

ROCK RIVER WATER RECLAMATION DISTRICT

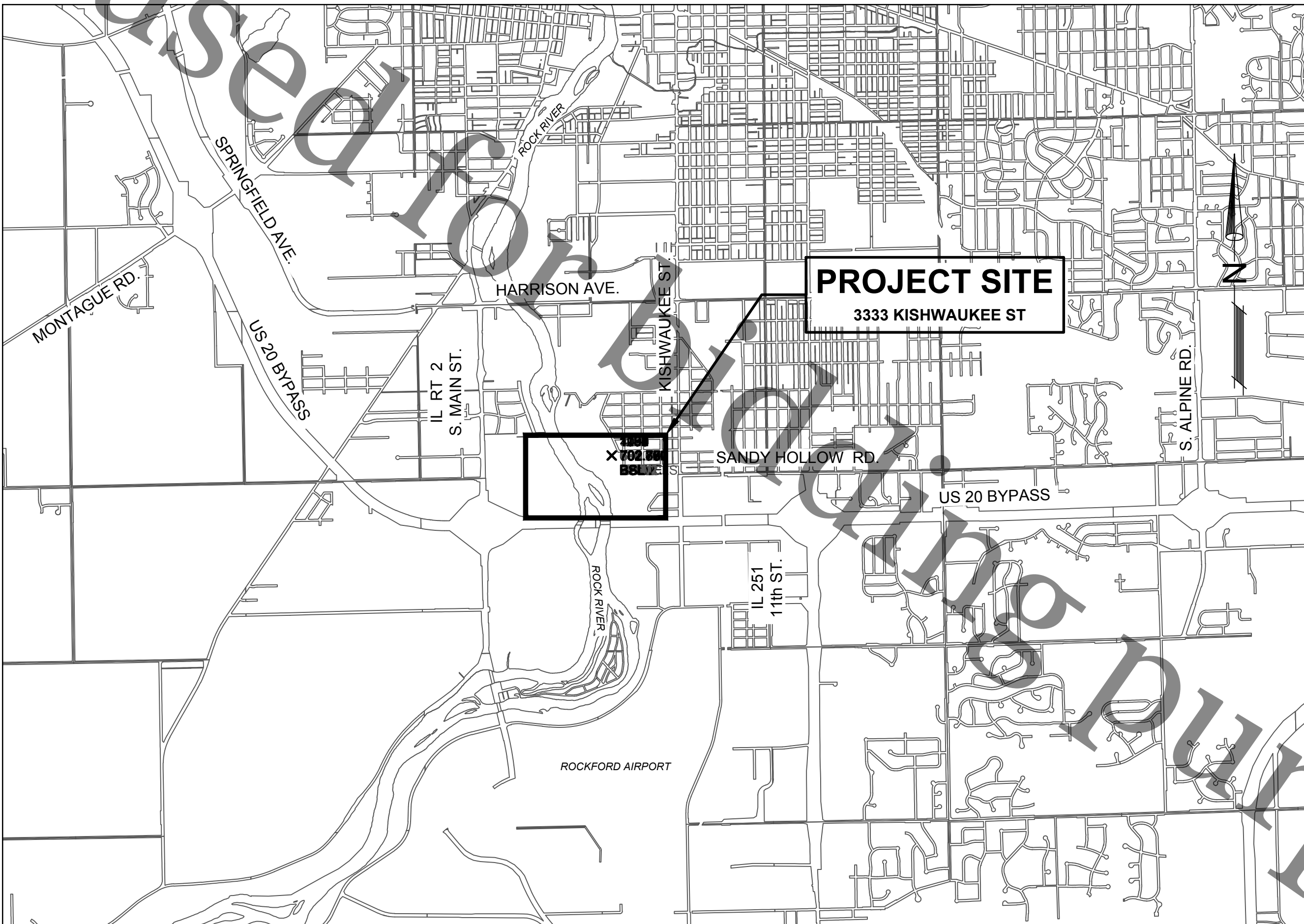
SCREENING EQUIPMENT REPLACEMENT CAPITAL IMPROVEMENT PROJECT #1858 2019

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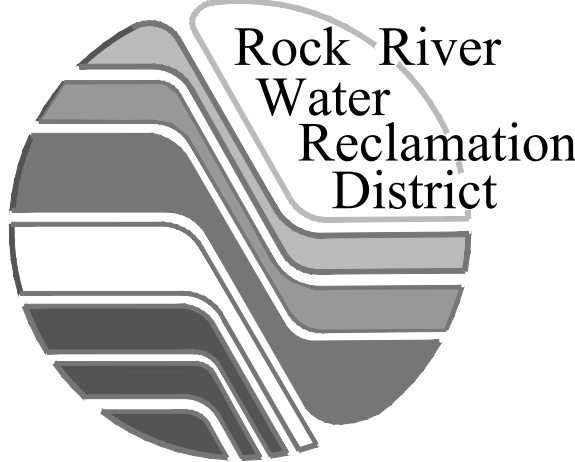
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ROCKFORD, ILLINOIS



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**ROCK RIVER WATER
RECLAMATION DISTRICT**
3501 KISHWAUKEE STREET
ROCKFORD, ILLINOIS 61109
(815) 387-7660

No.	DATE	REVISION	INT.

MAIN PUMP - SCREEN REPLACEMENT - 2019
CAPITAL IMPROVEMENT PROJECT #1858

GENERAL NOTES

Sheet No.
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Date
11/26/2018

GENERAL NOTES:

1. NOT ALL FACILITIES, FEATURES, DUCTS, OR PIPES ARE SHOWN ON THE DRAWINGS. CONTRACTOR TO INSPECT THE WORK AREAS AND AVOID DAMAGE TO OR CONFLICTS WITH EXISTING FEATURES.
2. CONTRACTOR SHALL USE THE DESIGNATED STAGING AREA, SOUTH AND EAST OF THE OHIO GENERATOR BUILDING #26, FOR PARKING, MATERIAL STAGING, SHELTERS, PORTABLE TOILET/WASH FACILITIES, EQUIPMENT, AND OTHER NEEDS. PARKING NEAR MAIN PUMP STATION SHALL BE KEPT TO AS NEEDED ONLY. ACCESS SHALL BE KEPT CLEAR FOR OWNER OPERATION AND MAINTENANCE ACTIVITIES.
3. THE EXISTING MAIN PUMP PROCESSES SHALL REMAIN IN OPERATION THROUGHOUT THE DURATION OF THIS PROJECT, WITH SCREENING EQUIPMENT OUTAGES AS INDICATED.
4. CONTRACTOR SHALL NOTIFY THE OWNER AT LEAST 48 HOURS PRIOR TO THE START OF ANY WORK ON SITE.
5. PAINTING OF ALL WALLS AND CEILINGS IN THE LOADING AREA, UPPER SCREEN ROOM, LOWER SCREEN ROOM, AND UTILITY ROOM IS A REQUIREMENT OF THIS PROJECT AND SHALL BE INCLUDED IN THE LUMP SUM BID.

DEMOLITION NOTES:

1. DURING SCREEN REMOVAL, THE CONTRACTOR SHALL PROVIDE STEEL PLATES OR OTHER APPROVED MEANS TO MINIMIZE CONCENTRATED LOADING OVER THE EXISTING 84" DIAMETER INFLUENT SEWER.
2. THE TWO WASHER COMPACTOR UNITS, ASSOCIATED MOTOR OPERATED WATER VALVES, AND SCREENINGS DISCHARGE PIPES SHALL BE SALVAGED AND TURNED OVER TO THE OWNER. ALL OTHER MATERIALS INDICATED FOR DEMOLITION SHALL BE PROPERLY DISPOSED-OF OFF SITE.
3. REINFORCEMENT AND ANCHOR BOLTS RESULTING FROM CONCRETE DEMOLITION SHALL BE CUT DOWN ½" BELOW THE SURROUNDING FLOOR OR WALL SURFACE. THE CONCRETE SHALL BE REPAIRED WITH GROUT AND FINISHED TO MATCH THE SURROUNDING SURFACE.
4. AFTER OWNER CLOSES THE SCREEN CHANNEL SHEAR GATES, THE CONTRACTOR IS RESPONSIBLE FOR PUMPING WATER FROM THE CHANNEL TO THE ADJACENT SCREEN CHANNEL AND SEALING THE GATE LEAKAGE WITH SAND BAGS OR OTHER MEANS.
5. THE PLANT WATER PIPING AND THE DRAIN PIPING IN THE LOWER SCREEN ROOM ARE IN ACTIVE SERVICE. THE PIPE REMOVAL AND REPLACEMENT WORK SHALL BE PLANNED TO MINIMIZE DOWN TIME ON INDIVIDUAL USES. TEMPORARY OUTAGES NECESSARY TO COMPLETE THE WORK SHALL BE COORDINATED WITH THE OWNER. TEMPORARY HOSES FOR PLANT WATER SUPPLY TO CRITICAL USES SUCH AS WASHER COMPACTORS AND SEAL WATER SYSTEM SHALL BE INCLUDED IN THE WORK. TEMPORARY DRAIN SERVICE SHALL BE PROVIDED AS NEEDED.

STRUCTURAL NOTES:

1. CAST IN PLACE CONCRETE SHALL HAVE AT LEAST 28 DAY COMPRESSIVE STRENGTH OF 4,500 PSI AND SHALL USE TYPE II OR TYPE 1/11 CEMENT.
2. SMALL REPAIRS CAN USE NON-SHRINK GROUT SUCH AS EUCLID EUCOREPAIR V-100 OR MASTER EMACO.
3. REINFORCING SHALL BE ASTM A615 GRADE 60 DEFORMED STEEL BARS.
4. WELDING OF REINFORCING BARS SHALL NOT BE PERMITTED.
5. LAP LENGTH FOR #4 REINFORCING BARS SHALL BE AT LEAST 16" AND LAP LENGTH FOR #5 BARS SHALL BE AT LEAST 22".
6. CONCRETE COVER OVER REINFORCING STEEL SHALL BE AT LEAST 2".
7. POST-INSTALLED ANCHOR HOLES SHALL AVOID EXISTING REINFORCING STEEL AS BEST POSSIBLE AND SHALL BE THOROUGHLY CLEANED PRIOR TO INSTALLING ADHESIVE PER PRODUCT MANUFACTURER'S INSTRUCTIONS. ALL POST INSTALLED ANCHORS SHALL BE ATTACHED WITH ADHESIVE.

MECHANICAL NOTES:

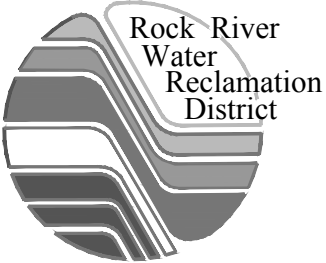
1. ALL NEW PLANT WATER PIPING SHALL BE SCHEDULE 80 PVC. UNIONS SHALL BE PROVIDED AS NECESSARY TO ALLOW REMOVAL OF VALVES, STRAINERS, AND SIMILAR DEVICES. SPECIAL FITTINGS OR VALVES THAT ARE NOT AVAILABLE IN PVC SHALL HAVE STAINLESS STEEL BODIES WITH THREADED CONNECTIONS.
2. ALL NEW DRAIN AND VENT PIPING SHALL BE SCHEDULE 40 PVC.
3. ALL WATER PIPING SHALL BE INSULATED PER THE SPECIFICATION REQUIREMENTS.
4. GRAVITY PIPING SHALL BE INSTALLED WITH UNIFORM SLOPES BETWEEN FITTINGS.
5. PIPE SUPPORTS, HANGERS, BRACKETS, INSERTS, AND BRACES ARE NOT SHOWN ON THE DRAWINGS. CONTRACTOR SHALL PROVIDE A COMPLETE SUPPORT SYSTEM FOR NEW PIPING AS DELINEATED IN THE SPECIFICATIONS.
6. CONTRACTOR SHALL COORDINATE MAKING EACH PIPE CONNECTION WITH THE OWNER.
7. CONTRACTOR SHALL MAKE ADJUSTMENTS TO THE EXISTING NORTH SCREEN WASHER COMPACTOR DISCHARGE PIPING TO ALLOW INSTALLATION OF THE NEW SOUTH WASHER COMPACTOR DISCHARGE PIPING WHILE THE NORTH SYSTEM REMAINS FUNCTIONAL.
8. LOCATIONS OF FLOOR PENETRATIONS FOR TWO 1" PLANT WATER PIPES AND TWO 4" DRAIN PIPES FOR THE NEW SCREENING EQUIPMENT SHALL BE FIELD ADJUSTED TO AVOID FLOOR BEAMS, ELECTRIC CONDUIT AND LIGHT FIXTURES MOUNTED TO THE LOWER SCREEN ROOM CEILING.

