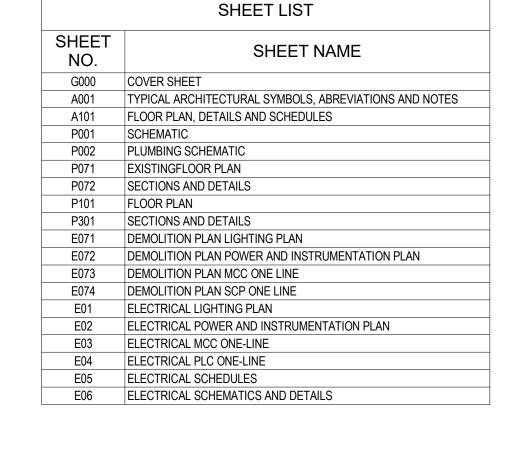
CONSTRUCTION DRAWINGS FOR

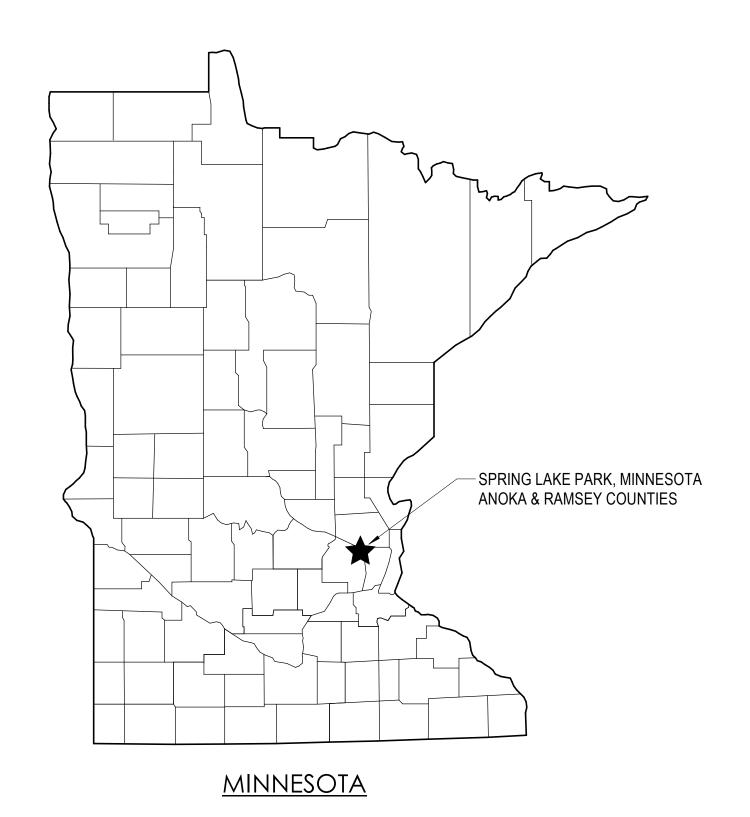
ARTHUR STREET WATER TREATMENT FACILITY REPAIRS

SPRING LAKE PARK, MINNESOTA





PROJECT SITE WELL NO. 5 WTF 8249 ARTHUR ST NE SPRING LAKE PARK



PROJECT LOCATION MAP

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STREET WTF REPAIRS

PRING LAKE PARK - ARTHUR S

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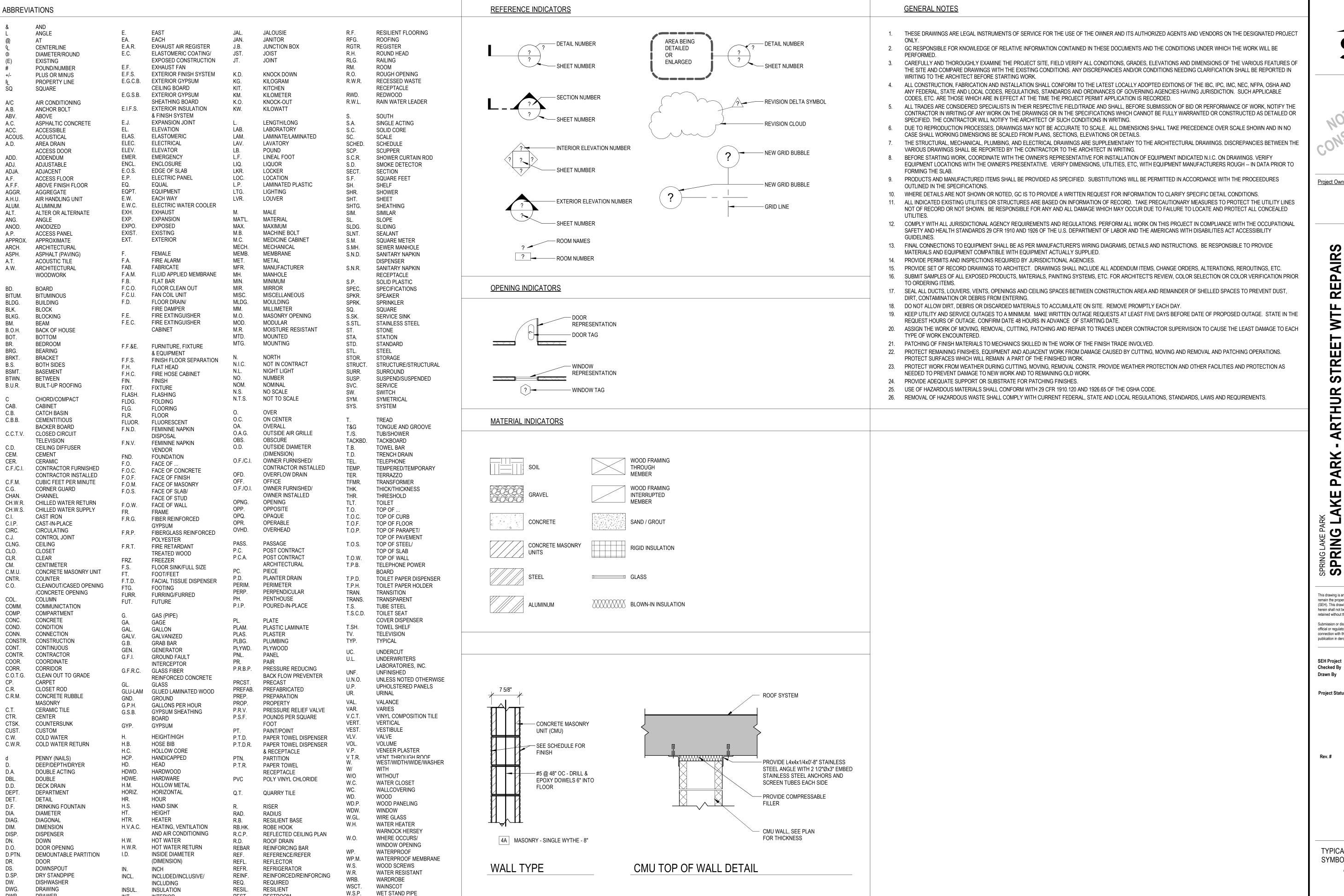
roject SPLAK 15. ed By By

Revision Issue

Nevision issu

COVER SHEET

G000



DWR.

DRAWER

INT.

INV.

INTERIOR

INVERT

REST.

REV.

RESTROOM

REVISED/REVISION

WEIGHT

WELDED WIRE FABRIC

Project Owner

2

TR S XX <u>Δ</u>

S

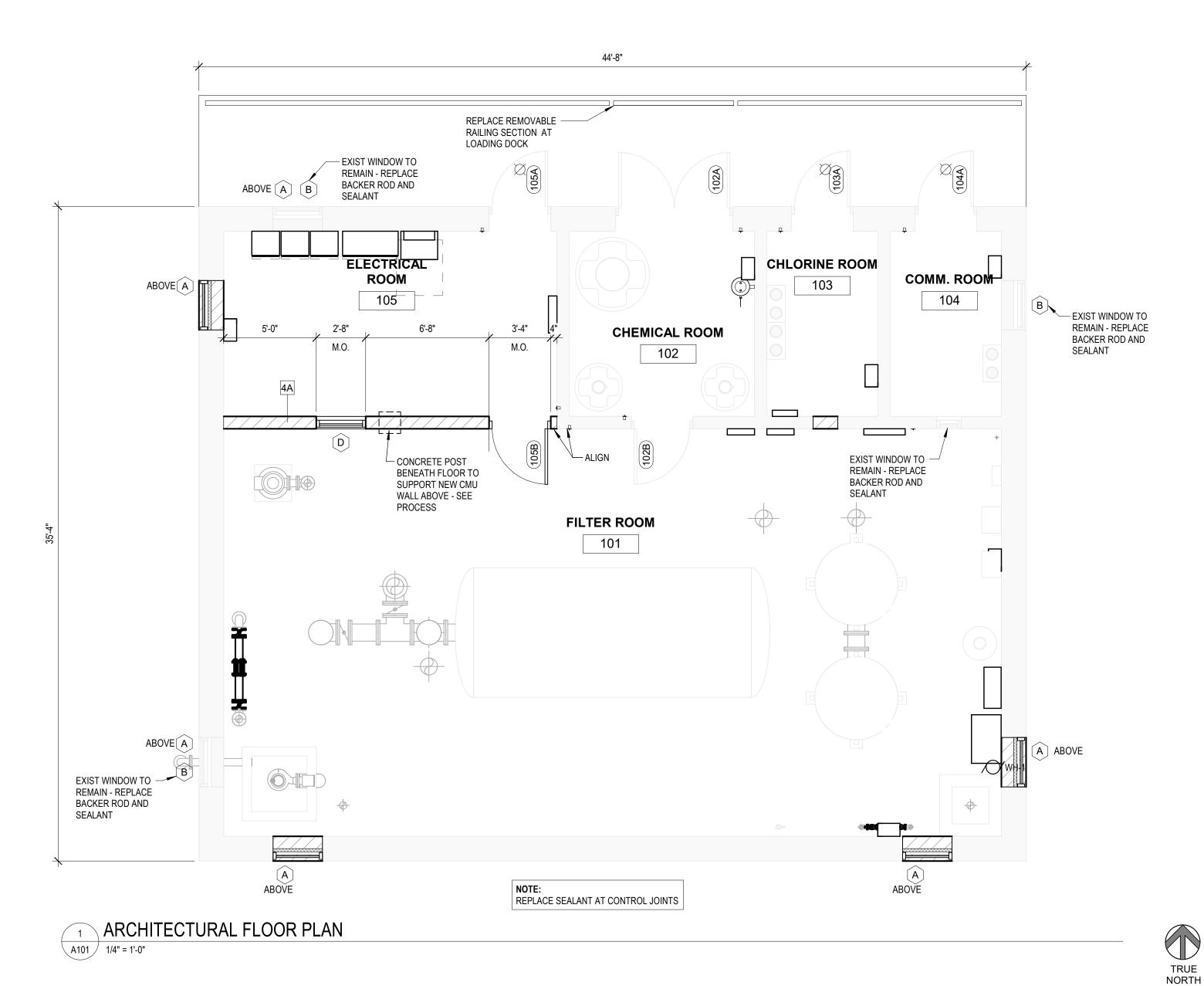
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Project Status

