

OVERALL SITE PLAN
 0' 120' 240'

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GENERAL NOTES

1. NOT ALL OF THE GAS, POWER, OR TELEPHONE LINES, WHETHER ABOVE OR BELOW GROUND, HAVE BEEN SHOWN ON THE DRAWINGS. THE CONTRACTOR MUST REALIZE THAT THE ACTUAL LOCATIONS OF THE UTILITIES SHOWN ON THE DRAWINGS MAY BE DIFFERENT FROM THE LOCATIONS INDICATED.
2. THE LOCATIONS OF THE EXISTING YARD PIPING, SUCH AS RAW SEWAGE LINES, DRAIN LINES, NON-POTABLE WATER LINES, ETC., AS SHOWN ON THE DRAWINGS, HAS BEEN DETERMINED FROM PLANS FOR THE EXISTING FACILITIES AND ARE GIVEN FOR THE CONVENIENCE OF THE CONTRACTOR. THE CONTRACTOR MUST ASSUME RESPONSIBILITY FOR ALL PIPING AND MUST REALIZE THAT THE ACTUAL LOCATIONS MAY BE DIFFERENT FROM THOSE INDICATED ON THE DRAWINGS.
3. IT SHALL BE THE CONTRACTOR'S RESPONSIBILITY TO MAINTAIN IN SERVICE THE WASTEWATER TREATMENT FACILITY ALL EXISTING PROCESS PIPING AND ALL EXISTING UTILITIES ENCOUNTERED DURING CONSTRUCTION UNLESS OTHERWISE INDICATED IN THE DRAWINGS. ANY PIPING WHICH CAN BE REMOVED DURING CONSTRUCTION WITHOUT UNDUE INTERRUPTION OF SERVICE MAY BE REMOVED AND REPLACED BY THE CONTRACTOR WITH THE PERMISSION OF THE OWNER.
4. BEFORE WORKING WITH OR AROUND EXISTING UTILITIES, THE APPLICABLE UTILITY COMPANY SHALL BE CONTACTED BY THE CONTRACTOR.
5. THE CONTRACTOR SHALL PRESERVE AND PROTECT PROPERTY MARKERS, SECTION CORNERS, SURVEY MARKS AND CITY BENCH MARKS, SUCH AS STONES, PIPES, OR OTHER MONUMENTS ENCOUNTERED. IF THE CONTRACTOR MUST RELOCATE THE PROPERTY MARKERS OR MONUMENTS, THEIR LOCATION SHALL BE REFERENCED BY A REGISTERED LAND SURVEYOR AND THE OWNER NOTIFIED BEFORE MOVING. ALL PROPERTY MARKERS AND MONUMENTS RELOCATED DURING CONSTRUCTION SHALL BE RE-ESTABLISHED BY A REGISTERED LAND SURVEYOR AT THE CONTRACTOR'S EXPENSE.
6. THE CONTRACTOR SHALL FAMILIARIZE HIMSELF WITH THE AREA AND NO EXTRA COMPENSATION CONNECTED WITH OVERHEAD UTILITIES WILL BE ALLOWED.
7. THE CONTRACTOR IS RESPONSIBLE FOR DUST AND MUD CONTROL.
8. ROADWAY SURFACING AND BASE MATERIALS, OR ANY OTHER PROPERTY REMOVED OR DAMAGED, SHALL BE REPLACED OR REPAIRED AS PROVIDED FOR IN THE SPECIFICATIONS OR OTHER CONTRACT DOCUMENTS.
9. THE CONTRACTOR IS RESPONSIBLE FOR ALL CONSTRUCTION TRAFFIC CONTROL.
10. IT IS INTENDED THAT GRADING BE PROVIDED TO ASSURE ADEQUATE DRAINAGE AWAY FROM THE BUILDINGS AND STRUCTURES. ALL GRADING SHALL BE APPROVED BY THE OWNER.
11. THE CONTRACTOR IS SOLELY AND COMPLETELY RESPONSIBLE FOR JOB SITE CONDITIONS DURING THE COURSE OF CONSTRUCTION OF THIS PROJECT, INCLUDING EROSION CONTROL AND THE SAFETY OF ALL PERSONS AND PROPERTY. THIS REQUIREMENT SHALL APPLY CONTINUOUSLY AND NOT BE LIMITED TO NORMAL WORKING HOURS, AND THE CONTRACTOR SHALL DEFEND, INDEMNIFY AND HOLD THE OWNER AND THE ENGINEER HARMLESS FROM ALL LIABILITY, REAL OR ALLEGED, IN CONNECTION WITH THE PERFORMANCE OR WORK ON THE PROJECT EXCEPTING FOR LIABILITY ARISING FROM THE SOLE NEGLIGENCE OF THE OWNER OR THE ENGINEER.
12. INFORMATION ON DETAIL DRAWINGS TAKES PRIORITY OVER ALL GENERAL DRAWINGS AND SCHEDULES. CONFLICTS SHALL BE RESOLVED ACCORDINGLY.
13. WHEN CONNECTIONS ARE TO BE MADE TO EXISTING PIPING AND STRUCTURES, THE LOCATION AND ELEVATION OF THE EXISTING PIPING SHALL BE FIELD VERIFIED AND NOTIFICATION GIVEN TO THE OWNER IF THE EXISTING PIPING IS FOUND TO BE DIFFERENT THAN THAT SHOWN ON THE DRAWINGS.
14. THE COST OF ABIDING BY THE PROVISIONS OF PERMITS ISSUED BY VARIOUS AGENCIES SHALL BE CONSIDERED INCIDENTAL TO THE CONTRACT. ALL ASSOCIATED BONDING REQUIREMENTS AND COSTS ARE INCIDENTAL TO THE CONTRACT.
15. THE CONTRACTOR IS RESPONSIBLE FOR OBTAINING PERMITS FROM THE WILL COUNTY HIGHWAY DEPARTMENT (815/727-8476) WHEN OVERWEIGHT LOADS ARE TO BE TRANSPORTED TO AND FROM THE PLANT SITE. THE PERMIT WILL BE NECESSARY FOR LOADS EXCEEDING THE STATE MAXIMUM WEIGHT LIMIT OF 73,280 LBS. AN INDIVIDUAL PERMIT WILL BE REQUIRED FOR EACH OVERWEIGHT LOAD. THE CONTRACTOR MAY APPLY FOR THE PERMIT BY PHONE AND PICK UP AND SIGN THE PERMIT AT THE HIGHWAY DEPARTMENT OFFICES IN JOLIET. THE FOLLOWING INFORMATION WILL BE NEEDED:
 - A DESCRIPTION OF THE LOAD.
 - THE LOAD ORIGIN AND DESTINATION.
 - THE LOAD'S TOTAL LENGTH, WIDTH, AND HEIGHT.
 - WEIGHTS OF SEPARATE COMPONENTS OF THE LOAD (TRACTOR WEIGHT, TRAILER WEIGHT, AND THE WEIGHT OF THE OBJECT BEING MOVED).
 - LICENSE NUMBERS OF THE TRACTOR AND TRAILER BEING USED.
 - DATE THAT THE MOVE WILL TAKE PLACE.

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PROJECT TITLE
**CITY OF JOLIET, ILLINOIS
 EASTSIDE WWTP
 SLUDGE PUMP REPLACEMENT
 AND TANK REPAIRS**

DESIGNED BY:	JLE
DRAWN BY:	CSH
CHECKED BY:	TKB
DATE CHECKED:	04/07

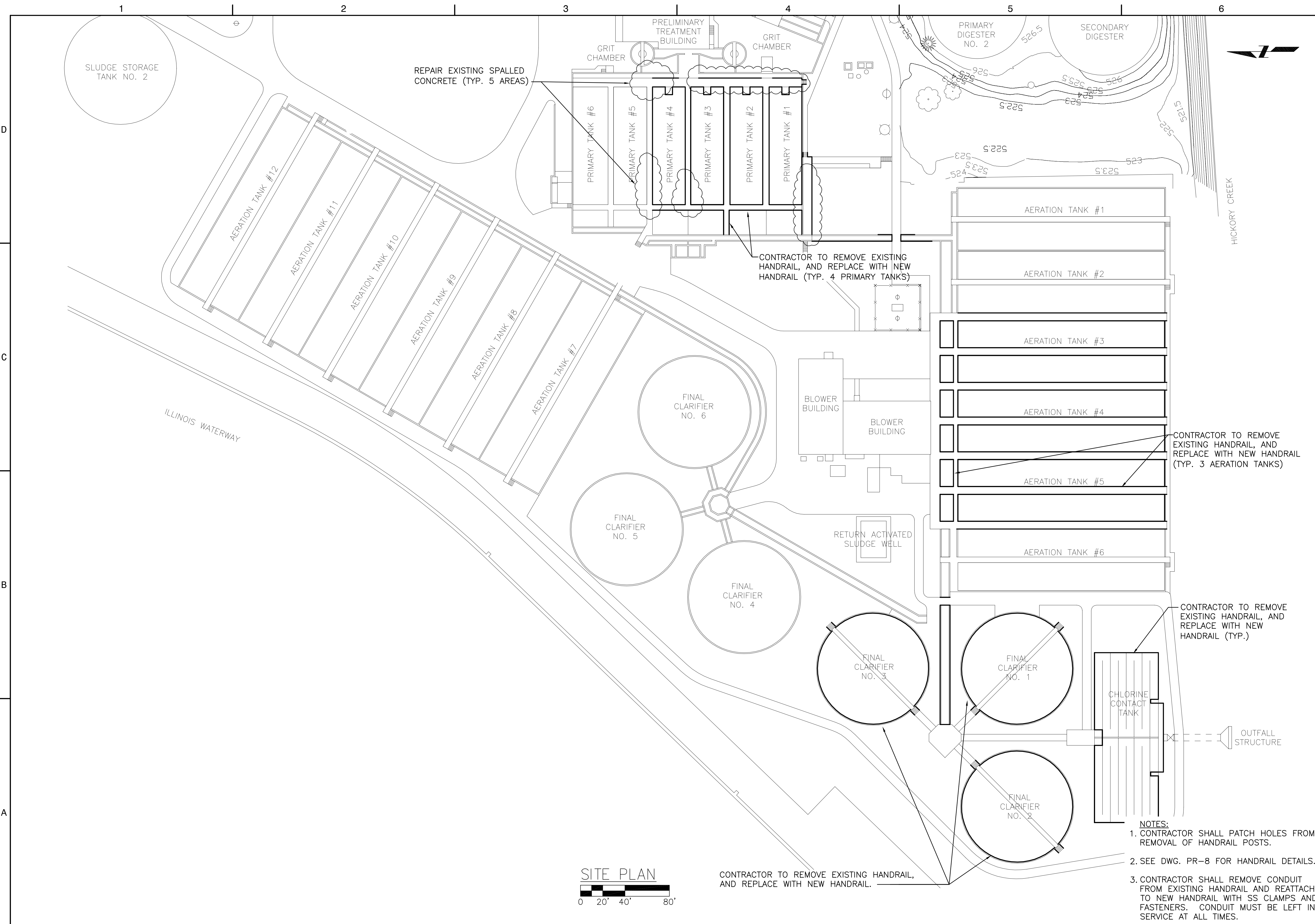
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DRAWING TITLE
**OVERALL SITE PLAN AND
 GENERAL INFORMATION**

PROJECT No.
J02570

DRAWING No.
G-2



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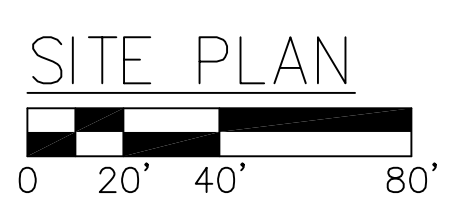
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DRAWING TITLE
**HANDRAIL REPLACEMENT
PLAN AND CONCRETE
REPAIR PLAN**

PROJECT No.
J02570
DRAWING No.
PR-2
DRAWING 4 OF 22

- NOTES:**
1. CONTRACTOR SHALL PATCH HOLES FROM REMOVAL OF HANDRAIL POSTS.
 2. SEE DWG. PR-8 FOR HANDRAIL DETAILS.
 3. CONTRACTOR SHALL REMOVE CONDUIT FROM EXISTING HANDRAIL AND REATTACH TO NEW HANDRAIL WITH SS CLAMPS AND FASTENERS. CONDUIT MUST BE LEFT IN SERVICE AT ALL TIMES.



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2

3

4

5

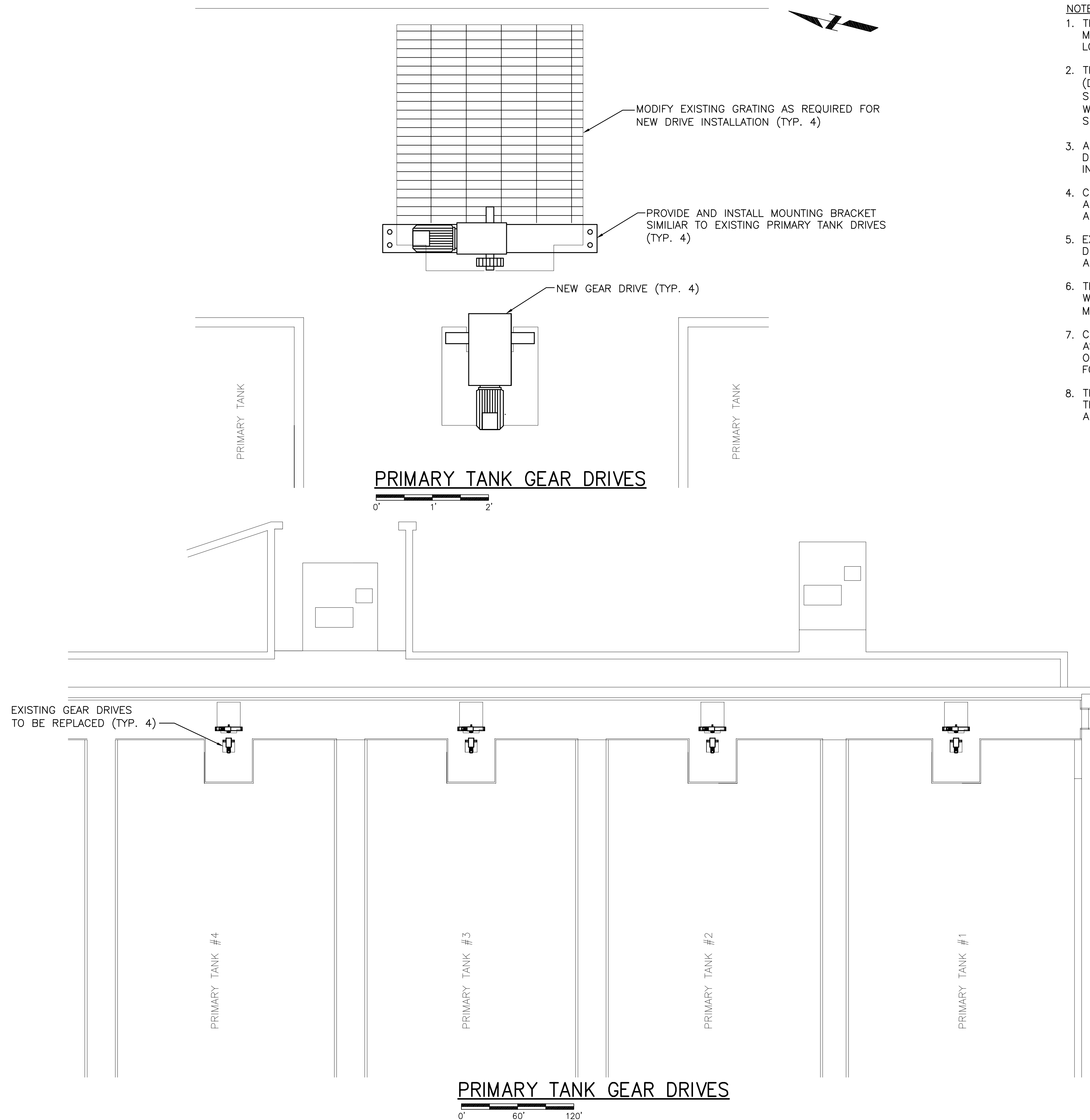
6

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C

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A



NOTES:

1. THE CONTRACTOR SHALL FURNISH ALL LABOR AND MATERIALS FOR REPLACEMENT OF THE DRIVE UNITS LOCATED AT EXISTING PRIMARY TANKS 1 THROUGH 4.
2. THE REPLACEMENT DRIVES SHALL BE V04-1758-1 (DUAL OUTPUT SHAFT) AND V04-1758-2 (SINGLE SHAFT) AS MANUFACTURED BY US FILTER/ENVIREX, WAUKESHA WI. PHONE # (262) 521-8218. NO SUBSTITUTIONS WILL BE ALLOWED.
3. A TOTAL OF ONE (1) SINGLE SHAFT AND ONE (1) DUAL OUTPUT SHAFT WILL BE FURNISHED AND INSTALLED FOR EACH EXISTING PRIMARY TANK.
4. CONTRACTOR SHALL BE RESPONSIBLE FOR PROVIDING A COMPLETE WORKING SYSTEM, INCLUDING ELECTRICAL AND CONTROL RECONNECTIONS.
5. EXISTING REMOVED DRIVES SHALL BE LEGALLY DISPOSED OF OFFSITE BY THE CONTRACTOR. ALL ANCHOR BOLTS TO BE CUT FLUSH WITH SURFACE.
6. THE NEW DRIVES SHALL BE MOUNTED IN ACCORDANCE WITH THE DETAILS SHOWN ON THIS DRAWING AND THE MANUFACTURER'S SHOP DRAWINGS.
7. CONTRACTOR SHALL REPLACE EXISTING GEAR DRIVES AS SHOWN. ONLY ONE GEAR DRIVE SHALL BE OUT OF SERVICE AT A TIME. COORDINATE WITH OWNER FOR SHUT DOWN.
8. THE CITY WILL DRAIN EXISTING TANKS AS REQUIRED. THE CONTRACTOR IS RESPONSIBLE FOR DISCONNECTING AND RE-CONNECTING THE EXISTING CHAINS.

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PROJECT TITLE
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EASTSIDE WWTP
SLUDGE PUMP REPLACEMENT
AND TANK REPAIRS**