ELECTRICAL NOTES:

1. ALL WORK SHALL COMPLY WITH THE NATIONAL ELECTRICAL CODE AND LOCAL ORDINANCES.
2. ALL MATERIALS AND INSTALLATIONS IN THE LOWER SCREEN ROOM, UPPER SCREEN ROOM, AND LOADING AREA SHALL BE SUITABLE FOR USE IN A CLASS 1 DIVISION 2 GROUP D RATED AREA PER THE NATIONAL ELECTRICAL CODE, INCLUDING SEAL-OFFS ON CONDUITS ENTERING AND LEAVING THE AREAS.
3. ALL MATERIALS SHALL BE NEW AND APPROVED BY OWNER.
4. OUTAGES SHALL BE COORDINATED WITH THE OWNER AT LEAST 48 HOURS PRIOR TO THE OUTAGE.
5. CONTRACTOR SHALL FIELD VERIFY ALL EQUIPMENT LOCATIONS AND DIMENSIONS.
6. SEPARATE CONDUITS SHALL BE INSTALLED FOR POWER WIRING, CONTROL WIRING, AND SHIELDED CONTROL WIRING.
7. ALL WIRE SHALL BE STRANDED COPPER, TYPE XHHW-2 OR THWN RATED FOR 90 DEGREE CELSIUS 600 VOLT. POWER WIRING SHALL BE MINIMUM OF #12 AND CONTROL WIRING MINIMUM OF #16.
8. ALL CONDUITS IN THE LOWER SCREEN ROOM, UPPER SCREEN ROOM, AND LOADING AREA SHALL BE PVC COATED RIGID GALVANIZED STEEL WITH MINIMUM SIZE OF ¾" DIAMETER.
9. ALL CONDUITS IN THE UTILITY ROOM AND CONTROL ROOM SHALL BE RIGID GALVANIZED STEEL WITH MINIMUM SIZE OF ¾" DIAMETER.
10. LIQUID-TIGHT FLEXIBLE METAL CONDUIT SHALL BE USED FOR CONNECTIONS TO EQUIPMENT AND DEVICES.
11. CONDUIT ROUTINGS ON THE DRAWINGS DEPICT GENERAL LOCATIONS. CONTRACTOR SHALL ADJUST THE ROUTINGS TO SUITE FIELD CONDITIONS.
12. PULL BOXES ARE NOT SHOWN ON THE DRAWINGS BUT SHALL BE PROVIDED AS REQUIRED BY CODE AND GOOD INSTALLATION PRACTICES.
13. NUMEROUS EQUIPMENT ITEMS AND DEVICES WILL REQUIRE TEMPORARY CONNECTIONS TO ALLOW OPERATION OF THE ITEMS DURING PORTIONS OF THE WORK. CONTRACTOR SHALL PROVIDE ALL TEMPORARY CONDUIT AND WIRING NECESSARY TO MAINTAIN FUNCTIONAL OPERATION OF EQUIPMENT AND DEVICES.
14. DISCONNECTS FOR THE SCREENS, WASHER COMPACTORS, AND WASH WATER VALVES SHALL BE LOCATED ON A CONTRACTOR FABRICATED STAINLESS STEEL RACK, SUPPORTED OFF THE CURB EAST OF THE STAIRWAY.



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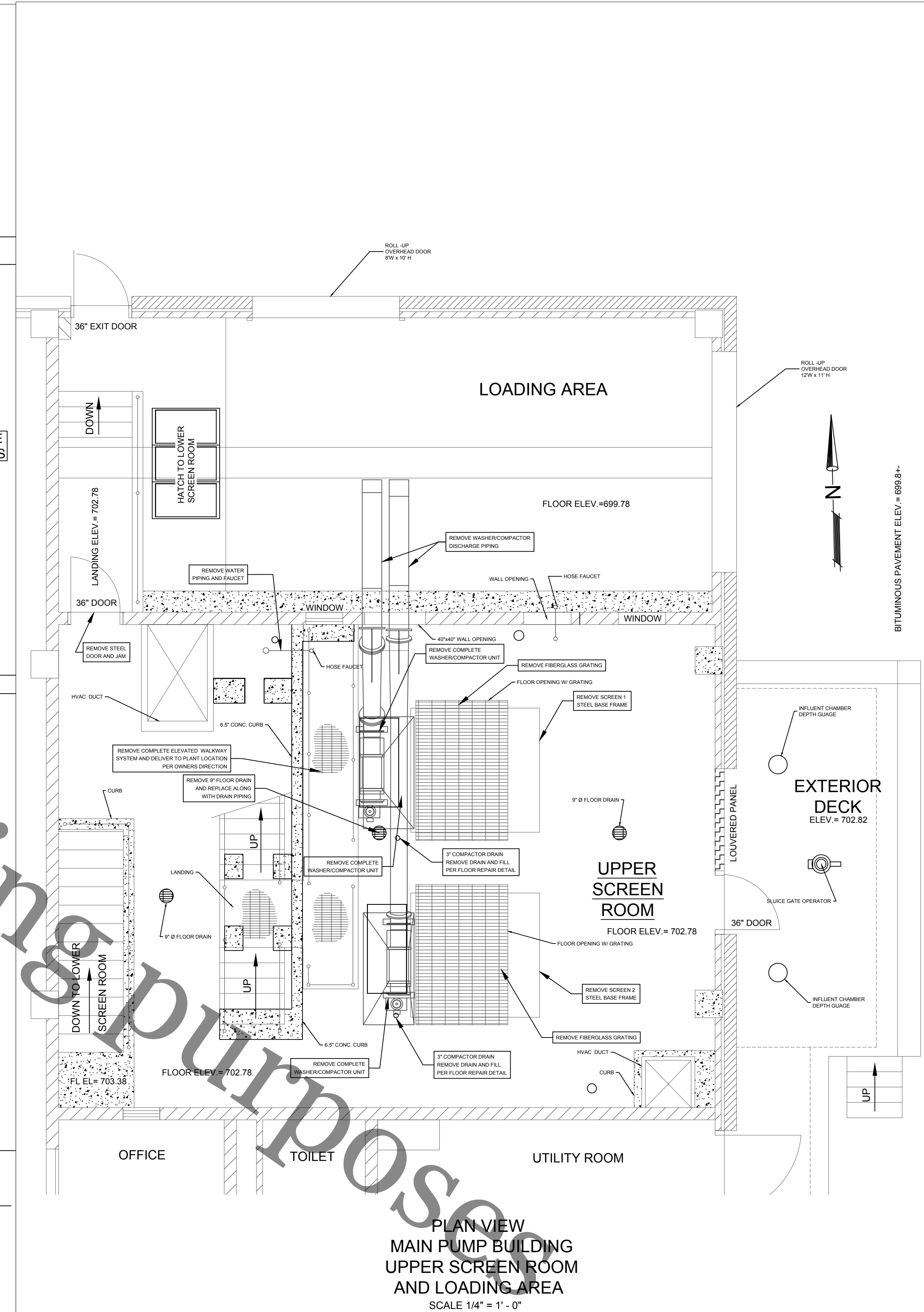
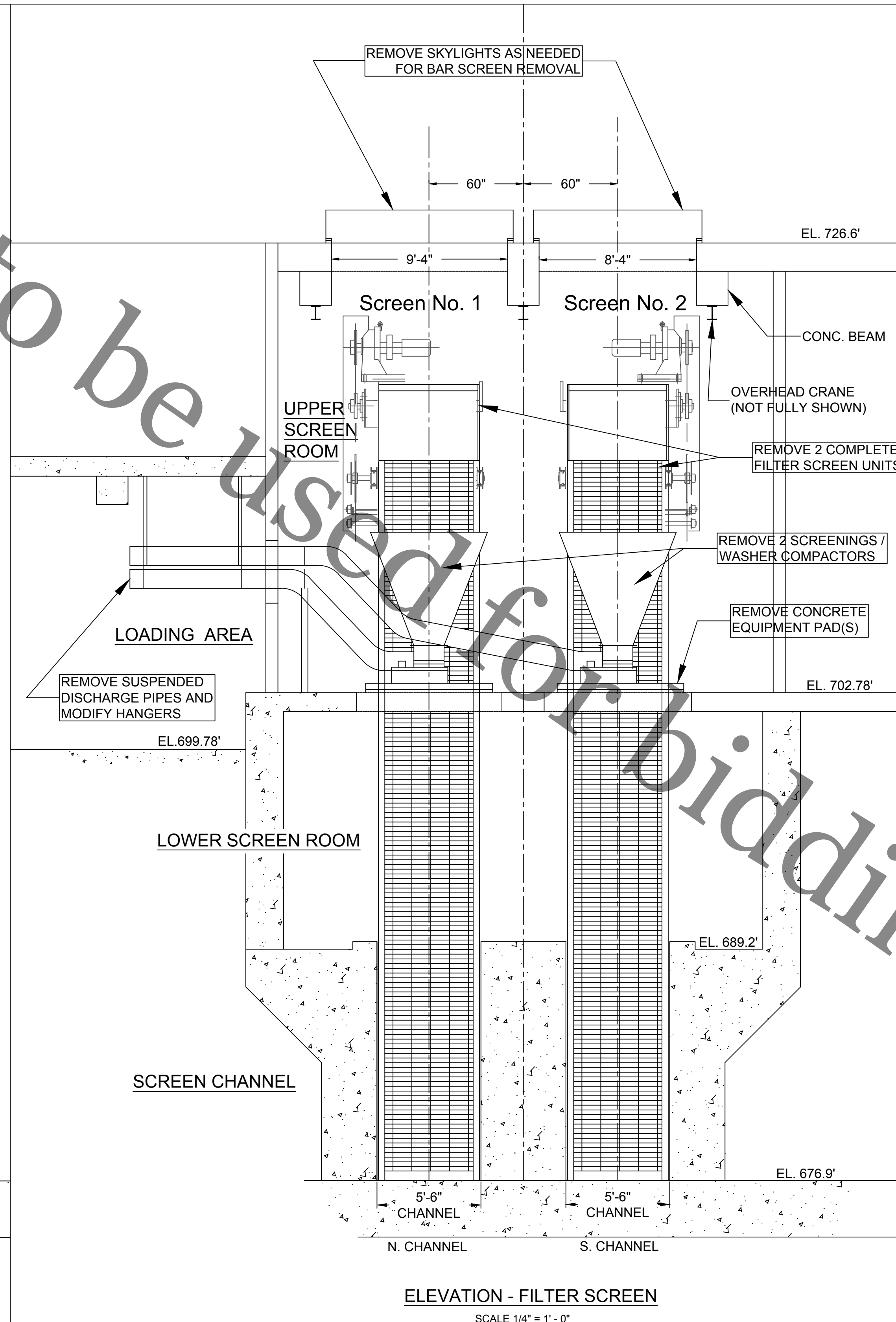
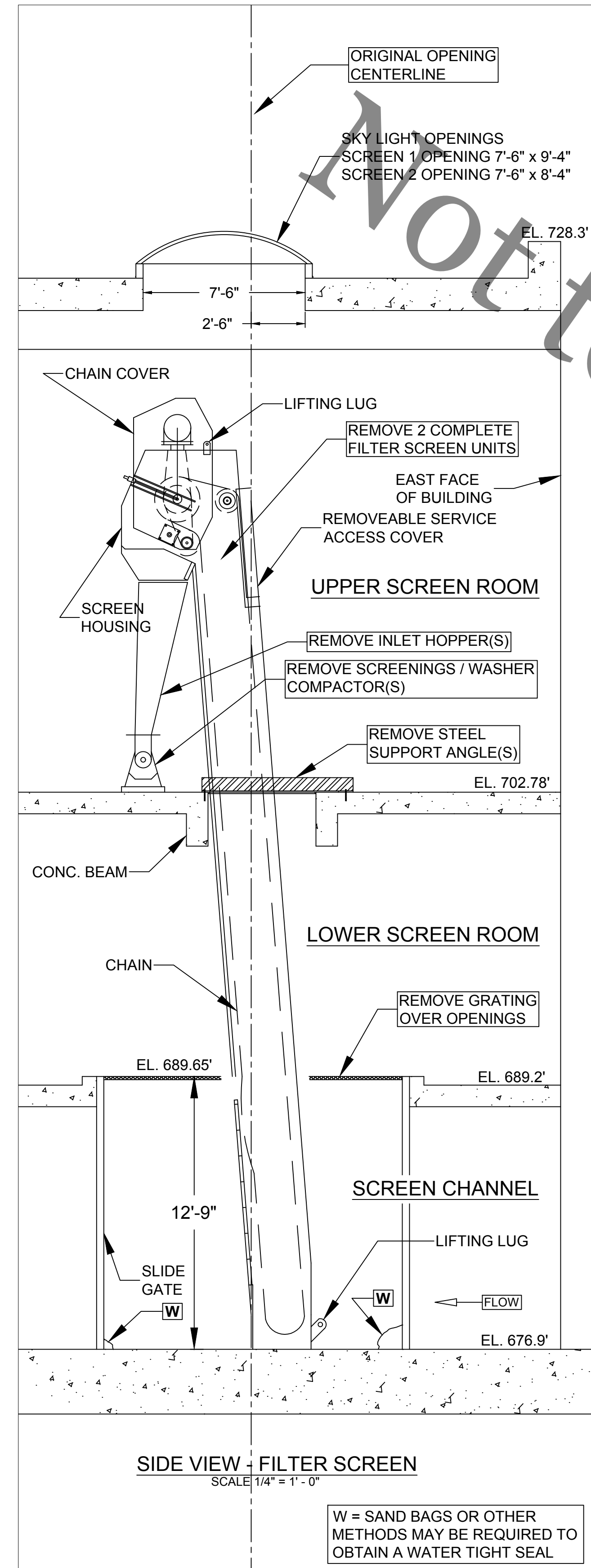
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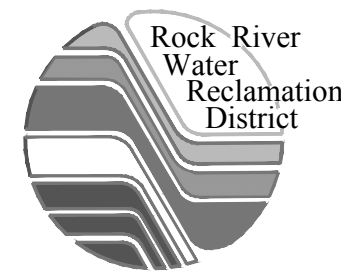
SITE OVERVIEW