TYPICAL ARCHITECTURAL SYMBOLS, ABREVIATIONS AND NOTES



DOOR SCHEDULE FRAME DETAILS FRAME HARDWARE DOOR NO. HEIGHT WIDTH DOOR MATERIAL TYPE MATERIAL TYPE FIRE RATING GROUP **HEAD DETAIL** JAMB DETAIL REMARKS EXIST 6' - 0" EXISTING - REPLACE HARDWARE 7' - 0" 3' - 0" EXIST EXIST **EXIST EXIST EXIST EXIST** EXISTING - REPLACE HARDWARE EXIST EXIST EXIST 7' - 0" 3' - 0" EXIST EXIST EXIST EXISTING - REPLACE HARDWARE 7' - 0" 3' - 0" EXIST EXIST EXIST EXIST EXIST EXIST EXISTING 7' - 0" 3' - 0" EXIST EXIST EXIST EXIST EXIST EXISTING - REPLACE HARDWARE EXIST 7' - 0" 3' - 0" HM 2/A100 3/A100 PAINT TO MATCH EXISTING

ROOM FINISH SCHEDULE									
ROOM NO.	NAME	FLOOR FINISH	WALL FINISH	CEILING FINISH	REMARKS				
101	FILTER ROOM	EXIST	PT	EXIST					
102	CHEMICAL ROOM	EXIST	PT	EXIST					
103	CHLORINE ROOM	EXIST	PT	EXIST					
104	COMM. ROOM	EXIST	-	EXIST	EXIST FINISHES TO REMAIN				
105	ELECTRICAL ROOM	EXIST	PT	EXIST					

WINDOW SHEDULE										
MARK	WIDTH	HEIGHT	GLASS TYPE	FRAME TYPE	COMMENTS					
Α	2' - 8"		EXIST	EXIST	EXISTING - REPLACE EXTERIOR BACKER ROD AND SEALANT					
В	2' - 8"	4' - 0"	GL-1	ALUM.	NEW EXTERIOR WINDOW UNLESS NOTED OTHERWISE					
С	1' - 4"	2' - 0"	GL-2	ALUM.	NEW INTERIOR WINDOW, RATED CONDITION					
D	2' - 8"	4' - 0"	GL-3	ALUM.	NEW INTERIOR WINDOW					

FRAME TYPE

GLASS	TYPES:
GL-1:	1" INSULATING LOW-E GLASS, TO MATCH EXISTING
GL-2:	60 MIN. FIRE RATED GLASS, CLEAR
GL-3:	1/4" TEMPERED GLASS, CLEAR
	<u> </u>

Project Owner

- ARTHUR STREET WTF REPAIRS

PARK

SPRING LAKE PA SPRING

SEH Project

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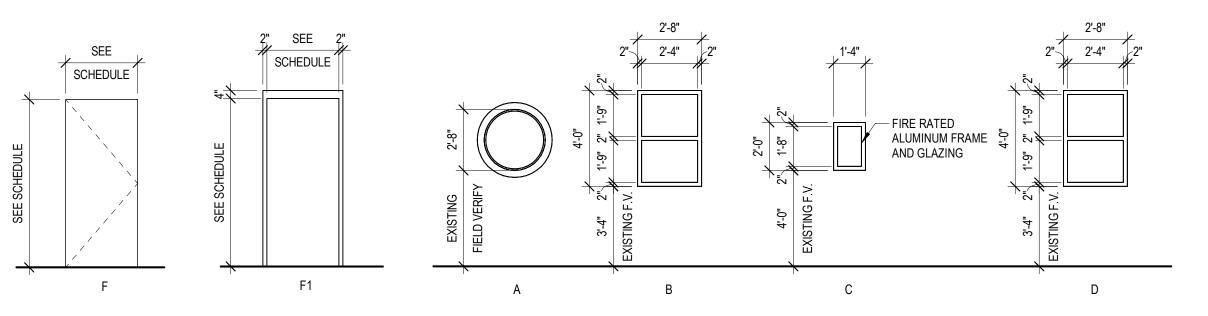
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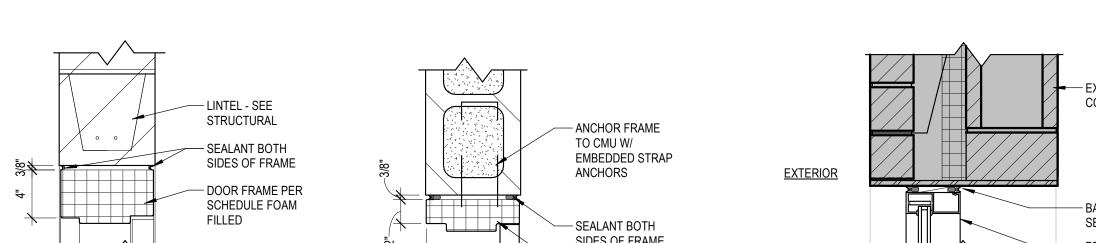
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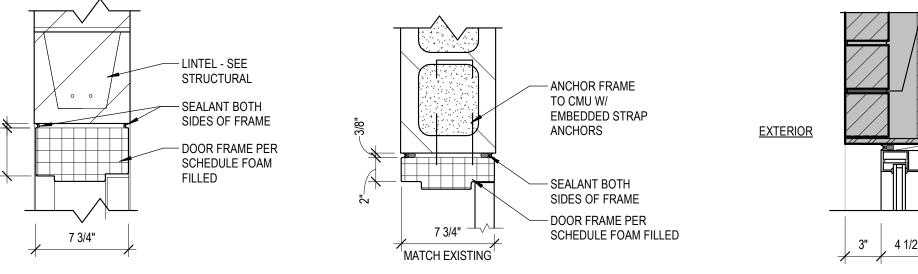
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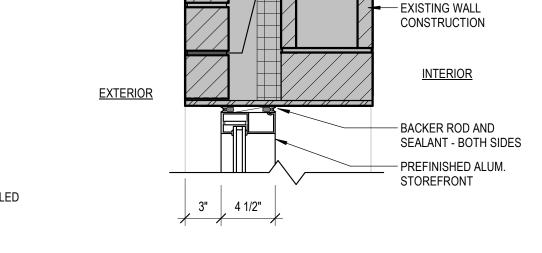
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WINDOW TYPES



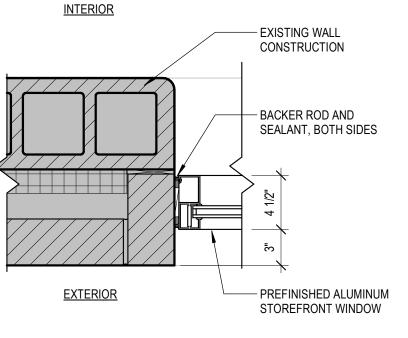


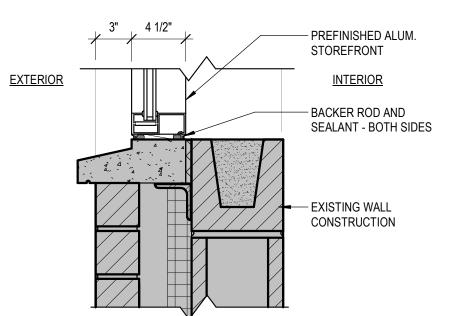


DOOR TYPE





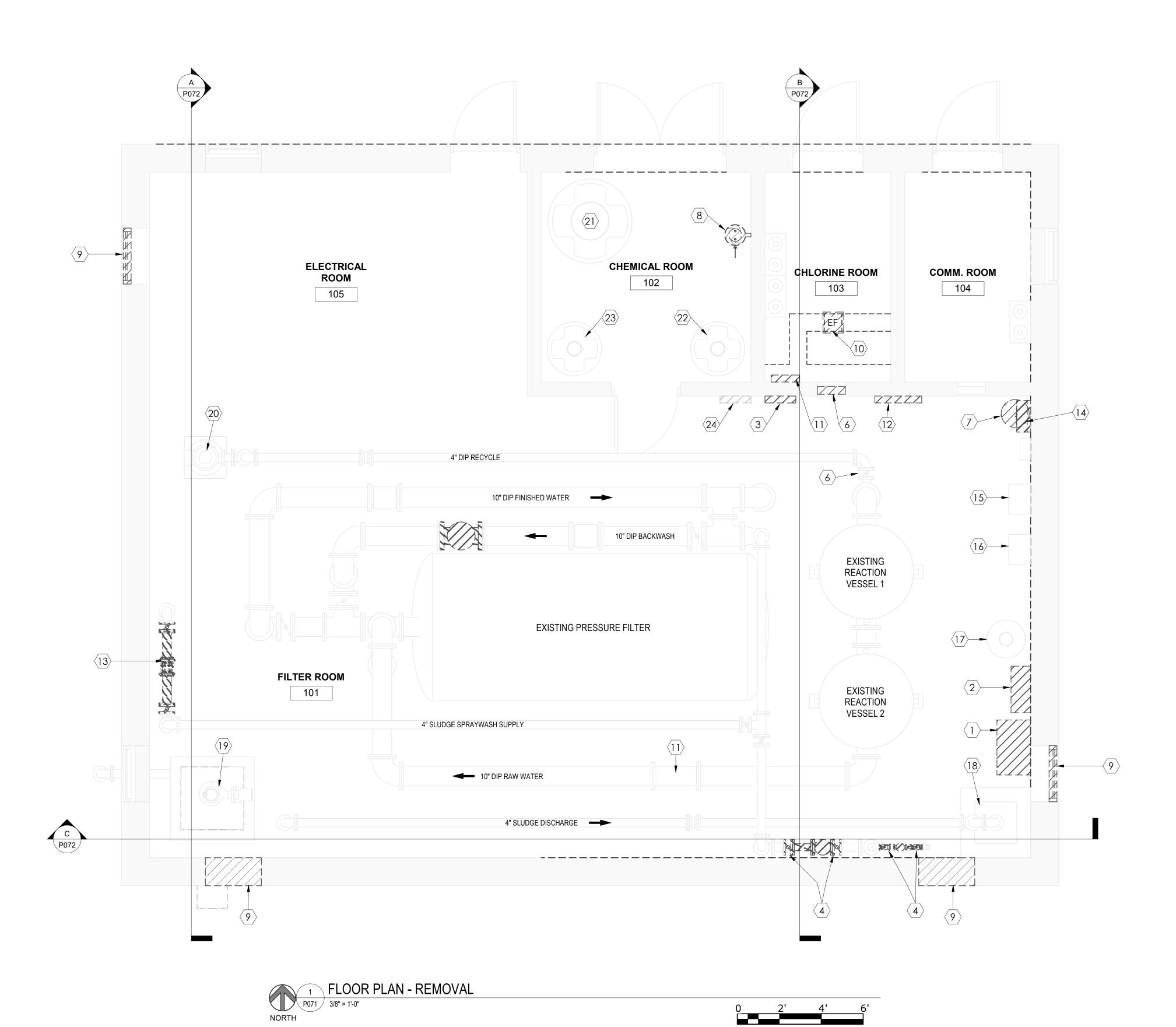




WINDOW JAMB AT EXISTING WALL A101 1 1/2" = 1'-0"

6 WINDOW SILL AT EXISTING WALL A101 1 1/2" = 1'-0"

FLOOR PLAN, DETAILS AND SCHEDULES



- ⟨ 1 ⟩ REMOVE 2 STAGE AIR COMPRESSOR
- $\langle\,2\,
 angle$ REMOVE AIR DRYER AND FILTERS
- \langle 3 \rangle REMOVE GAS DETECTOR CHLORINE
- 4 REMOVE FIRE SPRINKLER SYSTEM VALVES
- $\langle 5 \rangle$ REMOVE 10" FLOW CONTROL VALVE
- (6) REMOVE CHLORINE ROOM WINDOW
- $\langle 7 \rangle$ REMOVE 30 GAL ELECTRIC WATER HEATER
- $\langle 8 \rangle$ REMOVE EYE WASH AND FAUCET
- \langle 9 \rangle remove exterior window. See window sched
- ON ARCH SHTS FOR REPLACEMENT. (10) REMOVE EXHAUST FAN
- $\langle 11 \rangle$ EXISTING STATIC MIXER
- $\langle 12 \rangle$ REMOVE SOLENOIDS FOR VALVE OPERATORS AND GAS SYSTEM
- 13 REMOVE RPZ
- (14) EXISTING RESIDUAL CHLORINE ANALYZER
- (15) EXISTING CHLORINE BOOSTER PUMP
- (17) EXISTING SECONDARY RECEIVING TANK
- (18) EXISTING SLUDGE SINK
- (19) EXISTING SUBMERSIBLE SLUDGE PUMP
- (20) EXISTING BACKWASH RECYCLE PUMP
- (22) EXISTING FLUORIDE TANK



