

Plot Date: 12-NOV-2024 4:43:40 PM
User: svcPW
Model: Layout1 ColorTable: gshade.ctb DesignScript: Carollo Std Pen v0905.pen PlotScale: 1:1
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CITY OF PUNTA GORDA, FLORIDA

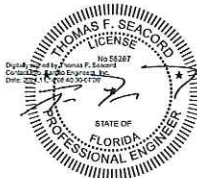
SHELL CREEK WATER TREATMENT PLANT SULFURIC ACID FEED SYSTEM IMPROVEMENTS

BID SET

NOVEMBER 2024



LOCATION MAP



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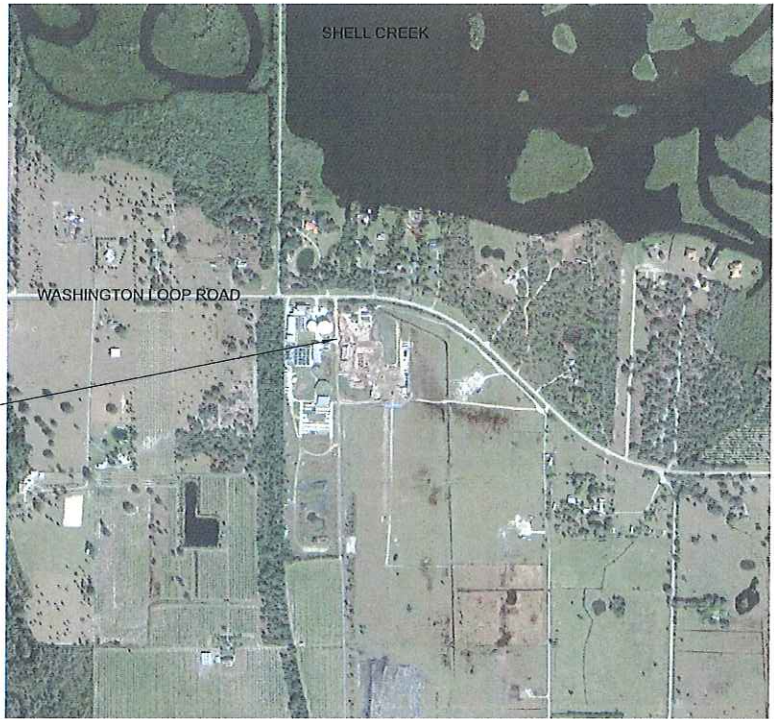
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PUNTA GORDA
SHELL CREEK WATER
TREATMENT PLANT
38100 WASHINGTON LOOP ROAD
PUNTA GORDA, FL 33982



301 NORTH CATTLEMEN ROAD, SUITE 302
SARASOTA, FL. 343232
PHONE: (941) 371-9832 FAX: (941) 371-9873
CA 00008571



VICINITY MAP

JOB NO. 202885
DRAWING NO. G01
SHEET NO. OF

Plot Date: 12-NOV-2024 4:16:46 PM

User: svp/PW

Plot Scale: 1:1

Design Script: Carollo_Sld_Pen_v0905.pen

Color Table: gshade.ctb

Model: Layout




Last Saved By: hve

1	2	3	4	5	6	7	8	9	10	11	12	13
SHEET NO.		DRAWING NO.		DESCRIPTION								
				PIPE SCHEDULE								
1	G01	(G) - GENERAL										
2	G02	TITLE SHEET										
3	G03	DRAWING INDEX AND PIPE SCHEDULE										
4	G04	GENERAL NOTES, LEGEND AND SYMBOLS										
5	G05	GENERAL ABBREVIATIONS										
		SITE AREA KEY PLAN										
				(D) - DEMOLITION								
6	DM01	SULFURIC ACID FEED ROOM DEMOLITION PLAN										
7	DM02	SULFURIC ACID FEED ROOM DEMOLITION SECTIONS										
8	DM03	SULFURIC ACID FEED PIPING DEMOLITION PLAN										
9	DM04	SULFURIC ACID FEED PIPING DEMOLITION SECTIONS										
				(M) - MECHANICAL								
10	GM01	GENERAL MECHANICAL LEGEND AND SYMBOLS										
11	M01	SULFURIC ACID FEED SYSTEM PROCESS FLOW DIAGRAM										
12	M02	SULFURIC ACID FEED ROOM MODIFICATIONS PLAN										
13	M03	SULFURIC ACID FEED PIPING MODIFICATIONS PLAN										
14	M04	SULFURIC ACID FEED PIPING MODIFICATIONS SECTIONS										
15	TM01	TYPICAL MECHANICAL DETAILS										
				(E) - ELECTRICAL								
16	GE01	LEGEND										
17	GE02	NOTES										
18	E01	SULFURIC ACID FEED ROOM MODIFICATIONS PLAN										
19	TE01	DETAILS SHEET NO. 1										
				(I) - INSTRUMENTATION								
20	GN01	INSTRUMENTATION LEGEND SHEET NO. 1										
21	GN02	INSTRUMENTATION LEGEND SHEET NO. 2										
22	I01	SULFURIC ACID FEED P&ID										

Process Abbrev.	Service	Nomlnal Diameter (Inches)	Material	Pressure Class Special Thickness Class Schedule Wall Thickness	Pipe Spec. Section	Joints/ Fittings	Test Pressure/ Method	Lining	Coating	Service Conditions	Comments
SA	Sulfuric Acid										
	Aboveground	3	CPVC	150# SCH 80	15230 Plastic Piping and Tubing	SW	125 psig/HH	None	None	Carrier Piping for PTFE Tubing	1" PTFE tubing in 3" carrier pipe
	Aboveground	1-2	PVDF	150# SCH 80	15230 Plastic Piping and Tubing	SW	125 psig/HH	None	None	SA Feed Room Piping	
	Aboveground	3	Alloy 20	150# SCH 10S	15282 Nickel Alloy Piping	FL or WLD	125 psig/HH	None	None	SA Side Stream Piping	
	Aboveground	1/4	CPVC	150# SCH 80	15230 Plastic Piping and Tubing	SW	125 psig/HH	None	None	SA Side Stream Air Bleed	
	Aboveground	24	316 SST	150# SCH 10S	15286 Stainless Steel Piping and Tubing	FL	125 psig/HH	None	None	RO Permeate/SA Side Stream	

Abbreviations:
1. The following abbreviations used in the column of test method refer to the respective methods as specified in Section 15956 - Piping Systems Testing.
AM AIR METHOD
GR GRAVITY METHOD
HH HIGH HEAD METHOD
LH LOW HEAD METHOD
SC SPECIAL CASE
2. Abbreviations to designate piping include the following:
B&SP BELL AND SPIGOT
BSP BLACK STEEL PIPE
CE CERAMIC EPOXY LINING
CI CAST IRON
CISP CAST IRON SOIL PIPE
CL CLASS, FOLLOWED BY THE DESIGNATION
CM CEMENT MORTAR
CPVC CHLORINATED POLYVINYL CHLORIDE
CTP COAL TAR PITCH
DIP DUCTILE IRON PIPING
EPP EPOXY POLYURETHANE COATING
FL FLANGE

GA GAUGE, PRECEDED BY THE DESIGNATION
GE GROOVED END JOINT
GL GLASS LINED
GSP GALVANIZED STEEL PIPE
MJ MECHANICAL JOINT
MWA MECHANICAL WEDGE ACTION
NPS NOMINAL PIPE SIZE, FOLLOWED BY THE NUMBER IN INCHES
PSI POUNDS PER SQUARE INCH
PSIG POUNDS PER SQUARE INCH GAUGE
PE POLYETHYLENE
PEE POLYETHYLENE ENCASEMENT
PTW POLYETHYLENE TAPE WRAP
PTFE POLYTETRAFLUOROETHYLENE
PVC POLYVINYL CHLORIDE
PVDF POLYVINYLIDENE FLUORIDE
RPO RESTRAINED PUSH-ON
SCH SCHEDULE, FOLLOWED BY THE DESIGNATION
SCRD SCREWED-ON
SST STAINLESS STEEL
SW SOLVENT WELDED
VCP VITRIFIED CLAY PIPING
WLD WELD

