

- GENERAL NOTES:**
1. ALL WORK INSIDE THE EAST CLEARWELL SHALL BE CONDUCTED TO PREVENT THE CONTAMINATION OF THE POTABLE WATER CONTAINED THEREIN.
 2. WORKER INSTALLING SS TUBING IN WEIRBOX SHALL WEAR PLASTIC OR TYVEK WATERPROOF SUIT AND SHALL BE DISINFECTED BEFORE WORKING IN WEIRBOX.
 3. AFTER INSTALLATION, CLEAN AND DISINFECT INTERIOR OF WEIRBOX.

PLOT DATE: Sep 20, 2016 - 1:46pm XREFS: K:\w_u_wu_wtp\cadd\31wtp\cadd\1_rnd1.dwg K:\w_u_wu_wu_wtp\cadd\31wtp\cadd\1_rnd1.dwg IMAGES:

BAR IS EQUAL TO ONE INCH ON ORIGINAL DRAWING
 ADJUST ALL SCALED DIMENSIONS ACCORDINGLY

NO.	DATE	BY	REVISION

**BID DRAWING SET
 SEPTEMBER 20, 2016**

SEAL
 JOHN R. LEEMON
 FLORIDA P.E. NO. 41645
 DATE

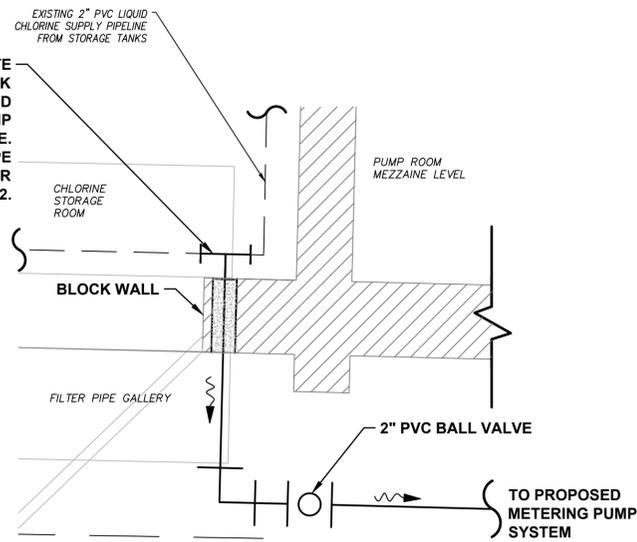
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FIELD: ----
 DRAWN: YM/MNF
 DESIGN: JRL
 APPR: GGG
 SCALE: AS SHOWN

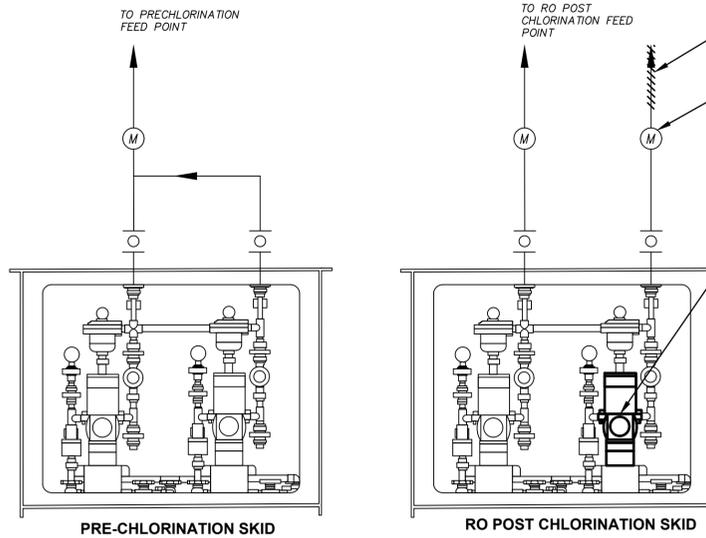
PUMP ROOM
 WATER TREATMENT PLANT
 CHLORINATION SYSTEM IMPROVEMENTS
 CITY OF LAKE WORTH
 PALM BEACH COUNTY, FLORIDA

DATE: AUGUST 2016
 P.A. NO. B5038.00
 DWG. NO. 44-43-28-305
 SHEET: C1-1

CUT IN 2" PVC TEE AND ROUTE 2" PVC THROUGH BLOCK WALL TO PROPOSED LIQUID CHLORINE METERING PUMP SYSTEM USE 3" PVC SLEEVE. USE FITTINGS TO OFFSET PIPE AS NECESSARY. SEAL PER NOTE 9 SHEET C0-2.