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- ARTHUR STREET WTF REPAIRS

PARK

LAKE

(16) EXISTING SULFUR DIOXIDE BOOSTER PUMP

 $\langle 21 \rangle$ EXISTING MANGANOUS SULFATE TANK

(23) EXISTING POTASSIUM PERMANGANATE TANK

(24) REMOVE SAFETY VALVE CLOSURE PANEL

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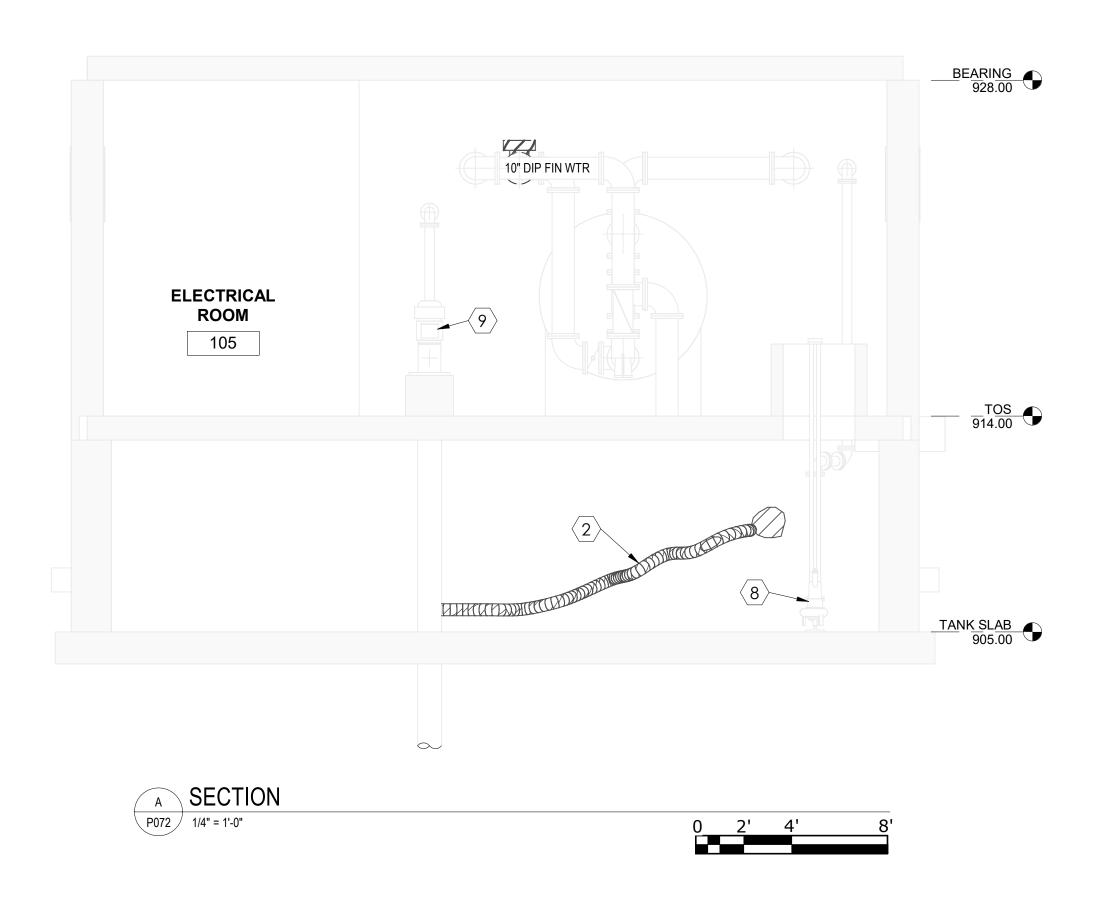
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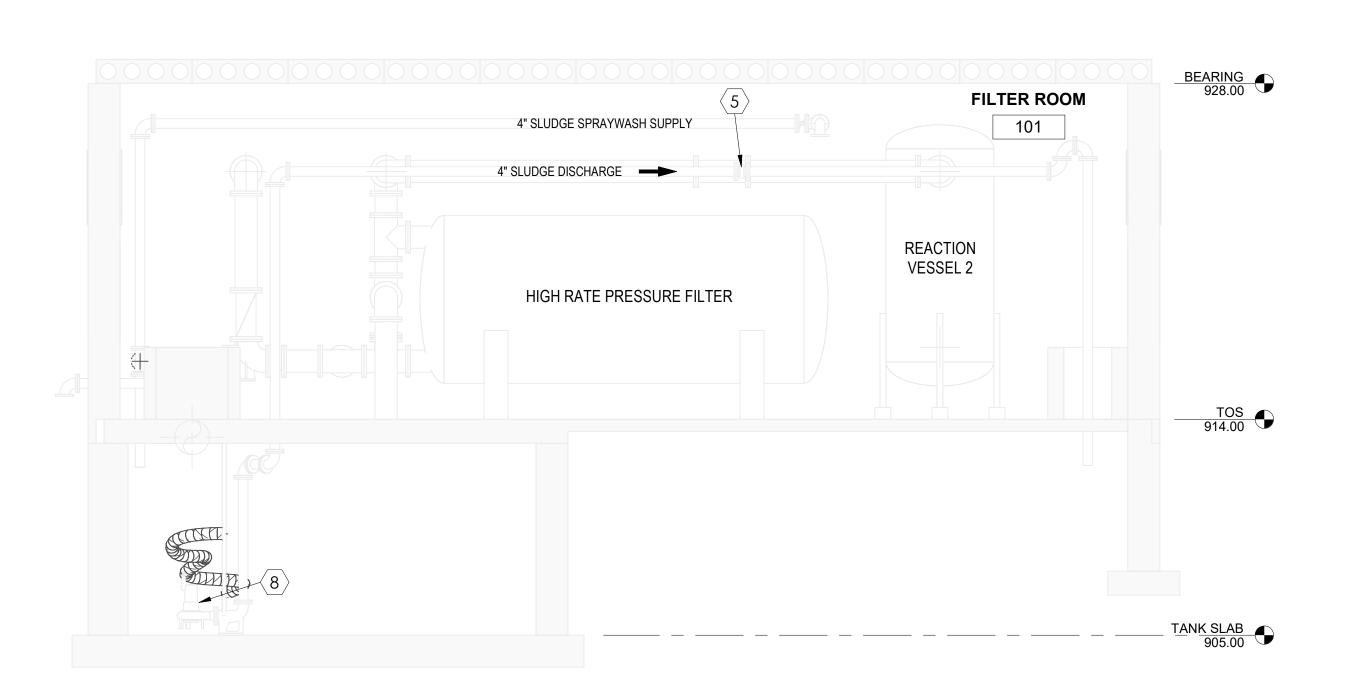
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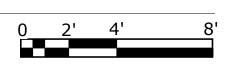
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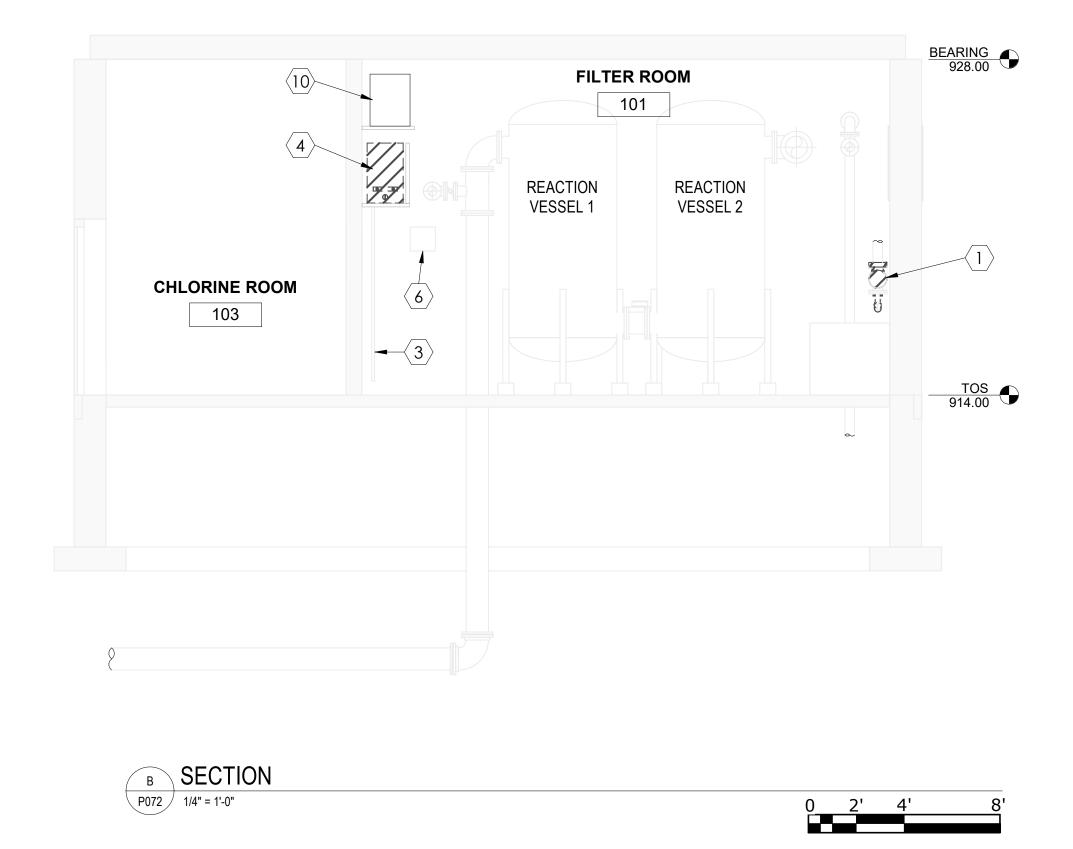
EXISTINGFLOOR PLAN











- 1 REMOVE FIRE SPRINKLER SYSTEM VALVES
- $\langle 2 \rangle$ REMOVE FLOATING SUCTION AND HOSE
- 3 EXISTING WATER HEATER DRAIN
- 4 REMOVE 30 GAL ELECTRIC WATER HEATER
- 5 REMOVE 4" SLUDGE WATER MAGNETIC METER
- EXISTING RESIDUAL CHLORINE ANALYZER
- 7 EXISTING SECONDARY RECEIVING TANK
- 8 EXISTING SUBMERSIBLE SLUDGE PUMP
- 9 EXISTING BACKWASH RECYCLE PUMP
- 10 EXISTING TEMPERING TANK

TEMPERING TANK ____

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Description

SECTIONS AND DETAILS

P072

- 1 NEW 2 STAGE AIR COMPRESSOR
- $\langle 2 \rangle$ NEW AIR DRYER AND FILTERS
- \langle 3 \rangle NEW CHLORINE GAS DETECTOR
- 4 NEW 10" FLOW CONTROL VALVE
- $\langle 5 \rangle$ EXISTING STATIC MIXER
- 6 NEW SAFETY VALVE CLOSURE PANEL
- $\langle 7 \rangle$ NEW 30 GAL ELECTRIC WATER HEATER
- $\langle 8 \rangle$ NEW EYE WASH AND FAUCET
- \langle 9 \rangle EXISTING POTASSIUM PERMANGANATE TANK
- (10) NEW EXHAUST FAN
- (11) NEW FIRE SPRINKLER SYSTEM VALVES
- (12) NEW SOLENOIDS FOR VALVE OPERATORS AND GAS SYSTEM
- (13) NEW 4" RPZ
- $\langle 14 \rangle$ Existing residual Chlorine analyzer
- $\langle 15 \rangle$ Existing Chlorine Booster Pump
- (16) EXISTING SULFUR DIOXIDE BOOSTER PUMP
- (17) EXISTING SECONDARY RECEIVING TANK
- (18) EXISTING SLUDGE SINK
- (19) EXISTING SUBMERSIBLE SLUDGE PUMP
- 20 EXISTING VERTICAL PUMP
- (21) EXISTING MANGANOUS SULFATE TANK
- $\langle 22 \rangle$ Existing fluoride tank

GENERAL NOTES

- CONTRACTOR SHALL WASH ALL SURFACES INCLUDING WALLS, CEILINGS, FLOORS, PROCESS PIPING AND FILTERS.
- CONTRACTOR SHALL PAINT ALL WALLS AND CEILINGS, EXCEPT IN ROOM 104.
 CONTRACTOR SHALL PAINT FILTERS, REACTION VESSELS, AND PIPING.