BID SET				DESIGNED BH		THIS ITEM HAS BEEN DIGITALLY SIGNED AND SEALED BY THOMAS F. SEACORD ON THE DATE ADJACENT TO THE SEAL. PRINTED COPIES OF THIS DOCUMENT ARE NOT CONSIDERED SIGNED AND SEALED AND THE SIGNATURE MUST BE VERIFIED ON ANY ELECTRONIC COPIES.		301 NORTH CATTLEMEN ROAD, SUITE 302 SARASOTA, FLORIDA 34232 PHONE (941) 371-9932 FAX (941) 371-9873 CA 00008571		CITY OF PUNTA GORDA, FLORIDA			VERIFY SCALES	JOB NO. 202885
				DRAWN HV						SULFURIC ACID FEED SYSTEM IMPROVEMENTS			BAR IS ONE INCH ON ORIGINAL DRAWING	DRAWING NO. G02
				CHECKED TS						GENERAL			0 1"	SHEET NO. OF
REV DATE BY DESCRIPTION				DATE NOVEMBER 2024						DRAWING INDEX AND PIPE SCHEDULE			IF NOT ONE INCH ON THIS SHEET, ADJUST SCALES ACCORDINGLY	
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Plot Date: 12-Nov-2024 4:17:01 PM

User: svcpw

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PlotScale: 1:1

ColorTable: gshade.ctb

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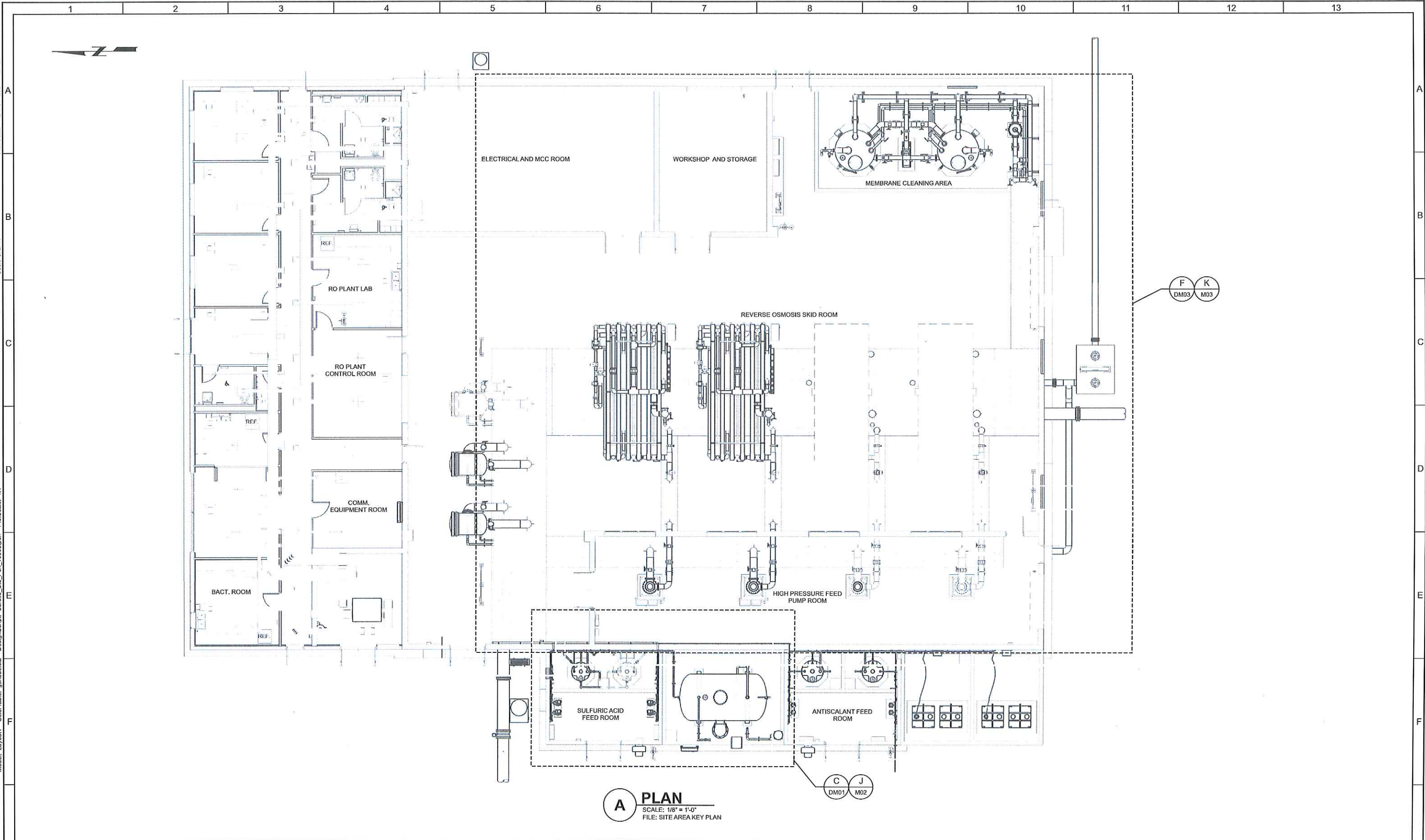
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A	@ # AB ABC ABS AC ACB ACI ACP ACU AD ADDL ADJ ADMIN ADR AED AER AFC AFF AFM AHU AIC AIL ALT AL ALUM ANCH ANV APPROX ARCH ARY ASSEMBLY ASTM AV AVG AVV AW	AT (MEASUREMENT) DEFLECTION ANGLE, CENTRAL ANGLE NUMBER (REBAR Ø) ANCHOR BOLT AGGREGATE BASE COURSE ACRYLONITRILE BUTADIENE STYRENE ASPHALTIC CONCRETE AIR CIRCUIT BREAKER AMERICAN CONCRETE INSTITUTE ASBESTOS CEMENT PIPE AIR CONDITIONING UNIT AREA DRAIN ADDITIONAL ADJACENT, ADJUST, ADJUSTABLE ADMINISTRATION ACCESS DOOR AREA EQUIPMENT DRAIN AERATION COOLER AFTER COOLER ABOVE FINISHED FLOOR AIR FLOW MONITOR AIR HANDLING UNIT AIR COMPRESSOR AIR INTAKE LOUVER ALTERNATE ALUMINUM ALUMINUM SULFATE ANCHOR ANGLE VALVE APPROXIMATE, APPROXIMATELY ARCHITECTURAL AIR RELEASE VALVE ASSEMBLY AMERICAN SOCIETY FOR TESTING AND MATERIALS ACID VENT AVERAGE AIR AND VACUUM VALVE ACID WASTE	CT CTJ CTL CTR CTSK CU CUP CV CW CWW CY D D/W DBL DDR DEG or + DEMO DET DFL DG DIA or Ø DIAG DIF DIG DIM DIP DISCH DIW DL DLV DMP DMS DN DO DP DPV DR DRP DRV DS DSW DUC DUH DW DWD DWG(S) DWL(S)	CURRENT TRANSFORMER, CERAMIC TILE CONTROL JOINT CONTROL CENTER, CENTERED COUNTERSUNK CUBIC COPPER PIPE CHECK VALVE COLD WATER COMBINATION WASTE AND VENT CUBIC YARD D D/W DBL DDR DEG or + DEMO DET DFL DG DIA or Ø DIAG DIF DIG DIM DIP DISCH DIW DL DLV DMP DMS DN DO DP DPV DR DRP DRV DS DSW DUC DUH DW DWD DWG(S) DWL(S)	FOT FPM FPP FRP FRPP FRS FS FSTN FT or + FTG FUP FV FW FX FXC FXE G GA GAL GALV GAV GB GBT GC GEL GEN GL GLV GM GND GPD GPM GR GRTG GRV GSP GV GYP	FLAT ON TOP FEET PER MINUTE FLEXIBLE PLASTIC PIPE FIBERGLASS REINFORCED PLASTIC FIBERGLASS REINFORCED PLASTIC PIPE FROT SPRAY FAR SIDE FAST (NED) FOOT, FEET FOOTING FUEL DISPENSER FLAP VALVE FLUSHING WATER, FINISHED WATER FIRE EXTINGUISHER GRAVITY EXHAUST LOUVER FIRE EXTINGUISHER - ELECTRICAL G GA GAL GALV GAV GB GBT GC GEL GEN GL GLV GM GND GPD GPM GR GRTG GRV GSP GV GYP	MAU MAX MB MC MCJ MD MECH MET MFR MGL MGD MH MIN MISC MIX MJ MK ML MO MOD MOIST MON MOS MPM MS MTD N NA NC NEV NG NIC NO, # NOM NPT NPW NS NTS	MAKE-UP AIR UNIT MAXIMUM MACHINE BOLT MECHANICAL COUPLING MASONRY CONTROL JOINT MOTORIZED DAMPER MECHANICAL RIGHT MANUFACTURER MILLIGRAMS PER LITER MILLION GALLONS PER DAY MANHOLE MINIMUM MISCELLANEOUS MIXER MECHANICAL JOINT MARK MIXED LIQUOR MASONRY OPENING MODIFIED MOISTURE MONUMENT MOISTURE SEPARATOR METERING PUMP MOP SINK MOUNTED N NA NC NEV NG NIC NO, # NOM NPT NPW NS NTS	REG REINF REJ REQD RER RES REV RF RG RH RHR RHRA RHRB RLS RM RO ROT RP RPM RPM/P RR RSR RT RTF RTU RUD RW RWR RWW S S/W S SA SC SCB SCD SCFM SCH SCO SCR SCR SD	REGULATOR, REGULATING REINFORCE(D)(ING)(MENT) RUBBER EXPANSION JOINT REQUIRED REACTOR RESERVOIR REVISION, REVERSE RETURN FAN RETURN GRILLE RUBBER GASKET RIGHT HAND RIGHT HAND REVERSE RIGHT HAND REVERSE ACTIVE RIGHT HAND REVERSE BEVEL REGISTERED LAND SURVEYOR ROOM ROUGH OPENING ROTAMETER RADIUS POINT REVOLUTIONS PER MINUTE REINFORCED PLASTIC MORTAR PIPE RETURN REGISTER RISER RIGHT ROTARY FEEDER ROOF TOP UNIT RUPTURE DISK RECLAIMED WATER, REUSE WATER RECLAIMED WATER RETURN RAW WASTEWATER S S/W S SA SC SCB SCD SCFM SCH SCO SCR SCR SD	T.O. TOC TOG TOM TOS T.O.W. TR TRD TS TSD TSP/L TSTAT TTB TUR TV TWW TYP U UC UG UHMWPE UHMW UNO US V VAR VB VCP VEC VERT VFR VG VOL VRV VTR W W W/ W/O WAS WCO WEF WF WH WI WL WM WOD WP WPT WRG WRS WS WSTP WT WTF WTP WTR WW WWV WWF WWTF WWTP Y Y YCO YH	TOP OF TOP OF CONCRETE TOP OF GRATING TOP OF MASONRY TOP OF STEEL TOP OF WALL TRIAD (THREE CONDUCTOR SHIELDED CABLE), TIMING RELAY TREATMENT THICKENER SUPERNATANT OR SUBNATANT THICKENED SLUDGE DECANT TURBIDIMETER SAMPLE THERMOSTAT TELEPHONE TERMINAL BOARD TURBINE TURNING VANES THREE-WAY VALVE TYPICAL U UC UG UHMWPE UHMW UNO US V VAR VB VCP VEC VERT VFR VG VOL VRV VTR W W W/ W/O WAS WCO WEF WF WH WI WL WM WOD WP WPT WRG WRS WS WSTP WT WTF WTP WTR WW WWV WWF WWTF WWTP Y Y YCO YH																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																								
B	BC BCR BCM BD BDD BDR BF BFG BFP BFV BG BKW BLDG BLK BLKHD BLR BM BO BOTT BOTT BPV BRG BSP BTU BTWN BV BWCCP	BEGIN CURVE, BRASS CAP, BACK OF CURB, BOLT CIRCLE BACKER BOARD BATCHMETER BOARD BACKDRAFT DAMPER BASIN DRAIN LINE BLIND FLANGE BELOW FINISHED GRADE BELT FILTER PRESS BUTTERFLY VALVE BREAK GLASS HAND SWITCH BACKWASH BUILDING BLOCK BULKHEAD PROCESS BLOWER BEAM, BENCH MARK BOTTOM OF BOTTOM BOTTOM SLUDGE BACK PRESSURE VALVE BEARING BLACK STEEL PIPE BRITISH THERMAL UNITS BETWEEN BALL VALVE BAR-WRAPPED CONCRETE CYLINDER PIPE	E EA EC ECC RED ECU ED EFF EG EIFS EJ EJR EL ELEC ELL EMBED EMH EP EPS EPV EQ EQUIP ER ES ESEW ESS ET EUH EVR EW EWC EWEF EWH EX EXIST EXP EMH EXT	EAST EACH END OF CURVE ECCENTRIC REDUCER EVAPORATOR COOLING UNIT EQUIPMENT DRAIN EXHAUST FAN, EACH FACE EFFLUENT EXHAUST GRILLE EXTERIOR INSULATION AND FINISH SYSTEM EXPANSION JOINT INJECTOR/EDUCTOR ELEVATION ELECTRICAL ELBOW EMBEDMENT ELECTRICAL MANHOLE EDGE OF PAVEMENT EXPANDED POLYSTYRENE ECCENTRIC PLUG VALVE EQUAL EQUIPMENT EXHAUST REGISTER EACH SIDE EMERGENCY SHOWER AND EYE WASH EMERGENCY HAND SWITCH ELECTRICALLY HEAT TRACED ELECTRIC UNIT HEATER EVAPORATOR EACH WAY ELECTRIC WATER