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11/26/2018



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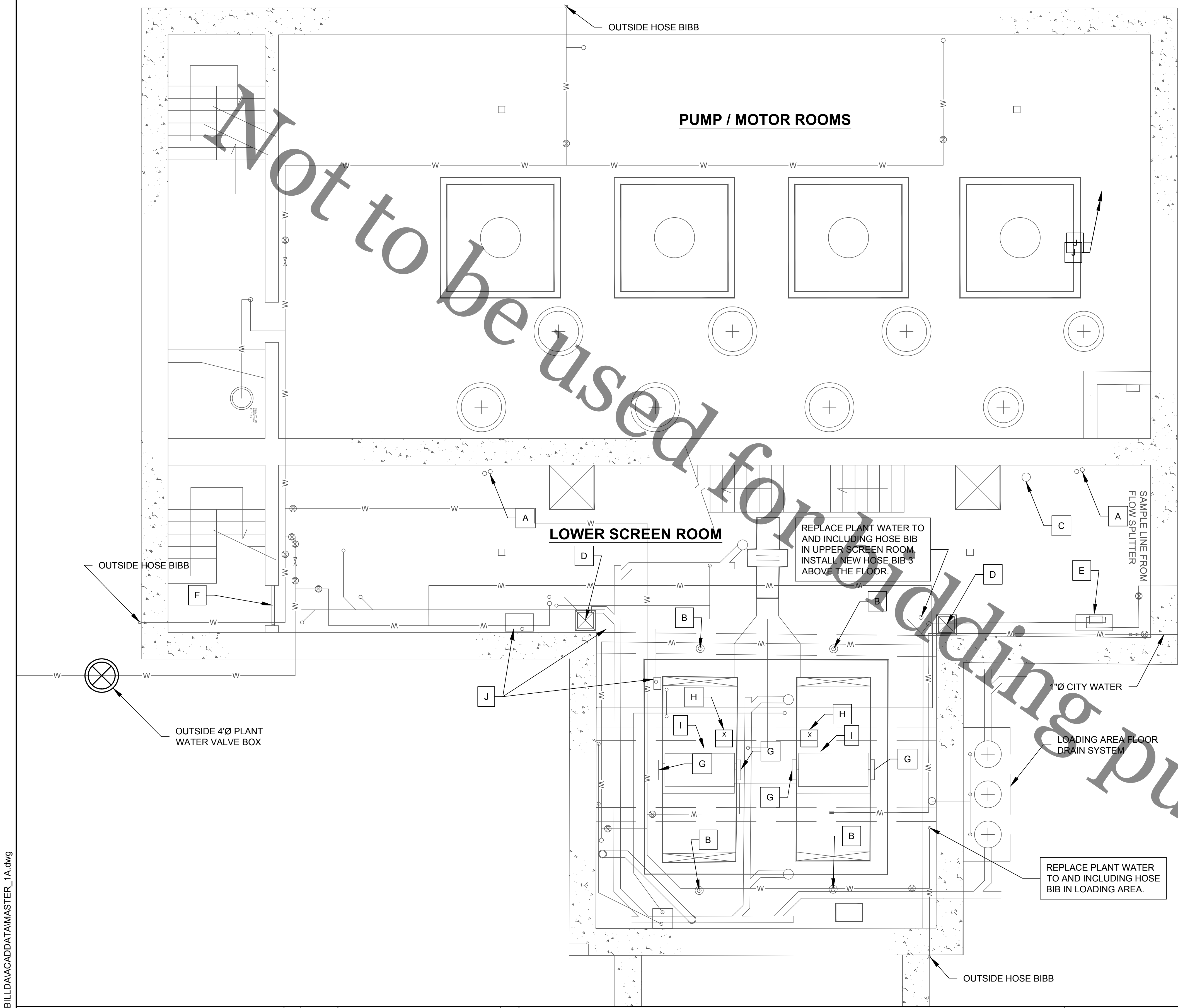
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MECHANICAL: LOWER SCREEN ROOM

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NOTES:

1. REMOVE AND REPLACE ALL COPPER WATER PIPING THROUGHOUT THE LOWER SCREEN ROOM AND PUMP/MOTOR ROOMS, INCLUDING STRAINER AND BACKFLOW PREVENTERS.
2. REPLACE PIPING WITH SIMILAR SIZE PIPE IN SCHEDULE 80 PVC PIPING WITH PVC VALVES AND FITTINGS. FITTINGS NOT AVAILABLE IN PVC SHALL BE THREADED STAINLESS STEEL.
3. SEAL WATER FLOW SHALL BE MAINTAINED AT ALL TIMES USING HOSES AS NECESSARY TO BYPASS AROUND WORK.
4. ALL NEW PLANT WATER PIPING SHALL BE INSULATED.
5. ALL NEW PIPE HANGERS SHALL BE SIZED TO ACCOMMODATE THE 1" PIPE INSULATION.
6. REMOVE AND REPLACE ALL CAST IRON DRAIN AND VENT PIPING THROUGHOUT THE LOWER SCREEN ROOM.
7. REPLACE DRAIN AND VENT PIPING WITH SIMILAR SIZE SCHEDULE 40 PVC PIPING. USE FERNCO SHEAR RING TYPE COUPLINGS WHERE NEW PVC PIPING CONNECTS TO EXISTING CAST IRON PIPING WITHIN 4 FEET OF WALL AND FLOOR PENETRATIONS.

KEYNOTES

A - 3" Ø CORE HOLES W/ 2" STEEL PIPE INSIDE. REMOVE PIPE AND PLUG WITH GROUT PER "FLOOR REPAIR DETAIL" ON DETAIL SHEET.

B - 8"Ø CORE HOLE WITH 8 STAINLESS STEEL THREADED ANCHORS DRILLED AND EPOXIED INTO FLOOR. REMOVE PCV BLIND FLANGE, CUT THREADED RODS 1/2" BELOW FLOOR, AND GROUT TO MATCH SURROUNDING FLOOR. SEAL 8"Ø CORE HOLES PER "FLOOR REPAIR DETAIL" ON DETAIL SHEET.

C - 6"Ø CORE HOLE. FILL WITH GROUT PER "FLOOR REPAIR DETAIL" ON DETAIL SHEET.

D - REMOVE STEEL PLATE AND GRIND ANCHORS 1/2" BELOW FLOOR. FILL 12" OPENING WITH GROUT PER "FLOOR REPAIR DETAIL" ON DETAIL SHEET.

E - REMOVE SAMPLE PUMP, STAND, CONDUIT, WIRING, SUCTION PIPE, AND DISCHARGE PIPE. PATCH CONCRETE AFTER REMOVING ANCHORS.

F - REMOVE METAL DOOR FRAME. CUT ANCHORS 1/2" BELOW CONCRETE AND PATCH WITH NON-SHRINK GROUT.

G - REPAIR FOUR (4) SCREEN CHANNEL NOTCHES. EACH NOTCH IS APPROXIMATELY 4"x18"xFULL DEPTH OF CHANNEL (12'-9"). SEE "SCREEN CHANNEL WALL REPAIR DETAIL" ON DETAIL SHEET.

H - INSTALL A 1/2" DIAMETER TYPE 316 STAINLESS STEEL THREADED, SHOULDERED EYEBOLT WITH 6" EMBEDMENT, IN CENTER OF BEAM ABOVE EACH OF THE 2 SAMPLE PUMP ACCESS OPENINGS USING HILTI HIT-RE500 V3 ADHESIVE.

I - PROVIDE NEW PIPE SUPPORTS FROM THE CEILING FOR THE SAMPLE PUMP DISCHARGE PIPES AND REMOVE THE SUPPORTS ATTACHED TO THE SCREENS.

J - REMOVE FRP PUSH BUTTON STATION, 1" CONDUIT & SUPPORTS, AND FRP JUNCTION BOX (ABANDONED).