DESIGNED BY: JLE
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DRAWING TITLE
**PRIMARY GEAR
DRIVE REPLACEMENT**

PROJECT No.
J02570

DRAWING No.
PR-3

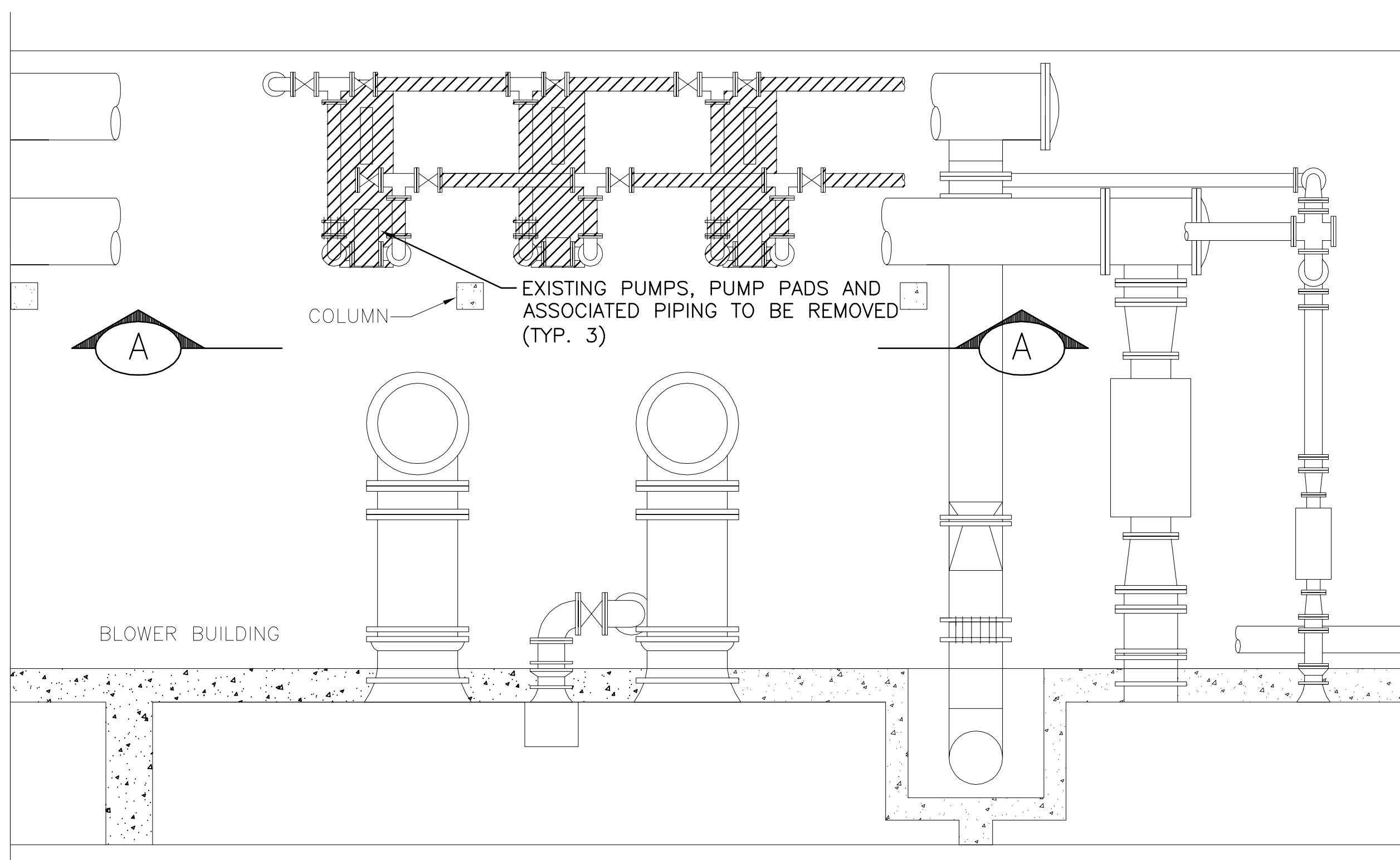
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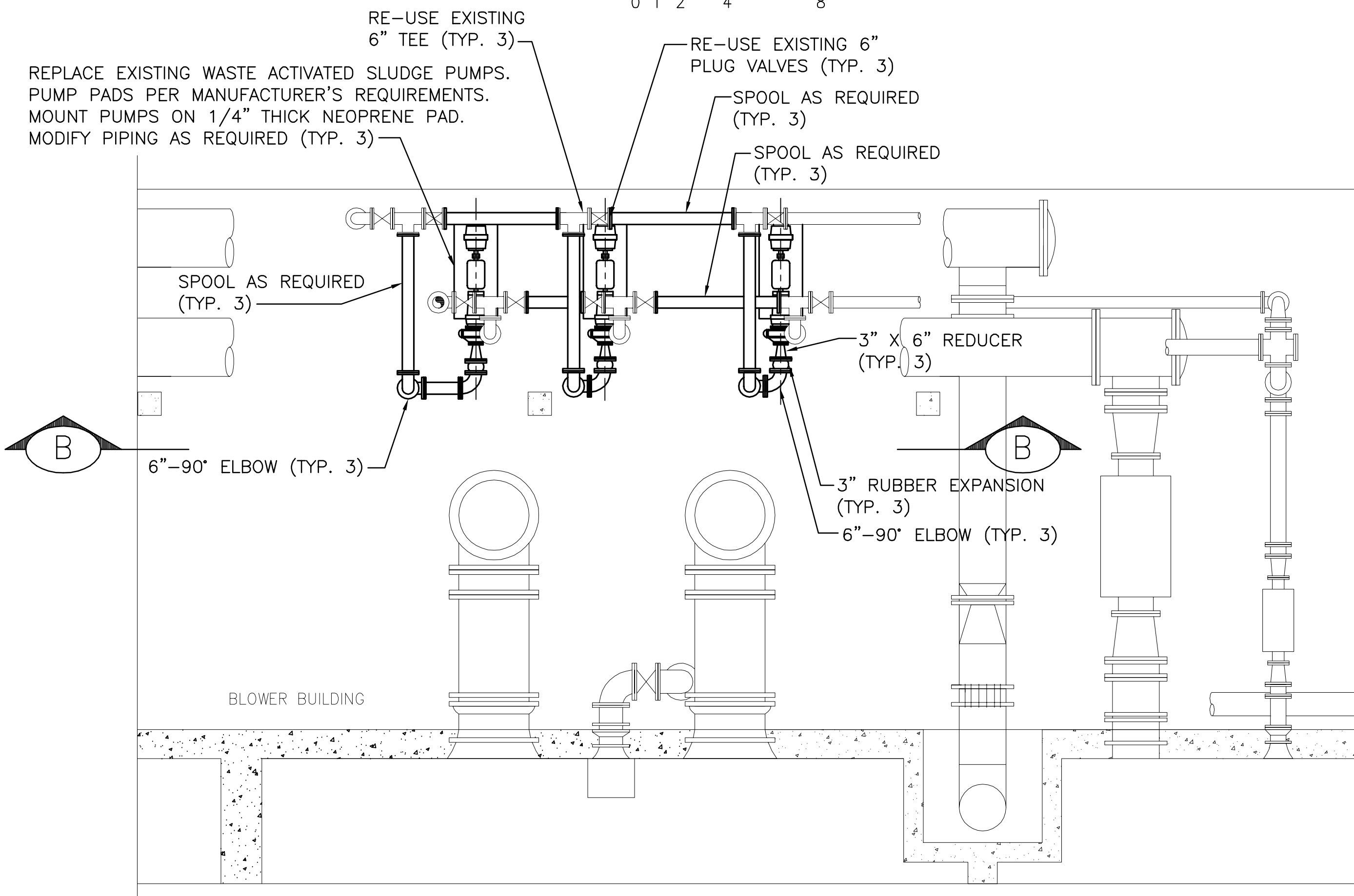
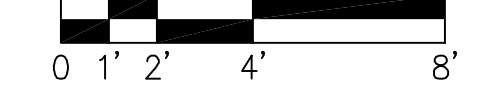
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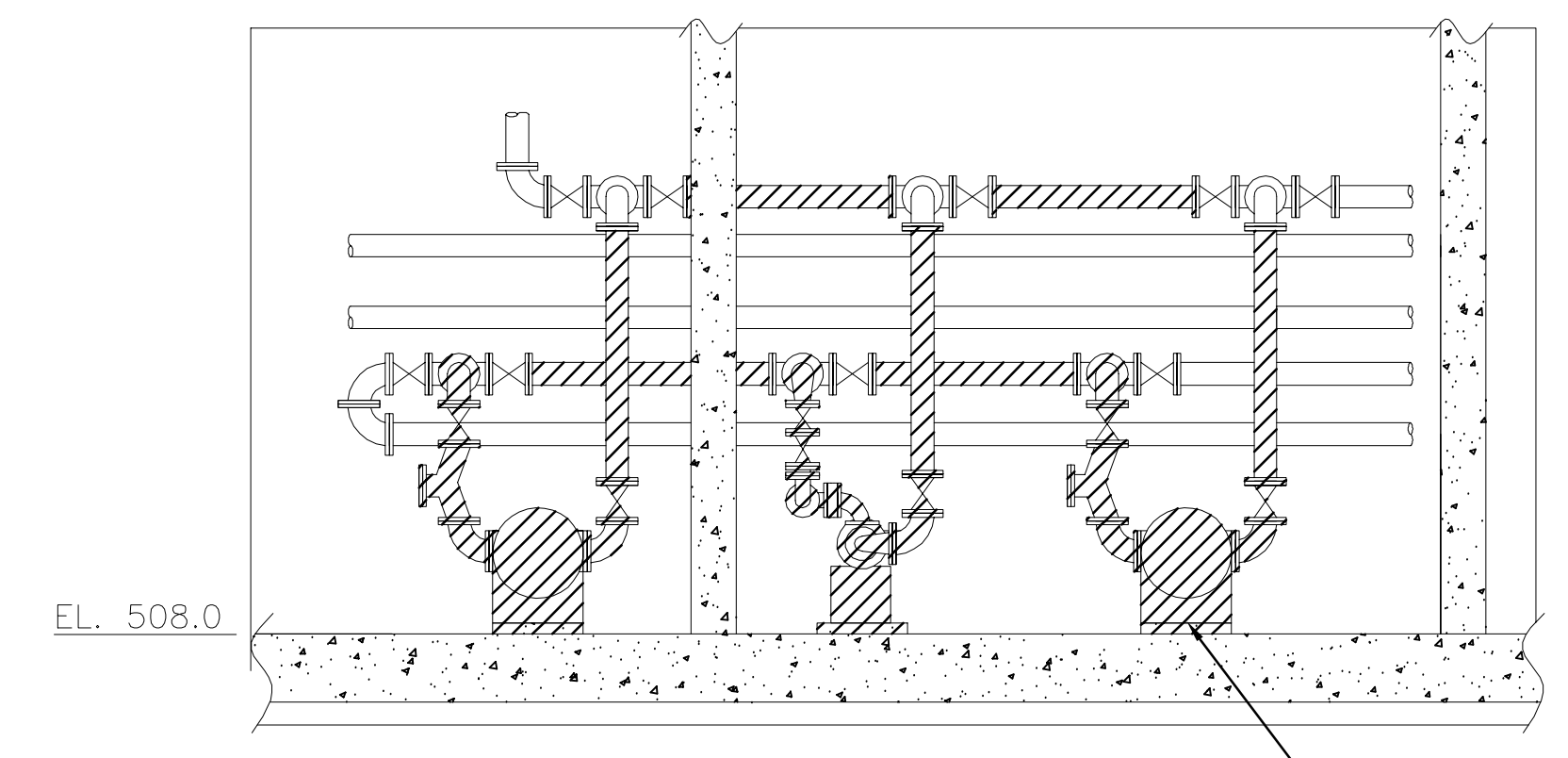
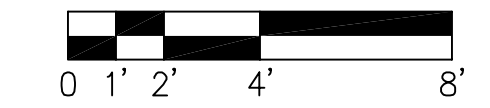
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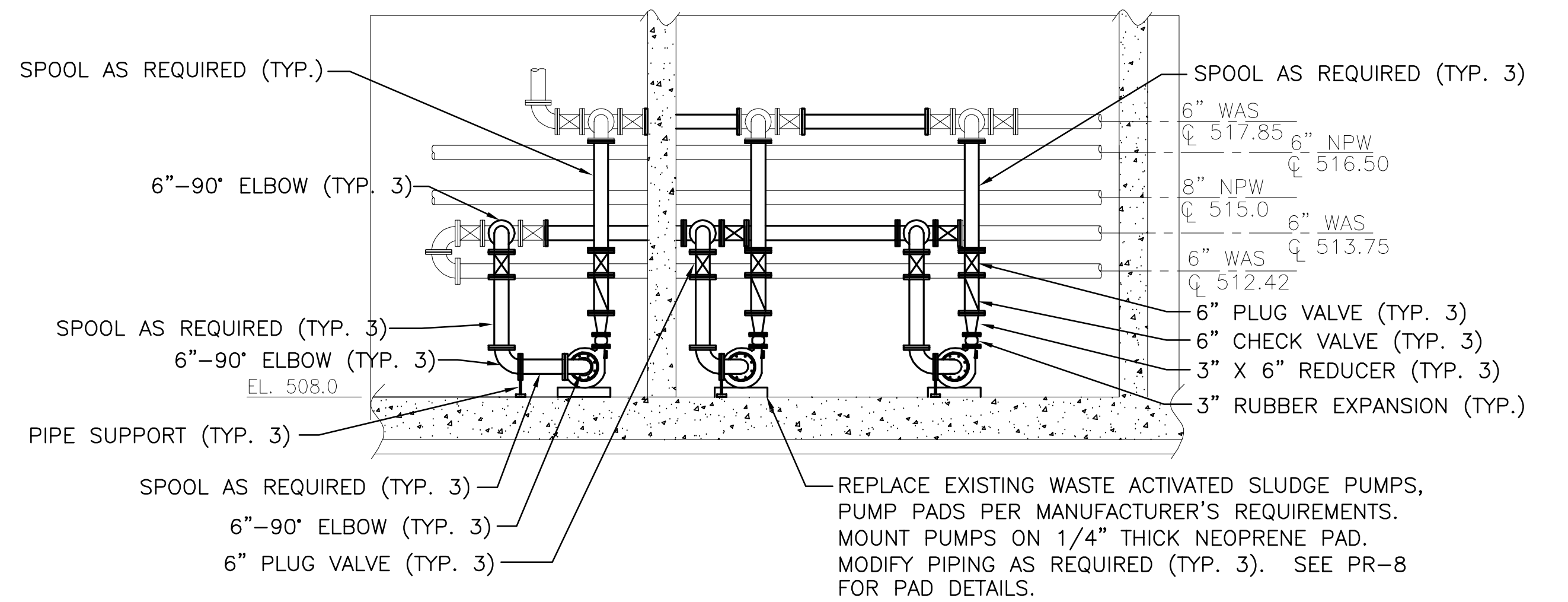
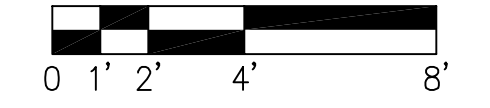
DEMOLITION PLAN



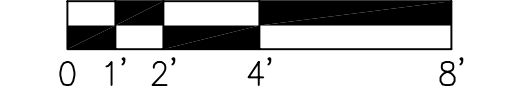
PROPOSED PLAN



DEMOLITION SECTION A-A



PROPOSED SECTION B-B



- NOTES:**
- CONTRACTOR SHALL REPLACE EXISTING PUMPS AS SHOWN. ONLY ONE PUMP SHALL BE OUT OF SERVICE AT ONE TIME. COORDINATE WITH OWNER FOR SHUT DOWN.
 - ONE (1) EXISTING GORMANN RUPP PUMP TO REMAIN PROPERTY OF OWNER. CONTRACTOR TO REMOVE FROM BUILDING AND PLACE ON SKID AT GROUND LEVEL.

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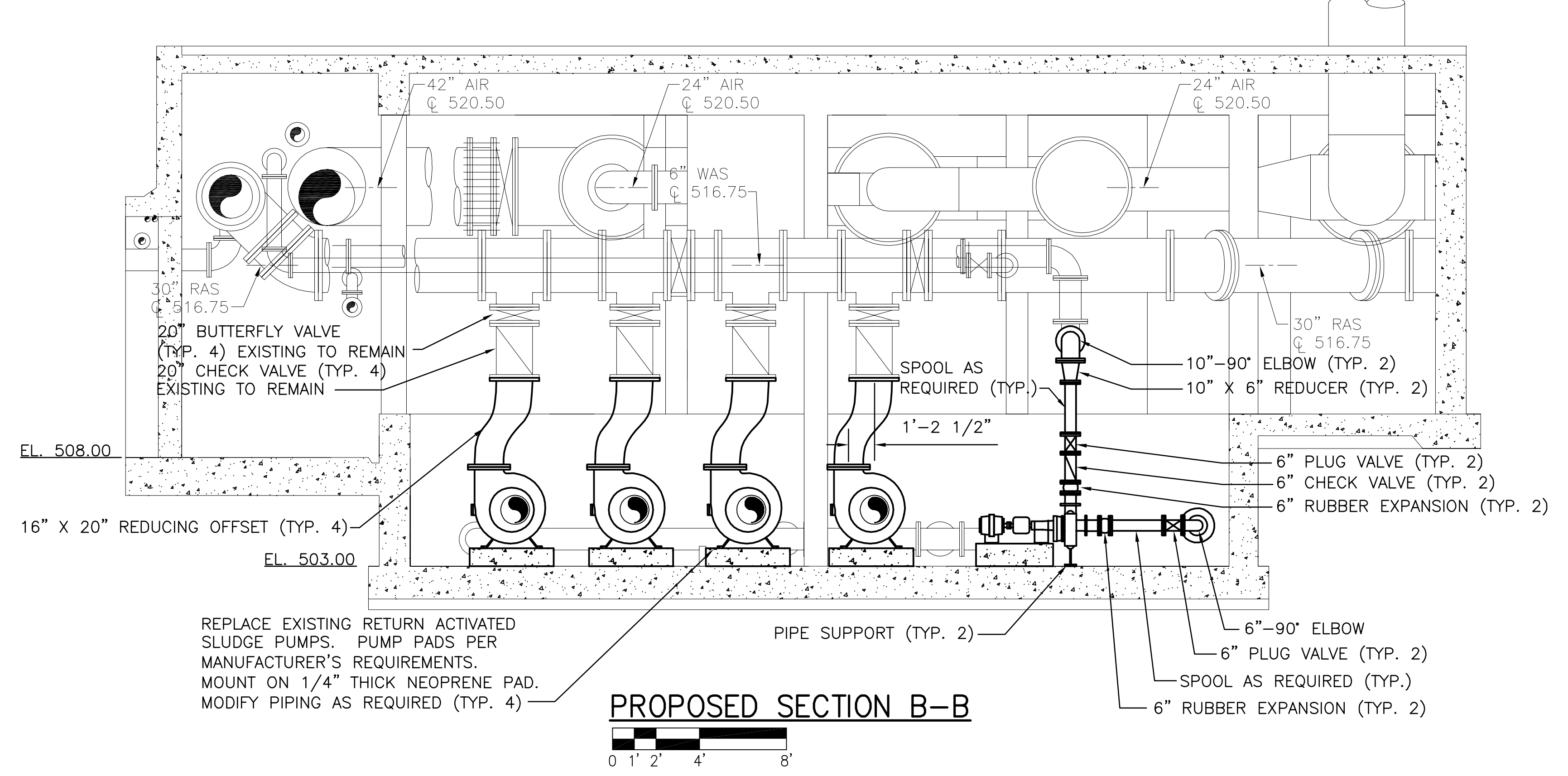
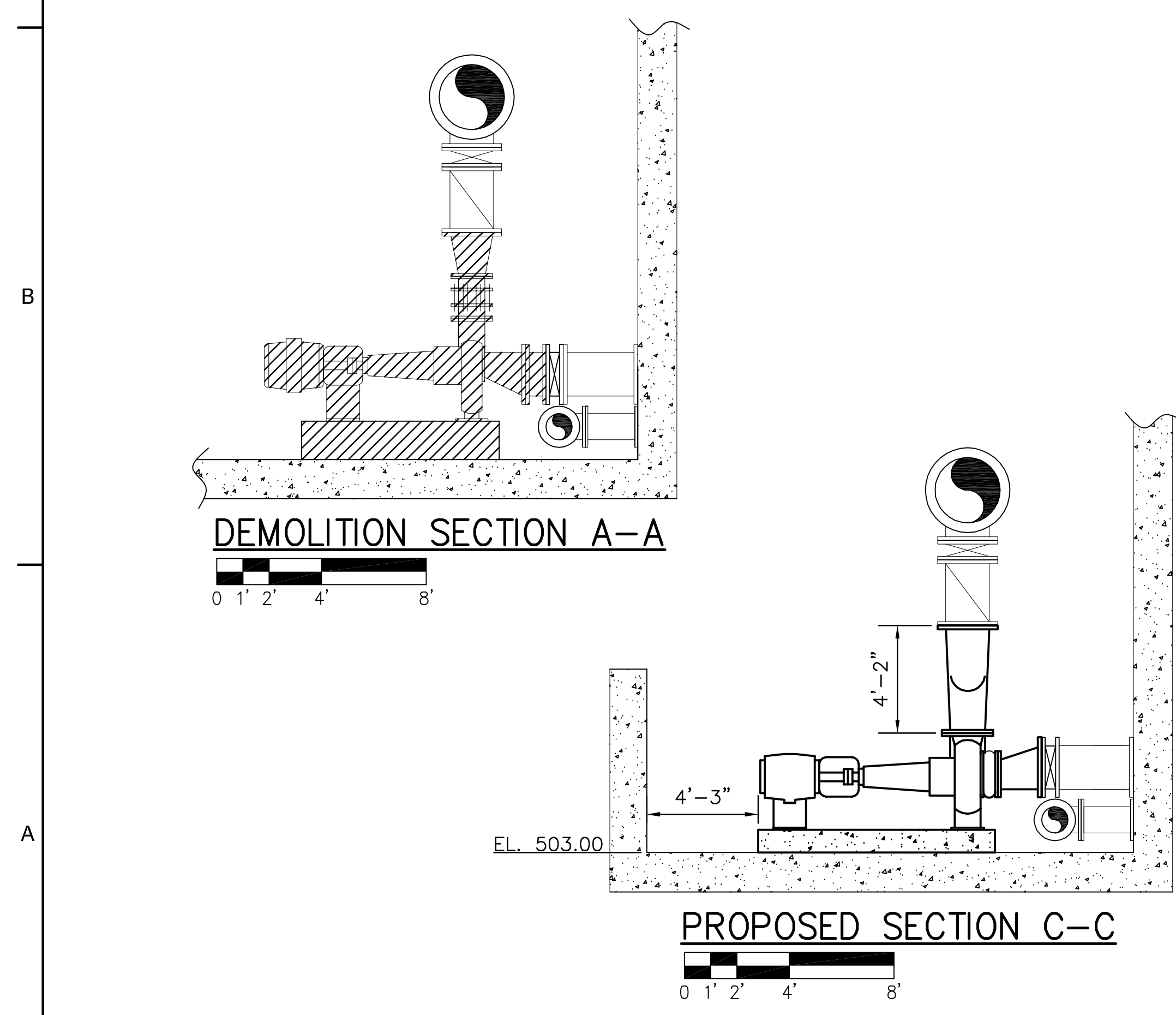
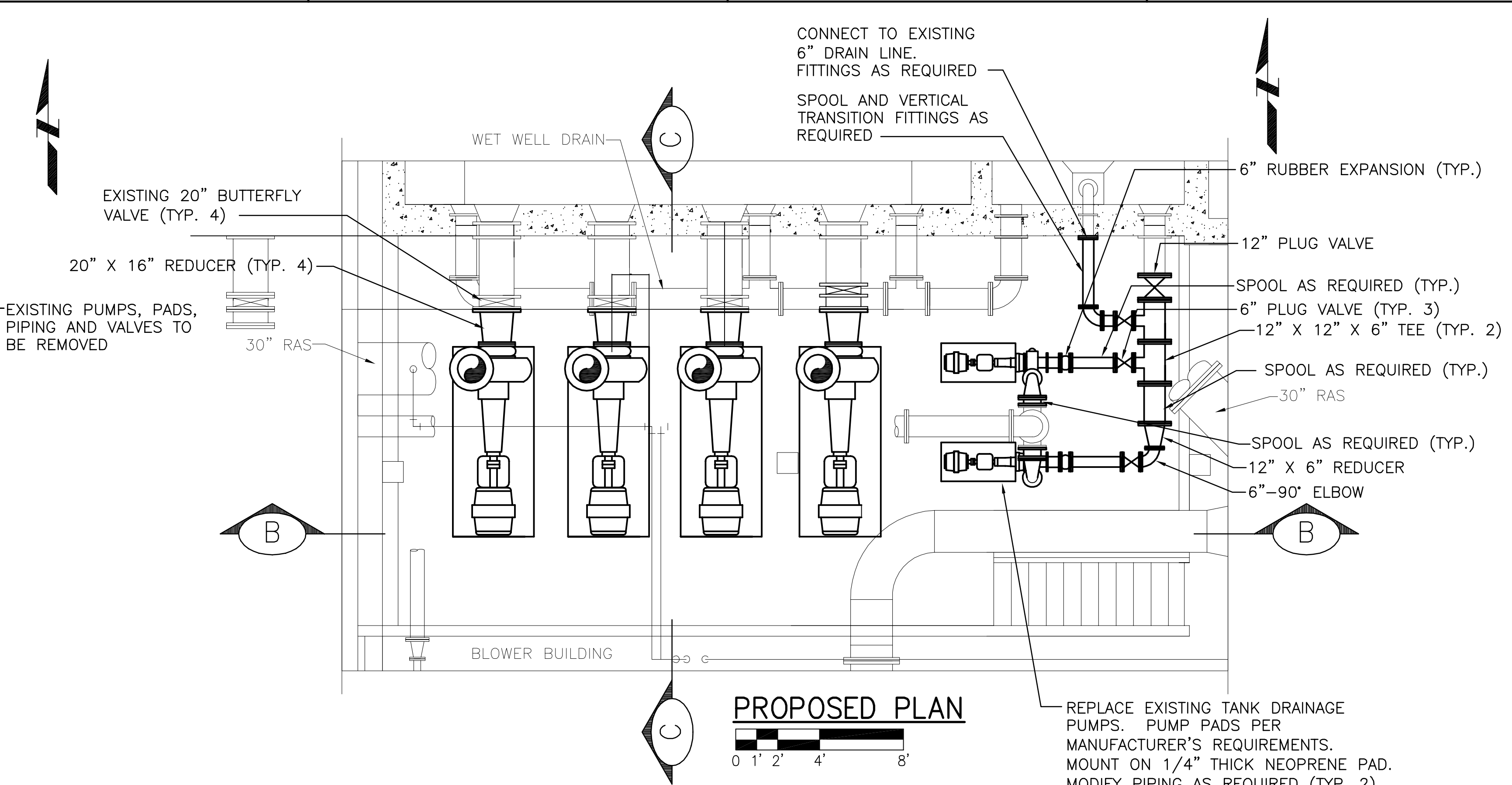
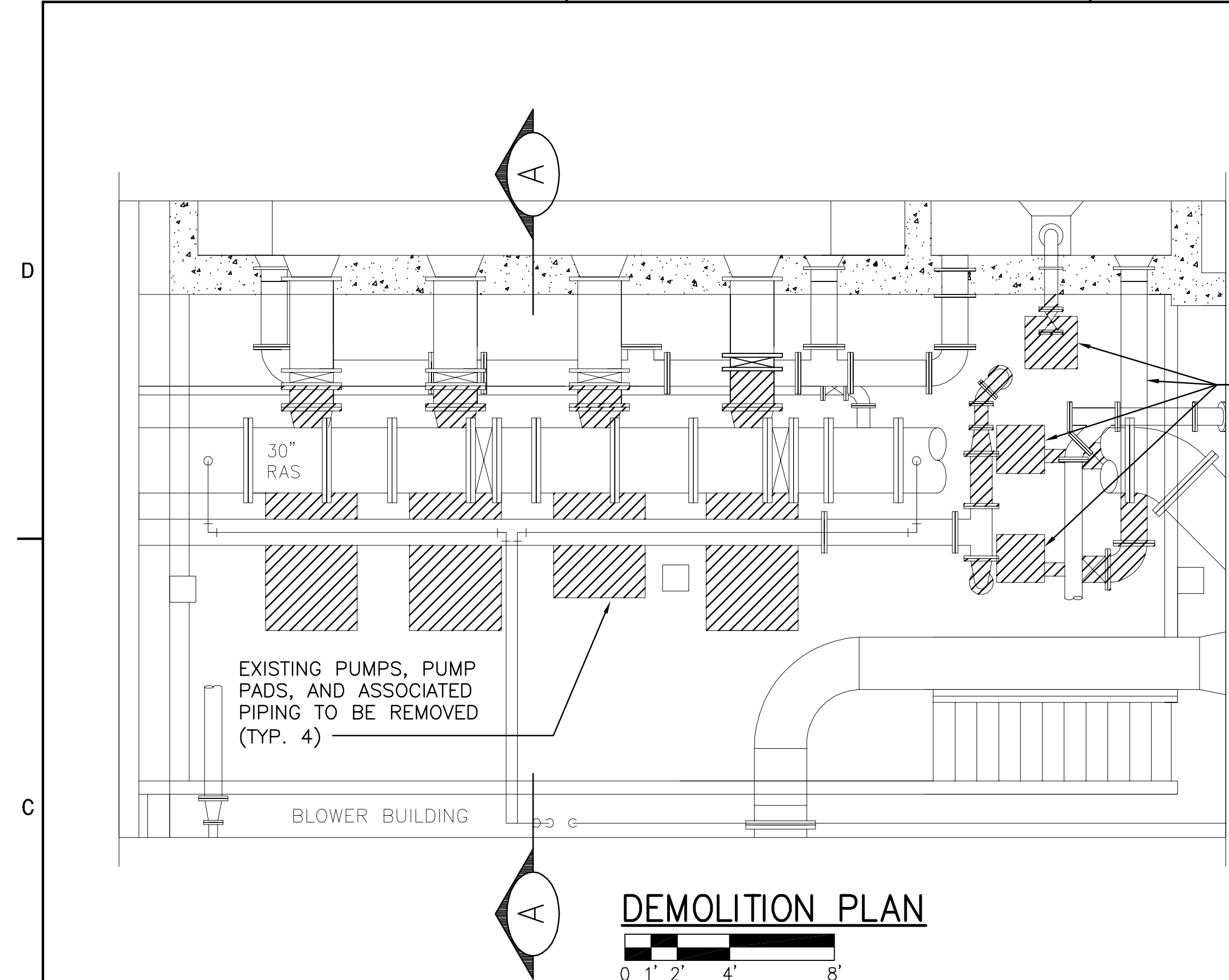
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DRAWING TITLE
**WAS PUMPS
DEMOLITION AND PROPOSED
PLANS AND SECTIONS**

PROJECT No.
J02570

DRAWING No.
PR-5

1 2 3 4 5 6



NOTE:
 1. CONTRACTOR SHALL REPLACE EXISTING PUMPS AS SHOWN. ONLY ONE PUMP SHALL BE OUT OF SERVICE AT ONE TIME. COORDINATE WITH OWNER FOR SHUT DOWN.