COOLER EACH WAY EACH FACE ELECTRIC WATER HEATER, EXHAUST EXISTING EXISTING EXPANSION, EXPANSION TANK EXPOSED EXTERIOR	H H1E H2E HAS HB HDPE HDW HDWL HEF HGT HORIZ HP HPA HPT HPU HR HSF HSS HTX HV HW HWL HWR HWS HkW HYD	EXPLOSION-PROOF, HIGH, HORIZONTAL HOOK ONE END HOOK TWO ENDS HOSE ANCHOR STUD HOSE BIBB HIGH DENSITY POLYETHYLENE HARDWARE HEADWALL HOOD EXHAUST FAN HEIGHT HORIZONTAL HEAT PUMP, HORSEPOWER, HIGH PRESSURE HIGH PRESSURE AIR HIGH POINT HEAT PUMP UNIT AIR HANDRAIL, HOSE REEL, HOUR HOOD SUPPLY FAN HOLLOW STRUCTURAL SECTION (STEEL) HEAT EXCHANGER HOSE VALVE HOT WATER HIGH WATER LEVEL HOT WATER RETURN HOT WATER SUPPLY HEIGHT BY WIDTH HYDRANT	O OBD OC OD OED O.F. OFL OPNG OPP OPP HND OVL OZ	OPEN OPPOSED BLADE DAMPER ON CENTER OUTSIDE DIAMETER, OUTSIDE DIMENSION OPEN EQUIPMENT DRAIN OUTSIDE FACE OVERFLOW OPENING OPPOSITE OPPOSITE HAND OVERFLOW OUNCE	P PBL PCL PCC PCCP PCP PD, PLD PDP PE PERP PG PH PI PIT PIV PL PLAS PLCS PLS PLWD PMP PNL(S) POL POLY POS POW PP PPMV PRC PREFAB PRG PRI PROJ PRR PRV PS PSF PSG PSI PSIG PT PV PVC PVDF PVI PVM PVT PLW Q QTY R R/W RAS RCP RCPP RD RDL RDOF RECIRC RED REF	POLE POLYMER BLENDER POINT OF CURVATURE PLANT CONTROL CENTER PRESTRESSED CONCRETE CYLINDER PIPE PROGRESSIVE CAVITY PUMP POSITIVE DISPLACEMENT, PLANT DRAIN PULSATION DAMPENER POSITIVE DISPLACEMENT PUMP PLAIN END PERPENDICULAR PRESSURE GAUGE PHASE, PHYSICALLY HANDICAPPED POINT OF INTERSECTION PRESSURE INDICATING TRANSMITTER POST INDICATOR VALVE PLATE, PROPERTY LINE PLASTIC PLACES POLYMER SOLUTION PLYWOOD PUMP PANEL(S) POLYMER POLYETHYLENE POSITION POTABLE WATER POWER POLE PARTS PER MILLION (VOLUME) POINT OF REVERSE CURVATURE PREFABRICATED PRESSURE REGULATOR PRIMARY PROJECTION PRESSURE OR VACUUM RELIEF VALVE PRESSURE REDUCING VALVE, PRESSURE PRESSURE VALVE, PRESSURE RELIEF VALVE PUMP STATION, PIPE SUPPORT POUNDS PER SQUARE FOOT PRESSURE GAUGE POUNDS PER SQUARE INCH POUNDS PER SQUARE INCH GAUGE POINT, POINT OF TANGENCY PLUG VALVE POINT OF VERTICAL CURVATURE, POLYVINYL CHLORIDE POLYVINYLIDENE FLUORIDE POINT OF VERTICAL INTERSECTION PAVEMENT POINT OF VERTICAL TANGENCY PLANT WATER Q QTY R R/W RAS RCP RCPP RD RDL RDOF RECIRC RED REF	REG REINF REJ REQD RER RES REV RF RG RH RHR RHRA RHRB RLS RM RO ROT RP RPM RPM/P RR RSR RT RTF RTU RUD RW RWR RWW S S/W S SA SC SCB SCD SCFM SCH SCO SCR SCR SD	REGULATOR, REGULATING REINFORCE(D)(ING)(MENT) RUBBER EXPANSION JOINT REQUIRED REACTOR RESERVOIR REVISION, REVERSE RETURN FAN RETURN GRILLE RUBBER GASKET RIGHT HAND RIGHT HAND REVERSE RIGHT HAND REVERSE ACTIVE RIGHT HAND REVERSE BEVEL REGISTERED LAND SURVEYOR ROOM ROUGH OPENING ROTAMETER RADIUS POINT REVOLUTIONS PER MINUTE REINFORCED PLASTIC MORTAR PIPE RETURN REGISTER RISER RIGHT ROTARY FEEDER ROOF TOP UNIT RUPTURE DISK RECLAIMED WATER, REUSE WATER RECLAIMED WATER RETURN RAW WASTEWATER S S/W S SA SC SCB SCD SCFM SCH SCO SCR SCR SD	T.O. TOC TOG TOM TOS T.O.W. TR TRD TS TSD TSP/L TSTAT TTB TUR TV TWW TYP U UC UG UHMWPE UHMW UNO US V VAR VB VCP VEC VERT VFR VG VOL VRV VTR W W W/ W/O WAS WCO WEF WF WH WI WL WM WOD WP WPT WRG WRS WS WSTP WT WTF WTP WTR WW WWV WWF WWTF WWTP Y Y YCO YH	TOP OF TOP OF CONCRETE TOP OF GRATING TOP OF MASONRY TOP OF STEEL TOP OF WALL TRIAD (THREE CONDUCTOR SHIELDED CABLE), TIMING RELAY TREATMENT THICKENER SUPERNATANT OR SUBNATANT THICKENED SLUDGE DECANT TURBIDIMETER SAMPLE THERMOSTAT TELEPHONE TERMINAL BOARD TURBINE TURNING VANES THREE-WAY VALVE TYPICAL U UC UG UHMWPE UHMW UNO US V VAR VB VCP VEC VERT VFR VG VOL VRV VTR W W W/ W/O WAS WCO WEF WF WH WI WL WM WOD WP WPT WRG WRS WS WSTP WT WTF WTP WTR WW WWV WWF WWTF WWTP Y Y YCO YH																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																						
C	CA CAUSTIC CB CC CCB CDL CDT CEF CF CFM CFS CHEMD CHEM CHKD PL CI CIP CIRC CJ CKA CKB CKF CKS CL CLK CLD CLL CLR CLS CLSM CLV CML CMLC CMP CMU CNV CO COL(S) CONC CONN CONST CONT CORR CP CPLG CPT CPVC CS CSP	CLOSE, CONDUIT CHANNEL (STRUCTURAL) CONCRETE ANCHOR CAUSTIC SOLUTION (CONCENTRATED OR DILUTE) CATCH BASIN CENTER OF CURVATURE, CENTER TO CENTER CHLORINE CONTACT BASIN CEILING DIFFUSER, CONDENSATE DRAIN CHEMICAL DRAIN LINE CONDUIT CEILING EXHAUST FAN CUBIC FEET CUBIC FEET PER MINUTE CUBIC FEET PER SECOND CHEMICAL DRAIN CHECKERED PLATE CAST IRON CAST IRON PIPE CIRCUMFERENTIAL/CIRCUMFERENCE CONSTRUCTION JOINT CHECK VALVE, ANGLE CHECK VALVE, BALL CHECK VALVE, FLAP CHECK VALVE, SWING CENTER LINE CHAIN LINK CHLORINE LEAK DETECTOR CHLORINE LIQUID CHLORINE GAS (PRESSURE) CLEAR CHLORINE SOLUTION CONTROLLED LOW STRENGTH MATERIAL CHLORINE GAS (VACUUM) CEMENT MORTAR LINED CEMENT MORTAR LINED AND COATED CORRUGATED METAL PIPE CONCRETE MASONRY UNIT CONVEYOR CLEANOUT COLUMN(S) CONCRETE CONNECT, CONNECTION CONSTRUCTION CONTINUOUS OR CONTINUATION OR (D) (OUS) CORRUGATE(D), CORROSION CONTROL POINT COUPLING CARPET CHLORINATED POLYVINYL CHLORIDE CARBON STEEL, CIRCULATING SLUDGE CHEMICAL SUMP PUMP, CORRUGATED STEEL PIPE	F FACT FAD FB FBW FC FCA FCO FCU FD FDC FDL FDR FEFF FG FH FILT FIN FIN FL FIN GR FLA FLD FLE FLEX FLG FLR FM FND FO FOB	FACTORY FOUL AIR DUCT FLAT BAR FILTER BACKWASH FACE OF CURB, FLEXIBLE COUPLING FLANGE COUPLING ADAPTER FLOOR CLEANOUT FAN COIL UNIT FIRE DAMPER, FLOOR DRAIN, FOUND FIRE DEPARTMENT CONNECTION FLOOR DRAIN LINE FEEDER FINAL EFFLUENT FLAP GATE FIRE HYDRANT FILTRATE FINISH FINISHED FLOOR FINISHED GRADE FLOOR, FLOW LINE FOUL AIR FILTER DRAIN FILTER EFFLUENT FLEXIBLE FLANGE, OR FLANGED FILTER FORCE MAIN FOUNDATION FUEL OIL FLAT ON BOTTOM	J JST JT K KGV L LAB LAS LAV LB(S) LD LDF LDFR LF LG LH LHR LHRA LHRB LL LLH LLV LP LPA LPG LPT LR LS LT LWL	JOIST JOINT KNIFE GATE VALVE ANGLE (STRUCTURAL), LENGTH, LOUVER LABORATORY LIQUID AMMONIUM SULFATE LAVATORY POUND(S) LEAK DETECTION LIQUID DIESEL FUEL LIQUID DIESEL FUEL RETURN LINEAL FEET LONG LEFT HAND LEFT HAND REVERSE LEFT HAND REVERSE ACTIVE LEFT HAND REVERSE BEVEL LIVE LOAD LONG LEG HORIZONTAL LONG LEG VERTICAL LOW PRESSURE LOW PRESSURE AIR LIQUIFIED PROPANE GAS LOW POINT LONG RADIUS LAB SINK LEFT LOW WATER LEVEL	M MAINT MAN MANSY MATL	MOTOR MAINTENANCE MANUAL MASONRY MATERIAL																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																												