NOTES:

1. UNIT MATERIAL: SCREEN: 304SS
SCREENINGS PRESS: 304SS
SPIRAL MATERIAL: HI-STRENGTH ALLOY STEEL
2. AREA CLASSIFICATION: HAZARDOUS-CLASS1, DIVISION 1.
3. SCREEN DRIVE MOTOR: 3.0 HP, 460 V, 3 PH, 60 HZ
SCREEN BRUSH MOTOR: 2.0 HP, 460 V, 3 PH, 60 HZ
PRESS MOTOR: 5.0 HP, 460 V, 3 PH, 60 HZ
4. SCREEN WEIGHT - 7010 LB
PRESS WEIGHT - TBD LB
5. WATER REQUIREMENTS:
SCREEN SPRAY WASH: 40 GPM @ 40 - 60 PSI
PRESS SPRAY WASH: 16 GPM @ 20 - 40 PSI
6. CONTRACTOR TO PROVIDE ALL INTER CONNECTING PIPING, WIRING, AND CONDUIT FROM UNIT-MOUNTED DEVICES.
7. BOTTOM OF SCREEN MUST REST FLUSH TO THE CONCRETE CHANNEL FLOOR, TO PREVENT MATERIAL FROM BYPASSING THE SCREEN. SIDE SEALS MUST REST ALONG CHANNEL WALL ON BOTH SIDES TO PREVENT MATERIAL FROM BYPASSING THE SCREEN.
8. STRAINER TO BE INSTALLED IN WASHWATER SUPPLY LINE BEFORE SPLITTING TO SUPPLY SCREENS AND PRESS.
9. EQUIPMENT MUST BE PROTECTED TO PREVENT SURFACE CONTAMINATION. CONTAMINATION CAN COME FROM WELDING CUTTING, PAINTING AND OTHER SUCH ACTIVITIES IN THE AREA OF THE EQUIPMENT. STAINLESS STEEL SURFACES CONTAMINATED WITH ANY IRON, CHLORIDE CONTAINING MATERIAL AND OTHER SUBSTANCES CAN EXPERIENCE ACCELERATED SURFACE CORROSION AND PITTING.
10. THE FOLLOWING DEVICES NEED TO BE FIELD WIRED BY ELECTRICAL CONTRACTOR
 - SCREEN DRIVE MOTOR: ITEM 105 (QTY 2)
 - BRUSH DRIVE MOTOR: ITEM 106 (QTY 2)
 - MOTOR CUT OUT SWITCH: ITEM 114 (QTY 2)
 - SCREENINGS PRESS DRIVE MOTOR: ITEM 204 (QTY 2)
 - ELECTRICALLY ACTUATED BALL VALVES: ITEM 110 (QTY 2), ITEM 207 (QTY 4)
 - CONTROL PANEL: ITEM 121 (QTY 1) ITEM 122 (QTY 1)

PROCESS DESIGN INFORMATION: SCREEN

APPLICATION: MUNICIPAL WASTEWATER

PEAK DESIGN FLOW: 60 MGD

DOWNSTREAM WATER LEVEL: 90 INCHES @ PEAK FLOW

MAXIMUM SCREEN HEADLOSS: 14.4 INCHES @ PF WITH 30% BLINDING

SCREEN OPENING: .394 INCHES (10mm) PERFORATED

ANGLE OF INCLINATION: 80 DEGREES

CHANNEL WIDTH: 5.5 FEET

CHANNEL DEPTH: 12.75 FEET

DISCHARGE HEIGHT: 30.3 FEET (FROM CHANNEL INVERT)

CLEAN SCREEN HEADLOSS: 0 INCHES (REQUIRED FOR FR33):

PROCESS DESIGN INFORMATION: WASH PRESS

APPLICATION: MUNICIPAL WASTEWATER

SCREEN CAPACITY: 5 m3/hr (177 ft3/hr)

INLET OPENING: 1800mm

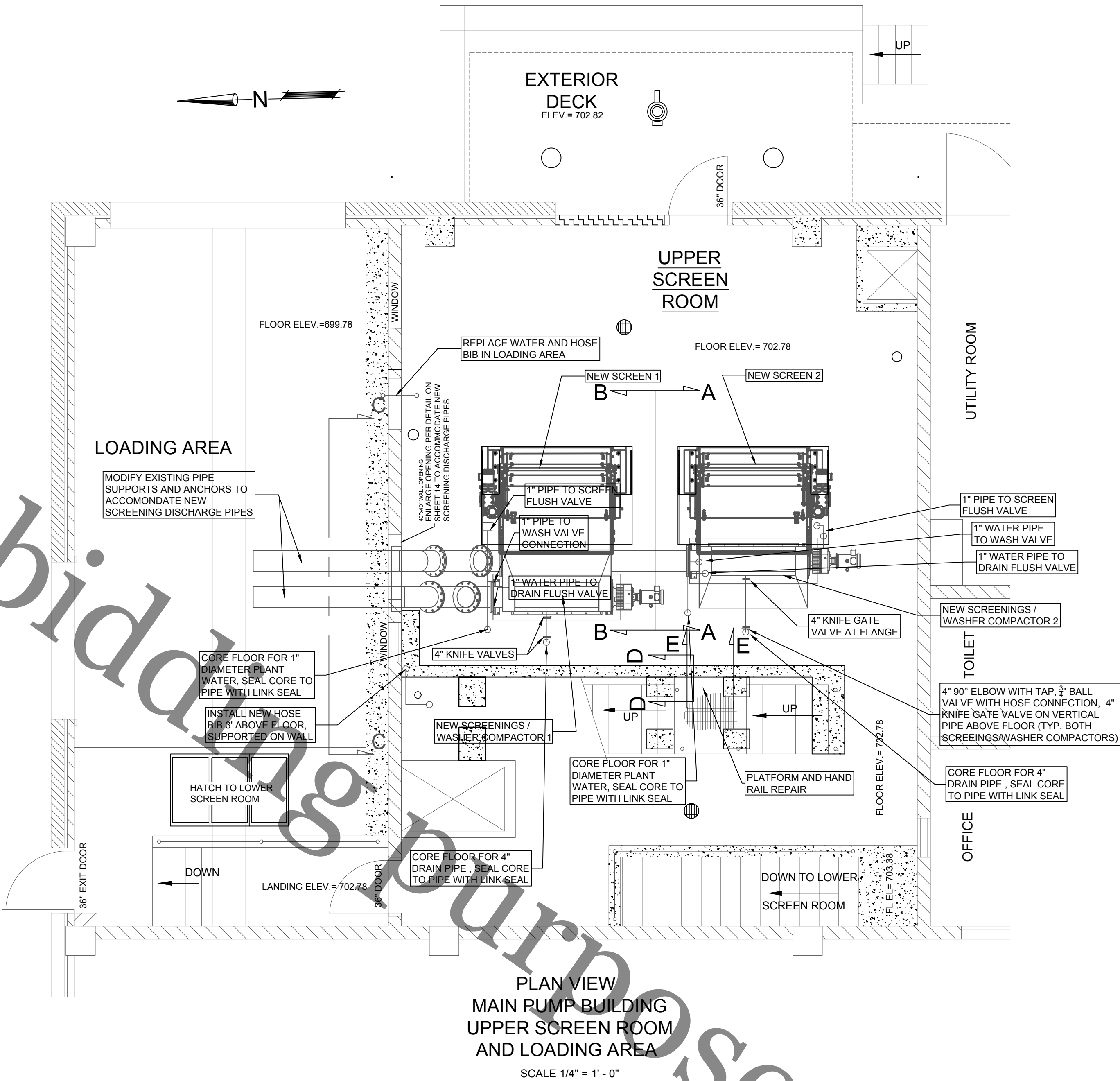
SCREW DIAMETER: 300mm

DISCHARGE MATERIAL DRY SOLIDS: >40%

VOLUME REDUCTION: 60 - 85%

WEIGHT REDUCTION: 60 - 85%

FECAL REDUCTION: 95% or <20 mg/g BODS



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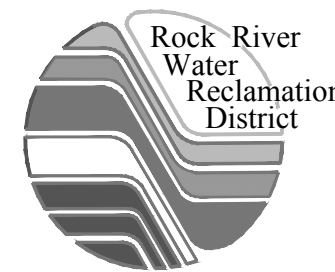
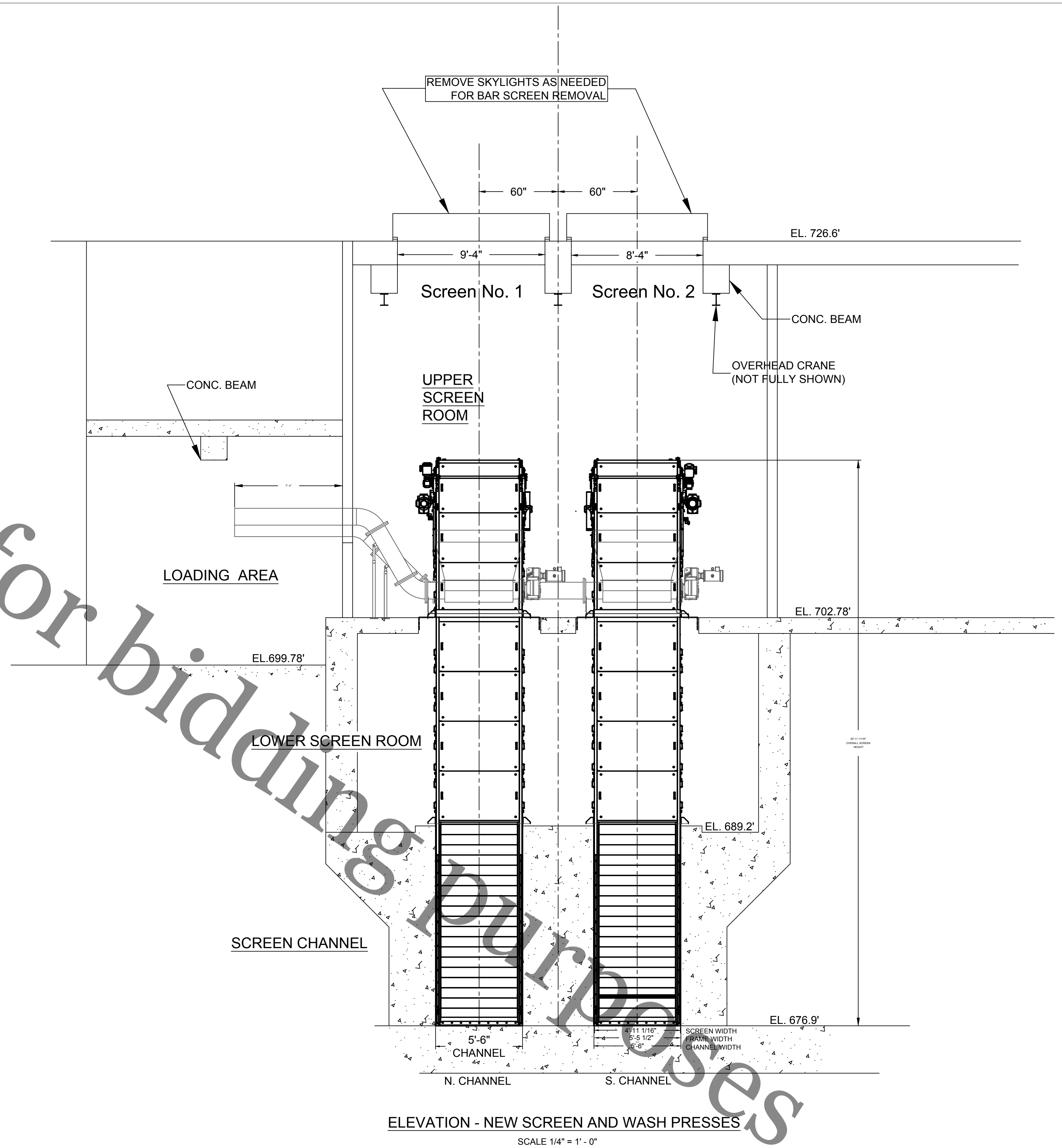
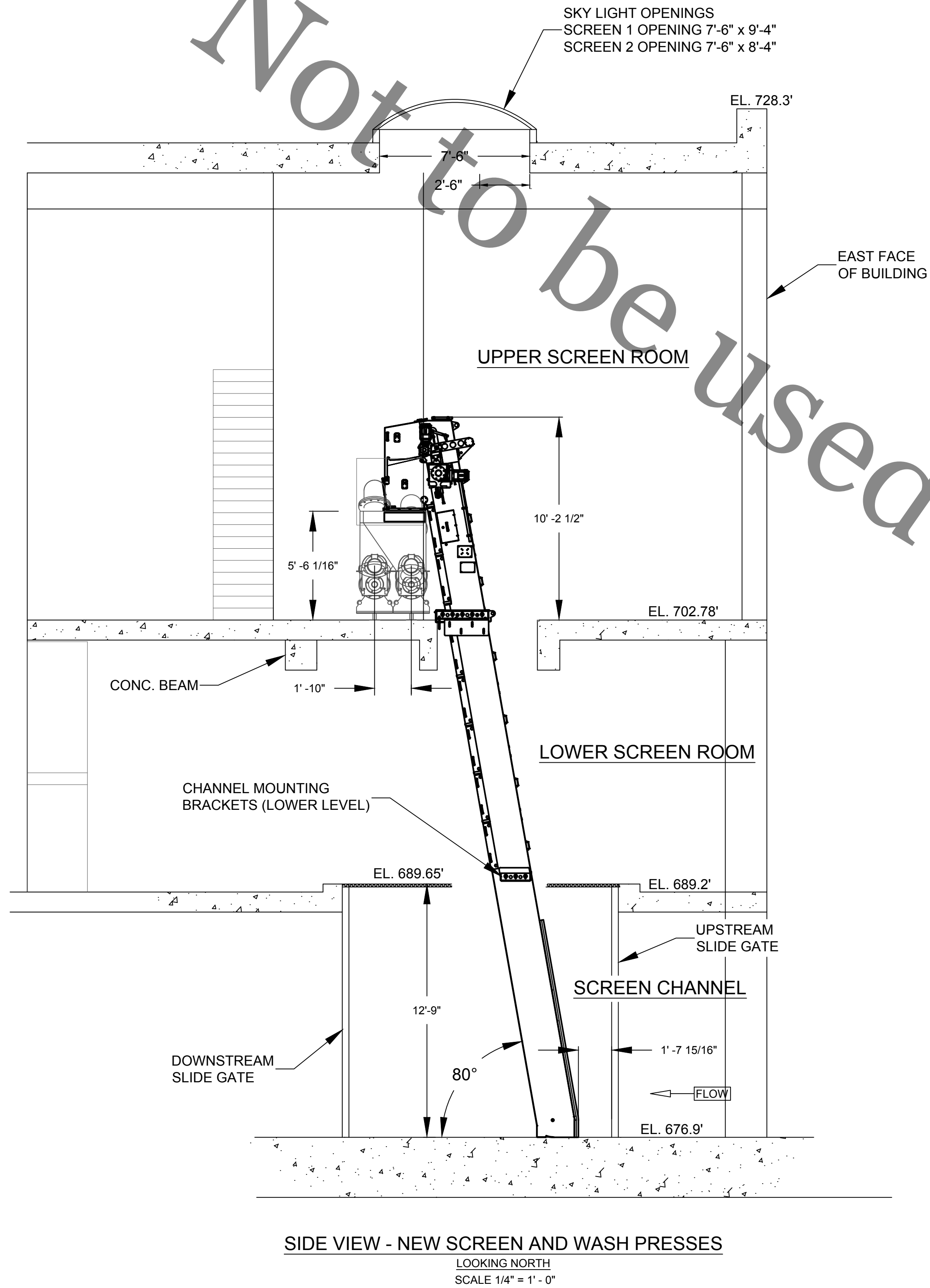
MAIN PUMP - SCREEN REPLACEMENT - 2019
CAPITAL IMPROVEMENT PROJECT #1858