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PROJECT TITLE
**CITY OF JOLIET, ILLINOIS
 EASTSIDE WWTP
 SLUDGE PUMP REPLACEMENT
 AND TANK REPAIRS**

DESIGNED BY: JLE
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DATE REVISION

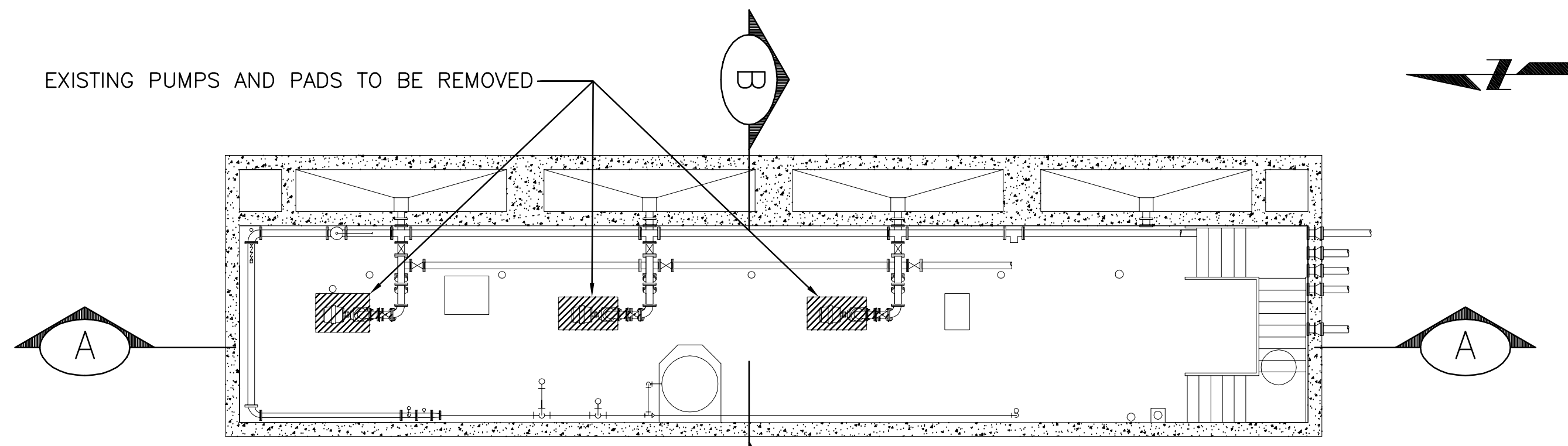
DRAWING TITLE
**RAS PUMPS AND AS PUMPS
 DEMOLITION AND PROPOSED
 PLANS AND SECTIONS**

PROJECT No.
J02570

DRAWING No.
PR-6

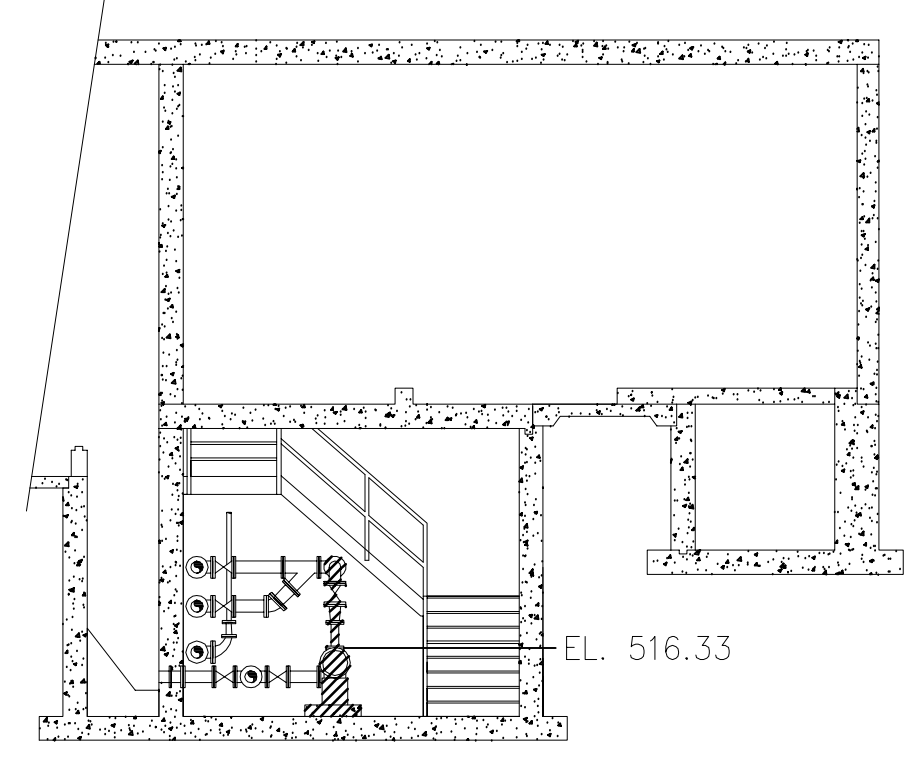
DRAWING 8 OF 22

EXISTING PUMPS AND PADS TO BE REMOVED



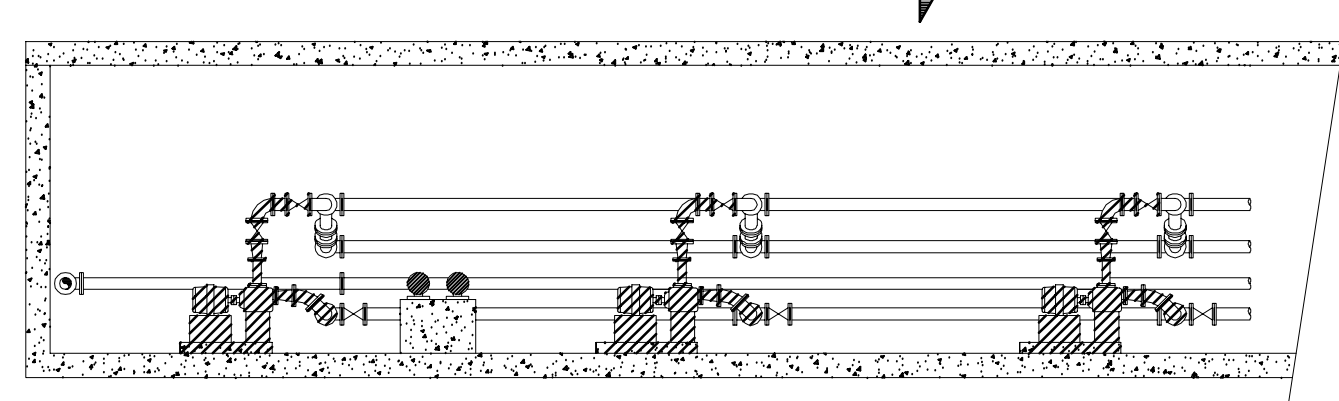
DEMOLITION PLAN

0 2' 4' 8' 16'



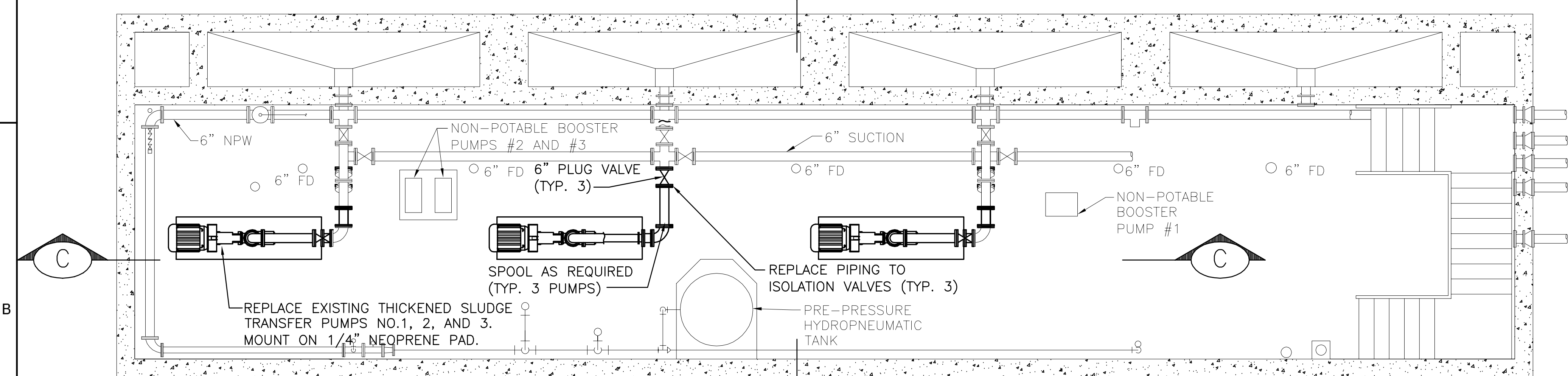
DEMOLITION SECTION B-B

0 2' 4' 8' 16'



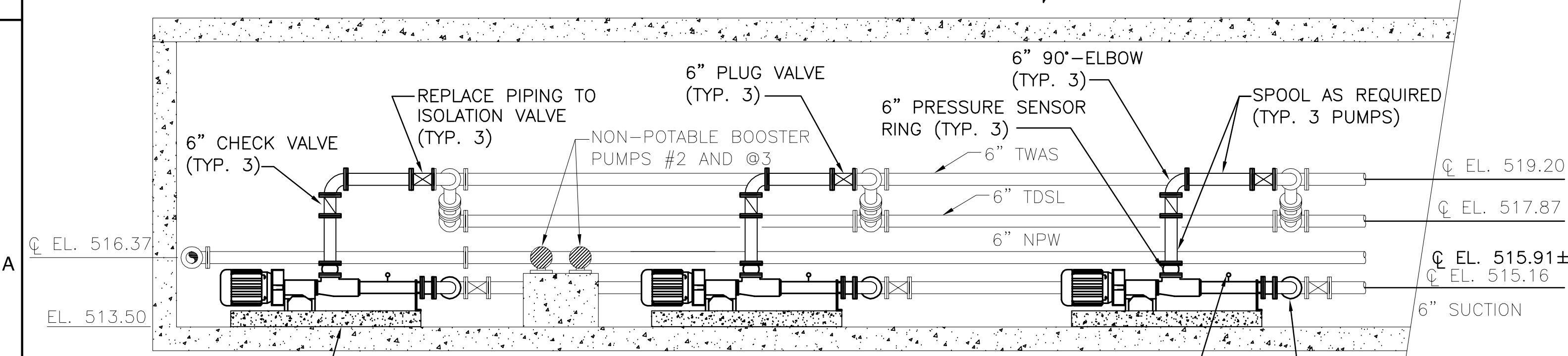
DEMOLITION SECTION A-A

0 2' 4' 8' 16'



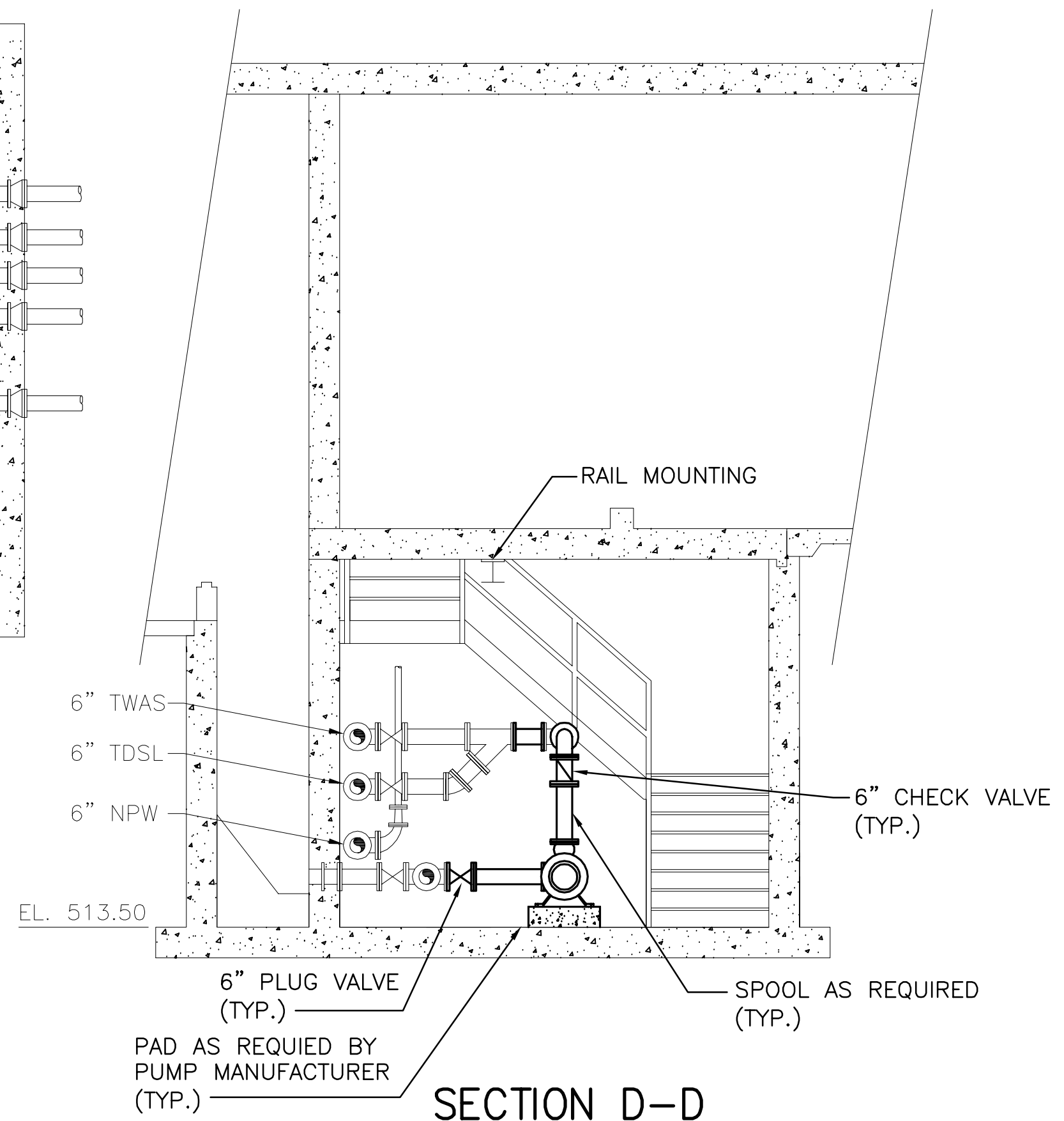
PLAN

0 1' 2' 4' 8'



SECTION C-C

0 1' 2' 4' 8'



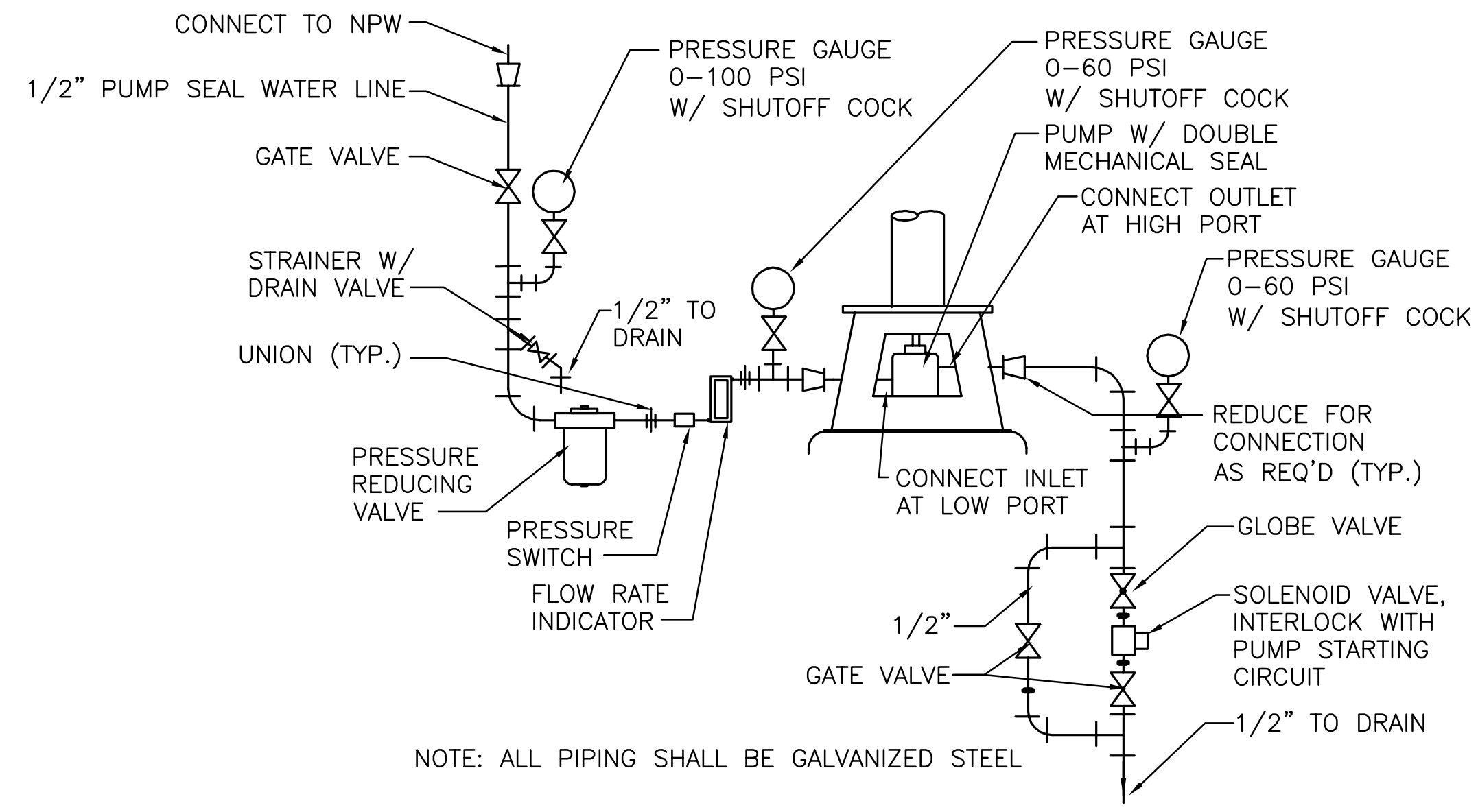
SECTION D-D

0 1' 2' 4' 8'

- NOTES:
- CONTRACTOR SHALL REPLACE EXISTING PUMPS AS SHOWN. ONLY ONE PUMP SHALL BE OUT OF SERVICE AT ONE TIME. COORDINATE WITH OWNER FOR SHUT DOWN.
 - THREE (3) EXISTING GORMANN RUPP PUMPS TO REMAIN PROPERTY OF OWNER. CONTRACTOR TO REMOVE FROM BUILDING AND PLACE ON SKID AT GROUND LEVEL.

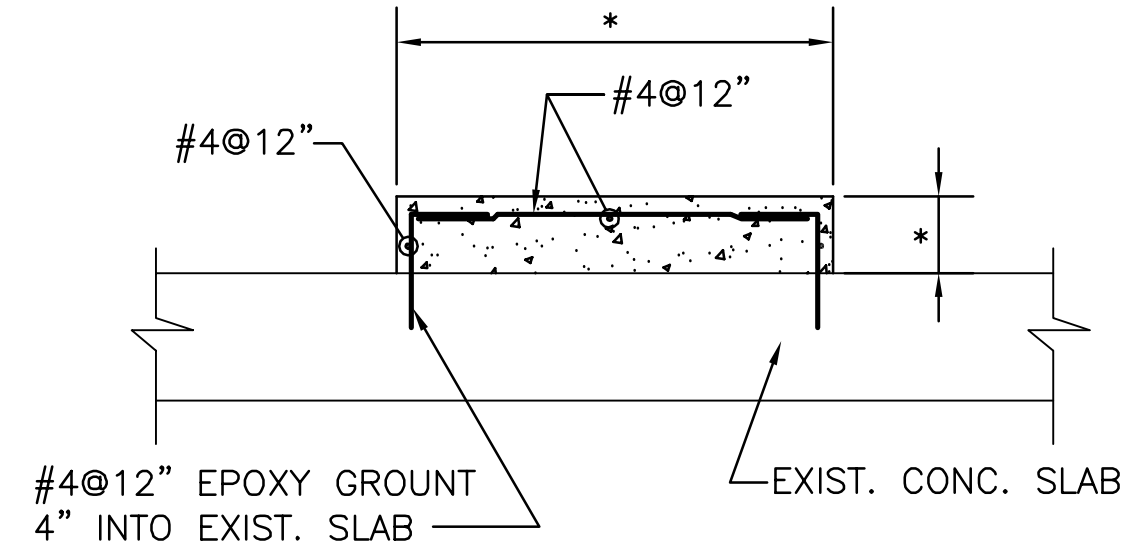


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PUMP SEAL WATER PIPING SCHEMATIC
SCALE: NONE

*PAD SIZE TO BE DETERMINED FROM EQUIPMENT MANUFACTURER'S APPROVED SHOP DRAWINGS.



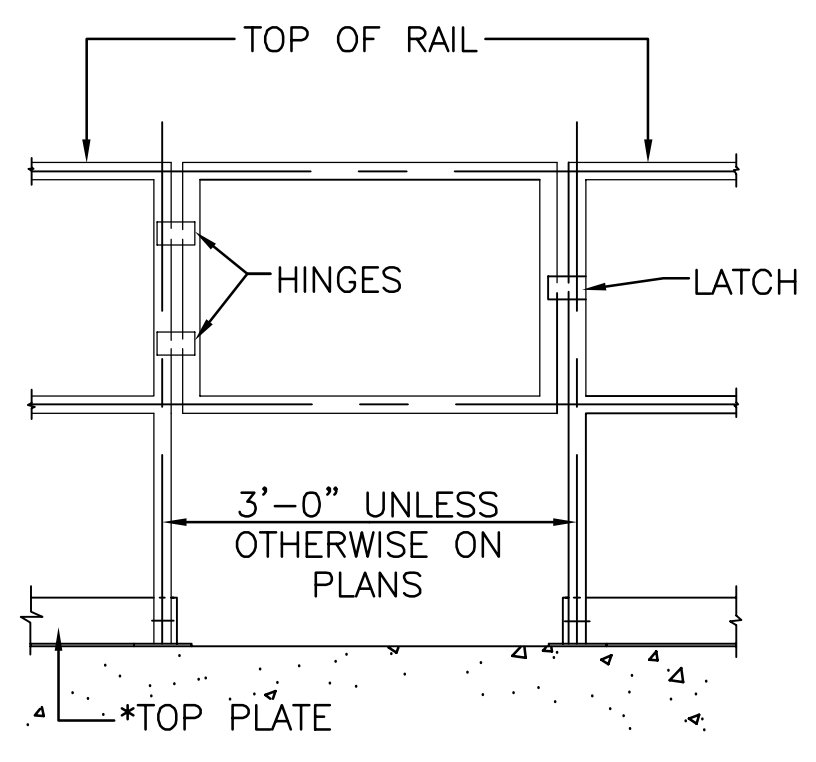
**NEW PAD-EXISTING SLAB
EQUIPMENT PAD REINFORCEMENT**
SCALE: NONE