Plot Date: 12-NOV-2024 4:17:07 PM

User: svcPW

Model: Layout1 ColorTable: gshade.ctb DesignScript: Carollo_Sld_Pen_v0805.pen PlotScale: 1:1

LAST SAVED BY: iwo



A PLAN
SCALE: 1/8" = 1'-0"
FILE: SITE AREA KEY PLAN

BID SET			DESIGNED BH		THIS ITEM HAS BEEN DIGITALLY SIGNED AND SEALED BY THOMAS F. SEACORD ON THE DATE ADJACENT TO THE SEAL. PRINTED COPIES OF THIS DOCUMENT ARE NOT CONSIDERED SIGNED AND SEALED AND THE SIGNATURE MUST BE VERIFIED ON ANY ELECTRONIC COPIES.	 301 NORTH CATTLEMEN ROAD, SUITE 302 SARASOTA, FLORIDA 34232 PHONE (941) 371-9832 FAX (941) 371-9873 CA 00008571		CITY OF PUNTA GORDA, FLORIDA			VERIFY SCALES	JOB NO. 202885
			DRAWN HV					SULFURIC ACID FEED SYSTEM IMPROVEMENTS			BAR IS ONE INCH ON ORIGINAL DRAWING	DRAWING NO. G05
			CHECKED TS					GENERAL			0 1"	SHEET NO.
REV DATE BY DESCRIPTION			DATE NOVEMBER 2024					SITE AREA KEY PLAN			IF NOT ONE INCH ON THIS SHEET, ADJUST SCALES ACCORDINGLY	OF

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1 2 3 4 5 6 7 8 9 10 11 12 13