NEW SCREEN - PLAN VIEW

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11/27/2018

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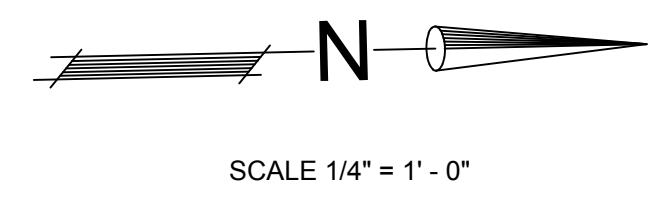
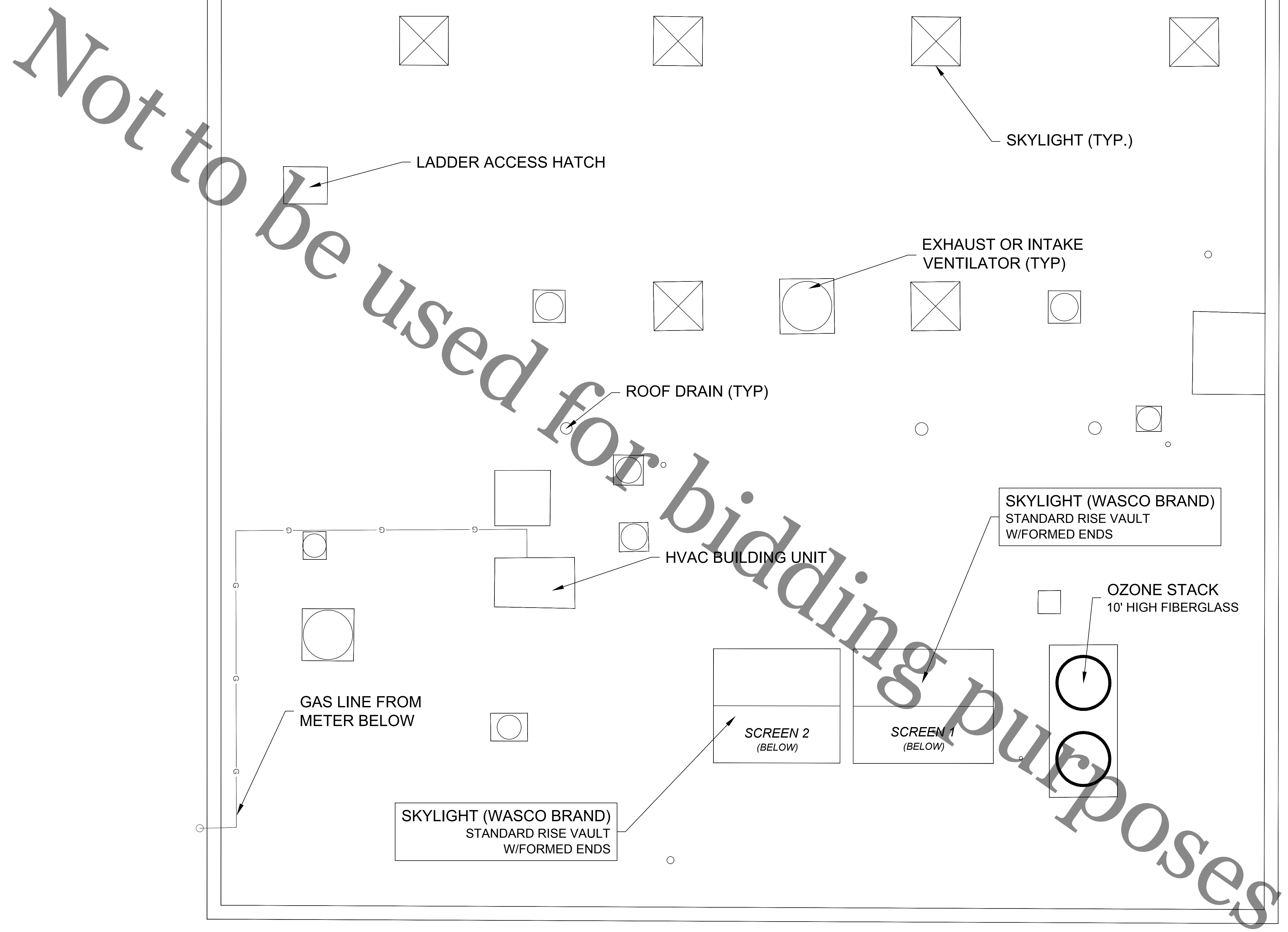
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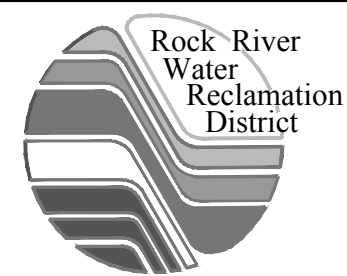
MECHANICAL: NEW SCREEN - PROFILES
ALL LEVELS

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ROOF PLAN

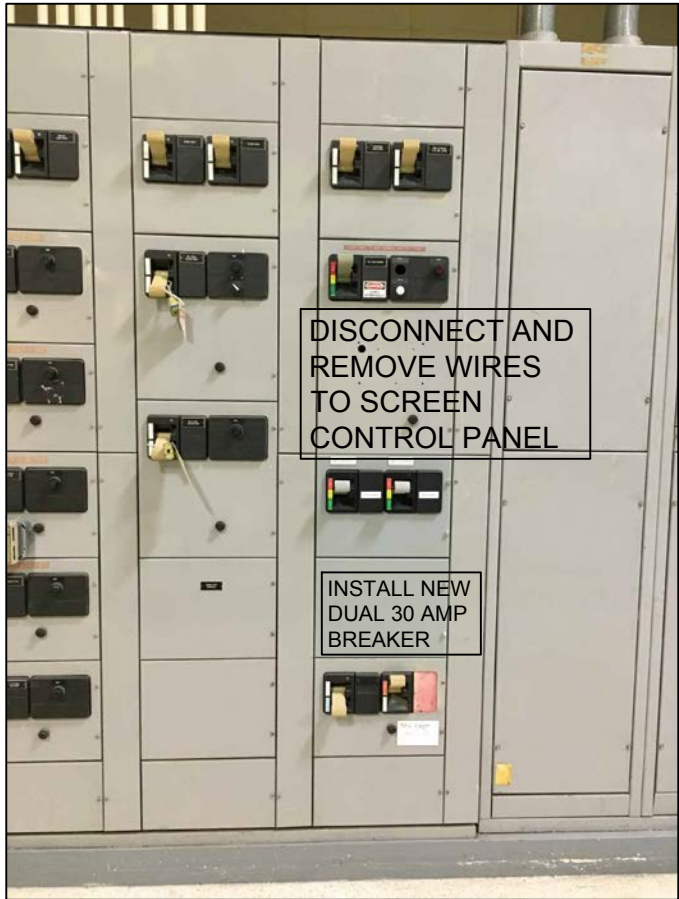
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CONDUIT AND WIRE SCHEDULE