PROJECT TITLE
**CITY OF JOLIET, ILLINOIS
EASTSIDE WWTP
SLUDGE PUMP REPLACEMENT
AND TANK REPAIRS**

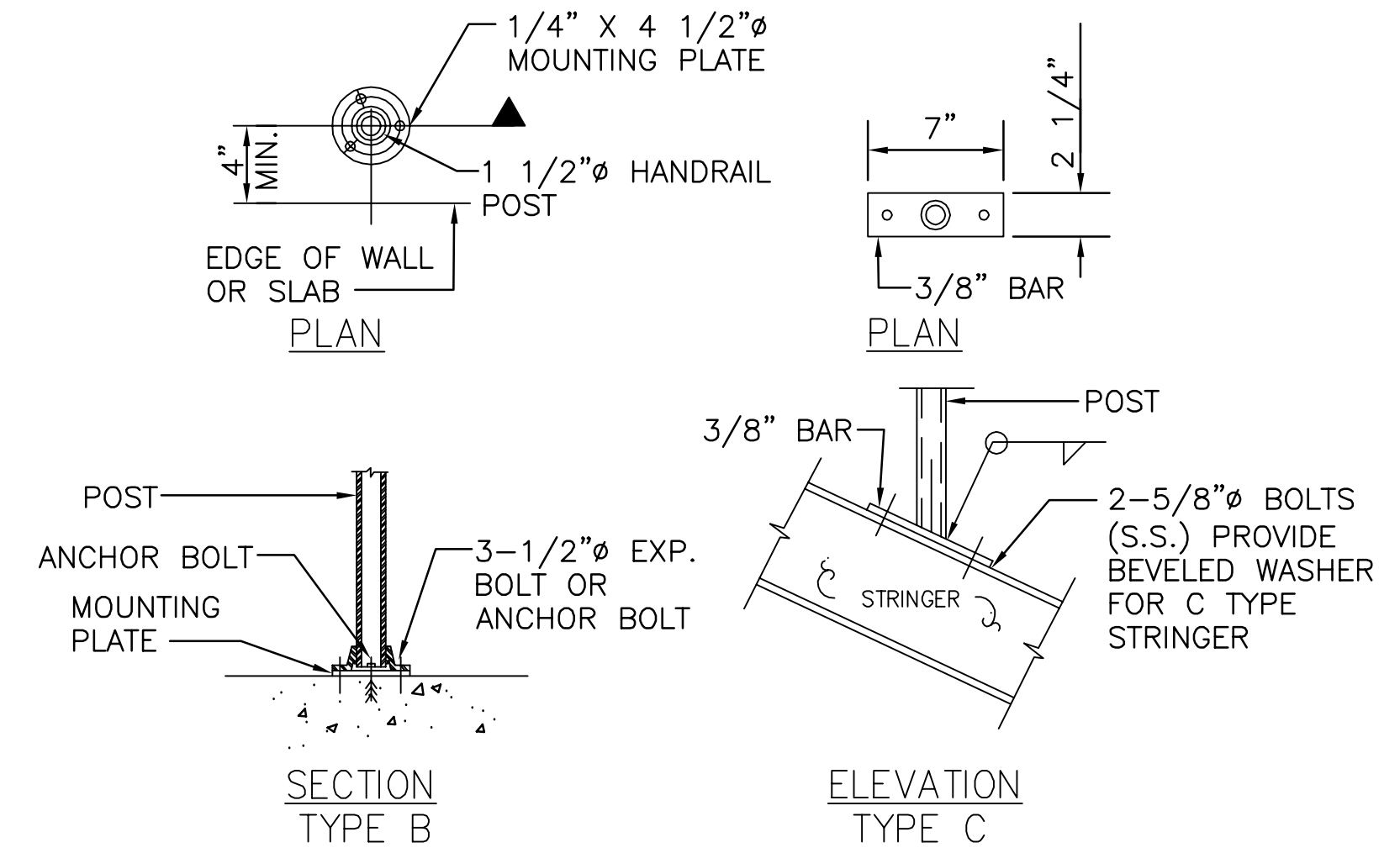
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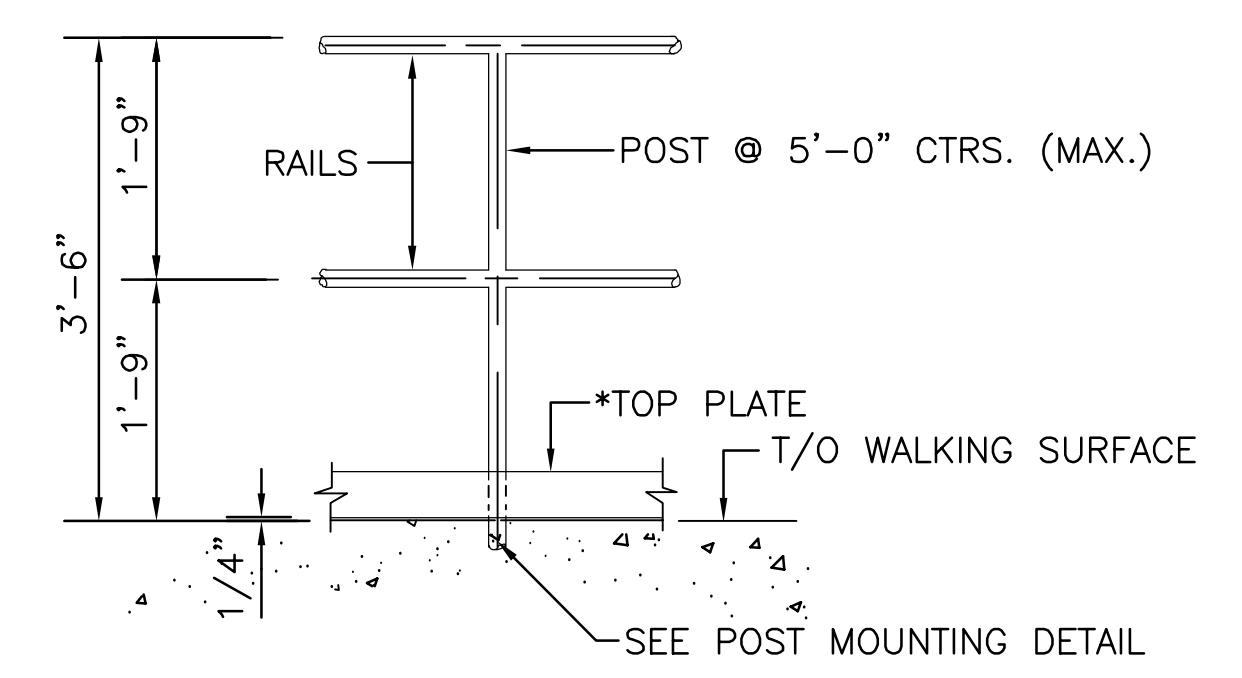
DATE	REVISION



SINGLE GATE DETAIL
SCALE: NONE



POST MOUNTING DETAIL
SCALE: NONE



TYPICAL HANDRAIL DETAIL
SCALE: NONE
*PROVIDE TOE PLATE-1/4"x4" W/ 3/8" DIA. U-BOLT IN ALL LOCATIONS

DRAWING TITLE

DETAILS

PROJECT No.
J02570

DRAWING No.
PR-8

ELECTRICAL GENERAL NOTES

A. GENERAL NOTES

- ALL WORK SHALL CONFORM TO THE REQUIREMENTS OF THE 2005 NATIONAL ELECTRICAL CODE, THE MOST CURRENT EDITION OF THE NATIONAL ELECTRICAL SAFETY CODE, AND ALL APPLICABLE LOCAL ORDINANCES.
- CONTRACTOR SHALL FURNISH ALL MATERIALS FOR A COMPLETE AND WORKABLE SYSTEM.
- CONTRACTOR SHALL BE RESPONSIBLE FOR OBTAINING ALL REQUIRED PERMITS AND FOR PROVIDING ALL SUPERVISION, LABOR AND TOOLS FOR THE PROJECT.
- ALL WORK IS TO CONFORM TO A TIME SCHEDULE TO BE ESTABLISHED BY THE OWNER.
- CONTRACTOR SHALL COORDINATE THE WORK SCHEDULE WITH THE OWNER AND OBTAIN THE OWNER'S APPROVAL BEFORE ANY WORK INVOLVING A SHUTDOWN IS DONE.
- ALL MATERIALS FURNISHED BY THE CONTRACTOR ARE TO BE NEW AND APPROVED BY THE OWNER AS TO MANUFACTURER AND TYPE.
- ALL CONDUITS SHALL BE PROVIDED WITH AN EQUIPMENT GROUNDING CONDUCTOR SIZED IN ACCORDANCE WITH THE 2005 NATIONAL ELECTRICAL CODE.
- ALL LOCATIONS AND DIMENSIONS SHOWN ARE APPROXIMATE. CONTRACTOR SHALL FIELD VERIFY ALL ELECTRICAL EQUIPMENT LOCATIONS AND EQUIPMENT DIMENSIONS.

B. RACEWAY NOTES

- POWER, INSTRUMENTATION AND CONTROL WIRING SHALL BE INSTALLED IN SEPARATE CONDUITS. SHIELDED CONDUCTORS SHALL NOT BE INSTALLED IN THE SAME CONDUIT AS ANY UNSHIELDED CONDUCTORS.
- REMOVE ALL UNUSED CONDUIT AND WIRE BACK TO SOURCE ASSOCIATED WITH EQUIPMENT BEING REMOVED OR RELOCATED. CONCEALED CONDUIT BELOW FLOOR OR UNDERGROUND MAY REMAIN IN PLACE.
- ALL CONDUIT FOR POWER, LIGHTING, CONTROL AND INSTRUMENTATION SHALL BE HOT-DIPPED GALVANIZED HEAVY WALL RIGID STEEL UNLESS OTHERWISE NOTED. MINIMUM CONDUIT SIZE SHALL BE 3/4".
- ALL UNDERGROUND CONDUITS SHALL BE RIGID STEEL HOT-DIPPED GALVANIZED 1" MINIMUM AND SHALL BE ENCASED IN RED CONCRETE 2'-6" MINIMUM BELOW GRADE, UNLESS OTHERWISE NOTED.
- CONDUIT RUNS SHALL BE ROUTED TO AVOID, AND NEVER RUN BELOW, STEAM, WATER OR OTHER PIPE WHICH MAY HAVE AN ADVERSE EFFECT DUE TO HEAT OR LEAKS. WHERE CONDUIT PARALLELS OR CROSSES SUCH PIPES, A MINIMUM SEPARATION OF 12 INCHES SHALL BE MAINTAINED.
- LIQUID-TIGHT FLEXIBLE CONDUIT (MAXIMUM OF 24") SHALL BE USED IN CONNECTING MOTORS, SENSING ELEMENTS, INSTRUMENTS, SOLENOID VALVES, OR ANY OTHER DEVICE WHICH TRANSMIT VIBRATION OR NOISE, REQUIRE MOVEMENT FOR ADJUSTMENT, OR REQUIRE REMOVAL FOR MAINTENANCE. MINIMUM SIZE OF FLEXIBLE CONDUIT SHALL BE 1/2".
- JUNCTION BOXES, CABINETS, SWITCHES AND OTHER ELECTRICAL EQUIPMENT SHALL BE SOLIDLY ATTACHED PRIOR TO INSTALLATION OF CONDUIT.
- CONDUIT, PULL BOXES, CABINETS, ETC. SHALL FORM A CONTINUOUS CONDUCTIVE GROUND SYSTEM. AT TRANSITIONS AND BREAKS, CONDUIT SHALL BE BONDED.
- CONDUIT SHALL NOT BE FASTENED TO OTHER EQUIPMENT OR SO INSTALLED AS TO PREVENT THE READY REMOVAL OF OTHER EQUIPMENT FOR REPAIRS. INSTALLATION OF CONDUITS MUST NOT INTERFERE WITH ACCESS WAYS OR LADDERS.
- ALL NEW CONDUITS INSIDE BUILDINGS SHALL BE PAINTED TO MATCH THE COLOR OF THE WALLS OR THE COLOR OF THE EXISTING CONDUITS.
- ONLY PULLBOXES SPECIFICALLY REQUIRED BY THE ENGINEER IN LOCATIONS SHOWN ARE IDENTIFIED. CONTRACTOR SHALL PROVIDE ALL PULLBOXES REQUIRED TO MEET APPLICABLE CODES.
- CONDUITS ENTERING EXTERIOR ENCLOSURES SHALL BE TERMINATED WITH STEEL OR IRON FITTINGS AND T&B EFCOR HUB CONNECTORS.

C. GROUNDING NOTES

- ALL GROUND CONDUCTORS SHALL BE STRANDED BARE COPPER UNLESS OTHERWISE NOTED AND SIZED AS SHOWN ON THE DRAWINGS.

ELECTRICAL GENERAL NOTES (CONT.)

D. WIRING NOTES

- WIRING SHALL BE IDENTIFIED BY PERMANENT WIRE MARKERS AT EACH TERMINATION AND SHALL CORRESPOND WITH THE IDENTIFICATION NUMBERS ON THE DRAWINGS.
- CONDUCTORS SHALL BE CONTINUOUS FROM POINT OF ORIGIN TO THE TERMINATION. NO CABLE SHALL BE SPLICED EXCEPT AS SHOWN ON THE DRAWINGS OR ON EXPLICIT INSTRUCTIONS OF THE OWNER.
- TERMINALS ON THE TERMINAL BLOCK SHALL BE PLAINLY AND PERMANENTLY MARKED TO CORRESPOND WITH THE IDENTIFICATION NUMBERS ON THE DIAGRAMS.
- ALL CABLE AND WIRE SHALL BE STRANDED COPPER. ALUMINUM CABLE AND WIRE ARE NOT ACCEPTABLE. ALL POWER AND CONTROL CABLE SHALL BE CROSS-LINKED POLYETHYLENE (XLP) OR POLYVINYL CHLORIDE (PVC) INSULATION (XHHW OR THHN-THWN), RATED 90°C FOR 600 VOLT.
- CONTRACTOR SHALL FURNISH ALL LIGHTING FIXTURES, CONDUIT, JUNCTION BOXES, AND PULLBOXES AS REQUIRED. ALL OUTDOOR LIGHTING JUNCTION BOXES AND PULLBOXES SHALL BE STAINLESS STEEL NEMA 4X ENCLOSURES.
















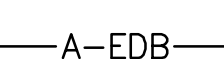
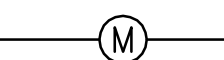
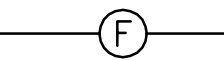
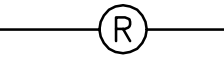
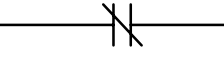
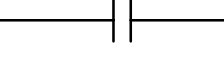



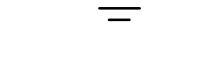
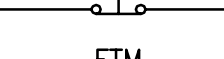
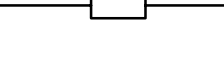

E. CONTROL NOTES

- CONTRACTOR SHALL PROVIDE AND INSTALL ALL CABLES AND WIRE FROM CONTROL/INSTRUMENTATION DEVICES BACK TO ASSOCIATED CONTROL PANELS.
- CONTRACTOR SHALL PROVIDE 20% SPARE CONTROL WIRES (MINIMUM OF 3 SPARES) FOR EACH CONTROL DEVICE. CAP SPARE WIRES AND LABEL AS SPARE.
- ALL MODIFICATIONS TO THE EXISTING SCADA SYSTEM, PLC CONTROL PANELS, AND TERMINATION OF CONTROL WIRES AT PANEL SHALL BE BY THE OWNER (CONTRACTOR SHALL LABEL ALL CONTROL WIRES THAT ARE BEING ADDED AND COIL UP IN PLC CONTROL PANEL). CONTRACTOR SHALL COORDINATE ALL CONTROL INTERFACE FROM VFD'S AND STARTERS WITH THE OWNER AND PROVIDE CONTROL DEVICES AS REQUIRED. CONTRACTOR SHALL REMOVE EXISTING CONTROL WIRES THAT WILL NOT BE NEEDED OR ARE BEING REPLACED FOR WORK ASSOCIATED WITH THIS PROJECT.

F. BOX NOTES

- FABRICATED BOXES 24 x 24 INCHES OR SMALLER SHALL BE MADE FROM 10 GAUGE STEEL SHEET.
- FABRICATED BOXES LARGER THAN 24 x 24 INCHES SHALL BE MADE FROM 1/8" STEEL SHEET.
- BOXES INSTALLED IN AN AREA DEFINED TO BE ACID OR CAUSTIC SHALL BE MADE FROM TYPE 316 STAINLESS STEEL UNLESS INDICATED OTHERWISE ON THE DRAWINGS.
- IN DRY AND/OR CLEAN AREAS CONDUIT ATTACHMENT TO THE BOX SHALL BE MADE BY THE USE OF DOUBLE STEEL LOCK NUT (ONE OF WHICH SHALL BE OF THE BONDING TYPE) AND AN INSULATING BUSHING ON THE END OF EACH CONDUIT TERMINATION IN THE BOX.
- IN WET AND/OR DUSTY AREAS AND OUTDOORS, CONDUIT ATTACHMENT TO BOXES SHALL BE MADE WITH A WATERTIGHT CONDUIT HUB AS MANUFACTURED BY EFCOR CO. OR OWNER APPROVED EQUAL.
- CONTRACTOR SHALL LEAVE SLACK IN ALL CABLE IN ALL BOXES.
- CONTRACTOR SHALL FURNISH AND INSTALL BARRIERS IN BOXES AS CALLED FOR ON THE DRAWINGS. BARRIERS SHALL BE MADE FROM A MINIMUM OF 10 GAUGE STEEL SHEET AND HELD IN PLACE WITH CLIP ANGLES.
- ALL BARRIERS SHALL BE INSTALLED UPON COMPLETION OF THE INSTALLATION OF CABLE AND SHALL BE REMOVABLE TO PERMIT FUTURE CABLE INSTALLATION.
- ALL CABLES WITHIN THE BOX SHALL BEAR A CABLE IDENTIFICATION TAG IN ACCORDANCE WITH THE OWNERS ELECTRICAL SPECIFICATION.

SYMBOL LIST

	TRANSFORMER
	MOTOR, # INDICATES HORSEPOWER
	EQUIPMENT TO BE REMOVED
	DISCONNECT SWITCH
	COMBINATION STARTER/DISCONNECT SWITCH
	LOCAL CONTROL STATION
	SHEAR PIN LIMIT SWITCH
	THERMAL SWITCH
	PRESSURE SWITCH
	STATOR TEMPERATURE SWITCH
	SEAL WATER SOLENOID VALVE
	ELECTRICAL DUCTBANK
	EXISTING 480V DUCTBANK
	480V DUCTBANK
	EXISTING LOW VOLTAGE DUCTBANK
	5KV DUCTBANK
	ABANDON UNDERGROUND DUCTBANK
	MOTOR CONTACTOR
	FORWARD CONTACTOR
	REVERSE CONTACTOR
	NORMALLY CLOSED CONTACT
	NORMALLY OPEN CONTACT
	PUSH-TO-TEST GREEN INDICATING LIGHT
	THERMAL OVERLOAD
	FUSE
	GROUND
	SELECTOR SWITCH
	ELAPSED TIME METER

ABBREVIATIONS

A	AMPERES
BKR	BREAKER
C	CONDUIT
G	GROUND
HH	HANDHOLE
HV	HIGH VOLTAGE
KV	KILO-VOLTS
KVA	KILO-VOLT AMPERES
LV	LOW VOLTAGE
MCP	MOTOR CIRCUIT PROTECTOR
MH	MANHOLE
PH	PHASE
RAS	RETURN ACTIVATED SLUDGE
WAS	WASTE ACTIVATED SLUDGE
VFD	VARIABLE FREQUENCY DRIVE



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PROJECT TITLE
CITY OF JOLIET, ILLINOIS
EASTSIDE WWTP
SLUDGE PUMP REPLACEMENT
AND TANK REPAIRS

DESIGNED BY: SEM
DRAWN BY: RLF
CHECKED BY: CEC/MLS
DATE CHECKED: 07/07

NOTE: DIMENSIONAL DATA IS NOT TO BE OBTAINED BY SCALING ANY PORTION OF THIS DRAWING.

DATE REVISION

DRAWING TITLE
ELECTRICAL GENERAL
NOTES, SYMBOL LIST,
AND ABBREVIATIONS

PROJECT No.
J02570

DRAWING No.
E-1

KEYNOTES (THIS DRAWING)

- ① PROVIDE DUCTBANK FOR PRIMARY TANK DRIVE POWER AND CONTROL WIRING.
- ② PROVIDE (2) 14"Hx12"Wx6"D NEMA 12 PULLBOX MOUNTED 9' ABOVE GRADE TO CONTROL BUILDING WALL. EXTEND DUCTBANK CONDUIT AND WIRE INSIDE CONTROL BUILDING TO EXISTING MCC-E. PAINT EXPOSED CONDUITS AND PULLBOX TO MATCH BUILDING WALL.

ELECTRICAL NOTES (THIS DRAWING)

- 1. SEE DRAWING E-1 FOR GENERAL NOTES.

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EASTSIDE WWTP
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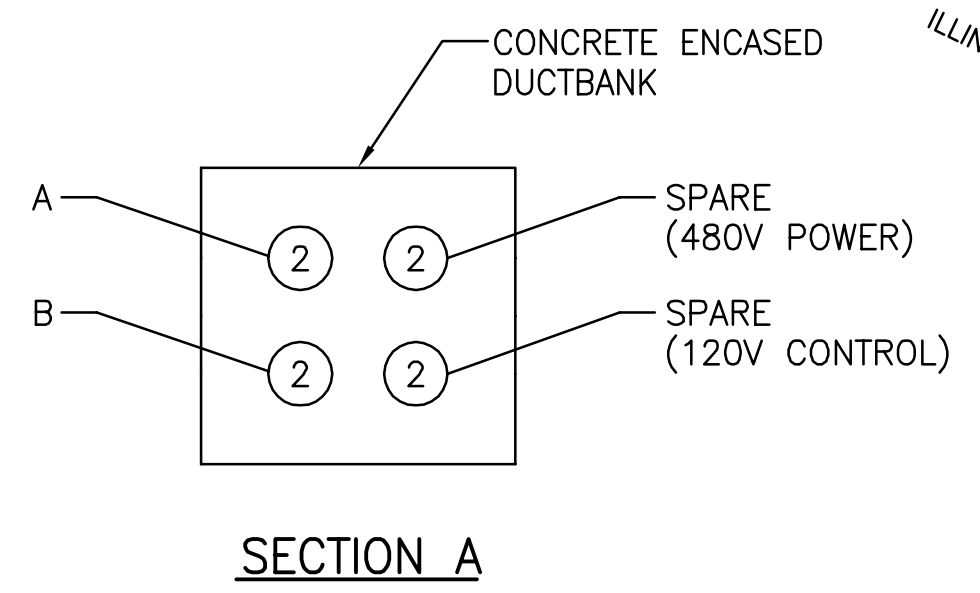
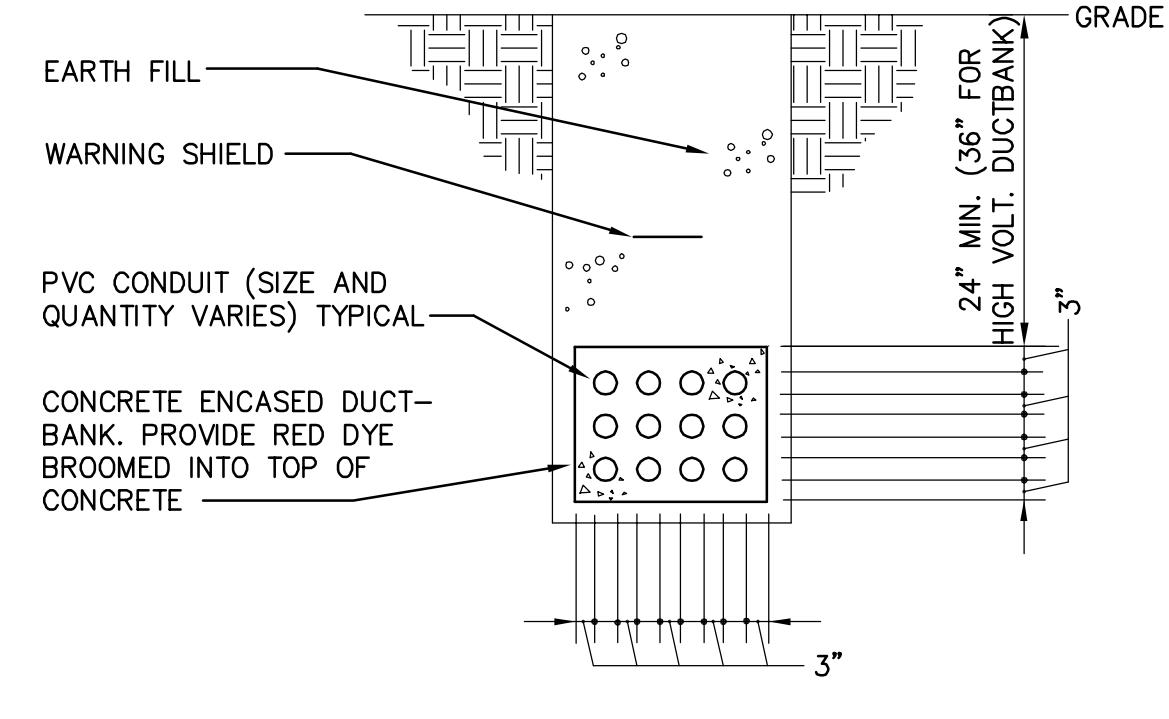
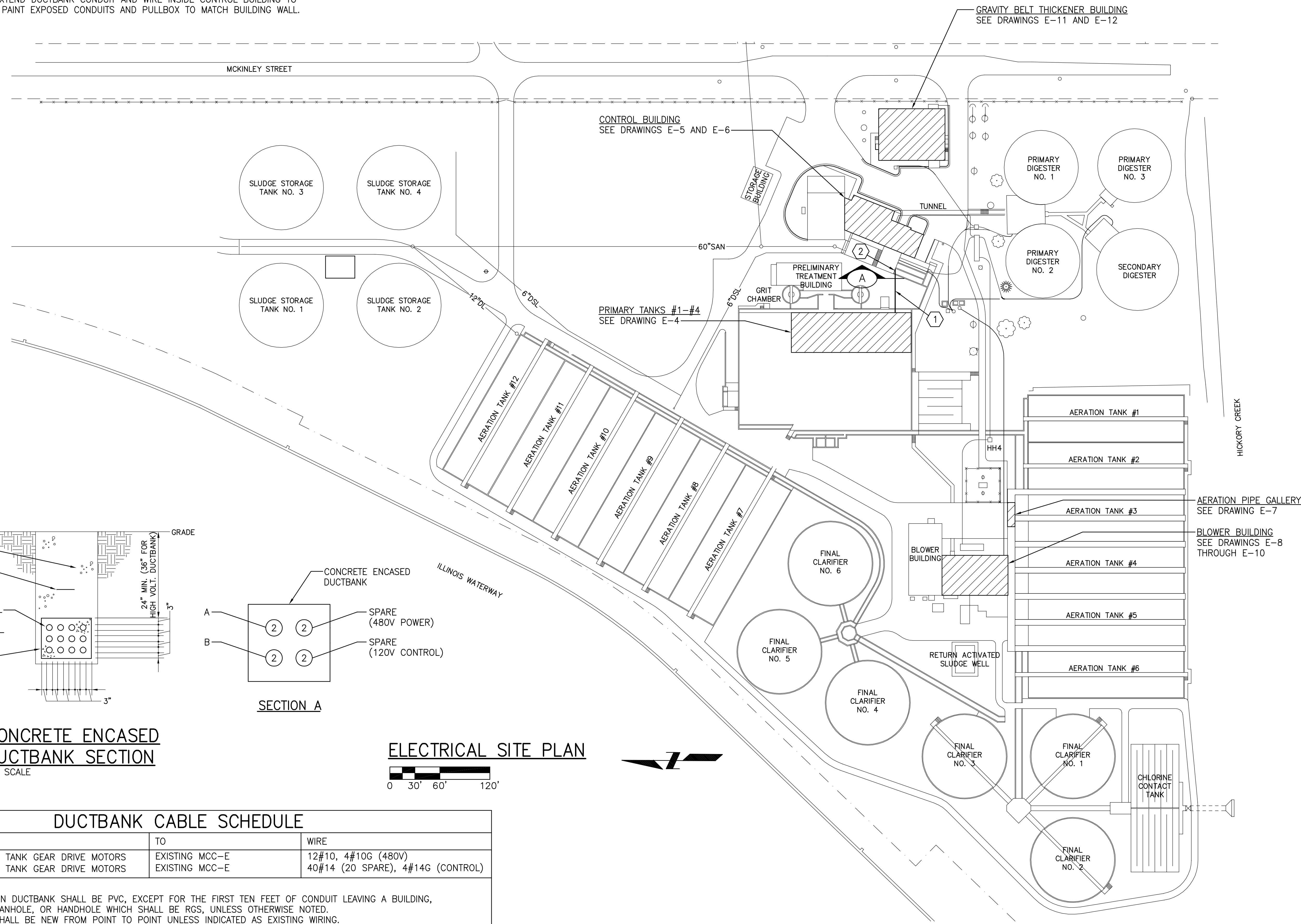
DRAWING TITLE
ELECTRICAL SITE PLAN