A

B

C

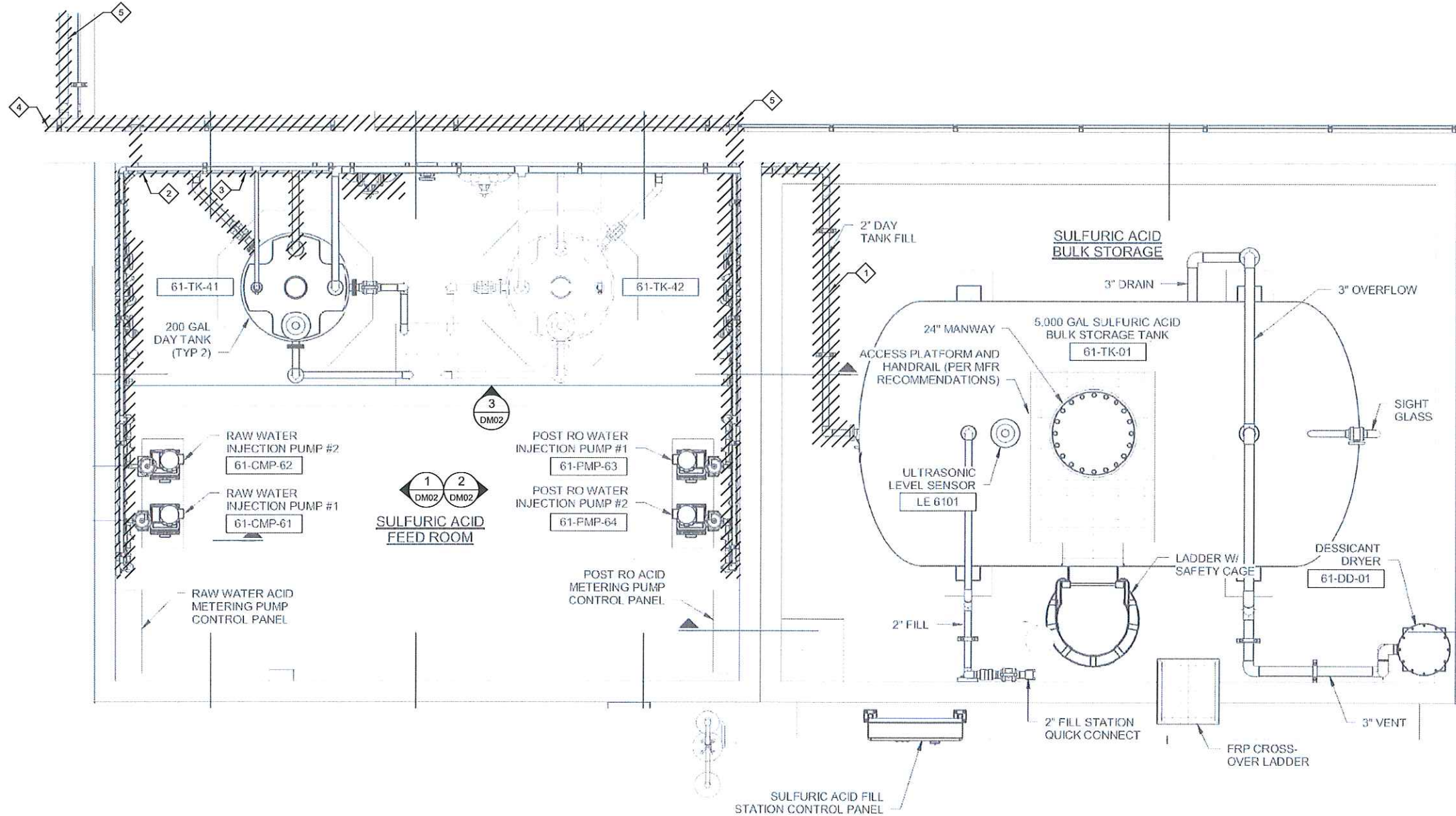
D

E

F

G

1 2 3 4 5 6 7 8 9 10 11 12 13



GENERAL NOTES:

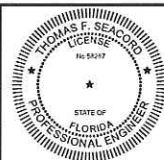
1. CONTRACTOR TO PROTECT AND REUSE EXISTING PIPE SUPPORTS.
2. POST RO WATER (POST-TREATMENT) SULFURIC ACID FEED IMPROVEMENTS MUST BE COMPLETED PRIOR TO SHUTDOWN AND DEMOLITION OF RAW WATER (PRE-TREATMENT) SULFURIC ACID FEED. REFER TO SPECIFICATION SECTION 01140 FOR ADDITIONAL INFORMATION.

KEY NOTES:

1. DEMOLISH AND DISPOSE EXISTING 2\"/>

C PLAN
SCALE: 1/2\"/>

BID SET			
DESIGNED	BH		
DRAWN	HV		
CHECKED	TS		
DATE	NOVEMBER 2024		
REV	DATE	BY	DESCRIPTION
1			
2			
3			



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CITY OF PUNTA GORDA, FLORIDA
SULFURIC ACID FEED SYSTEM IMPROVEMENTS
DEMOLITION
SULFURIC ACID FEED ROOM DEMOLITION PLAN

VERIFY SCALES
BAR IS ONE INCH ON ORIGINAL DRAWING
0 1"
IF NOT ONE INCH ON THIS SHEET, ADJUST SCALES ACCORDINGLY

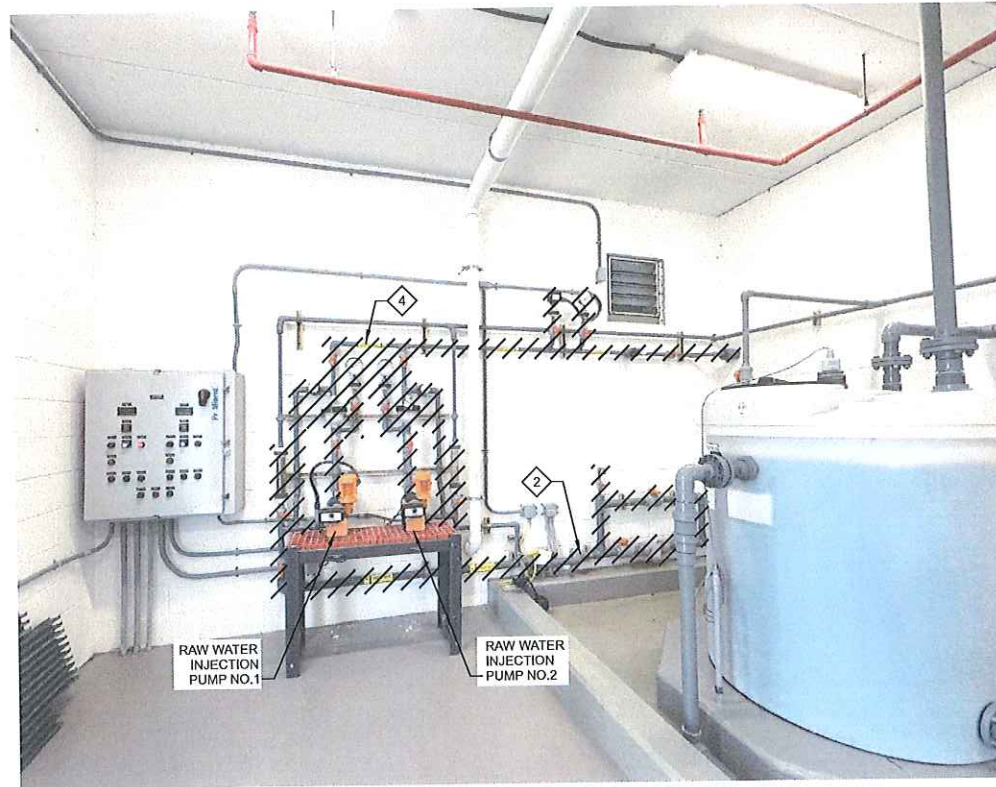
JOB NO.
202885
DRAWING NO.
DM01
SHEET NO.
OF