Project Owner

STREET WTF REPAIRS

ARTHUR **PARK** LAKE SPRING LAKE PA SPRING

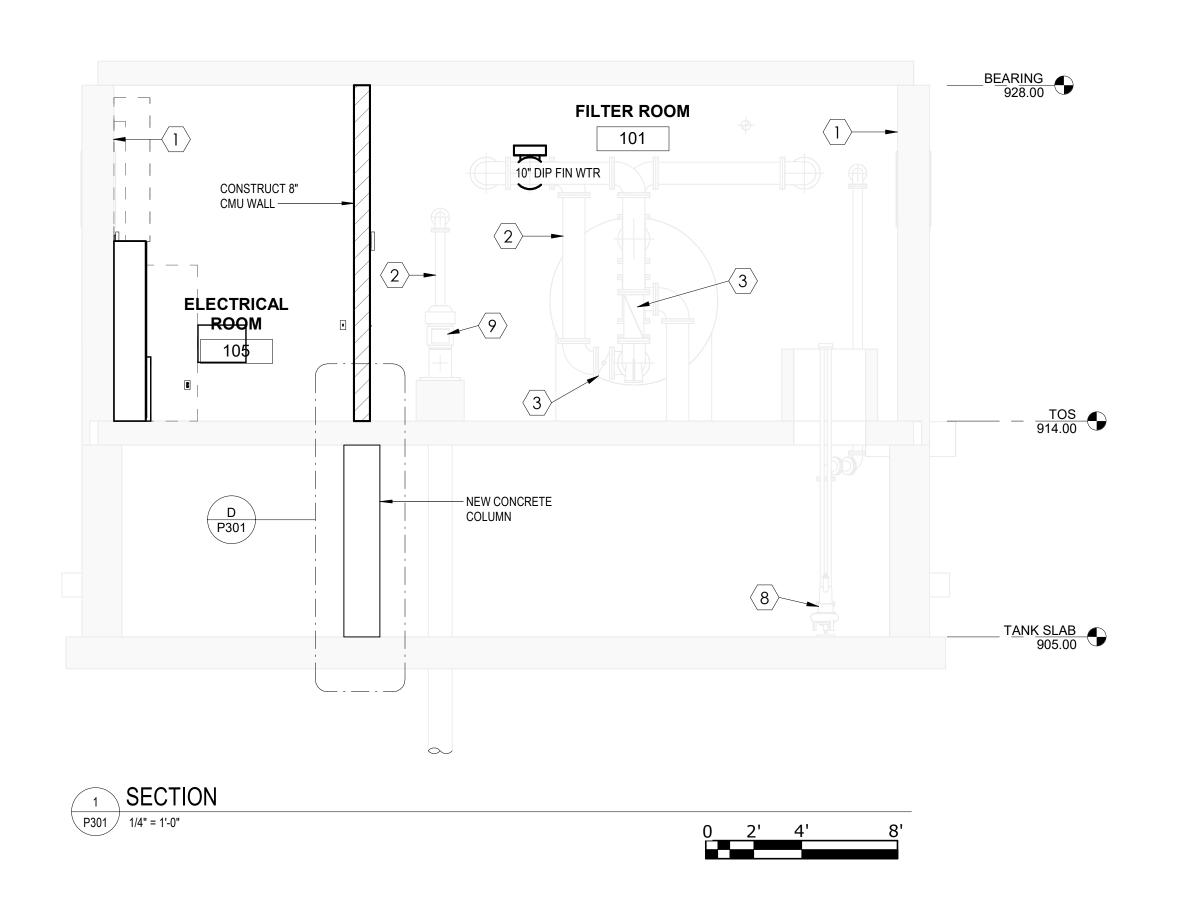
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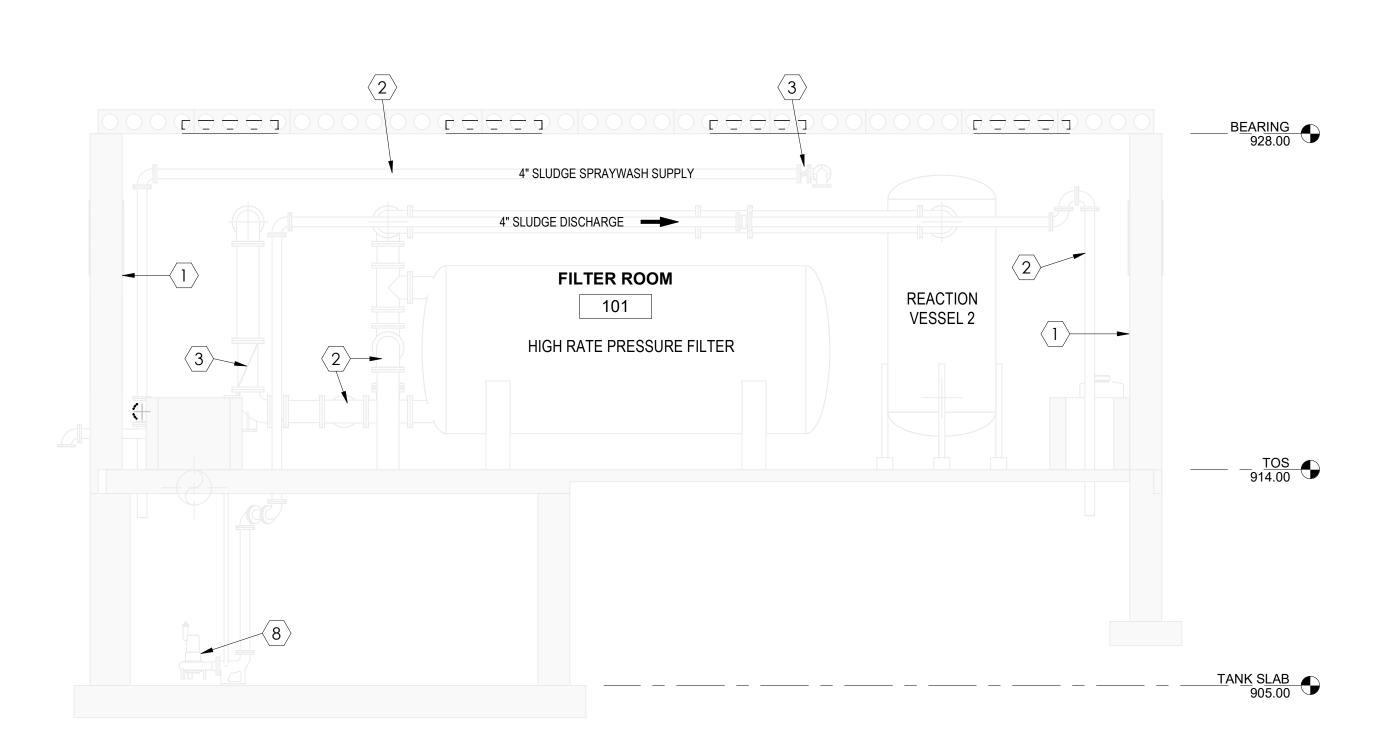
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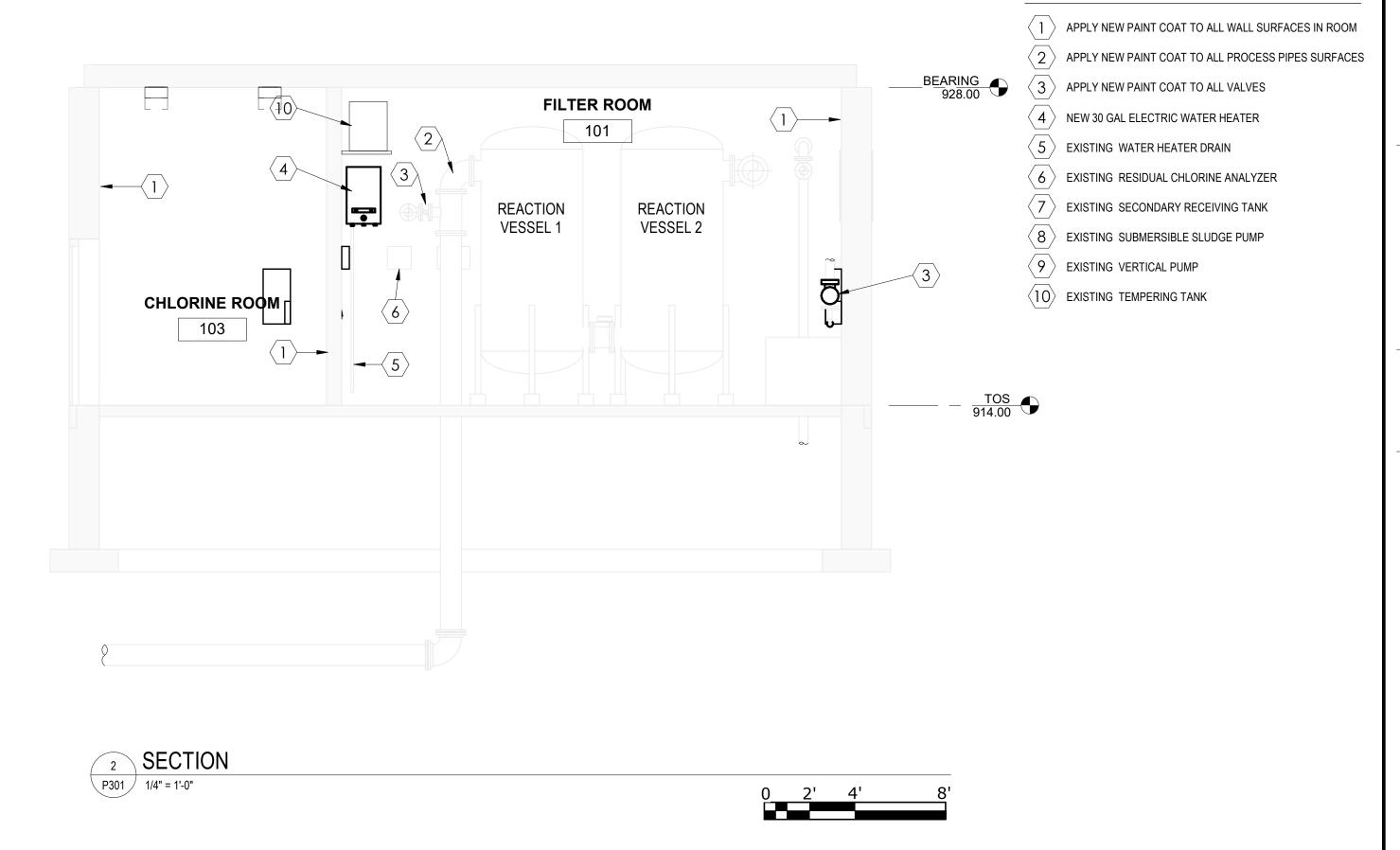
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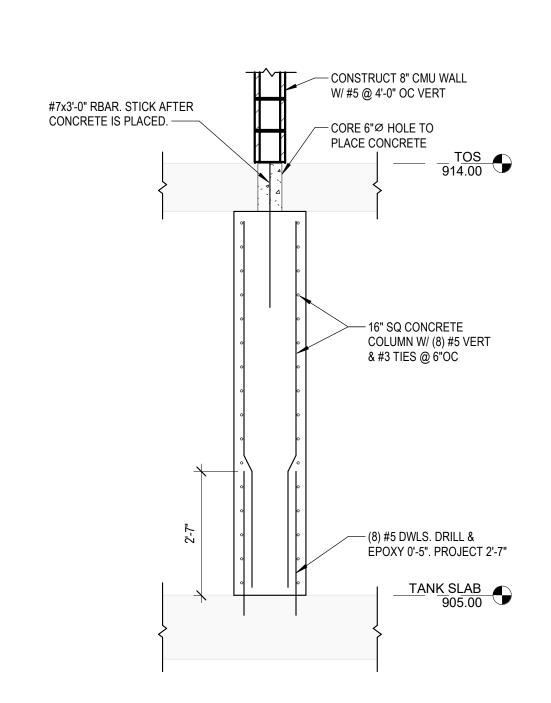
FLOOR PLAN