PROJECT No.
J02570

DRAWING No.
E-2

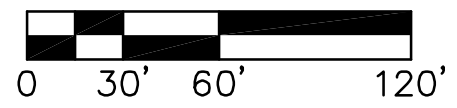
DRAWING 12 OF 22

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C
B
A



**CONCRETE ENCASED
DUCTBANK SECTION**
NO SCALE

ELECTRICAL SITE PLAN



DUCTBANK CABLE SCHEDULE			
MARK	FROM	TO	WIRE
A	(4) PRIMARY TANK GEAR DRIVE MOTORS	EXISTING MCC-E	12#10, 4#10G (480V)
B	(4) PRIMARY TANK GEAR DRIVE MOTORS	EXISTING MCC-E	40#14 (20 SPARE), 4#14G (CONTROL)

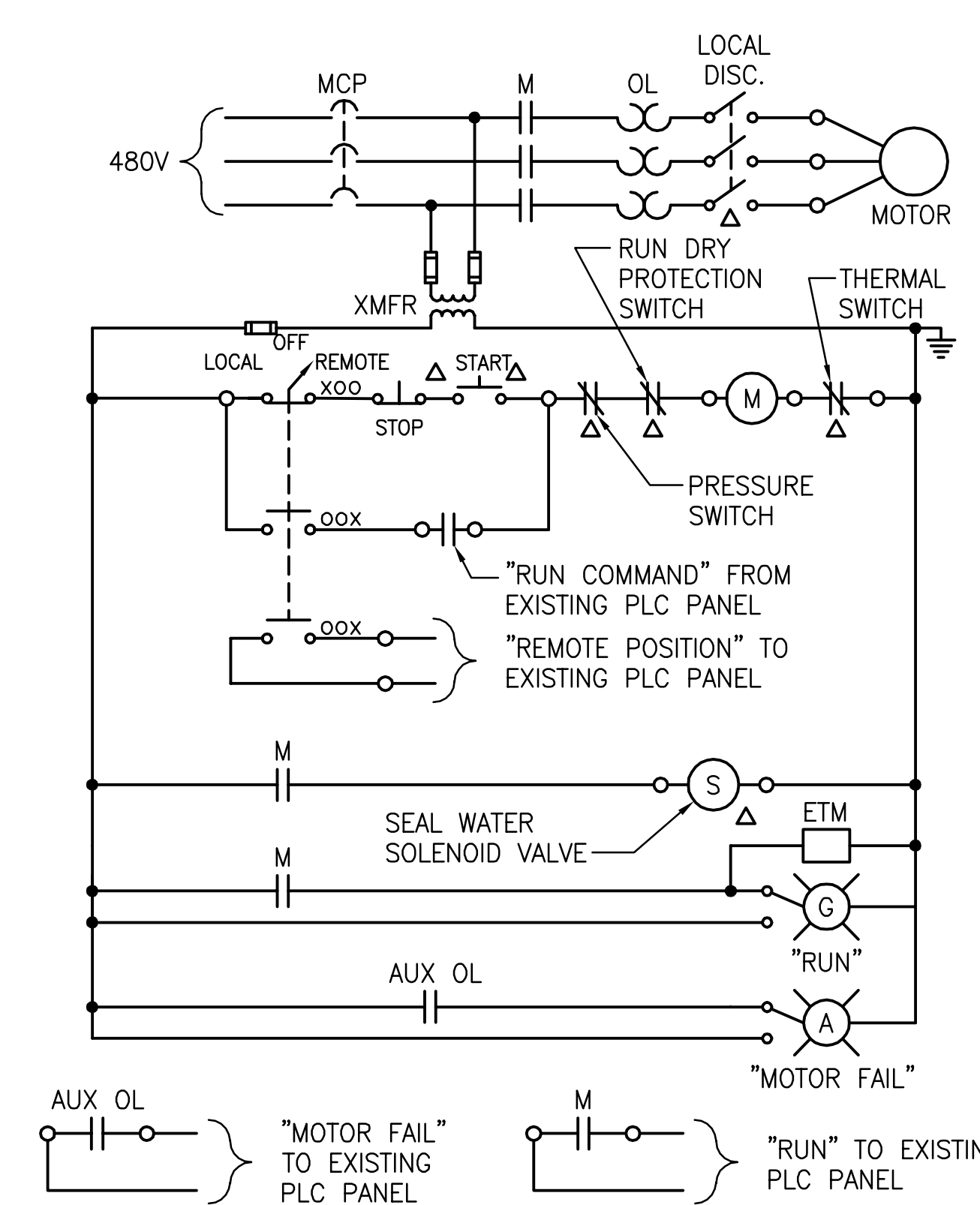
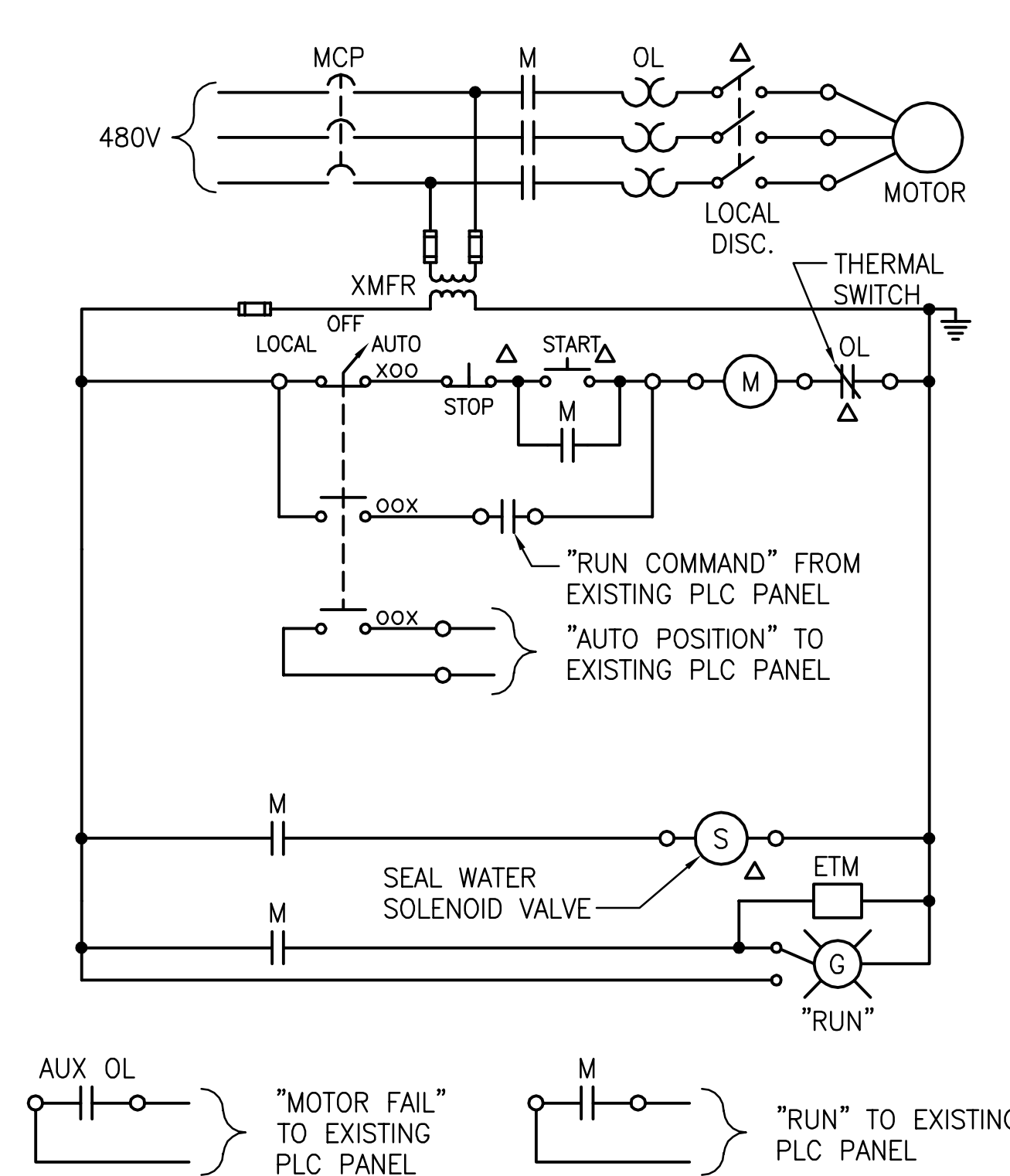
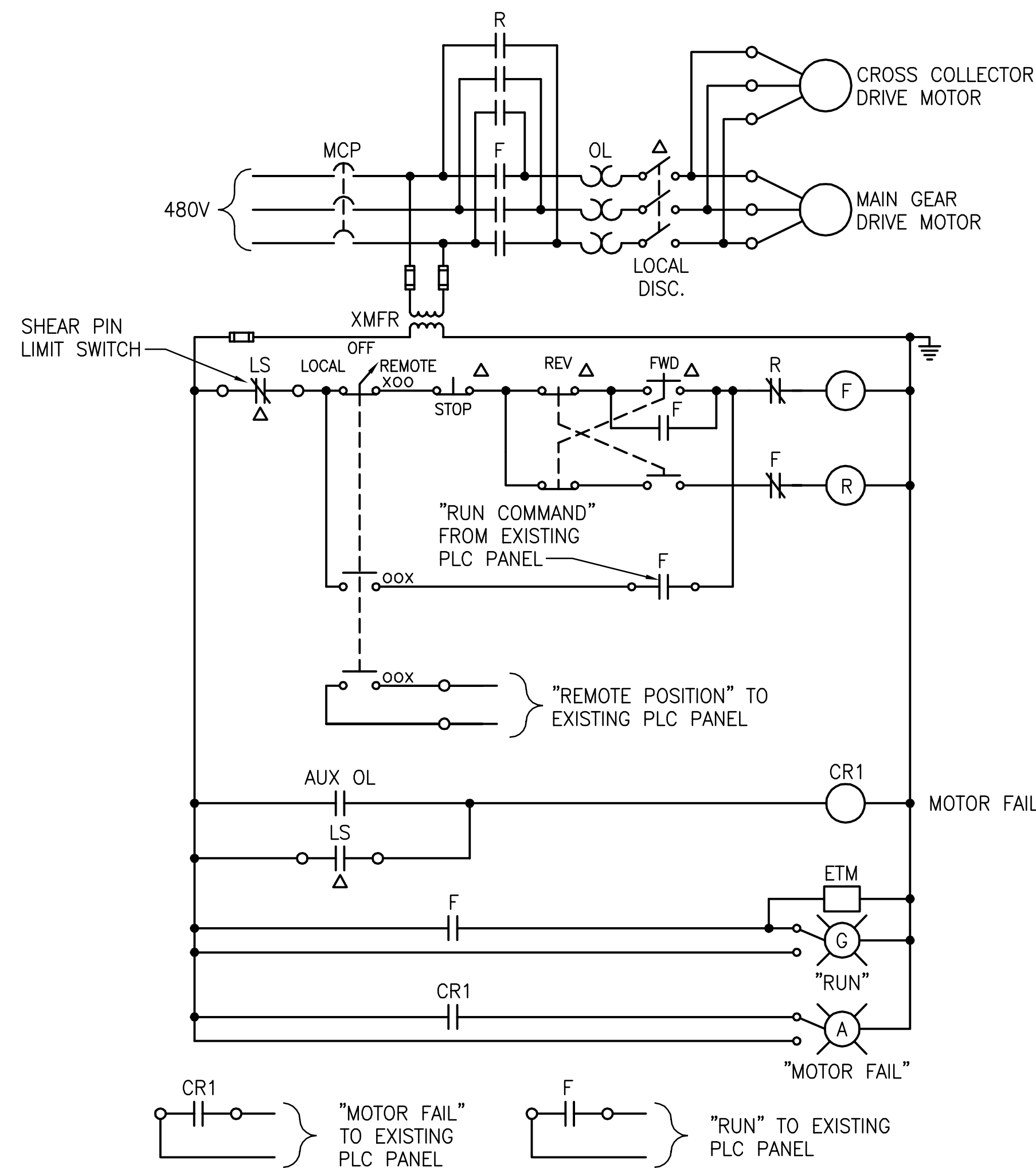
NOTES:
1. ALL CONDUIT IN DUCTBANK SHALL BE PVC, EXCEPT FOR THE FIRST TEN FEET OF CONDUIT LEAVING A BUILDING, STRUCTURE, MANHOLE, OR HANDHOLE WHICH SHALL BE RGS, UNLESS OTHERWISE NOTED.
2. ALL CABLES SHALL BE NEW FROM POINT TO POINT UNLESS INDICATED AS EXISTING WIRING.

PROCESS MOTOR SCHEDULE

NAMEPLATE DESCRIPTION	EQUIPMENT TAG	STATUS	LOCATION	MOTOR			EXIST. SOURCE	POWER		CONDUIT			CONTROLLER			NOTES
				HP	VOLT	PHASE		NEW SOURCE	CONDUIT	CONDUCTOR	TYPE	SIZE	LOCATION	DIAGRAM		
PRIMARY TANK NO. 1 MAIN GEAR DRIVE	PST-101	REPLACE - 1/2 HP	PRIMARY TANKS	1/2	460	3	MCC-E	MCC-E	3/4"	3#10, 1#10G	FVR	1	MCC-E	TYPE 1	SEE NOTE 3	
PRIMARY TANK NO. 1 CROSS COLLECTOR DRIVE	PST-101A	NEW	PRIMARY TANKS	1/3	460	3	N/A	MCC-E	3/4"	3#10, 1#10G	FVR	--	MCC-E	TYPE 1	SEE NOTE 3	
PRIMARY TANK NO. 2 MAIN GEAR DRIVE	PST-102	REPLACE - 1/2 HP	PRIMARY TANKS	1/2	460	3	MCC-E	MCC-E	3/4"	3#10, 1#10G	FVR	1	MCC-E	TYPE 1	SEE NOTE 3	
PRIMARY TANK NO. 2 CROSS COLLECTOR DRIVE	PST-102A	NEW	PRIMARY TANKS	1/3	460	3	N/A	MCC-E	3/4"	3#10, 1#10G	FVR	--	MCC-E	TYPE 1	SEE NOTE 3	
PRIMARY TANK NO. 3 MAIN GEAR DRIVE	PST-103	REPLACE - 1/2 HP	PRIMARY TANKS	1/2	460	3	MCC-E	MCC-E	3/4"	3#10, 1#10G	FVR	1	MCC-E	TYPE 1	SEE NOTE 3	
PRIMARY TANK NO. 3 CROSS COLLECTOR DRIVE	PST-103A	NEW	PRIMARY TANKS	1/3	460	3	N/A	MCC-E	3/4"	3#10, 1#10G	FVR	--	MCC-E	TYPE 1	SEE NOTE 3	
PRIMARY TANK NO. 4 MAIN GEAR DRIVE	PST-104	REPLACE - 1/2 HP	PRIMARY TANKS	1/2	460	3	MCC-E	MCC-E	3/4"	3#10, 1#10G	FVR	1	MCC-E	TYPE 1	SEE NOTE 3	
PRIMARY TANK NO. 4 CROSS COLLECTOR DRIVE	PST-104A	NEW	PRIMARY TANKS	1/3	460	3	N/A	MCC-E	3/4"	3#10, 1#10G	FVR	--	MCC-E	TYPE 1	SEE NOTE 3	
RAW WASTE SLUDGE PUMP NO. 1	P-110	REPLACE - 30 HP	CONTROL BUILDING	20	460	3	CB ENGINE ROOM PNL	CB ENGINE ROOM PNL	1"	3#6, 1#8G	VFD	27A	NEAR MOTOR		SEE NOTE 2	
RAW WASTE SLUDGE PUMP NO. 2	P-112	REPLACE - 20 HP	CONTROL BUILDING	20	460	3	CB ENGINE ROOM PNL	CB ENGINE ROOM PNL	1"	3#6, 1#8G	VFD	27A	NEAR MOTOR		SEE NOTE 2	
RETURN ACTIVATED SLUDGE PUMP NO. 1	P-331	REPLACE - 50 HP	BLOWER BUILDING	50	460	3	MCC-D	MCC-D	1"	3#4, 1#8G	VFD	65A	NEAR MOTOR		SEE NOTE 3	
RETURN ACTIVATED SLUDGE PUMP NO. 2	P-332	REPLACE - 50 HP	BLOWER BUILDING	50	460	3	MCC-D	MCC-D	1"	3#4, 1#8G	VFD	65A	NEAR MOTOR		SEE NOTE 3	
RETURN ACTIVATED SLUDGE PUMP NO. 3	P-333	REPLACE - 50 HP	BLOWER BUILDING	50	460	3	MCC-D	MCC-D	1"	3#4, 1#8G	VFD	65A	NEAR MOTOR		SEE NOTE 3	
RETURN ACTIVATED SLUDGE PUMP NO. 4	P-334	REPLACE - 50 HP	BLOWER BUILDING	50	460	3	MCC-D	MCC-D	1"	3#4, 1#8G	VFD	65A	NEAR MOTOR		SEE NOTE 3	
ACTIVATED SLUDGE TANK DRAINAGE PUMP NO. 1	P-335	REPLACE - 7 1/2 HP	BLOWER BUILDING	7 1/2	460	3	MCC-D	MCC-D	3/4"	3#12, 1#12G	FVNR	1	MCC-D	TYPE 2	SEE NOTE 3	
ACTIVATED SLUDGE TANK DRAINAGE PUMP NO. 2	P-336	REPLACE - 7 1/2 HP	BLOWER BUILDING	7 1/2	460	3	MCC-D	MCC-D	3/4"	3#12, 1#12G	FVNR	1	MCC-D	TYPE 2	SEE NOTE 3	
ACTIVATED SLUDGE TANK DRAINAGE PUMP NO. 3	P-337	REMOVE - 7 1/2 HP	BLOWER BUILDING	N/A	N/A	N/A	MCC-D	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	
WASTE ACTIVATED SLUDGE PUMP NO. 1	P-313	REPLACE - 10 HP	AERATION PIPE GALLERY	15	460	3	MCC-D/CONTROL PNL	MCC-D	3/4"	3#8, 1#10G	VFD	21A	NEAR MOTOR		SEE NOTE 3	
WASTE ACTIVATED SLUDGE PUMP NO. 2	P-314	REPLACE - 10 HP	AERATION PIPE GALLERY	15	460	3	MCC-D/CONTROL PNL	MCC-D	3/4"	3#8, 1#10G	VFD	21A	NEAR MOTOR		SEE NOTE 3	
WASTE ACTIVATED SLUDGE PUMP NO. 3	P-315	REPLACE - 10 HP	AERATION PIPE GALLERY	15	460	3	MCC-D/CONTROL PNL	MCC-D	3/4"	3#8, 1#10G	VFD	21A	NEAR MOTOR		SEE NOTE 3	
THICKENED SLUDGE TRANSFER PUMP NO. 1	P-601	REPLACE - 20 HP	GRAVITY BELT THICKENER BLDG.	20	460	3	MCC-A	MCC-A	3/4"	3#8, 1#10G	FVNR	2	MCC-A	TYPE 3	SEE NOTE 2	
THICKENED SLUDGE TRANSFER PUMP NO. 2	P-602	REPLACE - 30 HP	GRAVITY BELT THICKENER BLDG.	20	460	3	MCC-A	MCC-A	3/4"	3#8, 1#10G	FVNR	2	MCC-A	TYPE 3	SEE NOTE 2	
THICKENED SLUDGE TRANSFER PUMP NO. 3	P-603	REPLACE - 30 HP	GRAVITY BELT THICKENER BLDG.	20	460	3	MCC-A	MCC-A	3/4"	3#8, 1#10G	FVNR	2	MCC-A	TYPE 3	SEE NOTE 2	

PROCESS MOTOR SCHEDULE NOTES:

1. REUSE EXISTING CONDUIT AND PROVIDE NEW WIRE.
2. REUSE EXISTING CONDUIT AND EXTEND TO EQUIPMENT AS REQUIRED (PROVIDE NEW CONDUIT AS REQUIRED). PROVIDE NEW WIRE.
3. PROVIDE NEW CONDUIT AND WIRE.

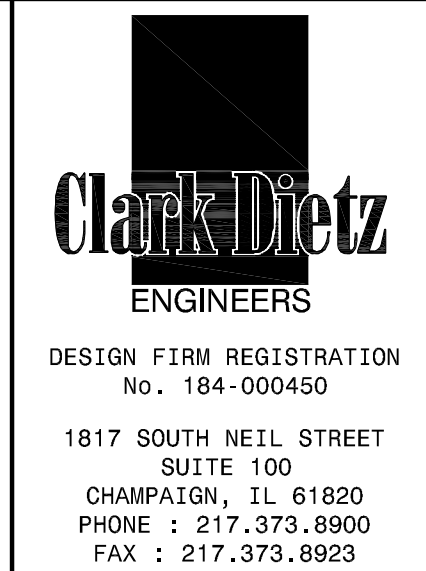


TYPE 1 CONTROL DIAGRAM
SCALE: NONE

TYPE 2 CONTROL DIAGRAM
SCALE: NONE

TYPE 3 CONTROL DIAGRAM
SCALE: NONE

NOTES: Δ = LOCATED AT MOTOR



PROJECT TITLE
**CITY OF JOLIET, ILLINOIS
EASTSIDE WWTP
SLUDGE PUMP REPLACEMENT
AND TANK REPAIRS**

DESIGNED BY:	SEM
DRAWN BY:	RLF
CHECKED BY:	CEC/MLS
DATE CHECKED:	07/07

NOTE: DIMENSIONAL DATA IS NOT TO BE OBTAINED BY SCALING ANY PORTION OF THIS DRAWING.