Plot Date: 12-NOV-2024 4:17:23 PM

User: svcPW

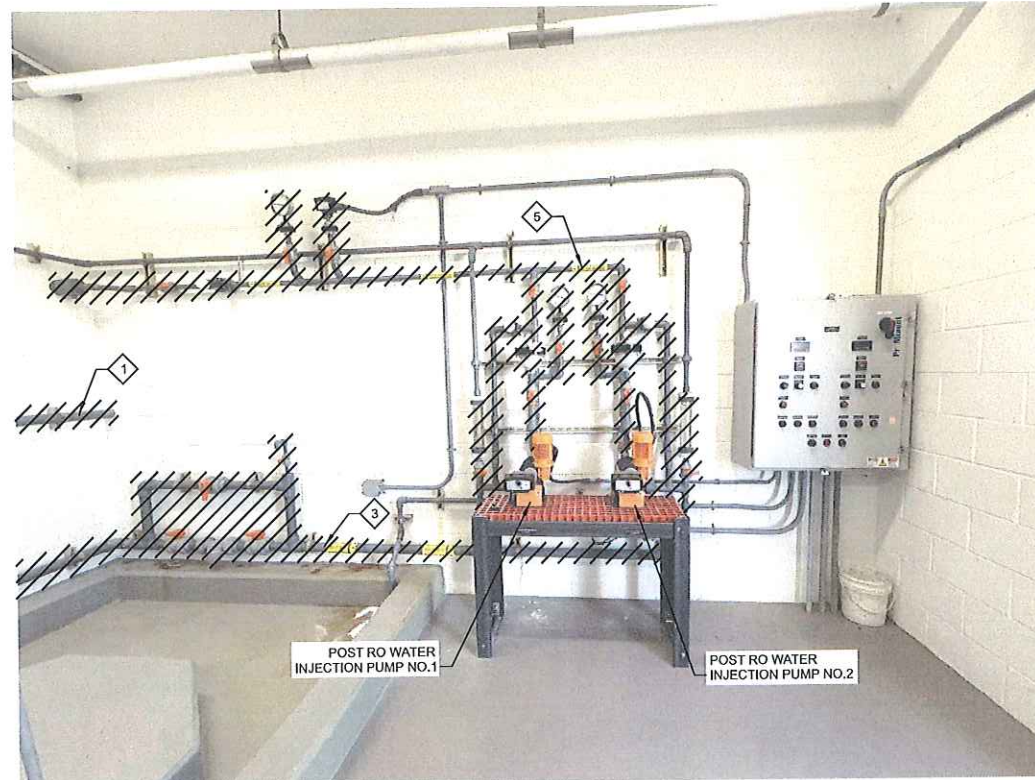
Model: Layout1 ColorTable: gshade.ctb DesignScript: Carollo Std Pen v0905.pen PlotScale: 1:1

LAST SAVED BY: hvo



RAW WATER (PRE-TREATMENT) SULFURIC ACID FEED

1 DETAIL
DM01 SCALE: NTS
FILE: SULFURIC ACID FEED ROOM SECTIONS DEMO



POST RO WATER (POST-TREATMENT) SULFURIC ACID FEED

2 DETAIL
DM01 SCALE: NTS
FILE: SULFURIC ACID FEED ROOM SECTIONS DEMO



SULFURIC ACID BULK STORAGE TRANSFER

3 DETAIL
DM01 SCALE: NTS
FILE: SULFURIC ACID FEED ROOM SECTIONS DEMO

GENERAL NOTES:

1. CONTRACTOR TO COORDINATE WITH THE CITY FOR APPROVAL PRIOR TO THE DISPOSAL OF MATERIAL.
2. CONTRACTOR TO PROTECT AND REUSE EXISTING PIPE SUPPORTS.
3. POST-TREATMENT SULFURIC ACID FEED IMPROVEMENTS MUST BE COMPLETED PRIOR TO SHUTDOWN AND DEMOLITION OF PRE-TREATMENT SULFURIC ACID FEED. REFER TO SPECIFICATION SECTION 01140 FOR ADDITIONAL INFORMATION.

KEY NOTES:

1. DEMOLISH AND DISPOSE EXISTING 2" CPVC SULFURIC ACID TRANSFER PIPING FROM EXISTING BULK STORAGE TANK FLANGE TO EXISTING DAY TANK FLANGE.
2. DEMOLISH AND DISPOSE EXISTING 2" AND 1" CPVC SULFURIC ACID SUCTION PIPING FROM THE EXISTING DAY TANK TO RAW WATER INJECTION PUMPS #1 AND #2.
3. DEMOLISH AND DISPOSE EXISTING 2" AND 1" CPVC SULFURIC ACID SUCTION PIPING FROM THE EXISTING DAY TANK TO POST RO WATER INJECTION PUMPS #1 AND #2.
4. DEMOLISH AND DISPOSE EXISTING 1" CPVC SULFURIC ACID DISCHARGE PIPING AND 3" CONTAINMENT PIPING FROM RAW WATER INJECTION PUMPS #1 AND #2 TO THE POINT OF INJECTION (PRE-TREATMENT).
5. DEMOLISH AND DISPOSE EXISTING 1" CPVC SULFURIC ACID DISCHARGE PIPING AND 3" CONTAINMENT PIPING FROM POST RO WATER INJECTION PUMPS #1 AND #2 TO THE POINT OF INJECTION (POST-TREATMENT).

BID SET			
DESIGNED	BH		
DRAWN	HV		
CHECKED	TS		
DATE	NOVEMBER 2024		
REV	DATE	BY	DESCRIPTION
1			
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THOMAS F. SEACORD
PROFESSIONAL ENGINEER
STATE OF FLORIDA
No. 550717

carollo

301 NORTH CATTLEMEN ROAD, SUITE 302
SARASOTA, FLORIDA 34232
PHONE (941) 371-9632 FAX (941) 371-9673
CA 0000571



CITY OF PUNTA GORDA, FLORIDA

SULFURIC ACID FEED SYSTEM IMPROVEMENTS

DEMOLITION

SULFURIC ACID FEED ROOM DEMOLITION SECTIONS

VERIFY SCALES
BAR IS ONE INCH ON ORIGINAL DRAWING
0 1"

IF NOT ONE INCH ON THIS SHEET, ADJUST SCALES ACCORDINGLY

JOB NO.
202885

DRAWING NO.
DM02

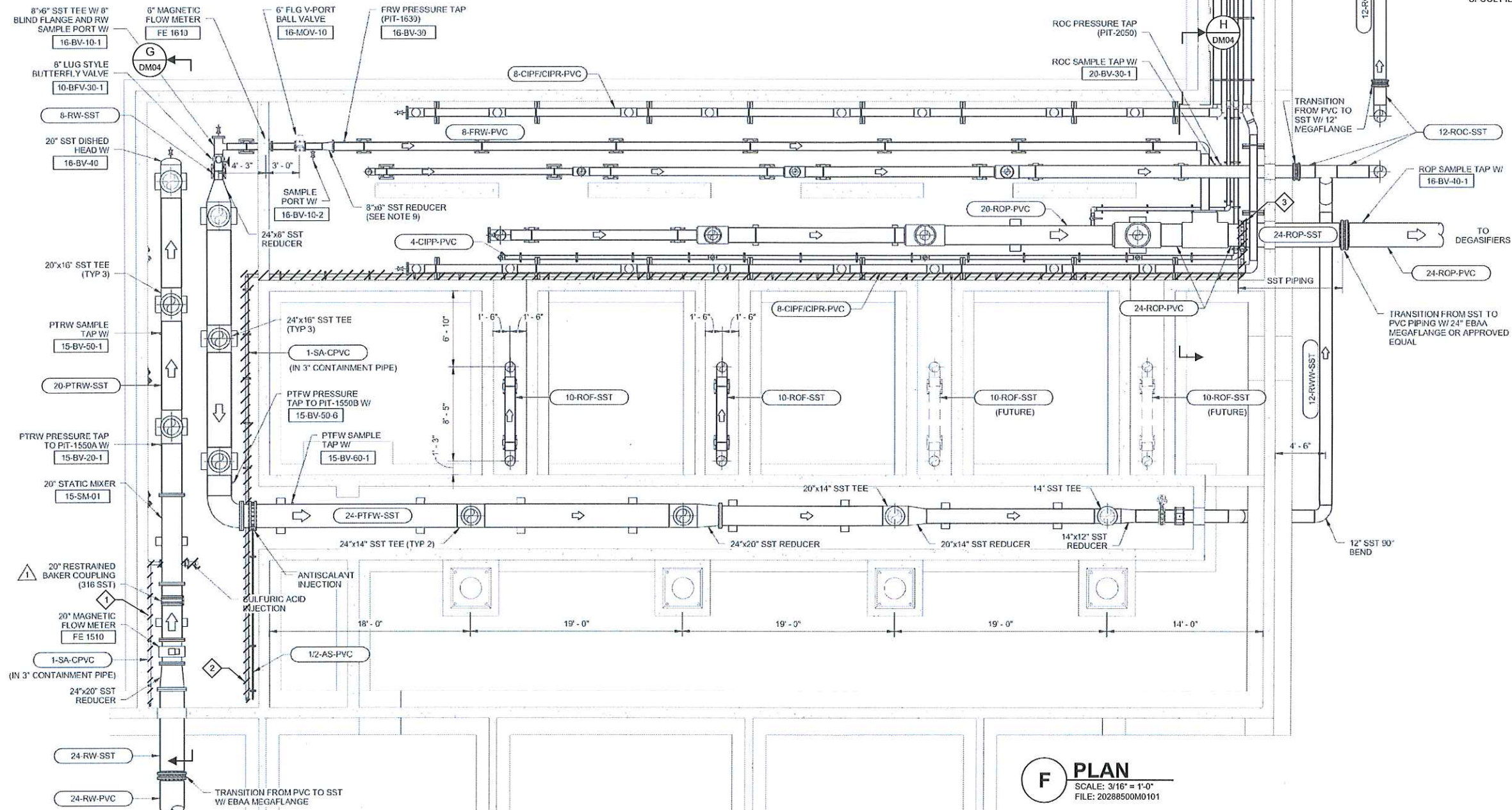
SHEET NO.
OF

Plot Date: 12-NOV-2024 4:17:38 PM

User: svdPW

Model: Layout1 ColorTable: gshade.ctb DesignScript: Carollo Std Pen_v0905.pen PlotScale: 1:1

LAST SAVED BY: hvo



GENERAL NOTES:

- CONTRACTOR TO COORDINATE WITH THE CITY FOR APPROVAL PRIOR TO THE DISPOSAL OF MATERIAL.
- CONTRACTOR TO PROTECT AND REUSE EXISTING PIPE SUPPORTS.
- POST-TREATMENT SULFURIC ACID FEED IMPROVEMENTS MUST BE COMPLETED PRIOR TO SHUTDOWN AND DEMOLITION OF PRE-TREATMENT SULFURIC ACID FEED. REFER TO SPECIFICATION SECTION 01140 FOR ADDITIONAL INFORMATION.