1 CHLORINE METERING PUMP SYSTEM CONNECTION
C1-3 N.T.S. (PLAN)

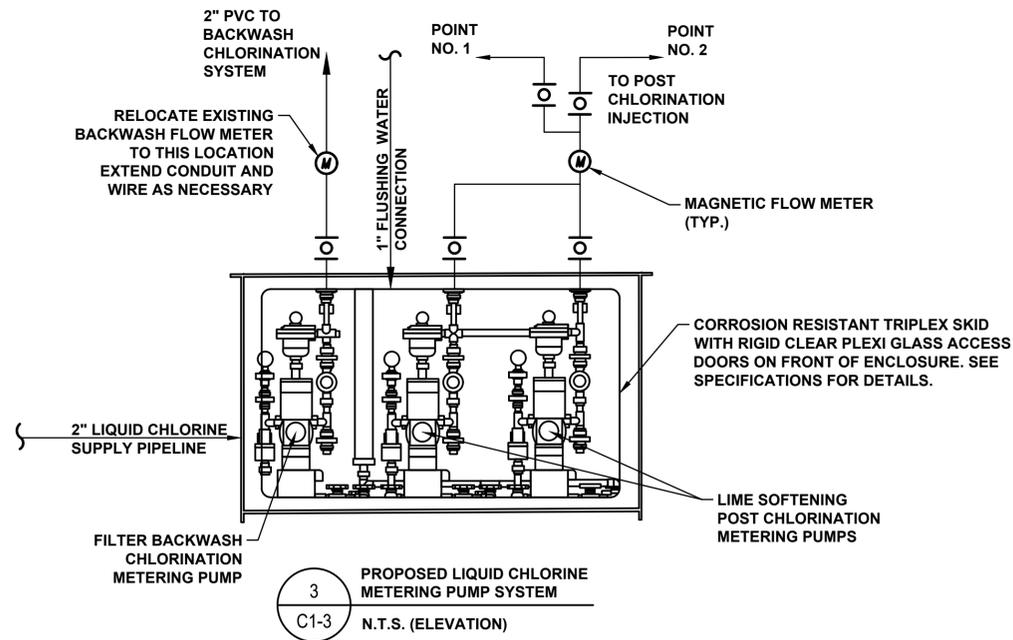


2 EXISTING LIQUID CHLORINE METERING PUMP SYSTEM
C1-3 N.T.S. (ELEVATION)

REMOVE UNUSED PIPE
RELOCATE EXISTING BACKWASH METER TO NEW SKID
REMOVE EXISTING FILTER BACKWASH METERING PUMP AND SALVAGE TO CITY. INSTALL NEW METERING PUMP. MODIFY PIPING TO CONNECT TO RO POST-CHLORINATION FEED PIPELINE. SEE SPECIFICATIONS FOR DETAILS



4 EXISTING RO POST CHLORINATION SKID
C1-3



3 PROPOSED LIQUID CHLORINE METERING PUMP SYSTEM
C1-3 N.T.S. (ELEVATION)

2" PVC TO BACKWASH CHLORINATION SYSTEM
RELOCATE EXISTING BACKWASH FLOW METER TO THIS LOCATION EXTEND CONDUIT AND WIRE AS NECESSARY
POINT NO. 1
POINT NO. 2
TO POST CHLORINATION INJECTION
MAGNETIC FLOW METER (TYP.)
CORROSION RESISTANT TRIPLEX SKID WITH RIGID CLEAR PLEXI GLASS ACCESS DOORS ON FRONT OF ENCLOSURE. SEE SPECIFICATIONS FOR DETAILS.
LIME SOFTENING POST CHLORINATION METERING PUMPS
1" FLUSHING WATER CONNECTION