DATE	REVISION

DRAWING TITLE
**PROCESS MOTOR SCHEDULE
AND CONTROL DIAGRAMS**

PROJECT No.
J02570

DRAWING No.
E-3

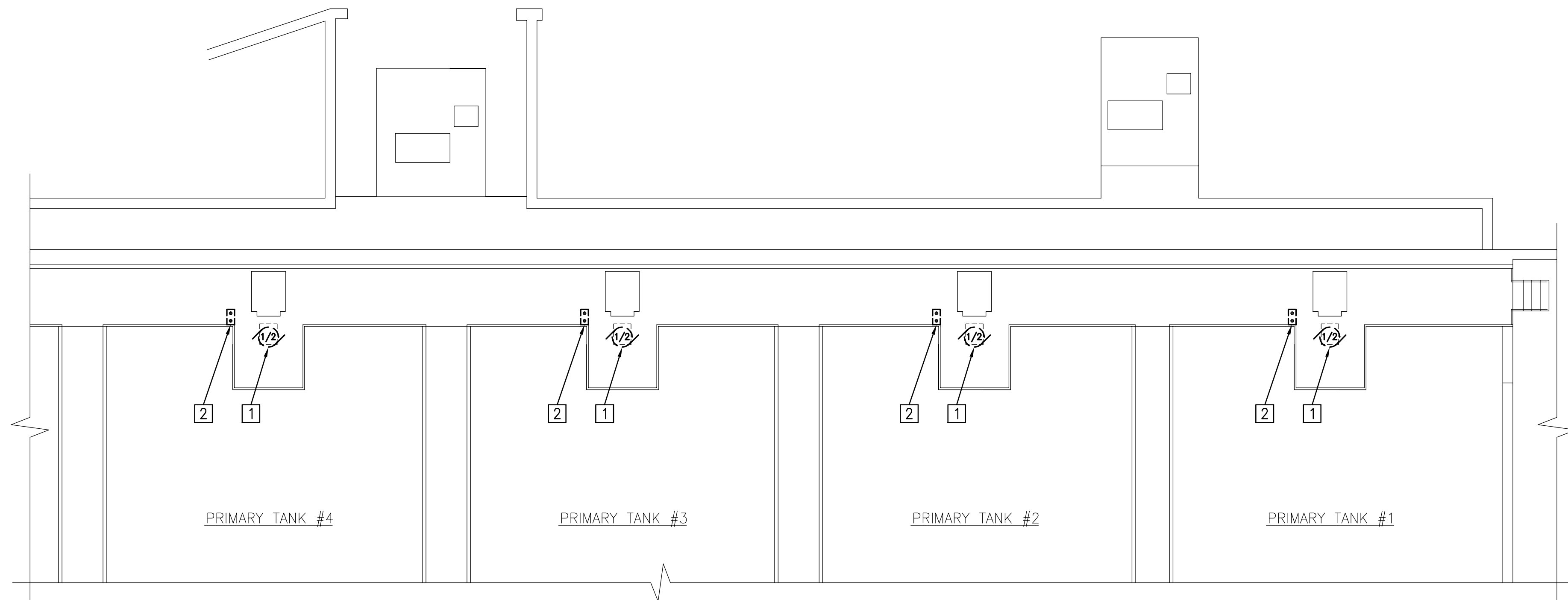
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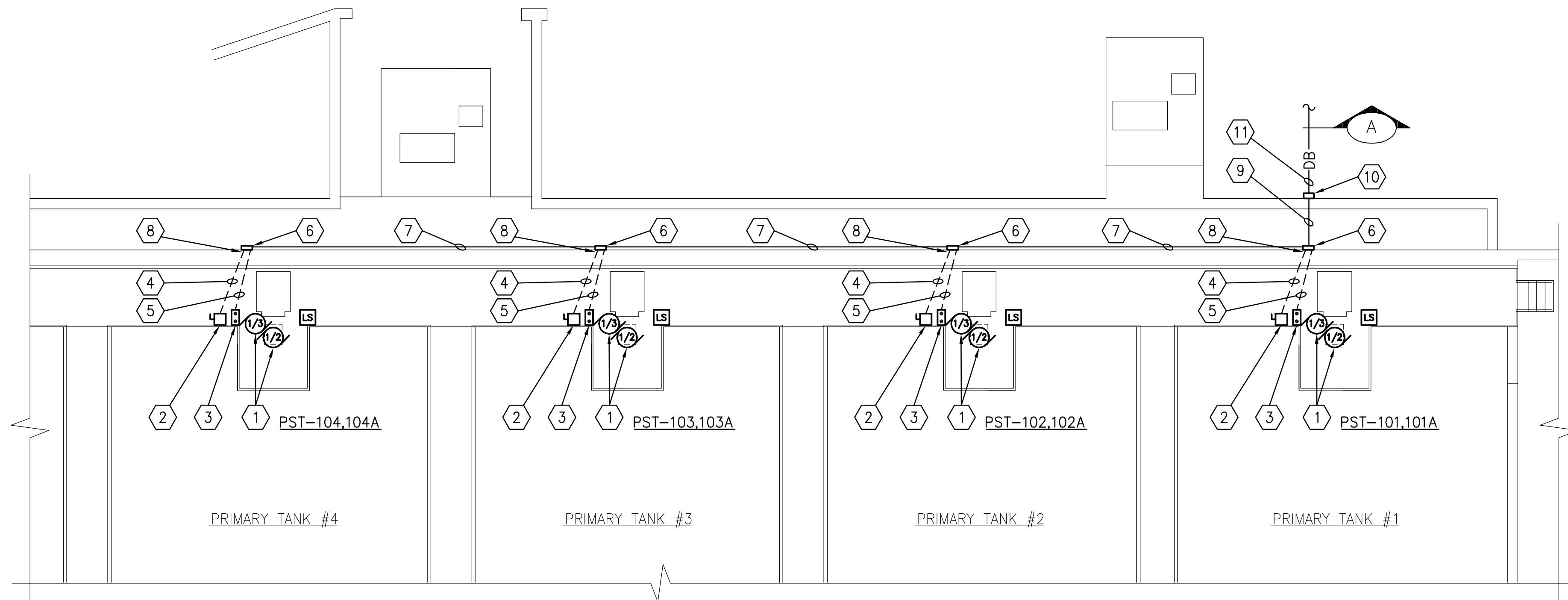
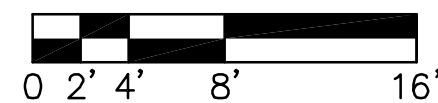
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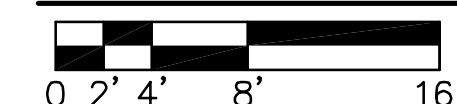
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ELECTRICAL DEMOLITION PLAN



ELECTRICAL PROPOSED PLAN



ELECTRICAL NOTES (THIS DRAWING)

1. SEE DRAWING E-1 FOR GENERAL NOTES AND SYMBOL LIST.
2. SEE PROCESS MOTOR SCHEDULE ON DRAWING E-3 FOR ADDITIONAL INFORMATION ON MOTOR LOADS.
3. ALL CONDUITS AND FITTING LOCATED AT PRIMARY TANKS SHALL BE PVC COATED RGS CONDUIT.
4. SEE DRAWING E-2 FOR DUCTBANK SECTIONS AND DUCTBANK CABLE SCHEDULE.

DEMOLITION KEYNOTES (THIS DRAWING)

- 1 DISCONNECT AND REMOVE EXISTING GEAR DRIVE MOTOR. REMOVE CONDUIT AND CONDUCTORS BACK TO MCC-E (SEE DRAWING E-6 FOR LOCATION).
- 2 DISCONNECT AND REMOVE EXISTING START/STOP CONTROL STATION. REMOVE CONDUIT AND CONDUCTORS BACK TO MCC-E (SEE DRAWING E-6 FOR LOCATION).

KEYNOTES (THIS DRAWING)

- 1 PRIMARY TANK MAIN GEAR DRIVE AND CROSS COLLECTOR DRIVE.
- 2 PROVIDE HEAVY DUTY NEMA 4X, NON-FUSIBLE, 30A, 3 POLE DISCONNECT SWITCH FOR PRIMARY TANK DRIVES. MOUNT DISCONNECT SWITCH TO EXISTING HANDRAIL.
- 3 PROVIDE FORWARD/STOP/REVERSE LOCAL CONTROL STATION IN NEMA 4X ENCLOSURE FOR CONTROL OF PRIMARY TANK GEAR DRIVE MOTORS (STOP PUSHBUTTON SHALL HAVE LOCKOUT CAPABILITIES). MOUNT TO EXISTING HANDRAIL.
- 4 3/4" PVC COATED RGS CONDUIT FOR 480V WIRES (LOCATED BELOW EXISTING CONCRETE DECK ABOVE WATER LEVEL).
- 5 3/4" PVC COATED RGS CONDUIT FOR 120V CONTROL WIRES (LOCATED BELOW EXISTING CONCRETE DECK ABOVE WATER LEVEL).
- 6 (2) PVC COATED RGS CONDUIT FITTINGS.
- 7 (2) 1 1/2" PVC COATED RGS CONDUITS, ONE WITH 480V WIRES AND ONE WITH 120V CONTROL WIRES. MOUNT CONDUITS TO EAST SIDE OF EXISTING HANDRAIL.
- 8 CORE THROUGH EXISTING CONCRETE TANK WALL IMMEDIATELY BELOW CONCRETE DECK FOR CONDUITS. SEAL PENETRATIONS WATER TIGHT.
- 9 (2) 1 1/2" PVC COATED RGS CONDUITS SUSPENDED ABOVE EXISTING PRIMARY TANK WALLS.
- 10 PROVIDE (2) 14"Hx12"Wx6"D NEMA 4X STAINLESS STEEL PULLBOXES ON SIDE OF TANK (ONE BOX FOR 480V WIRES AND ONE FOR 120V CONTROL WIRES).
- 11 UNDERGROUND DUCTBANK TO CONTROL BUILDING. SEE DRAWING E-2 FOR CONTINUATION.



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DRAWING TITLE
**PRIMARY TANK
ELECTRICAL PLANS**

PROJECT No.
J02570

DRAWING No.
E-4

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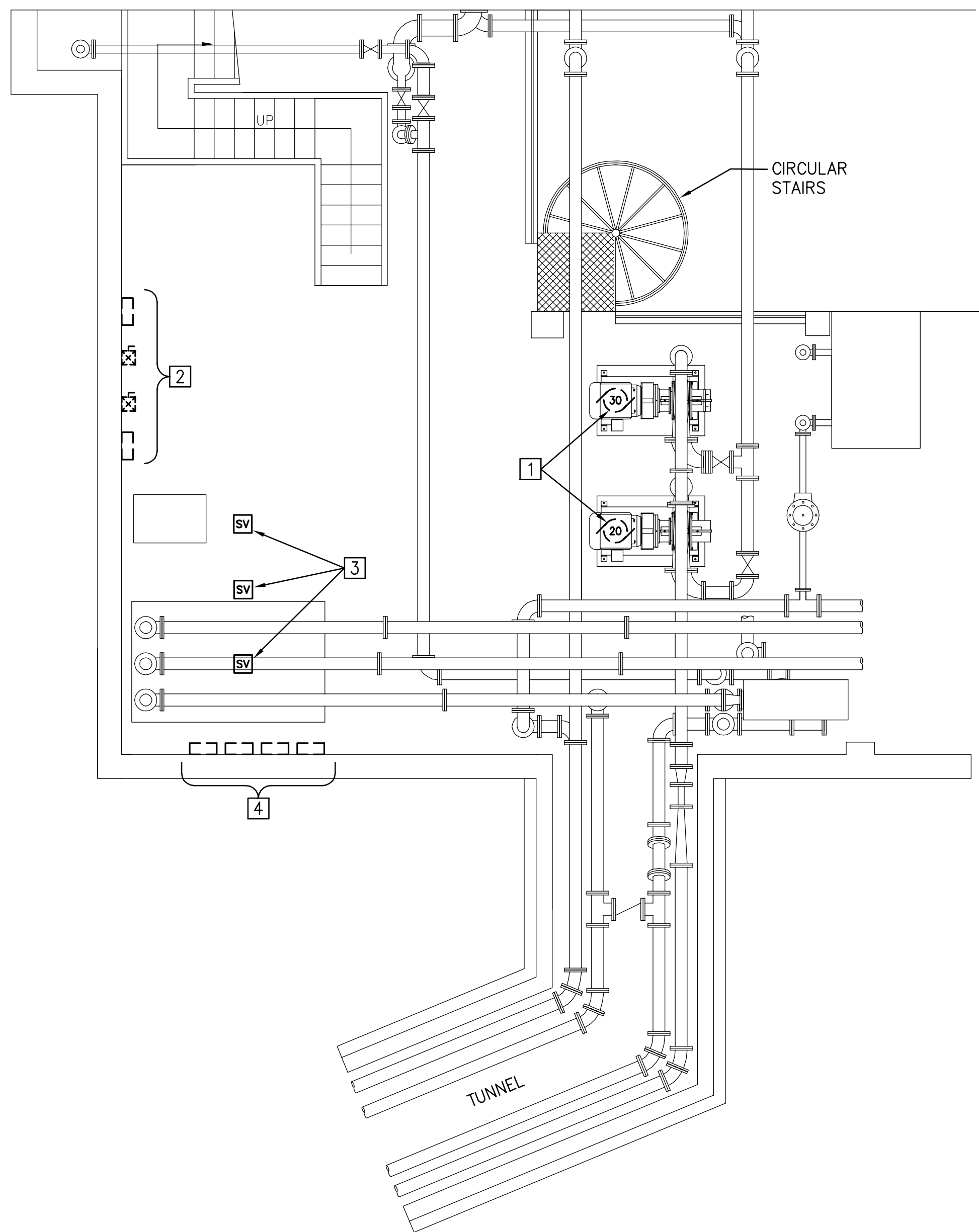
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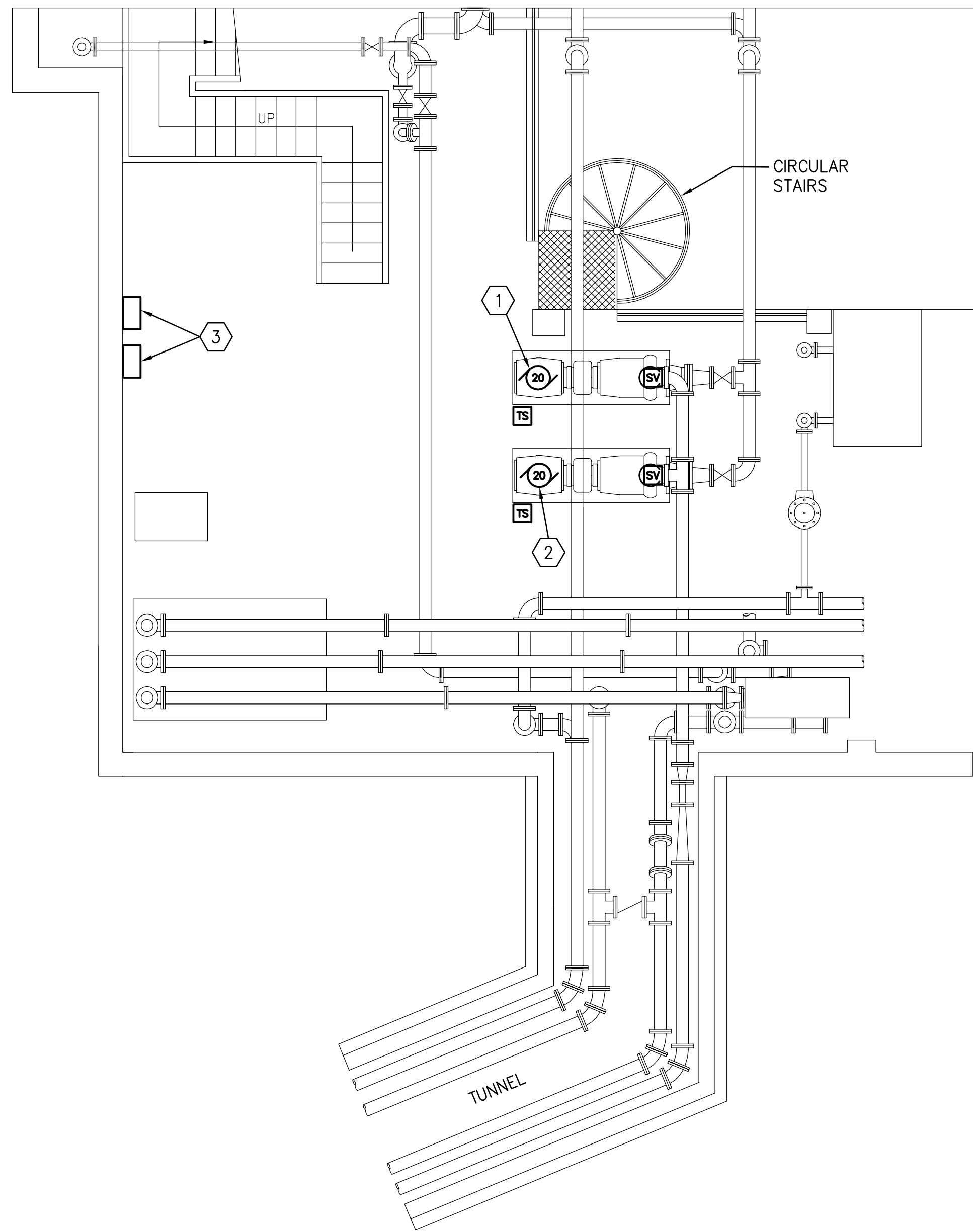
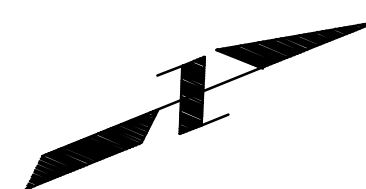
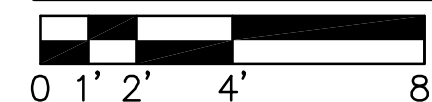
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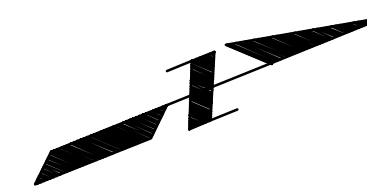
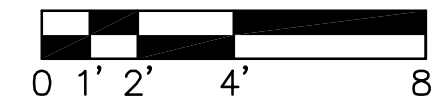
A



BASEMENT ELECTRICAL DEMOLITION PLAN



BASEMENT ELECTRICAL PROPOSED PLAN



ELECTRICAL NOTES (THIS DRAWING)

1. SEE DRAWING E-1 FOR GENERAL NOTES AND SYMBOL LIST.
2. SEE PROCESS MOTOR SCHEDULE ON DRAWING E-3 FOR ADDITIONAL INFORMATION ON MOTOR LOADS.
3. SEE DRAWING E-10 FOR VFD SCHEDULE AND INTERCONNECT DIAGRAM.

DEMOLITION KEYNOTES (THIS DRAWING)

- 1 DISCONNECT RAW WASTE SLUDGE PUMP MOTOR AND REMOVE SEAL-TITE CONDUIT, CONDUCTORS, AND ASSOCIATED STARTER. EXISTING RGS CONDUIT STUBBED OUT OF FLOOR SHALL REMAIN AND BE REUSED. RAW WASTE SLUDGE PUMP STARTERS ARE FED FROM C.B. ENGINE ROOM PANEL (SEE DRAWING E-6 FOR LOCATION).
- 2 REMOVE COMBINATION STARTER AND CONTROL PANEL WITH RELAYS FOR RAW WASTE SLUDGE PUMPS NO. 1 AND NO. 2.
- 3 DISCONNECT SOLENOID VALVE FOR DIAPHRAGM PUMP AND REMOVE ASSOCIATED CONDUIT AND WIRING BACK TO SOURCE.
- 4 REMOVE (4) CONTROL PANELS FOR (3) DIAPHRAGM PUMPS AND ASSOCIATED CONDUIT AND WIRING BACK TO SOURCE. CONTROL PANELS ARE FED FROM LIGHTING PANEL LP-G (SEE DRAWING E-6 FOR LOCATION).

KEYNOTES (THIS DRAWING)

- 1 RAW WASTE SLUDGE PUMP NO.1 (P-110).
- 2 RAW WASTE SLUDGE PUMP NO.2 (P-112).
- 3 PROVIDE VFD FOR RAW WASTE SLUDGE PUMPS NO. 1 AND NO. 2.

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PROJECT TITLE
**CITY OF JOLIET, ILLINOIS
EASTSIDE WWTP
SLUDGE PUMP REPLACEMENT
AND TANK REPAIRS**

DESIGNED BY: SEM
DRAWN BY: RLF
CHECKED BY: CEC/MLS
DATE CHECKED: 07/07

NOTE: DIMENSIONAL DATA IS NOT TO BE OBTAINED BY SCALING ANY PORTION OF THIS DRAWING.

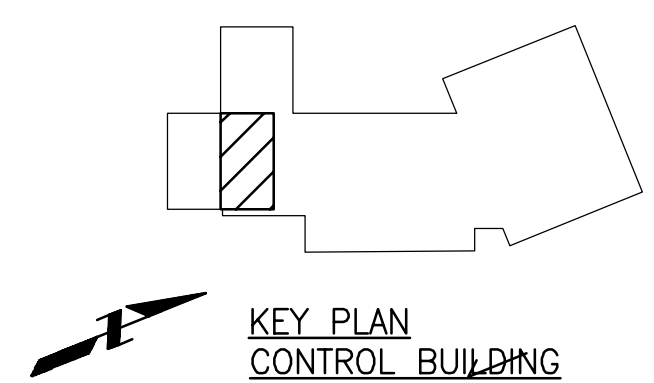
DATE	REVISION

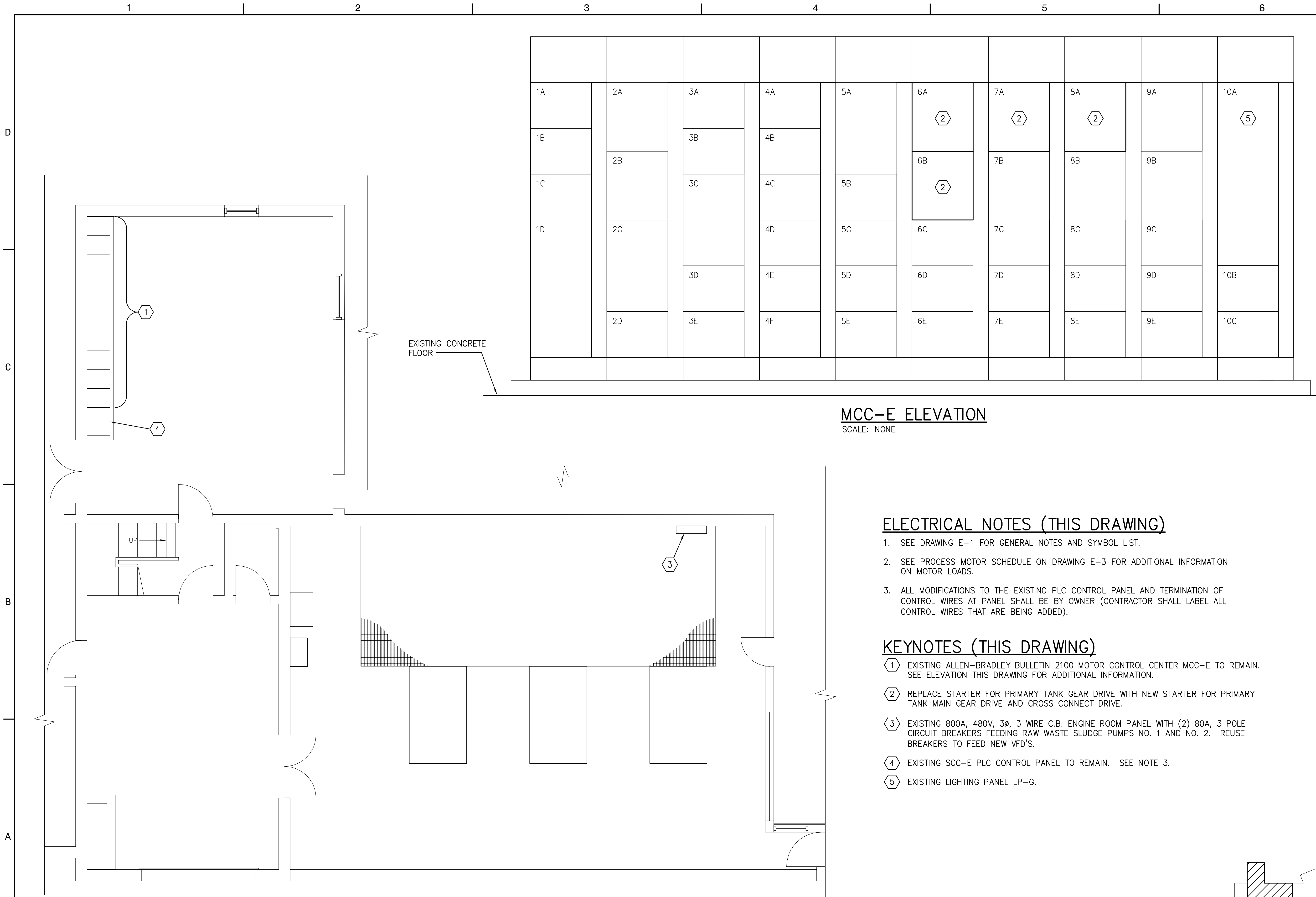
DRAWING TITLE
**CONTROL BUILDING
BASEMENT ELECTRICAL
PLANS**

PROJECT No.
J02570

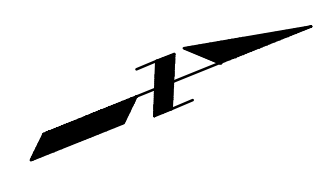
DRAWING No.
E-5

DRAWING 15 OF 22





ELECTRICAL PLAN
 0 1' 2' 4' 8'



MCC-E ELEVATION
 SCALE: NONE

ELECTRICAL NOTES (THIS DRAWING)

- SEE DRAWING E-1 FOR GENERAL NOTES AND SYMBOL LIST.
- SEE PROCESS MOTOR SCHEDULE ON DRAWING E-3 FOR ADDITIONAL INFORMATION ON MOTOR LOADS.
- ALL MODIFICATIONS TO THE EXISTING PLC CONTROL PANEL AND TERMINATION OF CONTROL WIRES AT PANEL SHALL BE BY OWNER (CONTRACTOR SHALL LABEL ALL CONTROL WIRES THAT ARE BEING ADDED).

