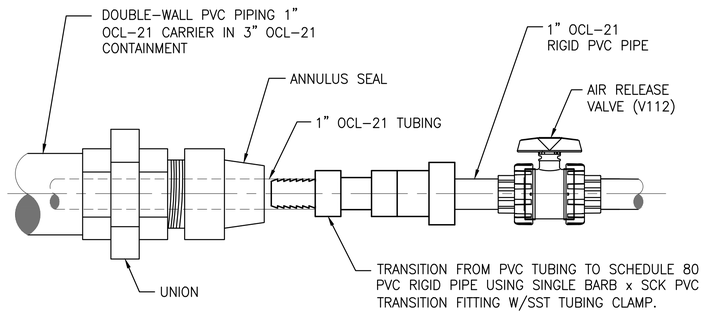


TOP VIEW



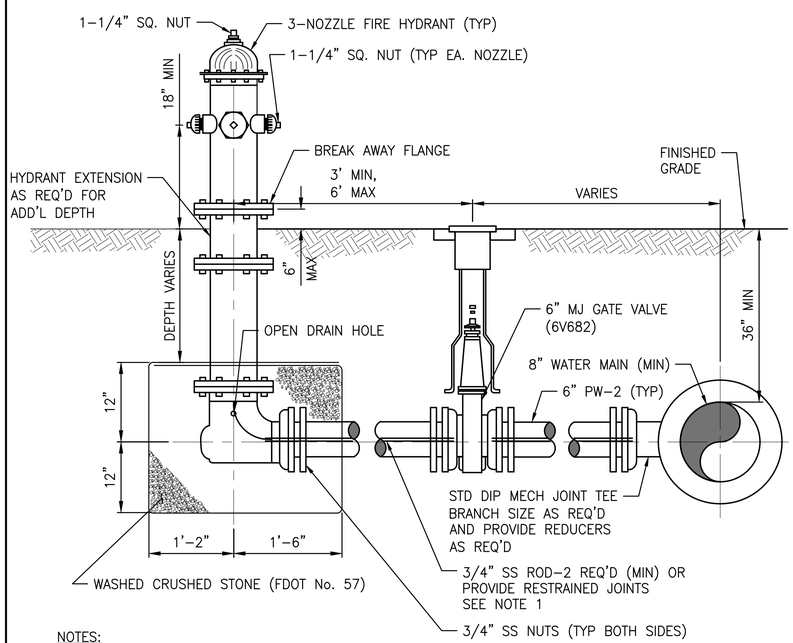
VALVE COLLAR W/ I.D. DISC DETAIL 1

NTS



CHEMICAL INJECTION TRANSITION DETAIL 2

NTS

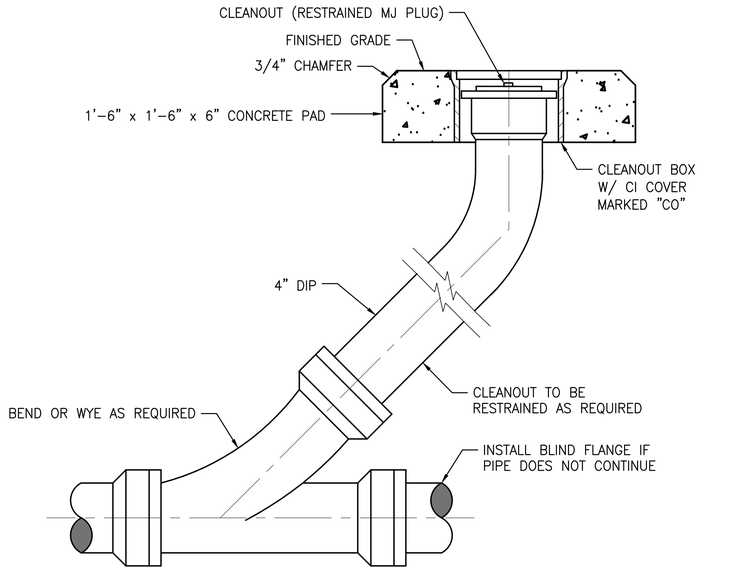


NOTES:

1. 3/4" STAINLESS STEEL ROD CUT AND THREADED AS REQUIRED, OR PROVIDE RESTRAINED JOINTS.
2. FIRE HYDRANTS SHALL BE INSTALLED AS SHOWN ON THE DRAWINGS OR AS DIRECTED IN FIELD.
3. TIE RODS, NUTS, WASHERS AND OTHER FASTENERS SHALL BE TYPE 316 STAINLESS STEEL
4. 4 1/2" PUMPER NOZZLE TO BE PERPENDICULAR TO CENTERLINE OF MAIN.
5. FIRE HYDRANT ASSEMBLY INCLUDES ALL THAT IS SHOWN INCLUDING DI PIPE TO MAIN, DIP TEE AT MAIN, HYDRANT, REDUCERS, VALVE, HYDRANT EXTENSIONS, VALVE EXTENSIONS, ALL PIPING AND MISCELLANEOUS APPURTENANCES REQUIRED FOR A COMPLETE INSTALLATION.

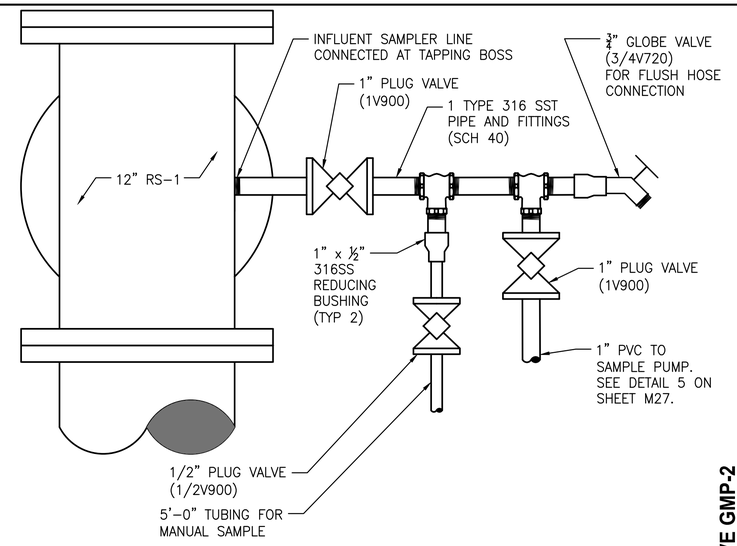
FIRE HYDRANT ASSEMBLY DETAIL 4

NTS



SEWER CLEANOUT DETAIL 3

NTS



INFLUENT SAMPLER PRESSURE FEED ASSEMBLY DETAIL 5

NTS

VE GMP-2

LTR.	DATE	REVISIONS	BY	APPRD.
VE	11/2022	VE GMP-1	LYC	TWF

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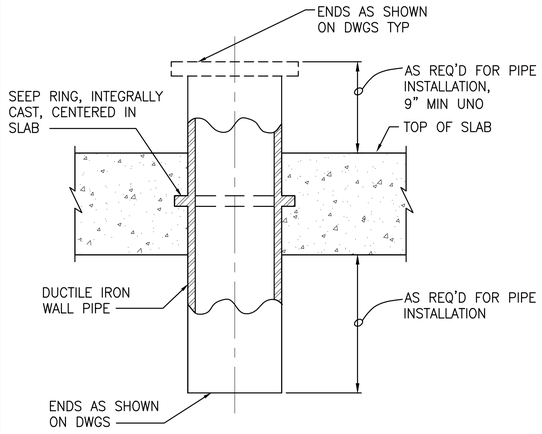
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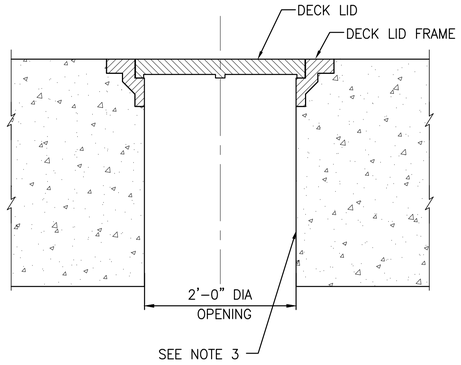
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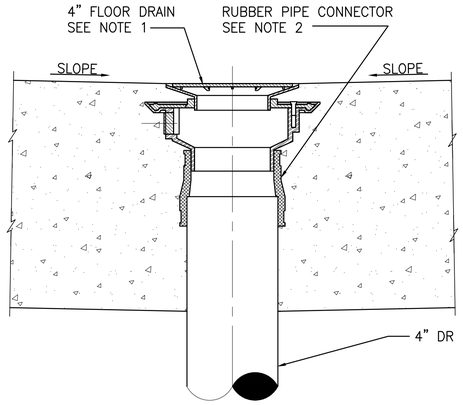
NOTE:
1. COAT FLOOR PIPE WITH SPECIFIED PAINT SYSTEM PRIOR TO CONCRETE PLACEMENT.

TYPICAL FLOOR PIPE DETAIL 1
NTS



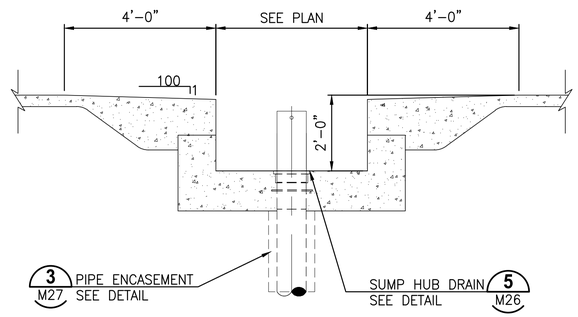
NOTES:
1. DECK LID AND FRAME SHALL BE CATALOG No R-6003 AS FABRICATED BY NEENAH FOUNDRY OR EQUAL.
2. COAT LID AND FRAME WITH SPECIFIED PAINT SYSTEM.
3. COAT CONCRETE SURFACES WITH SPECIFIED PAINT OR LINING SYSTEM.

TYPICAL DECK LID DETAIL 2
NTS

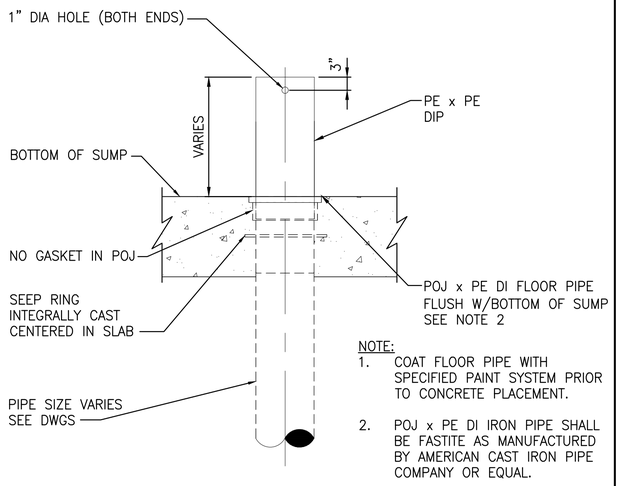


NOTES:
1. FLOOR DRAIN SHALL BE JOSAM MODEL N 30000-SS-Z OR EQUAL WITH EPOXY COATING AND NO-HUB SPIGOT OUTLET.
2. RUBBER PIPE CONNECTOR SHALL B FERNCO, INC. SERIES 1051 OR EQUAL. ALL CLAMPS AND HARDWARE SHALL B AISI TYPE 304SS.

TYPICAL FLOOR DRAIN DETAIL 3
NTS

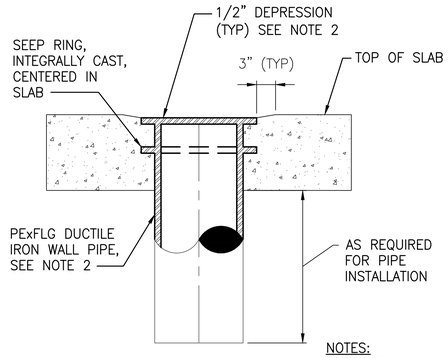


TYPICAL SUMP FLOOR DRAIN DETAIL 4
NTS

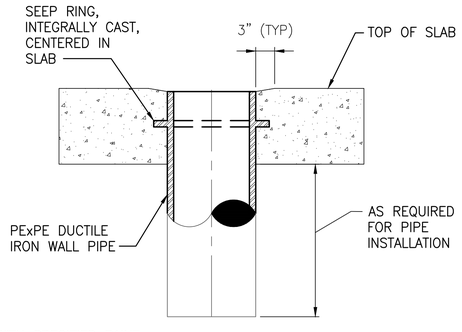


NOTE:
1. COAT FLOOR PIPE WITH SPECIFIED PAINT SYSTEM PRIOR TO CONCRETE PLACEMENT.
2. POJ x PE DI IRON PIPE SHALL BE FASTITE AS MANUFACTURED BY AMERICAN CAST IRON PIPE COMPANY OR EQUAL.

TYPICAL SUMP HUB DRAIN DETAIL 5
NTS



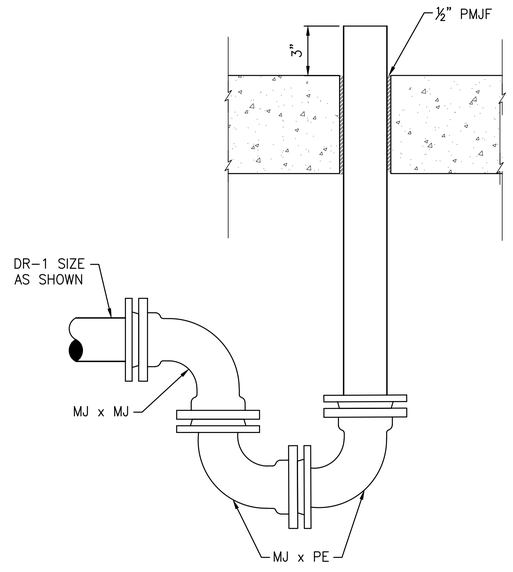
PE x FLG



PE x PE

NOTES:
1. COAT FLOOR PIPE WITH SPECIFIED PAINT SYSTEM PRIOR TO CONCRETE PLACEMENT.
2. DRILL AND TAP FLANGE TO RECEIVE THREADED BOLTS.

TYPICAL FLOOR PIPES (FLUSH MOUNTED) DETAIL 6
NTS



HUB DRAIN DETAIL 7
NTS

VE GMP-2

LTR.	DATE	REVISIONS	BY	APPRD.
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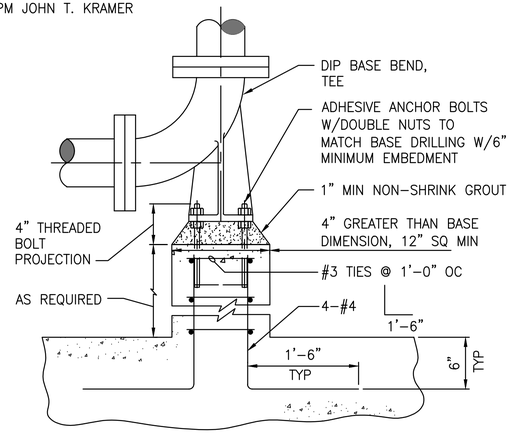
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INDEX NO:	DWG NO: M26

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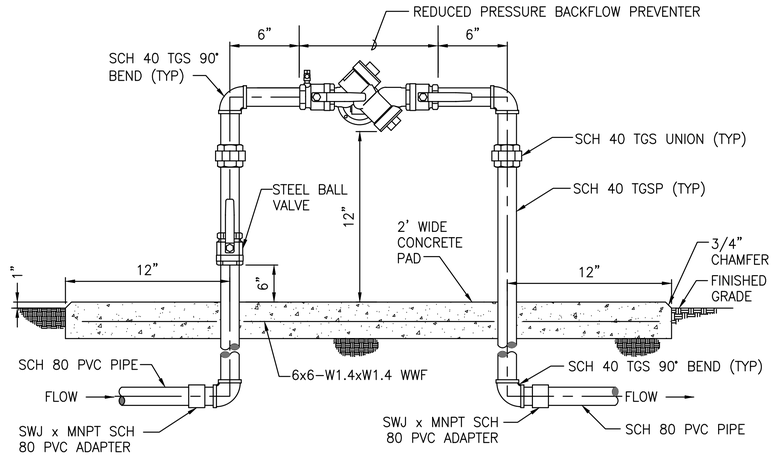


NOTE:
1. ALSO USE FOR SUPPORT OF HORIZONTAL TEE OR CROSS.

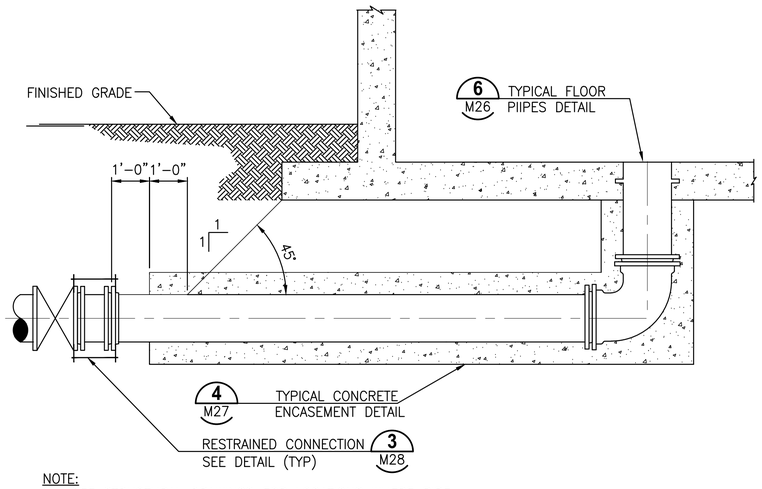
TYPICAL BASE BEND DETAIL 1
NTS

NOTES:

1. SIZE OF METER, ADAPTERS, ETC. SHALL BE THE SAME AS THE SERVICE LINE SHOWN ON THE PLAN.
2. INSULATE ABOVE GRADE PIPING AND BACKFLOW PREVENTER ASSEMBLY.
3. REDUCED PRESSURE BACKFLOW PREVENTER SHALL BE IN ACCORDANCE W/ SPECIFICATION 15145.
4. RESILIENT SEATED BALL VALVES REQUIRED ON ALL BACKFLOW PREVENTION DEVICES 2" AND SMALLER

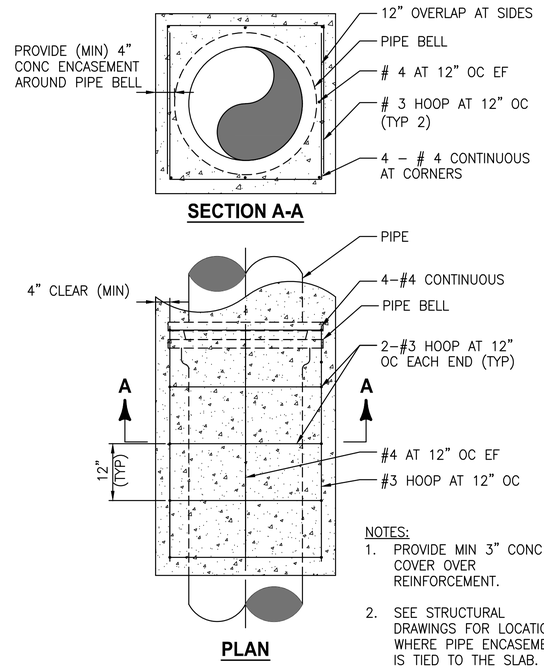


TYPICAL REDUCED PRESSURE BACKFLOW PREVENTER DETAIL 2
NTS



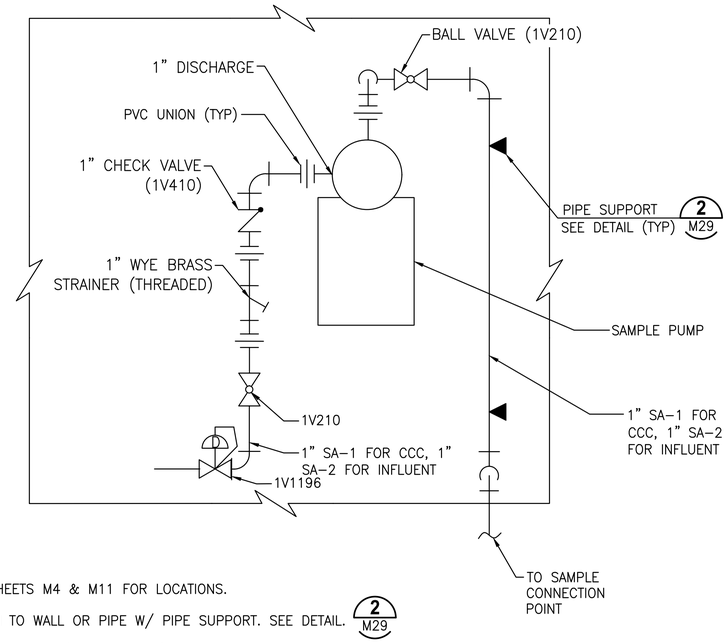
NOTE:
1. SEE STRUCTURAL DRAWINGS FOR LOCATIONS WHERE PIPE ENCASEMENT IS TIED TO THE SLAB.

TYPICAL PIPE ENCASEMENT DETAIL 3
NTS



NOTES:
1. PROVIDE MIN 3" CONC COVER OVER REINFORCEMENT.
2. SEE STRUCTURAL DRAWINGS FOR LOCATIONS WHERE PIPE ENCASEMENT IS TIED TO THE SLAB.

TYPICAL CONCRETE ENCASEMENT DETAIL 4
NTS



NOTES:

1. SEE SHEETS M4 & M11 FOR LOCATIONS.
2. ATTACH TO WALL OR PIPE W/ PIPE SUPPORT. SEE DETAIL. 2 M29
3. SAMPLE PUMPS (No.1, 2, 3, 4) SHALL BE SHALLOW WELL – STAINLESS STEEL, SELF-PRIMING END-SUCTION CENTRIFUGAL JET PUMPS WITH CERAMIC CARBON BELLOWS SEAL. 0.5 HP, 115 VAC, 1 PHASE MOTOR AS MANUFACTURED BY GRUNDFOS MODEL JP05-SS, OR ENGINEER APPROVED EQUAL.

PLAN

SAMPLE PUMP DETAIL 5
NTS

VE GMP-2

LTR.	DATE	REVISIONS	BY	APPRD.
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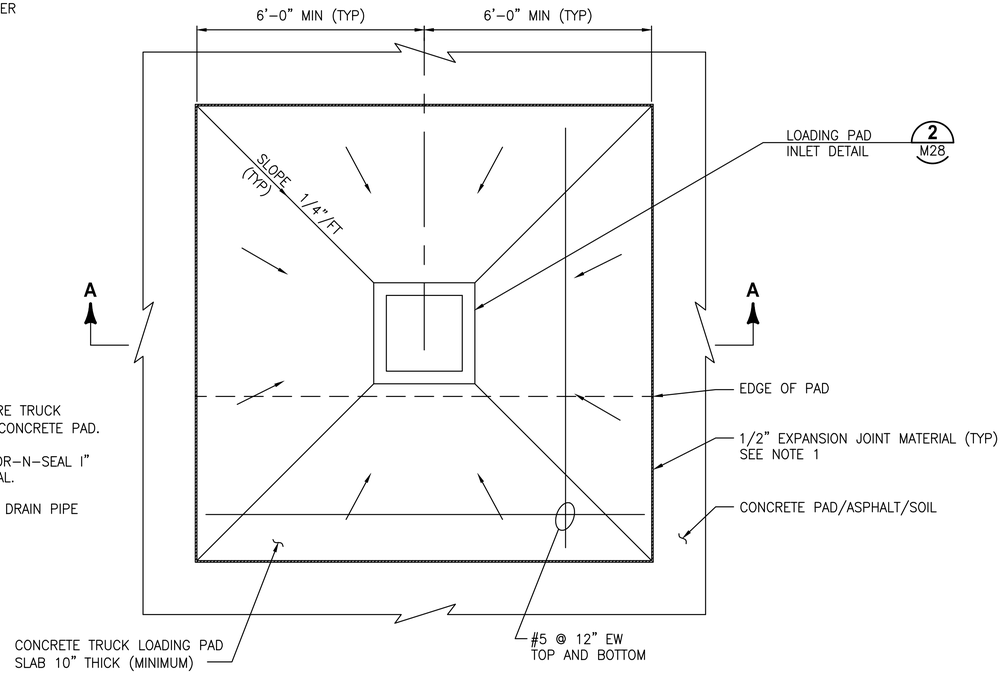
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DWG NO: M27

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PLOTTED: 12/22/2022 12:41 PM JOHN T. KRAMER

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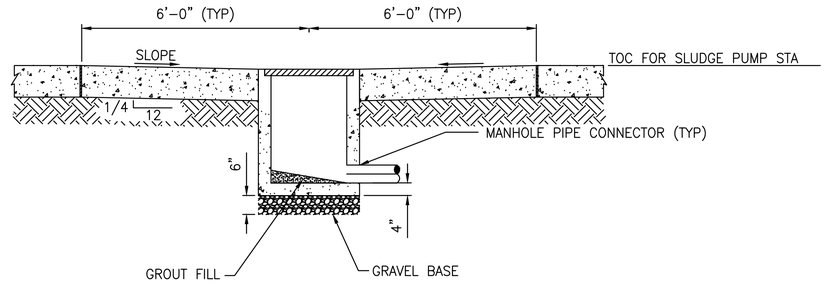
PLAN

NOTES:
1. PROVIDE EXPANSION JOINT MATERIAL WHERE TRUCK LOADING PAD ADJOINS AN EXISTING/NEW CONCRETE PAD.
2. MANHOLE PIPE CONNECTOR SHALL BE "KOR-N-SEAL I" AS MANUFACTURED BY NPC, INC OR EQUAL.
3. SEE STRUCTURAL DRAWINGS AND M7 FOR DRAIN PIPE SIZES, INVERTS AND RIM ELEVATIONS.

GRAPHIC SCALE

0 1 2 4

SCALE IN FEET

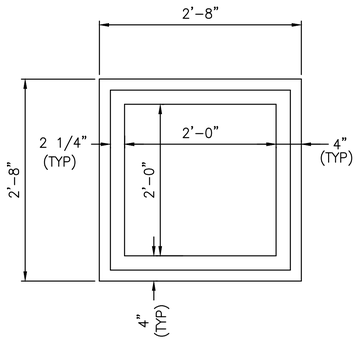


* SEE ELEVATION CALLOUTS ON DRAWINGS

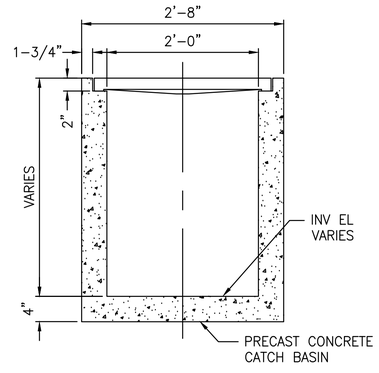
SECTION A-A

WASHDOWN PAD DETAIL 1

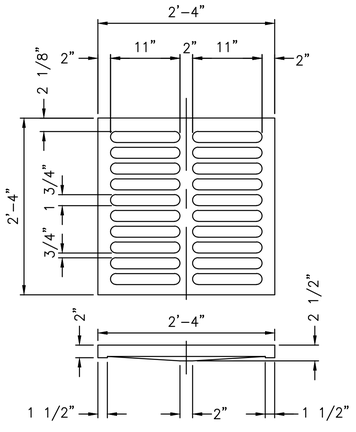
1/2" = 1'-0"



PLAN



SECTION



GRATE

LOADING PAD INLET AND PRECAST CONCRETE CATCH BASIN NOTES:
1. GRATE SHALL BE DESIGNED TO H2O LOADING.
2. GRATE SHALL BE CAST IRON.

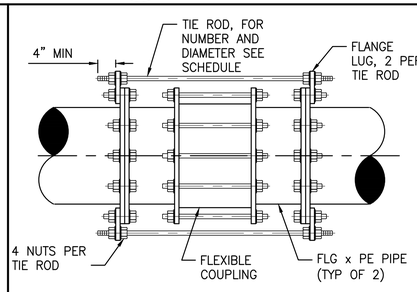
LOADING PAD INLET DETAIL 2

1" = 1'-0"

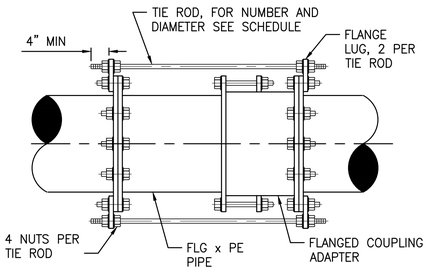
GRAPHIC SCALE

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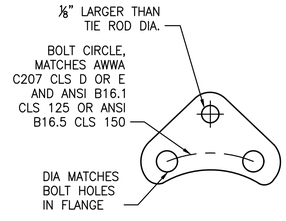
SCALE IN FEET



RESTRAINED FLEXIBLE COUPLING



RESTRAINED FLANGED COUPLING ADAPTER



FLANGE LUG

FLANGE LUG AND TIE ROD SCHEDULE

FIELD TEST PRESSURE		100 PSI	200 PSI	
PIPE DIAMETER (IN)	FLANGE LUG THICKNESS (IN)	NO. OF TIE RODS REQUIRED	NO. OF TIE RODS REQUIRED	TIE ROD DIA (IN)
4	1.0	2	2	0.75
6	1.0	2	2	0.75
8	1.0	2	2	0.75
10	1.0	2	4	0.75
12	1.0	2	4	0.75
14	1.0	2	4	0.75
16	1.0	4	6	0.75
18	1.0	4	8	0.75
20	1.25	4	6	1.0
24	1.25	4	6	1.0
30	1.25	6	10	1.0
36	1.25	8	14	1.0

NOTES:
1. FLANGE LUGS SHALL BE ROMAC INDUSTRIES, INC. STYLE 494, OR APPROVED EQUAL.
2. TIE RODS AND FLANGE LUGS SHALL BE ASTM A193B8M AISI TYPE 316 SST, UNLESS NOTED OTHERWISE.
3. TIE ROD NUTS SHALL BE ASTM A194B8M AISI TYPE 316 SST.
4. INSTALL SIZES AND NUMBERS OF FLANGE LUGS AND TIE RODS SHOWN IN THE SCHEDULE FOR PIPE WITH FIELD TEST PRESSURES NOT TO EXCEED 100 PSIG AND 200 PSIG.
5. INSTALL TIE RODS EQUALLY SPACED AROUND PIPE.
6. TIGHTEN TIE RODS IN EQUAL STAGES TO PROVIDE EVEN ALIGNMENT OF CONNECTING PIPE AND COUPLING. TIGHTEN TIE RODS EQUALLY TO EQUALLY DISTRIBUTE PRESSURE LOAD TO EACH TIE RODS.
7. COAT ALL FERROUS METAL SURFACES (EXCEPT STAINLESS STEELS) IN ACCORDANCE WITH PAINTING AND COATING SPECIFICATIONS.

TYPICAL RESTRAINED CONNECTION DETAILS 3

NTS

VE GMP-2

LTR.	DATE	REVISIONS	BY	APPRD.
VE	11/2022	VE GMP-1	LYC	TWF

DESIGNED TFRIEDRICH
DRAWN JKRAMER
CHECKED SMENARD

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730 NE WALDO ROAD, GAINESVILLE, FLORIDA 32641 / (352) 377-5821

NORTH FLORIDA MEGA INDUSTRIAL PARK
WASTEWATER TREATMENT PLANT
COLUMBIA COUNTY, FLORIDA

MECHANICAL DETAILS

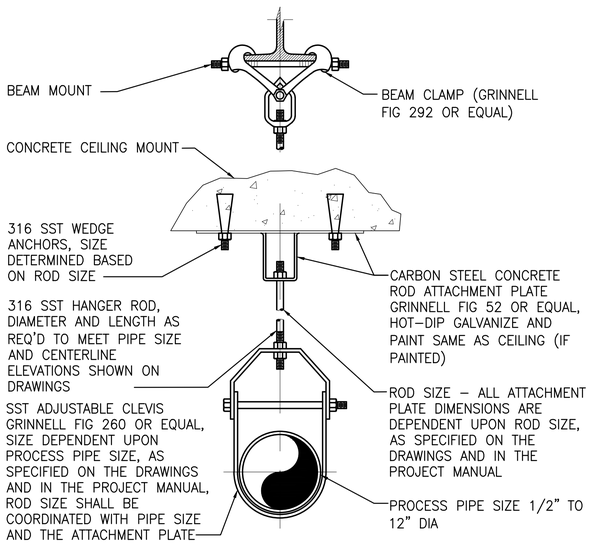
Thomas W. Friedrich, State of Florida, Professional Engineer, License No. 61281

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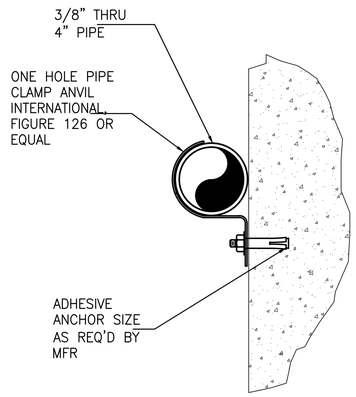
PROJECT NO: 03780-001-01
DATE: DEC. 2022
INDEX NO:
DWG NO: M28

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TYPICAL PIPE SUPPORT HANGER CLEVIS & PL DETAIL 1

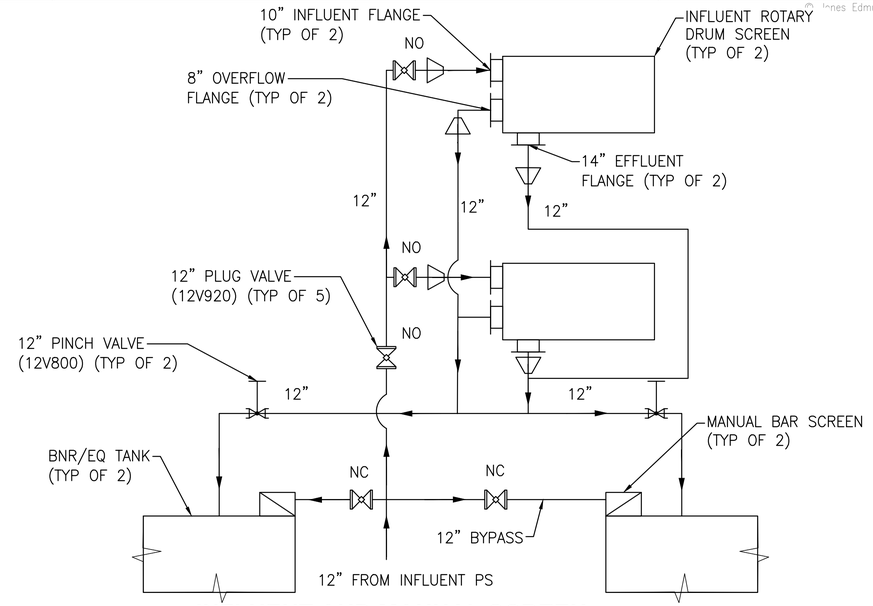
NTS



NOTES:
1. SPACE PIPE SUPPORTS TO SUIT LOAD.
2. CLAMP SHALL SS UNO.

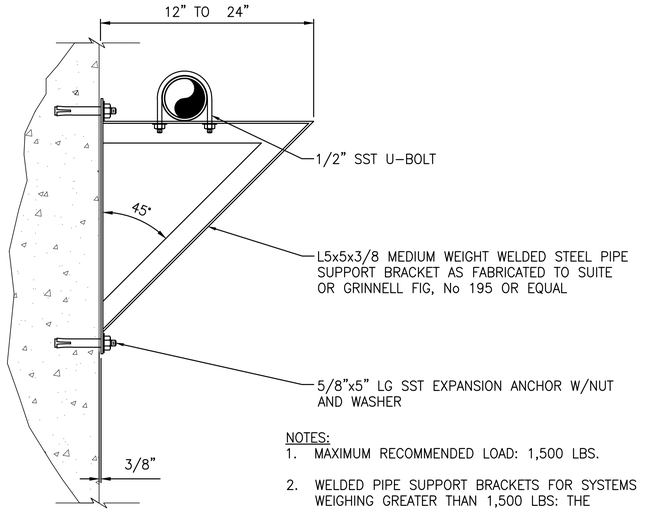
TYPICAL PIPE SUPPORT WALL CLAMP DETAIL 2

NTS



INFLUENT AND MANUAL SCREEN PIPING AND VALVE SCHEMATIC 3

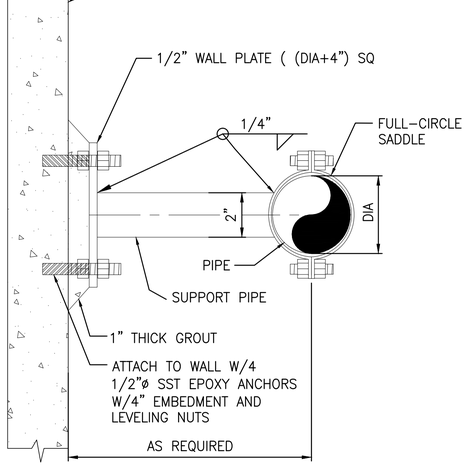
CONFIRM THESE DETAILS ARE NEEDED



NOTES:
1. MAXIMUM RECOMMENDED LOAD: 1,500 LBS.
2. WELDED PIPE SUPPORT BRACKETS FOR SYSTEMS WEIGHING GREATER THAN 1,500 LBS: THE CONTRACTOR SHALL SUBMIT A BRACKET APPROVED BY A STRUCTURAL ENGINEER TO JONES EDMUNDS FOR REVIEW AS PER SHOP DRAWING SUBMITTAL PROCEDURES IN THE SPECIFICATIONS.

TYPICAL PIPE SUPPORT WELDED STEEL DETAIL 4

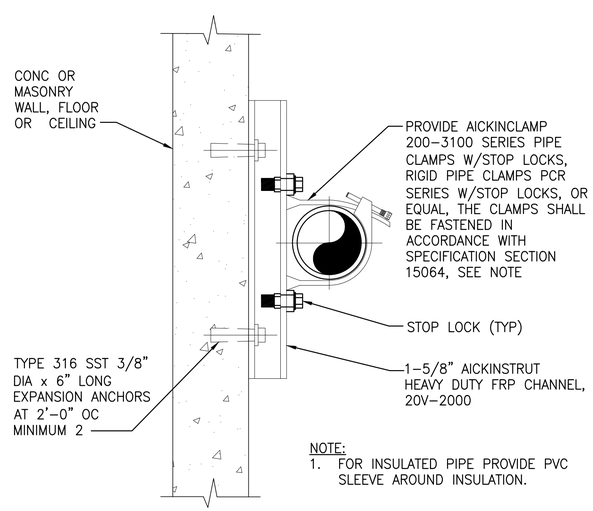
NTS



NOTES:
1. ALL HARDWARE, PLATE, SADDLE, ETC, SHALL BE 300 SERIES SST.
2. SUPPORT PIPE SHALL BE 316 SS.

TYPICAL WALL MOUNTED PIPE SUPPORT (TOP VIEW) DETAIL 5

NTS



NOTE:
1. FOR INSULATED PIPE PROVIDE PVC SLEEVE AROUND INSULATION.

CONCRETE SLABS, WALLS, AND CEILINGS

TYPICAL NONMETALLIC PIPE SUPPORT DETAIL 6

NTS

VE	11/2022	VE GMP-1	LYC	TWF
LTR.	DATE	REVISIONS	BY	APPRD.

DESIGNED TFRIEDRICH
DRAWN JKRAMER
CHECKED SMENARD

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COLUMBIA COUNTY, FLORIDA

MECHANICAL DETAILS

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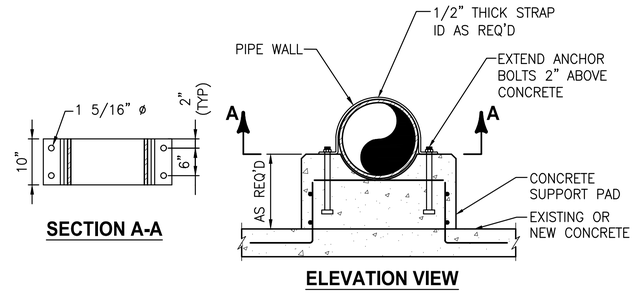
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INDEX NO:	DWG NO: M29

VE GMP-2

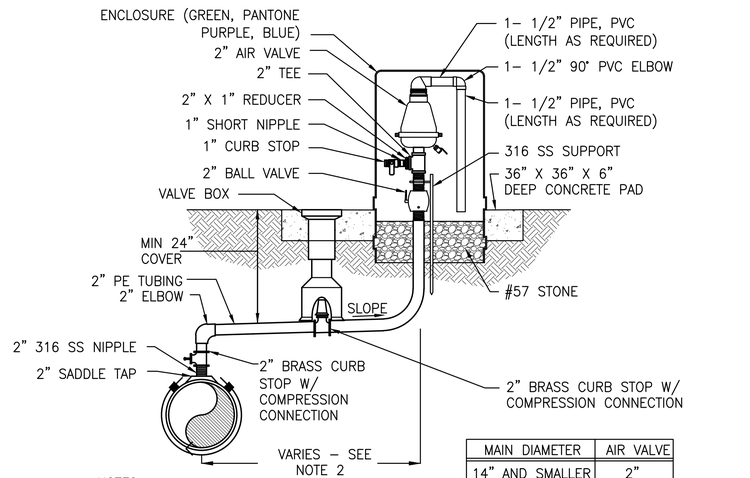
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TYPICAL CONCRETE PIPE SUPPORT DETAIL 1

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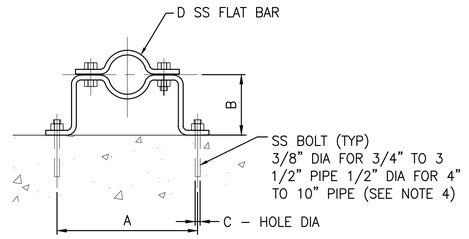
MAIN DIAMETER	AIR VALVE
14" AND SMALLER	2"
16" AND LARGER	3"

NOTES:

1. OFFSET DISTANCE TO BE FIELD DETERMINED AND AS CLOSE TO THE R/W LINE AS POSSIBLE.
2. ADJUST HORIZONTAL LOCATION OF SIDEWALK, AS REQUIRED TO AVOID ENCLOSURE.
3. LOCATE ARV ENCLOSURE WITHIN 6" OF R/W LINE.
4. ABOVE DETAIL IS BASED ON 2" AIR RELIEF VALVE. CHANGE PIPE AND FITTINGS ACCORDINGLY FOR OTHER VALVE SIZES AND TYPES. VALVE SIZES AND NUMBERS TO BE DETERMINED BY THE ENGINEER AND APPROVED BY OWNER PRIOR TO INSTALLATION.