CONDUIT NUMBER	SIZE	CONDUCTORS	DESCRIPTION	
			FROM	TO
S-P1	3/4"	6-#10 PWR, 2-#10 GRD	MCC-14 30A BREAKERS	JUNCTION BOX AT SCREEN PANELS
S-P2	3/4"	3-#10 PWR, 1-#10 GRD	JUNCTION BOX AT SCREEN PANELS	SCREEN 1 CONTROL PANEL
S-P3	3/4"	3-#10 PWR, 1-#10 GRD	JUNCTION BOX AT SCREEN PANELS	SCREEN 2 CONTROL PANEL
	existing	4-#16	PUMP 2 BREAKER PANEL	PCS PANEL
	existing	4-#16	PUMP 4 BREAKER PANEL	PCS PANEL
CP1	3/4"	2-#12 PWR, 1-#12 GRD	CONTROL ROOM LIGHTING PANEL	UTILITY ROOM SAMPLE PUMP PANEL
C1	3/4"	12-#16 CTL	PCS PANEL	UTILITY ROOM SAMPLE PUMP PANEL
SP4	3/4"	6-#12 PWR, 2-#12 GND	SCREEN CONTROL PANELS	SCREEN POWER JUNCTION BOX
	3/4"	3-#12 PWR, 1-#12 GND	SP JUNCTION BOX	SCREEN 1 BRUSH MOTOR DISCONNECT
	3/4"	3-#12 PWR, 1-#12 GND	SCREEN 1 BRUSH MOTOR DISCONNECT	SCREEN 1 BRUSH MOTOR
	3/4"	3-#12 PWR, 1-#12 GND	SP JUNCTION BOX	SCREEN 1 DRIVE MOTOR DISCONNECT
	3/4"	3-#12 PWR, 1-#12 GND	SCREEN 1 DRIVE MOTOR DISCONNECT	SCREEN 1 DRIVE MOTOR
	3/4"	4-#12 PWR, 2-#12 GND	SCREEN CONTROL PANELS	SCREEN CONTROL POWER JUNCTION BOX
	3/4"	2-#12 PWR, 1-#12 GND	S-CP JUNCTION BOX	SCREEN 1 FLUSH WATER VALVE
	3/4"	32-#16 CTL	SCREEN CONTROL PANELS	SCREEN 2 CONTROL JUNCTION BOX
	3/4"	2-#16 CTL	SCREEN 1 CONTROL JUNCTION BOX	SCREEN 1 INSPECTION DOOR SWITCH
	3/4"	2-#16 CTL	SCREEN 1 CONTROL JUNCTION BOX	SCREEN 1 E-STOP
	3/4"	12-#16 CTL	SCREEN 1 CONTROL JUNCTION BOX	S1 BRUSH MOTOR & DRIVE MOTOR T-STATS
	3/4" **	2-#16 CTL (SCREEN 1 RUNNING)	SCREEN 1 CONTROL PANEL	WASH PRESS 1 CONTROL PANEL
	3/4"	8-#16 CTL	SCREEN 1 CONTROL PANEL	JUNCTION BOX AT SCREEN PANELS
	3/4"	8-#16 CTL	SCREEN 2 CONTROL PANEL	JUNCTION BOX AT SCREEN PANELS
	3/4"	16-#16 CTL	JUNCTION BOX AT SCREEN PANELS	PCS PANEL
	3/4" *	6-#12 PWR, 2-#12 GND	WASH PRESS CONTROL PANELS	WASH PRESS POWER JUNCTION
	3/4"	3-#12 PWR, 1-#12 GND	WASH PRESS POWER JUNCTION	WASH PRESS 1 DRIVE MOTOR DISCONNECT
	3/4"	3-#12 PWR, 1-#12 GND	WASH PRESS 1 DRIVE MOTOR DISCONNECT	WASH PRESS 1 DRIVE MOTOR
	3/4" *	8-#12 PWR, 4-#12 GND	WASH PRESS CONTROL PANELS	WASH PRESS CONTROL POWER JUNCTION
	3/4"	2-#12 PWR, 1-#12 GND	WASH PRESS CONTROL POWER JUNCTION	WASH PRESS 1 DRAIN FLUSH VALVE
	3/4"	2-#12 PWR, 1-#12 GND	WASH PRESS CONTROL POWER JUNCTION	WASH PRESS 1 WASH WATER VALVE
	3/4" *	4-#16 CTL	WASH PRESS CONTROL PANELS	WASH PRESS CONTROL JUNCTION
	3/4"	2-#16 CTL	WASH PRESS CONTROL JUNCTION	WASH PRESS 1 E-STOP
	3/4"	3-#12 PWR, 1-#12 GND	SP JUNCTION BOX	SCREEN 2 BRUSH MOTOR DISCONNECT
	3/4"	3-#12 PWR, 1-#12 GND	SCREEN 2 BRUSH MOTOR DISCONNECT	SCREEN 2 BRUSH MOTOR
	3/4"	3-#12 PWR, 1-#12 GND	SP JUNCTION BOX	SCREEN 2 DRIVE MOTOR DISCONNECT
	3/4"	3-#12 PWR, 1-#12 GND	SCREEN 2 DRIVE MOTOR DISCONNECT	SCREEN 2 DRIVE MOTOR
	3/4"	2-#12 PWR, 1-#12 GND	S-CP JUNCTION BOX	SCREEN 2 FLUSH WATER VALVE
	3/4"	16-#16 CTL	SCREEN 2 CONTROL JUNCTION BOX	SCREEN 1 CONTROL JUNCTION BOX
	3/4"	2-#16 CTL	SCREEN 2 CONTROL JUNCTION BOX	INSPECTION DOOR SWITCH
	3/4"	2-#16 CTL	SCREEN 2 CONTROL JUNCTION BOX	SCREEN 2 E-STOP
	3/4"	12-#16 CTL	SCREEN 2 CONTROL JUNCTION BOX	BRUSH MOTOR & DRIVE MOTOR T-STATS
	3/4" **	2-#16 CTL (SCREEN 2 RUNNING)	SCREEN 2 CONTROL PANEL	WASH PRESS 2 CONTROL PANEL
	3/4"	3-#12 PWR, 1-#12 GND	WASH PRESS POWER JUNCTION	WASH PRESS 2 DRIVE MOTOR DISCONNECT
	3/4"	3-#12 PWR, 1-#12 GND	WASH PRESS 2 DRIVE MOTOR DISCONNECT	WASH PRESS 2 DRIVE MOTOR
	3/4"	2-#12 PWR, 1-#12 GND	WASH PRESS CONTROL POWER JUNCTION	WASH PRESS 2 DRAIN FLUSH VALVE
	3/4"	2-#12 PWR, 1-#12 GND	WASH PRESS CONTROL POWER JUNCTION	WASH PRESS 2 WASH WATER VALVE
	3/4"	2-#16 CTL	WASH PRESS CONTROL JUNCTION	WASH PRESS 2 E-STOP
NOTES: PROVIDE A PULL STRING ALONG WITH THE WIRES IN EACH CONDUIT.				
* THIS CONDUIT IS EXISTING IN UTILITY ROOM AND NEW IN UPPER SCREEN ROOM.				
** SHARE CONDUIT				
S = SCREEN			P = PWR = POWER	C = CTL = CONTROL
SWP = SCREENING WASH PRESS			GND = GROUND	CP = CONTROL POWER



MOTOR CONTROL CENTER (MCC-14)

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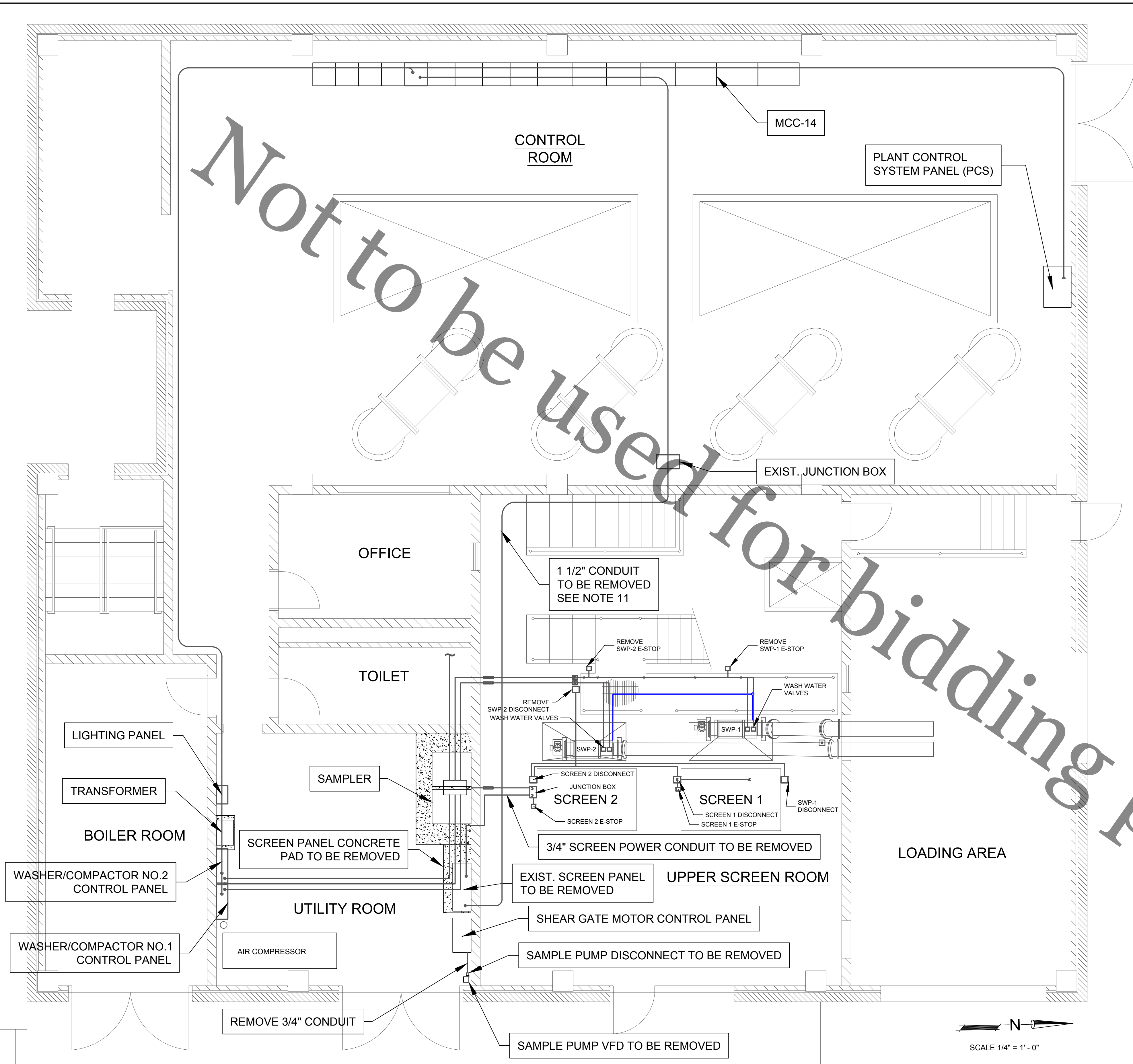
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ELECTRICAL SCHEDULE & NOTES

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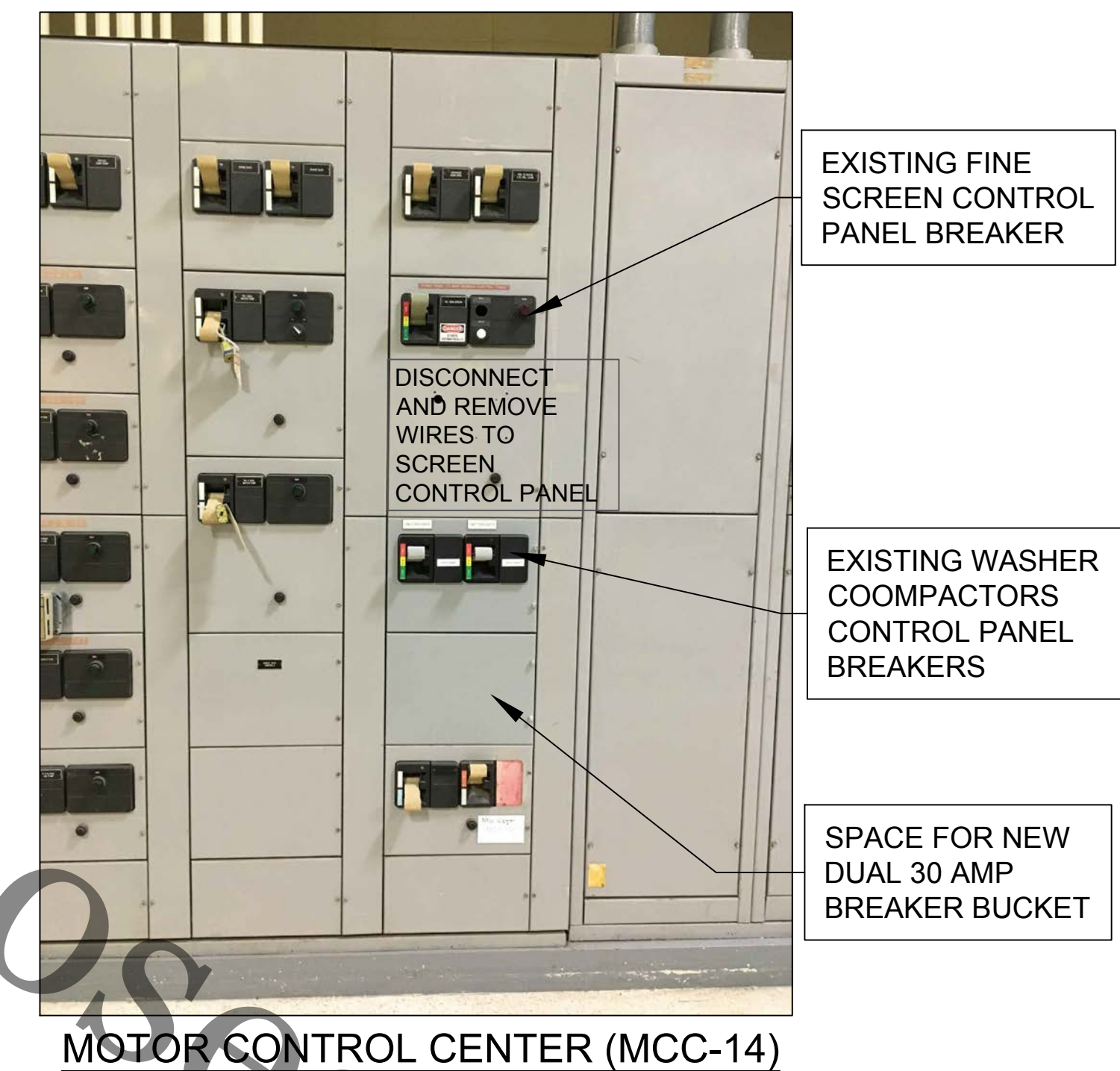
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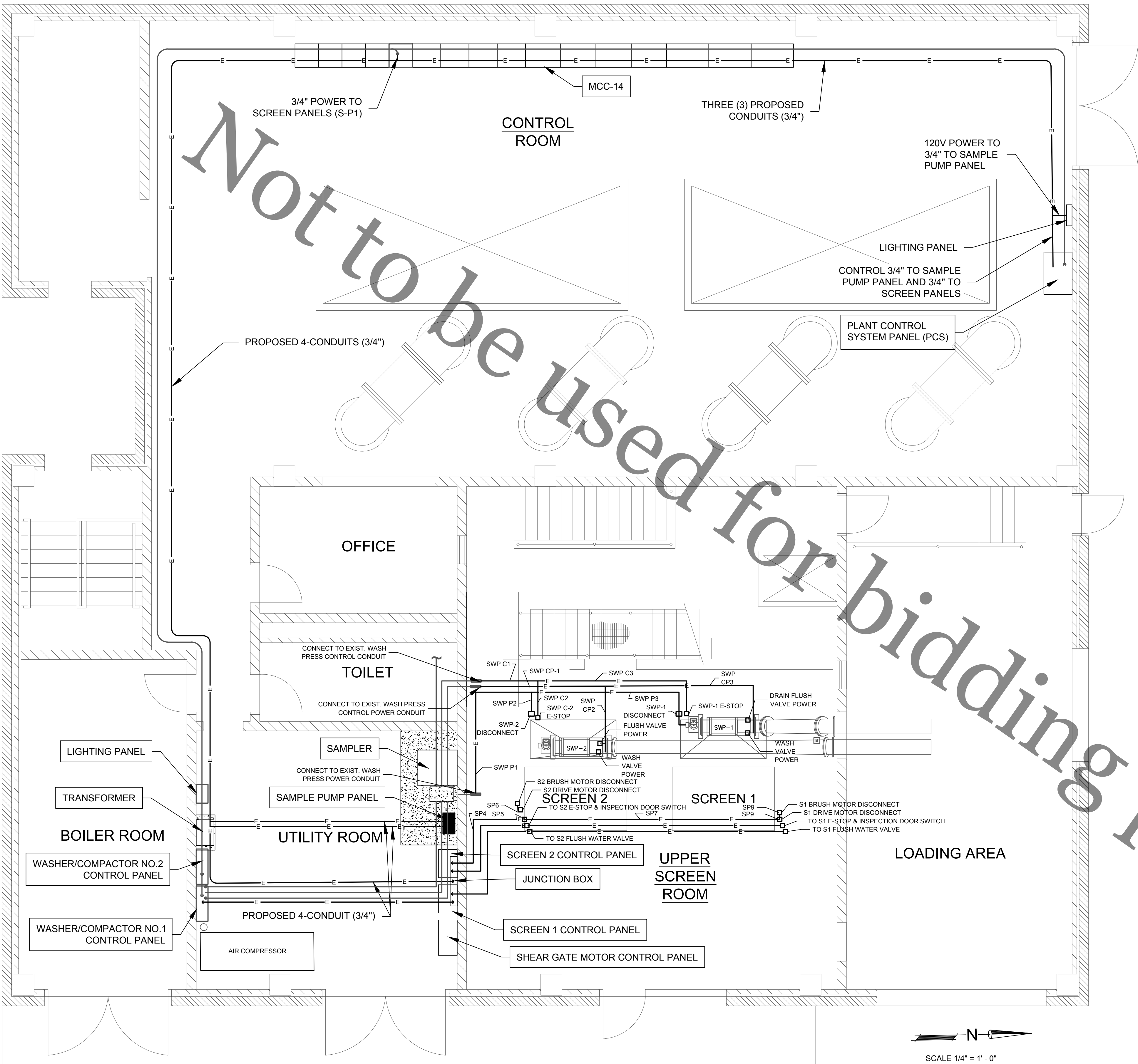