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LAKE PARK - ARTHUR STREET WTF REPAIRS SPRING LAKE PA SPRING

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SECTIONS AND DETAILS

P301

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SPRINGLAKE PARK - ARTHUR STREET WTF REPAIRS

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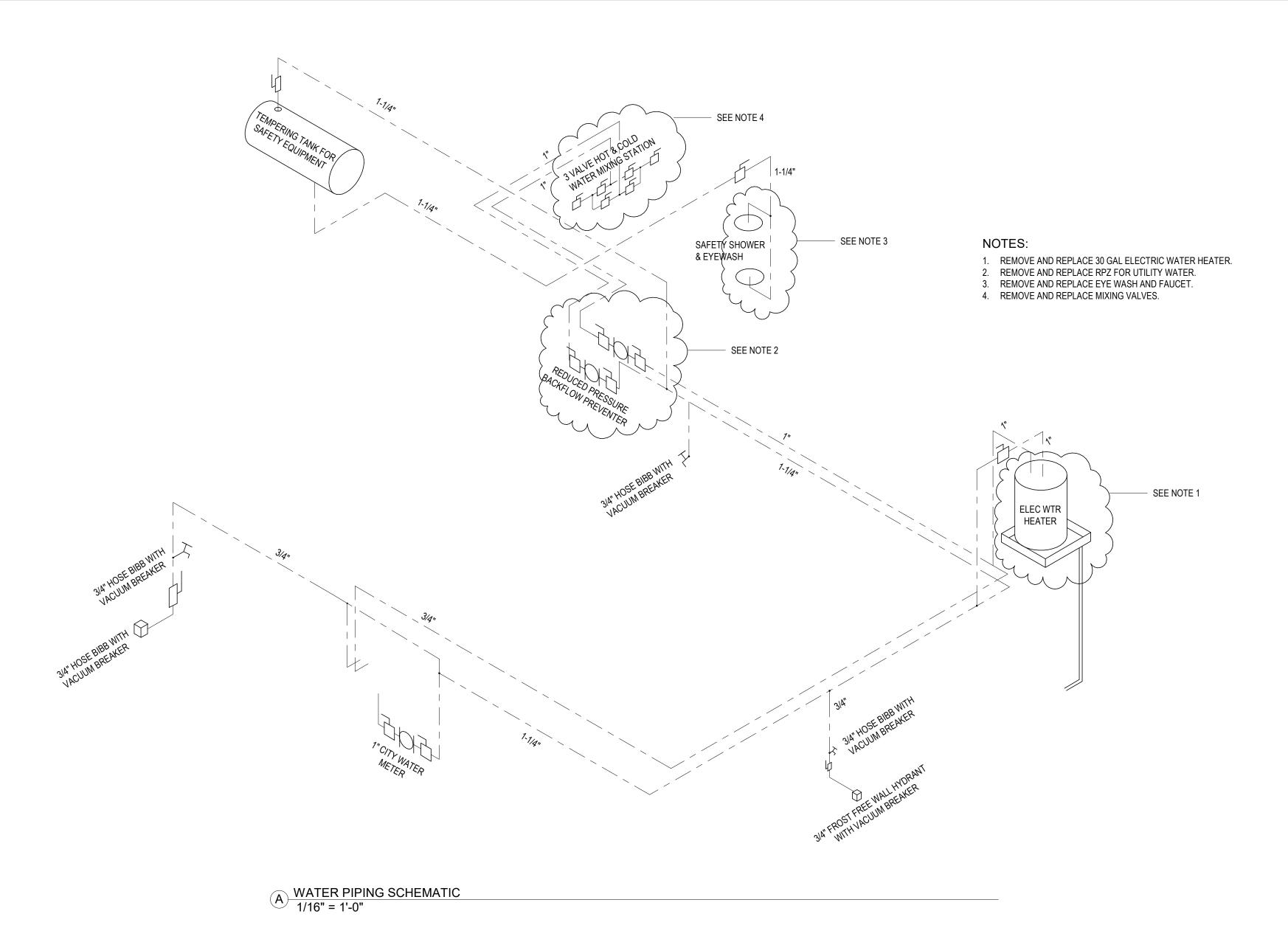
Project Status

Drawn By

Description

SCHEMATIC

P001



DATE 2020 LICENSE NO.

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LAKE PARK - ARTHUR STREET WTF REPAIRS

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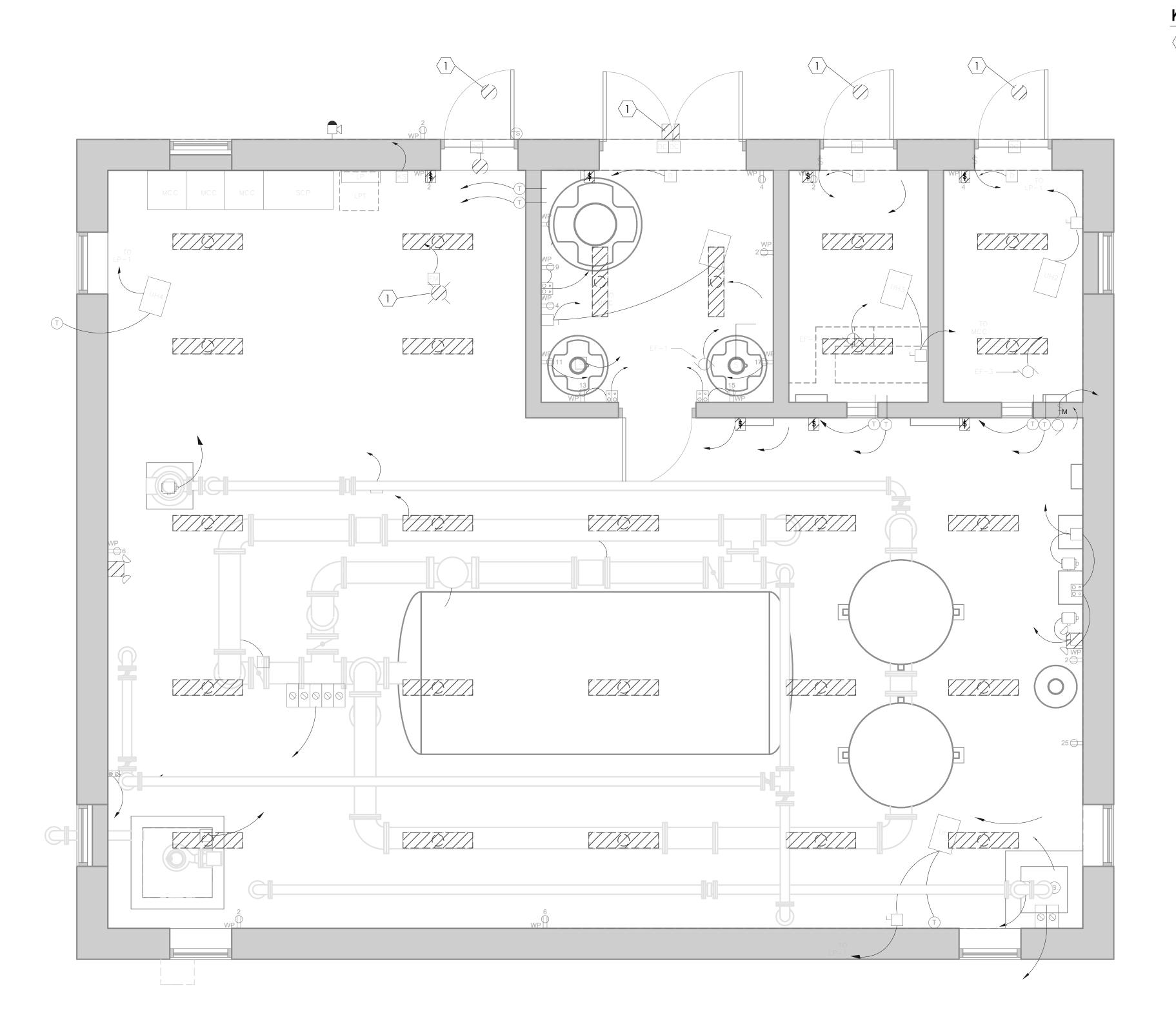
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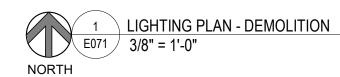
CTL

Project Status

Drawn By

PLUMBING SCHEMATIC







GENERAL NOTES

REMOVE ALL INTERIOR LIGHTING FIXTURES, PENDANT MOUNTING STEMS, AND CONDUCTORS. CONDUIT MAY REMAIN FOR RE-USE AS APPROPRIATE. EXTEND CONDUITS AS NECESSARY TO NEW LIGHT FIXTURES AND CONTROL COMPONENTS.