OFFSET AIR VALVE DETAIL 2

NTS



PIPE SIZE	A	B	C	D FLAT BAR SIZE	LOAD RATING LBS *
3/4	5 15/16	2 1/2	7/16	3/16 x 1 1/4	190
1	6 1/4	2 5/8	7/16	3/16 x 1 1/4	–
1 1/4	6 11/16	2 3/4	7/16	3/16 x 1 1/4	–
1 1/2	6 15/16	3	7/16	3/16 x 1 1/4	190
2	8 5/16	3 3/16	7/16	1/4 x 1 1/4	420
2 1/2	8 7/8	3 7/16	7/16	1/4 x 1 1/4	–
3	9 1/8	3 3/4	7/16	1/4 x 1 1/4	420
3 1/2	10 1/16	4	7/16	1/4 x 1 1/4	610
4	10 9/16	4 1/4	9/16	1/4 x 1 1/4	–
5	11 3/4	4 3/4	9/16	1/4 x 1 1/4	610
6	14 3/8	5 5/16	9/16	3/8 X 1 1/2	870
8	16 5/8	6 5/16	9/16	3/8 X 1 1/2	870

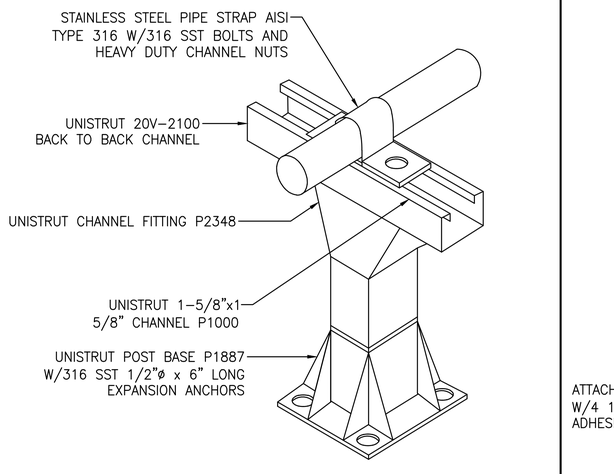
* SAFETY FACTOR OF 5

NOTES:

1. WHEN USED WITH PVC PIPE, PROVIDE 18 GA PAINTED SHEET STEEL SLEEVE 6" LONG W/STAINLESS STEEL HOSE CLAMPS AROUND PIPE AT CLAMP WITH LOOSE FIT. WRAP COPPER TUBES W/2" STRIP OF RUBBER FABRIC.
2. FOR FLANGED PIPING INCREASE B DIMENSION A REQUIRED.
3. PAINT PIPE SUPPORT SAME AS PIPE.
4. USE ADHESIVE ANCHORS FOR MOUNTING ON CONCRETE.
5. ALL MOUNTING HARDWARE SHALL BE AISI THDE 304 UNO.
6. PIPE SUPPORT SHALL BE BY ANVIL FIGURE NO. 103 OFFSET PIPE CLAMP OR EQUAL.

TYPICAL PIPE SUPPORT DETAIL 3

NTS

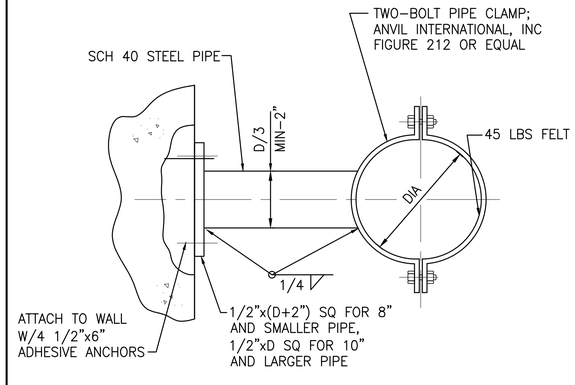


NOTE:

1. ALL CHANNELS AND FITTINGS SHALL BE DIPPED GALVANIZED STEEL UNO.

TYPICAL CHANNEL STRUT PIPE SUPPORT DETAIL 4

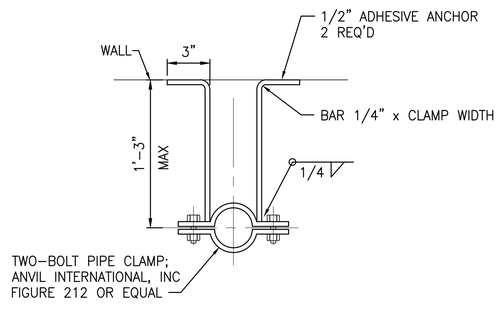
NTS



PLAN

TYPICAL SWAY BRACE (TYPE A) DETAIL 5

NTS



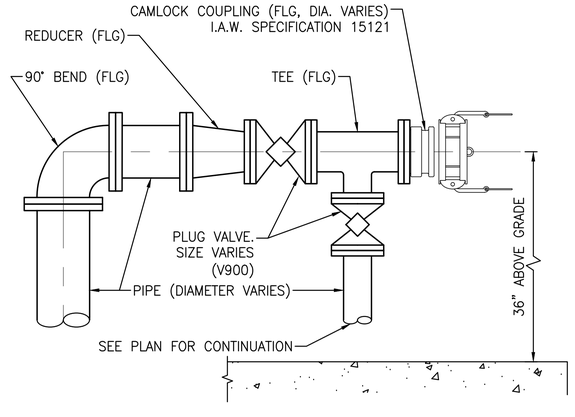
PLAN

NOTES:

1. SPACE SUPPORTS TO SUIT LOADS.
2. WHEN INSTALLED INSIDE WATER HOLDING BASINS, FABRICATE ENTIRE SWAY BRACE FROM AISI TYPE 304L STAINLESS STEEL COMPONENTS.

TYPICAL SWAY BRACE (TYPE B) DETAIL 6

NTS



CAMLOCK COUPLING (ABOVE GRADE) DETAIL (TYP) 7

NTS

VE GMP-2

VE LTR.	11/2022 DATE	VE GMP-1 REVISIONS	LYC BY	TWF APPRD.

DESIGNED TFRIEDRICH
DRAWN JKRAMER
CHECKED SMENARD

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COLUMBIA COUNTY, FLORIDA

MECHANICAL DETAILS

Thomas W. Friedrich, State of Florida, Professional Engineer, License No. 61281

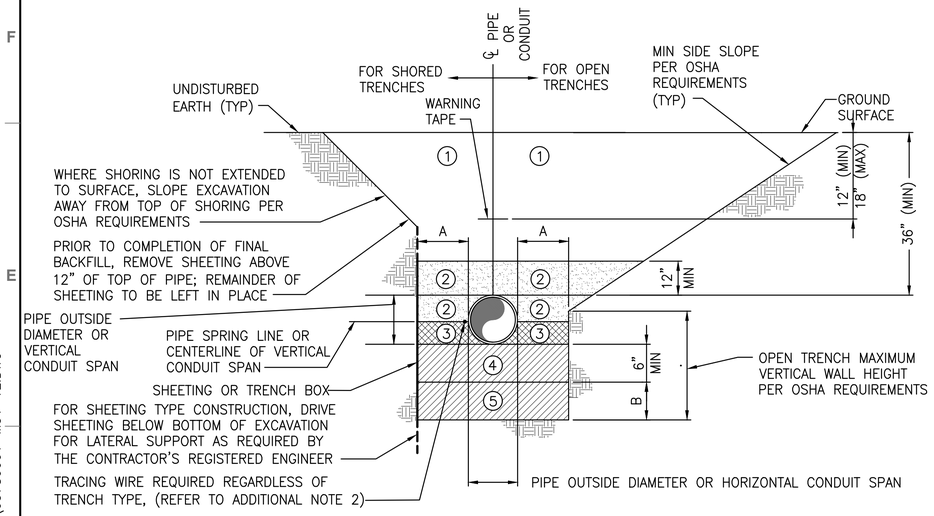
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INDEX NO:	DWG NO: M30

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NOMINAL PIPE DIAMETER OR HORIZONTAL CONDUIT SPAN (INCHES)	MINIMUM SIDEWALL CLEARANCE	ADDITIONAL EXCAVATION DEPTH (1)
	A (INCHES)	B (INCHES)
LESS THAN 24	12	12
24 AND GREATER	18	18

(1) REQUIRED WHERE UNSUITABLE MATERIAL IS ENCOUNTERED.

ZONE NO.	ZONE NAME	MATERIAL	ZONE 1 COMPACTION	ZONES 2–5 COMPACTION
①	FINAL BACKFILL	AS SPECIFIED	AT LEAST 98% MODIFIED PROCTOR MAXIMUM DRY DENSITY ASTM D–1557	AT LEAST 95% MODIFIED PROCTOR MAXIMUM DRY DENSITY ASTM D–1557
②	INITIAL BACKFILL			
③	HAUNCHING			
④	BEDDING			
⑤	FOUNDATION			

TRENCH ZONE NOTES:

① FINAL BACKFILL SHALL BE INSTALLED IN LIFTS NOT EXCEEDING 6 INCHES, LOOSE MEASUREMENT. REFER TO ADDITIONAL NOTE 3.

② INITIAL BACKFILL SHALL BE INSTALLED IN LIFTS NOT EXCEEDING 6 INCHES, LOOSE MEASUREMENT. ALL LIFTS SHALL BE COMPACTED BY HAND TAMPING OR AN APPROVED METHOD OF MECHANICAL TAMPING. REFER TO ADDITIONAL NOTE 3.

③ HAUNCHING SHALL BE IN COMPLETELY DEWATERED TRENCHES IN LIFTS NOT EXCEEDING 6 INCHES, LOOSE MEASUREMENT. ALL LIFTS SHALL BE COMPACTED BY HAND TAMPING. HAUNCHING SHALL BE BROUGHT UP EQUALLY ON BOTH SIDES OF THE PIPE.

④ BEDDING SHALL BE INSTALLED IN COMPLETELY DEWATERED TRENCHES IN LIFTS NOT EXCEEDING 6 INCHES, LOOSE MEASUREMENT, AND SHALL BE COMPACTED BY HAND OR MECHANICAL TAMPING. PROPERLY SHAPED BELL HOLES SHALL BE EXCAVATED IN THE BEDDING TO PERMIT ASSEMBLY OF THE PIPE. REFER TO ADDITIONAL NOTE 3.

NATIVE, UNDISTURBED MATERIAL IN COMPLETELY DEWATERED TRENCHES MEETING THE COMPACTION AND MATERIAL REQUIREMENTS FOR COMPACTED BEDDING MATERIAL NEED NOT BE REPLACED OR REWORKED, EXCEPT FOR SHAPING OF THE BELL HOLES, AND WHERE REFILL IS REQUIRED.

⑤ FOUNDATION SHALL BE REQUIRED WHERE UNSUITABLE MATERIAL IS ENCOUNTERED. FOUNDATION SHALL BE IN ACCORDANCE WITH THE REQUIREMENTS FOR BEDDING. REFER TO ADDITIONAL NOTE 3.

ADDITIONAL NOTES:

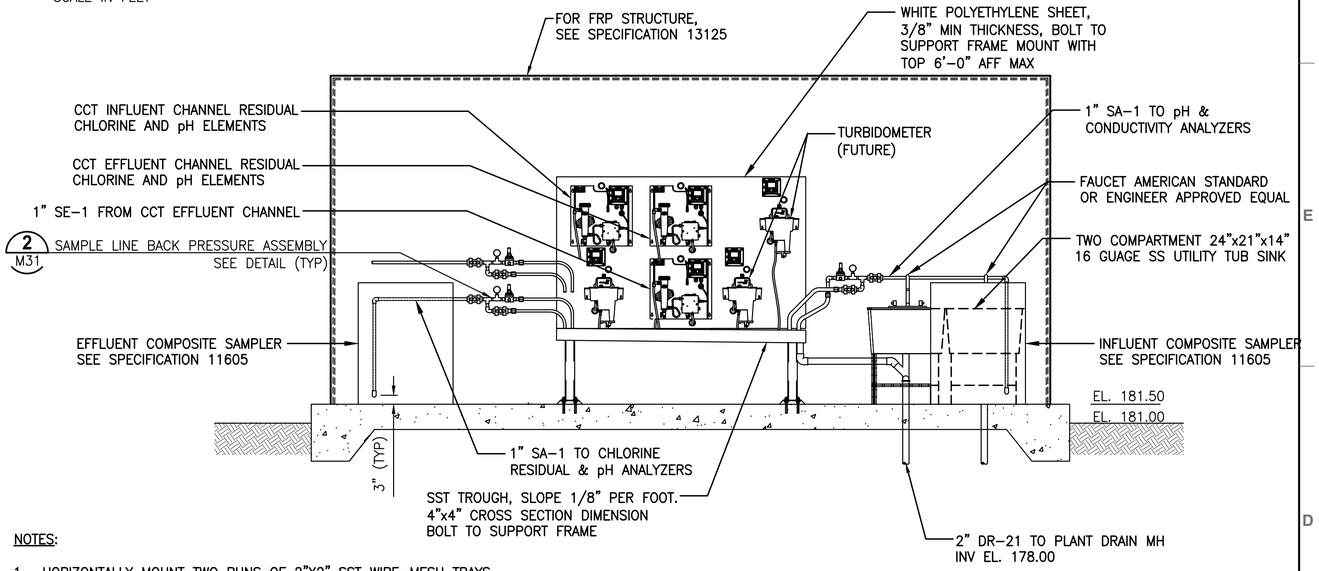
1. FOR TRENCHES IN VEHICULAR TRAFFIC AREAS OR BENEATH SURFACE IMPROVEMENTS (EG, SLAB, ETC.) SEE CONTRACT SPECIFICATIONS FOR ADDITIONAL COMPACTION REQUIREMENTS. SEE CIVIL DRAWINGS FOR ASPHALT RESTORATION DETAILS.
2. TRACING WIRE SHALL BE INSTALLED ON THE SIDE OF THE PIPE AND ATTACHED TO THE PIPE EVERY 10' W/ A NYLON WIRE TIE. IF THE WIRE IS DAMAGED OR NEEDS TO BE EXTENDED A 3M WATERPROOF TYPE UF SPLICE SHALL BE INSTALLED TO REPAIR THE WIRE. THE ENDS OF THE TRACING WIRE SHALL BE BROUGHT UP IN EVERY VALVE BOX ON THE LINE AND AT THE HYDRANT VALVES. THERE SHALL BE A MINIMUM COIL OF 3' LEFT UNDER THE VALVE BOX COVER. THE WIRE SHALL BE TESTED TO VERIFY CONDUCTIVITY.
3. ALTERNATIVE LIFT THICKNESSES, NOT EXCEEDING 12 INCHES LOOSE MEASUREMENT, ARE ACCEPTABLE IN TRENCH ZONES 1, 2, 4, AND 5 PROVIDED 1) THE LIFT THICKNESS DOES NOT EXCEED THE MAXIMUM VALUE RECOMMENDED IN WRITING BY THE APPLICABLE PIPE MANUFACTURER AND 2) FIELD TEST RESULTS CONFIRM THAT THE SPECIFIED COMPACTION REQUIREMENTS ARE BEING MET.

TYPICAL UTILITY TRENCH DETAIL 3
NTS

GRAPHIC SCALE

0 1 2 4

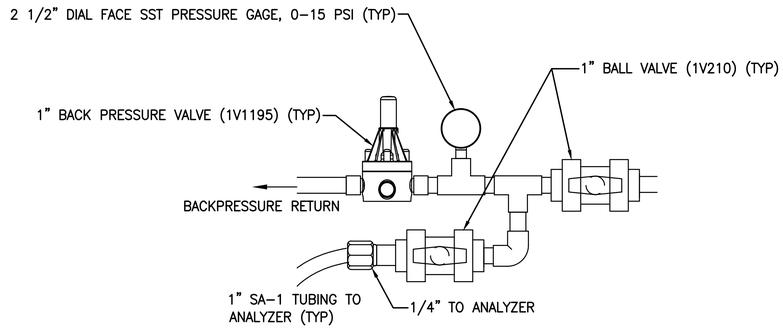
SCALE IN FEET



NOTES:

1. HORIZONTALLY MOUNT TWO RUNS OF 2"X2" SST WIRE–MESH TRAYS ACROSS THE BACK OF THE PANEL TO SUPPORT THE SAMPLE TUBING. MOUNT THE LOWER TRAY AT THE BOTTOM EDGE OF THE PANEL AND MOUNT THE UPPER TRAY AT MID–SPAN.

FRP ANALYZER STRUCTURE 1
1/2" = 1'–0"



NOTES:

1. EACH SAMPLE LINE REQUIRES A BACK PRESSURE ASSEMBLY. VERIFICATION AND/OR COORDINATION BY CONTRACTOR IS REQUIRED WITH RESPECT TO APPROVED SHOP DRAWING PRIOR TO CONSTRUCTION.
2. (2) 1" SA–1 (RETURN) AND (2) 1" SA–1 (RETURN) PIPES NOT SHOWN FOR CLARITY. CONTRACTOR SHALL ROUTE PIPES ALONG SAME ALIGNMENT AS SUPPLY PIPES.

SAMPLE LINE BACK PRESSURE ASSEMBLY 2
NTS

VE GMP-2

LTR.	DATE	REVISIONS	BY	APPRD.
VE	11/2022	VE GMP–1	LYC	TWF

DESIGNED TFRIEDRICH
DRAWN JKRAMER
CHECKED SMENARD

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MECHANICAL DETAILS

Thomas W. Friedrich, State of Florida, Professional Engineer, License No. 61281

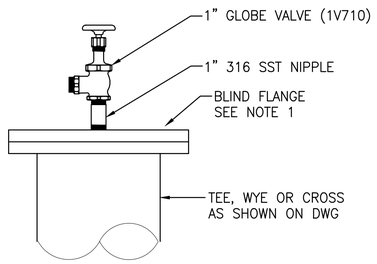
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PROJECT NO: 03780–001–01
DATE: DEC. 2022
INDEX NO:
DWG NO: M31

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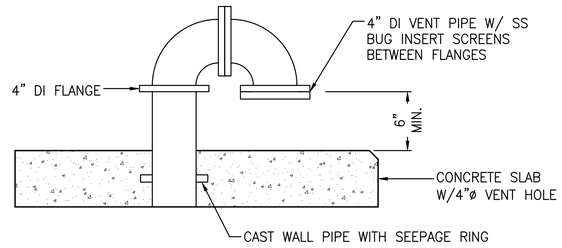
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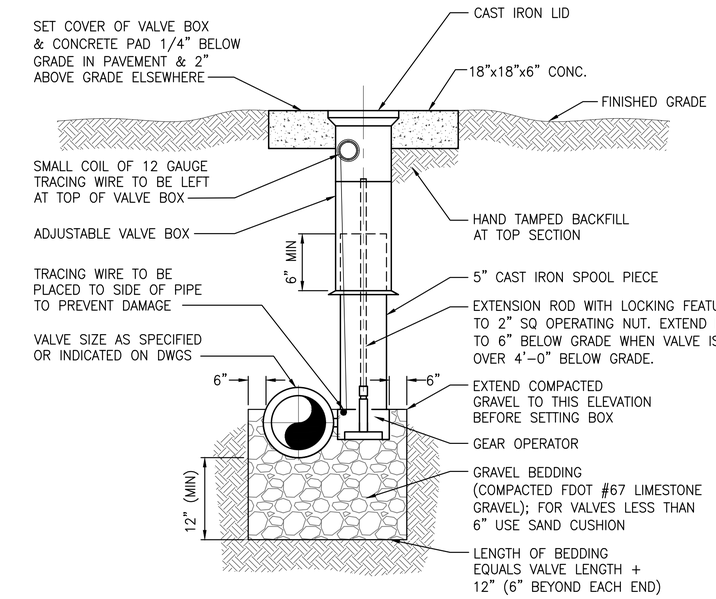
NOTE:

1. DRILL AND TAP FLANGE FOR 1 1/2" NPT NIPPLE.

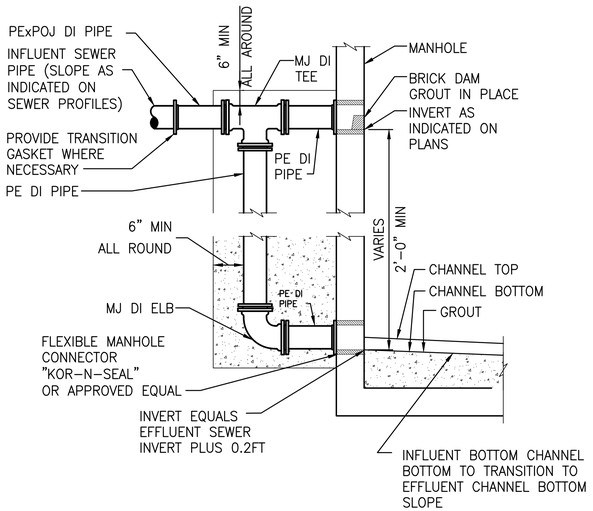
TYPICAL HOSE CONNECTION DETAIL 1
NTS



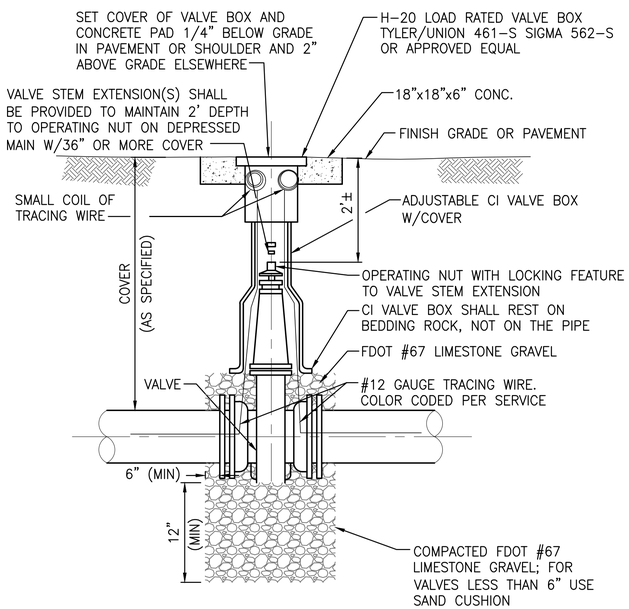
WET WELL VENT DETAIL 2
NTS



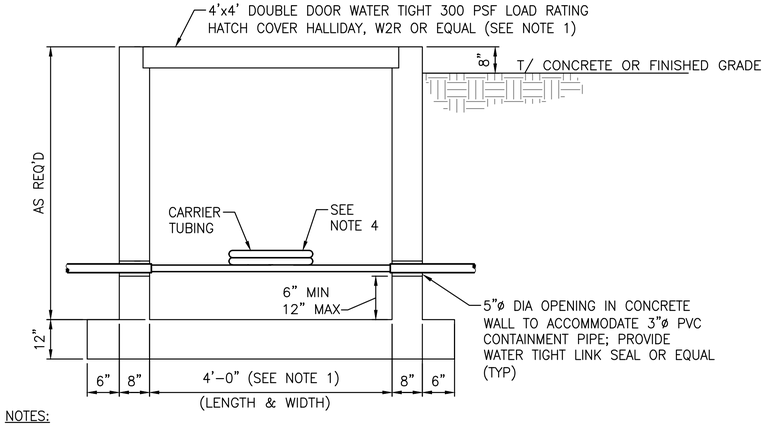
TYPICAL BUTTERFLY OR PLUG VALVE DETAIL 3
NTS



DROP MANHOLE DETAIL 4
NTS



TYPICAL GATE VALVE AND BOX DETAIL 5
NTS



NOTES:

1. CHEMICAL RUNS TO BE CONTINUOUS (UNSPLICED) BETWEEN CONTAINMENT BOXES.
2. PROVIDE SCH 80 PVC PIPING (NOT SHOWN) FROM HATCH FRAME DRAIN CONNECTION(S) TO BOX EXTERIOR WALL FACE.
3. COAT ALL INTERIOR CONCRETE SURFACES OF CHEMICAL CONTAINMENT BOX WITH CHEMICAL RESISTANT COATING.
4. TWO HORIZONTAL COILS OF PVC TUBING WITH RADIUS AT LEAST 20% LARGER THAN MIN ALLOWABLE RADIUS FOR TUBING; SECURE COILS TOGETHER USING PLASTIC STRAPS TO HOLD TUBING IN A LOOP SHAPE AND HANG USING N ON-METALLIC WALL BRACKET. STRAPPING/HANGING SHALL BE AS SUCH TO AVOID DEFORMING TUBING ID AND PREVENT KINKING.

CHEMICAL CONTAINMENT BOX DETAIL 6
NTS

VE GMP-2

LTR.	DATE	REVISIONS	BY	APPRD.
VE	11/2022	VE GMP-1	LYC	TWF

DESIGNED TFRIEDRICH
DRAWN JKRAMER
CHECKED SMENARD

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NORTH FLORIDA MEGA INDUSTRIAL PARK
WASTEWATER TREATMENT PLANT
COLUMBIA COUNTY, FLORIDA

MECHANICAL DETAILS

Thomas W. Friedrich, State of Florida, Professional Engineer, License No. 61281

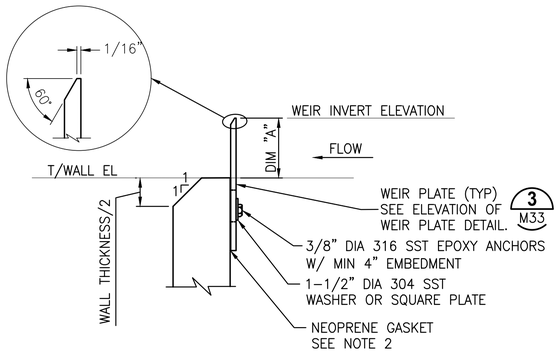
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PROJECT NO:	DATE:
03780-001-01	DEC. 2022
INDEX NO:	DWG NO: M32

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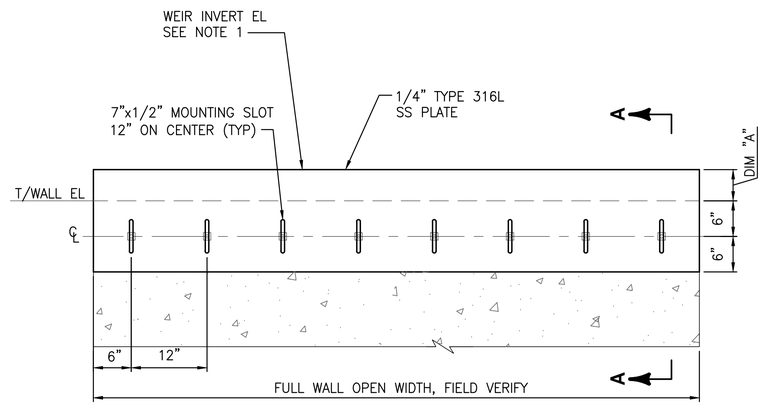
SECTION A-A

NOTES:

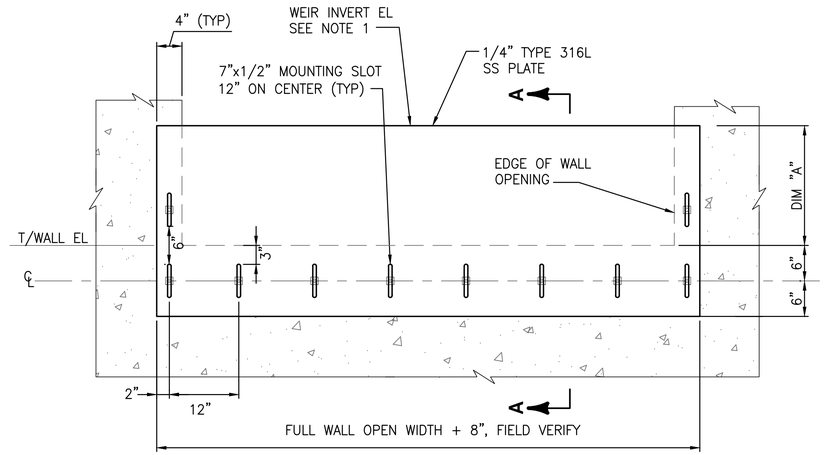
1. DIM "A" REQUIRES VERIFICATION AND/OR COORDINATION BY CONTRACTOR WITH RESPECT TO APPROVED SHOP DRAWING PRIOR TO CONSTRUCTION.
2. FURNISH AND INSTALL NEOPRENE GASKET STRIP WITH 1/2"x7" SLOTS TO MATCH THE WEIR PLATE SHOWN.

WEIR PLATE DETAILS 1

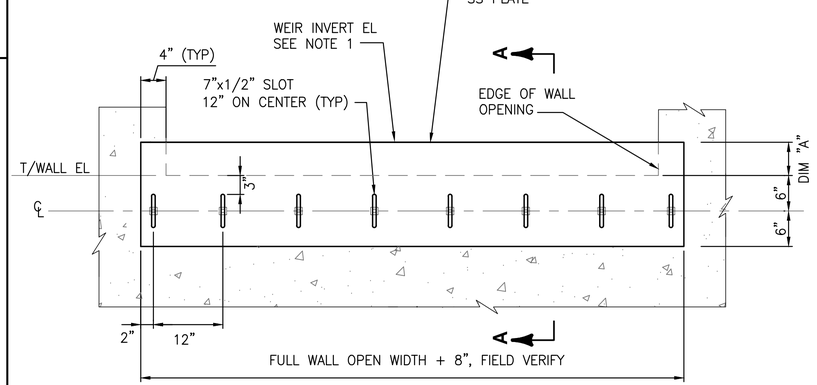
NTS



ELEVATION DETAIL "A" OF WEIR PLATE



ELEVATION DETAIL "B" OF WEIR PLATE



ELEVATION DETAIL "C" OF WEIR PLATE

WEIR NO.	LOCATION	FULL WALL OPEN WIDTH	WEIR INVERT EL	T/CONC EL	ELEVATION DETAIL	DIM "A"
CC-W-1	CCT NO. 1	3'-0"	184.00	183.75	B	3"
CC-W-2	CCT NO. 2	3'-0"	184.00	183.75	B	3"

NOTES:

1. WEIR INVERT ELEVATION IS WITH THE WEIR SET IN THE CENTER OF THE MOUNTING SLOTS.

WEIR PLATE ELEVATION AND SCHEDULE 3

NTS

NOT USED 2

LTR.	DATE	REVISIONS	BY	APPRD.
VE	11/2022	VE GMP-1	LYC	TWF

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NORTH FLORIDA MEGA INDUSTRIAL PARK
WASTEWATER TREATMENT PLANT
COLUMBIA COUNTY, FLORIDA

MECHANICAL DETAILS

Thomas W. Friedrich, State of Florida, Professional Engineer, License No. 61281

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PROJECT NO: 03780-001-01
DATE: DEC. 2022
INDEX NO:
DWG NO: M33

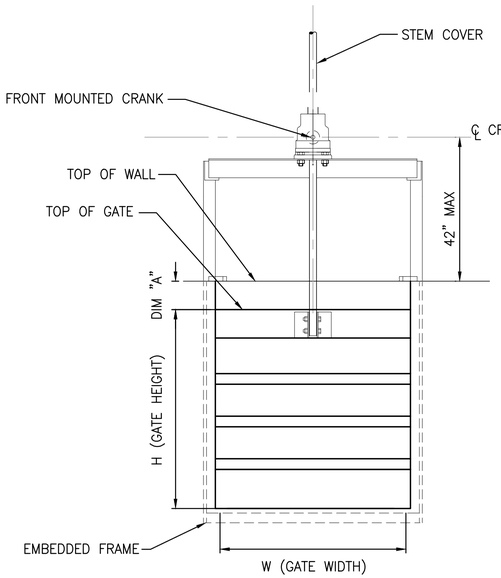
VE GMP-2

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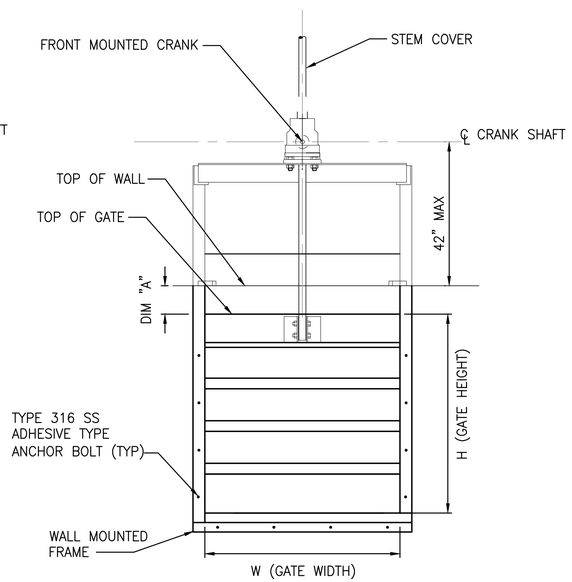
GATE NO.	LOCATION	GATE OPENING (W x H)	DIM "A"	GATE TYPE	FRAME TYPES	SEATING/UNSEATING HEAD CONDITION	OPERATOR TYPE	MATERIAL OF CONSTRUCTION	STEM
CC-G-1	CHLORINE CONTACT BASIN	4'-0" X 4'-0"	0.68'	SLIDE	SCF/EF	UNSEATING	CRANK/MANUAL	316 SS	316 SS/SINGLE
CC-G-2	CHLORINE CONTACT BASIN	4'-0" X 4'-0"	0.68'	SLIDE	SCF/EF	UNSEATING	CRANK/MANUAL	316 SS	316 SS/SINGLE
CC-G-3	TRANSFER PUMP STA	4'-0" X 4'-0"	14.50'	SLIDE	SCF/EF	UNSEATING	CRANK/MANUAL	316 SS	316 SS/SINGLE
CC-SG-1	TRANSFER PUMP STA POND PIPES	2'-0" X 2'-0"	7.00'	SLUICE	WMF	SEATING	MOTOR ACTUATED	316 SS	316 SS/SINGLE
CC-SG-2	TRANSFER PUMP STA POND PIPES	2'-0" X 2'-0"	7.00'	SLUICE	WMF	SEATING	MOTOR ACTUATED	316 SS	316 SS/SINGLE

ABBREVIATION

G	SLIDE GATE
WG	WEIR GATE
SG	SLUICE GATE
SCF	SELF-CONTAINED FRAME
WMF	WALL MOUNTED FRAME
EF	EMBEDDED FRAME
SS	STAINLESS STEEL



TYPICAL EMBEDDED FRAME



TYPICAL WALL MOUNTED FRAME

NOTES:
1. DIM "A" REQUIRES VERIFICATION AND/OR COORDINATION BY CONTRACTOR WITH RESPECT TO APPROVED GATE SHOP DRAWING PRIOR TO CONSTRUCTION OF STRUCTURE.

SLUICE AND SLIDE GATE DETAILS

NTS

VE GMP-2

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LTR.	DATE	REVISIONS	BY	APPRD.
VE	11/2022	VE GMP-1	LYC	TWF

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NORTH FLORIDA MEGA INDUSTRIAL PARK
WASTEWATER TREATMENT PLANT
COLUMBIA COUNTY, FLORIDA

MECHANICAL DETAILS

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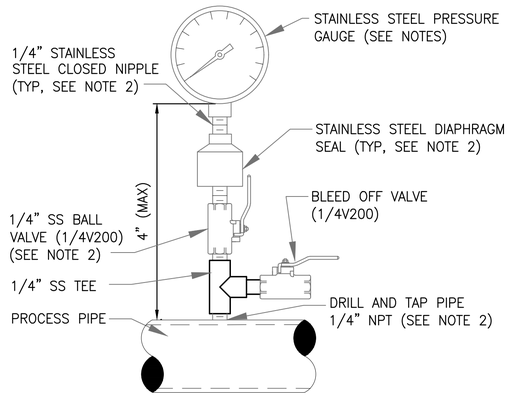
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PROJECT NO: 03780-001-01
DATE: DEC. 2022
INDEX NO:
DWG NO: M34

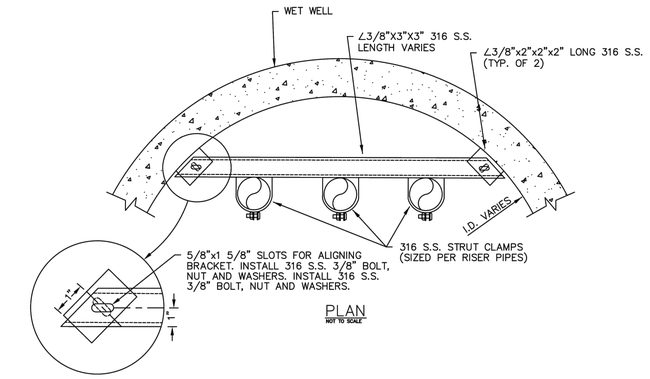
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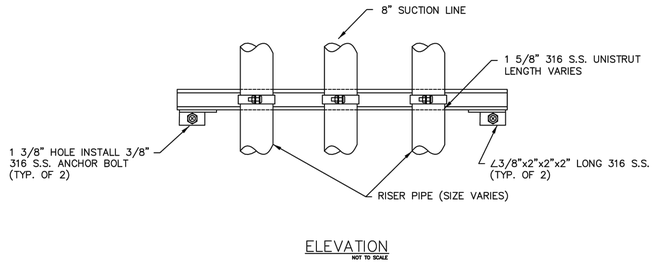
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NOTES:
1. SIZE, TYPE, PRESSURE RANGE AND MANUFACTURER PER SPECIFICATIONS DIVISIONS 11 AND DIVISION 15.
2. PRESSURE GAUGES WHERE INDICATED ON DRAWINGS AND DISCHARGE OF ALL PUMPS. CONTRACTOR TO COORDINATE LOCATION WITH OWNER DURING CONSTRUCTION.
3. VERIFY SIZE OF LOWER CONNECTION PRIOR TO PURCHASING ANCILLARY PARTS OR DRILLING AND TAPPING.

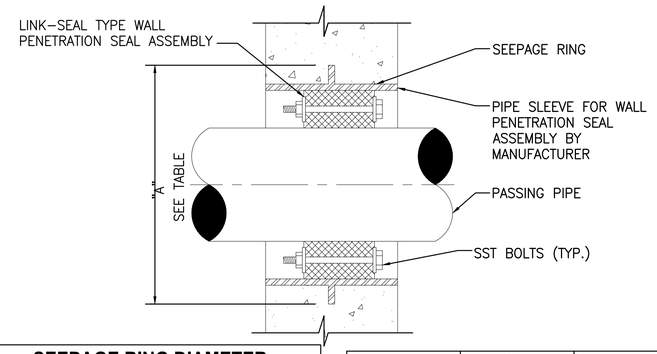


PRESSURE GAUGE DETAIL 1
NTS





RISER PIPE SUPPORT BRACKET DETAIL 2
NTS

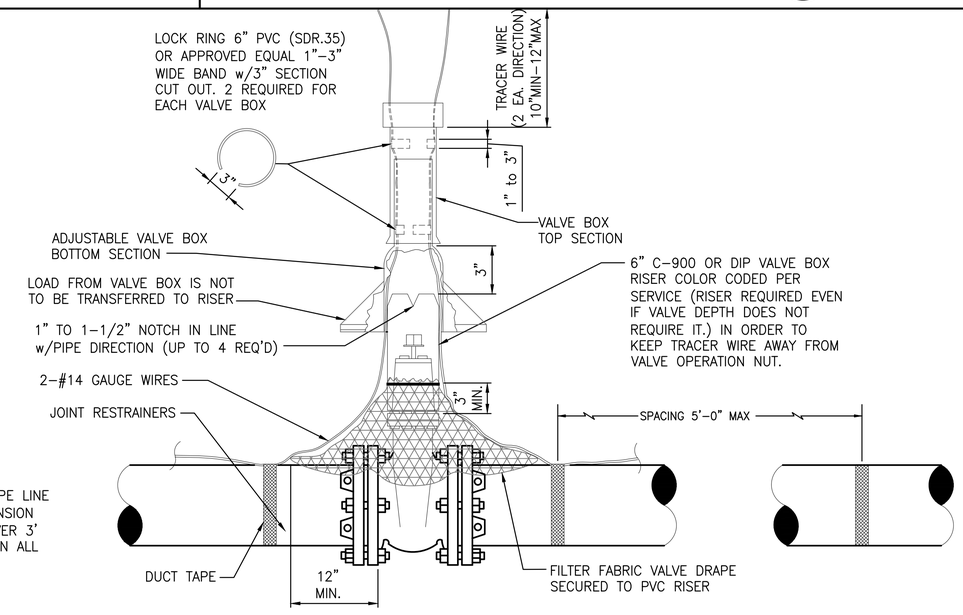


SEEPAGE RING DIAMETER		
PIPE SIZE	NOMINAL SLEEVE DIA	"A"
2	4	6
2 1/2	4	7
3	5	7 1/2
4	6	9
6	10	13
8	12	15
10	14	17

PIPE SIZE	NOMINAL SLEEVE DIA	"A"
12	16	19
14	18	21
16	20	23 1/2
18	24	25
20	24	27 1/2
24	30	32

NOTE:
1. ALL DIMENSIONS IN TABLE ABOVE ARE IN INCHES.

CONCRETE PENETRATION / SEAL DETAIL 3
NTS



NOTE:

FILTER FABRIC REQUIRED ON VALVES WHEN PIPE LINE HAS 5' OR MORE OF COVER VALVE KEY EXTENSION REQUIRED ON VALVES WITH OPERATOR NUT OVER 3' DEEP. COLOR CODED POLY WRAP REQUIRED ON ALL BURIED VALVES AND FITTINGS.

VALVE BOX W/ TRACER WIRE DETAIL 4
NTS

LTR.	DATE	REVISIONS	BY	APPRD.
VE	11/2022	VE GMP-1	LYC	TWF

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CHECKED SMENARD

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NORTH FLORIDA MEGA INDUSTRIAL PARK
WASTEWATER TREATMENT PLANT
COLUMBIA COUNTY, FLORIDA

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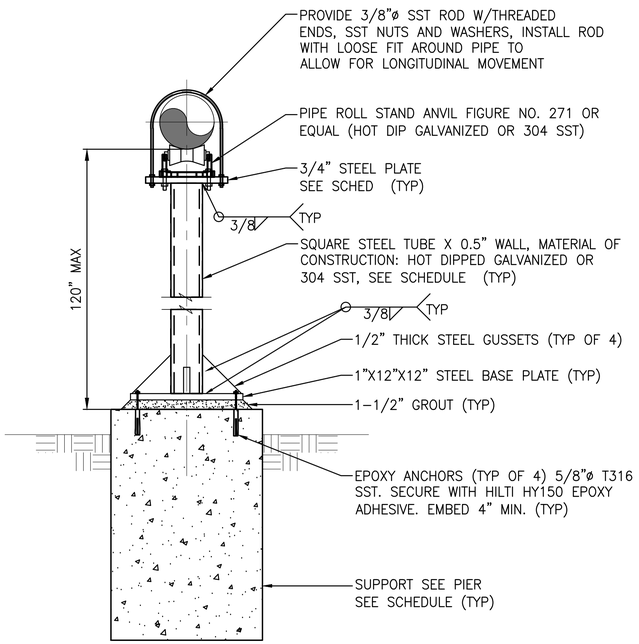
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PROJECT NO: 03780-001-01
DATE: DEC. 2022
INDEX NO:
DWG NO: M35

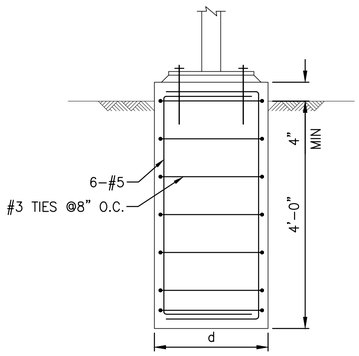
VE GMP-2

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TYPICAL AIR PIPE SUPPORT AND PIER



DUCT DIAMETER	FOOTING DIAMETER (d)
12"	24"
16"	28"
20"	36"
24"	42"

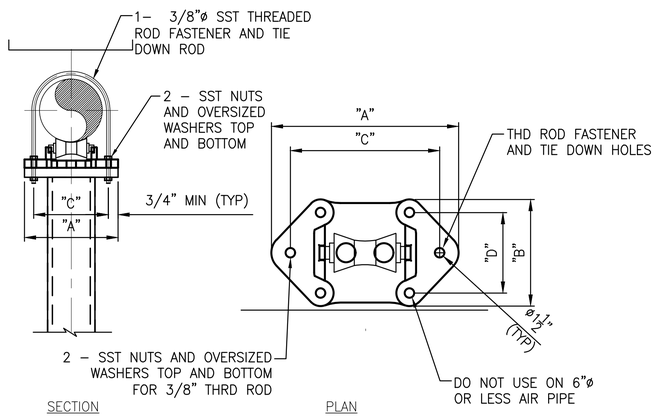
SUPPORT PIER AND PIER SCHEDULE

ROLL STAND ASSEMBLY SCHEDULE (1)

PIPE SIZE	TUBE SIZE	PLATE LENGTH "A"	PLATE WIDTH "B"	BOLT HOLES "C"	BOLT HOLES "D"
2	4x4x.5	8.375	U+2	6.375	4
2 1/2	4x4x.5	8.375	U+2	6.375	4
3	4x4x.5	8.375	U+2	6.375	4
3 1/2	4x4x.5	8.375	U+2	6.375	4
4	4x4x.5	9.875	U+2	7.875	4.25
5	5x5x.5	9.875	U+2	7.875	4.25
6	5x5x.5	9.875	U+2	7.875	4.25
8	5x5x.5	PIPE DIA + 5	U+2	7	5
10	5x5x.5	PIPE DIA + 5	U+2	7	5
12	5x5x.5	PIPE DIA + 5	U+2	9.0	6
14	5x5x.5	PIPE DIA + 5	U+2	9.0	6
16	6x6x.5	PIPE DIA + 5	U+2	10.25	6.5
18	6X6X.5	PIPE DIA + 5	U+2	10.25	6.5
20	6X6X.5	PIPE DIA + 5	U+2	10.25	6.5
24	6X6X.5	PIPE DIA + 5	U+2	11.375	6.5

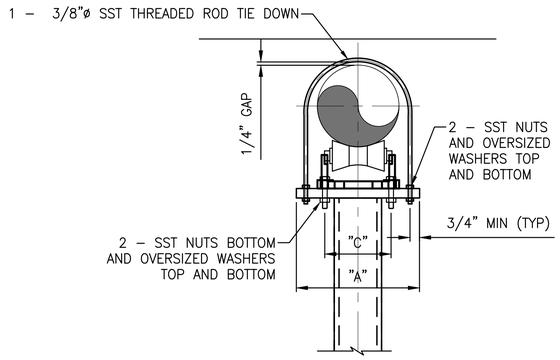
NOTES:

1. DIMENSIONS GIVEN IN SCHEDULE ARE BASED UPON ANVIL FIGURE NO. 271 PIPE ROLL STAND PUBLISHED DIMENSIONS. CONTRACTOR SHALL VERIFY PLATE DIMENSIONS AND HOLE LOCATIONS AND SIZES PRIOR TO FABRICATION.
2. ALL DIMENSIONS SHOWN ARE IN INCHES.