ELECTRICAL DEMOLITION NOTES:

1. SEAL ALL CONDUIT PENETRATIONS THROUGH WALLS OR FLOORS THAT ARE CREATED AS A RESULT OF THIS WORK.
2. CONTRACTORS SHALL SUBMIT TO OWNER THEIR HOT WORK SAFETY PROCEDURES AND PERSONAL PROTECTIVE EQUIPMENT REQUIREMENTS FOR ANY LIVE ELECTRICAL WORK.
3. EXISTING PLANT CONTROL SYSTEM PANEL (PCS-1-5) TO REMAIN. ALL REQUIRED PROGRAMMING AND TERMINATIONS OF SCADA WIRING IN THIS PANEL INSTALLED BY CONTRACTOR FOR THE NEW SCREEN PANELS SHALL BE BY OWNER.
4. EXISTING MOTOR CONTROL CENTER (MCC-14). REMOVE SCREEN CONTROL PANEL WIRING PER PHOTO BELOW.
5. EXISTING BAR SCREEN #1 AND SCREENINGS WASH PRESS 1 (SWP-1), ASSOCIATED DISCONNECT SWITCHES, E-STOPS, CONDUIT AND WIRING TO BE REMOVED AND REPLACED WITH NEW SWP CONDUIT IN THE UTILITY ROOM AND TO THE SEAL-OFF IN UPPER SCREEN ROOM TO BE RE-USED.
6. EXISTING BAR SCREEN #2 AND SCREENINGS WASH PRESS 2 (SWP-2), ASSOCIATED DISCONNECT SWITCHES, E-STOPS, CONDUIT AND WIRING TO BE REMOVED AND REPLACED WITH NEW SWP CONDUIT IN THE UTILITY ROOM AND TO THE SEAL-OFF IN UPPER SCREEN ROOM TO BE RE-USED.
7. TEMPORARILY SUPPORT AND INSTALL SCREEN NO. 2 (SOUTH) CONTROL PANEL WITH AMPLE WIRE FOR FUTURE PERMANENT INSTALLATION AFTER EXISTING SCREEN CONTROL PANEL CAN BE REMOVED, PER BELOW.
8. EXISTING SCREEN CONTROL PANEL TO BE REMOVED AFTER SCREEN NO. 2 (SOUTH) IS TESTED FUNCTIONALLY AND SCREEN NO. 1 (NORTH) IS OFF-LINE. REMOVE CONCRETE PAD AFTER REMOVAL OF THE PANEL.
9. APPROXIMATE ROUTING OF CONDUIT FOR EXISTING SCREEN'S POWER.
10. REMOVE WIRES FROM MCC-14 TO EXITING SCREEN PANEL. REMOVE 1 1/2\"/>



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NOTES:

- SEE DRAWING 9 FOR ELECTRICAL GENERAL NOTES, SYMBOLS, AND ABBREVIATIONS.
- ALL WIRING, CONDUIT, AND ELECTRICAL EQUIPMENT LOCATED IN THE SCREEN ROOMS AND LOADING AREA SHALL BE RATED FOR USE IN CLASS 1, DIVISION 1, GROUP D LOCATIONS PER THE NATIONAL ELECTRICAL CODE (NEC). PROVIDE NEC REQUIRED SEAL-OFFS ON ALL CONDUITS ENTERING AND LEAVING THE SPACE.
- SEAL ALL CONDUIT PENETRATIONS THROUGH WALLS OR FLOORS THAT ARE CREATED AS A RESULT OF THIS WORK.
- CONTRACTORS SHALL SUBMIT TO OWNER THEIR HOT WORK SAFETY PROCEDURES AND PERSONAL PROTECTIVE EQUIPMENT REQUIREMENTS FOR ANY LIVE ELECTRICAL WORK.
- EXISTING PLANT CONTROL SYSTEM PANEL (PCS-1-5) TO REMAIN. ALL REQUIRED PROGRAMMING AND TERMINATIONS OF SCADA WIRING IN THIS PANEL INSTALLED BY CONTRACTOR FOR THE NEW SCREEN PANELS SHALL BE BY OWNER.
- EXISTING MOTOR CONTROL CENTER (MCC-14). PROVIDE ONE DUEL 30 AMP BREAKER BUCKET IN THE 12" SPACE DIRECTLY BELOW THE EXISTING SCREENINGS WASH PRESS CONTROL PANEL DUAL BREAKER BUCKET, SEE DETAIL ON SHEET NO. E2.0.
- THE NEW BREAKERS SHALL FEED SCREEN NO. 1 CONTROL PANEL AND THE OTHER BREAKER TO FEED SCREEN NO. 2. MOTOR CONTROL CENTER (MCC-14) IS A WESTINGHOUSE FIVE STAR TYPE (G.O. CGC-11807 IT.3-1). SEE NOTE 4 ABOVE CONCERNING LIVE WORK ON MOTOR CONTROL CENTER (MCC-14).
- EXISTING BAR SCREEN #1 AND ASSOCIATED DISCONNECT SWITCH, E-STOP AND CONDUIT AND WIRING TO BE REMOVED AND REPLACED WITH NEW.
- EXISTING BAR SCREEN #2 AND ASSOCIATED DISCONNECT SWITCH, E-STOP AND CONDUIT AND WIRING TO BE REMOVED AND REPLACED WITH NEW.
- TEMPORARILY SUPPORT AND INSTALL SCREEN NO. 2 (SOUTH) CONTROL PANEL WITH AMPLE WIRE FOR FUTURE PERMANENT INSTALLATION AFTER EXISTING SCREEN CONTROL PANEL CAN BE REMOVED, PER BELOW.
- PROVIDE TWO (2)- 3/4" CONDUITS FOLLOWING GENERAL ROUTE OF EXISTING 3/4" WASHER/COMPACTOR PANEL CONDUITS, ONE TO MCC-14 AND ONE TO PCS PANEL.
- WASHER/COMPACTOR NO. 1 CONTROL PANEL TO REMAIN. INSTALL NEW BREAKER PROVIDED BY RRWRD.
- EXISTING SCREENINGS WASH PRESS #1 AND ASSOCIATED CONDUIT IN THE SCREEN ROOM STARTING AT THE EXISTING SEAL-OFF, WIRING, DISCONNECT,E-STOP,AND CONDUIT SUPPORTS, TO BE REMOVED AND REPLACED WITH NEW.
- PROVIDE DISCONNECT SWITCH, E-STOP, CONDUIT, WIRING, AND SUPPORTS FOR NEW WASHER/COMPACTOR NO. 1 ROUTE CONDUIT AND WIRING TO A NEW SUPPORT STAND FOR THE NEW DEVICES TO BE MOUNTED ON THE CONCRETE CURB ADJACENT TO THE STAIRS.
- ROUTE NEW MOTOR OPERATED VALVE CONDUIT FROM EXISTING STAND OFF NEAR SOUTH WALL TO THE NEW VALVES ASSOCIATED WITH NEW WASHER COMPACTOR 1. INSTALL NEW WIRE FOR THE WASHER/COMPACTOR NO. 1 WASH WATER VALVE AND THE FLUSH WATER VALVE.
- WASHER/COMPACTOR NO. 2 CONTROL PANEL TO REMAIN. INSTALL NEW BREAKER PROVIDED BY RRWRD.
- EXISTING SCREENINGS WASH PRESS #2 AND ASSOCIATED CONDUIT IN THE SCREEN ROOM STARTING AT THE EXISTING SEAL-OFF, WIRING, DISCONNECT,E-STOP,AND CONDUIT SUPPORTS, TO BE REMOVED AND REPLACED WITH NEW.
- PROVIDE DISCONNECT SWITCH, E-STOP, CONDUIT, WIRING, AND SUPPORTS FOR NEW WASHER/COMPACTOR NO. 2 ROUTE CONDUIT AND WIRING TO A NEW SUPPORT STAND FOR THE NEW DEVICES TO BE MOUNTED ON THE CONCRETE CURB ADJACENT TO THE STAIRS.
- ROUTE NEW MOTOR OPERATED VALVE CONDUIT FROM EXISTING STAND OFF NEAR SOUTH WALL TO THE NEW VALVES ASSOCIATED WITH NEW WASHER COMPACTOR 2. INSTALL NEW WIRE FOR THE WASHER/COMPACTOR NO. 1 WASH WATER VALVE AND THE FLUSH WATER VALVE.
- EXISTING SCREEN CONTROL PANEL TO BE REMOVED AFTER SCREEN NO. 2 (SOUTH) IS TESTED FUNCTIONALLY AND SCREEN NO. 1 (NORTH) IS OFF-LINE.
- APPROXIMATE ROUTING OF CONDUIT FOR EXISTING SCREEN'S POWER.