BAR IS EQUAL TO ONE INCH ON ORIGINAL DRAWING
ADJUST ALL SCALED DIMENSIONS ACCORDINGLY

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DETAILS
WATER TREATMENT PLANT
CHLORINATION SYSTEM IMPROVEMENTS
CITY OF LAKE WORTH
PALM BEACH COUNTY, FLORIDA
DATE: AUGUST 2016
P.A. NO. B5038.00
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SYMBOLS

	EXPOSED CONDUIT		MOTOR, (NUMBER INDICATES HORSEPOWER)
	CONDUIT RUN IN WALLS, CEILING SPACE, OR IN CONCRETE SLAB ABOVE		ELECTRICAL ENCLOSURE OUTLINE
	HOME RUN TO PANEL "SPL1" CIRCUITS #2, 4, 6. PULL #12 AWG (MINIMUM) CONDUCTORS AS REQUIRED FOR NUMBER OF CIRCUITS SHOWN IN A 3/4" (MINIMUM) CONDUIT. PROVIDE #12 NEUTRAL CONDUCTOR AS REQ'D. PULL #12 AWG (MINIMUM) INSULATED GROUND WIRE IN EACH CONDUIT. HOME RUNS WITHOUT CIRCUIT IDENTIFICATION SHALL BE 2#12 & 1#12G-3/4"		CONTROL RELAY OR COIL EXAMPLE { TD2 TIME DELAY RELAY NO. 2 CR1 CONTROL RELAY NO. 1 M1 STARTER NO. 1 MAIN COIL
	CONDUIT BENDS TOWARD OBSERVER		N.O. CONTACT, CONTROL RELAY NO. 1, CONTACT NO. 2
	CONDUIT BENDS AWAY FROM OBSERVER		N.C. CONTACT, CONTROL RELAY NO. 2, CONTACT NO. 1
	CONDUIT CAPPED		FLOAT TYPE LIQUID LEVEL SWITCH, CLOSING ON RISING LEVEL
	FLEXIBLE LIQUID-TIGHT CONDUIT CONNECTION		FLOAT TYPE LIQUID LEVEL SWITCH, OPENING ON RISING LEVEL
	INDICATES CONDUIT NUMBER SEE CONDUIT AND CABLE SCHEDULE		NORMALLY CLOSED PUSH-BUTTON MOMENTARY OPEN
	EXIT SIGN, UNIVERSAL MOUNTING, SHADED AREA INDICATES SINGLE OR DOUBLE FACED, ARROWS INDICATE EGRESS DIRECTION		TWO-POSITION SELECTOR SWITCH: H - HAND, M - MANUAL, R - REMOTE, L - LOCAL A - AUTOMATIC, O - OFF
	TYPE "A" WALL BRACKET INCANDESCENT, MERCURY VAPOR OR SIMILAR LAMP FIXTURE.		THREE POSITION SELECTOR SWITCH, (SAME AS ABOVE)
	TYPE "A" FLUORESCENT LIGHTING FIXTURE		SINGLE POLE TOGGLE SWITCH, ("ON-OFF", ETC.)
	TYPE "A" BATTERY EMERGENCY LIGHT FIXTURE		GROUND CONNECTION
	SINGLE POLE SWITCH. (WP, W/ WEATHERPROOF COVER)		OVERLOAD RELAY CONTACTS (MAGNETIC)
	SINGLE POLE SWITCH. "a" INDICATES CIRCUIT CONTROLLED.		FUSE
	THREE-WAY SWITCH		INDICATING LIGHT: A-AMBER OP-OPALESCENT B-BLUE P-PURPLE C-CLEAR R-RED G-GREEN W-WHITE NE-NEON Y-YELLOW O-ORANGE
	MANUAL MOTOR STARTER		ELAPSED TIME METER
	DENOTES REFERENCE TO NOTE 1, I.E. - "SEE ELECTRICAL NOTE 1"		DISCONNECT SWITCH (SCHEMATIC)
	120V DUPLEX RECEPTACLE, NEMA CONFIGURATION 5-20.		FUSED DISCONNECT SWITCH (PLAN VIEW)
	240V RECEPTACLE		PANELBOARD
	SPECIAL PURPOSE OUTLET		MISCELLANEOUS EQUIPMENT
	DISCONNECT SWITCH (PLAN VIEW)		THERMOSTAT
	FUSED DISCONNECT SWITCH (PLAN VIEW)		COMBINATION MAGNETIC STARTER. SIZE AS INDICATED TYPE DESIGNATIONS ARE AS FOLLOWS: (FVNR) FULL VOLTAGE NON-REVERSING (RVNR) REDUCED VOLTAGE NON-REVERSING (REV) REVERSING (2S2W) TWO SPEED, TWO WINDING
	PANELBOARD		MOLDED CASE CIRCUIT BREAKER SIZE AND NUMBER OF POLES AS INDICATED. (LOCK) PADLOCKABLE (NON-AUTO) NON-AUTOMATIC (MCP) MOTOR CIRCUIT PROTECTOR (CL) CURRENT LIMITING
	MISCELLANEOUS EQUIPMENT		DRY-TYPE TRANSFORMER WITH GROUNDED SECONDARY, KVA SIZE & VOLTAGE AS NOTED
	THERMOSTAT		CURRENT TRANSFORMER & RATIO (X)-QUANTITY
	COMBINATION MAGNETIC STARTER. SIZE AS INDICATED TYPE DESIGNATIONS ARE AS FOLLOWS: (FVNR) FULL VOLTAGE NON-REVERSING (RVNR) REDUCED VOLTAGE NON-REVERSING (REV) REVERSING (2S2W) TWO SPEED, TWO WINDING		POWER TRANSFORMER
	MOLDED CASE CIRCUIT BREAKER SIZE AND NUMBER OF POLES AS INDICATED. (LOCK) PADLOCKABLE (NON-AUTO) NON-AUTOMATIC (MCP) MOTOR CIRCUIT PROTECTOR (CL) CURRENT LIMITING		FLOAT SWITCH
	DRY-TYPE TRANSFORMER WITH GROUNDED SECONDARY, KVA SIZE & VOLTAGE AS NOTED		PUSHBUTTON
	CURRENT TRANSFORMER & RATIO (X)-QUANTITY		SELECTOR SWITCH
	POWER TRANSFORMER		LIMIT SWITCH (N.O.)
	FLOAT SWITCH		LIMIT SWITCH (N.O.)
	PUSHBUTTON		
	SELECTOR SWITCH		