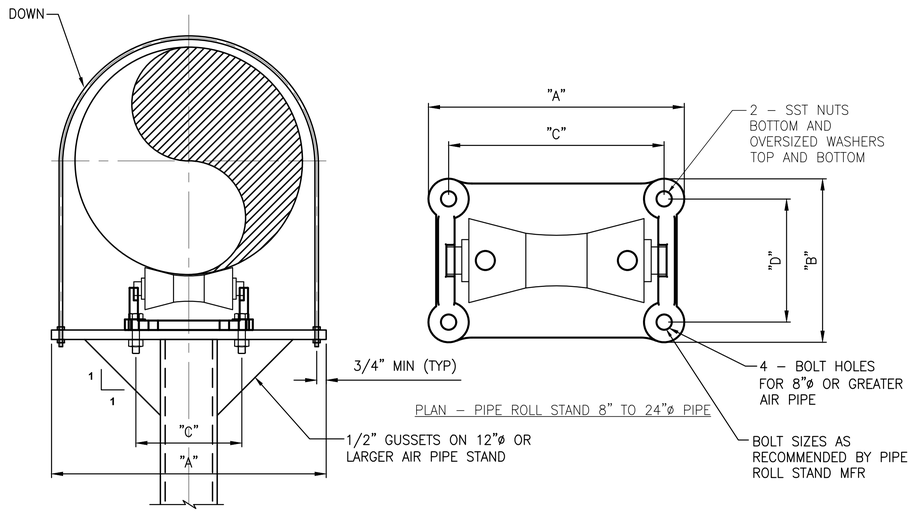


SECTION PLAN

PIPE ROLL STAND 6"ø PIPE OR LESS



SECTION - NON-GUSSETED PIPE ROLL STAND 6"ø OR LESS



PLAN - PIPE ROLL STAND 8" TO 24"ø PIPE

SECTION - GUSSETED PIPE ROLL STAND 8" TO 24"ø PIPE

AIR PIPE / AIR DUCT SUPPORT DETAIL 1

NTS

LTR.	DATE	REVISIONS	BY	APPRD.
VE	11/2022	VE GMP-1	LYC	TWF

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CHECKED SMENARD

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NORTH FLORIDA MEGA INDUSTRIAL PARK
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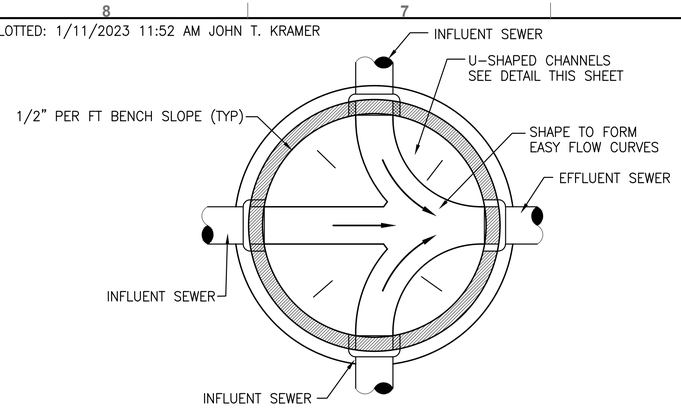
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DATE: DEC. 2022
INDEX NO:
DWG NO: M36

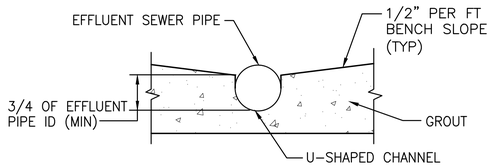
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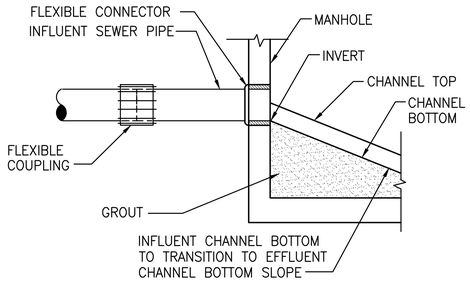


PLAN



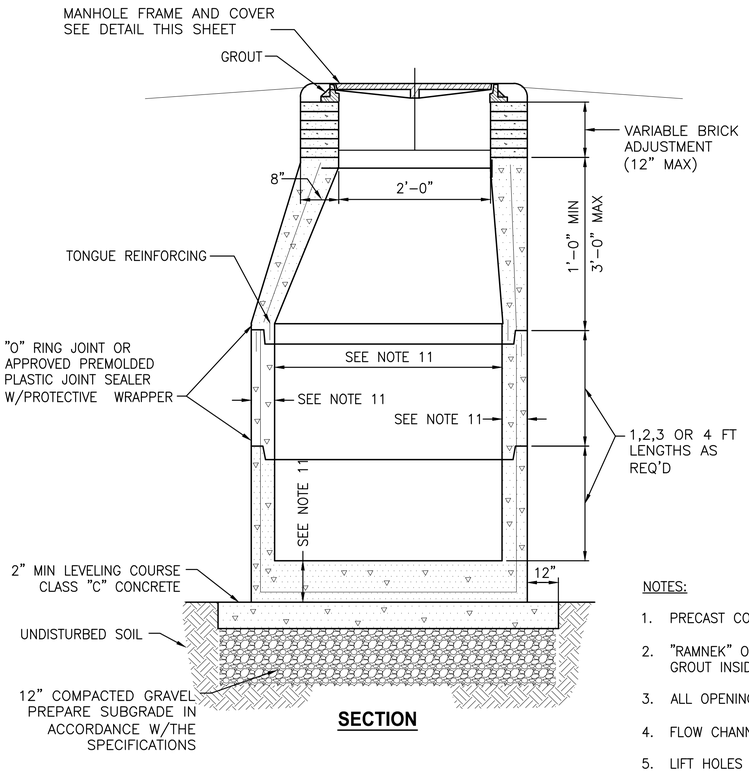
TYPICAL U-SHAPED CHANNEL

NTS



TYPICAL INFLUENT GRAVITY SEWER CONNECTION TO MANHOLE

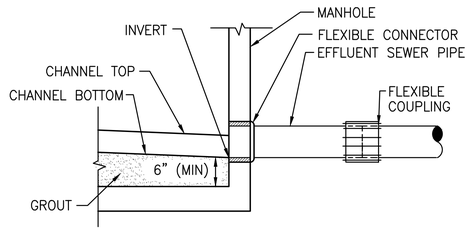
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SECTION

MANHOLE DETAIL 1

NTS

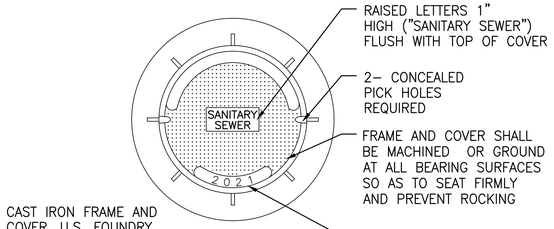


TYPICAL EFFLUENT GRAVITY SEWER CONNECTION TO MANHOLE

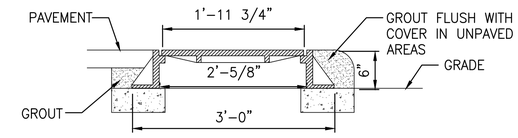
NTS

NOTES:

1. PRECAST CONCRETE TYPE II 4000 P.S.I. IN ACCORDANCE WITH SPECIFICATION SECTION 3480.
2. "RAMNEK" OR EQUAL AT ALL RISER JOINTS (1/2" THICK WITH WIDTH AT LEAST 1/2 THE WALL THICKNESS) WITH GROUT INSIDE AND OUTSIDE.
3. ALL OPENINGS SHALL BE SEALED WITH A WATERPROOF NON–SHRINKING GROUT.
4. FLOW CHANNELS SHALL BE CONSTRUCTED TO DIRECT INFLUENT INTO FLOW STREAM (SEE DETAIL).
5. LIFT HOLES ARE PERMITTED AND SHALL BE SEALED AFTER PLACEMENT OF RISER.
6. ALL PIPE HOLES SHALL BE PRECAST OR CORE–DRILLED.
7. APPROVED RUBBER BOOT MUST BE USED WITH PVC PIPE.
8. INSIDE DROPS SHALL NOT EXCEED 2.0 FEET.
9. CONNECTIONS AND GROUTING IN MANHOLE NOT SHOWN. SEE DRAWINGS FOR PIPE SIZES, LOCATIONS AND INVERTS, FOR DETAILS REGARDING SEWER PIPE CONNECTIONS TO MANHOLE, SEE TYPICAL INFLUENT AND EFFLUENT DETAILS.
10. COAT INTERIOR & EXTERIOR WITH 2 COATES COAL TAR EPOXY 8 MIL MIN. EACH DRY FILM THICKNESS COAT.
11. AS REQUIRED BY PRECAST CONCRETE MANUFACTURER.
12. 5'x5'x6" CONCRETE COLLAR IS REQUIRED WHEN MANHOLE IS OUT OF PAVEMENT.



PLAN



SECTION

MANHOLE FRAME AND COVER DETAIL 2

NTS

VE GMP-2

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DRAWN JKRAMER
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NORTH FLORIDA MEGA INDUSTRIAL PARK
WASTEWATER TREATMENT PLANT
COLUMBIA COUNTY, FLORIDA

MECHANICAL DETAILS

Thomas W. Friedrich, State of Florida, Professional Engineer, License No. 61281

This item has been digitally signed and sealed by Thomas W. Friedrich on the date indicated on the Cover Page (G1) and M1.

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PROJECT NO: 03780–001–01
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DWG NO: M37

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ABBREVIATIONS

A	AMBER, AMPERE, ALARM
AC	ALTERNATING CURRENT
ACB	AIR CIRCUIT CURRENT
ACCU	AIR COOLED CONDENSING UNIT
AF	AMPERE FRAME
AFF	ABOVE FINISHED FLOOR
AFG	ABOVE FINISHED GRADE
AHU	AIR HANDLING UNIT
AIC	AMPS INTERRUPTING CAPACITY
ALUM	ALUMINUM
AM	AMMETER
ANN	ANNUNCIATOR
ANSI	AMERICAN NATIONAL STANDARDS INSTITUTE
AR	ALARM RELAY
ASA	AMERICAN STANDARDS ASSOCIATION
AS	AMMETER SWITCH
AT	AMPERE TRIP
ATS	AUTOMATIC TRANSFER SWITCH
AUX	AUXILIARY
AWG	AMERICAN WIRE GAGE
B	BLUE
BC	BARE COPPER OR BATTERY CHARGER
BIL	BASIC IMPULSE LEVEL
BKR	BREAKER
BLDG	BUILDING
BR	BRAKE
BT	BEARING TEMPERATURE
C	CLOSE, COUNTER, CONTACTOR OR CONDUIT
°C	DEGREES CENTIGRADE
CAB	CABINET
CAP	CAPACITOR
CB	CIRCUIT BREAKER
CB"A"	CIRCUIT BREAKER AUXILIARY CONTACT (OPEN WHEN BREAKER IS OPEN AND CLOSED WHEN BREAKER IS CLOSED OR TRIPPED)
CB"B"	CIRCUIT BREAKER AUXILIARY CONTACT (CLOSED WHEN BREAKER IS OPEN AND OPEN WHEN BREAKER IS CLOSED OR TRIPPED)
CBM	CERTIFIED BALLAST MANUFACTURERS
CI	CELL INTERLOCK
CKT	CIRCUIT
CL2	CHLORINE
CLG	CEILING
CONC	CONCRETE
COND	CONDUCTOR
CONN	CONNECTION
COS	CABLE OPERATED SWITCH
CP	CONTROL PANEL
CPT	CONTROL POWER TRANSFORMER
CR	CURRENT OR CONTROL RELAY
CS	CONTROL STATION
CT	CYCLE TIMER OR CURRENT TRANSFORMER
CTC	CYCLE TIMER CLUTCH
CTM	CYCLE TIMER MOTOR
CU	COPPER
CWP	COLD WATER PIPE
DC	DIRECT CURRENT
DIA	DIAMETER
DI	DOOR INTERLOCK
DM	DAMPER MOTOR OR DEMAND METER
DN	DOWN
DO	DRAW OUT
DPDT	DOUBLE POLE DOUBLE THROW
DPST	DOUBLE POLE SINGLE THROW
DPR	DIFFERENTIAL PRESSURE REGULATOR
DPS	DIFFERENTIAL PRESSURE SWITCH
DS	DISCONNECT SWITCH
DVLS	DISCHARGE VALVE LIMIT SWITCH
EC	EMPTY CONDUIT
EF	EXHAUST FAN
ELEC	ELECTRICAL
EL	ELEVATION
ELR	EMERGENCY LOCKOUT RELAY
EM	EMERGENCY
EMH	ELECTRICAL MANHOLE
EMT	ELECTRICAL METALLIC TUBING
ENCL	ENCLOSURE
EO	ELECTRICALLY OPERATED
EP	EXPLOSION PROOF
ER	ELECTRODE RELAY
ES	END SWITCH
ESB	ENERGY SAVING BALLAST
ETM	ELAPSED TIME METER
EUH	ELECTRIC UNIT HEATER
EVA	ELECTRIC VALVE ACTUATOR
EWC	ELECTRIC WATER COOLER
EWH	ELECTRIC WATER HEATER
EXH	EXHAUST
EXIST	EXISTING
F	FORWARD
°F	DEGREES FAHRENHEIT
FAAP	FIRE ALARM ANNUNCIATION PANEL
FACP	FIRE ALARM CONTROL PANEL
FIT	FLOW INDICATING TRANSMITTER
FLA	FULL LOAD AMPERES
FM	FACTORY MANUAL
FS	FLOW SWITCH
FT	FEET

GALV	GALVANIZED
GB	GENERATOR BREAKER
GD	GROUND DETECTOR
GEN	GENERATOR
GFI	GROUND FAULT INTERRUPTER
GND	GROUND
GFR	GROUND FAULT RELAY
H	HIGH OR HUMIDISTAT
HC	HOT CIRCUIT
HH	HANDHOLE
HMT	HIGH MOTOR TEMPERATURE
HOA	HAND–OFF–AUTO
HOR	HAND–OFF–REMOTE
HP	HORSE POWER
HPS	HIGH PRESSURE SODIUM
HR	HOUR
HWCO	HIGH WATER CUTOFF
HZ	HERTZ (CYCLE)
I/O	INPUT/OUTPUT
IEEE	INSTITUTE OF ELECTRICAL AND ELECTRONIC ENGINEERS
IES	ILLUMINATING ENGINEERING SOCIETY
INST	INSTRUMENTATION
ISO	ISOLATION
J	JUNCTION BOX
K	KEY INTERLOCK
KV	KILOVOLT
KVA	KILOVOLT AMPERE
KVAR	KILOVAR
KW	KILOWATT
KWH	KILOWATT HOUR
L	LOW, LEVEL
LA	LIGHTNING ARRESTED
LC	LIGHTING CONTRACTOR
LOR	LOCAL–OFF–REMOTE
LS	LIMIT OR LEVEL SWITCH
LT	LIGHT
LTG	LIGHTING
LWCO	LOW WATER CUTOFF
M	MAGNETIC MOTOR STARTER
MA	MILLIAMPERE
MAX	MAXIMUM
MCB	MAIN CIRCUIT BREAKER
MCC	MOTOR CONTROL CENTER
MCM	THOUSAND CIRCULAR MIL
MCP	MOTOR CIRCUIT PROTECTOR
MD	MOISTURE DETECTOR
MFM	MAGNETIC FLOW METER
MFR	MANUFACTURER
MH	MANHOLE, MOUNTING HEIGHT OR METAL HALIDE
MIN	MINIMUM
MLO	MAIN LUGS ONLY
MOV	MOTOR OPERATED VALVE
MPR	MOTOR PROTECTION RELAY
MS	MANUAL MOTOR STARTER
MSH	MOTOR SPACE HEATER
MTD	MOUNTED
MTS	MANUAL TRANSFER SWITCH
MV	MILLIVOLT OR MERCURY VAPOR
MVA	MEGA VOLT AMPERE
N	NEUTRAL
NC	NORMALLY CLOSED
NECA	NATIONAL ELECTRICAL CONTRACTORS ASSOCIATION
NEC	NATIONAL ELECTRICAL CODE
NEMA	NATIONAL ELECTRICAL MANUFACTURERS ASSOCIATION
NF	NON–FUSED
NFPA	NATIONAL FIRE PROTECTION ASSOCIATION
NIC	NOT IN CONTRACT
NO	NORMALLY OPEN, NUMBER
NTS	NOT TO SCALE
O	OPEN
OC	ON CENTER
OFCI	OWNER FURNISHED CONTRACTOR INSTALLED
OH	OVERHEAD
OL	OVERLOAD
OLS	OVERLOADS
OSHA	OCCUPATIONAL SAFETY AND HEALTH ACT
P	POLE
PB	PUSH BUTTON OR PULL BOX
PC	PHOTO CONTROL
PLC	PROGRAMMABLE LOGIC CONTROLLER
PF	POWER FACTOR
PH	PHASE, CHEMICAL TERM
PNL	PANEL
PR	PAIR
PRGS	PVC COATED RIGID GALVANIZED STEEL
PRI	PRIMARY
PRS	PROXIMITY SWITCH

R	RED, RAISE, RELAY OR REVERSE
RECP	RECEPTACLE
RES	RESISTOR
RGS	RIGID GALVANIZED STEEL
RMS	ROOT–MEAN–SQUARE
RS	RAPID START
RT	REPEATING TIMER
RTD	RESISTANCE TYPE TEMP DETECTOR
RTU	REMOTE TERMINAL UNIT
SCH	SCHEDULE
SEC	SECONDARY
SH	SPACE HEATER OR SHIELD
SN	SOLID NEUTRAL
SP	SINGLE POLE
SPDT	SINGLE POLE DOUBLE THROW
SPST	SINGLE POLE SINGLE THROW
SS	SELECTOR SWITCH OR STAINLESS STEEL
ST	STATION TIE BREAKER
SUPV	SUPERVISORY CONTROL
SV	SOLENOID VALVE
SW	SWITCH
SWBD	SWITCHBOARD
SWGR	SWITCHGEAR
T	THERMOSTAT, TIMER, OR TOTALIZER
TACH	TACHOMETER
TB	TERMINAL BLOCK
TC	TIMER CLUTCH OR TIME CLOCK
TD	TIME DELAY RELAY
TEL	TELEPHONE
TEMP	TEMPERATURE
TM	TIMER MOTOR
TQ	TORQUE
TTB	TELEPHONE TERMINAL BOX OR BOARD
TTC	TELEPHONE TERMINAL CABINET
TYP	TYPICAL
UL	UNDERWRITERS LABORATORIES
UG	UNDERGROUND
UON	UNLESS OTHERWISE NOTED
UV	UNDER VOLTAGE
UPS	UNINTERRUPTIBLE POWER SUPPLY
V	VOLTS
VA	VOLT AMPERE
VAR	VARMETER
VFD	VARIABLE FREQUENCY DRIVE
VLS	VALVE LIMIT SWITCH
VM	VOLTMETER
VPI	VALVE POSITION INDICATOR
VS	VOLTMETER SWITCH
VSC	VARIABLE SPEED CONTROLLER
VSD	VARIABLE SPEED DRIVE
W	WHITE, WATTS OR WIRE
WH	WATTHOUR METER
WM	WATT METER
WP	WEATHER PROOF
WT	WATER TIGHT
X	AUXILIARY RELAY
XFMR	TRANSFORMER
XTMR	TRANSFORMER
Y	YELLOW
ZS	POSITION SWITCH
ø	PHASE

GENERAL NOTES

1. ALL ELECTRICAL WORK SHALL COMPLY WITH N.E.C AND LOCAL CODES.
2. DO NOT SCALE THE ELECTRICAL DRAWINGS. REFER TO THE MECHANICAL, STRUCTURAL, CIVIL AND ARCHITECTURAL DWGS AND APPROVED SHOP DRAWINGS FOR THE EXACT LOCATION OF ALL EQUIPMENT.
3. THE CONTRACTOR SHALL VERIFY EXACT LOCATION OF TERMINAL BOXES, PANELBOARDS, CONDUITS, CONTROL PANELS ETC, AGAINST SHOP DRAWINGS BEFORE STUBBING UP CONDUITS.
4. CONTRACTOR SHALL PROVIDE ADDITIONAL PULLBOXES WHERE REQUIRED BY THE NEC AND/OR TO MAKE A WORKABLE INSTALLATION.
5. CONDUIT ENTRY INTO ELECTRICAL EQUIPMENT SHALL BE DIRECTLY BELOW OR ABOVE AND BE LOCATED EQUALLY SPACED FROM EQUIPMENT CENTERLINE

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Willard C Hoanshelt

Digitally signed by Willard C Hoanshelt
DN: CN=Willard C Hoanshelt, email=whoanshelt@jonesedmunds.com, C=US
Date: 2023.05.04 14:33:24-04'00'

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NORTH FLORIDA MEGA INDUSTRIAL PARK
WASTEWATER TREATMENT PLANT
COLUMBIA COUNTY, FLORIDA

ABBREVIATIONS

APPROVED BY
EMI
WILLARD C. HOANSHELT
P.E. # 42593

PROJECT NO: 03780–001–01
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DWG NO: E01

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ELEMENTARY SYMBOLS

- WIRE INTERSECTION POINT
- EXTERNAL CONNECTION POINT
- NORMALLY OPEN CONTACT
- NORMALLY CLOSED CONTACT
- STARTER, CONTACTOR OR RELAY COIL
- NORMALLY OPEN PUSH BUTTON
- NORMALLY CLOSED PUSH BUTTON
- MAINTAINED PUSH BUTTON
- MOMENTARY MUSHROOM HEAD
- NORMALLY CLOSED GEARED LIMIT SWITCH
- NORMALLY OPEN GEARED LIMIT SWITCH
- INDICATING LIGHT
- FUSE
- POTENTIOMETER
- CAPACITOR
- DIODE
- RESISTOR
- CONTROL POWER TRANSFORMER
- SWITCH
- MANUAL STARTER
- ELECTRODE
- FLOAT SWITCH (CLOSING ON RISING LEVEL)
- FLOAT SWITCH (OPENING ON RISING LEVEL)
- PRESSURE SWITCH (CLOSING ON RISING PRESSURE)
- PRESSURE SWITCH (OPENING ON RISING PRESSURE)
- VACUUM SWITCH (CLOSING ON INCREASING VACUUM)
- VACUUM SWITCH (OPENING ON INCREASING VACUUM)
- TEMPERATURE SWITCH (CLOSING ON RISING TEMPERATURE)
- TEMPERATURE SWITCH (OPENING ON RISING TEMPERATURE)
- FLOW ACTUATED SWITCH (CLOSING ON INCREASE IN FLOW)
- FLOW ACTUATED SWITCH (OPENING ON INCREASE IN FLOW)
- ON TIME DELAY SWITCH (NORMALLY OPEN WITH TIME DELAY CLOSING AFTER COIL IS ENERGIZED)
- OFF TIME DELAY SWITCH (NORMALLY OPEN WITH TIME DELAY OPENING AFTER COIL IS DE-ENERGIZED)
- ON TIME DELAY SWITCH (NORMALLY CLOSED WITH TIME DELAY OPENING AFTER COIL IS ENERGIZED)
- OFF TIME DELAY SWITCH (NORMALLY CLOSED WITH TIME DELAY CLOSING AFTER COIL IS DE-ENERGIZED)
- TORQUE SWITCH (NORMALLY OPEN)
- TORQUE SWITCH (NORMALLY CLOSED)
- LIMIT SWITCH (NORMALLY OPEN)
- LIMIT SWITCH (NORMALLY OPEN, HELD CLOSED)

ELEMENTARY SYMBOLS (CON'T)

- LIMIT SWITCH (NORMALLY CLOSED)
- LIMIT SWITCH (NORMALLY CLOSED, HELD OPEN)
- DIFFERENTIAL PRESSURE SWITCH (NORMALLY OPEN, CLOSING ON INCREASING DIFF.)
- DIFFERENTIAL PRESSURE SWITCH (NORMALLY CLOSED, OPENING ON INCREASING DIFF.)

FIRE ALARM SYSTEM

- PULL STATION
- HORN/LIGHT COMBINATION
- ROOM SMOKE DETECTOR
- DUCT SMOKE DETECTOR
- FIRE ALARM CONTROL PANEL
- TWO COMMUNICATIONS STATION

SINGLE LINE POWER DIAGRAM SYMBOLS

- CIRCUIT BREAKER
- COMBINATION MOTOR STARTER WITH MOTOR CIRCUIT PROTECTOR, FULL VOLTAGE, NON-REVERSING, SINGLE SPEED
- REDUCE VOLTAGE NON-REVERSING SOLID STATE STARTER SINGLE SPEED
- THERMAL OVERLOADS
- AC MOTOR, NUMBER INDICATES HORSEPOWER
- DC MOTOR, NUMBER INDICATES HORSEPOWER
- GENERATOR, SIZE AS NOTED
- LOW VOLTAGE CIRCUIT BREAKER DRAW-OUT TYPE
- MEDIUM VOLTAGE CIRCUIT BREAKER DRAW-OUT TYPE
- LIGHTNING ARRESTOR
- SURGE SUPPRESSOR
- SURGE CAPACITOR
- FUSE
- POTENTIAL TRANSFORMER, QUANTITY AS NOTED
- MOTOR CIRCUIT PROTECTOR NO. INDICATES FRAME SIZE
- CURRENT TRANSFORMER, QUANTITY AS NOTED
- KEY INTERLOCK
- POWER PANEL
- LIGHTING PANEL
- FUSED SAFETY SWITCH
- NON-FUSED SAFETY SWITCH
- COMBINATION MOTOR STARTER

SWITCH SYMBOLS

- S — SINGLE POLE SWITCH
- S_2 — DOUBLE POLE SWITCH
- S_3 — THREE-WAY SWITCH
- S_4 — FOUR-WAY SWITCH
- S_{WP} — WEATHERPROOF SWITCH
- S_P — SWITCH WITH PILOT LAMP
- S_K — KEY OPERATED SWITCH
- S_H — HAZARDOUS AREA SWITCH
- D — DIMMER SWITCH
- S_L — SWITCH FOR LOW VOLTAGE SWITCHING SYSTEM
- S_{LM} — MASTER SWITCH FOR LOW VOLTAGE SWITCHING SYSTEM
- S — SWITCH AND SINGLE RECEPTACLE
- S — SWITCH AND DOUBLE RECEPTACLE
- S_D — DOOR SWITCH
- S_T — TIME SWITCH
- S_{CB} — CIRCUIT BREAKER SWITCH
- S_{MC} — MOMENTARY CONTACT SWITCH OR PUSHBUTTON FOR OTHER THAN SIGNALING SYSTEM
- START/STOP SWITCH
- SPEED CONTROL
- LOCAL CONTROL SWITCH
- M — MOTION SENSOR

RECEPTACLE OUTLET SYMBOLS

- DUPLEX RECEPTACLE
- SINGLE RECEPTACLE OUTLET
- DUPLEX RECEPTACLE OUTLET-SPLIT WIRED
- TRIPLEX RECEPTACLE OUTLET-SPLIT WIRED
- (1) SINGLE SPECIAL PURPOSE RECEPTACLE OUTLET (SEE NOTE 1)
- (1) DUPLEX RECEPTACLE SPECIAL PURPOSE OUTLET (SEE NOTE 1)
- (1) RANGE OUTLET (SEE NOTE 1)
- (1) SPECIAL PURPOSE CONNECTION OR PROVISION FOR CONNECTION (SEE NOTE 1)
- (1) MULTIOUTLET ASSEMBLY (SEE NOTE 1)
- (1) CLOCK HANGER RECEPTACLE (SEE NOTE 1)
- (1) FAN HANGER RECEPTACLE (SEE NOTE 1)
- FLOOR SINGLE RECEPTACLE OUTLET
- FLOOR DUPLEX RECEPTACLE
- (1) FLOOR SPECIAL PURPOSE OUTLET (SEE NOTE 1)
- QUADPLEX RECEPTACLE

NOTE 1:

NUMERICAL SUBSCRIPT INDICATES THE SHEET NOTE WHERE THE TYPE OF RECEPTACLE AND USAGE IS NOTED.

SERVICE AND DISTRIBUTION

- MAGNETIC MOTOR STARTER OR CONTACTOR SIZE AS NOTED
- MOTOR CONNECTION, AS NOTED
- MOTOR CONNECTION, FUTURE OR EXISTING AS NOTED
- DISCONNECT SWITCH, SIZE AS NOTED
- COMBINATION MAGNETIC MOTOR STARTER, SIZE AS NOTED
- BRANCH CIRCUIT PANELBOARD, UNDER 250 VOLTS, SURFACE MOUNTED
- BRANCH CIRCUIT PANEL BOARD, UNDER 250 VOLTS, FLUSH MOUNTED
- BRANCH CIRCUIT PANELBOARD, OVER 250 VOLTS, SURFACE MOUNTED
- TRANSFORMER, SIZE AS NOTED
- SYSTEMS CABINET
- TELEPHONE TERMINAL BOARD

LIGHTNING PROTECTION/ GND SYSTEM

- AIR TERMINAL WITH CAST ADHESIVE BASE MOUNT
- BONDING PLATE
- TEE SPLICE
- CONDUCTOR TURNED DOWN
- G — ROOFTOP MAIN CONDUCTOR
- ROOFTOP BONDING CONDUCTOR
- G — MAIN CONDUCTOR CONCEALED BELOW ROOFTOP
- G — BURIED COUNTERPOISE CONDUCTOR
- AIR TERMINAL WITH CAST ADHESIVE BASE MOUNT FOR USE ON TOP OF EXHAUST FAN HOUSING.
- GROUND ROD
- GROUND CONNECTION

RACEWAY SYSTEM

- J — JUNCTION BOX
- HOME RUN TO PANELBOARD. NO. OF ARROWS INDICATE NO. OF CIRCUITS, HASH MARKS INDICATE NO. OF #12 AWG. CONDUCTORS. NO HASH MARKS INDICATE 2#12 CONDUCTORS.
- CONDUIT CONCEALED IN WALL OR ABOVE CEILING
- CONDUIT CONCEALED IN OR BELOW FLOOR OR UNDERGROUND
- CONDUIT RUN EXPOSED. RUN PARALLEL OR PERPENDICULAR TO STRUCTURE OR WALL

COMMUNICATIONS

- (S) INTERIOR CEILING SPEAKER
- S EXTERIOR HORN SPEAKER
- (S) WALL MOUNTED SPEAKER
- WP EXTERIOR HANDSET
- DESKTOP HANDSET
- FLOOR TELEPHONE OUTLET-PUBLIC
- FLOOR TELEPHONE OUTLET-PRIVATE
- FLUSH OUTLET BOX AND COVER PLATE
- FLUSH FLOOR MOUNTED OUTLET BOX AND COVER PLATE
- SECURITY CAMERA
- (C) COMMUNICATION OUTLET (TELEPHONE & DATA)

LIGHTING OUTLETS

CEILING	WALL	
(1)	(1)	SURFACE OR PENDANT MOUNTED FIXTURE
(R)1	(R)1	RECESSED FIXTURE
1	1	SURFACE OR PENDANT MOUNTED FLUORESCENT FIXTURE
R 1	R 1	RECESSED FLUORESCENT FIXTURE
1 R		TANDEM FLUORESCENT FIXTURE
1		RECESSED TANDEM FLUORESCENT FIXTURE
1		BARE LAMP FLUORESCENT STRIP WITH GUARD
1		FLUORESCENT TROFFER
		SURFACE OR PENDANT MOUNTED EXIT LIGHT
R	R	RECESSED EXIT LIGHT
(B)	(B)	BLANKED OUTLET
(J)	(J)	JUNCTION BOX
1	1	POLE MOUNTED FIXTURE
		EMERGENCY LIGHT FIXTURE
		LIGHT WITH EMERGENCY BATTERY BACKUP

NOTE 1:

LETTER SUBSCRIPT INDICATES FIXTURE TYPE AS DESCRIBED IN THE LIGHTING FIXTURE SCHEDULE.

PLAN SYMBOLS

- (TT) TEMPERATURE TRANSMITTER
- (PT) PRESSURE TRANSMITTER
- (FT) FLOW INDICATING TRANSMITTER
- (FE) FLOW ELEMENT
- (DT) DENSITY INDICATING TRANSMITTER
- (LT) LEVEL INDICATING TRANSMITTER
- (LE) LEVEL ELEMENT
- (VM) VOLT METER
- (VS) VOLT SWITCH
- (AM) AMPMETER
- (AS) AMP SWITCH
- MS MOTION SWITCH
- (FT) FLOAT SWITCH
- (FS) FLOW SWITCH
- (LS) LIMIT SWITCH
- (TS) TORQUE SWITCH
- (PS) PRESSURE SWITCH
- (T) THERMOSTAT
- (VS) VIBRATION SWITCH
- (SV) SOLENOID VALVE
- (ZS) ZERO SPEED SWITCH
- (TR) TIMING RELAY
- GROUND CONNECTION
- GROUND ROD

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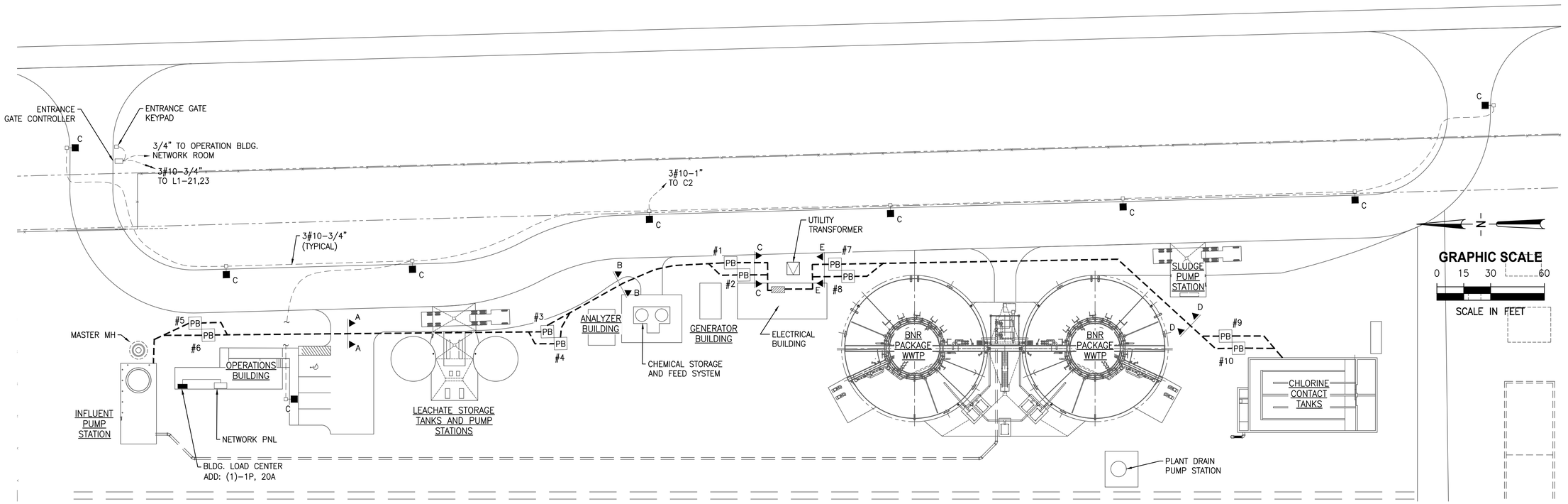
SYMBOLS

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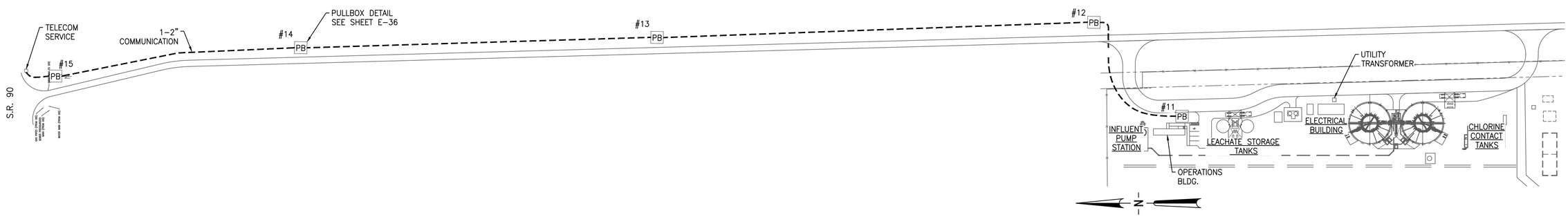
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SITE PLAN
1" = 30'



UTILITY SITE PLAN
1" = 100'

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VE	11/2022	VE GMP-1	LYC	TWF

DESIGNED TFRIEDRICH
DRAWN JKRAMER
CHECKED SMENARD

JonesEdmunds
730 NE WALDO ROAD, GAINESVILLE, FLORIDA 32641 / (352) 377-5821

NORTH FLORIDA MEGA INDUSTRIAL PARK
WASTEWATER TREATMENT PLANT
COLUMBIA COUNTY, FLORIDA

SITE PLAN

Thomas W. Friedrich, State of Florida, Professional Engineer, License No. 61281

This item has been digitally signed and sealed by Thomas W. Friedrich on the date indicated on the Cover Page (G1) and M1.

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PROJECT NO: 03780-001-01
DATE: DEC. 2022
INDEX NO:
DWG NO: E03

SAVED: 1/9/2023 1:42 PM WHOANSHELT T:\MY CLIENTS DWGS\JONES EDMUNDS\JONES EDMUNDS MEGA PARK REDESIGN EMI DWGS 1-4-22\EMI DWGS 1-4-22\03780001-E03.DWG

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WIRE SIZE NOTES

1. 3#1,1#4,4#14–2"
2. 3#1,1#6–1½"
3. 3#4,1#6,4#14–2"
4. 3#3,1#6–1½"
5. 3#6,1#10,4#14–1½"
6. 3#8,1#10–1"
7. 3#8,1#10,4#14–1½"
8. 3#12,1#12–1"
9. 3#10,1#10,4#14–1"
10. 3#14,1#12,4#14–3/4"
11. 4#10–1"
12. 3#4,1#6,–1¼"
13. 3P, SIZE 1 COMBINATION STARTER W/ RL, ON/OFF, 120V CPT, NEMA 4X
14. 4#8,1#10–1½"
15. 30A, 3P, NEMA 1 ELECTRIC HELD, 120V, COIL, HOA
16. TORK, 7 DAY TIMER W/ PHOTO CONTROL INDOORS, BACKUP
17. 4#8,1#10–1"

FLORIDA POWER AND LIGHT SERVICE POLE

(2)–4" PVC

PROPOSED FLORIDA POWER AND LIGHT SERVICE TRANSFORMER 277/480V, 3ø, 4W

ALUM METER

MTD ON CONC POST

SHUNT TRIP NEMA 4X

TO GENSET

MB PNL BD, 1600A, 480V, 3ø, 4W FLOOR MTD, 65KAIC RATED, 1600A, MB W/: (1)–3P,30A (SPD)

200KA PER MODE SPD

1600A MB W/ GFP

#4/0 TO GRID

(4)–4" W/3–600KCMIL, 1#4/0 EA.

(4)–4" W/3–600KCMIL, 2#4/0 EA.

1600A, 4P, ATS, INDOORS

PROPOSED 750KW/937.5KVA GENERATOR 1200A

(3)–4" W/3–600KCMIL, 2#4/0 EA.

CP

MDP PNL, 1600A, 480V, 3ø, 3W FLOOR MTD, 65KAIC RATED, 1600A, MB, NEMA 12

1600A MDP

1600A 800A 800A 600A 600A 30A 30A

MCC–3

MCC–4

SPD 200KA PER MODE

SEE SHEET E–5 FOR CONTINUATION

GENERATOR BUILDING

(4)–4" W/3–600KCMIL, 1#4/0 EA.

(2)–4" W/3–600KCMIL, 1#4/0 EA.

SEE E05 FOR CONTINUATION

(2)–3" W/3–350KCMIL, 1#1/0 EA.

MCC–1, 800A, 480V, 3ø, 65KAIC RATED (SEE FRONT VIEWS SPARES)

600A	20A	100A	30A	70A	20A	50A	30A	20A	20A	20A	70A	20A	20A	150A	150A	20A	20A	20A	15A	70A	20A	20A	20A	60A
	VFD	VFD			VFD	VFD		VFD	VFD	VFD	VFD			VFD	VFD		VFD	VFD						
			IPCP				MSCP					MCPA–1	MCPA–3			MCPA–5			SCP1					
BOOSTER PUMP	INFLUENT PUMP #1 P–100–1	INFLUENT P.S. MIXER (IPCP) M–105–1	LEACHATE OFFLOADING PUMP #1 P–155A–1	LEACHATE FEED PUMP #1 P–160A–1	LEACHATE BLOWERS #1 B–165A–1	MECHANICALLY CLEAN SCREEN D–200A–1	MECHANICALLY CLEAN SCREEN D–200B–2	SCREW COMPACTOR CONVEYOR D–201–3	EQ PUMP #1 P–206A–1	EQ PUMP #3 P–206A–3	EQ PUMP #5 P–206A–5	EQ BLOWER #1 B–208A–1	PRE ANOXIC 1 MIXER #1 M–211A–1	PRE ANOXIC 2 MIXER #3 M–211A–3	AERATION DIGESTER BLOWER #1 B–216A–1	AERATION DIGESTER BLOWER #3 B–216A–3	POST ANOXIC BASIN MIXER #1 M–221A–5	INTERNAL RECYCLE PUMP #1 P–230–1	INTERNAL RECYCLE PUMP #3 P–230–3	SECONDARY CLARIFIER #1 D–240A–1	SLUDGE TRUCK LOADING PUMP #1 P–246A–1	AERATION DIGESTER BLOWER #1 CP	AERATION DIGESTER BLOWER #2 CP	AERATION DIGESTER BLOWER #3 CP
5	45	2	40	2	25	1	1	2	3	3	3	25	3	3	75	75	3	5	5	1/2	40	1BLCP–1	1BLCP–2	1BLCP–3

SEE E05 FOR CONTINUATION

MCC–2, 800A, 480V, 3ø, 65KAIC RATED

100A	70A	20A	70A	20A	20A	20A	50A	20A	20A	150A	20A	20A	20A	15A	70A	20A	20A	20A	20A	60A
VFD		VFD	VFD	VFD	VFD	VFD	VFD			VFD			VFD	VFD			VFD	VFD	VFD	VFD
								MCPB–2	MCPB–4		MCPB–6				SCP2					
INFLUENT PUMP #2 P–100–2	LEACHATE OFFLOADING PUMP #2 P–155B–2	LEACHATE FEED PUMP #2 P–160B–2	LEACHATE BLOWERS #2 B–165B–2	EQ PUMP #2 P–206B–2	EQ PUMP #4 P–206B–4	EQ PUMP #6 P–206B–6	EQ BLOWER #2 B–208B–2	STAGE 1 ANOXIC BASIN MIXER #2 M–211B–2	STAGE 1 ANOXIC BASIN MIXER #4 M–211B–4	AERATION DIGESTER BLOWER #2 B–216B–2	POST ANOXIC BASIN MIXER #2 M–221B–6	INTERNAL RECYCLE PUMP #2 P–230–2	INTERNAL RECYCLE PUMP #4 P–230–4	SECONDARY CLARIFIER #2 D–240B–2	SLUDGE TRUCK LOADING PUMP #2 P–246B–2	SAMPLE PUMP P–101–1	AERATION DIGESTER BLOWER #1 CP	AERATION DIGESTER BLOWER #2 CP	AERATION DIGESTER BLOWER #3 CP	
45	40	2	25	3	3	3	25	3	3	75	3	5	5	1/2	40	1	2BLCP–1	2BLCP–2	2BLCP–3	

3#6,1#10–1"

TO SITE LTG

PC 16

TC 16

CI 15

#6 17

MTS–1, 100A,3P

3#6,1#10,–1"

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T–1 30 KVA, 480V–120/208, 3ø, 4W

4#3,1#6,–1½"

50KA/MODE NEMA 4X (TYP.)