KEYNOTES

1 LIGHT FIXTURE TO REMAIN. RECONNECT CIRCUITING



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LAKE PARK - ARTHUR STREET WTF REPAIRS

SPRING LAKE

CW

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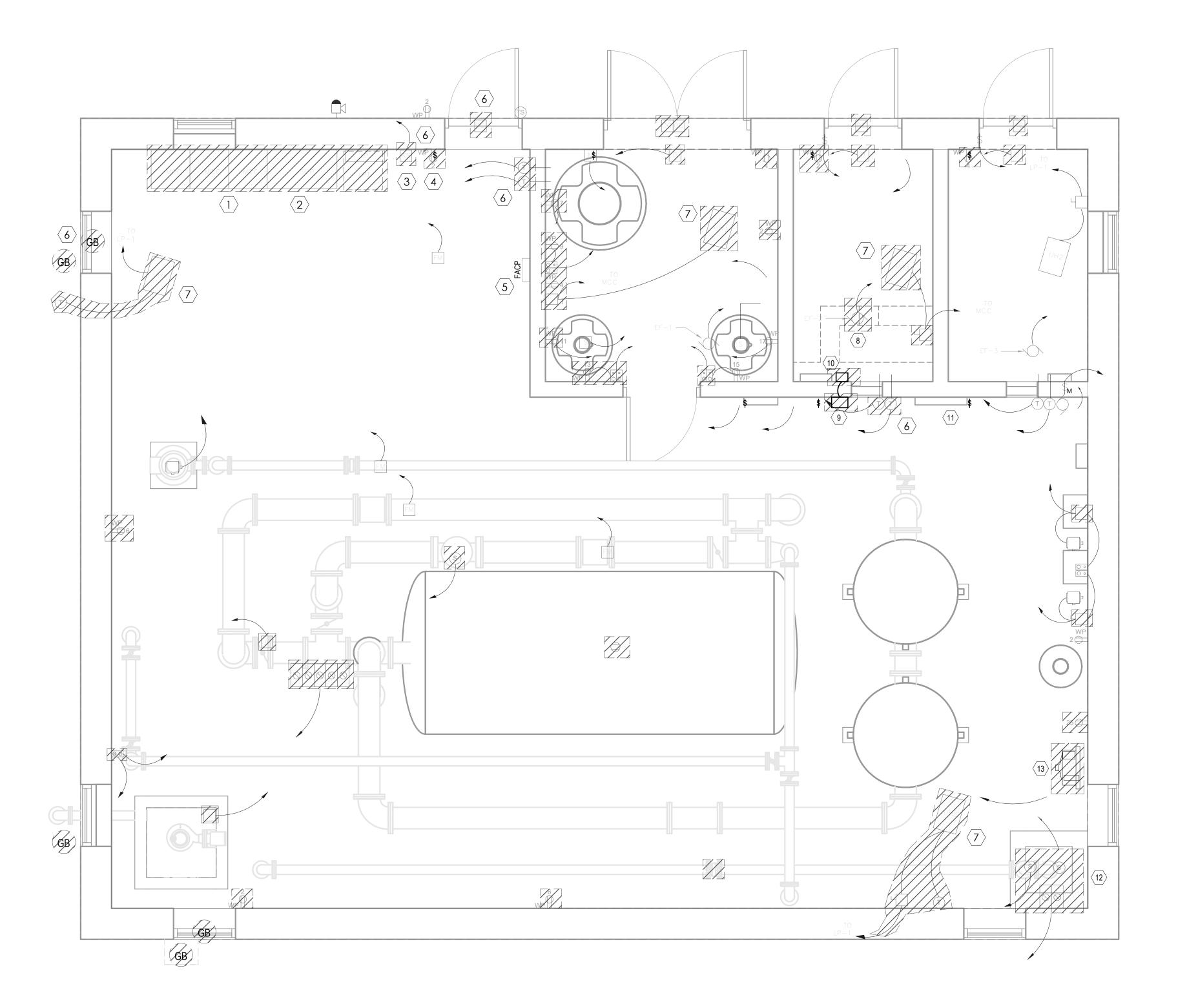
Owner SPRING

Revision Issue

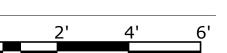
Description

DEMOLITION PLAN LIGHTING PLAN

E071







GENERAL NOTES

- 1. REMOVE ALL RECEPTACLES AND COVER PLATES. PROVIDE NEW RECEPTACLE AND COVER PLATE AND RE-TERMINATE WIRING.
- FOR ALL CONDUCTORS NOT SHOWN TO BE REPLACED, CUT ENDS TO REMOVE EXPOSED COPPER, TRIM BACK INSULATION, AND RE-TERMINATE CABLE.

KEYNOTES

- REMOVE MOTOR CONTROL CENTER AND ALL ASSOCIATED CONDUCTORS. SERVICE GROUNDING CONDUCTORS TO REMAIN AND BE RE-USED. CONDUITS MAY REMAIN FOR RE-USE TO THE EXTEND
- REMOVE SUPERVISORY CONTROL PANEL (SCP) AND ALL ASSOCIATED CONDUCTORS. CONDUITS MAY REMAIN FOR RE-USE TO THE EXTEND POSSIBLE..
- REMOVE PANELBOARD AND ALL ASSOCIATED CONDUCTORS. CONDUITS MAY REMAIN FOR RE-USE TO THE EXTEND POSSIBLE.
- REMOVE TRANSFORMER AND ALL ASSOCIATED CONDUCTORS. CONDUITS MAY REMAIN FOR RE-USE TO THE EXTEND POSSIBLE.
- REMOVE FIRE ALARM CONTRLOL PANEL AND ALL ASSOCIATED CONDUCTORS. CONDUITS MAY REMAIN FOR RE-USE TO THE EXTEND POSSIBLE.
- REMOVE INSTRUMENTATION AND ALL ASSOCIATED CONDUCTORS. CONDUITS MAY REMAIN FOR RE-USE TO THE EXTEND POSSIBLE.
- REMOVE UNIT HEATER, DISCONNECT, THERMOSTAT, AND ALL ASSOCIATED CONDUCTORS. CONDUITS MAY REMAIN FOR RE-USE TO THE EXTEND POSSIBLE.
- DISCONNECT EXISTING CONDUCTORS TO EXHAUST FAN. CONDUIT MAY REMAIN. RE-TERMINATE CONDUCTORS.
- REMOVE CHLORINE LEAK DETECTOR CONDUIT MAY REMAIN TO THE EXTENT POSSIBLE. INSTALL NEW DETECTOR AND RE-TERMINATE
- REMOVE CHLORINE AUTOMATIC SWITHC OVER SYSTEM. CONDUIT MAY REMAIN TO EXTENT POSSIBLE. INSTALL NEW SWITCH OVER SYSTEM AND RE-TERMINATE CONDUCTORS.
- 11. REPLACE SOLENOIDS FOR VALVE OPERATORS AND GAS SYSTEM. DISCONNECT AND RECONNECT CONDUCTORS.
- WATER HEATER TO BE REPLACED. DISCONNECT CONDUCTORS AND RECONNECT WHEN NEW WATER HEATER IS INSTALLED.
- REMOVE CONDUCTOR TO AIR COMPRESSOR. CONDUIT MAY BE RE-USED TO THE EXTENT POSSIBLE.

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REPAIRS WTF STREET ARTHUR

PARK

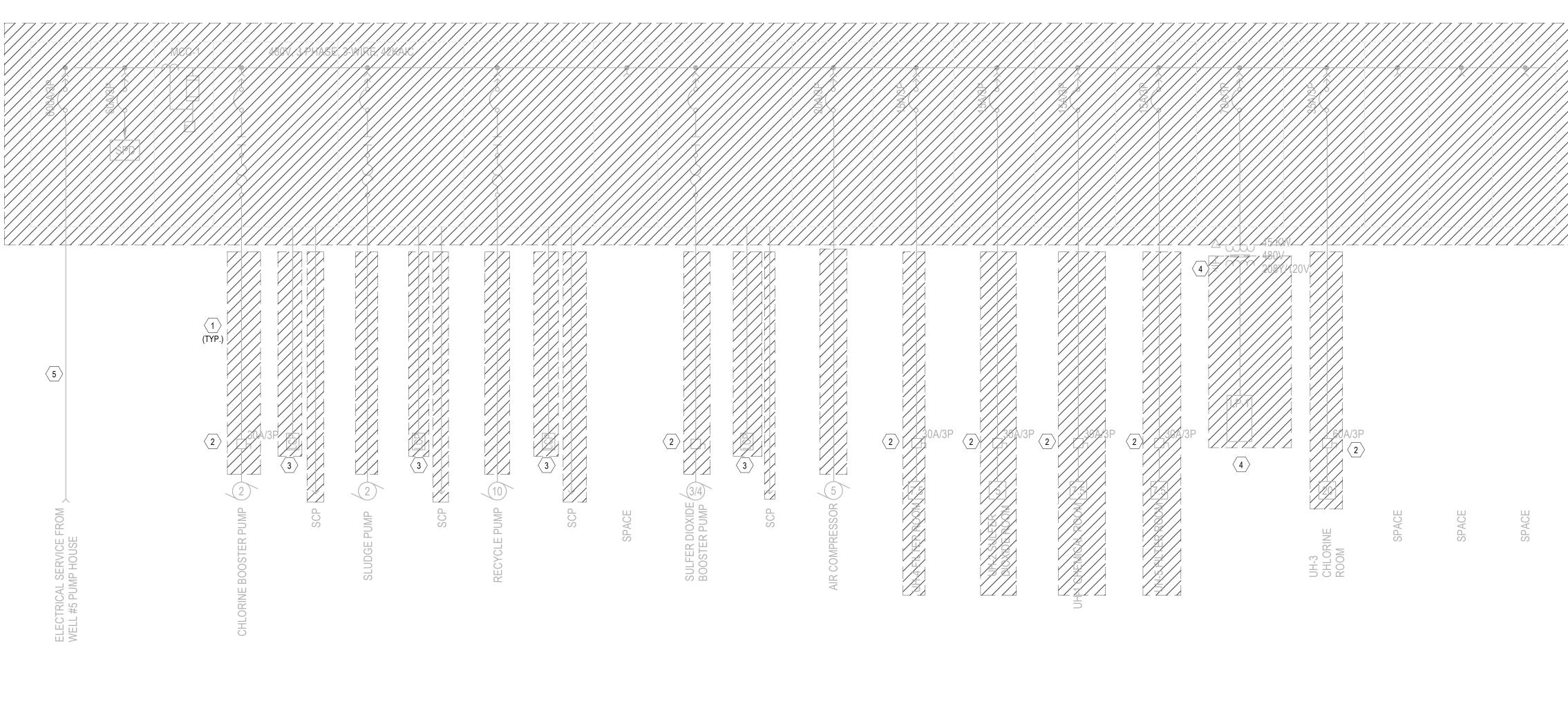
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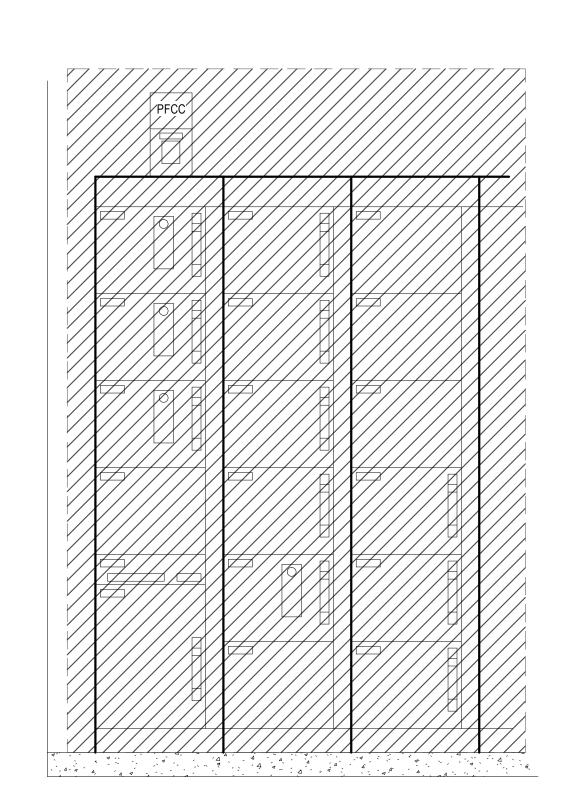
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DEMOLITION PLAN POWER AND INSTRUMENTATION PLAN



1 MCC ONE LINE - DEMOLITION 12" = 1'-0"



2 MCC-1 ELEVATION E073 3/4" = 1'-0"

KEYNOTES

- REMOVE CONDUCTOR AND REPLACE WITH NEW. CONDUIT MAY REMAIN TO THE EXTENT POSSIBLE.
- 2. REMOVE DISCONNECT SWITCH AND REPLACE WITH NEW. REMOVE LOCAL CONTROL PANEL AND REPLACE WITH NEW.
 - REMOVE ELECTRICAL TRANSFORMER AND PANELBOARD AND REPLAE
 - RECONNECT EXISTING MAIN FEEDER. CUT AND RETERMINATE CONDUCTORS TO NEW MCC TO REMOVE CORRODED COPPER.