ABBREVIATIONS

A	AMPERE	NC	NORMALLY CLOSED
AHU	AIR HANDLING UNIT	NEC	NATIONAL ELECTRICAL CODE
AIC	AVAILABLE FAULT CURRENT (SYMMETRICAL)	NO	NORMALLY OPEN, NUMBER
ATS	AUTOMATIC TRANSFER SWITCH	NTS	NOT TO SCALE
AWG	AMERICAN WIRE GAUGE	OL	OVERLOAD RELAY
BKR	BREAKER	P	POLE
CPT	CONTROL POWER TRANSFORMER	PC	POWER CONDITIONER
CU	CONDENSING UNIT	PF	POWER FACTOR
DIA	DIAMETER	PH, Ø	PHASE
DIA	DIAMETER	PLC	PROGRAMMABLE LOGIC CONTROLLER
EF	EXHAUST FAN	PM	PHASE MONITOR
FPL	FLORIDA POWER AND LIGHT COMPANY	PNL	PANEL
G	GROUND	PSI	PER SQUARE INCH
GFCI	GROUND FAULT CIRCUIT INTERRUPTING	PVC	POLYVINYL CHLORIDE
HP	HORSEPOWER	RGS	RIGID GALVANIZED STEEL
INST	INSTANTANEOUS	RTU	REMOTE TERMINAL UNIT
J-BOX	JUNCTION BOX	SCH	SCHEDULE
KCML	THOUSAND CIRCULAR MILS	SH	SHIELDED
KV	KILOVOLT	SS	STAINLESS STEEL
KVA	KILO (1000) VOLT AMPS	TYP	TYPICAL
KW	KILOWATTS	V	VOLTAGE, VOLTS
MAX	MAXIMUM	W	WATTS, WIRE
MCB	MAIN CIRCUIT BREAKER	WP	WEATHERPROOF
MCC	MOTOR CONTROL CENTER		
MIN	MINUTES, MINIMUM		
MLO	MAIN LUGS ONLY		
N	NEUTRAL		