KEYNOTES (THIS DRAWING)

- EXISTING ALLEN-BRADLEY BULLETIN 2100 MOTOR CONTROL CENTER MCC-E TO REMAIN. SEE ELEVATION THIS DRAWING FOR ADDITIONAL INFORMATION.
- REPLACE STARTER FOR PRIMARY TANK GEAR DRIVE WITH NEW STARTER FOR PRIMARY TANK MAIN GEAR DRIVE AND CROSS CONNECT DRIVE.
- EXISTING 800A, 480V, 3 ϕ , 3 WIRE C.B. ENGINE ROOM PANEL WITH (2) 80A, 3 POLE CIRCUIT BREAKERS FEEDING RAW WASTE SLUDGE PUMPS NO. 1 AND NO. 2. REUSE BREAKERS TO FEED NEW VFD'S.
- EXISTING SCC-E PLC CONTROL PANEL TO REMAIN. SEE NOTE 3.
- EXISTING LIGHTING PANEL LP-G.

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PROJECT TITLE
**CITY OF JOLIET, ILLINOIS
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 SLUDGE PUMP REPLACEMENT
 AND TANK REPAIRS**

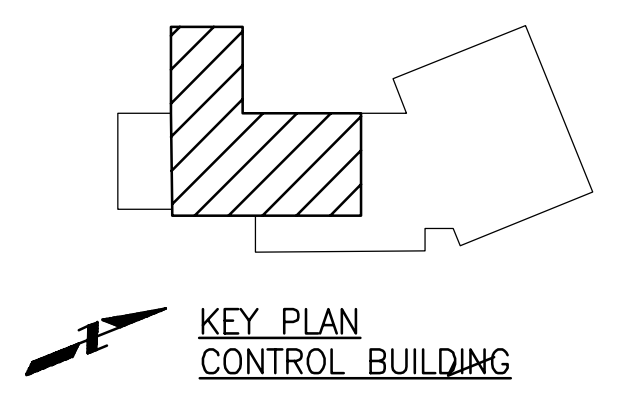
DESIGNED BY: SEM
 DRAWN BY: RLF
 CHECKED BY: CEC/MLS
 DATE CHECKED: 07/07
 NOTE: DIMENSIONAL DATA IS NOT TO BE OBTAINED BY SCALING ANY PORTION OF THIS DRAWING.

DATE	REVISION

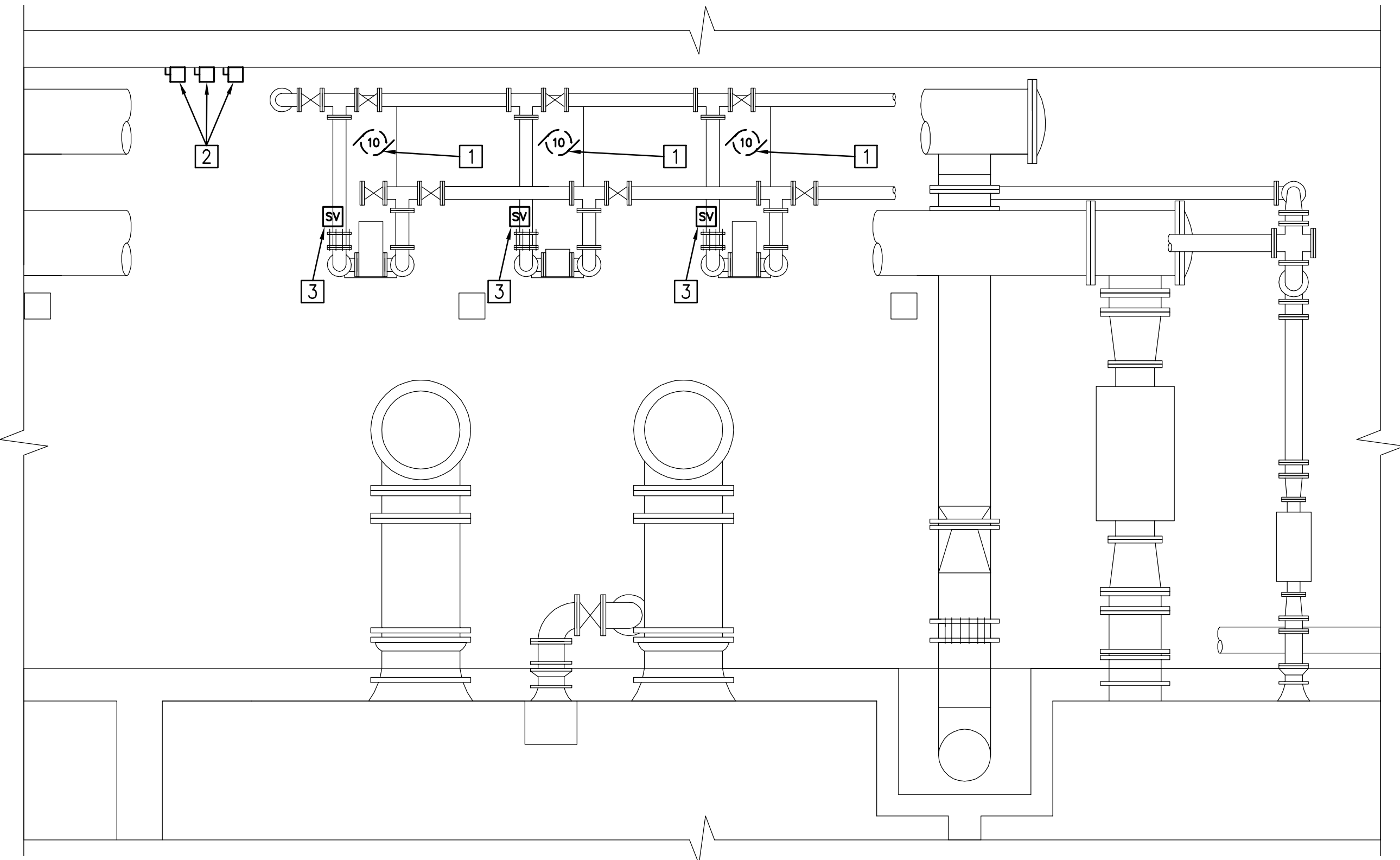
DRAWING TITLE
**CONTROL BUILDING FIRST
 FLOOR ELECTRICAL PLAN
 AND MCC-E ELEVATION**

PROJECT No.
J02570

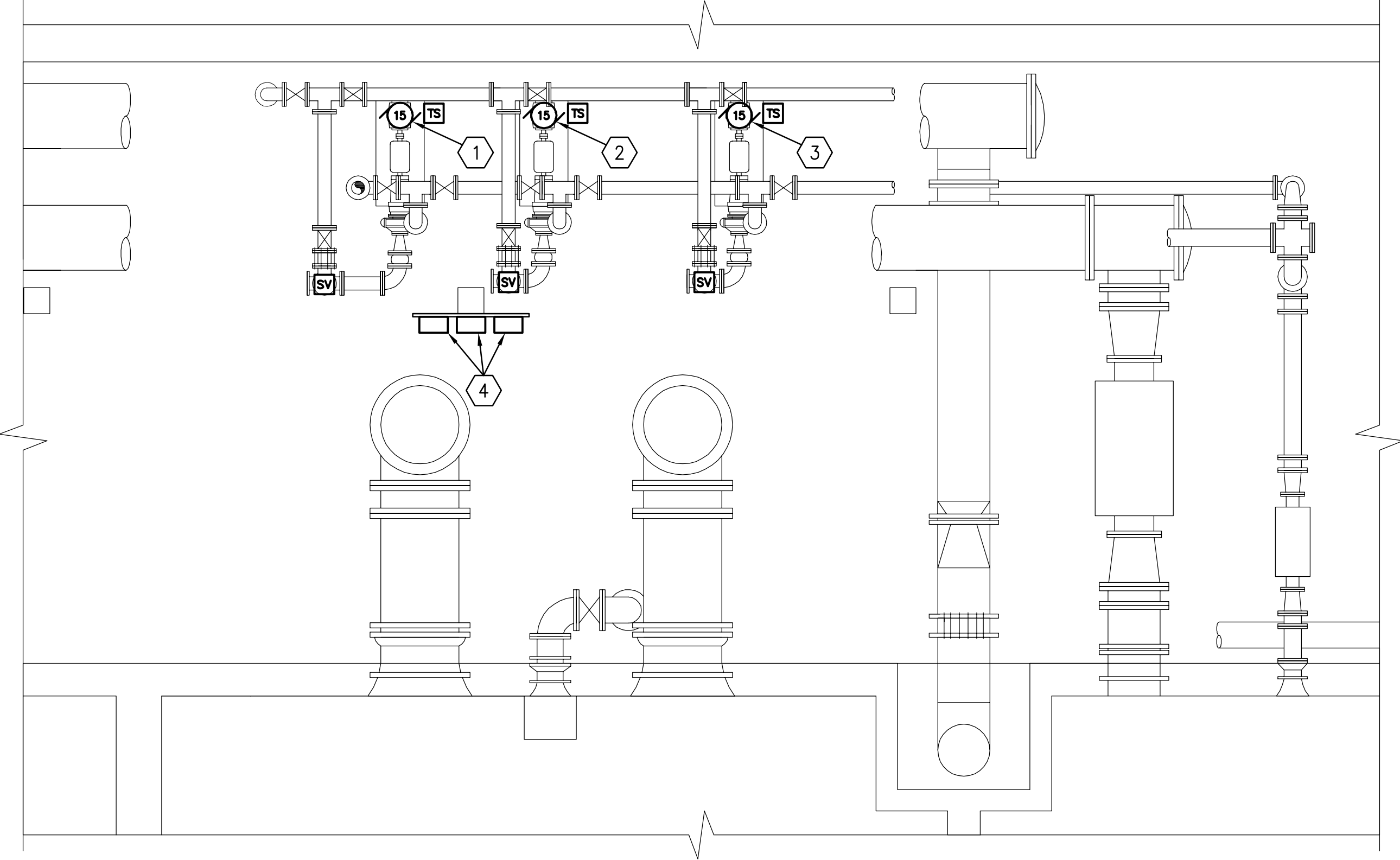
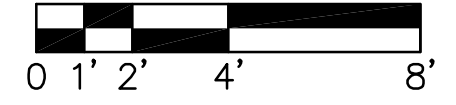
DRAWING No.
E-6
 DRAWING 16 OF 22



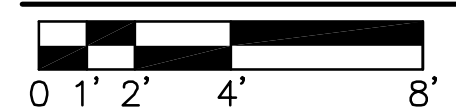
D
C
B
A



ELECTRICAL DEMOLITION PLAN



ELECTRICAL PROPOSED PLAN



ELECTRICAL NOTES (THIS DRAWING)

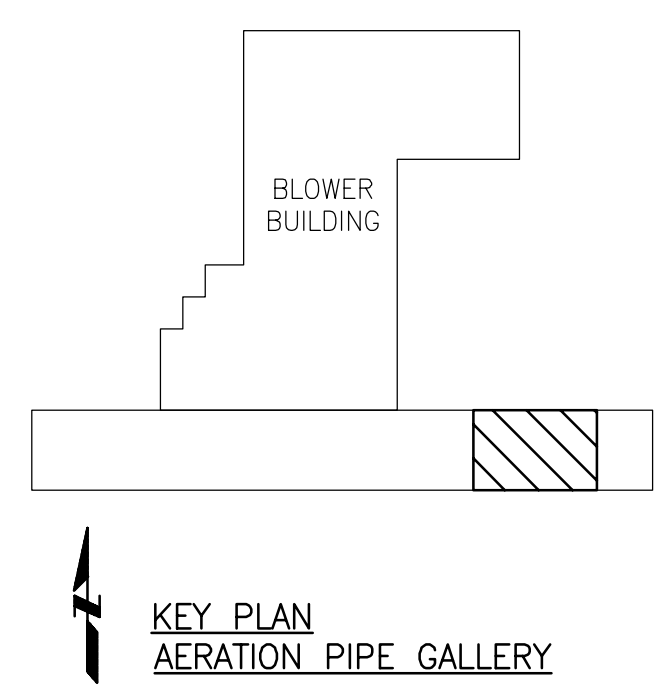
1. SEE DRAWING E-1 FOR GENERAL NOTES AND SYMBOL LIST.
2. SEE PROCESS MOTOR SCHEDULE ON DRAWING E-3 FOR ADDITIONAL INFORMATION ON MOTOR LOADS.
3. SEE DRAWING E-10 FOR VFD SCHEDULE AND INTERCONNECT DIAGRAM.

DEMOLITION KEYNOTES (THIS DRAWING)

- 1 DISCONNECT EXISTING WAS PUMP AND REMOVE CONDUIT AND CONDUCTORS BACK TO DISCONNECT SWITCH.
- 2 REMOVE EXISTING DISCONNECT SWITCHES FOR WAS PUMPS. REMOVE EXISTING CONDUIT AND CONDUCTORS BACK TO MCC-D AND EXISTING CONTROL PANEL (SEE DRAWING E-9 FOR LOCATION).
- 3 DISCONNECT CONDUIT AND WIRE TO EXISTING SEAL WATER SOLENOID VALVE.

KEYNOTES (THIS DRAWING)

- 1 WAS PUMP NO.1 (P-313).
- 2 WAS PUMP NO.2 (P-314).
- 3 WAS PUMP NO.4 (P-315).
- 4 PROVIDE VFDs FOR WAS PUMPS NO. 1, 2, AND 3. PROVIDE STAINLESS STEEL SUPPORT STRUCTURES ANCHORED TO CONCRETE COLUMNS FOR MOUNTING VFDs.



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PROJECT TITLE
**CITY OF JOLIET, ILLINOIS
EASTSIDE WWTP
SLUDGE PUMP REPLACEMENT
AND TANK REPAIRS**

DESIGNED BY: SEM
DRAWN BY: RLF
CHECKED BY: CEC/MLS
DATE CHECKED: 07/07

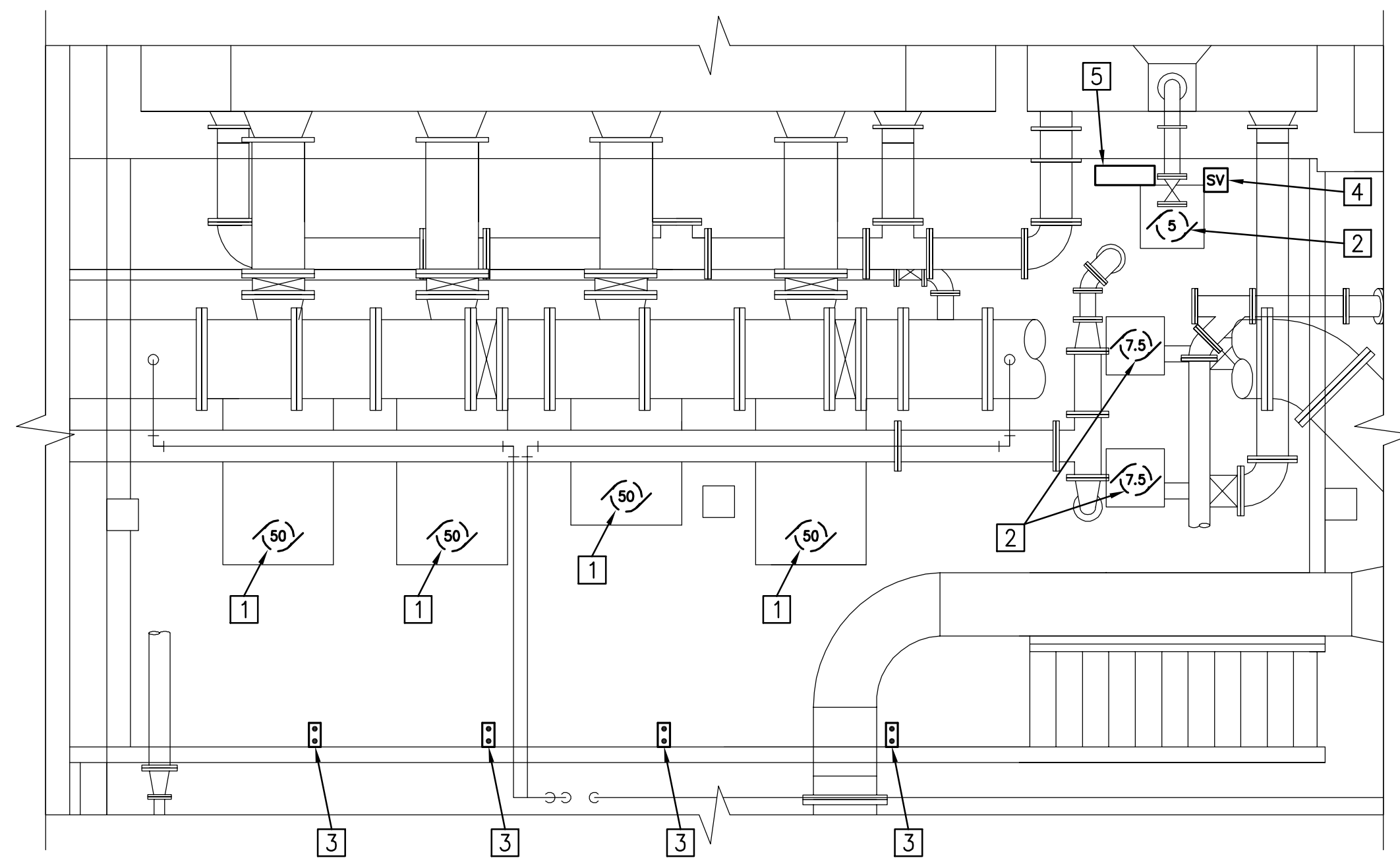
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DATE	REVISION

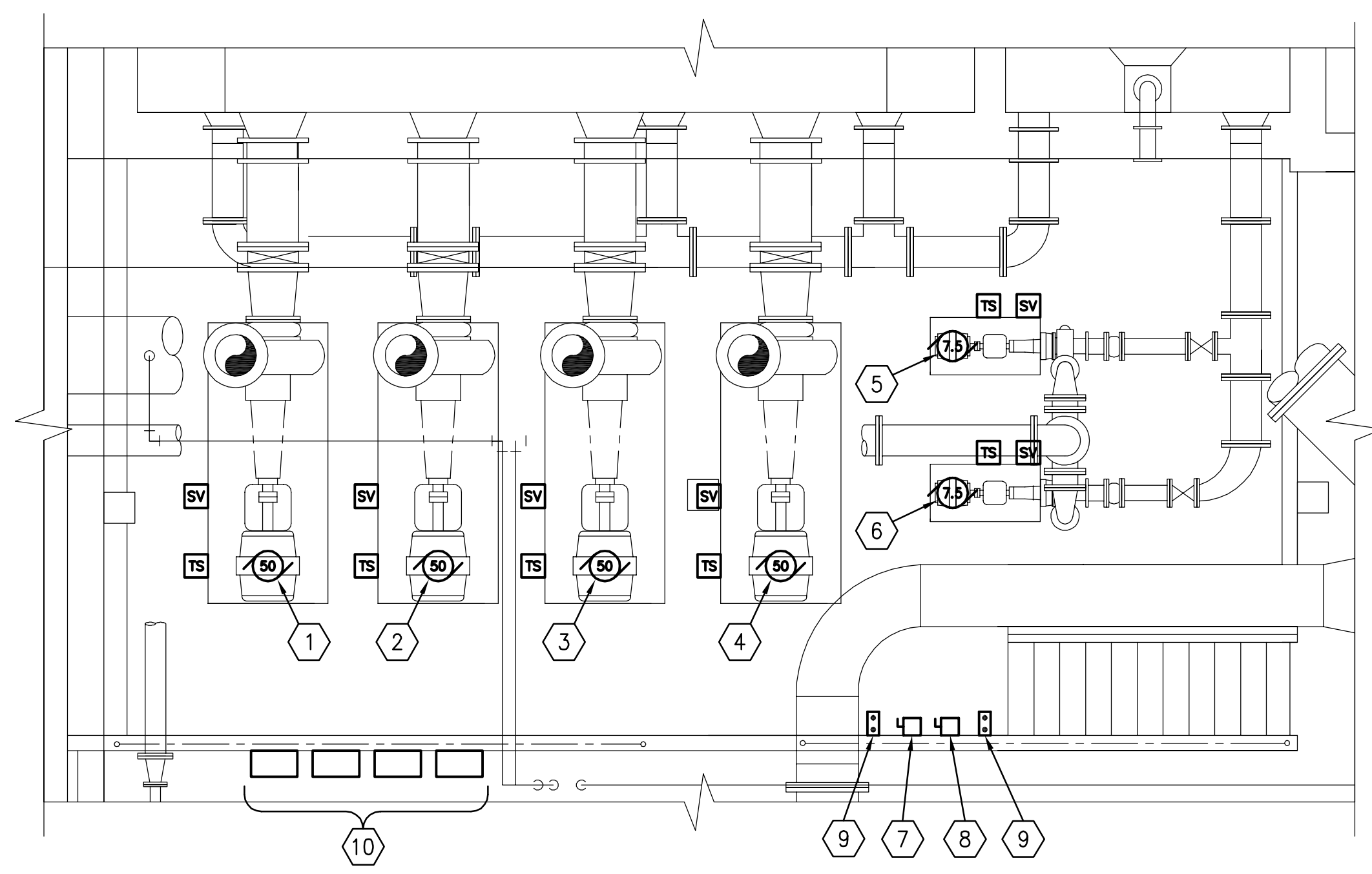
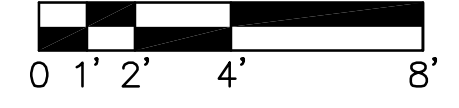
DRAWING TITLE
**AERATION PIPE GALLERY
ELECTRICAL PLANS**

PROJECT No.
J02570

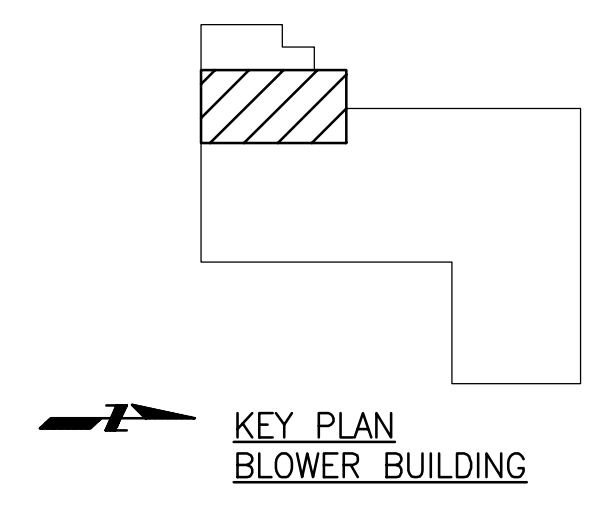
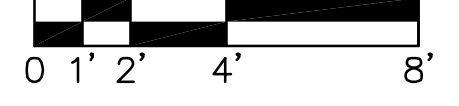
DRAWING No.
E-7



BASEMENT ELECTRICAL DEMOLITION PLAN



BASEMENT ELECTRICAL PROPOSED PLAN



ELECTRICAL NOTES (THIS DRAWING)

1. SEE DRAWING E-1 FOR GENERAL NOTES AND SYMBOL LIST.
2. SEE PROCESS MOTOR SCHEDULE ON DRAWING E-3 FOR ADDITIONAL INFORMATION ON MOTOR LOADS.
3. SEE DRAWING E-10 FOR VFD SCHEDULE AND INTERCONNECT DIAGRAM.