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ARTHUR STREET WTF REPAIRS PARK -LAKE

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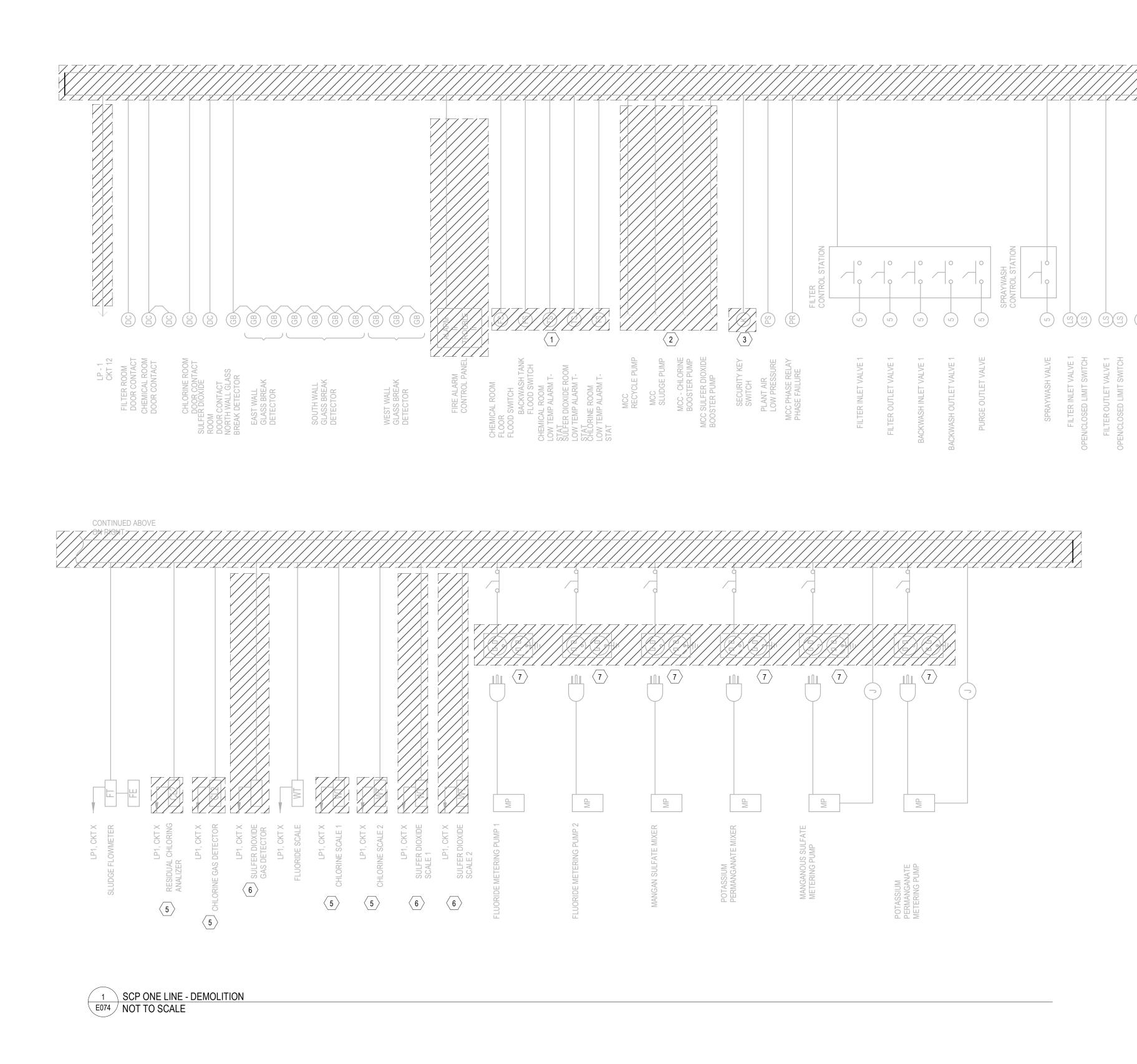
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Project Status

DEMOLITION PLAN MCC ONE LINE





- ALL CONDUITS SHOWN MAY BE RE-USED TO THE EXTENT POSSIBLE.
- WHERE CONDUCTORS ARE DISCONNECTED AND RECONNECTED BUT NOT REMOVED. CUT THE END BACK TO THE INSULATION AND RE-TERMINATE.

- REMOCE FLOOD SWITCH AND REPLACE WITH NEW.
- REMOVE AND REPLACE CONDUCTORS BACK TO MCC.
- 3. REMOVE KEYED SWITCH AND REPLACE WITH NEW.
- 4. REPLACE PRESSURE TRANSDUCER WITH NEW.
- REPLACE CHLORINE ANALYZER, GAS DETECTOR AND SCALES WITH NEW.
- REMOVE EQUIPMENT AND ALL ASSOCIATED COINDUIT/WIRE.

REMOVE EQUIPMENT AND ALL ASSOCIATED COIN
REPLACE RECEPTACLE AND COVER WITH NEW.

SEH

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CONTINUED BELOW

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Owner
SPRING LAKE PARK - ARTHUR STREET WTF REPAIRS

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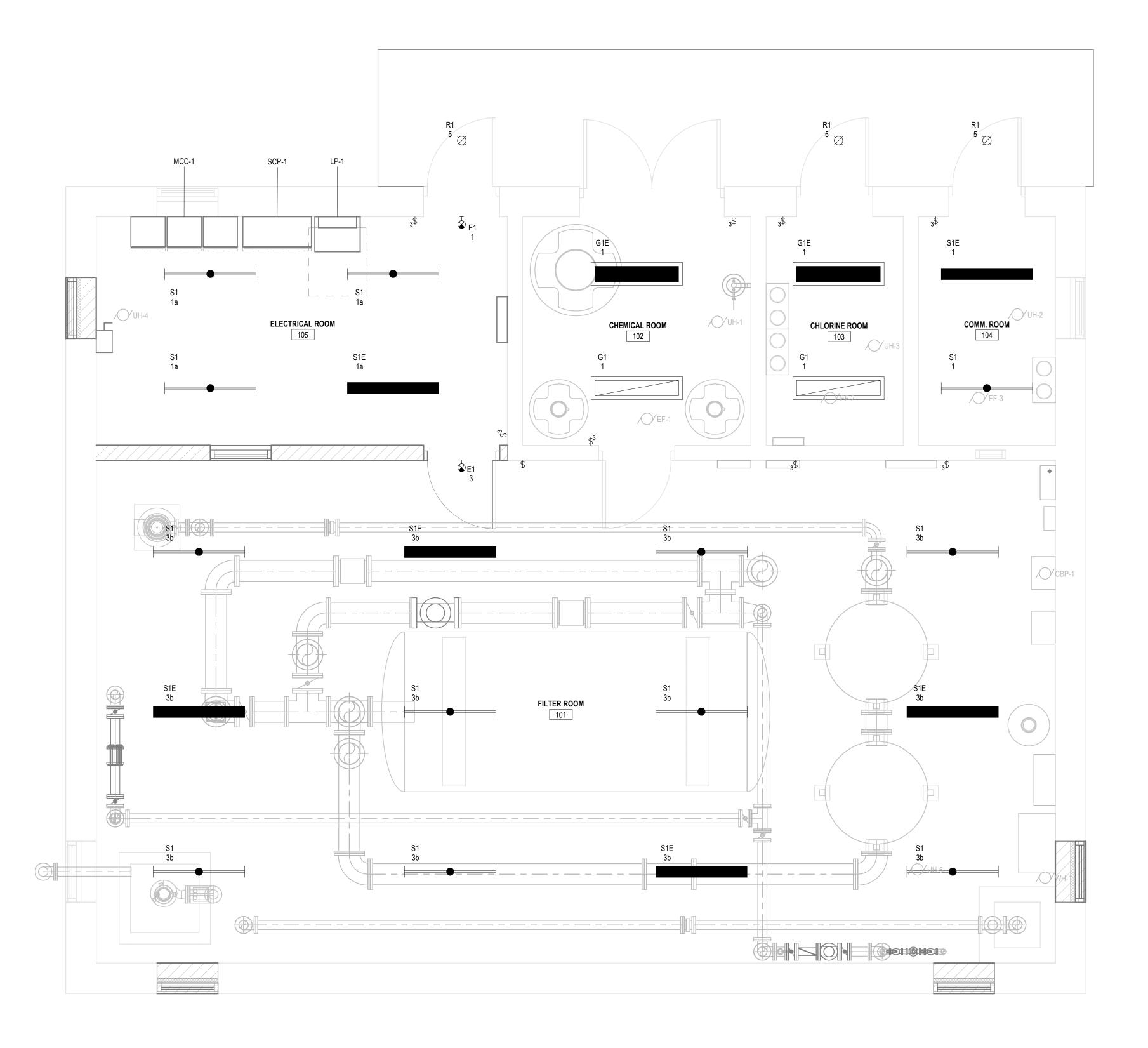
Revision Iss

Description

DEMOLITION PLAN SCP ONE LINE

F074

1. NOTES HERE



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SPRING LAKE PARK - ARTHUR STREET WTF REPAIRS

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SEH Project
Checked By
Drawn By

Project Status

Revision Issue

Description

ELECTRICAL LIGHTING PLAN

E01

1 ELECTRICAL LIGHTING PLAN
E01 3/8" = 1'-0"
0 2' 4' 6'



DATE 2020 LICENSE NO.