GENERAL NOTES

- THE INSTALLATION SHALL MEET ALL REQUIREMENTS OF THE LATEST EDITION OF THE NATIONAL ELECTRICAL CODE (NEC) AND ALL CODES HAVING JURISDICTION.
- AN EQUIPMENT GROUND WIRE SIZED PER THE NEC SHALL BE PULLED IN ALL ELECTRICAL CONDUITS, POWER & CONTROL, WHETHER OR NOT INDICATED ON THE PLANS.
- ALL EQUIPMENT AND MATERIALS SHALL BE NEW AND UNUSED AND U.L. LISTED.
- ALL EQUIPMENT FURNISHED AND INSTALLED BY THE CONTRACTOR SHALL BE GUARANTEED AGAINST DEFECTS IN MATERIALS AND WORKMANSHIP FOR A PERIOD OF ONE YEAR FROM DATE OF ACCEPTANCE UNLESS OTHERWISE SPECIFIED.
- COORDINATE ALL EQUIPMENT LOCATIONS WITH THE ENGINEER AND MECHANICAL CONTRACTOR BEFORE ANY INSTALLATION. ALL EQUIPMENT DIMENSIONS AND CONDUIT OPENINGS SHALL BE VERIFIED WITH THE MANUFACTURER'S APPROVED SHOP DRAWINGS PRIOR TO FORMING CONCRETE WORK.
- THE DRAWINGS ARE NOT INTENDED TO SHOW THE EXACT LOCATION OF CONDUIT RUNS. THESE ARE TO BE COORDINATED WITH THE OTHER TRADES SO THAT CONFLICTS ARE AVOIDED.
- CONTRACTOR SHALL, WITHIN 30 DAYS AFTER THE DATE OF THE SYSTEM ACCEPTANCE, PROVIDE TO THE BUILDING OWNER RECORD DRAWINGS OF THE ACTUAL INSTALLATION INCLUDING A SINGLE LINE DIAGRAM OF THE ELECTRICAL DISTRIBUTION SYSTEM AND RELATED FLOOR PLANS INDICATING THE LOCATION AND AREA SERVED FOR THE DISTRIBUTION.
- CONTRACTOR SHALL PROVIDE TO THE OWNER AN OPERATING AND MAINTENANCE MANUAL IN ACCORDANCE WITH THE REQUIREMENTS OF SECTION C405.7.4.2 OF THE 2014 FLORIDA BUILDING CODE - ENERGY CONSERVATION, INCLUDING ANY AMENDMENTS THERETO.

BID DRAWING SET
SEPTEMBER 20, 2016

ELECTRICAL SYMBOLS, ABBREVIATIONS, AND GENERAL NOTES

PLOT DATE: Sep 16, 2016 - 12:00pm XREFS: IMAGES:

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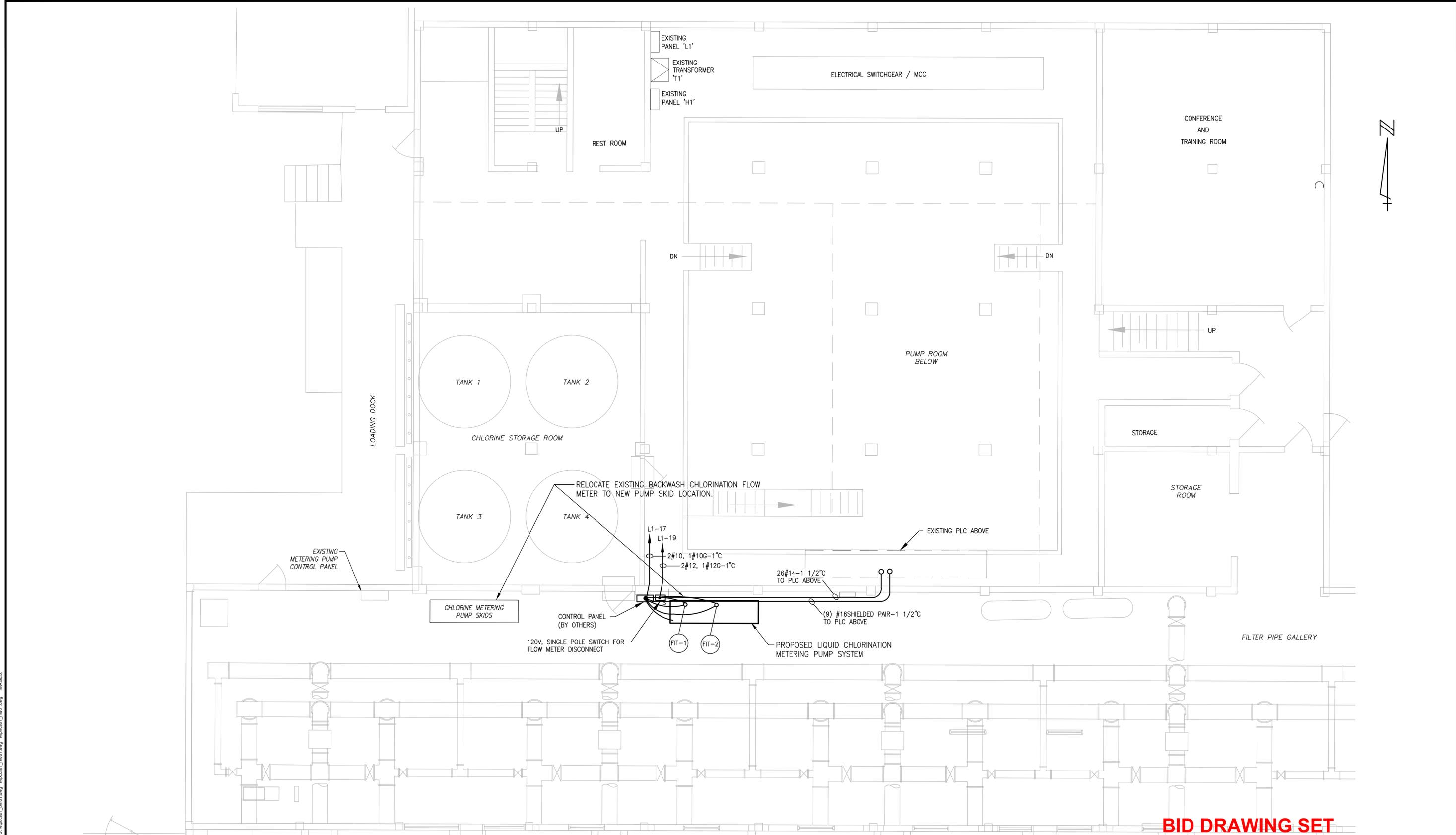
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FIELD: □□□□
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DESIGN: S.P.H.
APPR: L.M.S.
SCALE: AS SHOWN

WATER TREATMENT PLANT
CHLORINATION SYSTEM
IMPROVEMENTS
CITY OF LAKE WORTH
PALM BEACH COUNTY, FLORIDA

DATE:	JUNE 2016
P.A. NO.	B5038.00
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SHEET:	E-1



**BID DRAWING SET
SEPTEMBER 20, 2016**

ELECTRICAL PLAN

WATER TREATMENT PLANT
CHLORINATION SYSTEM
IMPROVEMENTS
CITY OF LAKE WORTH
PALM BEACH COUNTY, FLORIDA

DATE:	JUNE 2016
P.A. NO.	B5038.00
DWG. NO.	44-43-28-305
SHEET:	E-2

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