SPD 14

SPD 14

SPD PNL L1

PNL L1A

PNL L1B

3#6,1#10,–1"

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WILLARD C. HOANSHELT LICENSE No. 42593 STATE OF FLORIDA PROFESSIONAL ENGINEER

VE GMP-2

LTR.	DATE	REVISIONS	BY	APPRD.
VE	11/2022	VE GMP–1	LYC	TWF

DESIGNED WCH

DRAWN JPH

CHECKED MCLARK

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NORTH FLORIDA MEGA INDUSTRIAL PARK
WASTEWATER TREATMENT PLANT
COLUMBIA COUNTY, FLORIDA

480V POWER RISER

APPROVED BY

EMI

WILLARD C. HOANSHELT

P.E. # 42593

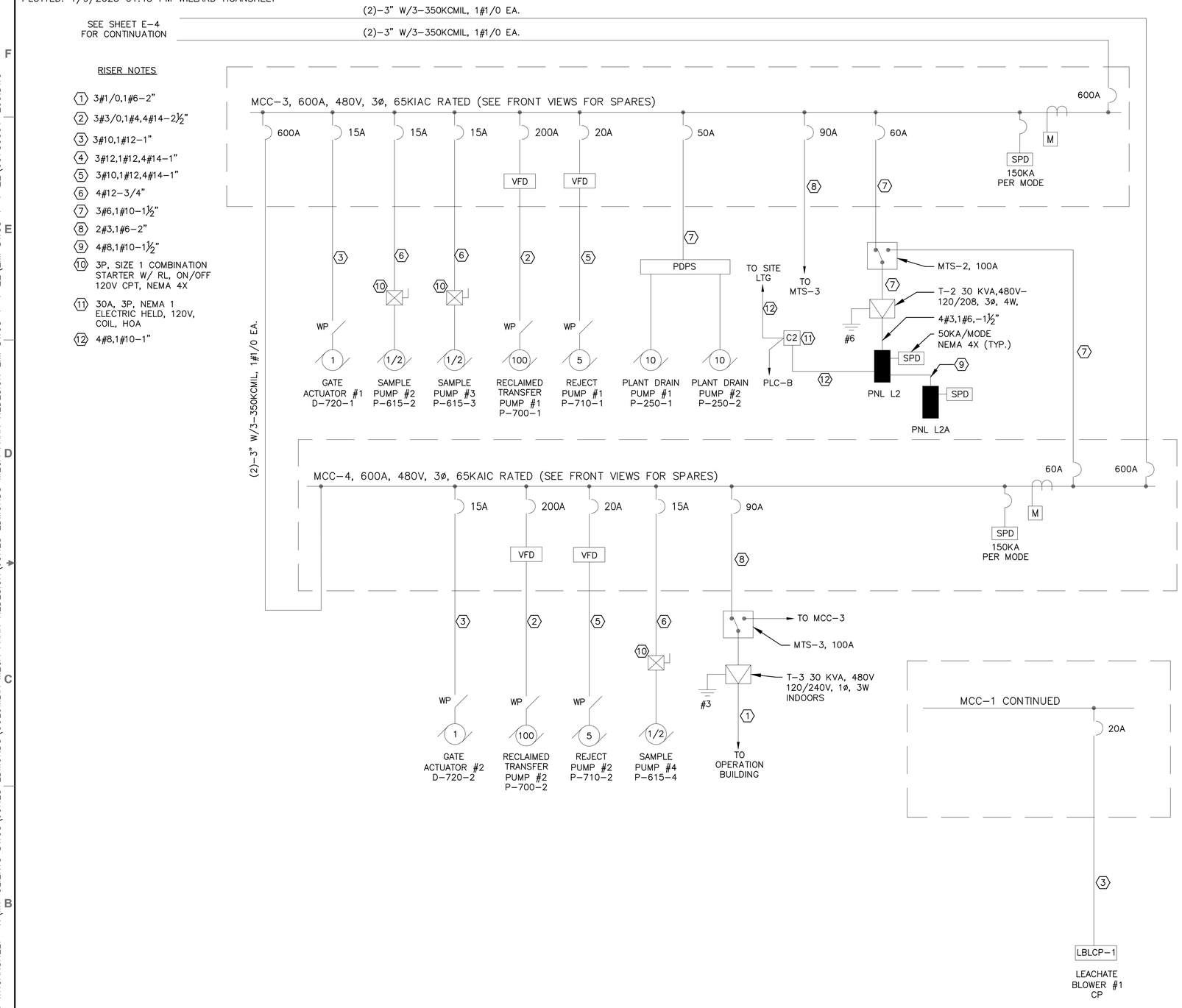
PROJECT NO: 03780–001–01

DATE: DEC. 2022

INDEX NO:

DWG NO: E04

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COLUMBIA COUNTY WWTF Electrical Load Calculations			
Available Voltage 277/480V – 3 Phase, 4 WIRE, WYE, Solid Ground Maximum Available Fault Current =			
Load	Phase A Amps	Phase B Amps	Phase C Amps
INFLUENT P.S. PUMPS (2)-45HP (100)	130.0	130.0	130.0
INFLUENT P.S. MIXER (1)-2HP (105)	3.4	3.4	3.4
LEACHATE OFFLOADING PUMP (2)-40HP (155)	104.0	104.0	104.0
LEACHATE FEED PUMP (2)-2HP (160)	6.8	6.8	6.8
LEACHATE TANK BLOWERS (2)-25HP (165)	80.0	80.0	80.0
MECHANICALLY CLEANED SCREEN (2)-1HP (200)	4.2	4.2	4.2
SCREW COMPACTOR/CONVEYOR (1)-2HP (201)	3.4	3.4	3.4
EQ PUMPS (6)-3HP (206)	28.8	28.8	28.0
EQ BLOWERS (2)-25HP (208)	104.0	104.0	104.0
STAGE 1 ANOXIC BASIN MIXERS (4)-3HP (211)	19.2	19.2	19.2
AERATION/DIGESTER BLOWERS (3)-75HP (216)	288.0	288.0	288.0
STAGE 2 ANOXIC BASIN MIXERS (4)-3HP (221)	19.2	19.2	19.2
STAGE 1 INTERNAL RECYCLE PUMPS (4)-5HP (230)	84.0	84.0	84.0
SECONDARY CLARIFIERS (2)-0.5HP (240)	2.2	2.2	2.2
DIGESTED SLUDGE LOADING PUMP (2)-40HP (246)	104.0	104.0	104.0
PLANT DRAIN PUMPS (2)-10HP (250)	28.0	28.0	28.0
SAMPLE PUMPS (4)-1HP (615)	8.4	8.4	8.4
RECLAIMED TRANSFER P.S. (2)-100HP (700)	248.0	248.0	248.0
REJECT PUMPS (2)-5HP (710)	15.2	15.2	15.2
Lighting, Recept, A/C (At 480 Volts)	72.0	72.0	72.0
25% Largest Motor	31.0	31.0	31.0
Total	1383.80	1383.80	1383.80
Service Size Selected = 1600 Amperes			

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VE GMP-2

LTR.	DATE	REVISIONS	BY	APPRD.
VE	11/2022	VE GMP-1	LYC	TWF

DESIGNED WCH
DRAWN JPH
CHECKED MCLARK

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730 NE WALDO ROAD, GAINESVILLE, FLORIDA 32641 / (352) 377-5821

NORTH FLORIDA MEGA INDUSTRIAL PARK
WASTEWATER TREATMENT PLANT
COLUMBIA COUNTY, FLORIDA

480V POWER RISER

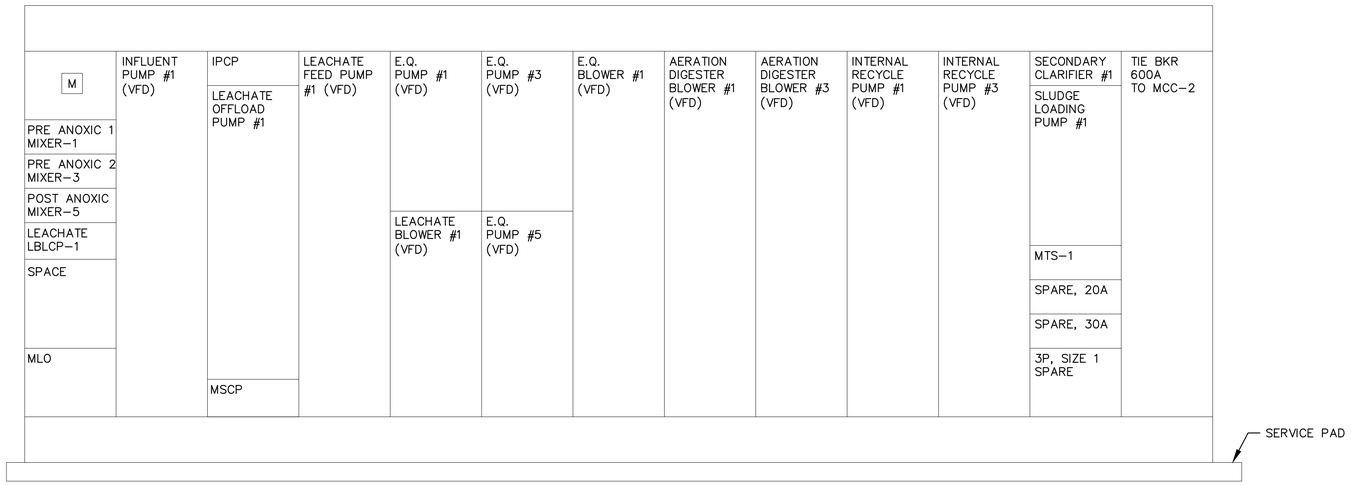
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PROJECT NO: 03780-001-01
DATE: DEC. 2022
INDEX NO:
DWG NO: E05

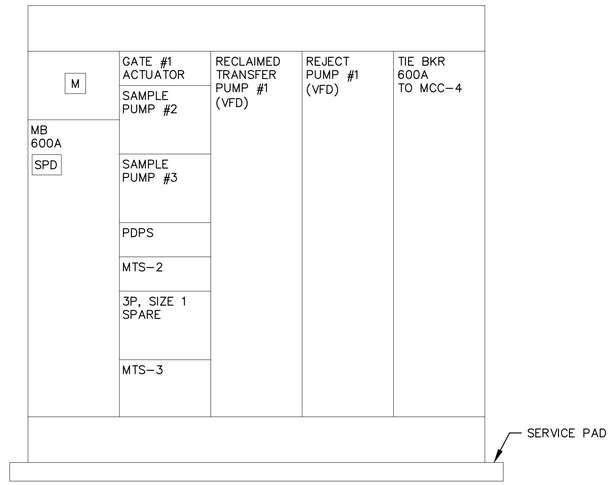
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REDESIGN\JONES EDMUNDS MEGA PARK REDESIGN EMI DWGS 1-4-22

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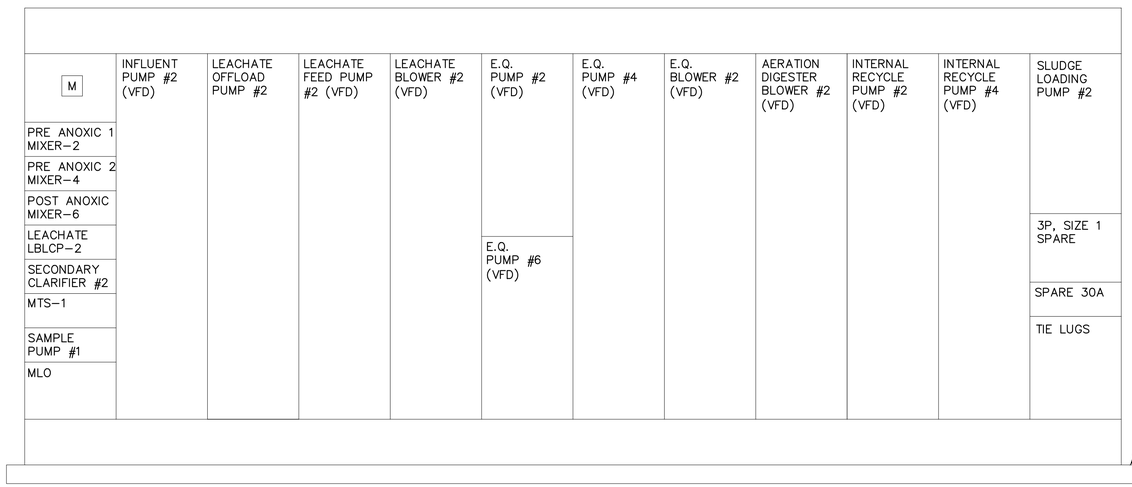
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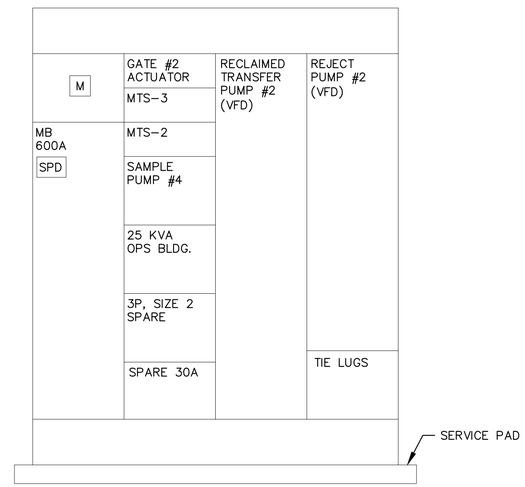
MCC-1



MCC-3



MCC-2



MCC-4

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WILLARD C. HOANSHELT LICENSE No. 42593 STATE OF FLORIDA PROFESSIONAL ENGINEER

VE GMP-2

LTR.	DATE	REVISIONS	BY	APPRD.
VE	11/2022	VE GMP-1	LYC	TWF

DESIGNED WCH
DRAWN JPH
CHECKED MCLARK

JonesEdmunds
730 NE WALDO ROAD, GAINESVILLE, FLORIDA 32641 / (352) 377-5821

NORTH FLORIDA MEGA INDUSTRIAL PARK
WASTEWATER TREATMENT PLANT
COLUMBIA COUNTY, FLORIDA

FRONT VIEWS

APPROVED BY
EMI
WILLARD C. HOANSHELT
P.E. # 42593

PROJECT NO:	DATE:
03780-001-01	DEC. 2022
INDEX NO:	DWG NO:
	E06

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PANEL NAME: L1 MOUNTING: SURFACE INTERRUPTING RATING: 10,000 AIC
TOTAL LOAD: 14.6 KVA VOLTAGE: 120/208V, 3ø, 4W MAIN BREAKER: 100A BUS: 225A
LOCATION: ELECTRICAL BUILDING #1 MFR: REMARKS: NEMA 1

LOAD SERVED	AMPS øA	AMPS øB	AMPS øC	BKR SIZE	POLE	CKT NO.	CKT NO.	BKR SIZE	POLE	AMPS øA	AMPS øB	AMPS øC	LOAD SERVED
SPD	–			30	3	1	2	40	3	7			
SPD		–		30	3	3	4	40	3		7		PANEL L1A
SPD			–	30	3	5	6	40	3			2	–
EB#1 LTG	10			20	1	7	8	40	3	11			–
SPARE		–		20	1	9	10	40	3		9		PANEL L1B
PAC–1			31	50	2	11	12	40	3			7	–
PAC–1	31			50	2	13	14	50	2	31			PAC–2
PLC–A		6		20	1	15	16	50	2		31		PAC–2
EB#1 RECPT			6	20	1	17	18	20	1			–	INF. FM
EB#1 RECPT	3			20	1	19	20	20	1	2			INF. PS LTG
GATE CONTROLLER		8		30	2	21	22	20	1		1		INF. PS RECPT
GATE CONTROLLER			8	30	2	23	24	20	1			–	SPARE
SPARE	–			20	1	25	26	20	1	–			SPARE
SPARE		–		20	1	27	28	20	1		–		SPARE
SPACE			–	20	1	29	30	20	1			8	C1
SPACE	–			20	1	31	32	20	1	5			C1
SPACE		–		20	1	33	34	20	1		6		C1
SPACE			–	20	1	35	36	20	1			–	SPACE
SPACE	–			20	1	37	38	20	1	–			SPACE
SPACE		–		20	1	39	40	20	1		–		SPACE
SPACE			–	20	1	41	42	20	1			–	SPACE
TOTALS	25	8	18							32	29	10	TOTALS

TOTAL AMPS THIS PANEL: øA 57, øB 37, øC 28

REMARKS:

PANEL NAME: L2 MOUNTING: SURFACE INTERRUPTING RATING: 10,000 AIC
TOTAL LOAD: 15.6 KVA VOLTAGE: 120/208V, 3ø, 4W MAIN BREAKER: 100A BUS: 225A
LOCATION: ELECTRICAL BUILDING #1 MFR: REMARKS: NEMA 1

LOAD SERVED	AMPS øA	AMPS øB	AMPS øC	BKR SIZE	POLE	CKT NO.	CKT NO.	BKR SIZE	POLE	AMPS øA	AMPS øB	AMPS øC	LOAD SERVED
SPD	–			30	3	1	2	40	3	18			–
SPD		–		30	3	3	4	40	3		22		PANEL L2A
SPD			–	30	3	5	6	40	3			9	–
EB#2 LTG	4			20	1	7	8	20	1	2			OUTDOOR LTG
EB#2 RECPT		3		20	1	9	10	20	1		5		PLC–B
PLANT DRAIN LTG			1	20	1	11	12	20	1			3	CCC LIGHTING
PLANT DRAIN RECPT	1			20	1	13	14	20	1	4			CCC RECPT
EB #2 RECPT		4		20	1	15	16	50	2		31		PAC–2
SPARE			–	40	2	17	18	50	2			31	PAC–2
SPARE	–			40	2	19	20	20	1	–			SPARE
FLUME FLOW METER		1		20	1	21	22	20	1		1		REJECT FM
WETWELL 1 LEVEL			1	20	1	23	24	20	1			1	WETWELL 2 LEVEL
EFF. FM	1			20	1	25	26	20	1	5			C2
SPARE		–		20	1	27	28	20	1		6		C2
SPARE			–	20	1	29	30	20	1			2	C2
SPARE	–			20	1	31	32	20	1	–			SPACE
SPACE		–		20	1	33	34	20	1		–		SPACE
SPACE			–	20	1	35	36	20	1			–	SPACE
SPACE	–			20	1	37	38	20	1	–			SPACE
SPACE		–		20	1	39	40	20	1		–		SPACE
SPACE			–	20	1	41	42	20	1			–	SPACE
TOTALS	19	8	14							24	40	25	TOTALS

TOTAL AMPS THIS PANEL: øA 43, øB 48, øC 39

REMARKS:

PANEL NAME: L1A MOUNTING: SURFACE INTERRUPTING RATING: 10,000 AIC
TOTAL LOAD: 1.9 KVA VOLTAGE: 120/208V, 3ø, 4W MAIN BREAKER: 40A BUS: 100A
LOCATION: LEACHATE TANKS MFR: REMARKS: NEMA 4X

LOAD SERVED	AMPS øA	AMPS øB	AMPS øC	BKR SIZE	POLE	CKT NO.	CKT NO.	BKR SIZE	POLE	AMPS øA	AMPS øB	AMPS øC	LOAD SERVED
SPD	–			30	3	1	2	20	1	5			PLATFORM LIGHTING
SPD		–		30	3	3	4	20	1		6		PLATFORM RECEPTACLE
SPD			–	30	3	5	6	20	1			1	TANK #1 LEVEL TRANSMITTER
TANK #2 LEVEL TRANSMITTER	1			20	1	7	8	20	1	–			SPACE
SPARE		–		20	1	9	10	20	1		1		OFFLOADING PUMP 1 TE
OFFLOADING PUMP 2 TE			1	20	1	11	12	20	1			–	OFFLOADING FLOW METER
FEED FLOW METER	–			20	1	13	14	20	1	–			SPACE
SPARE		–		20	1	15	16	20	1		–		SPACE
SPARE			–	40	1	17	18	20	1			–	SPACE
SPARE	–			40	1	19	20	20	1	–			SPACE
SPACE		–		20	1	21	22	20	1		–		SPACE
SPACE			–	20	1	23	24	20	1			–	SPACE
SPACE	–			20	1	25	26	20	1	–			SPACE
SPACE		–		20	1	27	28	20	1		–		SPACE
SPACE				20	1	29	30	20	1				SPACE
TOTALS	2	0	1							5	7	1	TOTALS

TOTAL AMPS THIS PANEL: øA 7, øB 7, øC 2

REMARKS:

PANEL NAME: L1B MOUNTING: SURFACE INTERRUPTING RATING: 10,000 AIC
TOTAL LOAD: 3.2 KVA VOLTAGE: 120/208V, 3ø, 4W MAIN BREAKER: 40A BUS: 100A
LOCATION: BNR PACKAGE TANKS MFR: REMARKS: NEMA 4X

LOAD SERVED	AMPS øA	AMPS øB	AMPS øC	BKR SIZE	POLE	CKT NO.	CKT NO.	BKR SIZE	POLE	AMPS øA	AMPS øB	AMPS øC	LOAD SERVED
SPD	–			30	3	1	2	20	1	7			PLATFORM LIGHTING
SPD		–		30	3	3	4	20	1		6		PLATFORM RECPT
SPD			–	30	3	5	6	20	1			5	MICRO CG
IR TANK "B" FM	1			20	1	7	8	20	1	1			IR TANK "A" FM
EQ PS PUMPS TANK "A" FM		1		20	1	9	10	20	1		1		TANK "A" DO METER
TANK "B" DO METER			1	20	1	11	12	20	1			1	EQ PS TANK "B" FM
TRUCK PUMP 1 TE	1			20	1	13	14	20	1	1			TRUCK PUMP 2 TE
TRUCK LOAD FM		1		20	1	15	16	20	1			–	SPARE
SPARE			–	20	1	17	18	20	1			–	SPARE
SPARE	–			20	1	19	20	20	1	–			SPARE
SPARE		–		20	1	21	22	20	1		–		SPACE
SPACE			–	20	1	23	24	20	1			–	SPACE
SPACE	–			20	1	25	26	20	1	–			SPACE
SPACE		–		20	1	27	28	20	1		–		SPACE
SPACE				20	1	29	30	20	1				SPACE
TOTALS	2	2	1							9	7	6	TOTALS

TOTAL AMPS THIS PANEL: øA 11, øB 9, øC 7

REMARKS:

PANEL NAME: L2A MOUNTING: SURFACE INTERRUPTING RATING: 10,000 AIC
TOTAL LOAD: – VOLTAGE: 120/208V, 3ø, 4W MAIN BREAKER: 40A BUS: 100A
LOCATION: ANALYZER BUILDING MFR: REMARKS: NEMA 1

LOAD SERVED	AMPS øA	AMPS øB	AMPS øC	BKR SIZE	POLE	CKT NO.	CKT NO.	BKR SIZE	POLE	AMPS øA	AMPS øB	AMPS øC	LOAD SERVED
SPD	–			30	3	1	2	20	1	2			ANALYZER BLDG. LTG
SPD		–		30	3	3	4	20	1		6		BULK STORAGE LTG
SPD			–	30	3	5	6	20	1			1	EMERGENCY SHOWER #2
EMERGENCY SHOWER #1	1			20	1	7	8	20	1	3			SKID TERMINAL PANEL
TANK RECEPTACLES		2		20	1	9	10	20	1		3		ANALYZER BUILDING RECPT.
TANK #2 LEVEL TRANSMITTER			1	20	1	11	12	20	1			1	TANK #1 LEVEL TRANSMITTER
CL2 METER #2	1			20	1	13	14	20	1	1			pH METER
TURB. METER		1		20	1	15	16	20	1		1		CL2 METER #1
INF. SAMPLER			3	20	1	17	18	20	1			3	EFF. SAMPLER
PAC–3	9			20	2	19	20	20	1	–			COND. METER
PAC–3		9		20	2	21	22	20	1		–		SPARE
SPARE			–	20	1	23	24	20	1			–	SPARE
SPACE	–			20	1	25	26	20		–			SPACE
SPACE		–		20	1	27	28	20			–		SPACE
SPACE				20	1	29	30	20					SPACE
TOTALS	11	12	4							7	10	5	TOTALS

TOTAL AMPS THIS PANEL: øA 18, øB 22, øC 9

REMARKS:

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VE GMP-2

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LTR.	DATE	REVISIONS	BY	APPRD.

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NORTH FLORIDA MEGA INDUSTRIAL PARK
WASTEWATER TREATMENT PLANT
COLUMBIA COUNTY, FLORIDA

PANEL SCHEDULES

APPROVED BY
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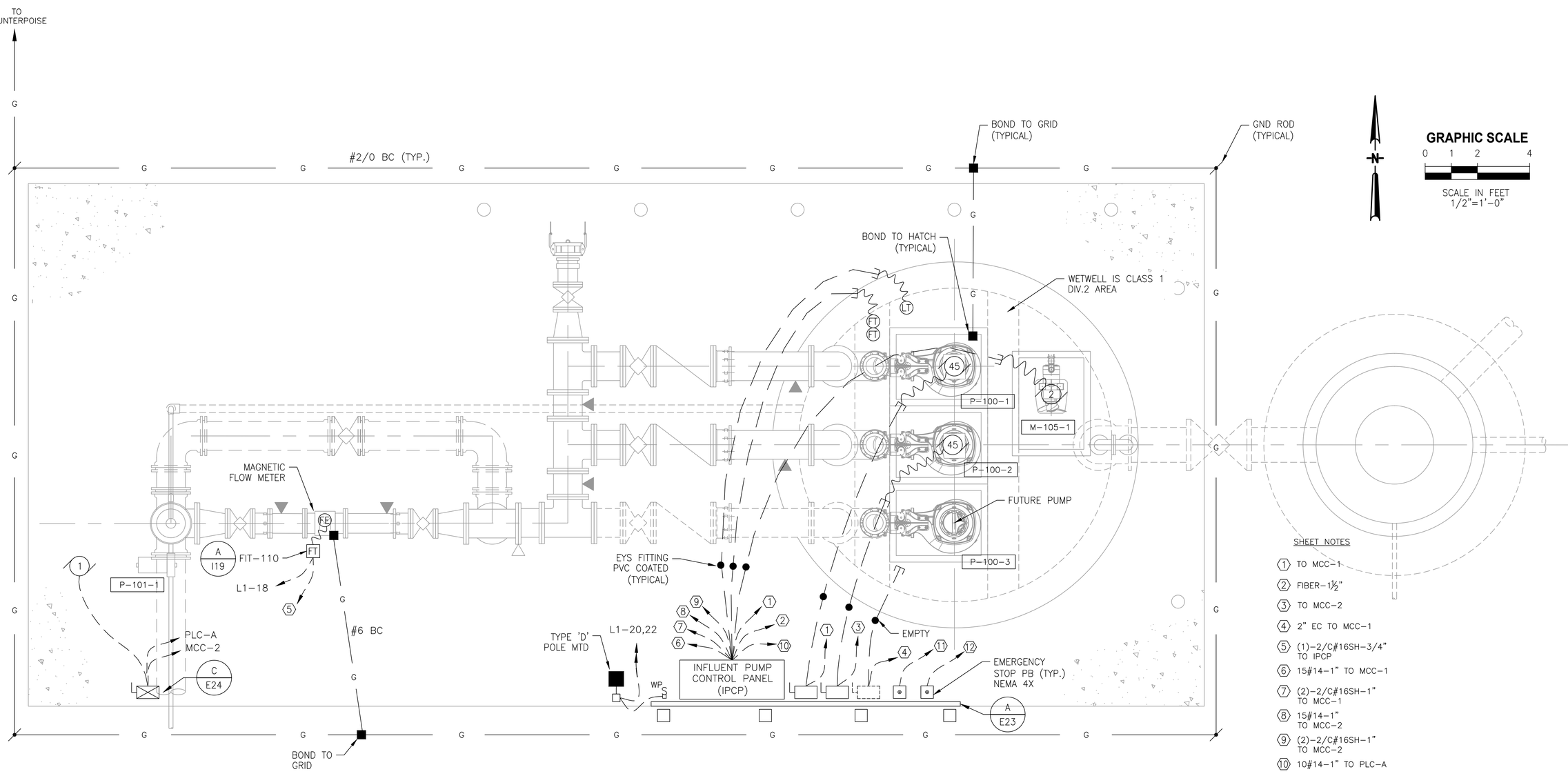
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INFLUENT PUMP STATION PLAN

1/2" = 1'-0"

SHEET NOTES

1. TO MCC-1
2. FIBER-1½"
3. TO MCC-2
4. 2" EC TO MCC-1
5. (1)-2/C#16SH-3/4" TO IPCP
6. 15#14-1" TO MCC-1
7. (2)-2/C#16SH-1" TO MCC-1
8. 15#14-1" TO MCC-2
9. (2)-2/C#16SH-1" TO MCC-2
10. 10#14-1" TO PLC-A
11. 2#14-3/4" TO MCC-1
12. 2#14-3/4" TO MCC-2

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VE LTR.	11/2022 DATE	VE GMP-1 REVISIONS	LYC BY	TWF APPRD.

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NORTH FLORIDA MEGA INDUSTRIAL PARK
WASTEWATER TREATMENT PLANT
COLUMBIA COUNTY, FLORIDA

INFLUENT PUMP STATION

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GRAPHIC SCALE
0 2.5 5 10
SCALE IN FEET

-N-

TO COUNTER POISE

L1A-6
1
LIT-151A
A E24
LT
LE
LEACHATE TANK #1
B E24
WPS
STAIRS UP
D
J
FT
FT
3
G
CP
BOND TO STEEL
ENCLOSED BLOWER
L1A-2,4
ENCLOSED BLOWER
A E23
PANEL L1A
ELEVATED WALK-WAY
LEACHATE TANK #2
FIXTURE BRACKET (TYP.)
LE
LIT-151B
A E24
LT
1
L1A-7
GND ROD (TYP.)

LEACHATE TANKS OVERALL PLAN
1" = 5'

GRAPHIC SCALE
0 1 2 4
SCALE IN FEET

-N-

B-165A-1
MCC-1
4 6
LBLCP-1
CP
25
C E24
MCC-1
LEACHATE BLOWERS
B-165B-2
MCC-2
5 6
LBLCP-2
CP
25
C E24
MCC-2
PANEL L1A
A E23
PANEL L1

FIT-156
A I19
FE
MCC-1
1
L1A-13
MCC-1
C E24
P-160A-1
2
LEACHATE FEED PUMPS
P-160B-2
2
MCC-2
C E24
MCC-2

C E24
MCC-1
MCC-1
A E23
2
L1A-10
CP
P-155A-1
40
TE
FIT-156
A I19
FE
FT
TRUCK LOADING
AeccDbPipe (AeccNetwork130)
1
L1A-12
40
TE
P-155B-2
A E23
CP
C E24
MCC-2
MCC-2
EMERGENCY STOP PB (TYP.) NEMA 4X
2
L1A-11

SHEET NOTES

1. (1)-2/C#16SH-3/4" TO PLC-A
2. 2#14-3/4" TO PLC-A
3. 4#14-3/4" TO PLC-A
4. 4#14-3/4" TO MCC-1
5. 4#14-3/4" TO MCC-2
6. (4)-2/C#16SH-1-1/4" TO PLC-A

LEACHATE TANKS PLAN
1" = 2'

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NORTH FLORIDA MEGA INDUSTRIAL PARK
WASTEWATER TREATMENT PLANT
COLUMBIA COUNTY, FLORIDA

LEACHATE STRUCTURES

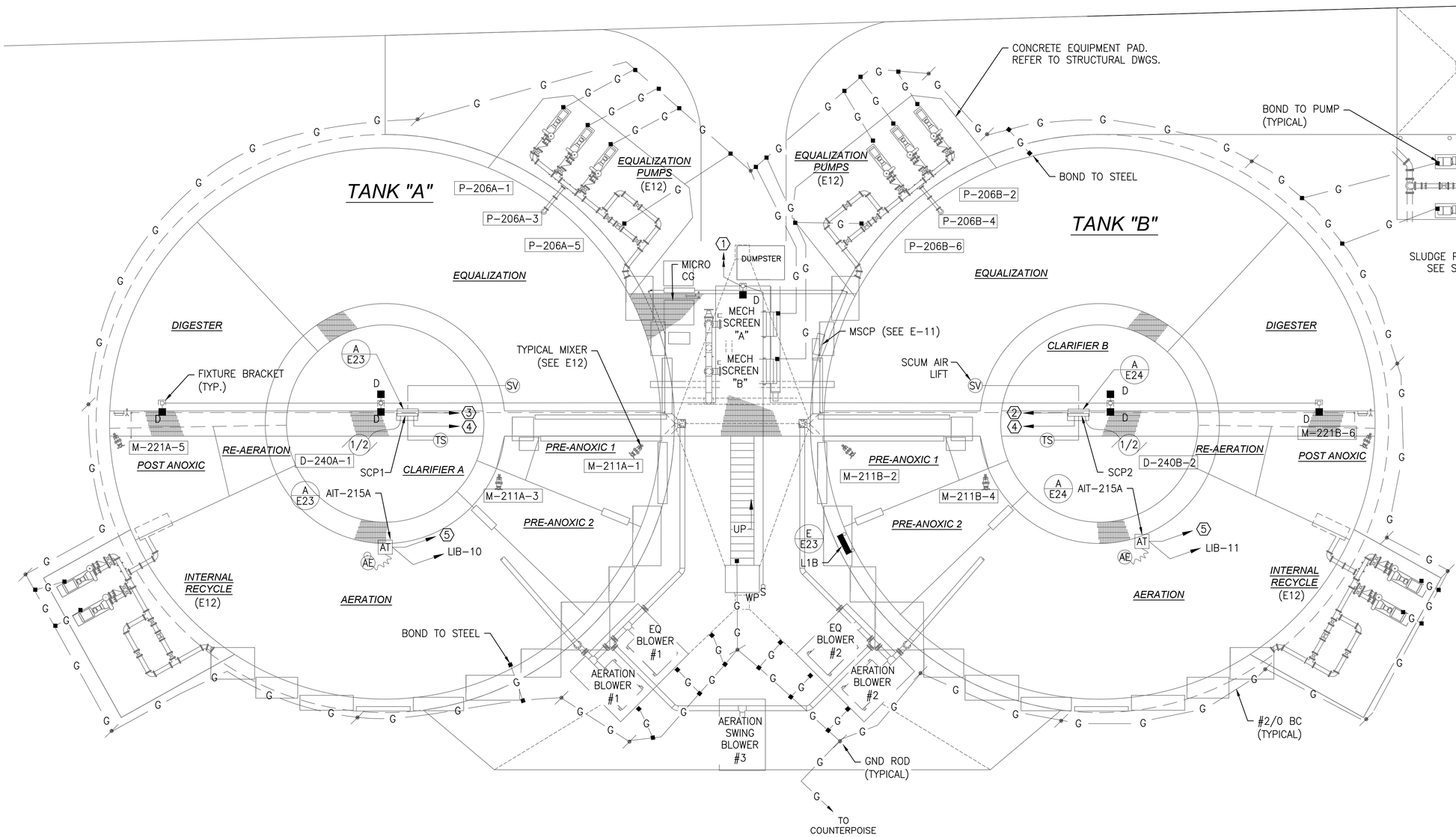
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GRAPHIC SCALE
0 2 4 8 16
SCALE IN FEET



SHEET NOTES

1. 5#10-1" TO L1B-2,4
2. TO MCC-2
3. TO MCC-1
4. 6#14-3/4" TO PLC-A
5. (1)-2/C#16SH-3/4" TO PLC-A

BNR PACKAGE PLANT TANKS PLAN
1" = 8'

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COLUMBIA COUNTY, FLORIDA

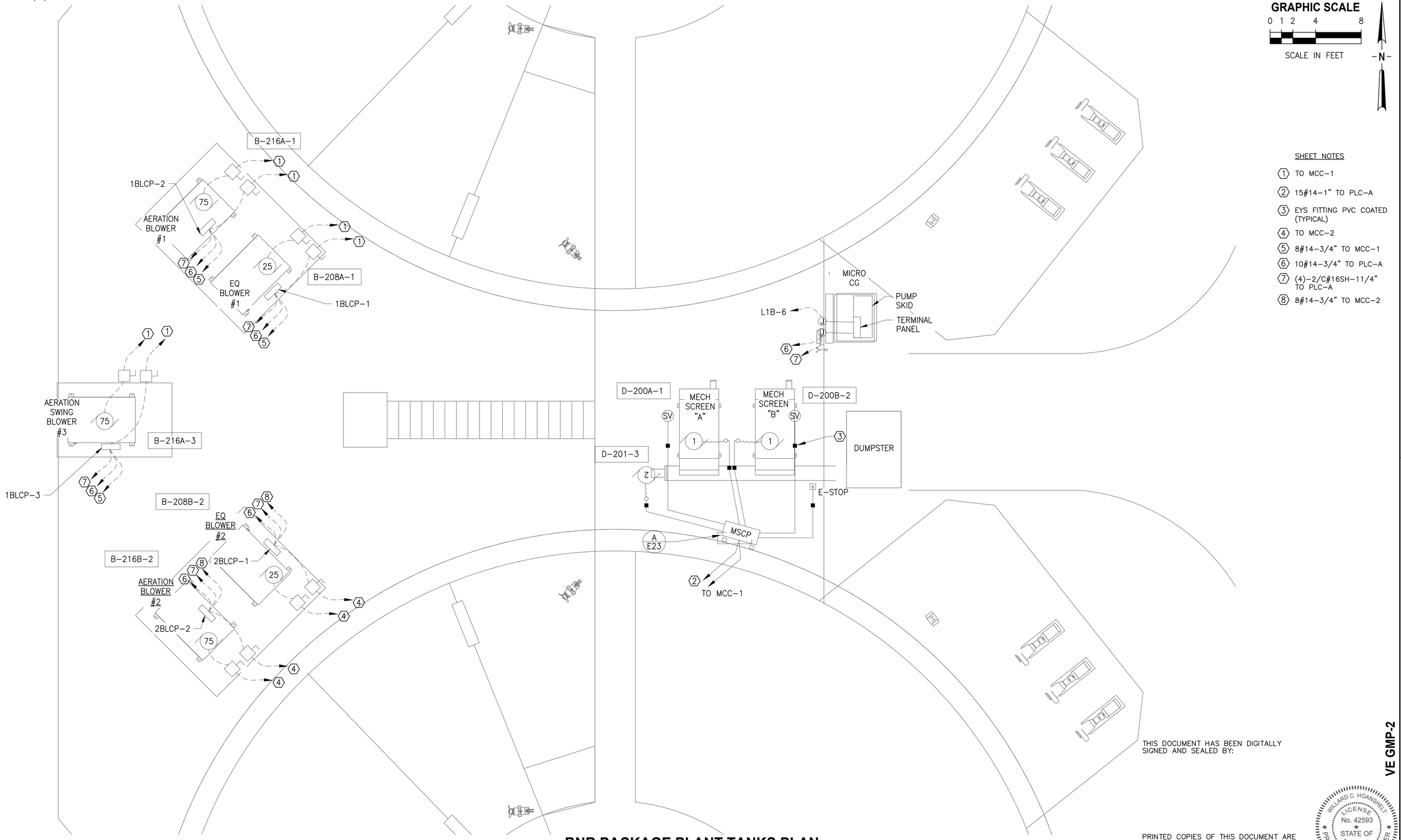
BNR PACKAGE PLANT TANKS PLAN

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BNR PACKAGE PLANT TANKS PLAN

1" = 4'

GRAPHIC SCALE

0 1 2 4 8

SCALE IN FEET

– N –

SHEET NOTES

1. TO MCC-1
2. 15#14-1" TO PLC-A
3. EYS FITTING PVC COATED (TYPICAL)
4. TO MCC-2
5. 8#14-3/4" TO MCC-1
6. 10#14-3/4" TO PLC-A
7. (4)-2/C#16SH-11/4" TO PLC-A
8. 8#14-3/4" TO MCC-2

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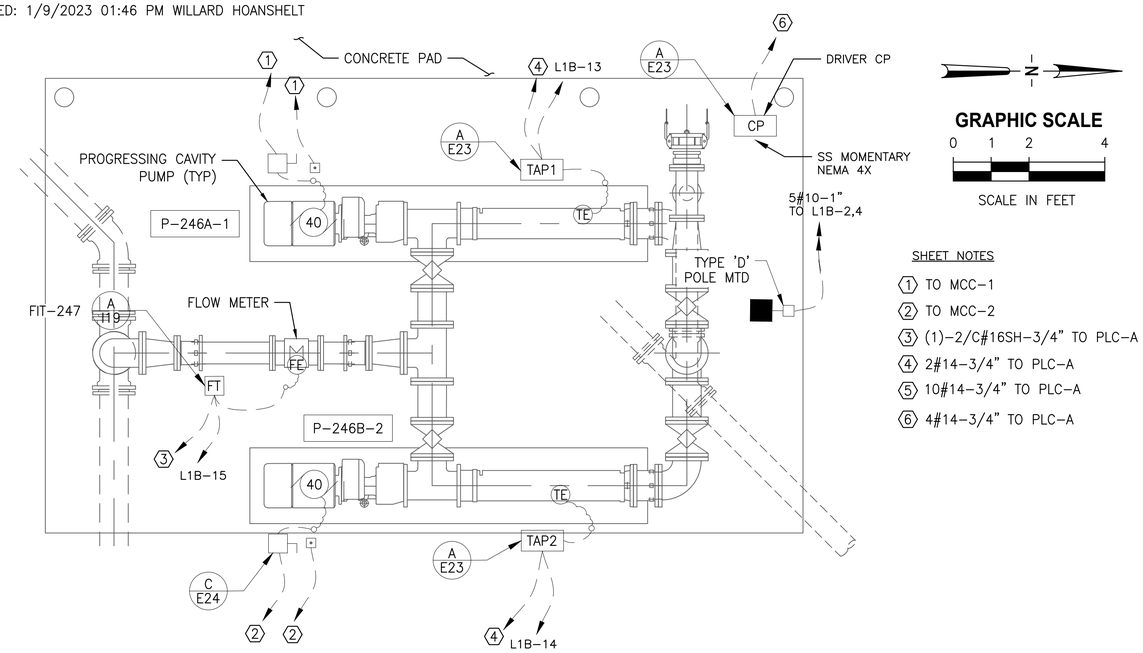
NORTH FLORIDA MEGA INDUSTRIAL PARK
WASTEWATER TREATMENT PLANT
COLUMBIA COUNTY, FLORIDA