KEY NOTES:

- DEMOLISH AND DISPOSE EXISTING 1" CPVC SULFURIC ACID DISCHARGE PIPING AND 3" CONTAINMENT PIPING FROM RAW WATER INJECTION PUMPS #1 AND #2 TO THE POINT OF INJECTION (PRE-TREATMENT).
- DEMOLISH AND DISPOSE EXISTING 1" CPVC SULFURIC ACID DISCHARGE PIPING AND 3" CONTAINMENT PIPING FROM POST RO WATER INJECTION PUMPS #1 AND #2 TO THE POINT OF INJECTION (POST-TREATMENT).
- DEMOLISH AND DISPOSE EXISTING 2'-0" LENGTH, 24" DIAMETER SPOOL PIECE (SHOWN AS A STATIC MIXER WITH INJECTION QUILL).

F PLAN
SCALE: 3/16" = 1'-0"
FILE: 20288500M0101

BID SET			DESIGNED BH		THIS ITEM HAS BEEN DIGITALLY SIGNED AND SEALED BY THOMAS F. SEACORD ON THE DATE ADJACENT TO THE SEAL. PRINTED COPIES OF THIS DOCUMENT ARE NOT CONSIDERED SIGNED AND SEALED AND THE SIGNATURE MUST BE VERIFIED ON ANY ELECTRONIC COPIES.	 301 NORTH CATTLEMEN ROAD, SUITE 302 SARASOTA, FLORIDA 34232 PHONE (941) 371-9832 FAX (941) 371-9873 CA 00008571		CITY OF PUNTA GORDA, FLORIDA			VERIFY SCALES	JOB NO. 202885	
			DRAWN HV					SULFURIC ACID FEED SYSTEM IMPROVEMENTS			BAR IS ONE INCH ON ORIGINAL DRAWING	DRAWING NO.	
			CHECKED TS					DEMOLITION			0 1"	DM03	
			DATE NOVEMBER 2024					SULFURIC ACID FEED PIPING DEMOLITION PLAN			IF NOT ONE INCH ON THIS SHEET, ADJUST SCALES ACCORDINGLY	SHEET NO.	
REV	DATE	BY	DESCRIPTION							OF			

Plot Date: 12-NOV-2024 4:17:21 PM

User: svcPW

Model: Layout1 ColorTable: gshade.cb DesignScript: Carollo_Sld_Pen_v0805.pen PlotScale: 1:1

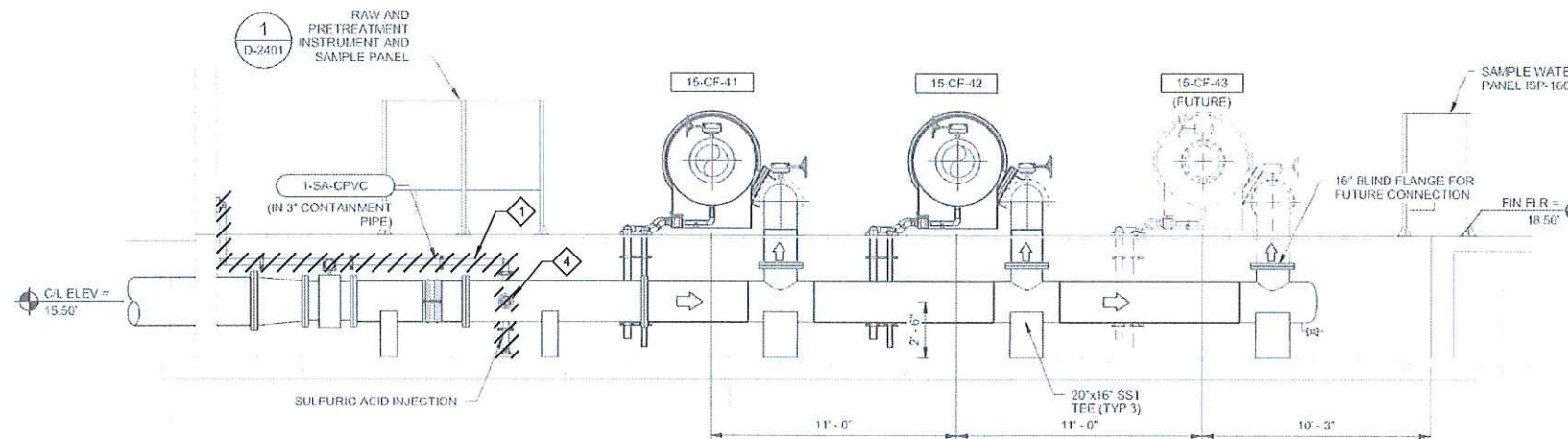
LAST SAVED BY: hvo

GENERAL NOTES:

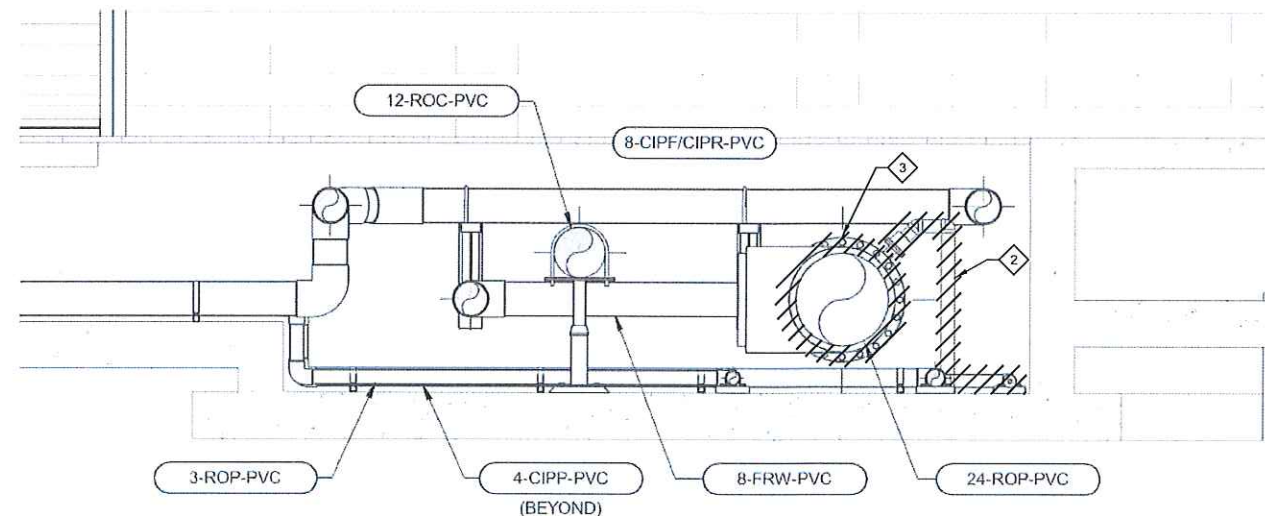
1. CONTRACTOR TO COORDINATE WITH THE CITY FOR APPROVAL PRIOR TO THE DISPOSAL OF MATERIAL.
2. CONTRACTOR TO PROTECT AND REUSE EXISTING PIPE SUPPORTS.
3. POST-TREATMENT SULFURIC ACID FEED IMPROVEMENTS MUST BE COMPLETED PRIOR TO SHUT DOWN AND DEMOLITION OF PRE-TREATMENT SULFURIC ACID FEED. REFER TO SPECIFICATION SECTION 01140 FOR ADDITIONAL INFORMATION.