DEMOLITION KEYNOTES (THIS DRAWING)

- 1 DISCONNECT EXISTING RAS PUMP AND ASSOCIATED SPEED CONTROL UNIT. REMOVE CONDUCTORS AND CONDUITS BACK TO SOURCE. EXISTING RAS PUMPS ARE FED FROM MCC-D AND COMMON CONTROL PANEL (SEE DRAWING E-9 FOR LOCATION).
- 2 DISCONNECT EXISTING ACTIVATED SLUDGE TANK DRAINAGE PUMPS. REMOVE CONDUCTORS AND CONDUITS BACK TO MCC-D (SEE DRAWING E-9 FOR LOCATION.)
- 3 REMOVE EXISTING LOCAL START/STOP CONTROL STATION FOR RAS PUMP AND ASSOCIATED CONDUIT AND WIRING.
- 4 REMOVE EXISTING SEAL WATER SOLENOID VALVE FOR PUMP AND ASSOCIATED CONDUIT AND WIRING.
- 5 REMOVE (3) EXISTING H/O/A SELECTOR SWITCHES FOR PUMPS AND ASSOCIATED CONDUIT AND WIRING. EXISTING WETWELL LEVEL PANEL TO REMAIN. PROVIDE KNOCKOUTS IN OPENINGS.

KEYNOTES (THIS DRAWING)

- 1 RAS PUMP NO.2 (P-332).
- 2 RAS PUMP NO.3 (P-333).
- 3 RAS PUMP NO.1 (P-331).
- 4 RAS PUMP NO.4 (P-334).
- 5 ACTIVATED SLUDGE TANK DRAINAGE PUMP NO.1 (P-335).
- 6 ACTIVATED SLUDGE TANK DRAINAGE PUMP NO.2 (P-336).
- 7 PROVIDE 30A, 3 POLE, HEAVY DUTY NON-FUSIBLE DISCONNECT SWITCH IN NEMA 12 ENCLOSURE FOR ACTIVATED SLUDGE TANK DRAINAGE PUMP NO.1.
- 8 PROVIDE 30A, 3 POLE, HEAVY DUTY NON-FUSIBLE DISCONNECT SWITCH IN NEMA 12 ENCLOSURE FOR ACTIVATED SLUDGE TANK DRAINAGE PUMP NO.2.
- 9 START/STOP LOCAL CONTROL STATION FOR ACTIVATED SLUDGE TANK DRAINAGE PUMPS.
- 10 PROVIDE VFDs FOR RAS PUMPS NO. 1-4 (MOUNT VFDs ON UPPER LEVEL SUCH THAT VFDs ARE WITHIN SIGHT OF MOTORS). PROVIDE STAINLESS STEEL SUPPORT STRUCTURE ANCHORED TO FLOOR AND CEILING FOR MOUNTING VFDs.

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PROJECT TITLE
**CITY OF JOLIET, ILLINOIS
EASTSIDE WWTP
SLUDGE PUMP REPLACEMENT
AND TANK REPAIRS**

DESIGNED BY: SEM
DRAWN BY: RLF
CHECKED BY: CEC/MLS
DATE CHECKED: 07/07
NOTE: DIMENSIONAL DATA IS NOT TO BE OBTAINED BY SCALING ANY PORTION OF THIS DRAWING.

DATE	REVISION

DRAWING TITLE
**BLOWER BUILDING
BASEMENT
ELECTRICAL PLANS**

PROJECT No.
J02570

DRAWING No.
E-8
DRAWING 18 OF 22

1

2

3

4

5

6

D

C

B

A

ELECTRICAL NOTES (THIS DRAWING)

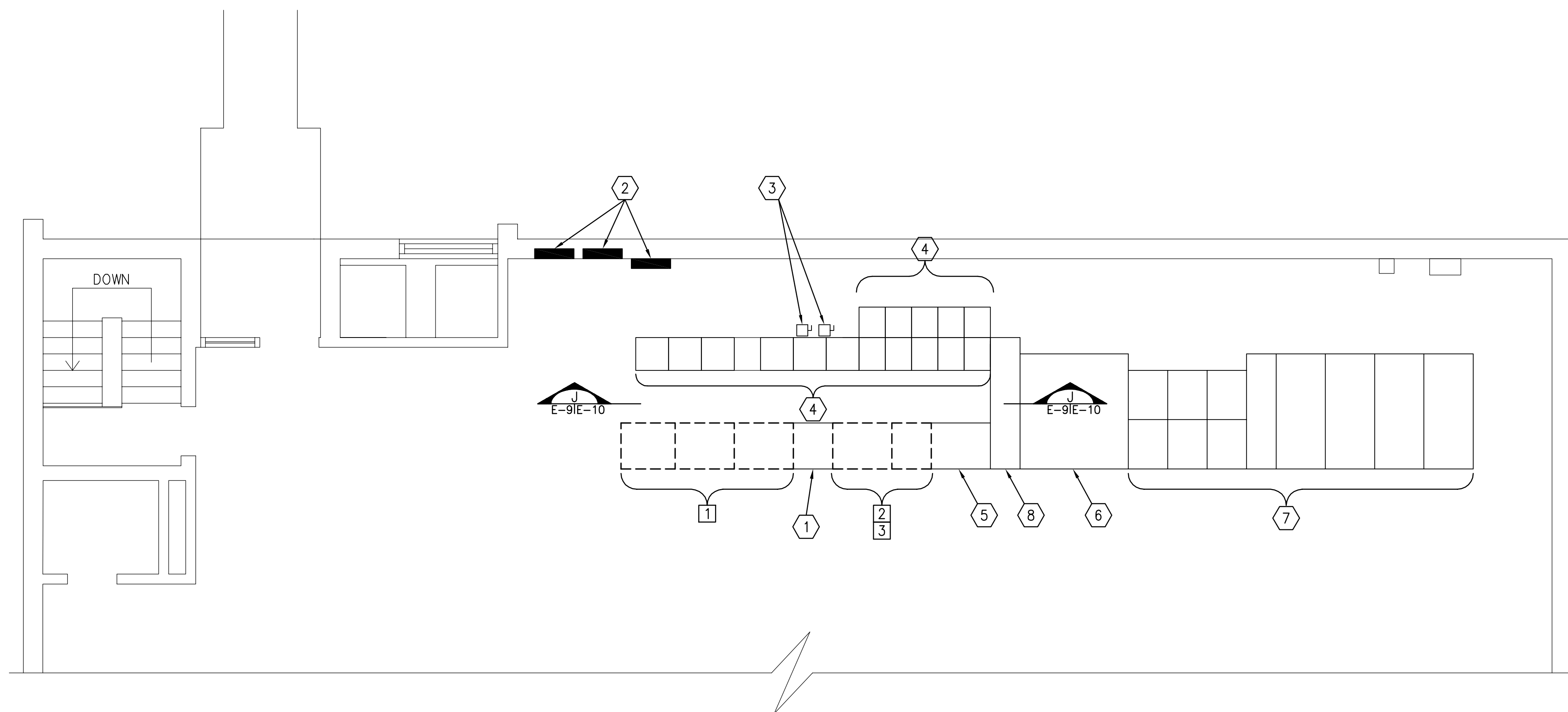
1. SEE DRAWING E-1 FOR GENERAL NOTES AND SYMBOL LIST.
2. SEE PROCESS MOTOR SCHEDULE ON DRAWING E-3 FOR ADDITIONAL INFORMATION ON MOTOR LOADS.
3. ALL MODIFICATIONS TO THE EXISTING PLC CONTROL PANEL AND TERMINATION OF CONTROL WIRES AT PANEL SHALL BE BY OWNER (CONTRACTOR SHALL LABEL ALL CONTROL WIRES THAT ARE BEING ADDED).

DEMOLITION KEYNOTES (THIS DRAWING)

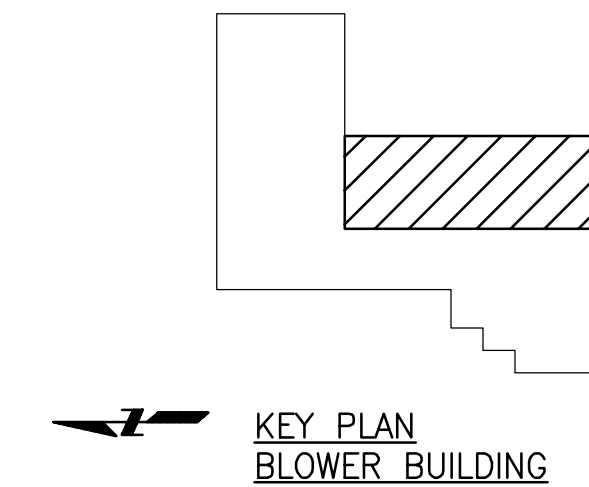
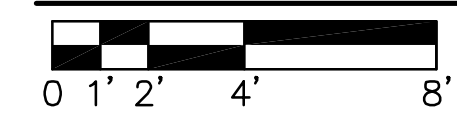
- 1 REMOVE EXISTING CONTROL PANELS WITH EDDY CURRENT CONTROLLERS FOR WAS PUMPS NO. 1, 2, AND 3.
- 2 REMOVE EXISTING RAS PUMP CONTROLS FROM COMMON CONTROL PANEL (E.G. RPM METER, POTENTIOMETER SWITCH, MANUAL/AUTO SELECTOR SWITCH, RUN LIGHT, START PUSHBUTTON, STOP PUSHBUTTON, NAMEPLATES, RELAYS, WIRING, ETC.). PROVIDE BLANK PLATE OVER OPENINGS IN DOOR.
- 3 REMOVE EXISTING TANK DRAINAGE PUMP CONTROLS FROM COMMON CONTROL PANEL (E.G. RUN LIGHT, AUTO LIGHT, NAMEPLATES, RELAYS, WIRING, ETC.). PROVIDE BLANK PLATE OVER OPENINGS IN DOOR.

KEYNOTES (THIS DRAWING)

- 1 EXISTING SCC-D/F PLC CONTROL PANEL. SEE NOTE 3.
- 2 EXISTING LIGHTING PANELS.
- 3 EXISTING DISCONNECT SWITCHES.
- 4 EXISTING 480V MOTOR CONTROL CENTER MCC-D. SEE DRAWING E-10 FOR ADDITIONAL INFORMATION.
- 5 EXISTING INSTRUMENT PANEL.
- 6 EXISTING 750KVA TRANSFORMER.
- 7 EXISTING 5KV SWITCHGEAR.
- 8 EXISTING BUS TRANSITION COMPARTMENT.



FIRST FLOOR ELECTRICAL PLAN



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PROJECT TITLE
CITY OF JOLIET, ILLINOIS
EASTSIDE WWTP
SLUDGE PUMP REPLACEMENT
AND TANK REPAIRS

DESIGNED BY: SEM
DRAWN BY: RLF
CHECKED BY: CEC/MLS
DATE CHECKED: 07/07

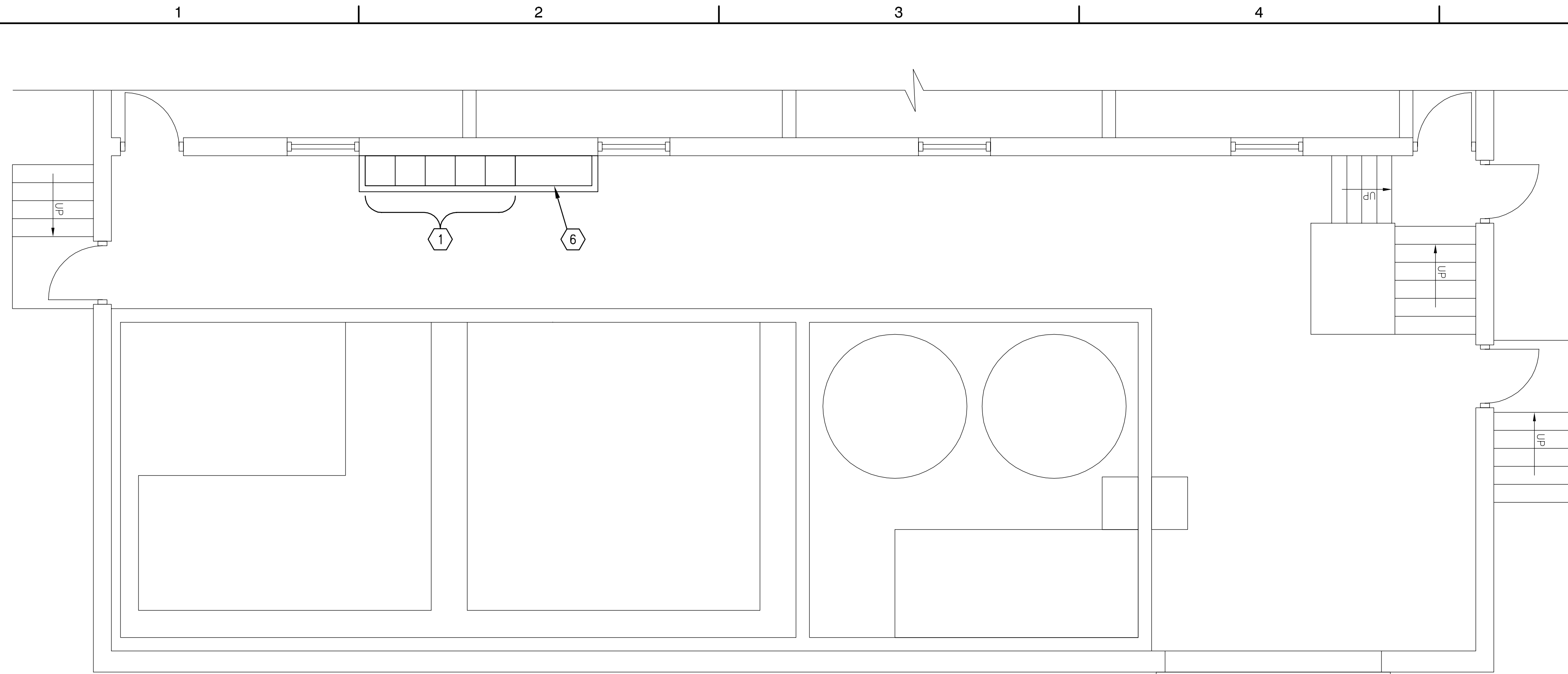
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DATE	REVISION

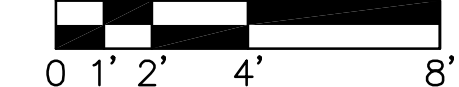
DRAWING TITLE
BLOWER BUILDING
FIRST FLOOR
ELECTRICAL PLAN

PROJECT No.
J02570

DRAWING No.
E-9
DRAWING 19 OF 22



FIRST FLOOR ELECTRICAL PLAN

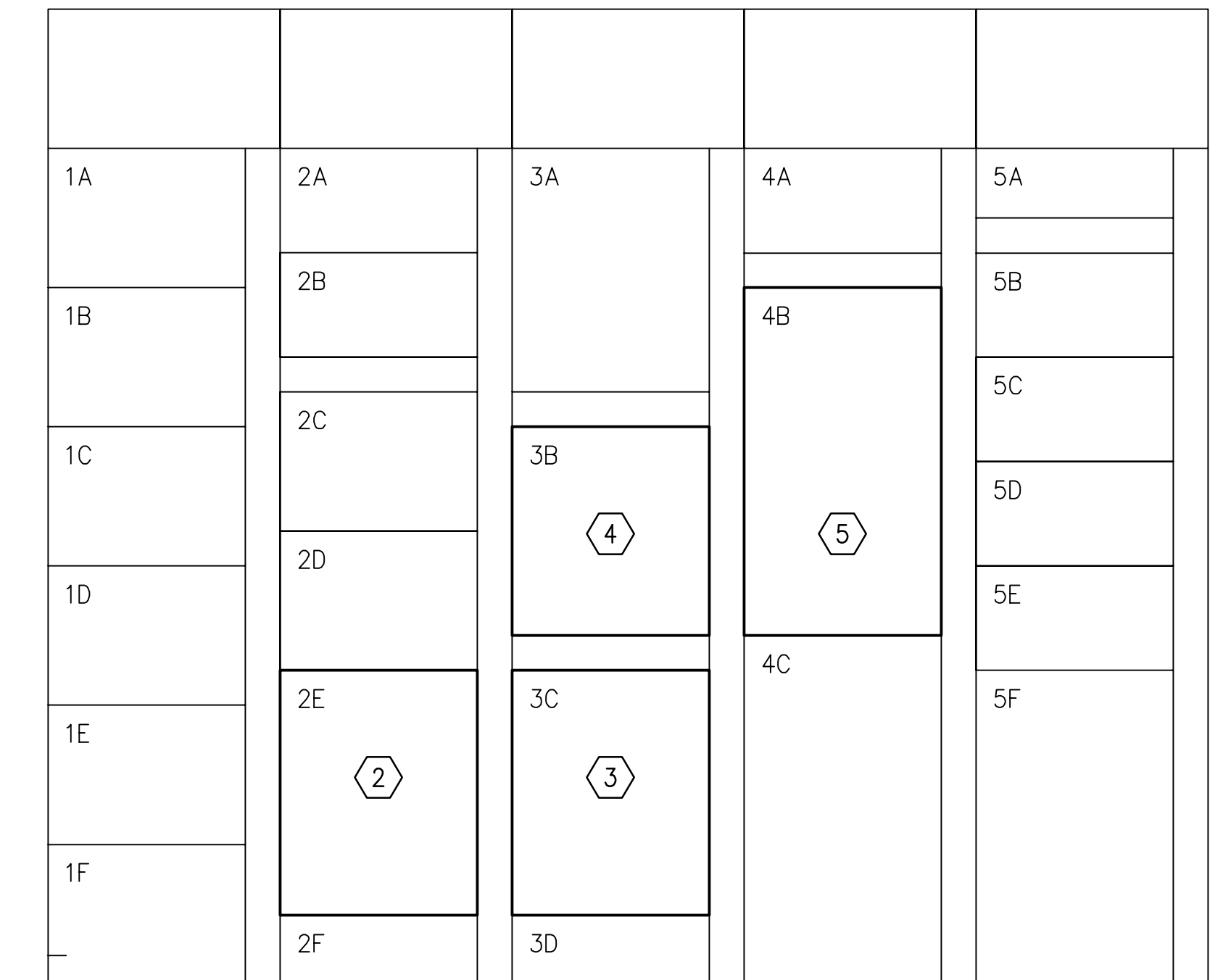


ELECTRICAL NOTES (THIS DRAWING)

1. SEE DRAWING E-1 FOR GENERAL NOTES AND SYMBOL LIST.
2. SEE PROCESS MOTOR SCHEDULE ON DRAWING E-3 FOR ADDITIONAL INFORMATION ON MOTOR LOADS.
3. ALL MODIFICATIONS TO THE EXISTING PLC CONTROL PANEL AND TERMINATION OF CONTROL WIRES AT PANEL SHALL BE BY OWNER (CONTRACTOR SHALL LABEL ALL CONTROL WIRES THAT ARE BEING ADDED).

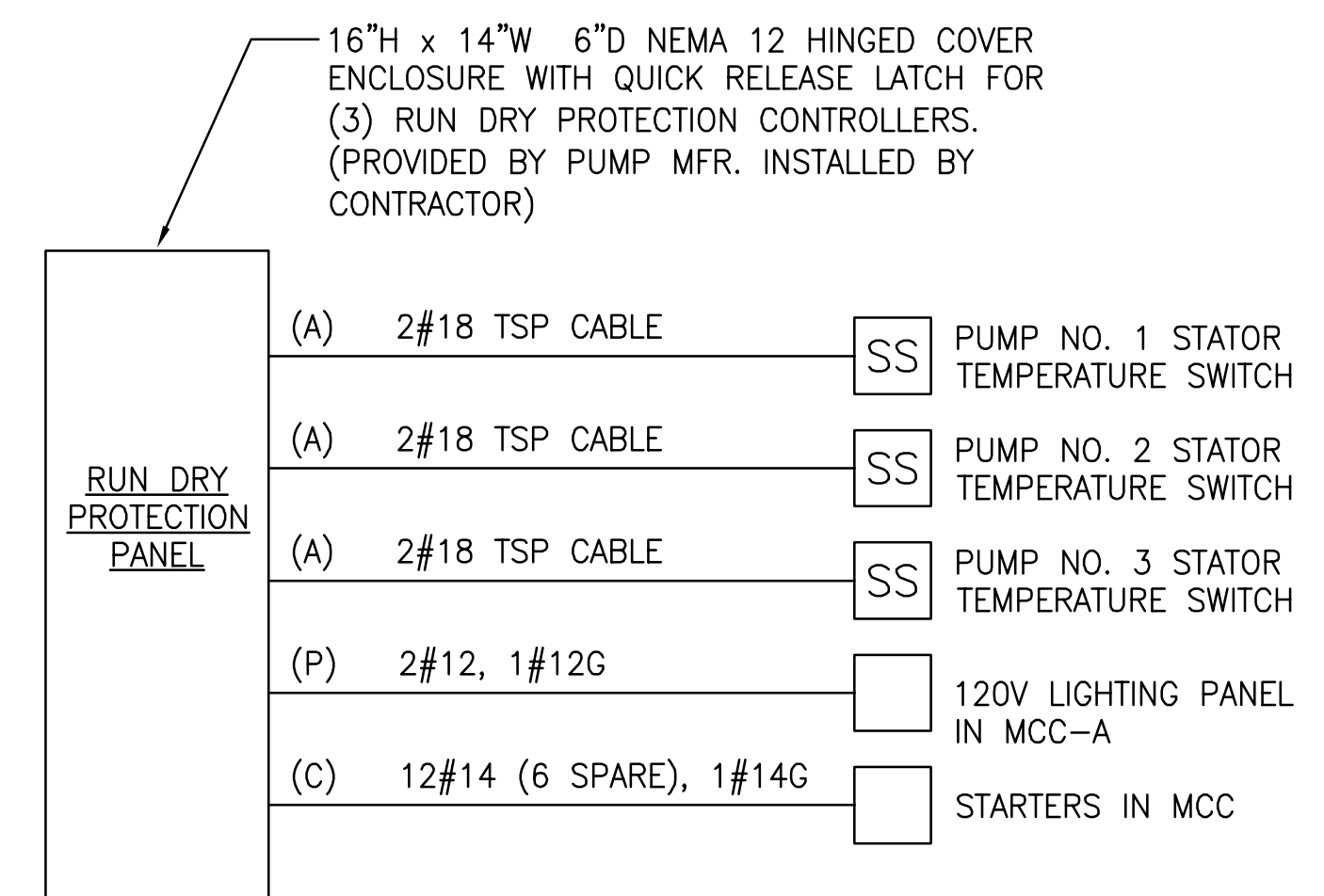
KEYNOTES (THIS DRAWING)

- ① EXISTING 400A, 480V, SQUARE D MODEL 5 MOTOR CONTROL CENTER MCC-A. SEE ELEVATION THIS DRAWING FOR ADDITIONAL INFORMATION.
- ② REPLACE EXISTING COMBINATION STARTER FOR THICKENED SLUDGE TRANSFER PUMP NO.1 (P-601) WITH NEW NEMA SIZE 3 COMBINATION STARTER WITH 80A MCP.
- ③ REPLACE EXISTING COMBINATION STARTER FOR THICKENED SLUDGE TRANSFER PUMP NO.2 (P-602) WITH NEW NEMA SIZE 3 COMBINATION STARTER WITH 80A MCP.
- ④ REPLACE EXISTING COMBINATION STARTER FOR THICKENED SLUDGE TRANSFER PUMP NO.3 (P-603) WITH NEW NEMA SIZE 3 COMBINATION STARTER WITH 80A MCP.
- ⑤ USE SPARE 20A, 1 POLE BREAKER TO FEED RUN DRY PROTECTION PANEL.
- ⑥ EXISTING SCC-A PLC CONTROL PANEL. SEE NOTE 3.

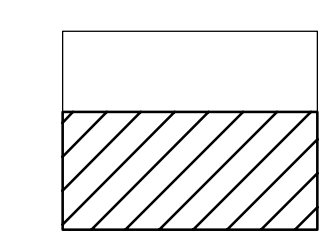


MCC-A ELEVATION
SCALE: NONE

EXISTING CONCRETE FLOOR



THICKENED SLUDGE TRANSFER PUMP RUN DRY PROTECTION PANEL INTERCONNECT DIAGRAM
SCALE: NONE



KEY PLAN
GRAVITY BELT THICKENER BUILDING

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PROJECT TITLE
**CITY OF JOLIET, ILLINOIS
EASTSIDE WWTP
SLUDGE PUMP REPLACEMENT
AND TANK REPAIRS**

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CHECKED BY: CEC/MLS
DATE CHECKED: 07/07

NOTE: DIMENSIONAL DATA IS NOT TO BE OBTAINED BY SCALING ANY PORTION OF THIS DRAWING.

DATE REVISION

DRAWING TITLE
GRAVITY BELT THICKENER BUILDING FIRST FLOOR ELECTRICAL PLAN AND MCC-A ELEVATION

PROJECT No.
J02570

DRAWING No.
E-12