MECHANICAL SCREENS & BLOWERS

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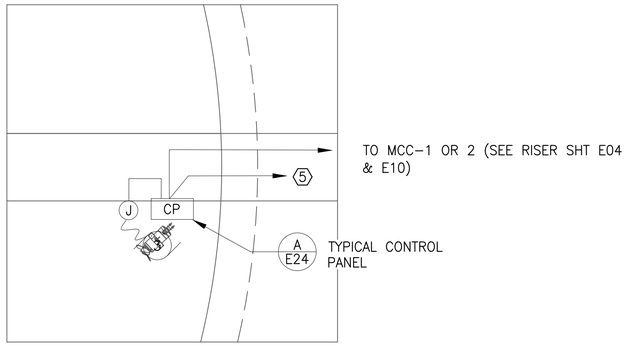


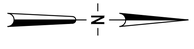
SHEET NOTES

1. TO MCC-1
2. TO MCC-2
3. (1)-2/C#16SH-3/4" TO PLC-A
4. 2#14-3/4" TO PLC-A
5. 10#14-3/4" TO PLC-A
6. 4#14-3/4" TO PLC-A

TRUCK LOADING PUMP STATION PLAN

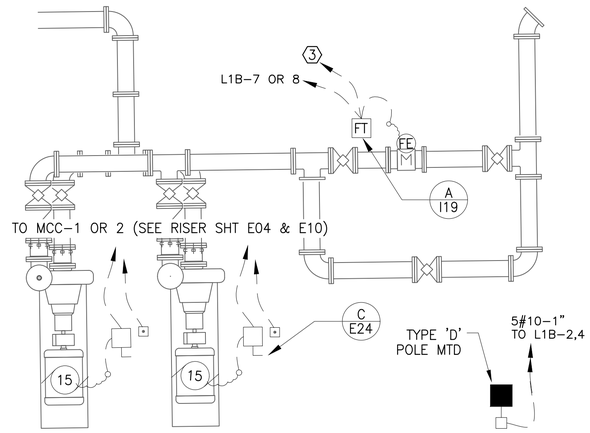
1/2" = 1' 0"

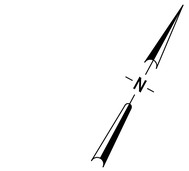




MIXER PLAN

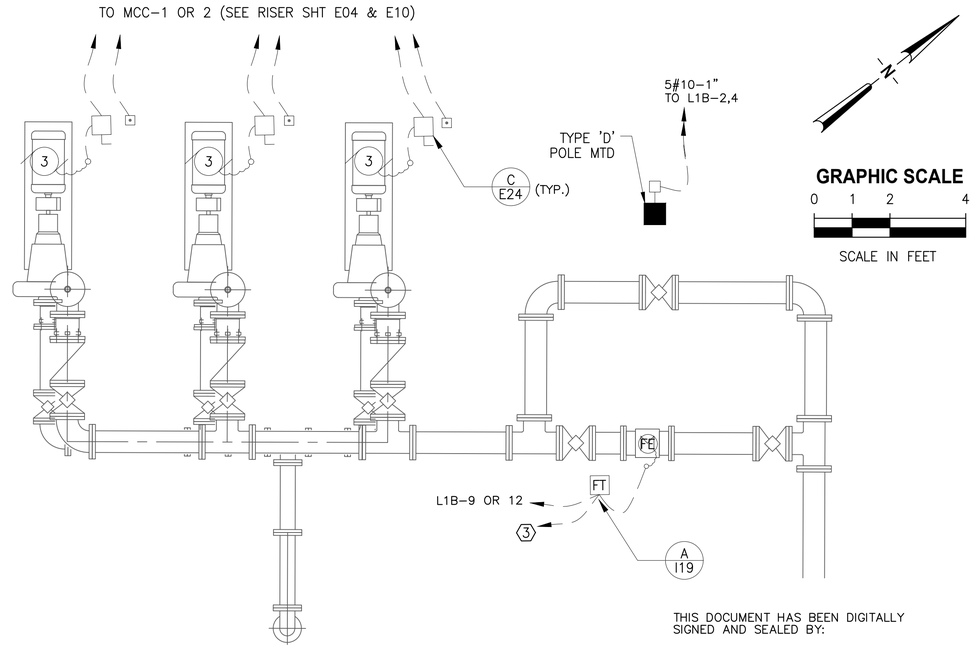
(TYPICAL 6 PLACES)





INTERNAL RECYCLE PUMPS PLAN (TYPICAL 2 LOCATIONS)

1/2" = 1' 0"



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EQ PUMPS PLAN (TYPICAL 2 LOCATIONS)

1/2" = 1' 0"

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MISCELLANEOUS PLANS

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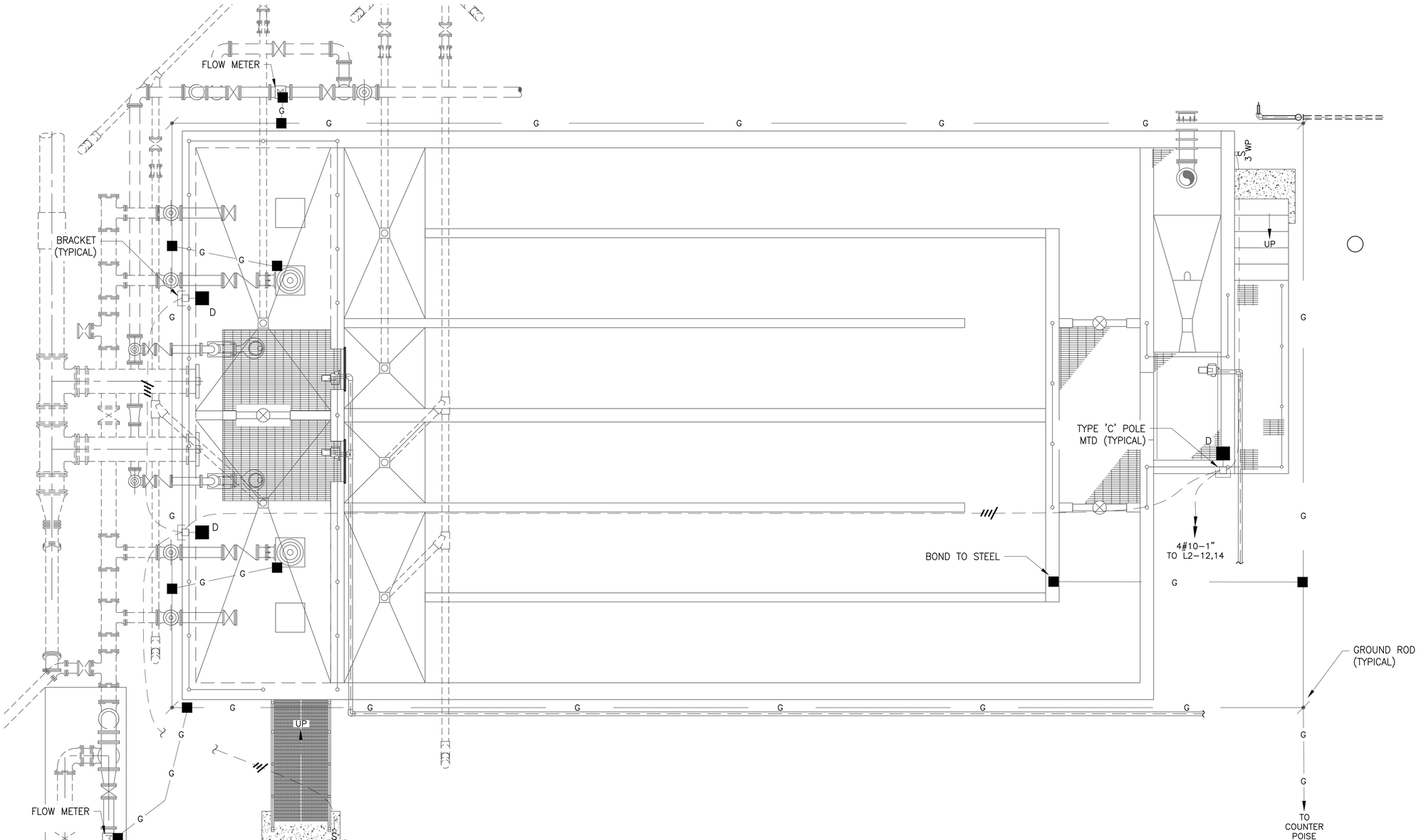
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CHLORINE CONTACT TANKS GROUNDING & LIGHTING PLAN

1/4" = 1'-0"

N

GRAPHIC SCALE

0 1 2 4 8

SCALE IN FEET

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WASTEWATER TREATMENT PLANT
COLUMBIA COUNTY, FLORIDA

CHLORINE CONTACT TANKS GROUNDING & LIGHTING PLAN

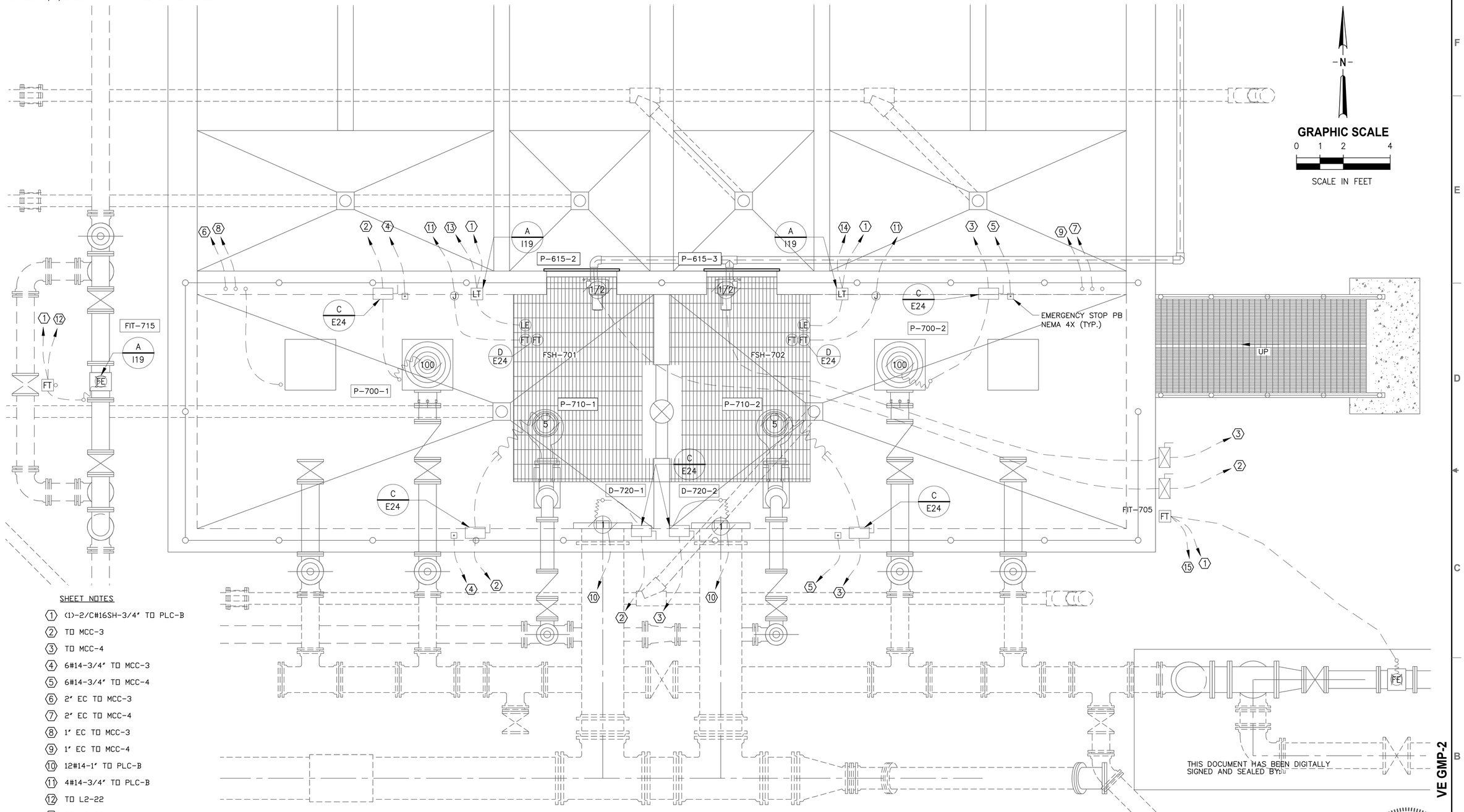
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SHEET NOTES

1. (1)-2/C#16SH-3/4" TO PLC-B
2. TO MCC-3
3. TO MCC-4
4. 6#14-3/4" TO MCC-3
5. 6#14-3/4" TO MCC-4
6. 2" EC TO MCC-3
7. 2" EC TO MCC-4
8. 1" EC TO MCC-3
9. 1" EC TO MCC-4
10. 12#14-1" TO PLC-B
11. 4#14-3/4" TO PLC-B
12. TO L2-22
13. TO L2-23
14. TO L2-24
15. TO L2-25

CHLORINE CONTACT TANKS SOUTH PLAN

1/2" = 1'-0"

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NORTH FLORIDA MEGA INDUSTRIAL PARK
WASTEWATER TREATMENT PLANT
COLUMBIA COUNTY, FLORIDA

EFFLUENT & REJECT PUMPS PLAN

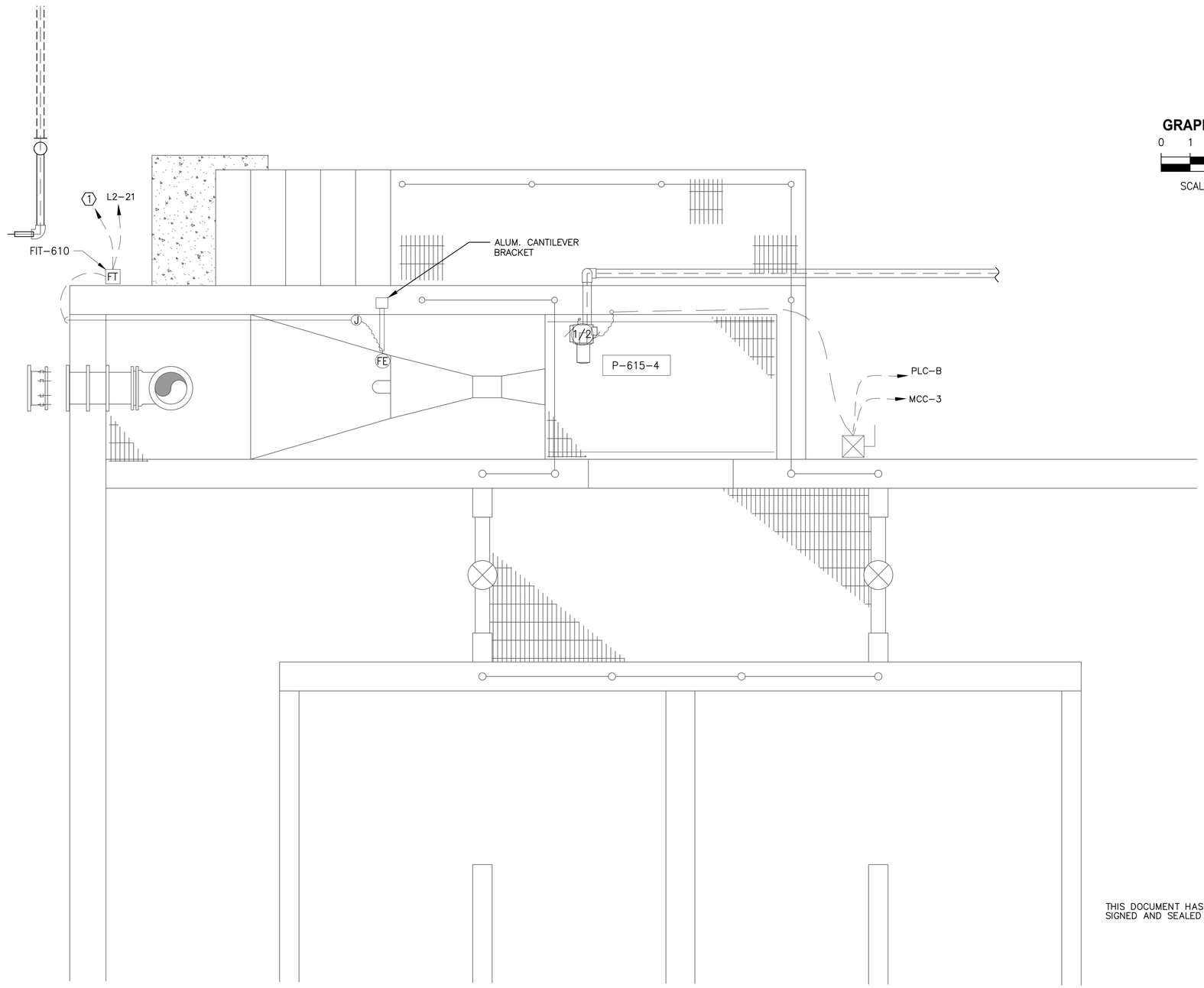
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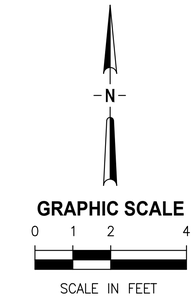


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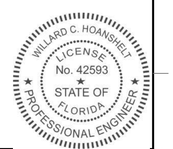
1. (1)-2/C#16SH-3/4" TO PLC-B

CHLORINE CONTACT TANKS NORTH PLAN

1/2" = 1'-0"



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COLUMBIA COUNTY, FLORIDA

CHLORINE CONTACT TANKS
NORTH PLAN

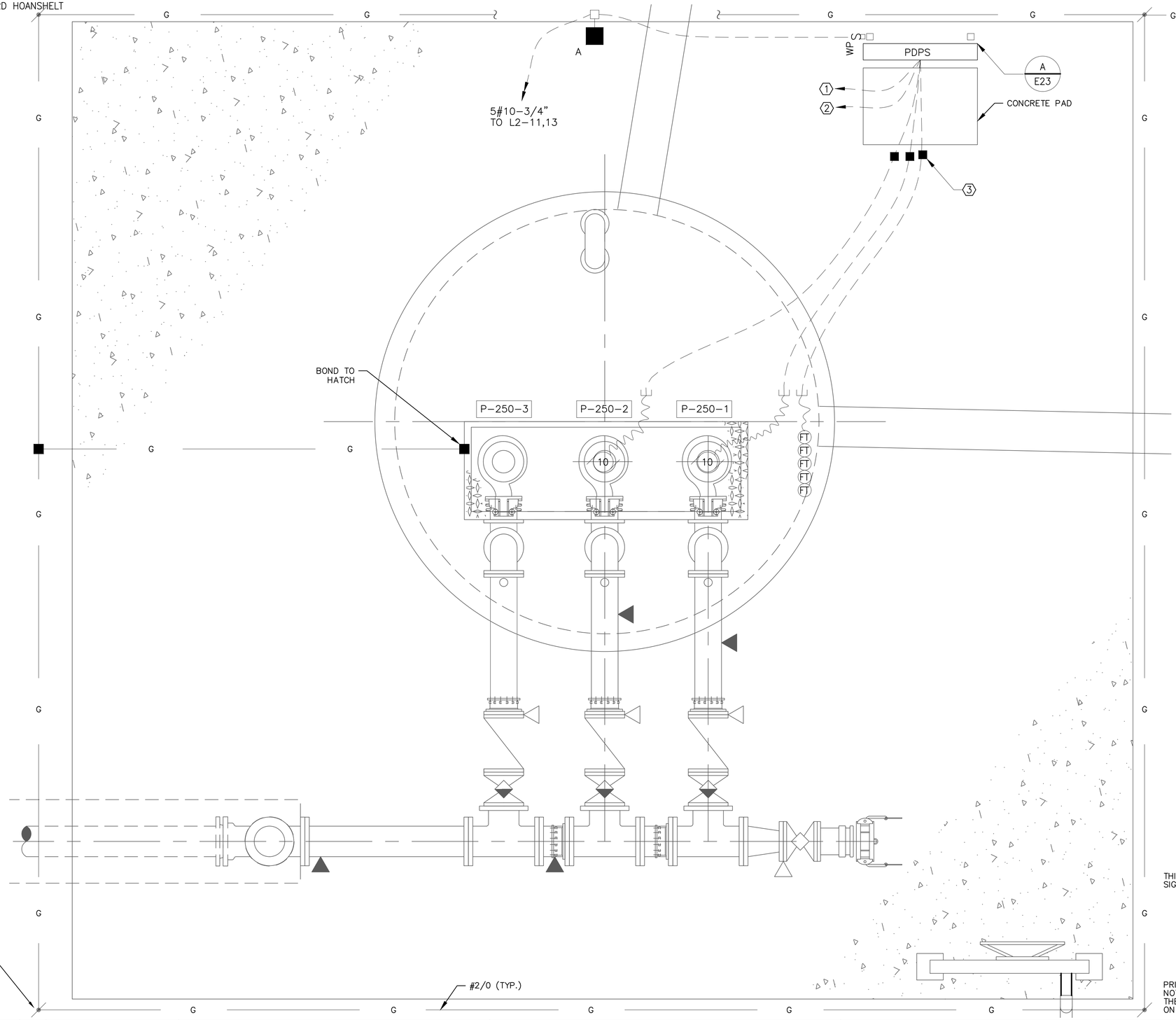
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DWG NO: E15

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SAVED: 1/9/2023 9:11 AM WHOANSHELT T:\MY CLIENTS DWGS\JONES EDMUNDS\COLUMBIA MEGA PARK REDESIGN EMI DWGS 1-4-22\EMI DWGS 1-4-22\03780001-E16.DWG



-N-

GRAPHIC SCALE

0 1 2 4

SCALE IN FEET
1/2"=1'-0"

SHEET NOTES

1. TO MCC-3
2. 20#14-1" TO PLC-B
3. EYS FITTING PVC COATED

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WILLARD C. HOANSHELT LICENSE No. 42593 STATE OF FLORIDA PROFESSIONAL ENGINEER

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VE GMP-2

LTR.	DATE	REVISIONS	BY	APPRD.
VE	11/2022	VE GMP-1	LYC	TWF

DESIGNED WCH
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NORTH FLORIDA MEGA INDUSTRIAL PARK
WASTEWATER TREATMENT PLANT
COLUMBIA COUNTY, FLORIDA

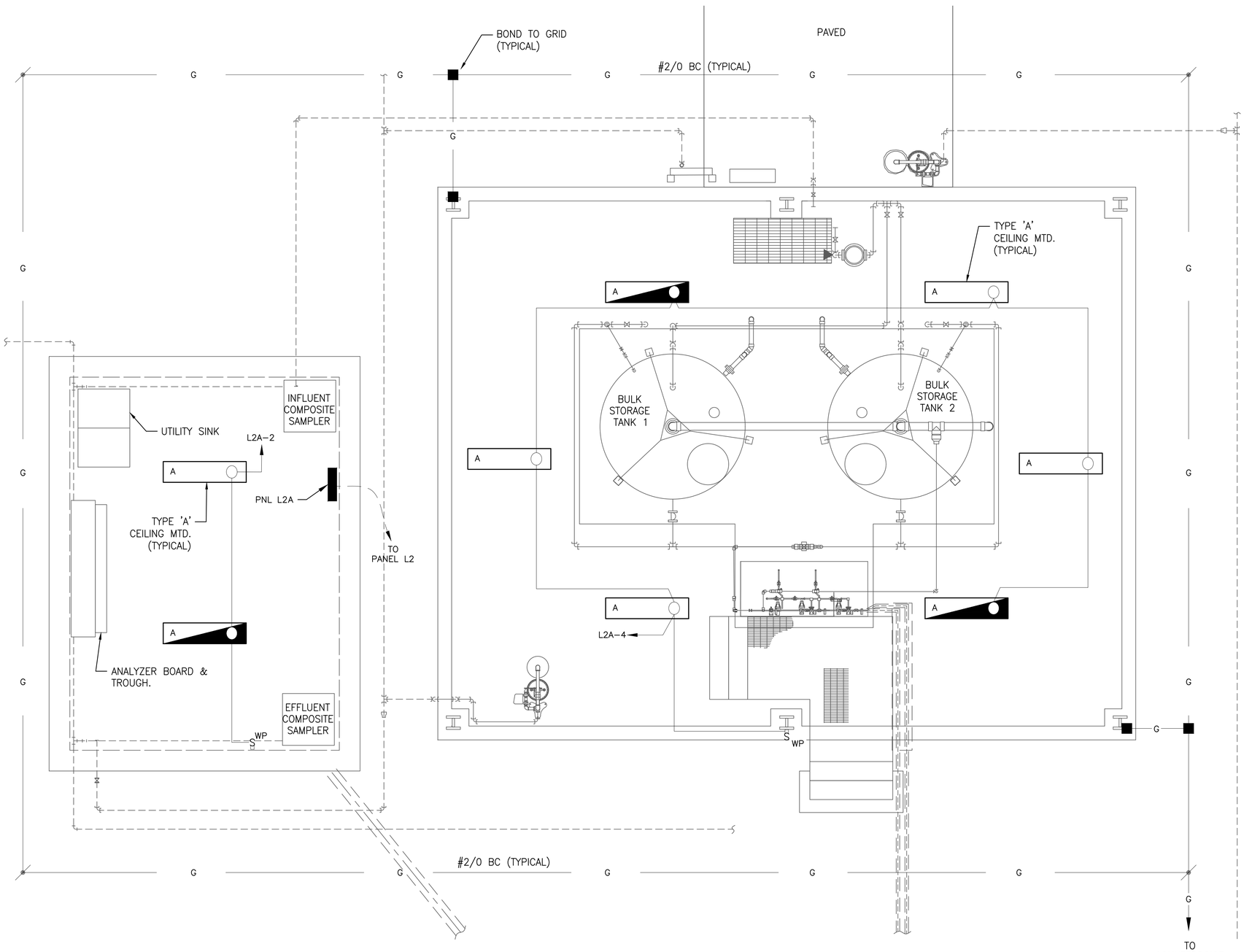
PLANT DRAIN PUMP STATION PLAN

APPROVED BY
EMI
WILLARD C. HOANSHELT
P.E. # 42593

PROJECT NO: 03780-001-01
DATE: DEC. 2022
INDEX NO:
DWG NO: E16

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0 1 2 4
SCALE IN FEET
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NORTH FLORIDA MEGA INDUSTRIAL PARK
WASTEWATER TREATMENT PLANT
COLUMBIA COUNTY, FLORIDA

CHEMICAL STORAGE & FEED SYSTEM LIGHTING PLAN

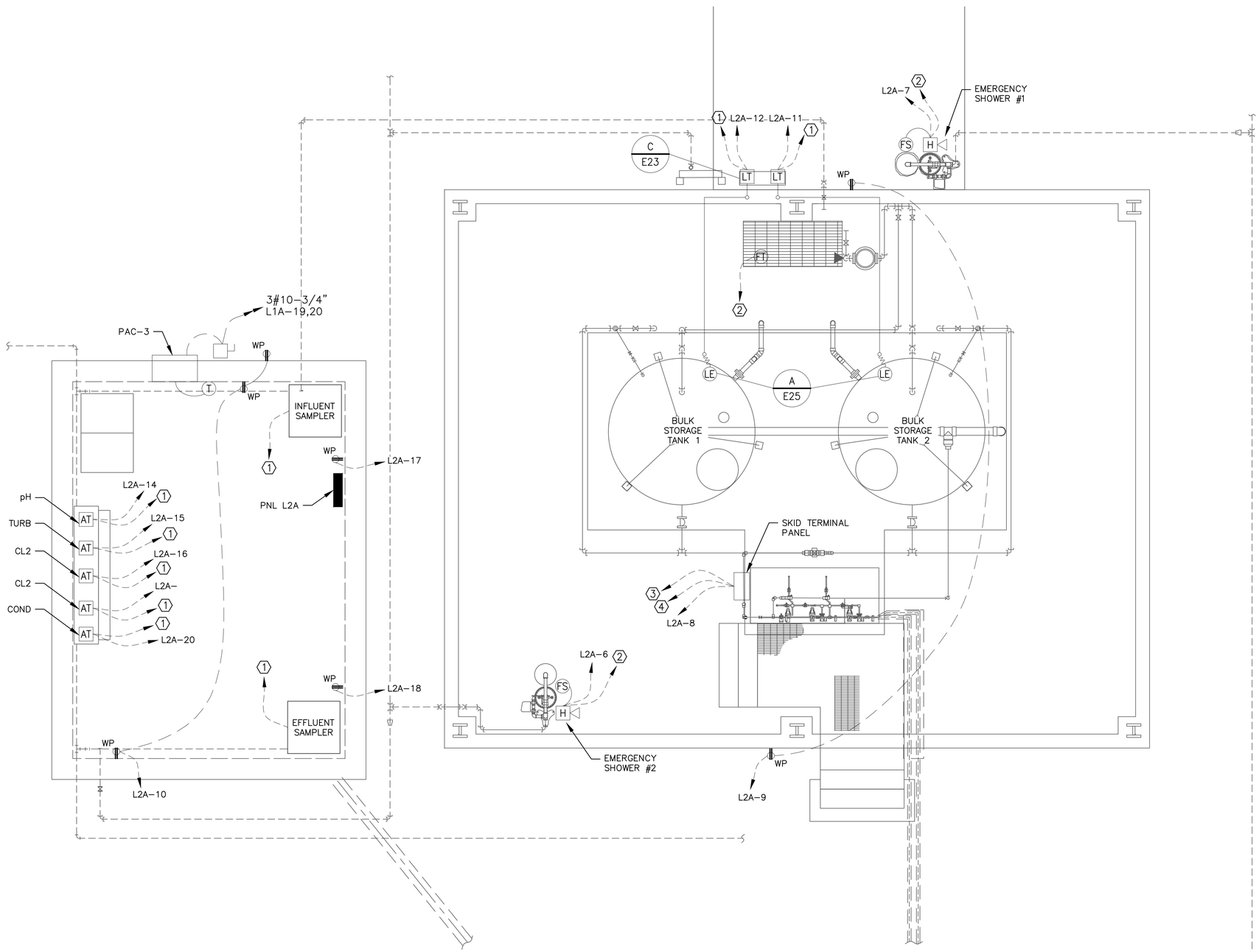
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EMI
WILLARD C. HOANSHELT
P.E. # 42593

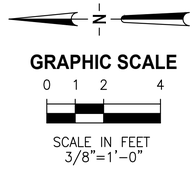
PROJECT NO: 03780-001-01
DATE: DEC. 2022
INDEX NO:
DWG NO: E17

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SHEET NOTES

1. (1)-2/C#16SH-3/4" TO PLC-B
2. 2#14-3/4" TO PLC-B
3. 20#14-1" TO PLC-B
4. (6)-2/C#16SH-1½" TO PLC-B

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NORTH FLORIDA MEGA INDUSTRIAL PARK
WASTEWATER TREATMENT PLANT
COLUMBIA COUNTY, FLORIDA

CHEMICAL STORAGE & FEED SYSTEMS POWER PLAN

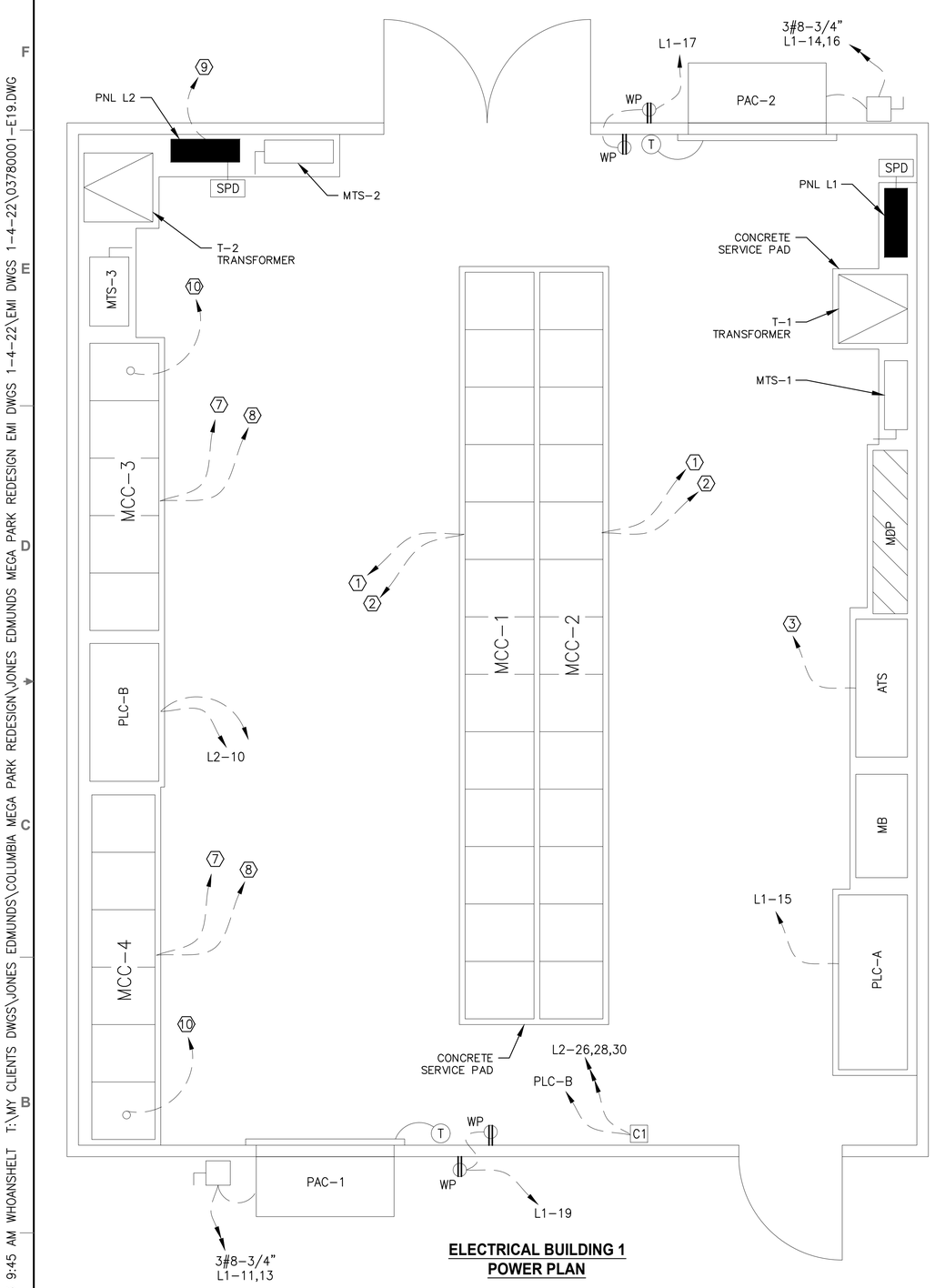
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WILLARD C. HOANSHELT
P.E. # 42593

PROJECT NO: 03780-001-01
DATE: DEC. 2022
INDEX NO:
DWG NO: E18

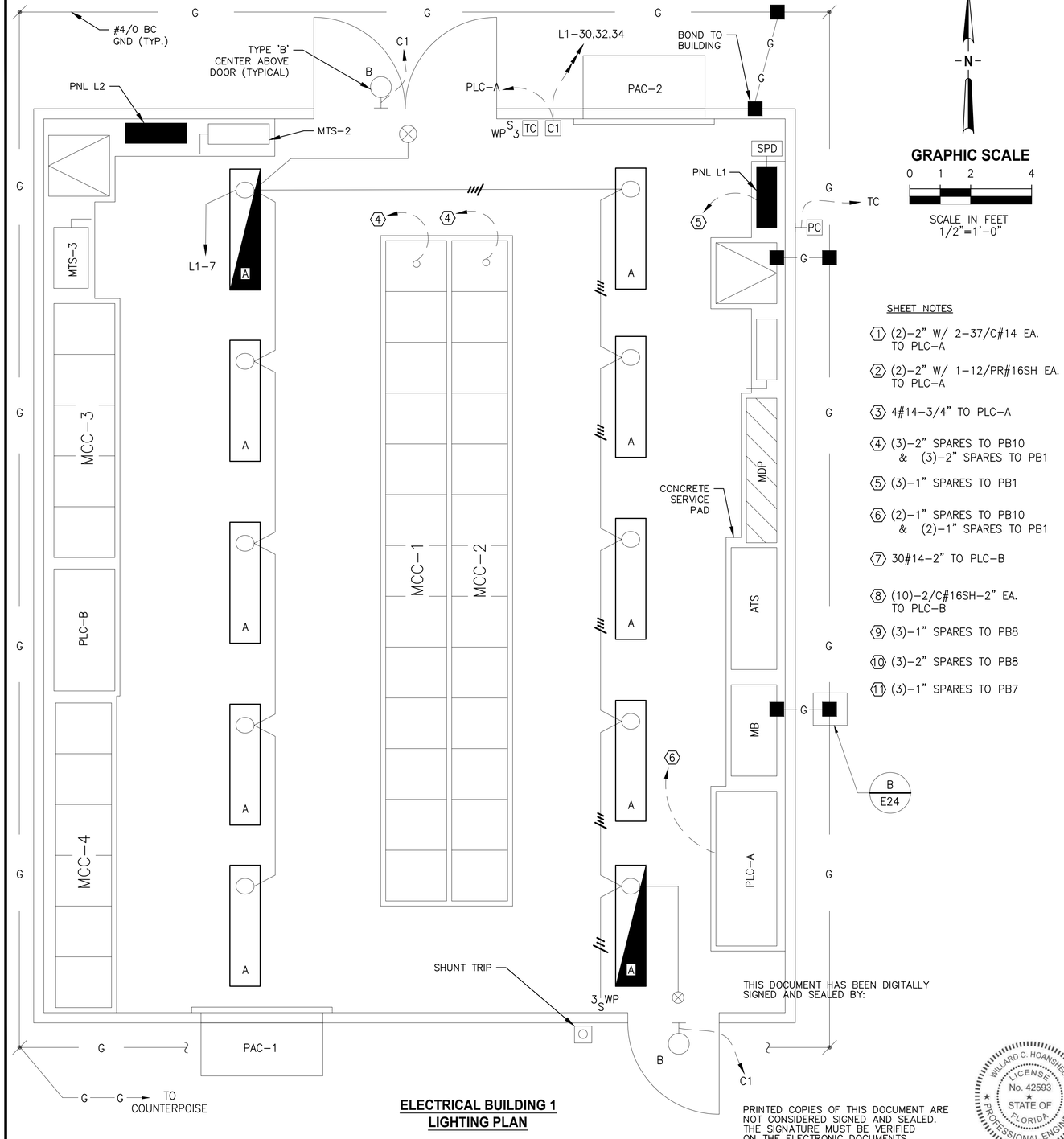
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ELECTRICAL BUILDING 1
POWER PLAN



ELECTRICAL BUILDING 1
LIGHTING PLAN

GRAPHIC SCALE

0 1 2 4

SCALE IN FEET
1/2"=1'-0"

SHEET NOTES

1. (2)-2" W/ 2-37/C#14 EA. TO PLC-A
2. (2)-2" W/ 1-12/PR#16SH EA. TO PLC-A
3. 4#14-3/4" TO PLC-A
4. (3)-2" SPARES TO PB10 & (3)-2" SPARES TO PB1
5. (3)-1" SPARES TO PB1
6. (2)-1" SPARES TO PB10 & (2)-1" SPARES TO PB1
7. 30#14-2" TO PLC-B
8. (10)-2/C#16SH-2" EA. TO PLC-B
9. (3)-1" SPARES TO PB8
10. (3)-2" SPARES TO PB8
11. (3)-1" SPARES TO PB7

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NORTH FLORIDA MEGA INDUSTRIAL PARK
WASTEWATER TREATMENT PLANT
COLUMBIA COUNTY, FLORIDA

ELECTRICAL BUILDING 1
PLANS

APPROVED BY
EMI
WILLARD C. HOANSHELT
P.E. # 42593

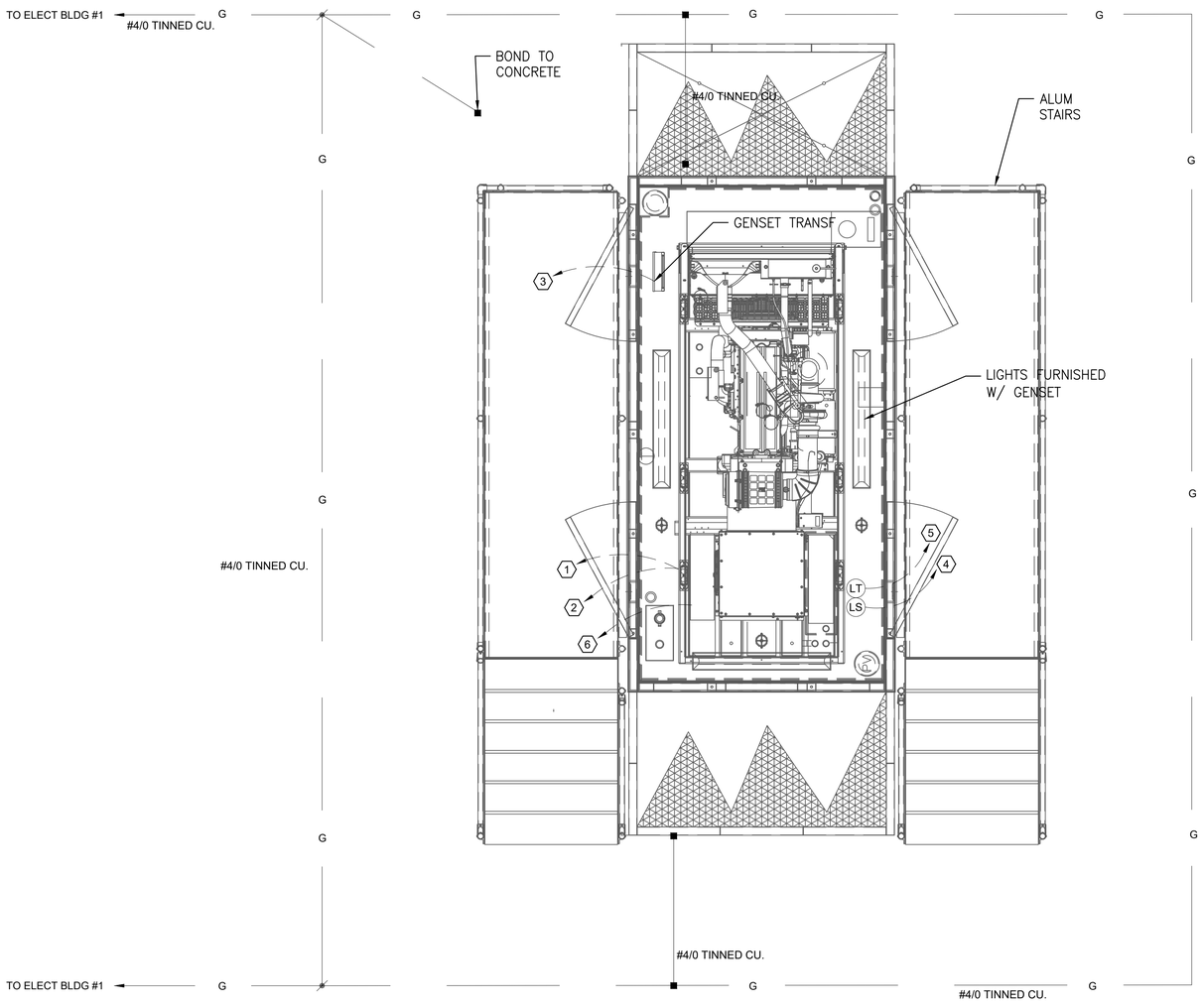
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N

GRAPHIC SCALE

0 1 2 4

SCALE IN FEET
1/2"=1'-0"

SHEET NOTES

1. CAT-6 SH-1" ALUM TO PLC-A
2. 6#14-1 1/4" TO ATS
3. TO MDP
4. 2#14-3/4" TO PLC-A
5. 1-2/C#16SH-3/4" TO PLC-A
6. TO ATS

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WASTEWATER TREATMENT PLANT
COLUMBIA COUNTY, FLORIDA

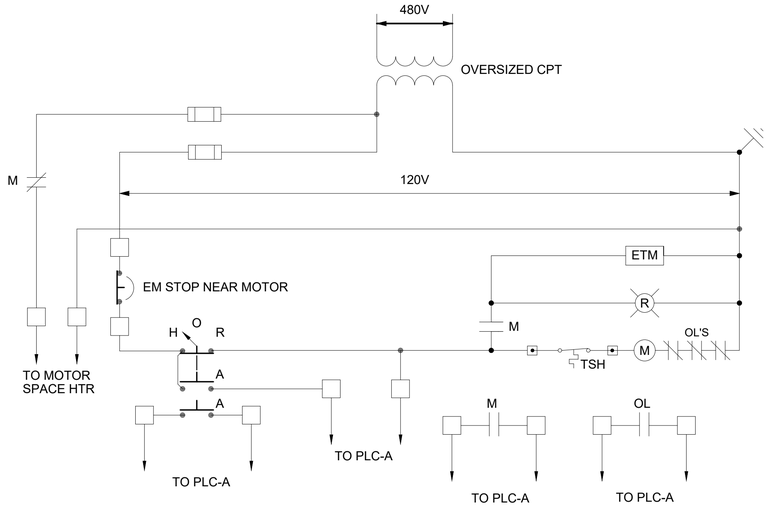
GENERATOR PLAN

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P.E. # 42593

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DWG NO: E20

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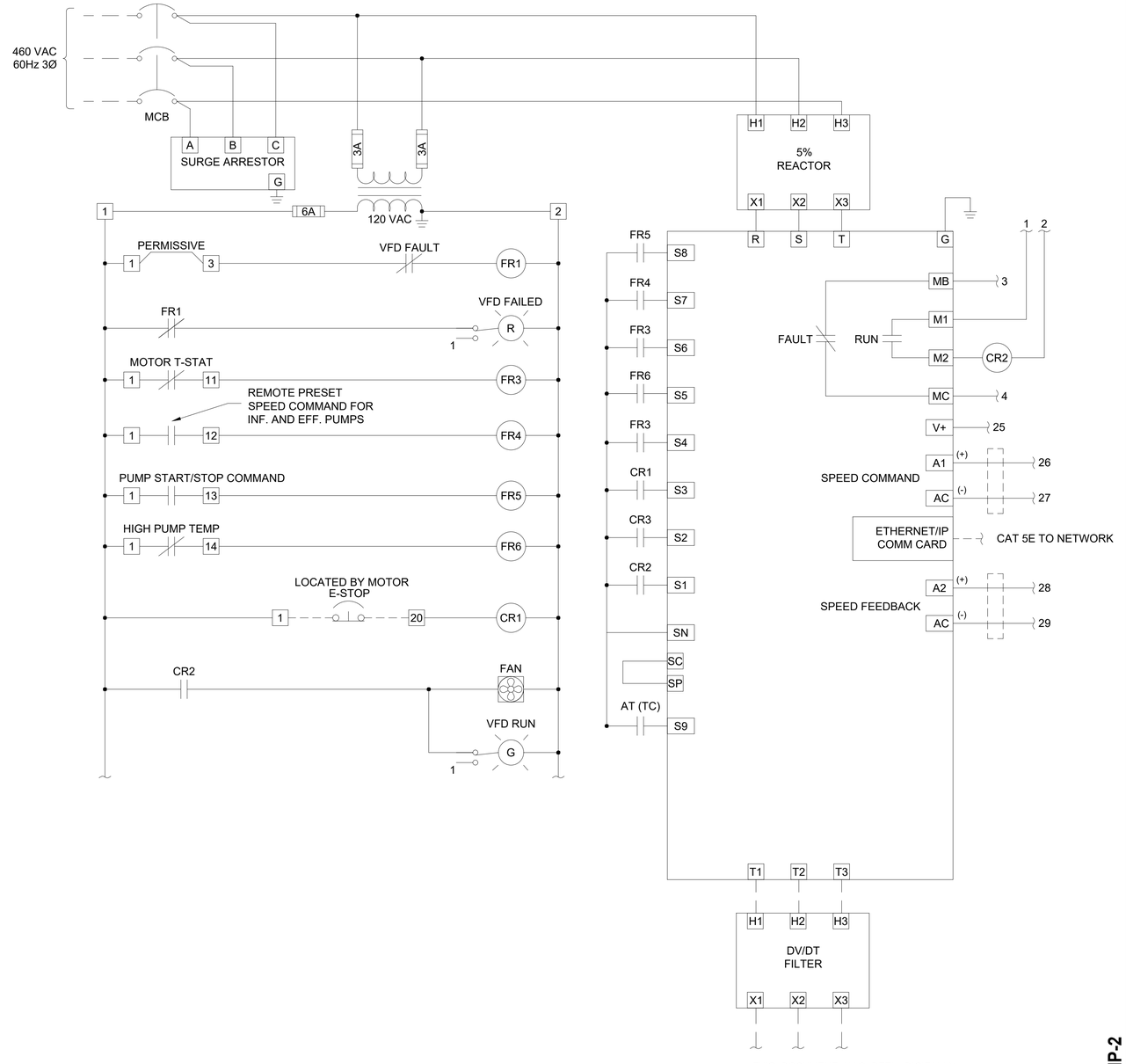
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TRUCK LOADING & OFF LOADING

LTG CONTACTOR C-1 & C-2

NOTE: PROVIDE MINIMUM OF (2) ADDITIONAL/SPARE CONTACTS.