KEY NOTES:

1. DEMOLISH AND DISPOSE EXISTING 1" CPVC SULFURIC ACID DISCHARGE PIPING AND 3" CONTAINMENT PIPING FROM RAW WATER INJECTION PUMPS #1 AND #2 TO THE POINT OF INJECTION (PRE-TREATMENT).
2. DEMOLISH AND DISPOSE EXISTING 1" CPVC SULFURIC ACID DISCHARGE PIPING AND 3" CONTAINMENT PIPING FROM POST RO WATER INJECTION PUMPS #1 AND #2 TO THE POINT OF INJECTION (POST-TREATMENT).
3. DEMOLISH AND DISPOSE EXISTING 2'-0" LENGTH, 24" DIAMETER SPOOL PIECE (SHOWN AS A STATIC MIXER WITH INJECTION QUILL).
4. DEMOLISH AND DISPOSE EXISTING PRE-TREATMENT INJECTION QUILL ASSEMBLY.



G SECTION
DM03 SCALE: 1/4" = 1'-0"
FILE: SULFURIC ACID FEED PIPING DEMOLITION SECTION 2



H SECTION
DM03 SCALE: 1/2" = 1'-0"
FILE: SULFURIC ACID FEED PIPING DEMOLITION SECTION 1

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				DRAWN HV					SULFURIC ACID FEED SYSTEM IMPROVEMENTS		SULFURIC ACID FEED SYSTEM IMPROVEMENTS		BAR IS ONE INCH ON ORIGINAL DRAWING	DRAWING NO. DM04
				CHECKED TS					DEMOLITION		DEMOLITION		0 1"	
				DATE NOVEMBER 2024					SULFURIC ACID FEED PIPING DEMOLITION SECTIONS		SULFURIC ACID FEED PIPING DEMOLITION SECTIONS		IF NOT ONE INCH ON THIS SHEET, ADJUST SCALES ACCORDINGLY	SHEET NO. OF
REV	DATE	BY	DESCRIPTION											

Plot Date: 12-NOV-2024 4:18:03 PM

User: svcpw

Model: Layout1 ColorTable: gshade.ctb DesignScript: Carollo_Sld_Pen_v0905.pen PlotScale: 1:1

LAST SAVED BY: hvo

1		2		3		4		5		6		7		8		9		10		11		12		13																																																																	
VALVES						PRESSURE VALVES						PUMPS				PUMPS CON'T				MISCELLANEOUS																																																																					
ONE LINE PIPE						THREE LINE PIPE						METERING PUMP				GEAR				BASKET STRAINER				FLOOR SINK																																																																	
ANGLE VALVE						BACKPRESSURE REG EXTERNAL TAP VALVE						HOSE PUMP				PROGRESSIVE CAVITY/POSITIVE DISPLACEMENT				CALIBRATION-COLUMN				COALESCER																																																																	
BUTTERFLY VALVE						PRESSURE REDUCING EXTERNAL PRESSURE TAP VALVE						HORIZONTAL OR SPLIT-CASE CENTRIFUGAL				AIR DRIVEN DIAPHRAGM PUMP				DIAPHRAGM SEAL				DESSICANT DRYER																																																																	
4-WAY VALVE						BACK PRESSURE REGULATOR						VERTICAL TURBINE				BLOWERS/COMPRESSORS				ANNULAR SEAL				FILTER																																																																	
GATE VALVE						RELIEF VALVE						CENTRIFUGAL MULTI-STAGE								SANITARY SEAL				FILTER SEPARATOR																																																																	
KNIFE GATE VALVE						VACUUM VALVE						SUBMERSIBLE				COMPRESSOR RECIPROCATING				EDUCTOR/EJECTOR				HOSE CONNECTION																																																																	
GLOBE VALVE						CONTROL VALVE						DIAPHRAGM				FAN				INLINE STATIC MIXER				ORIFICE RESTRICTION																																																																	
NEEDLE VALVE						PIPING						MAGNETIC DRIVE				ROTARY				PULSATION DAMPENER				REFRIGERATED DRYER																																																																	
PINCH VALVE												VERTICAL SUBMERSIBLE				FAN				SIGHT TUBE				RUPTURE DISK																																																																	
SEATING PORT						ONE LINE PIPE						SUBMERSIBLE				FAN				PIPE DIFFUSER				SAMPLE PORT																																																																	
ECCENTRIC PLUG VALVE						THREE LINE PIPE						DIAPHRAGM				ROTARY				CORP STOP ASSEMBLY				STRAINER WYE TYPE																																																																	
CONCENTRIC PLUG VALVE						AIR GAP						MAGNETIC DRIVE				ROTARY				CORIOLIS FLOW METER				STRAINER - MECHANICALLY CLEANED																																																																	
3-WAY VALVE						VENT TO ATMOSPHERE						MAGNETIC DRIVE				ROTARY				MAGNETIC FLOW METER				STRAINER WITH BLOW OFF																																																																	
MOTOR OPERATED VALVE						BLIND FLANGE						MAGNETIC DRIVE				ROTARY				ROTAMETER				VAPOR HEATER																																																																	
PNEUMATIC VALVE						CAPPED OR PLUGGED						MAGNETIC DRIVE				ROTARY				VENTURI METER				VAPORIZER																																																																	
SAMPLE VALVE						DRAIN						MAGNETIC DRIVE				ROTARY				PROPELLER METER				PIPE MATERIAL TRANSITION																																																																	
SOLENOID VALVE						FLEXIBLE CONNECTION						MAGNETIC DRIVE				ROTARY				PRESSURE GAUGE				FLOW ARROW																																																																	
DIAPHRAGM VALVE						QUICK DISCONNECT OR FLUSH CONNECTION						MAGNETIC DRIVE				ROTARY				MIXER				ULTRASONIC FLOWMETER (CLAMP ON) OR ULTRASONIC SENSOR																																																																	
AIR-RELIEF / VACUUM RELIEF VALVE						FLUSHING CONNECTION						MAGNETIC DRIVE				ROTARY				ROTARY CHEMICAL FEEDER				RADAR LEVEL SENSOR																																																																	
PUMP DISCHARGE						DOUBLE CONTAINMENT						MAGNETIC DRIVE				ROTARY				CHANNEL AIR/CHEMICAL DIFFUSER				SURGE TANK																																																																	
BUTTERFLY VALVE (BURIED)						GATES						MAGNETIC DRIVE				ROTARY				BLOW-OFF SILENCER				THERMOMETER																																																																	
CONE VALVE												MAGNETIC DRIVE				ROTARY				AIR DRYER				AIR/CHEMICAL DIFFUSER																																																																	
MUD VALVE						FLAP						MAGNETIC DRIVE				ROTARY				FLOOR DRAIN OR HUB DRAIN				HOSE RACK - WALL MOUNT																																																																	
CHECK VALVES						SLIDE						MAGNETIC DRIVE				ROTARY				FLOOR DRAIN OR HUB DRAIN				HOSE RACK - STAND																																																																	
ONE LINE PIPE						THREE LINE PIPE						MAGNETIC DRIVE				ROTARY				FLOOR DRAIN OR HUB DRAIN				HOSE RACK - STAND																																																																	
BACK FLOW PREVENTER (REDUCED PRESSURE)						STOP						MAGNETIC DRIVE				ROTARY				FLOOR DRAIN OR HUB DRAIN				HOSE RACK - STAND																																																																	
BALL CHECK VALVE						SLIDE						MAGNETIC DRIVE				ROTARY				FLOOR DRAIN OR HUB DRAIN				HOSE RACK - STAND																																																																	
SWING CHECK VALVE						SLUICE						MAGNETIC DRIVE				ROTARY				FLOOR DRAIN OR HUB DRAIN				HOSE RACK - STAND																																																																	
DIAPHRAGM CHECK VALVE						STOP						MAGNETIC DRIVE				ROTARY				FLOOR DRAIN OR HUB DRAIN				HOSE RACK - STAND																																																																	
DOUBLE FLAP CHECK VALVE						SLIDE						MAGNETIC DRIVE				ROTARY				FLOOR DRAIN OR HUB DRAIN				HOSE RACK - STAND																																																																	
FLAPPER CHECK VALVE						SLUICE						MAGNETIC DRIVE				ROTARY				FLOOR DRAIN OR HUB DRAIN				HOSE RACK - STAND																																																																	
REV						DATE						BY						DESCRIPTION						DESIGNED						BH						DRAWN						HV						CHECKED						TS						DATE						NOVEMBER 2024						VERIFIED						SHEET NO.						OF					
1						2						3						4						5						6						7						8						9						10						11						12						13																	