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LAKE PARK - ARTHUR STREET WTF REPAIRS

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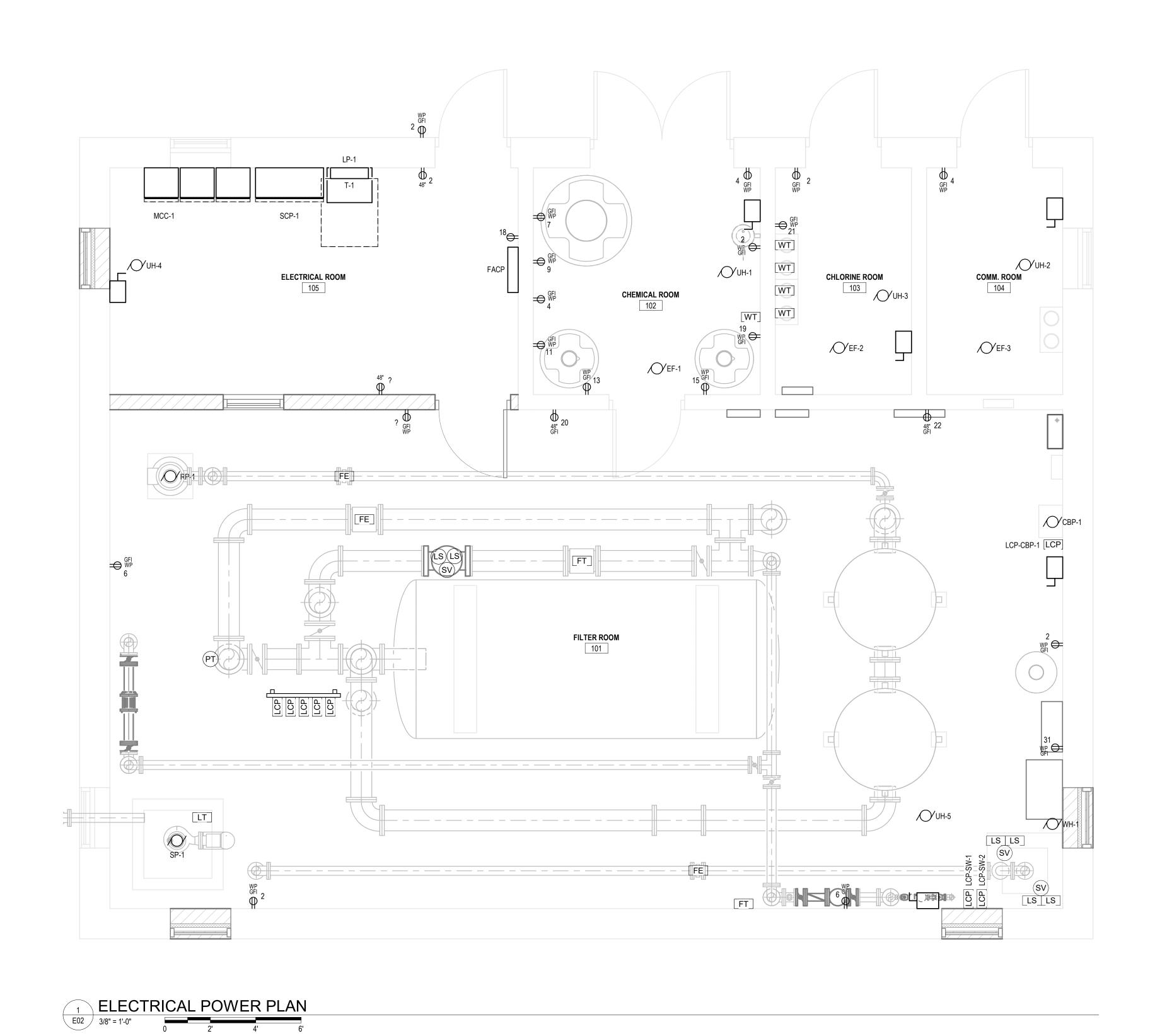
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ELECTRICAL POWER AND INSTRUMENTATION PLAN





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LAKE PARK - ARTHUR STREET WTF REPAIRS PRING LAKE PA S S

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ELECTRICAL MCC ONE-LINE

E03 NOT TO SCALE

NEW SCP ONE-LINE

E04 12" = 1'-0"

I HEREBY CERTIFY THAT THIS PLAN, SPECIFICATION, OR REPORT WAS PREPARED BY ME OR UNDER MY DIRECT SUPERVISION AND THAT I AM A DULY LICENSED PROFESSIONAL ENGINEER UNDER THE LAWS OF THE STATE OF

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PARK - ARTHUR STREET WTF REPAIRS

SPRING LAKE PA SPRING

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ELECTRICAL PLC ONE-LINE

PANELBOARD: LP-1

LOCATION: ELECTRICAL ROOM 105 **MOUNTING:** SURFACE NEMA 1 MAIN DEVICE: 200.0 A MAIN CB BUS AMPS: 225 AMPS

VOLTAGE: 208Y/120 V. 3 ø 4 W. A.I.C. RATING: 10,000 AMPS SYMMETRICAL SPECIAL:

CONDUIT/ WIRE	LOAD DESCR	IPTION	BKR	Р	СКТ	PHASE	A kVA	PHASE	B kVA	PHASE	C kVA	CKT	Р	BKR	LOAD DESCRIPTION	CONDUIT/ WIRE
3/4"- 2#12, 1#12G	LIGHTING		20 A	1	1	1.5	0.0					2	1	20 A	RECEPTACLES	3/4"- 2#12, 1#120
3/4"- 2#12, 1#12G	LIGHTING		20 A	1	3			2.6	0.0			4	1	20 A	RECEPTACLES	3/4"- 2#12, 1#120
3/4"- 2#12, 1#12G	EXTERIOR LIGT	HING	20 A	1	5					0.3	0.0	6	1	20 A	RECEPTACLES	3/4"- 2#12, 1#120
3/4"- 2#10, 1#10G	M. SULF. MIXER	2	30 A	1	7	0.0	0.0					8	1	20 A	EF-3	3/4"- 2#12, 1#120
3/4"- 2#12, 1#12G	M. SULF. METER	R PUMP	20 A	1	9			0.0	0.0			10	1		RESIDUAL CHL	3/4"- 2#12, 1#120
3/4"- 2#12, 1#12G	PPM MIXER		20 A	1	11					0.0	0.0	12	1		SCP-1	3/4"- 2#12, 1#120
3/4"- 2#12, 1#12G	PPM METER PU	IMP	20 A	1	13	0.0	0.0					14	2	30 A	WATER HEATER (WH-1)	3/4"- 3#12, 1#120
3/4"- 2#12, 1#12G	FLOURIDE MET	ER PUMP	20 A	1	15			0.0	0.0			16				
	SPARE		20 A	1	17					0.0	0.0	18	1	20 A	FACP	3/4"- 2#12, 1#120
3/4"- 2#12, 1#12G	PPM & FLUOR.	SCALES	20 A	1	19	0.0	0.0					20	1	20 A	DEHUMIDIFIER RCPT	3/4"- 2#12, 1#120
3/4"- 2#12, 1#12G	CHLORINE SCA	LES	20 A	1	21			0.0	0.0			22	1	20 A	DEHUMIDIFIER RCPT	3/4"- 2#12, 1#120
3/4"- 2#12, 1#12G	GAS DETECTOR	₹	20 A	1	23					0.0	0.0	24	1	20 A	SPARE	
3/4"- 2#12, 1#12G	EF-1		20 A	1	25	0.0	0.0					26	1	20 A	SPARE	
3/4"- 2#12, 1#12G	SAFE VALVE, C	HL	20 A	1	27			0.0	0.0			28	1		SPARE	
	SPARE		20 A	1	29					0.0	0.0	30	1	20 A	SPARE	
3/4"- 2#12, 1#12G	AIR DRYER		20 A	1	31	0.0	0.0					32	1	20 A	SPARE	
3/4"- 2#12, 1#12G	SLUDGE FLOW	METER	20 A	1	33			0.0				34				
3/4"- 2#12, 1#12G	EF-2		20 A	1	35					0.0	0.0	36	1	20 A	SPARE	
	TVSS		30 A	3	37	0.0	0.0					38	1	20 A	SPARE	
					39			0.0	0.0			40	1	20 A	SPARE	
					41					0.0	0.0	42	1	20 A	SPARE	
			TOTA	L L(OAD:	1 k	VA	3 k\	/A	0 k\	/A					
			TOTA	L Al	MPS:	14	- A	22.9	Α	3 A	4					
OAD CLASSIFICATIO	N	CON	NECTI	ED		D	EMAND)	ESTIMATED			PANEL TOTALS				
RCPT			0 VA			0.00%			0 VA							
ITES 4		43	37 VA			125.00%			5422 VA			CONNECTED LOAD:				4337 VA
1TR			0 VA				0.00%			0 VA		ESTIMATED DEMAND:				5422 VA
							-			CONNECTED CURRENT:				12.0 A		
													Е	ST. DEMAND CURRENT:	15.0 A	

LIGHTING FIXTURE SCHEDULE



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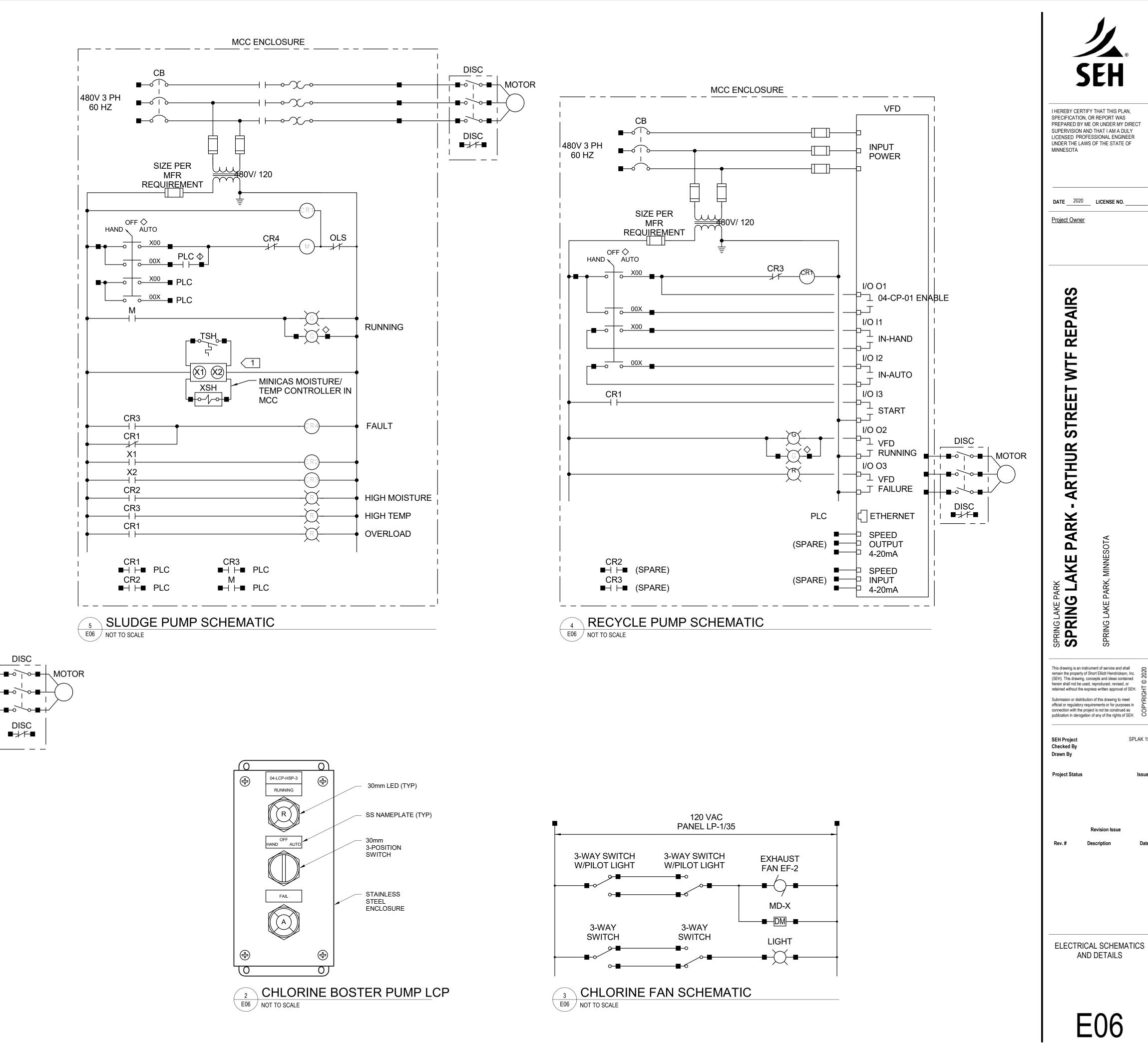
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ELECTRICAL SCHEDULES



MCC ENCLOSURE

START

IN-HAND

IN-AUTO

RUNNING

FAULT

CB

SIZE PER

MFG REQUIREMENT

PLC PLC PLC

CHLORINE BOOSTER PUMP SCHEMATIC

OFF 🔷

480V 3 PH

60 HZ

E06 12" = 1'-0"

ARTHUR

E06

AND DETAILS