TYPICAL VFD

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NORTH FLORIDA MEGA INDUSTRIAL PARK
WASTEWATER TREATMENT PLANT
COLUMBIA COUNTY, FLORIDA

CONTROL DIAGRAMS

APPROVED BY
EMI
WILLARD C. HOANSHELT
P.E. # 42593

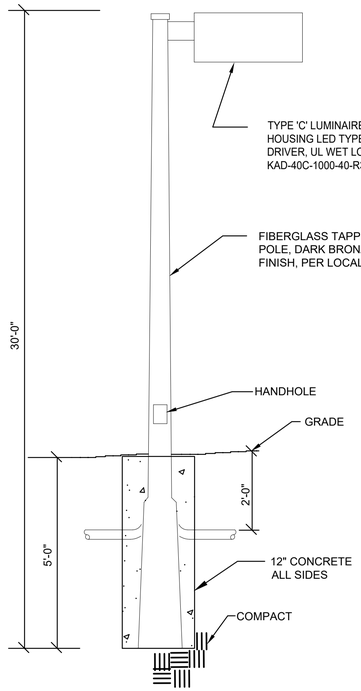
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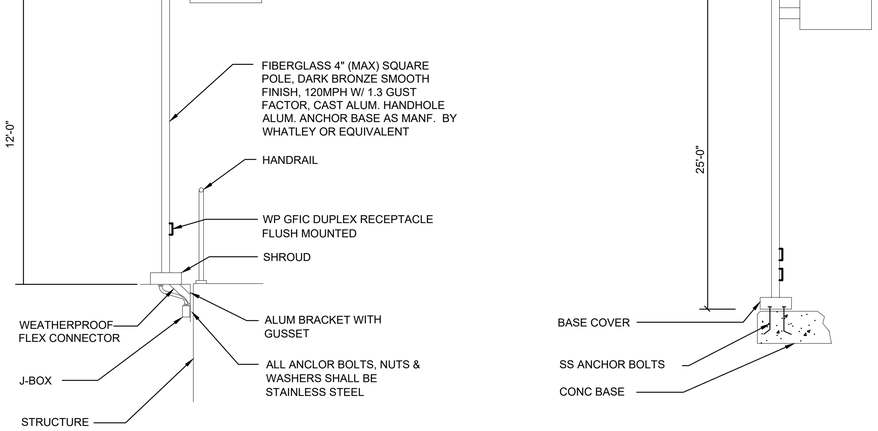


DETAIL 'A' ROADWAY LIGHTING

SELECT EXACT FIXTURE PER
LOCAL CODE AND ORDINANCES

LIGHTING FIXTURE SCHEDULE

MARK	WATT	DESCRIPTION	MFR (OR APPROVED EQUAL)
A	12	LED VAPORTIGHT 1X4 FIXTURE, UL LIST WET LOCATION, BUGTIGHT 120VAC, CLEAR LENS 4,000 LUMENS. SEE PLANS FOR FIXTURE WITH BATTERY BACKUP	LITHONIA: XVML LED
B	26	WALLPACK LED TEMPERED GLASS, TYPE 3 SHORT, DIE CAST ALUM. HOUSING, LED DRIVE ISOLATED, POWDER COAT FINISH, UL WET LOCATION, 10 LED, 40K , MVOLT, SPD, BRONZE SUPER PAINT BY HOLOPHANE W4GLED	LITHONIA: XVML LED
C		SEE DETAIL A BELOW	
D		SEE DETAIL B BELOW	
⊗	3	CEILING MTD. WITH RECESSED BOX, LED LIGHT SOURCE, UL LISTED, NICKEL CADMIUM MAINTENANCE FREE BATTERY, CLEAR ACRYLIC PANEL, SILK SCREEN, COMPUTER ENGRAVED, ALUM TRIM PLATE, GREEN LETTER ON CLEAR BACKGROUND, 120V.	EMERGI-LITE LEDPXN1R/2R-EI



FIXTURE DETAIL 'B' STRUCTURE MOUNTED

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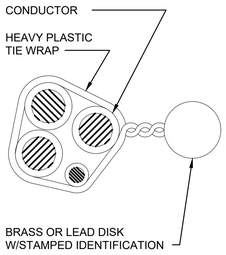
NORTH FLORIDA MEGA INDUSTRIAL PARK
WASTEWATER TREATMENT PLANT
COLUMBIA COUNTY, FLORIDA

LIGHTING FIXTURE SCHEDULE AND DETAILS

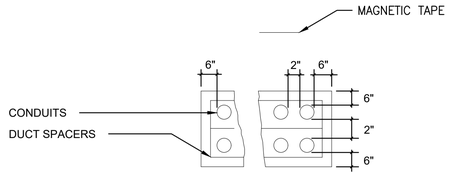
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P.E. # 42593

PROJECT NO: 03780-001-01
DATE: DEC. 2022
INDEX NO:
DWG NO: E22

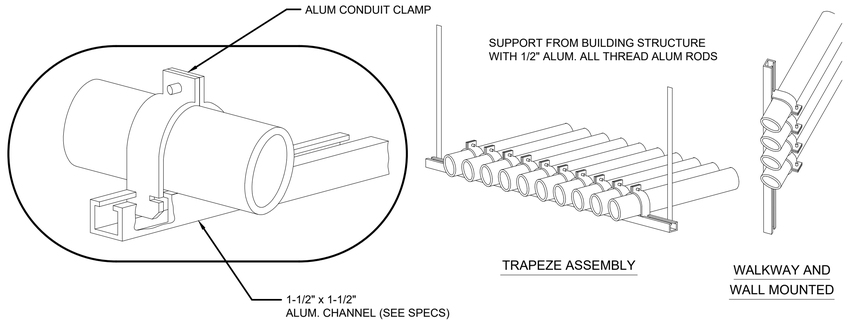
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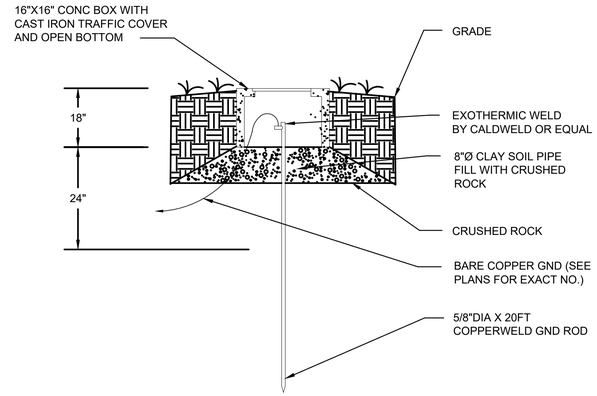
U.G. CABLE TAG DETAIL



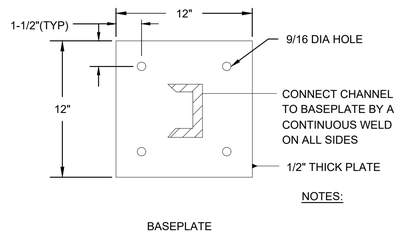
TYPICAL DUCT BANK



CONDUIT PIPE STRAP MOUNTING DETAILS

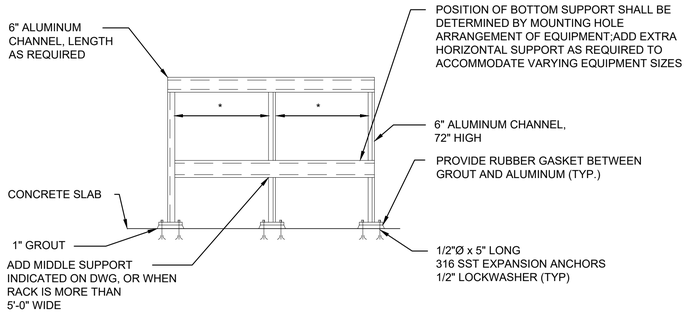


B / E23 SERVICE GROUND ROD AND TEST WELL



BASEPLATE

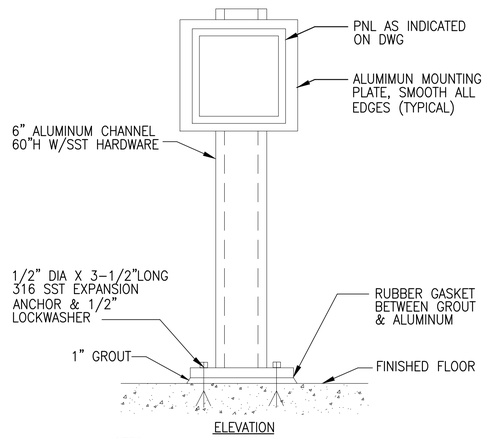
NOTES:



NOTES:

1. ENCLOSURES THAT ARE GREATER THAN 24" WIDE BY 6" DEEP SHALL BE PROVIDED WITH ADDITIONAL ENCLOSURE SUPPORTS. PROVIDE 1" ALUMINUM CONDUIT WITH ALUMINUM POST BASES AT EACH END AND SECURE THEM TO THE BASE OF THE ENCLOSURE AT EACH FRONT CORNER AND SECURE THE BOTTOM OF THE POST TO CONCRETE PAD OR STRUCTURE.
2. USE STAINLESS STEEL HARDWARE TO MOUNT EQUIPMENT.

A / E23 TYPICAL PANEL MOUNTING DETAIL

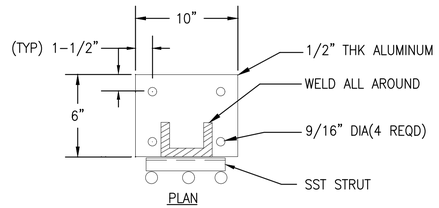


ELEVATION

NOTES:

1. USE SST MOUNTING HARDWARE

C / E23 MOUNTING



PLAN

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WASTEWATER TREATMENT PLANT
COLUMBIA COUNTY, FLORIDA

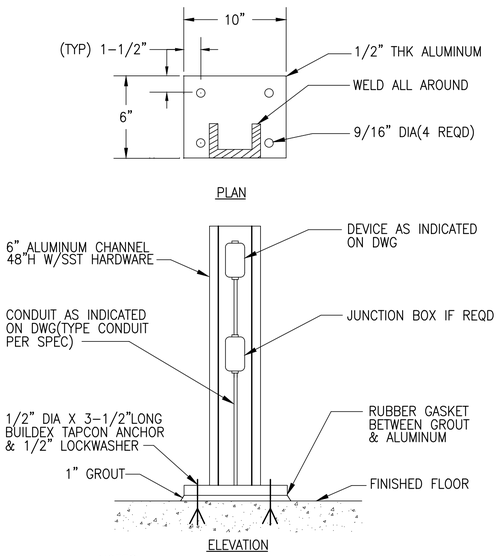
DETAILS 1

APPROVED BY *EMI*
WILLARD C. HOANSHELT
P.E. # 42593

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DWG NO: E23

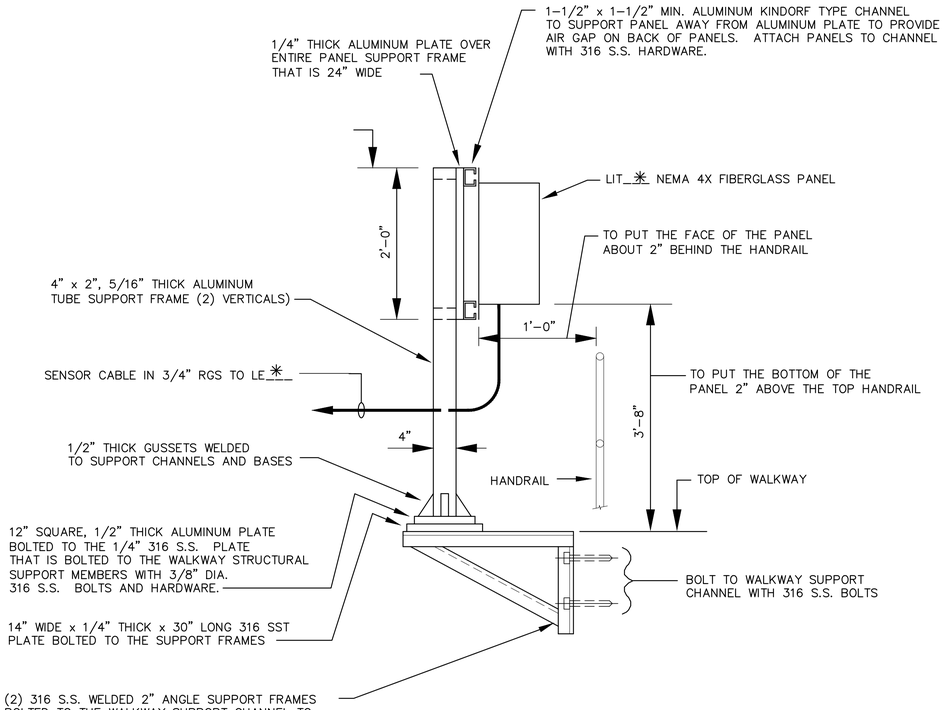
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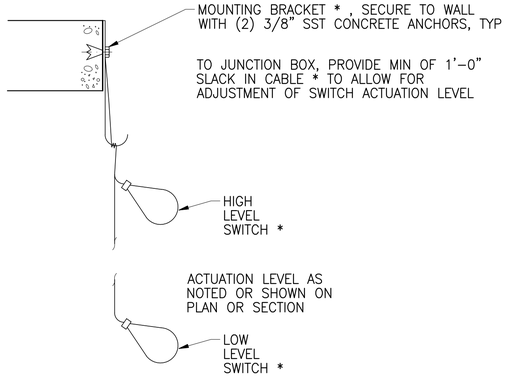
NOTES:
1. USE SST MOUNTING HARDWARE

B / E24 **DEVICE MTG. DETAIL**



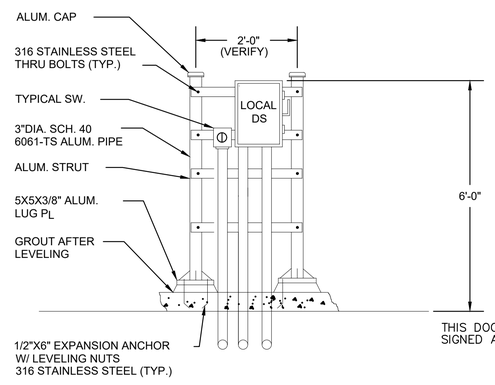
TYPICAL PANEL MOUNTING DETAIL FOR ENCLOSURES WHEN MOUNTED ON WALKWAYS AND PLATFORMS WITH HANDRAILS
N.T.S.

A / E24



NOTES:
1. COMPONENTS DESIGNATED BY * ARE SUPPLIED BY INSTRUMENT MANUFACTURER.

D / E24 **FLOAT-TYPE LEVEL SWITCH MOUNT**



C / E24 STRUCTURE MOUNTING DETAIL

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WASTEWATER TREATMENT PLANT
COLUMBIA COUNTY, FLORIDA

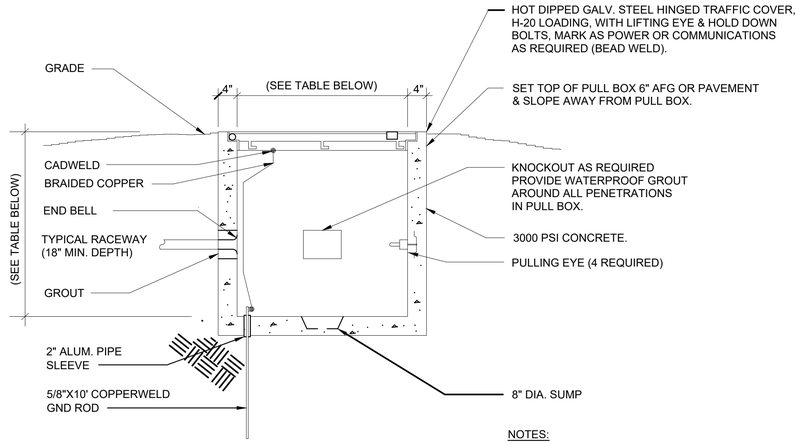
DETAILS 2

APPROVED BY
EMI
WILLARD C. HOANSHELT
P.E. # 42593

PROJECT NO:	DATE:
03780-001-01	DEC. 2022
INDEX NO:	DWG NO:
	E24

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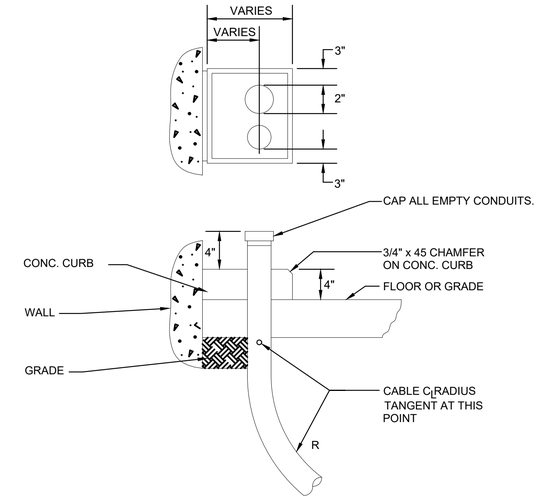


NOTES:

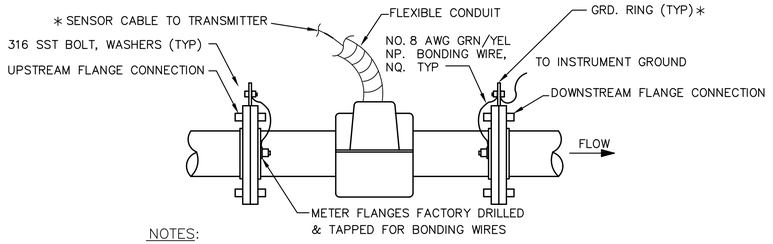
1. CONDUCTORS SHALL BE SECURED WITH NYLON SELF CLINCHING CABLE TIES.
2. PROVIDE RACK SUPPORTS FOR CABLES AND CONDUCTORS FOR SIDEWALL MTG..

PULLBOX (PB)

PULLBOX TABLE		
PB#	TOP SQ (")	DEPTH (")
1	60	60
2	36	36
3	60	60
4	36	36
5	60	60
6	36	36
7	60	60
8	36	36
9	60	60
10	36	36
11	36	36
12	36	36
13	36	36
14	36	36
15	36	36



TYPICAL CONDUIT THRU SLAB OR GRADE

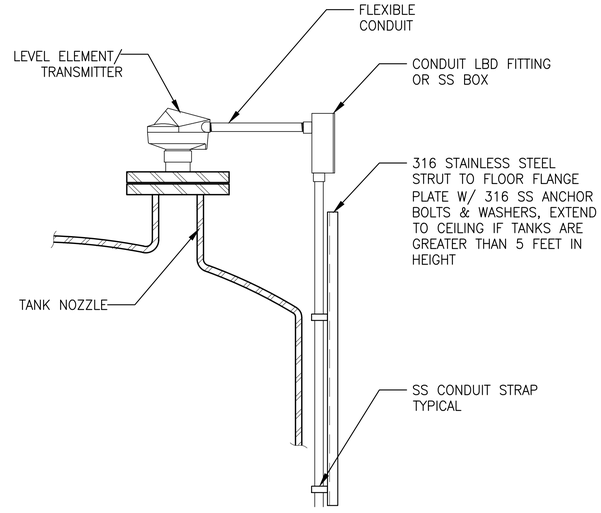


NOTES:

1. COMPONENTS DESIGNATED BY ∗ ARE SUPPLIED BY INSTRUMENT MANUFACTURER.
2. IF PIPE IS NON-CONDUCTIVE BOND MAGMETER TO ONE OF THE FOLLOWING ACCEPTABLE GROUNDS:
   A) METALLIC WATER PIPE IF BURIED PORTION IS MORE THAN 10'.
   B) STRUCTURAL STEEL.

MAGNETIC FLOWMETER INSTALLATION DETAIL

NOT TO SCALE



ULTRASONIC LEVEL ELEMENT MOUNT

NTS

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WILLARD C. HOANSHELT LICENSE No. 42593 STATE OF FLORIDA PROFESSIONAL ENGINEER

VE GMP-2

VE	11/2022	VE GMP-1	LYC	TWF
LTR.	DATE	REVISIONS	BY	APPRD.

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DRAWN JPH
CHECKED MCLARK

JonesEdmunds
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NORTH FLORIDA MEGA INDUSTRIAL PARK
WASTEWATER TREATMENT PLANT
COLUMBIA COUNTY, FLORIDA

DETAILS 3

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P.E. # 42593

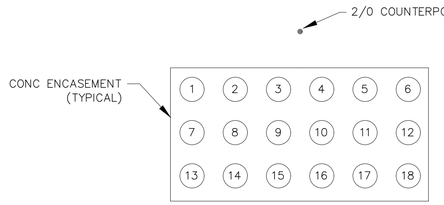
PROJECT NO: 03780-001-01
DATE: DEC. 2022
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DWG NO: E25

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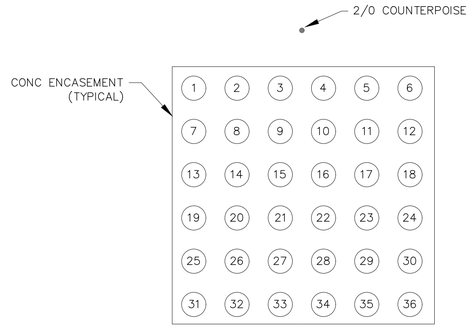
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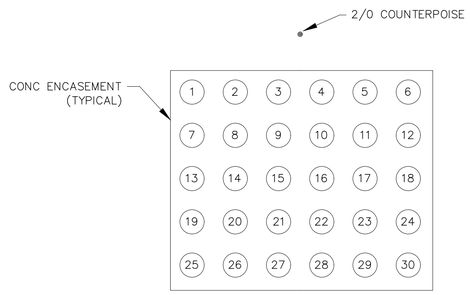
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SECTION A-A

NO.	REMARK	NO.	REMARK
1	IPCP	10	FIBER-PLC-A
2	P-100-1	11	OPERATIONS BLDG
3	P-100-2	12	SPARE-2" PLC-A
4	P-101-1	13	SPARE-2"
5	120VAC CKTS-2"	14	SPARE-2"
6	CONTROLS-MCC-1	15	SPARE-2"
7	INST (DC) MCC-2	16	SPARE-2"
8	CONTROLS MCC-2	17	SPARE-2"
9	INST (DC) MCC-2	18	SPARE-2"





SECTION B-B

NO.	REMARK	NO.	REMARK	NO.	REMARK	NO.	REMARK
1	IPCP	10	FIBER-PLC-A	19	B-165A-1	28	SPARE-2"
2	P-100-1	11	OPERATIONS BLDG	20	B-165B-2	29	SPARE-2"
3	P-100-2	12	SPARE-2"	21	LBLCP-1	30	SPARE-2"
4	P-101-1	13	SPARE-2"	22	LBLCP-2		
5	120VAC CKTS-2"	14	SPARE-2"	23	P-160A-1		
6	CONTROLS-MCC-1	15	SPARE-2"	24	P-160B-2		
7	INST (DC) MCC-2	16	SPARE-2"	25	P-155A-1		
8	CONTROLS MCC-2	17	SPARE-2"	26	P-155B-2		
9	INST (DC) MCC-2	18	SPARE-2"	27	PNL L1A		

SECTION C-C

NO.	REMARK	NO.	REMARK	NO.	REMARK	NO.	REMARK
1	IPCP	10	FIBER-PLC-A	19	B-165A-1	28	SPARE-2" (MCC-2)
2	P-100-1	11	OPERATIONS BLDG	20	B-165B-2	29	SPARE-2" (MCC-2)
3	P-100-2	12	SPARE-2" (MCC-1)	21	LBLCP-1	30	SPARE-2" (MCC-2)
4	P-101-1	13	SPARE-2" (MCC-1)	22	LBLCP-2	31	PNL L2A
5	120VAC CKTS-2"	14	SPARE-2" (MCC-1)	23	P-160A-1	32	PLC-B-2"
6	CONTROLS-MCC-1	15	SPARE-2" (MCC-1)	24	P-160B-2	33	PLC-B-2"
7	INST (DC) MCC-2	16	SPARE-2" (MCC-1)	25	P-155A-1	34	SPARE-2" (PLC-B)
8	CONTROLS MCC-2	17	SPARE-2" (MCC-2)	26	P-155B-2	36	SPARE-2" (PLC-B)
9	INST (DC) MCC-2	18	SPARE-2" (MCC-2)	27	PNL L1A	36	SPARE-1" (PNL L1)

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WASTEWATER TREATMENT PLANT
COLUMBIA COUNTY, FLORIDA

DUCTBANK 1

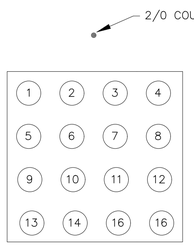
APPROVED BY
EMI
WILLARD C. HOANSHELT
P.E. # 42593

PROJECT NO:	DATE:
03780-001-01	DEC. 2022
INDEX NO:	DWG NO:
	E26

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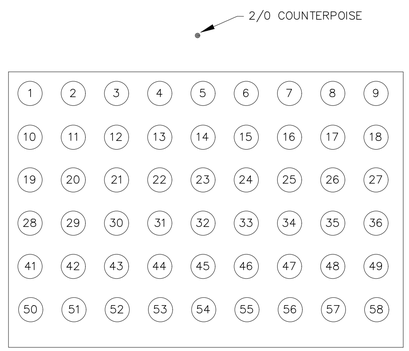
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SECTION D-D

NO.	REMARK	NO.	REMARK
1	P-700-1	10	PDPS
2	P-700-2	11	CONTROLS-2"
3	P-710-1	12	INSTRUMENTS (DC)-2"
4	P-710-2	13	SPARE-2"
5	D-720-1	14	SPARE-2"
6	D-720-2	15	SPARE-2"
7	P-615-2	16	SPARE-2"
8	P-615-3		
9	P-615-4		



SECTION E-E

NO.	REMARK	NO.	REMARK	NO.	REMARK	NO.	REMARK	NO.	REMARK	NO.	REMARK	NO.	REMARK
1	SCP1	10	2BCP-2	19	P-246-1	28	P-206B-2	37	CONTROLS-2"	46	P-700-1	55	PDPS
2	SCP2	11	2BCP-3	20	P-246-2	29	P-206B-4	38	CONTROLS-2"	47	P-700-2	56	SPARE-2" (MCC-4)
3	PNL L1B	12	2BCP-4	21	P-230-1	30	P-206B-6	39	INSTRUMENTS (DC)-2"	48	P-710-1	57	SPARE-2" (MCC-4)
4	MSCP	13	B-208A-1	22	P-230-3	31	M-211A-1	40	INSTRUMENTS (DC)-2"	49	P-710-2	58	SPARE-2" (MCC-4)
5	1BCP-1	14	B-216A-1	23	P-230-2	32	M-211A-3	41	SPARE-2" (MCC-3)	50	D-720-1	59	
6	1BCP-2	15	B-216A-3	24	P-230-4	33	M-221A-5	42	SPARE-2" (MCC-3)	51	D-720-2	60	
7	1BCP-3	16	B-208B-2	25	P-206A-1	34	M-211B-2	43	SPARE-2" (MCC-3)	52	P-615-2	61	
8	1BCP-4	17	B-216B-2	26	P-206A-3	35	M-211B-4	44	SPARE-2" (MCC-3)	53	P-615-3	62	
9	2BCP-1	18	B-216B-4	27	P-206A-5	36	M-221B-6	45	SPARE-2" (MCC-4)	54	P-615-4	63	

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DUCTBANK 2

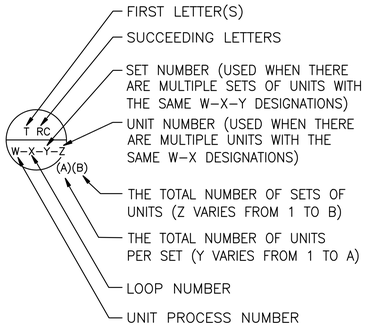
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P.E. # 42593

PROJECT NO: 03780-001-01
DATE: DEC. 2022
INDEX NO:
DWG NO: E27

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INSTRUMENT IDENTIFICATION

EXAMPLE SYMBOLS



FIELD MOUNTED INSTRUMENT

I/P
REAR-OF-PANEL MOUNTED INSTRUMENT

FIC
PANEL MOUNTED INSTRUMENT

QL
MOTOR CONTROL CENTER MOUNTED INSTRUMENT

SPECIAL CASES

OC QL — OPENED AND CLOSED EVENT LIGHTS

OC ZL — OPENED AND CLOSED POSITION LIGHTS

OC ZS — OPENED AND CLOSED POSITION SWITCHES

OO HS — ON-OFF HAND SWITCH. MAINTAINED CONTACT SWITCH CONTROLLED DEVICE WILL NOT RESTART ON RETURN OF POWER AFTER POWER FAILURE).

SS HS — STOP-START HAND SWITCH MOMENTARY CONTACT SWITCHES (CONTROLLED DEVICE WILL NOT RESTART ON RETURN OF POWER AFTER POWER FAILURE).

OSC HS — ELECTRIC ACTUATOR WITH INTEGRAL OPEN-STOP-CLOSE MOMENTARY CONTACT CONTROL SWITCH

CM FIHK — FLOW INDICATING, COMPUTER/MANUAL CONTROL STATION

CAM FIC — FLOW INDICATING, COMPUTER/AUTO/MANUAL CONTROL STATION

SSC FIC — FLOW INDICATING SUPERVISORY SET POINT (BY COMPUTER), AUTO/MANUAL CONTROL STATION

XX XXX X-X — PLC IMPLEMENTED FUNCTION OPERATOR ACCESSIBLE

XX XX — COMPUTER IMPLEMENTED FUNCTION NOT OPERATOR ACCESSIBLE

INSTRUMENT IDENTIFICATION LETTERS TABLE

	FIRST LETTER(S)		SUCCEEDING LETTERS		
	PROCESS OR INITIATING VARIABLE	MODIFIER	READOUT OR PASSIVE FUNCTION	OUTPUT FUNCTION	MODIFIER
A	ANALYSIS (+)		ALARM		
B	BURNER FLAME		USERS CHOICE (+)	USERS CHOICE (+)	USERS CHOICE
C	CONDUCTIVITY			CONTROL	
D	DENSITY (S.G.)	DIFFERENTIAL			
E	VOLTAGE		PRIMARY ELEMENT		
F	FLOW RATE				
G	GAUGE		GLASS	GATE	
H	HAND (MANUAL)				HIGH
I	CURRENT		INDICATE		
J	POWER	SCAN			
K	TIME OR SCHEDULE			CONTROL STATION	
L	LEVEL		LIGHT (PILOT)		LOW
M	MOTION				MIDDLE
N	USERS CHOICE (+)		USERS CHOICE (+)	USERS CHOICE (+)	USERS CHOICE (+)
O	USERS CHOICE (+)		ORIFICE		
P	PRESSURE (OR VACUUM)		POINT (TEST CONNECTION)		
Q	QUANTITY OR EVENT (+)	INTEGRATE	INTEGRATE		
R			RECORD OR PRINT		
S	SPEED OR FREQUENCY	SAFETY		SWITCH	
T	TEMPERATURE			TRANSMIT	
U	MULTIVARIABLE (+)		MULTIFUNCTION (+)	MULTIFUNCTION (+)	MULTIFUNCTION (+)
V	VISCOSITY			VALVE OR DAMPER	
W	WEIGHT OR FORCE		WELL		
X	UNCLASSIFIED (+)		UNCLASSIFIED	UNCLASSIFIED (+)	UNCLASSIFIED (+)
Y	USERS CHOICE (+)			RELAY OR COMPUTE (+)	
Z	POSITION			DRIVE, ACTUATE OR UNCLASSIFIED FINAL CONTROL ELEMENT	

(+) WHEN USED, EXPLANATION IS SHOWN ADJACENT TO INSTRUMENT SYMBOL. SEE ABBREVIATIONS AND LETTER SYMBOLS

TRANSDUCERS

A ANALOG	I CURRENT
D DIGITAL	P PNEUMATIC
E VOLTAGE	PF PULSE FREQUENCY
F FREQUENCY	PD PULSE DURATION
H HYDRAULIC	R RESISTANCE

EXAMPLE:

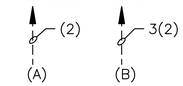
I/P — CURRENT TO PNEUMATIC TRANSDUCER (BACK OF PANEL, IN A FLOW LOOP)

THIS DRAWING DOES NOT INDICATE ALL OF THE I/O REQUIRED TO PERFORM THE INTENDED CONTROL AND MONITORING FUNCTIONS. REFER TO SPEC. SECTION 13620 CONTROL DESCRIPTIONS FOR COMPLETE I/O. REFER TO CIVIL & MECHANICAL DRAWINGS FOR EXACT PIPE AND FITTING CONFIGURATION.

LINE LEGEND

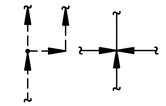
- PROCESS (CLOSED CONDUIT, DASHED LINE INDICATES ALTERNATE FLOW STREAM)
- PROCESS (EXISTING)
- PROCESS (OPEN CHANNEL)
- DOUBLE WALL CONTAINMENT
- -A--A-- ANALOG SIGNAL (4 TO 20 mAdc, ETC.)
- DISCRETE SIGNAL (ON/OFF, ETC.)
- PNEUMATIC SIGNAL
- DATA LINK
- ---S-- SERIAL SIGNAL
- ---FO-- FIBER OPTIC
- PACKAGE SYSTEM EQUIPMENT
- EQUIPMENT/PROCESS BOUNDARY
- BUILDING OR FACILITY BOUNDARY

PARALLELING LINES

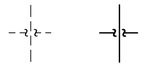


(A) TOTAL OF 2 SIGNALS
(B) 3 TYPICAL SETS OF 2 SIGNALS EACH. TOTAL OF 6 SIGNALS.

CONNECTING LINES



NON-CONNECTING LINES



INTERFACE SYMBOLS



= PROCESS INTERFACE

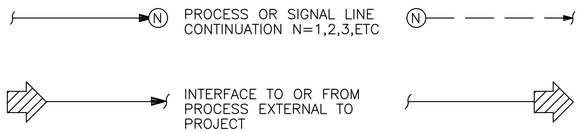
= SIGNAL INTERFACE

W = SOURCE UNIT PROCESS NO.

A = INTERFACE NO.

D = DESTINATION DRAWING NO.

S = SOURCE DRAWING NO.



PROCESS OR SIGNAL LINE CONTINUATION N=1,2,3,ETC

INTERFACE TO OR FROM PROCESS EXTERNAL TO PROJECT

SELF CONTAINED VALVE, ACTUATED VALVE & EQUIPMENT TAG NUMBERS

WD-XY

W = UNIT PROCESS NUMBER
X = LOOP NUMBER
Y = UNIT NUMBER

D:

ARV	= AIR RELEASE VALVE	P	= PUMP
AVRV	= AIR & VACUUM VALVE	PD	= PULSATION DAMPER
CC	= CALIBRATION COLUMN	PC	= PROGRAMMABLE CONTROLLER
LIU	= LIGHT INTERFACE UNIT	PSE	= PRESSURE SAFETY ELEMENT
M	= MECHANICAL EQUIPMENT	RIO	= REMOTE INPUT OUTPUT
MC	= MEDIA CONVERTER	SR	= SERVER
MP	= METERING PUMP	TK	= TANK
NS	= NETWORK SWITCH	V	= VALVE (SEE VALVE SCHEDULE)
OWS	= OPERATOR WORKSTATION	UPS	= UNINTERRUPTIBLE POWER

ABBREVIATIONS & LETTER SYMBOLS

AC	ALTERNATING CURRENT
ALKY	ALKALINITY
AM	AUTO-MANUAL
CAM	COMPUTER-AUTO-MANUAL
CCS	CENTRAL CONTROL SYSTEM
CL_2	CHLORINE (TYPICAL: USE STANDARD CHEMICAL ELEMENT ABBREVIATION)
CM	COMPUTER-MANUAL
COD	CHEMICAL OXYGEN DEMAND
XCP-Y	CONTROL PANEL: X=UNIT PROCESS NO. , Y=LOOP NO.
DC	DIRECT CURRENT
DO	DISSOLVED OXYGEN
FCL_2	FREE CHLORINE RESIDUAL
FOS	FAST-OFF-SLOW
FOSA	FAST-OFF-SLOW-AUTO
FOSR	FAST-OFF-SLOW-REMOTE
XFP-Y	FIELD PANEL: X=UNIT PROCESS NO. , Y=LOOP NO.
FR	FORWARD-REVERSE
HDNS	HARDNESS
HOA	HAND-OFF-AUTO
HOR	HAND-OFF-REMOTE
LEL	LOWER EXPLOSIVE LIMIT
LIU	LIGHT INTERFACE UNIT
LOS	LOCKOUT STOP
LR	LOCAL-REMOTE
MA	MANUAL-AUTO
MBAS	METHYLENE BLUE ACTIVE SUBSTANCES
MC	MODULATE-CLOSE
MCC-X	MOTOR CONTROL CENTER NO. X
MP	METERING PUMP
MSC	MANUFACTURER SUPPLIED CABLE
OC	OPEN-CLOSE (D)
OCR	OPEN-CLOSE-REMOTE
OCA	OPEN-CLOSE-AUTO
OO	ON-OFF
OOA	ON-OFF-AUTO
OOR	ON-OFF-REMOTE
OP	ORTHO PHOSPHATE
ORP	OXIDATION REDUCTION POTENTIAL
OSC	OPEN-STOP-CLOSE
pH	HYDROGEN ION CONCENTRATION
PLC	PROGRAMMABLE LOGIC CONTROLLER
RM-X	REMOTE MULTIPLEXING MODULE NO. X
RTU-X	REMOTE TELEMETRY UNIT NO. X
SF	SLOWER-FASTER
SS	START-STOP
SSC	SUPERVISORY SET POINT CONTROL
TCL_2	TOTAL CHLORINE RESIDUAL
TK	TANK
TOC	TOTAL ORGANIC CARBON
TOD	TOTAL OXYGEN DEMAND
TURB	TURBIDITY
VFD	VARIABLE FREQUENCY DRIVE
VH	VAPOR HEATER
VHC	VOLATILE HYDROCARBONS
VIB	VIBRATION
VP	VAPORIZER

GENERAL NOTES

1. COMPONENTS AND PANELS SHOWN WITH A SINGLE ASTERISK (*) ARE TO BE PROVIDED AS PART OF A PACKAGE SYSTEM
2. COMPONENTS AND PANELS SHOWN WITH A DOUBLE ASTERISK (**) ARE TO BE UNDER DIVISION 16, ELECTRICAL.
3. THIS IS A STANDARD LEGEND. THEREFORE, NOT ALL OF THIS INFORMATION MAY BE USED ON THIS PROJECT.
4. ALL COMPONENTS SHOWN INSIDE PACKAGE SYSTEM BOUNDARY ARE TO BE PROVIDED AS PART OF THE PACKAGE SYSTEM.

THIS DOCUMENT HAS BEEN DIGITALLY SIGNED AND SEALED BY:

Willard C Hoanshelt

Digitally signed by Willard C Hoanshelt
DN: CN=Willard C Hoanshelt, dnQualifier=A01410D000001 7EDBEAA28C0008E2FB, C=Florida, C=US
Date: 2023.05.04 14:33:57-04'00'

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NORTH FLORIDA MEGA INDUSTRIAL PARK
WASTEWATER TREATMENT PLANT
COLUMBIA COUNTY, FLORIDA

INSTRUMENTATION ABBREVIATIONS

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VALVE SYMBOLS

- GATE
- KNIFE GATE
- BUTTERFLY
- GLOBE
- BALL
- VEE– BALL
- PLUG
- SEAT PORT ECCENTRIC PLUG
- DIAPHRAGM
- PINCH
- NEEDLE
- SWING CHECK
- DOUBLE CHECK BACKFLOW PREVENTER
- REDUCED PRESSURE BACKFLOW PREVENTER (RP)
- BALL CHECK
- PRESSURE RELIEF
- AIR AND/OR VACUUM RELEASE
- REGULATED SIDE PRESSURE/CONTROL (OR)
- MULTI–PORT VALVES (BALL VALVE SHOWN. FOR OTHER VALVE TYPES, APPROPRIATE VALVE SYMBOL SHOWN). ARROWS INDICATE FLOW PATTERN. SEAT PORTS ARE IMPLIED BY INDICATED FLOW PATTERN.
- SAMPLE
- MUD
- FLOW CONTROL VALVE

GATE SYMBOLS

- SLUICE
- BUTTERFLY
- FLAP
- FABRICATED SLIDE
- SHEAR

ACTUATOR SYMBOLS

- M XX — MOTORIZED
- EH XX — ELECTROHYDRAULIC
- P XX — PNEUMATIC
- H XX — HYDRAULIC
- S — SOLENOID
- MANUAL

NOTES:

1. ON LOSS OF PRIMARY POWER (PNEUMATIC, ELECTRICAL OR HYDRAULIC)
   XX: FO = FAIL OPEN
   FC = FAIL CLOSED
   FLP = FAIL TO LAST POSITION

PRIMARY ELEMENT SYMBOLS

- PARSHALL FLUME
- WEIR
- ORIFICE PLATE
- FLOW TUBE
- PITOT–STATIC
- VORTEX METER
- ROTAMETER
- ULTRASONIC FLOW METER (INLINE)
- THERMAL MASS FLOW METER
- MASS FLOW METER
- ELECTROMAGNETIC FLOW METER
- PROPELLER OR TURBINE METER
- DENSITY METER (X: N = NUCLEAR, O = OPTICAL, U = ULTRASONIC)
- ULTRASONIC FLOW METER (CLAMP–ON)
- LEVEL (ULTRASONIC)
- LEVEL (BUBBLER TUBE)
- ELECTRODE
- LEVEL (FLOAT) (LS, OR)

MISCELLANEOUS SYMBOLS

NOTE:

XX: AS ADJUSTABLE SPEED
CS–1 CONSTANT SPEED (SINGLE SPEED)
CS–2 CONSTANT SPEED (TWO SPEED)

- SIGHT GLASS
- DIAPHRAGM SEAL
- BLIND FLANGE
- AIR GAP
- VENT TO ATMOSPHERE
- PLUG
- RECEPTACLE
- RADIO ANTENNA
- A ON–TD X–SEC B — "ON" TIME DELAY, B "ON" X–SEC. AFTER A "ON". INSTANT "OFF".
- A OFF–TD X–SEC B — "OFF" TIME DELAY, B "OFF" X–SEC. AFTER A "OFF". INSTANT "ON".
- OR — INTERLOCK. SEE CONTROL DIAGRAMS
- XX — AIR SET XX= SUPPLY PRESSURE IN PSIG.
- AIR SET FILTER/ REGULATOR/ GAUGE SET
- CALIBRATION CYLINDER
- STATIC MIXER
- FILTER
- 120VAC — 120 VOLT, 60 HZ POWER
- 480VAC — 480 VOLT, 60 HZ POWER
- ANNULAR DIAPHRAGM SEAL
- OR OR MIXER
- M XX — ELECTRIC MOTOR
- PRESSURE GAUGE
- CARD READER
- SECURITY CAMERA
- OPERATOR WORKSTATION
- A, B AND C — LOGIC ELEMENT: IF A AND NOT B THEN C
- A, B OR C — LOGIC ELEMENT: IF A OR B THEN C
- S R — ON/OFF RELAY. INPUT IS CONNECTED TO OUTPUT WHEN SWITCHING SIGNAL IS PRESENT.
- S R — SWITCHING SIGNAL SWITCHING RELAY. INPUT WITH DOT IS CONNECTED TO OUTPUT WHEN SWITCHING SIGNAL IS PRESENT
- OTHER INPUT IS CONNECTED TO OUTPUT WHEN SWITCHING SIGNAL IS NOT PRESENT.
- F — FLUSHING CONNECTION
- HOSE ADAPTOR
- S — SEAL WATER SET
- SIGHT GLASS
- PULSATION DAMPENER
- D — HUB DRAIN
- QUICK DISCONNECT

PUMP AND COMPRESSOR SYMBOLS

- CENTRIFUGAL PUMP (DRY PIT) XX
- CENTRIFUGAL WET PIT PUMP OR TURBINE PUMP XX
- CHEMICAL FEED PUMP XX
- DIAPHRAGM PUMP XX
- GEAR PUMP OR BLOWER (POSITIVE DISPLACEMENT) XX
- PISTON PUMP XX
- PROGRESSIVE CAVITY PUMP XX
- SUBMERSIBLE SUMP PUMP XX
- COMPRESSOR (CENTRIFUGAL), BLOWER OR TURBINE XX
- COMPRESSOR (PISTON) XX
- EJECTOR

- NETWORK GATEWAY OR BRIDGE
- LIGHT–COPPER TRANSCEIVER
- COMPUTER WORKSTATION OR SERVER
- WYE
- CONCENTRIC REDUCER
- ECCENTRIC REDUCER
- LEVEL GAUGE

- ELECTRICAL SIGNAL
- 3 PHASE AC POWER
- DATALINK
- 24VDC SIGNAL
- DC POWER
- DATA
- ANALOG & DISCRETE
- ANALOG
- DISCRETE

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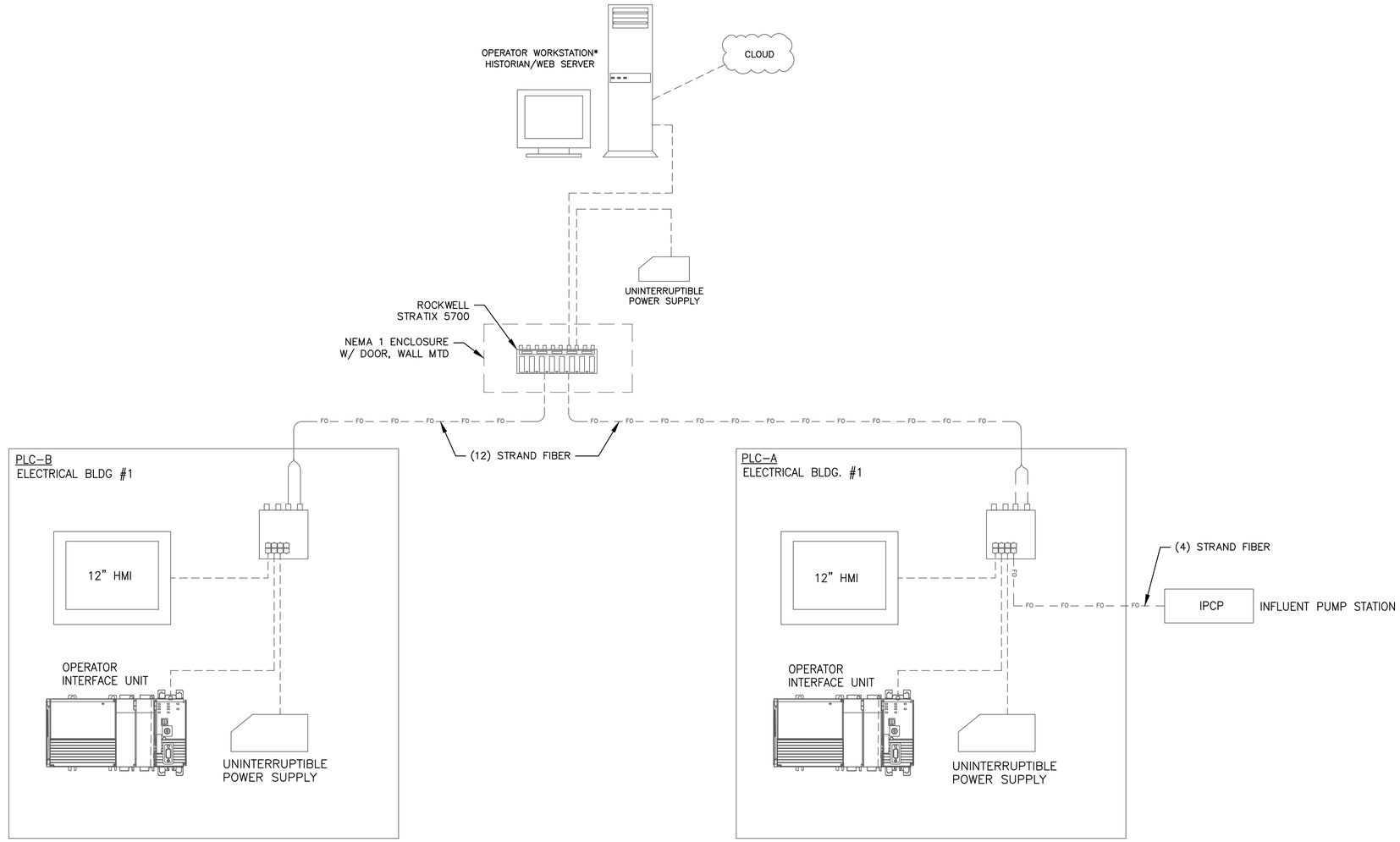
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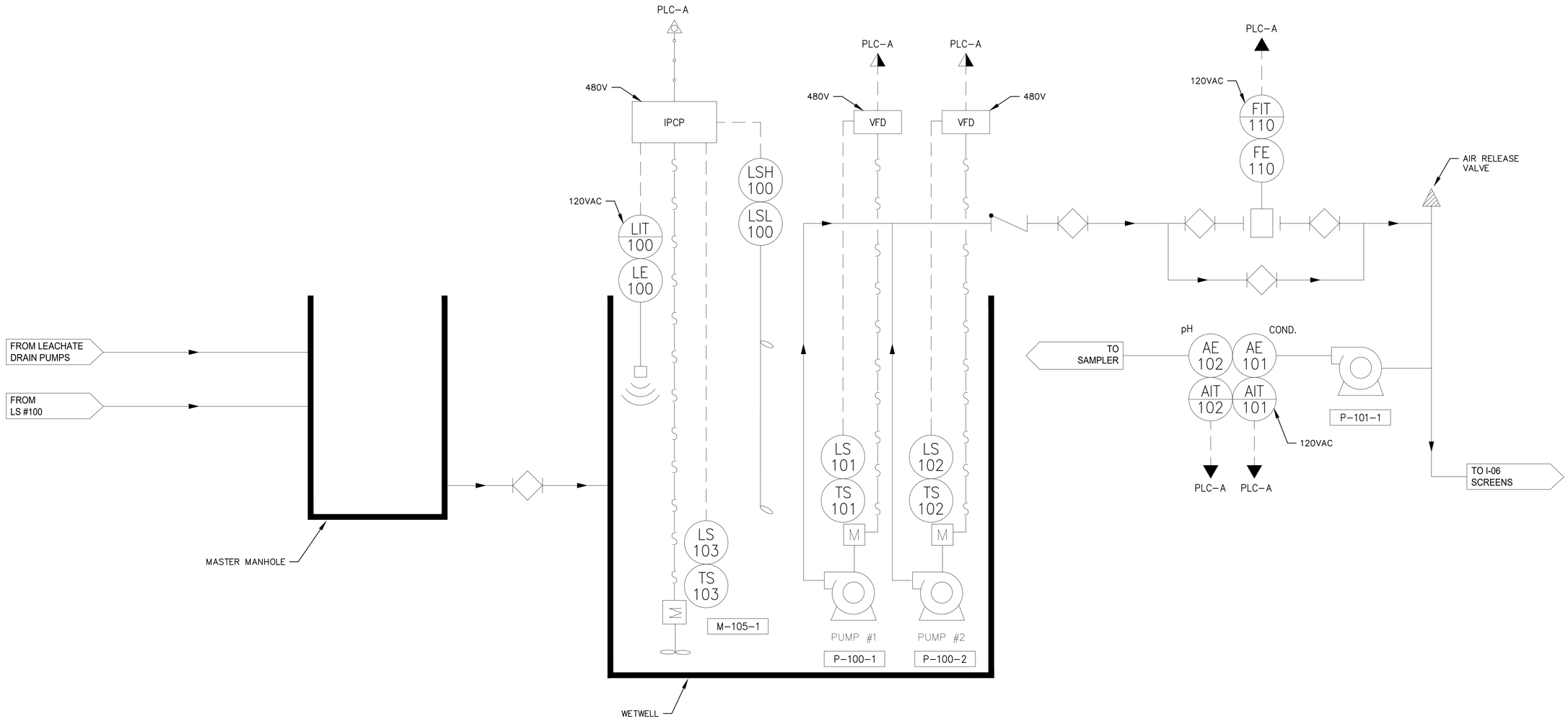
BLOCK SCADA DIAGRAM

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INFLUENT PUMP STATION

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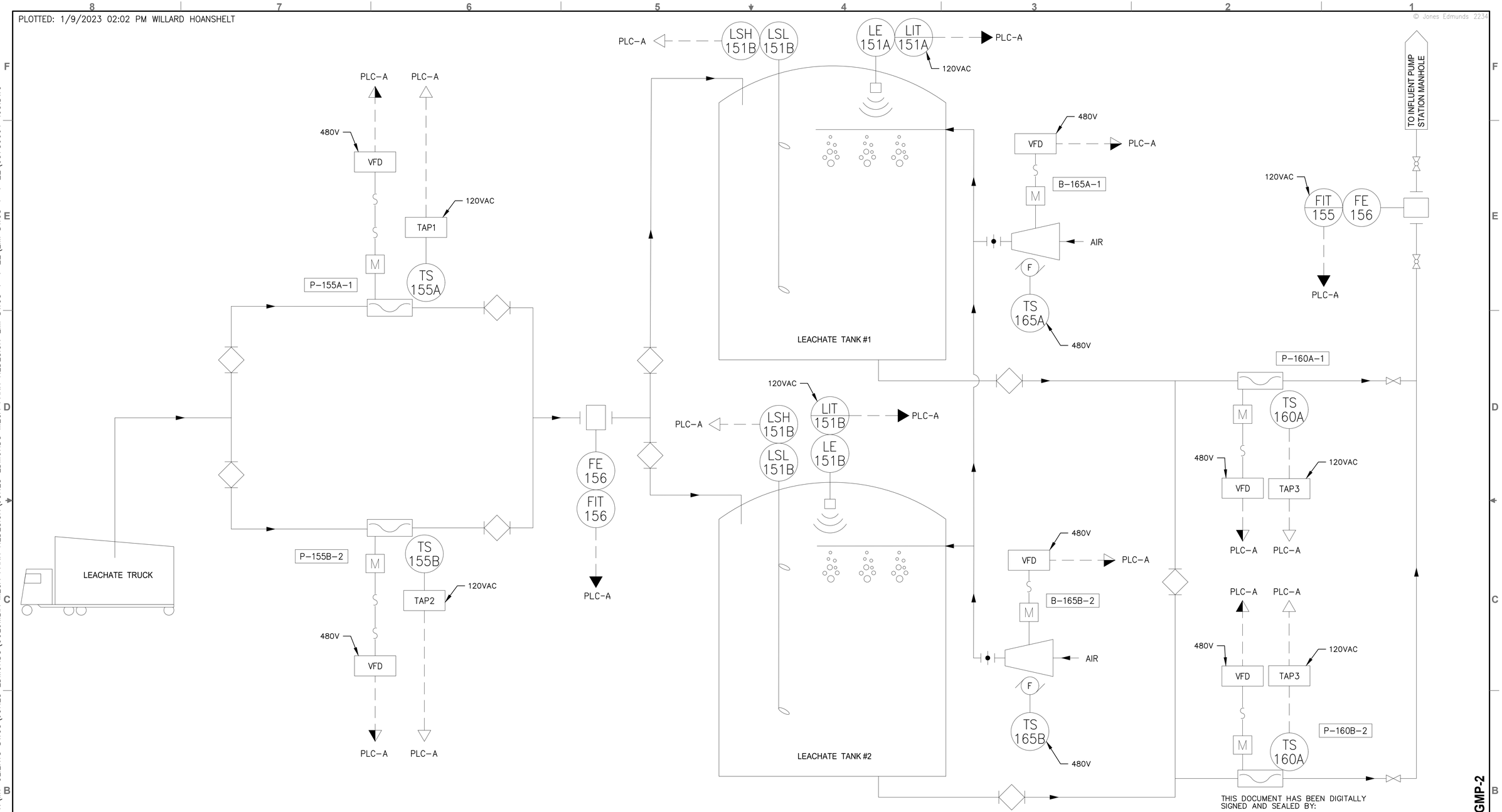
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LEACHATE TANKS DIAGRAM

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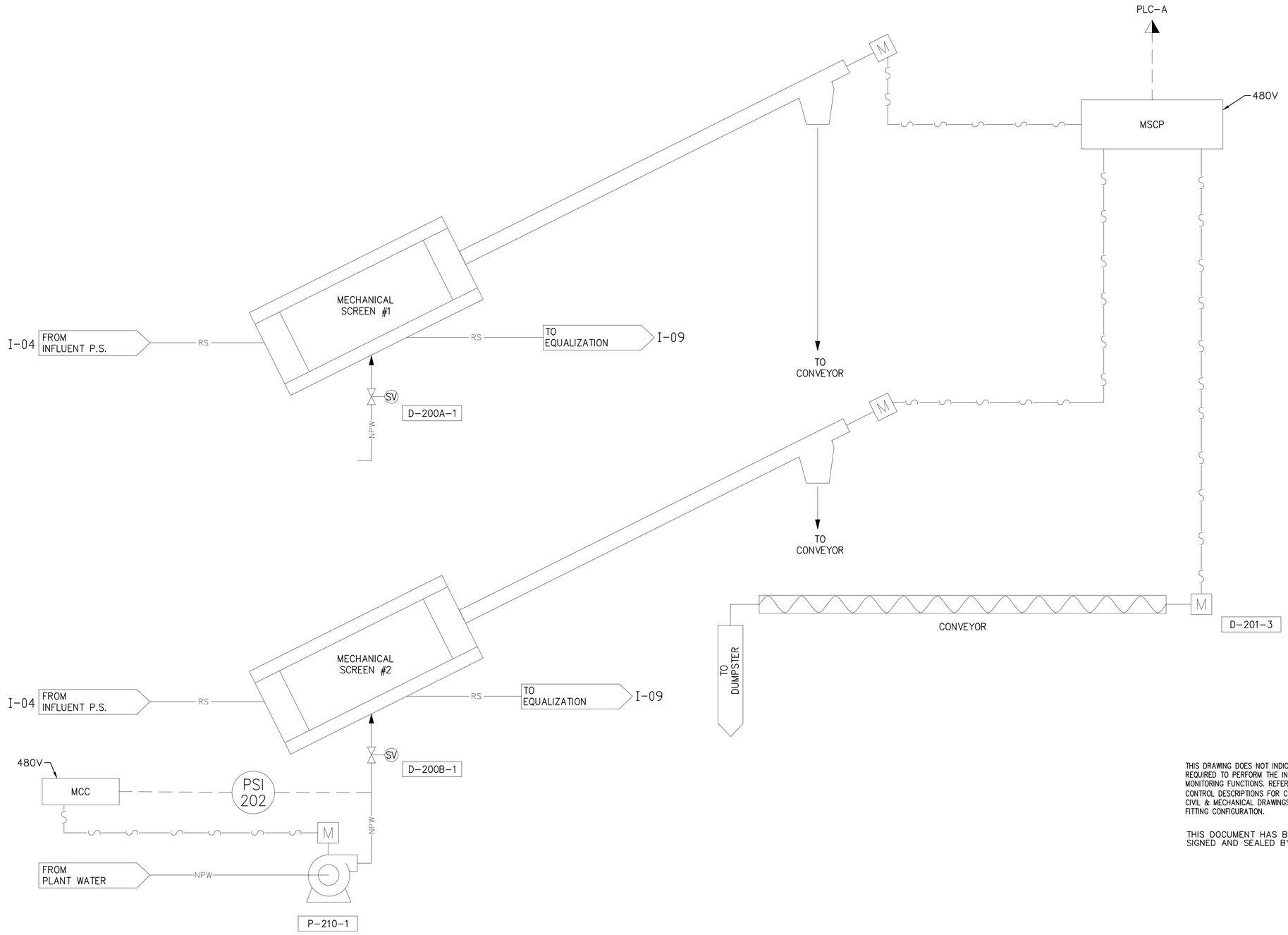
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LEACHATE TANKS

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MECHANICAL SCREENS DIAGRAM

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MECHANICAL SCREENS

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TO TRUCK LOADING

480V — MCC — M — PLC-A

PLC-A — TAP1 — 120VAC

TS 246A — P-246-1

TRUCK LOADING

P-246-2 — TS 246B

480V — MCC — M — PLC-A

PLC-A — TAP1 — 120VAC

TO DRAIN

120VAC — FE 246 — FIT 246 — PLC-A

TO I-09 PUMP STATION

TO I-06 SCREENS

TO I-09 PUMP STATION

FROM I-20 CARBON FEED

EQUALIZATION

DIGESTERS

CLARIFIERS

PRE ANOXIC 1

POST ANOXIC 2

RE-AERATION

PRE ANOXIC 2

AERATION

RCY

EQUALIZATION

DIGESTERS

CLARIFIERS

PRE ANOXIC 1

RE-AERATION

POST ANOXIC 2

FROM I-20 CARBON FEED

PRE ANOXIC 2

AERATION

RCY

480V — VFD — PLC-B

P-230A-1 — M

480V — VFD — PLC-B

P-230A-2 — M

TANK "A"

RCY — RCY

120VAC — FE 230A — FIT 230A — PLC-A

TANK "B"

480V — VFD — PLC-B

P-230B-1 — M

480V — VFD — PLC-B

P-230B-2 — M

RCY — RCY

PLC-A — FIT 230B — FE 230B — 120VAC

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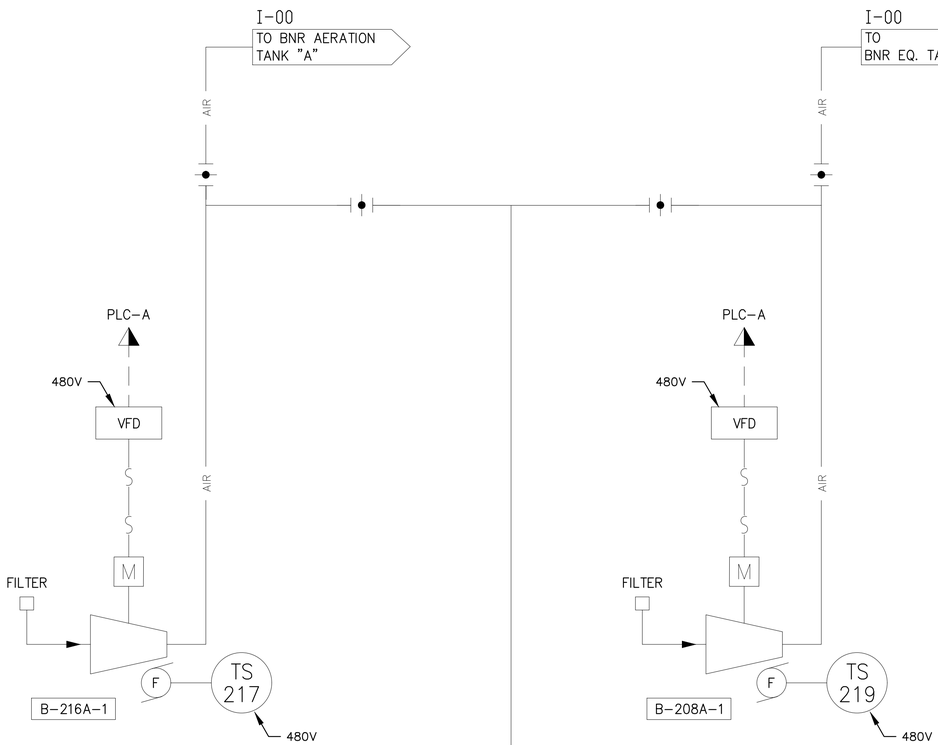
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BNR PACKAGE TANKS

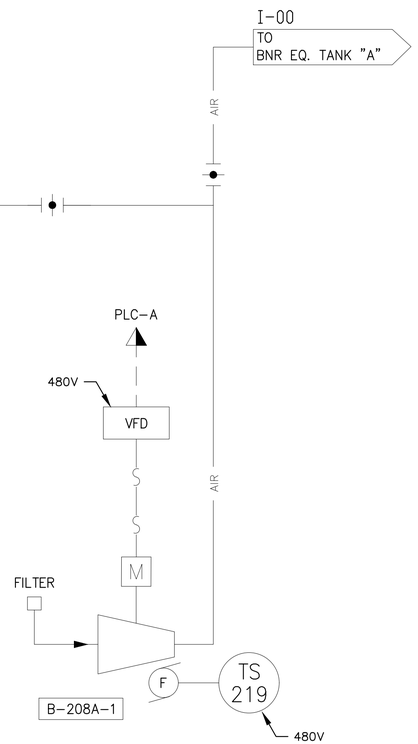
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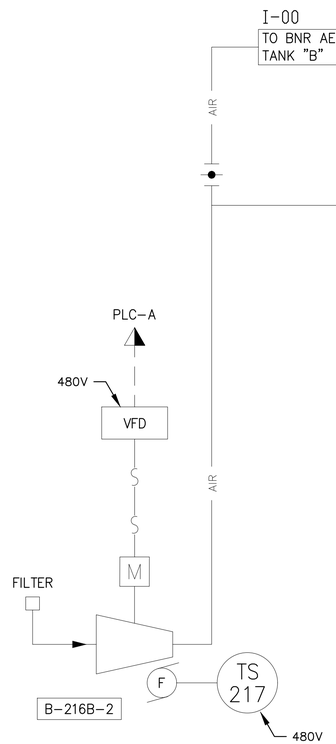
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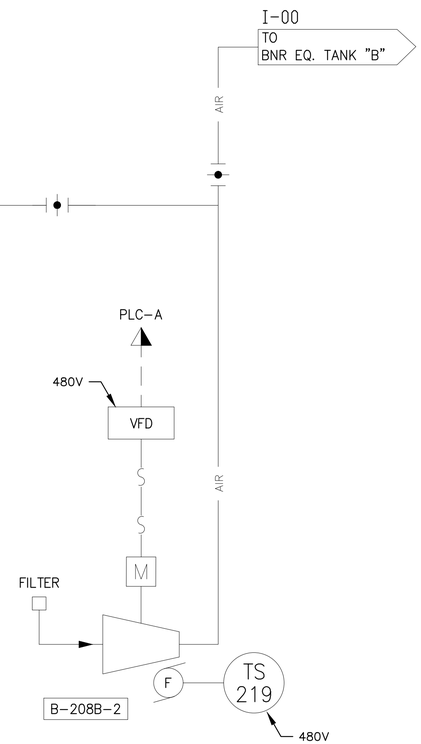
AERATION BLOWER



EQUALIZATION BLOWER

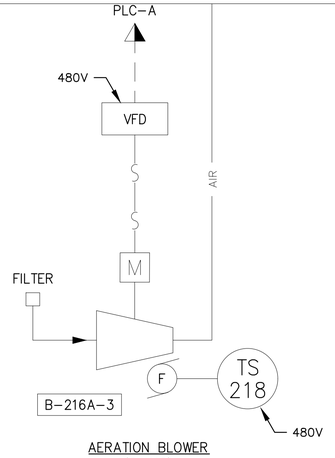


AERATION BLOWER



EQUALIZATION BLOWER

BNR PACKAGE TANK "A"



AERATION BLOWER (SWING)

BNR PACKAGE TANK "B"

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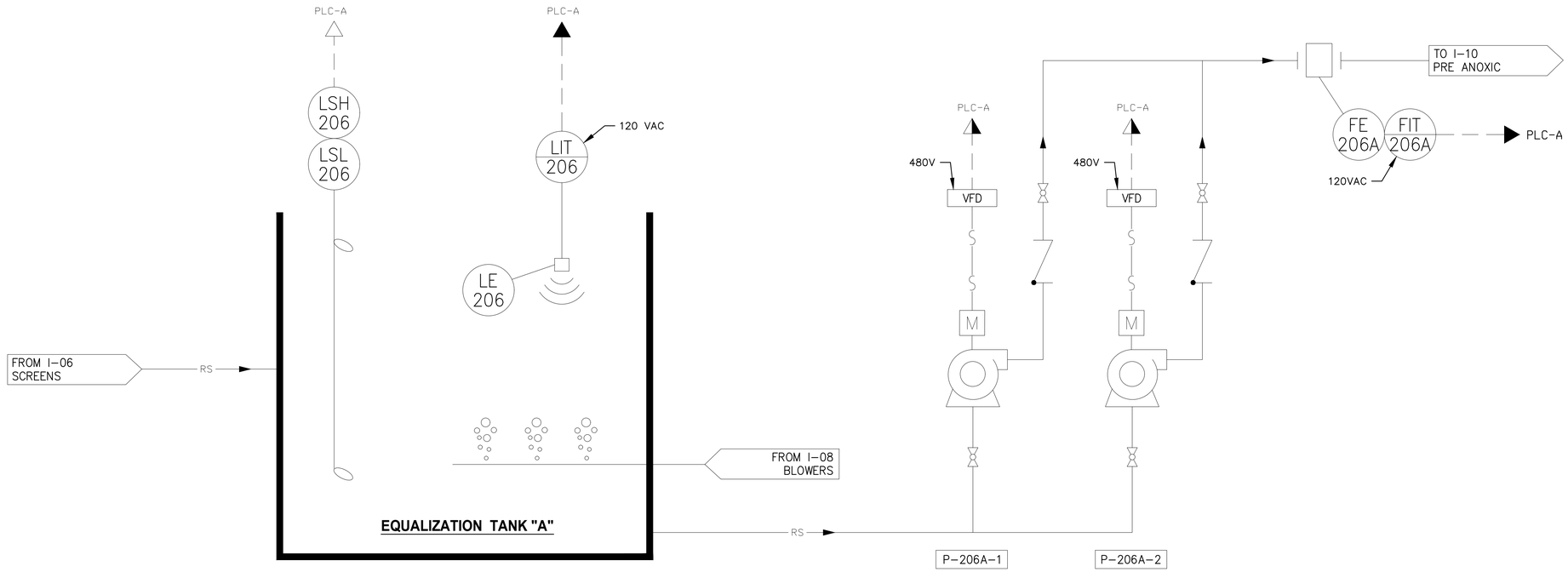
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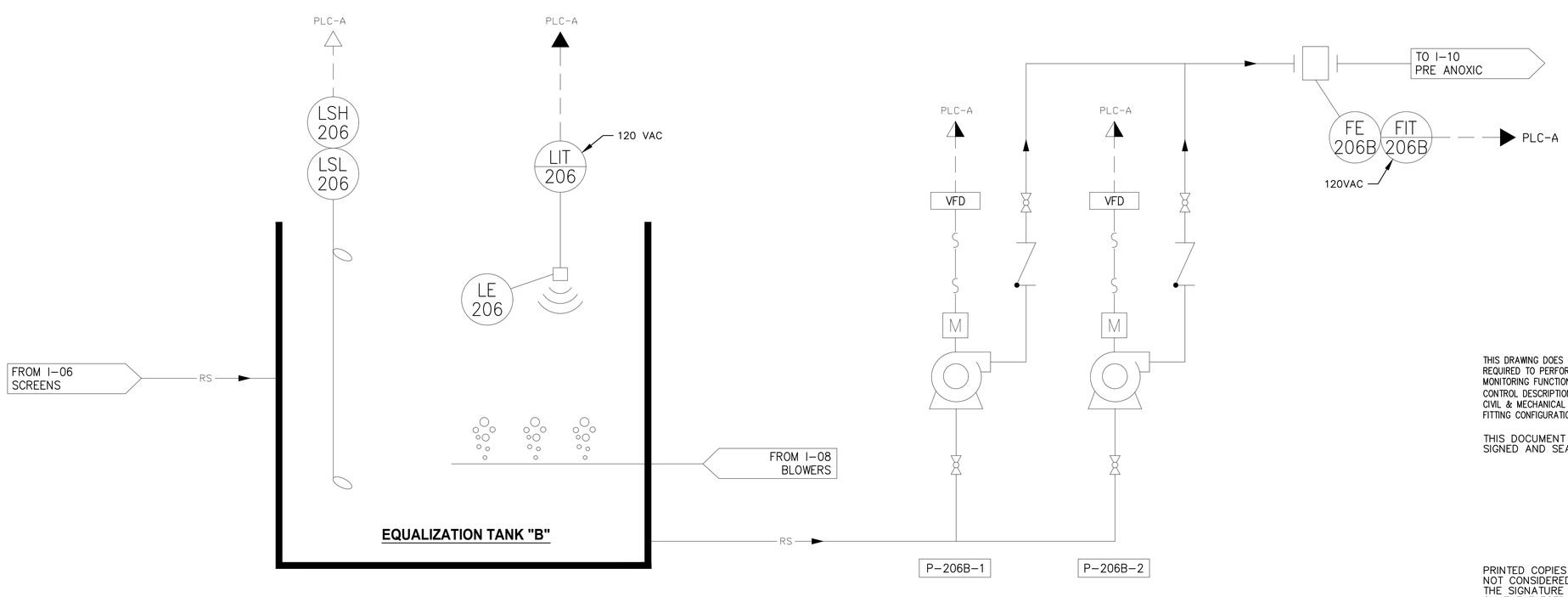
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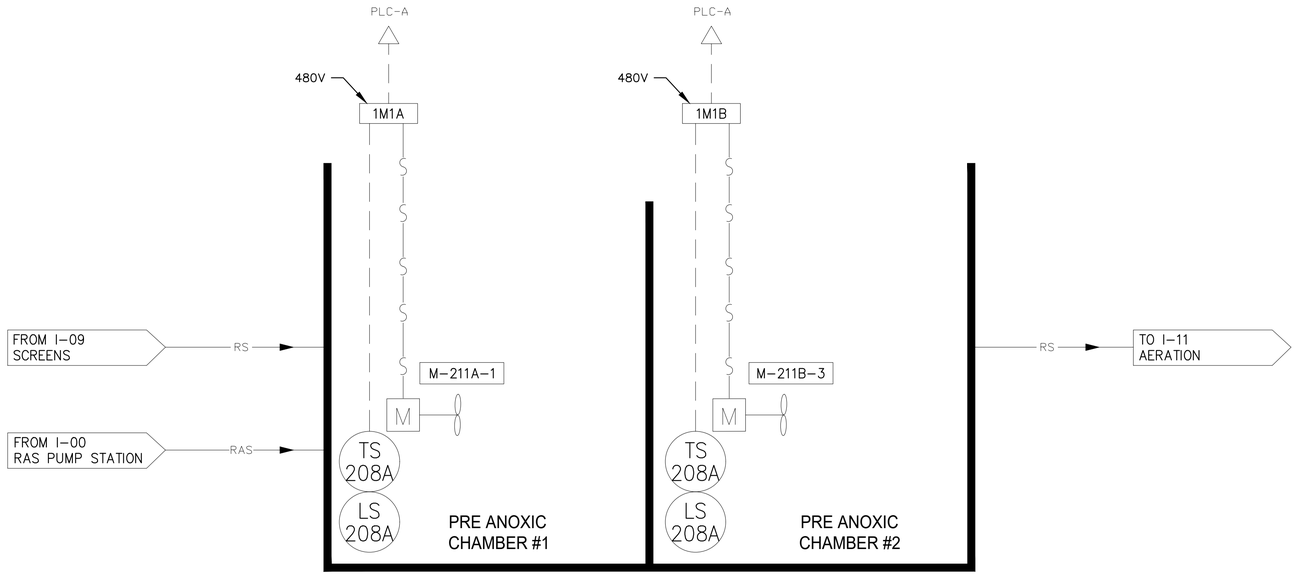
EQUALIZATION PUMPS

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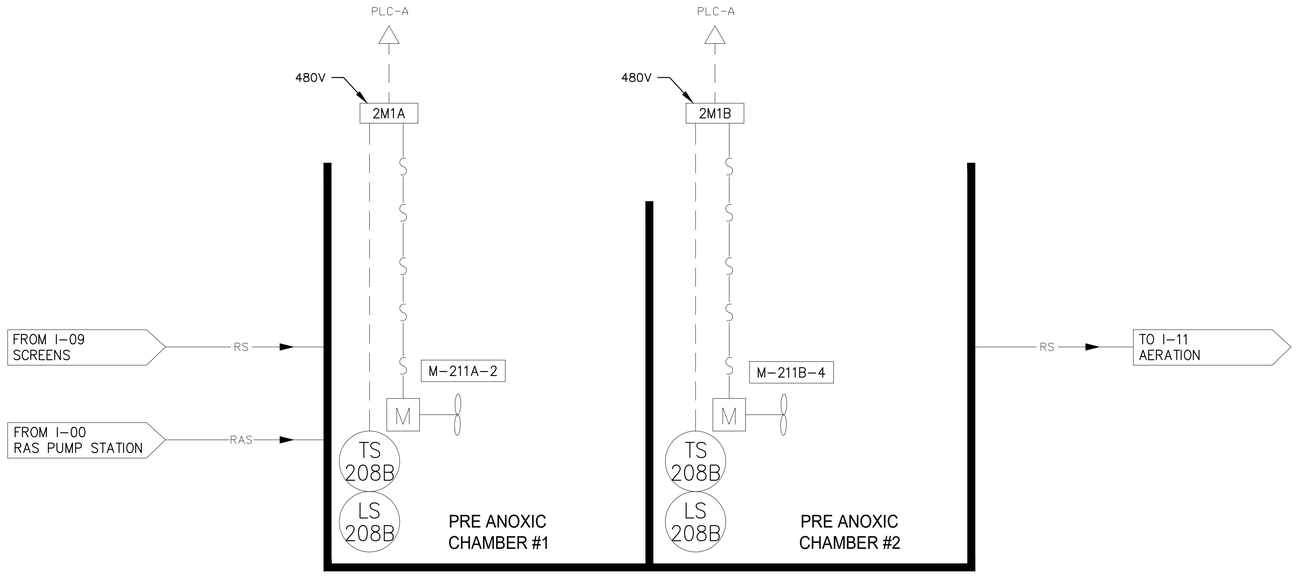
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COLUMBIA COUNTY, FLORIDA

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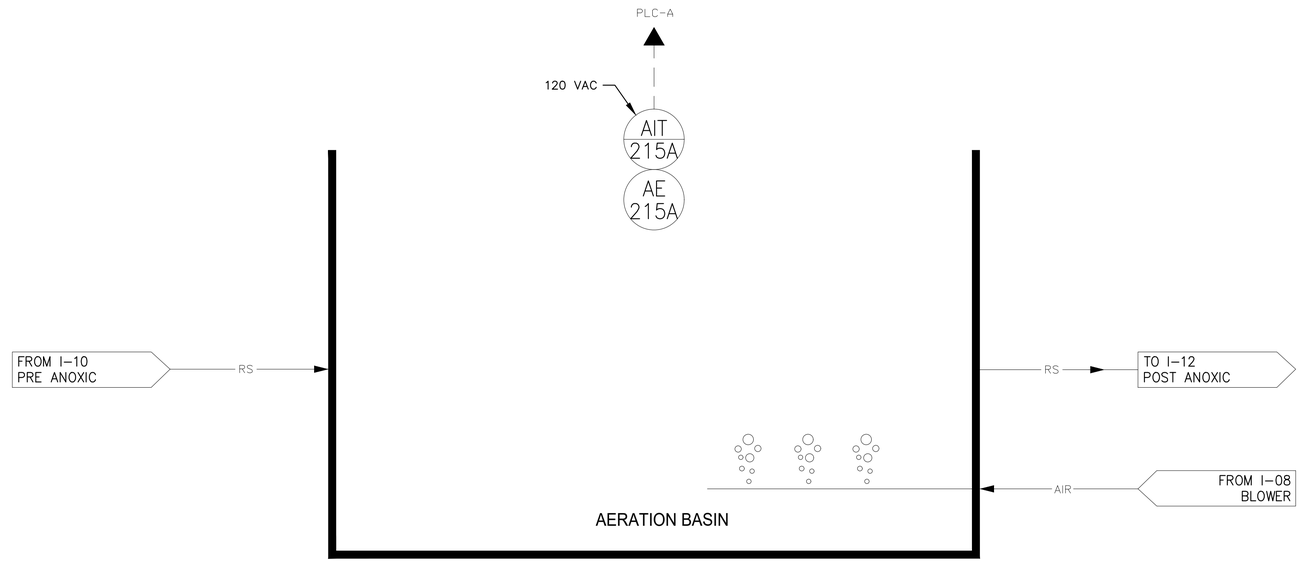
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INDEX NO:
DWG NO: I10

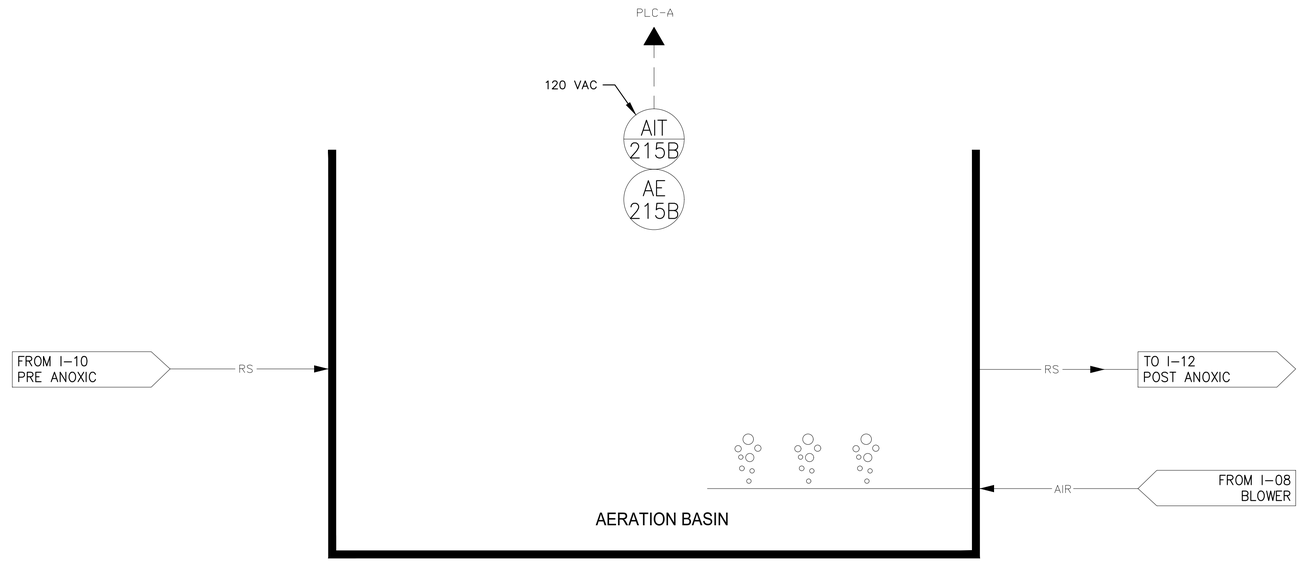
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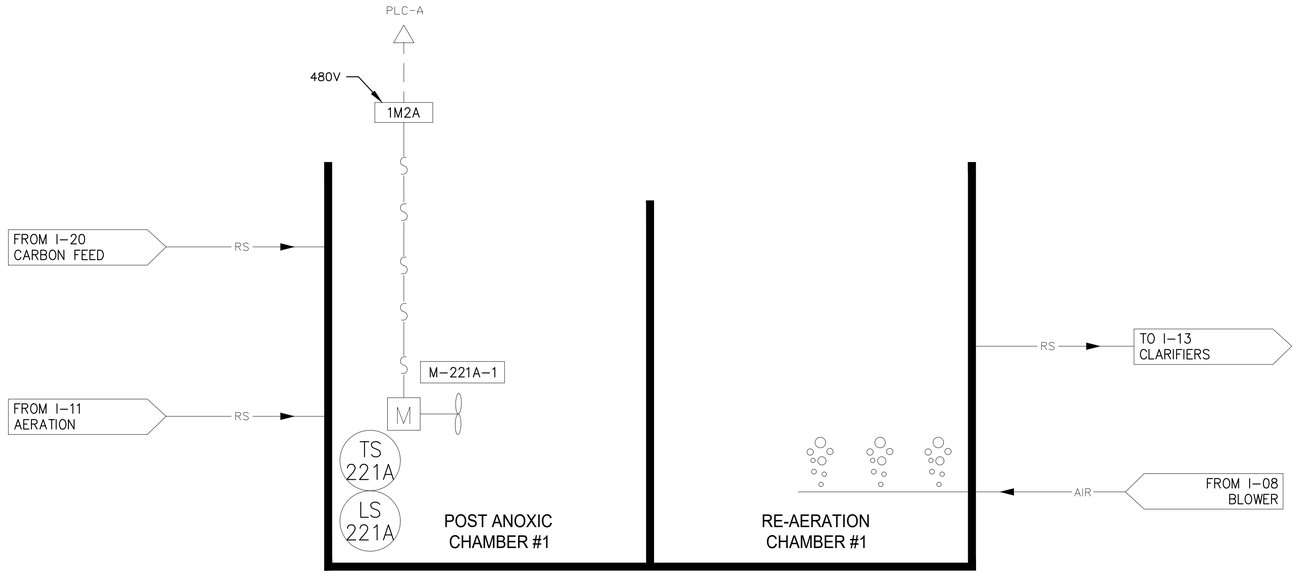
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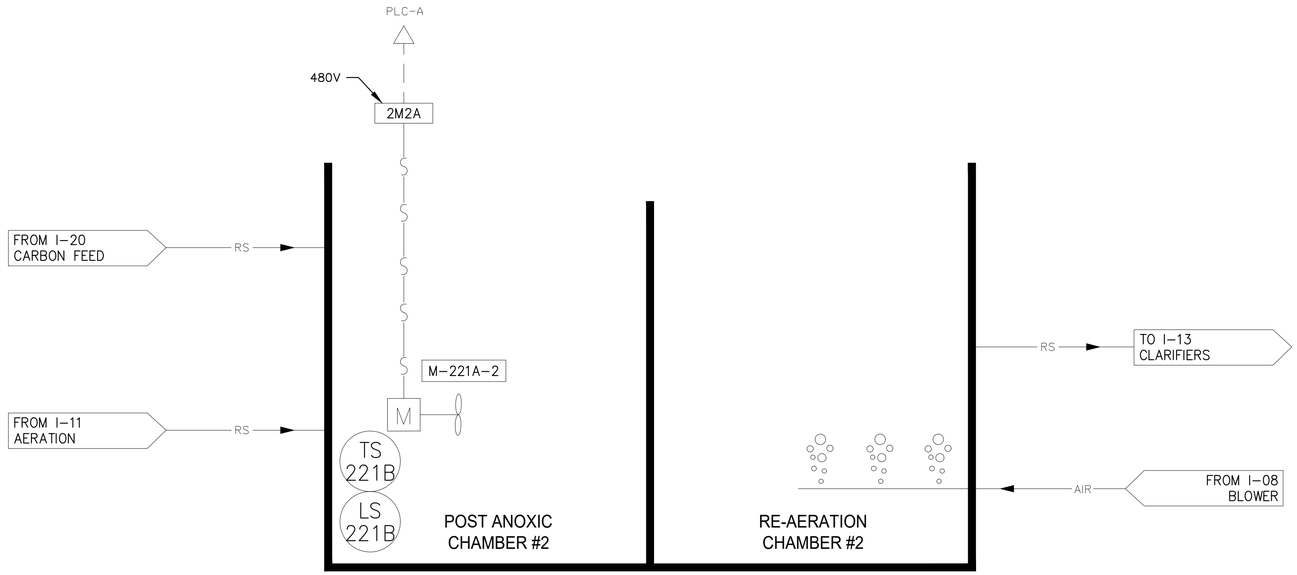
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DATE: DEC. 2022
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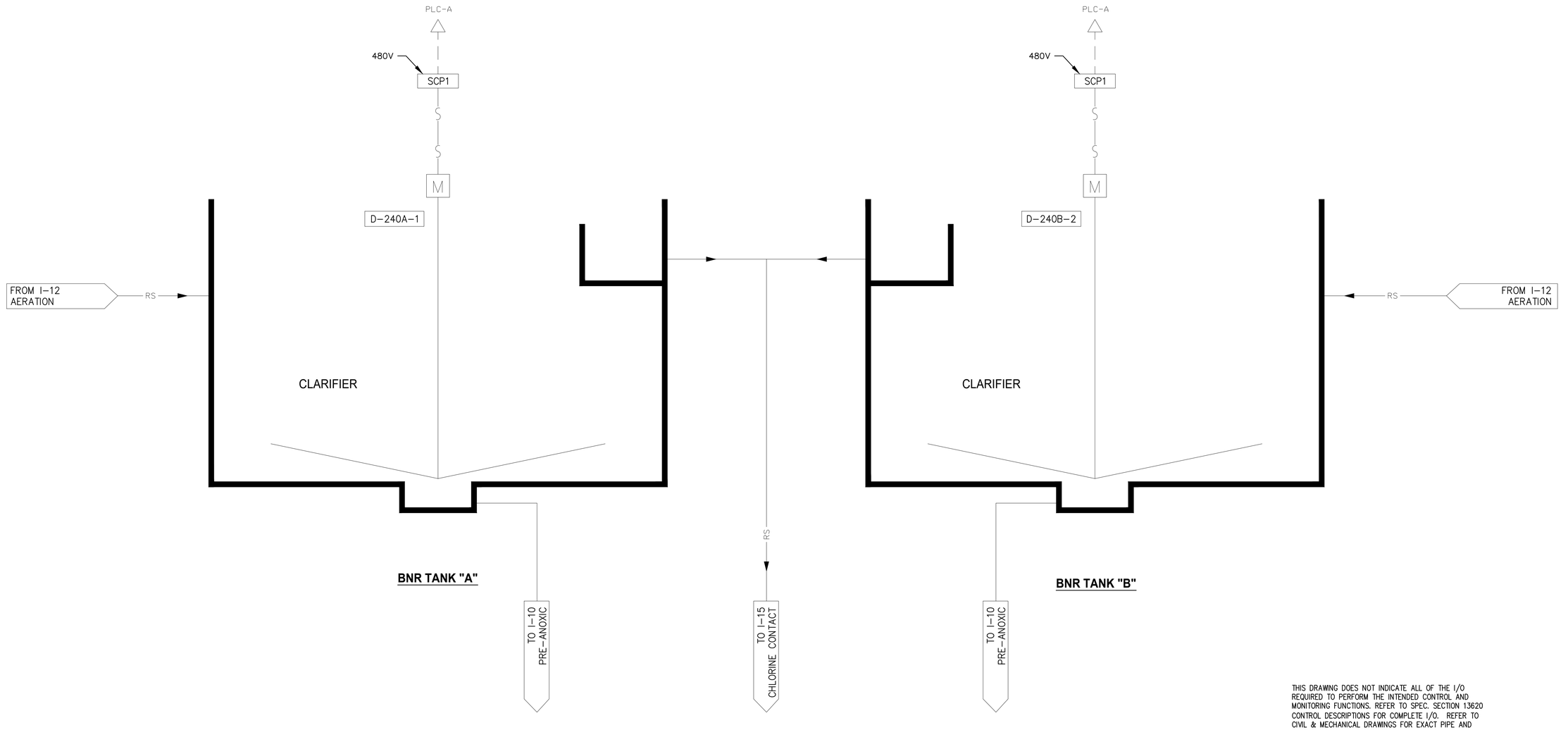
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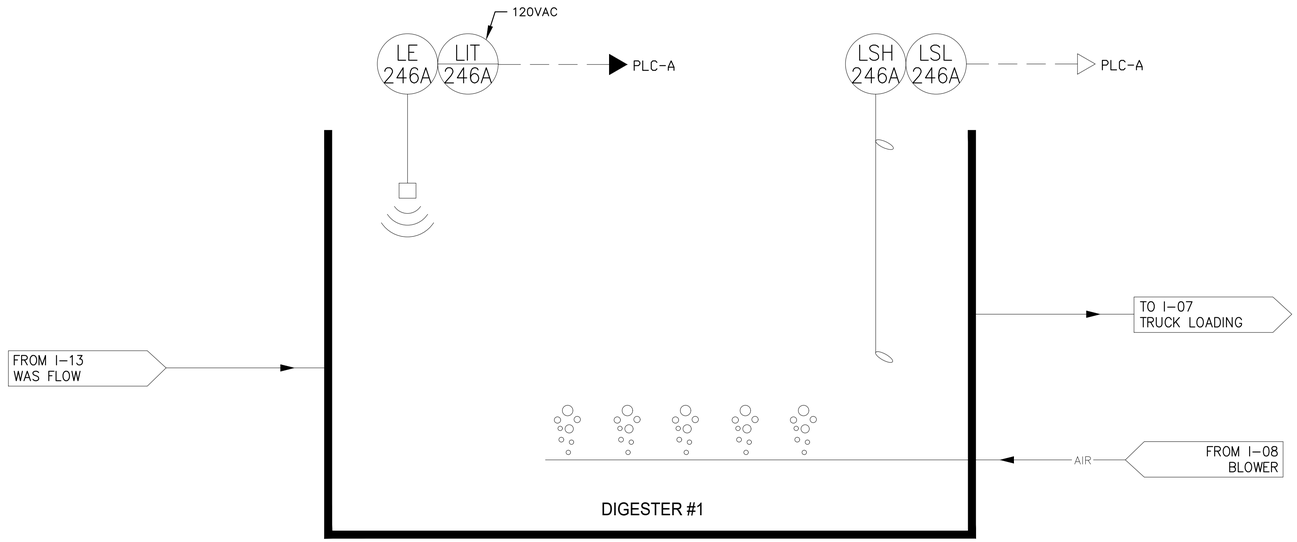
NORTH FLORIDA MEGA INDUSTRIAL PARK
WASTEWATER TREATMENT PLANT
COLUMBIA COUNTY, FLORIDA

CLARIFIERS

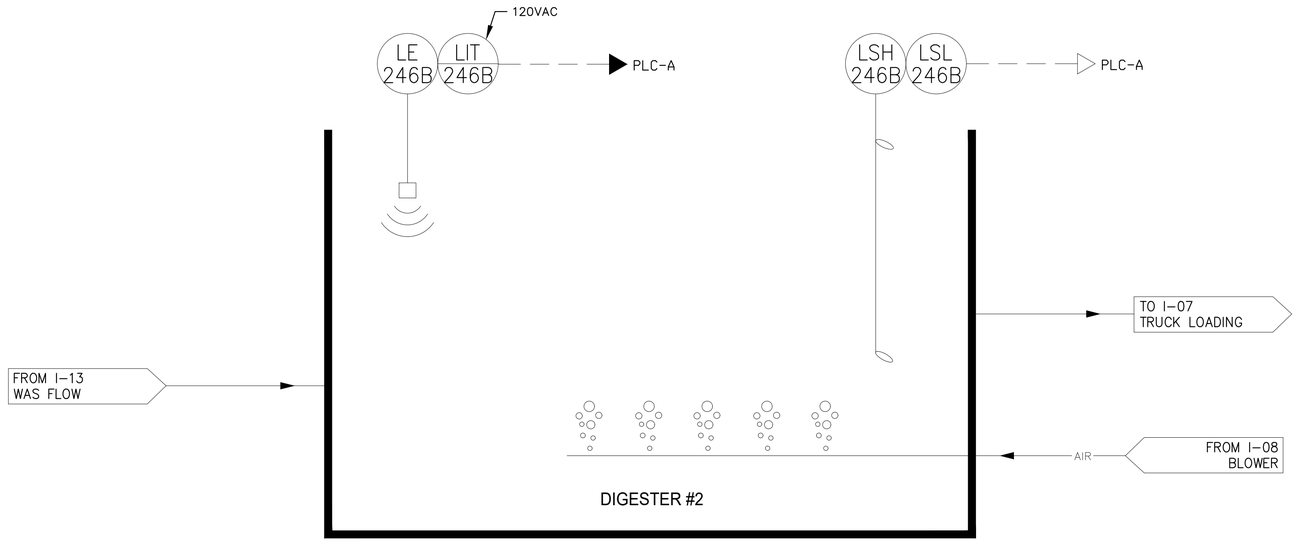
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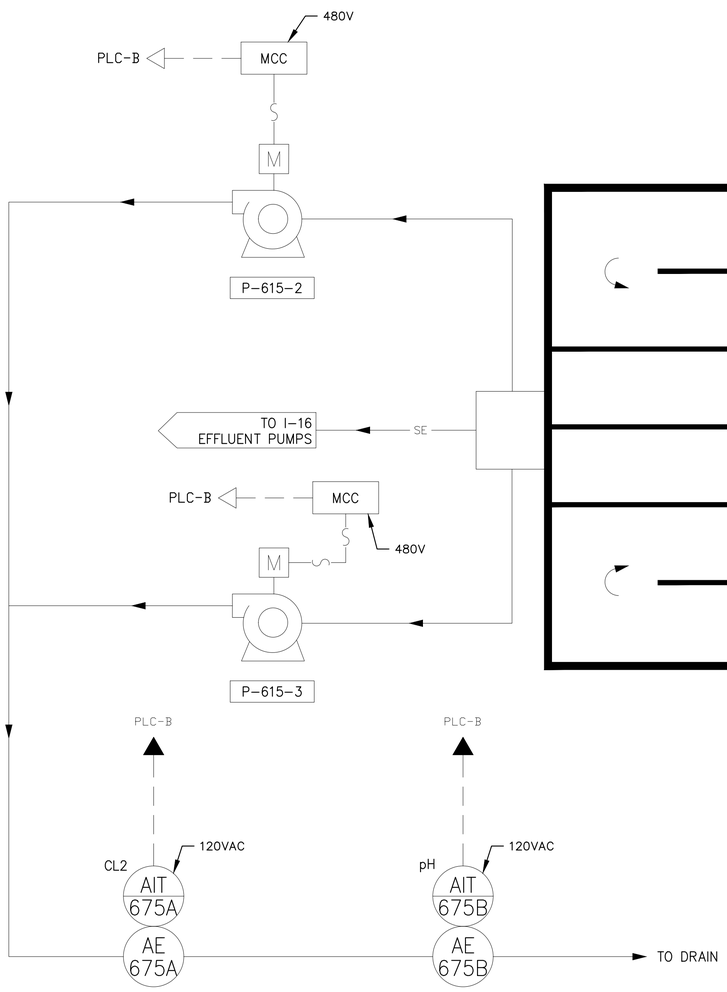
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DATE: DEC. 2022
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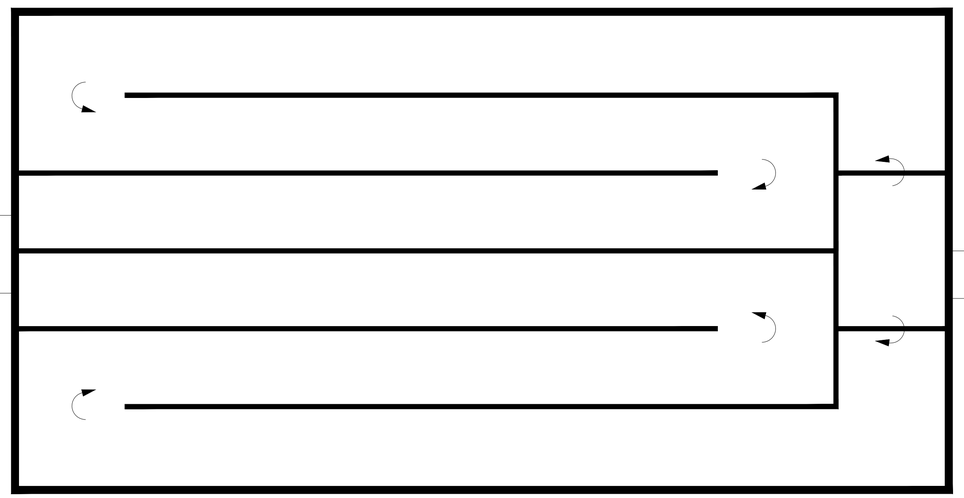
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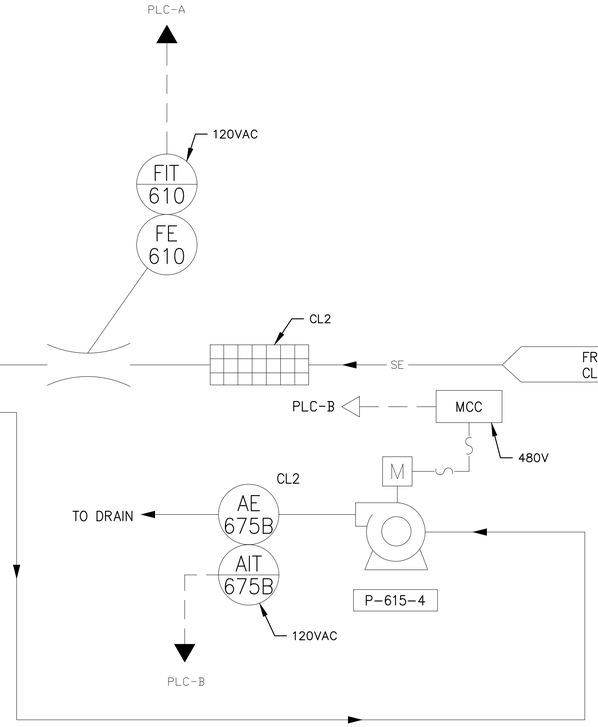
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CHLORINE CONTACT CHAMBER

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NORTH FLORIDA MEGA INDUSTRIAL PARK
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COLUMBIA COUNTY, FLORIDA

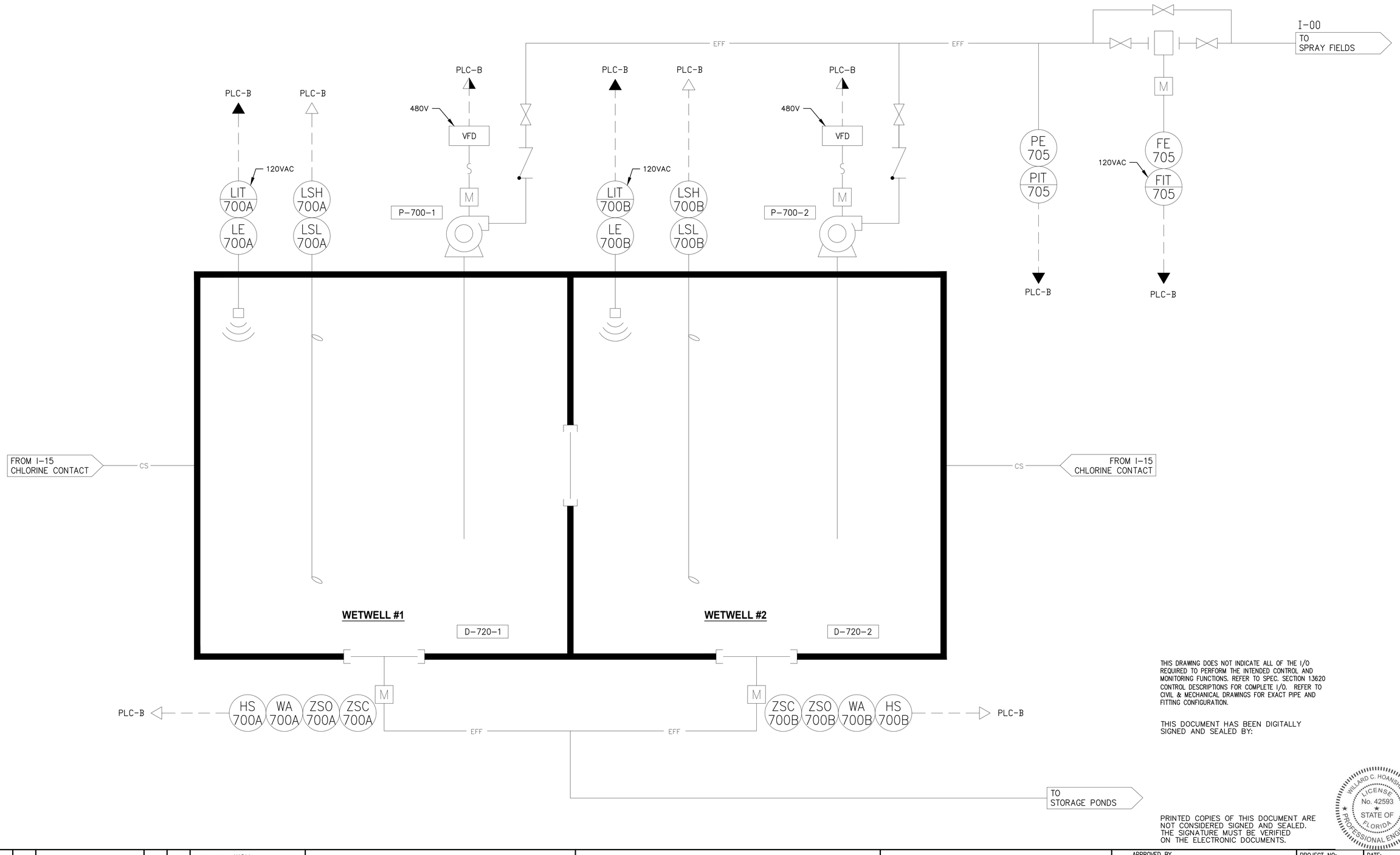
CHLORINE CONTACT CHAMBER

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DWG NO: I15

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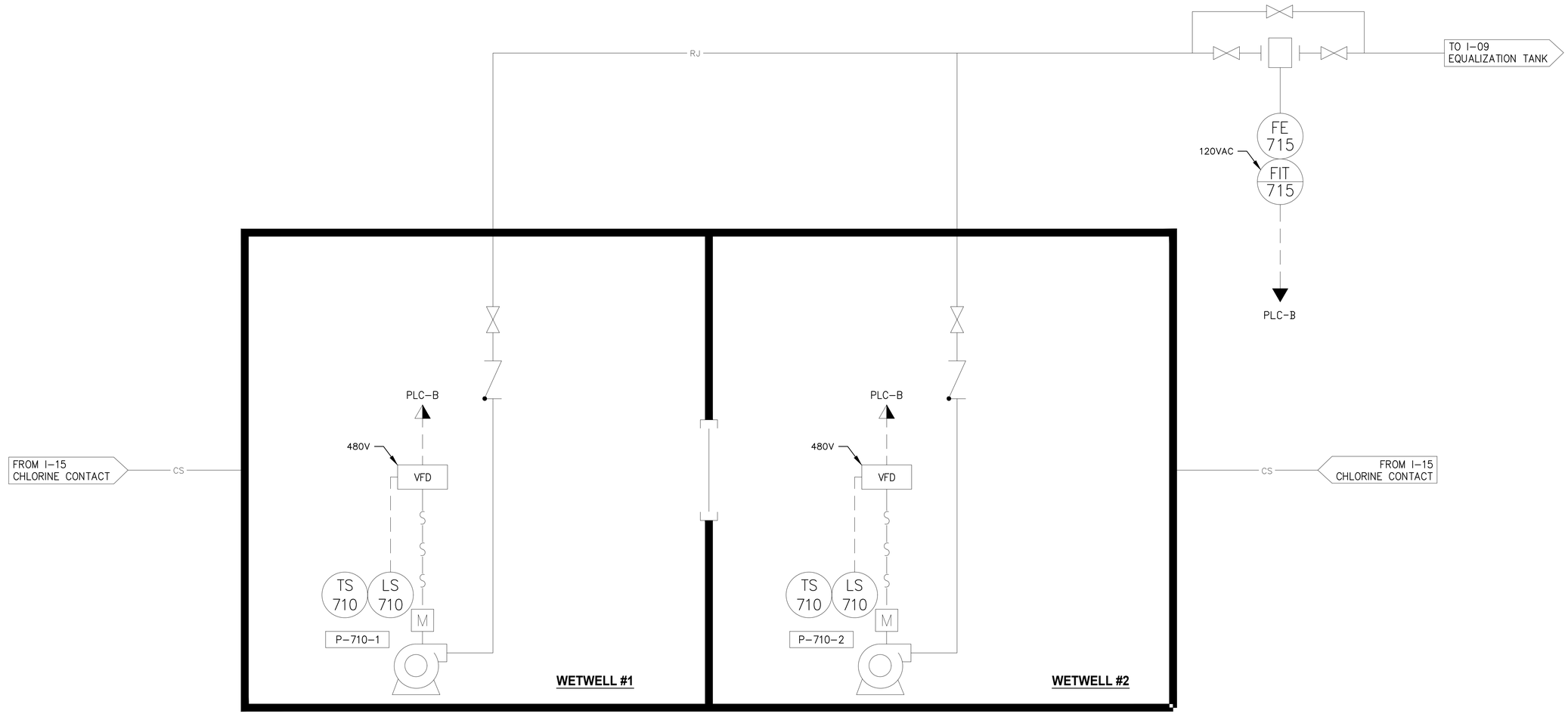
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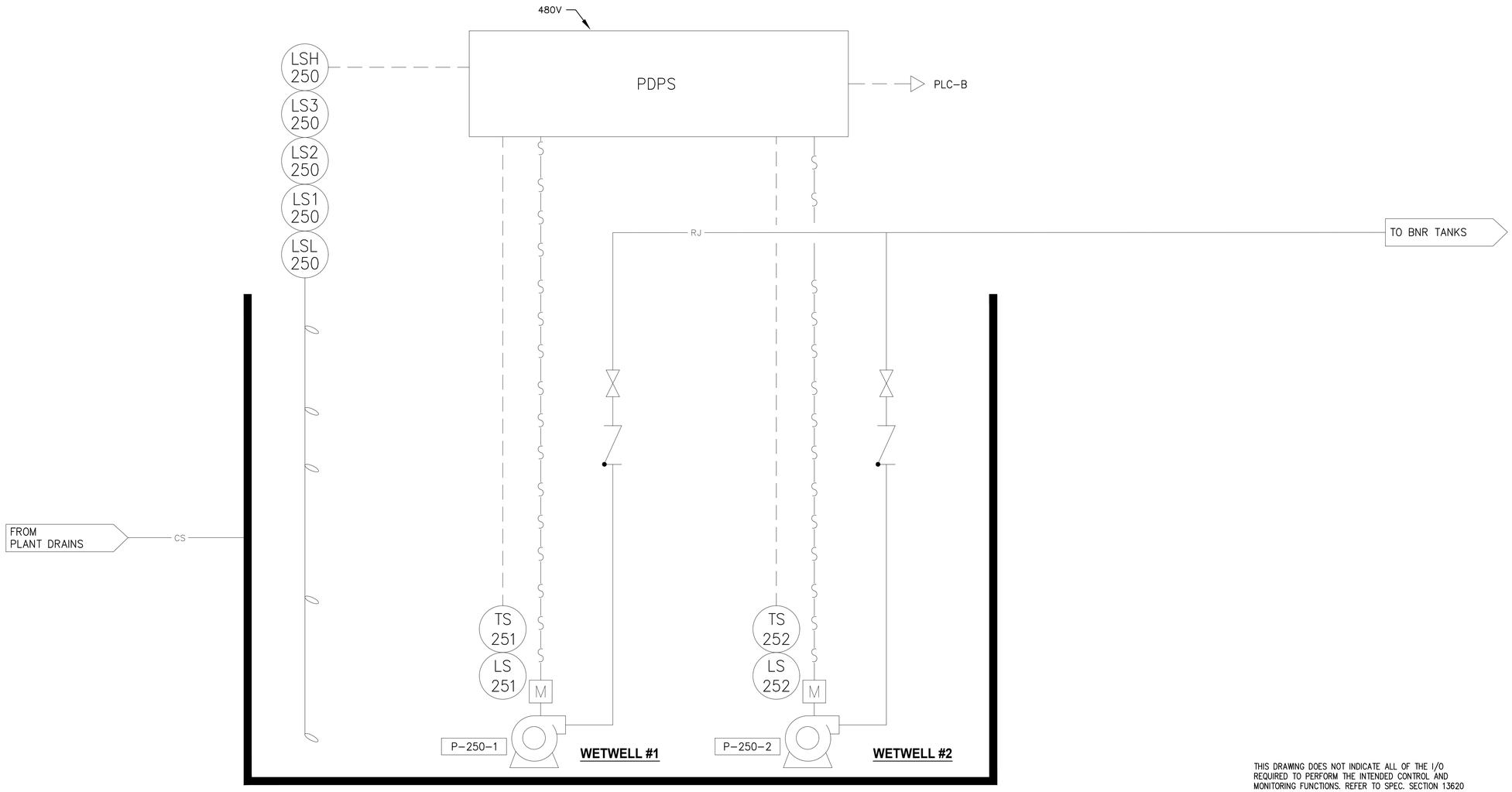
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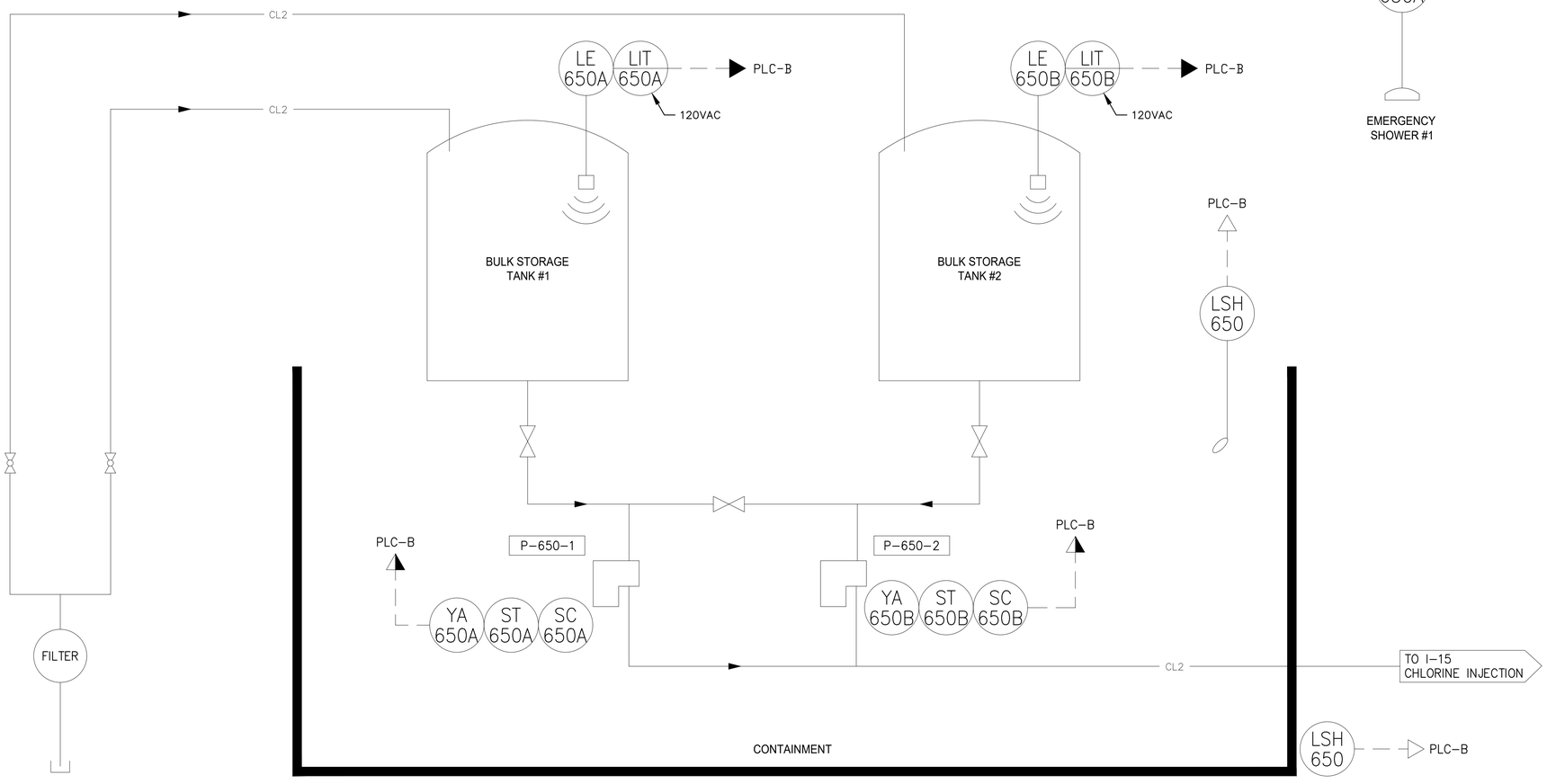
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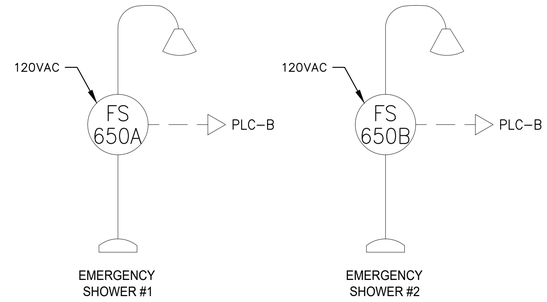
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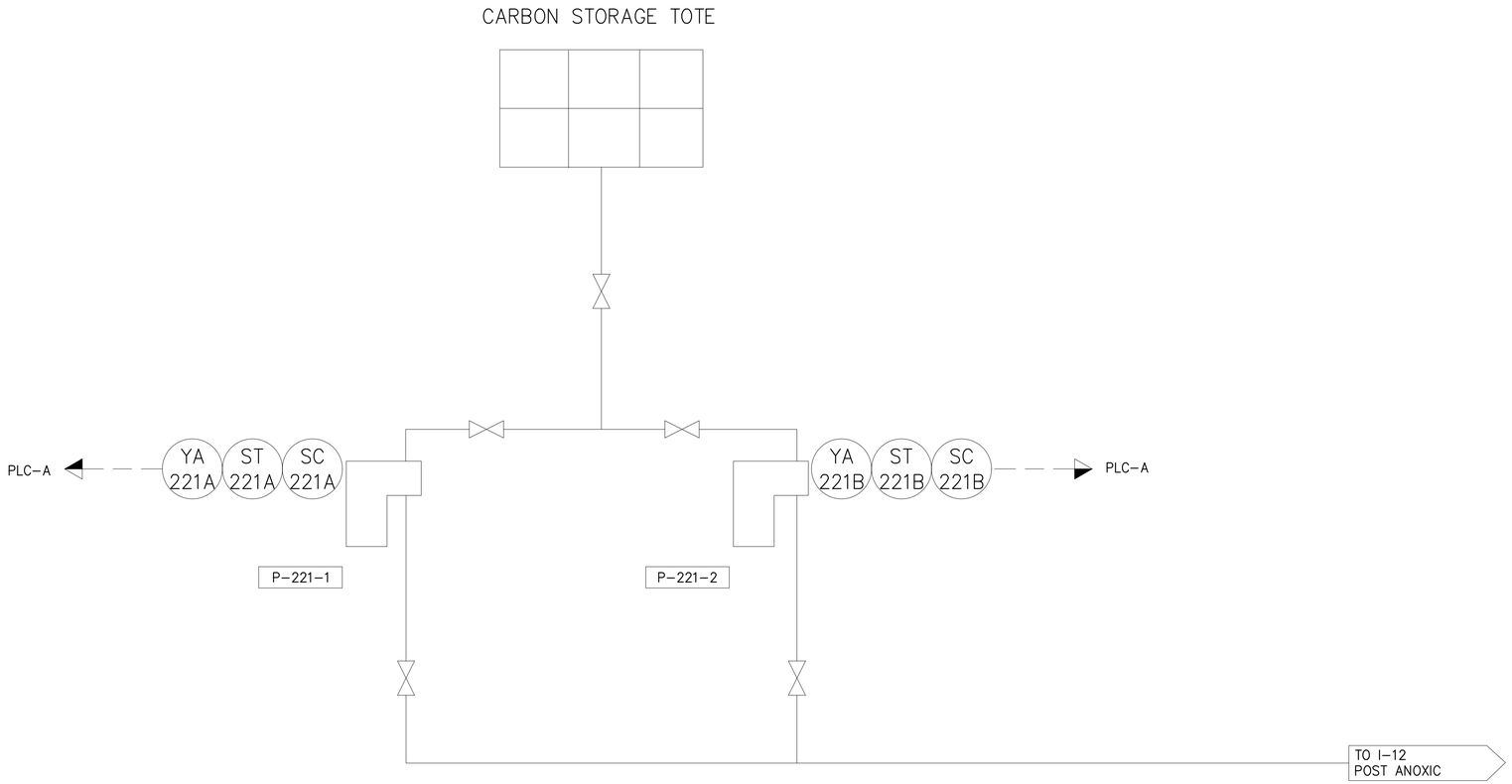
CHLORINE STORAGE & FEED

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VE GMP-2

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NORTH FLORIDA MEGA INDUSTRIAL PARK
WASTEWATER TREATMENT PLANT
COLUMBIA COUNTY, FLORIDA

CARBON STORAGE & FEED

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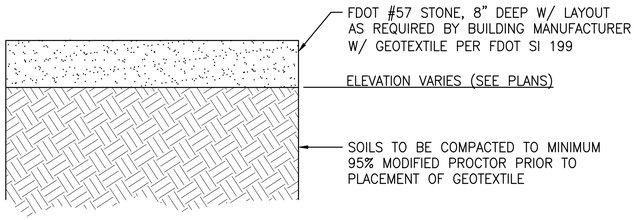
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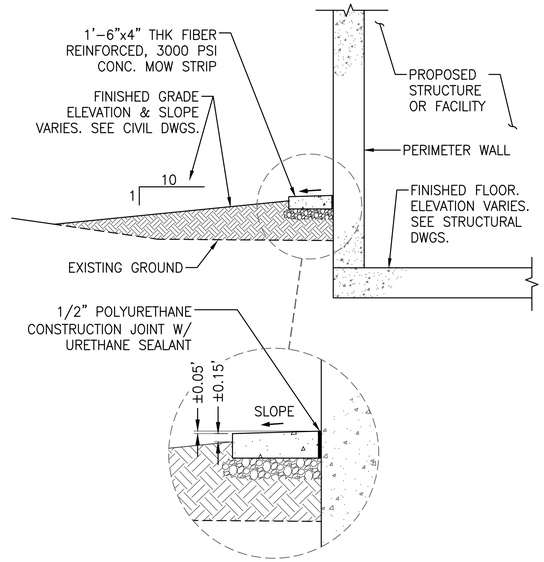
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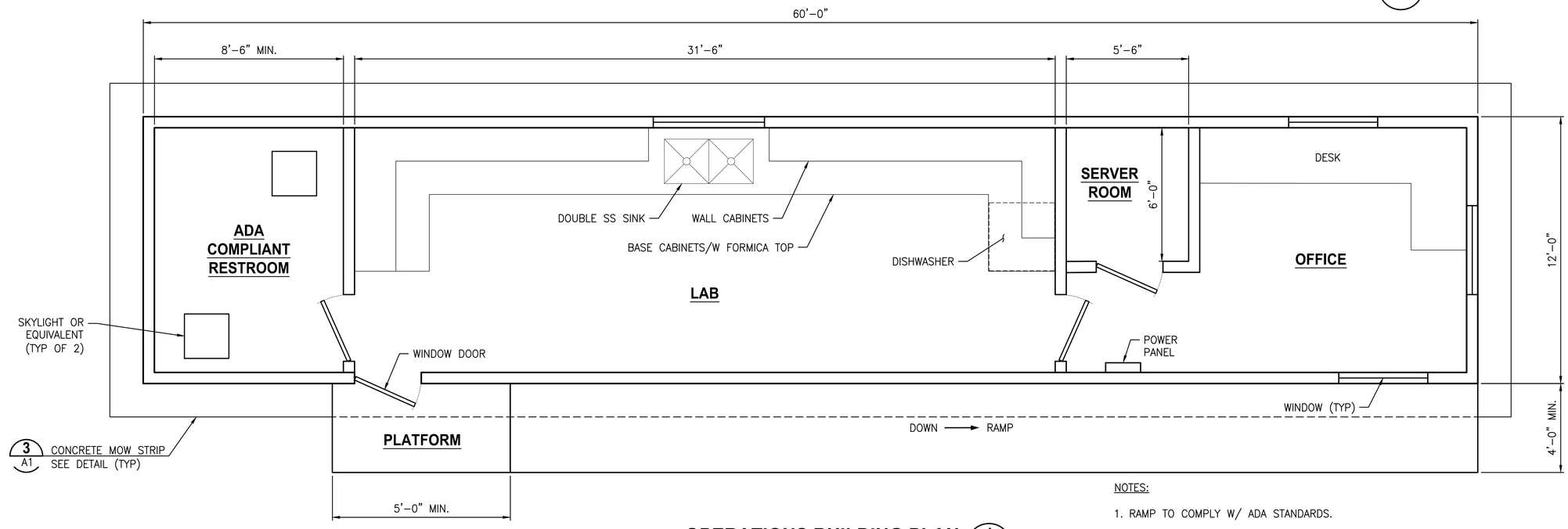
GRAPHIC SCALE
0 1 2 4
SCALE IN FEET



STONE DETAIL 2
NTS



CONCRETE MOW STRIP DETAIL 3
NTS



OPERATIONS BUILDING PLAN 1
3/8" = 1'-0"

NOTES:

1. RAMP TO COMPLY W/ ADA STANDARDS.
2. BUILDING FOUNDATION TO USE ABS PADS, DRY STACK PIERS AND FOUR-FOOT ANCHORS.
3. BUILDING FOUNDATION AND STRUCTURES SHALL MEET LATEST FLORIDA BUILDING CODE REQUIREMENTS.
4. CONTRACTOR SHALL COORDINATE FOUNDATION REQUIREMENTS, PLACEMENT AND ALL SKIRTING AND FIELD ASSEMBLY REQUIREMENTS WITH THE MANUFACTURER.

THIS ITEM HAS BEEN ELECTRONICALLY SIGNED AND SEALED BY THOMAS W. FRIEDRICH (FL#61281), ON THE DATE INDICATED, USING A *SHA* AUTHENTICATION CODE.

PRINTED COPIES OF THIS DOCUMENT ARE NOT CONSIDERED SIGNED AND SEALED AND THE *SHA* AUTHENTICATION CODE MUST BE VERIFIED ON ANY ELECTRONIC COPIES.

THOMAS W. FRIEDRICH LICENSE No. 61281 STATE OF FLORIDA PROFESSIONAL ENGINEER

Digitally signed by Thomas W. Friedrich
Date: 2023.05.04 18:09:17-04'00'

LTR.	DATE	REVISIONS	BY	APPRD.
VE	11/2022	VE GMP-1	LYC	TWF

DESIGNED TFRIEDRICH
DRAWN JKRAMER
CHECKED SMENARD

JonesEdmunds
730 NE WALDO ROAD, GAINESVILLE, FLORIDA 32641 / (352) 377-5821

NORTH FLORIDA MEGA INDUSTRIAL PARK
WASTEWATER TREATMENT PLANT
COLUMBIA COUNTY, FLORIDA

OPERATIONS BUILDING PLAN

Thomas W. Friedrich, State of Florida, Professional Engineer, License No. 61281
This item has been digitally signed and sealed by Thomas W. Friedrich on the date indicated on the Cover Page (G1) and M1.
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PROJECT NO: 03780-001-01
DATE: DEC. 2022
INDEX NO:
DWG NO: A1

VE GMP-2

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