THE ORDER OF THESE NOTES DOES NOT REPRESENT REQUIRED ORDER OF THE WORK. SEE SPECIFICATION SECTION 01010 FOR SEQUENCING OF THE ABOVE WORK.



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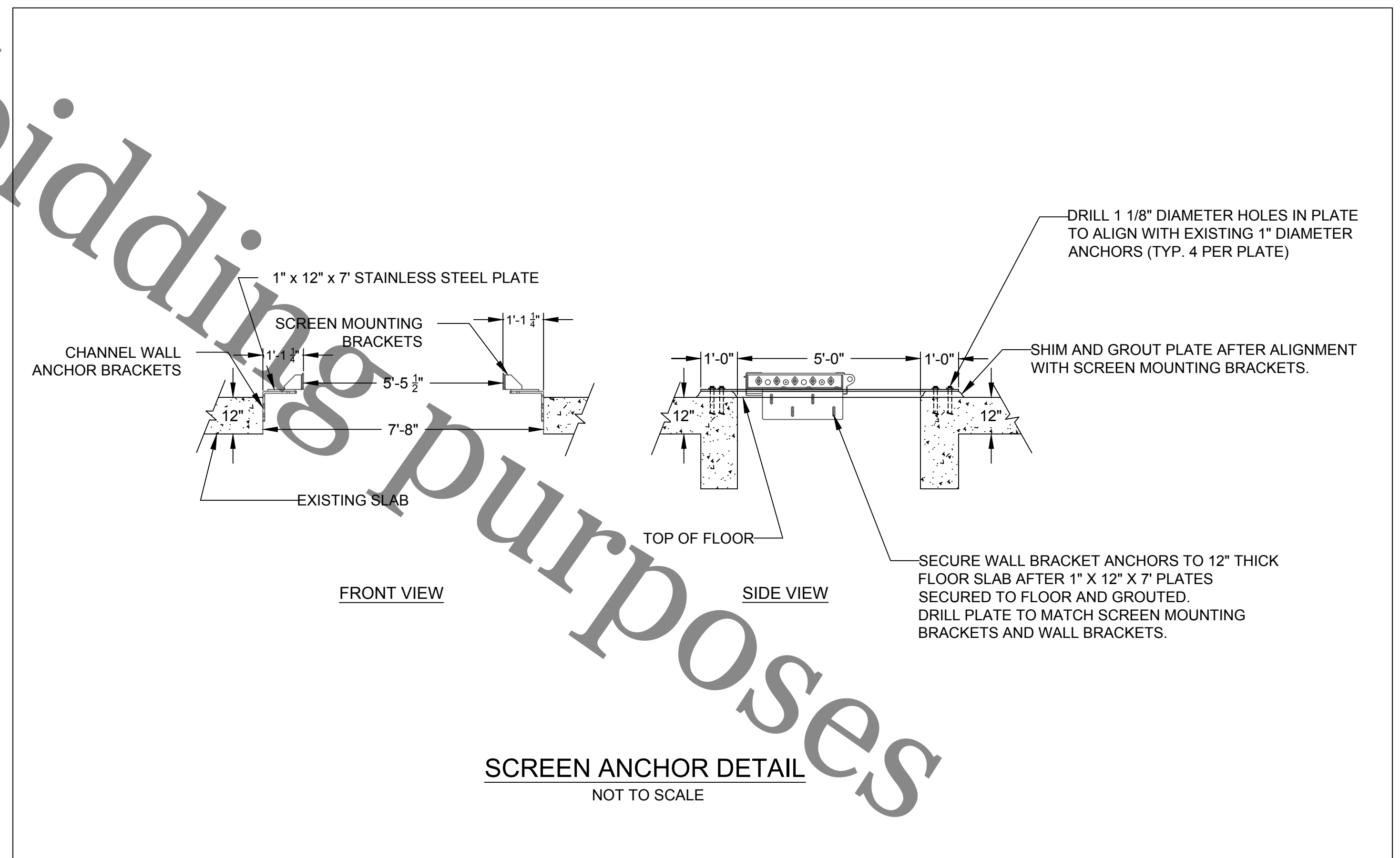
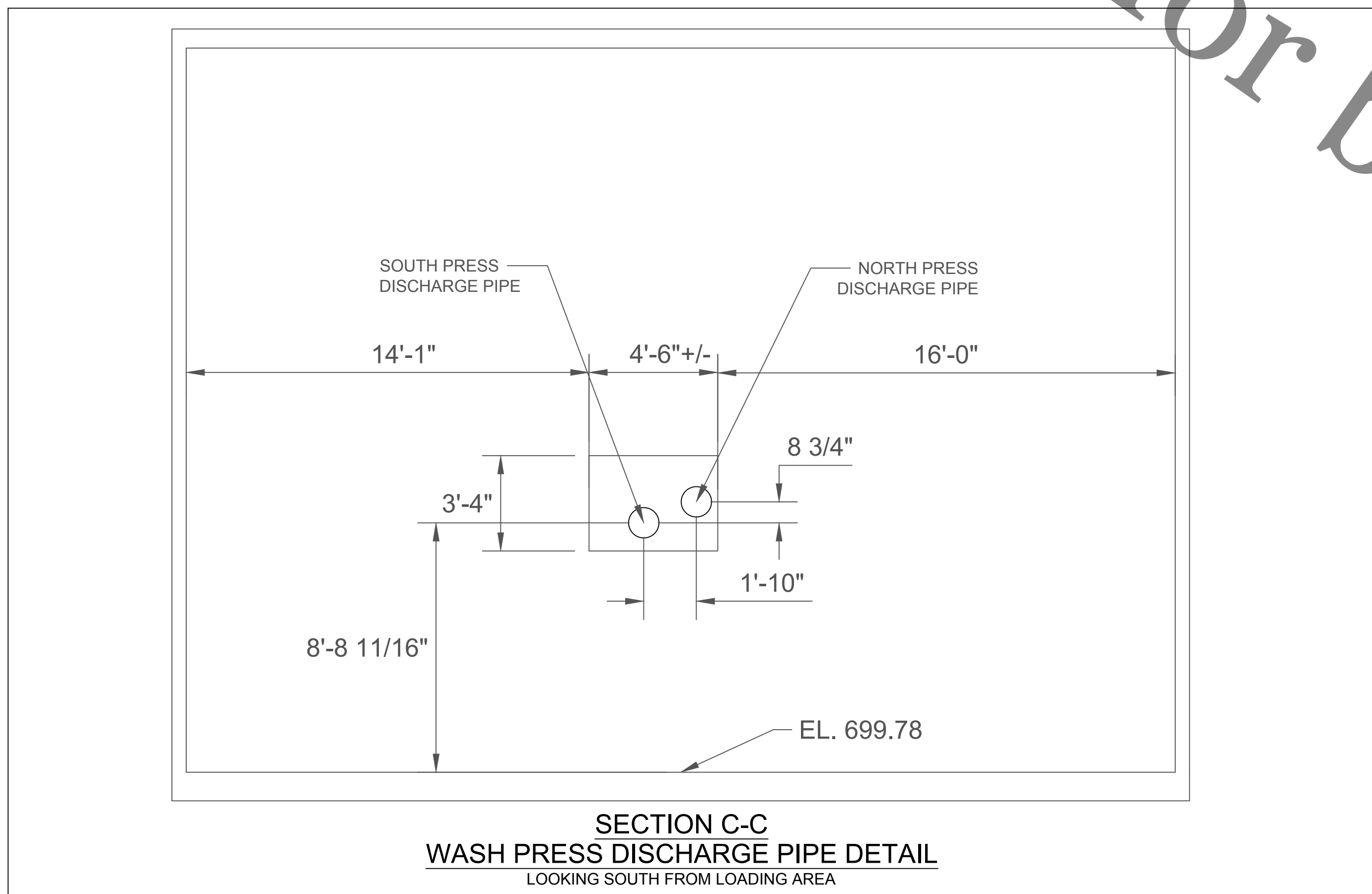
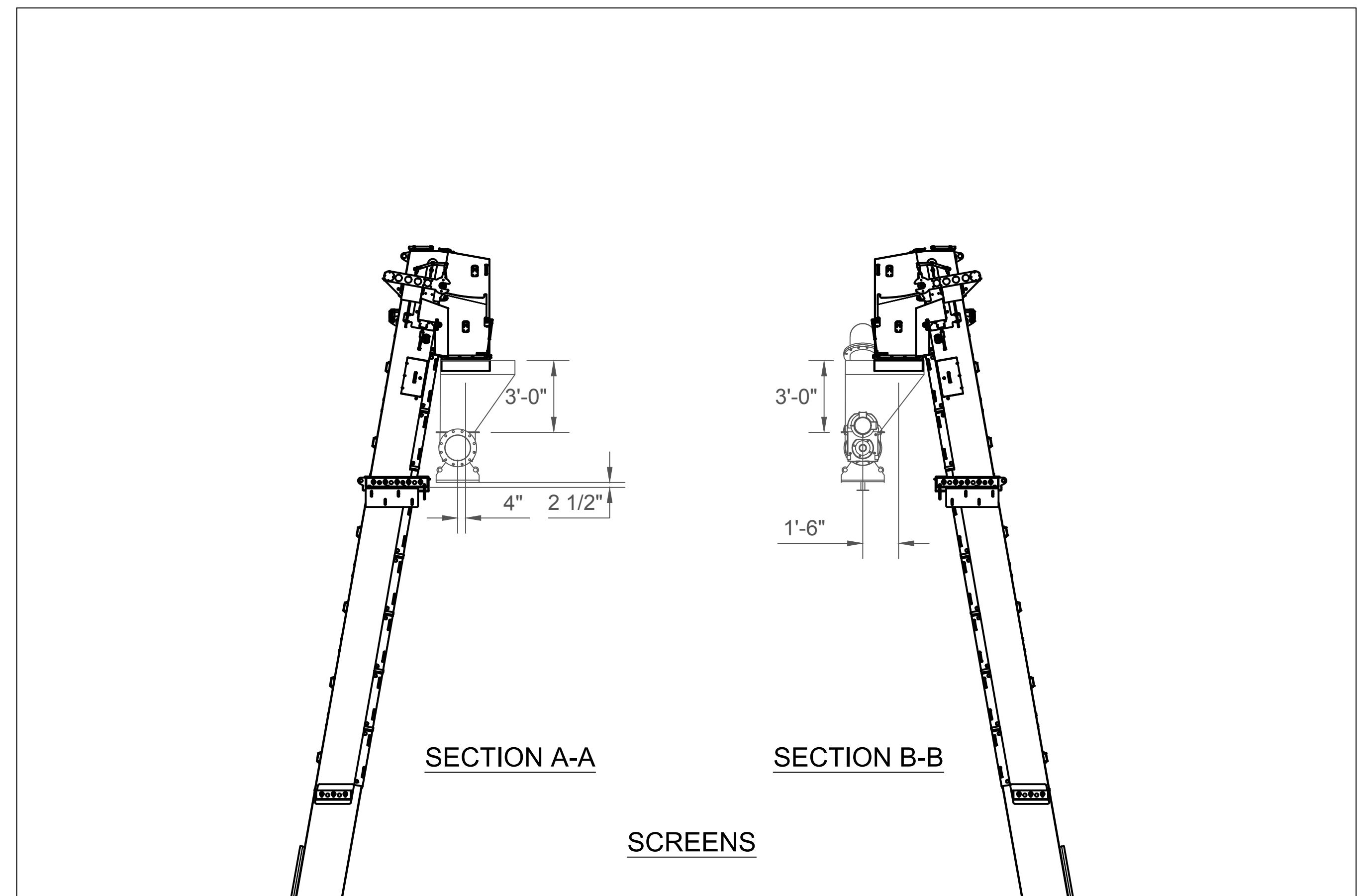
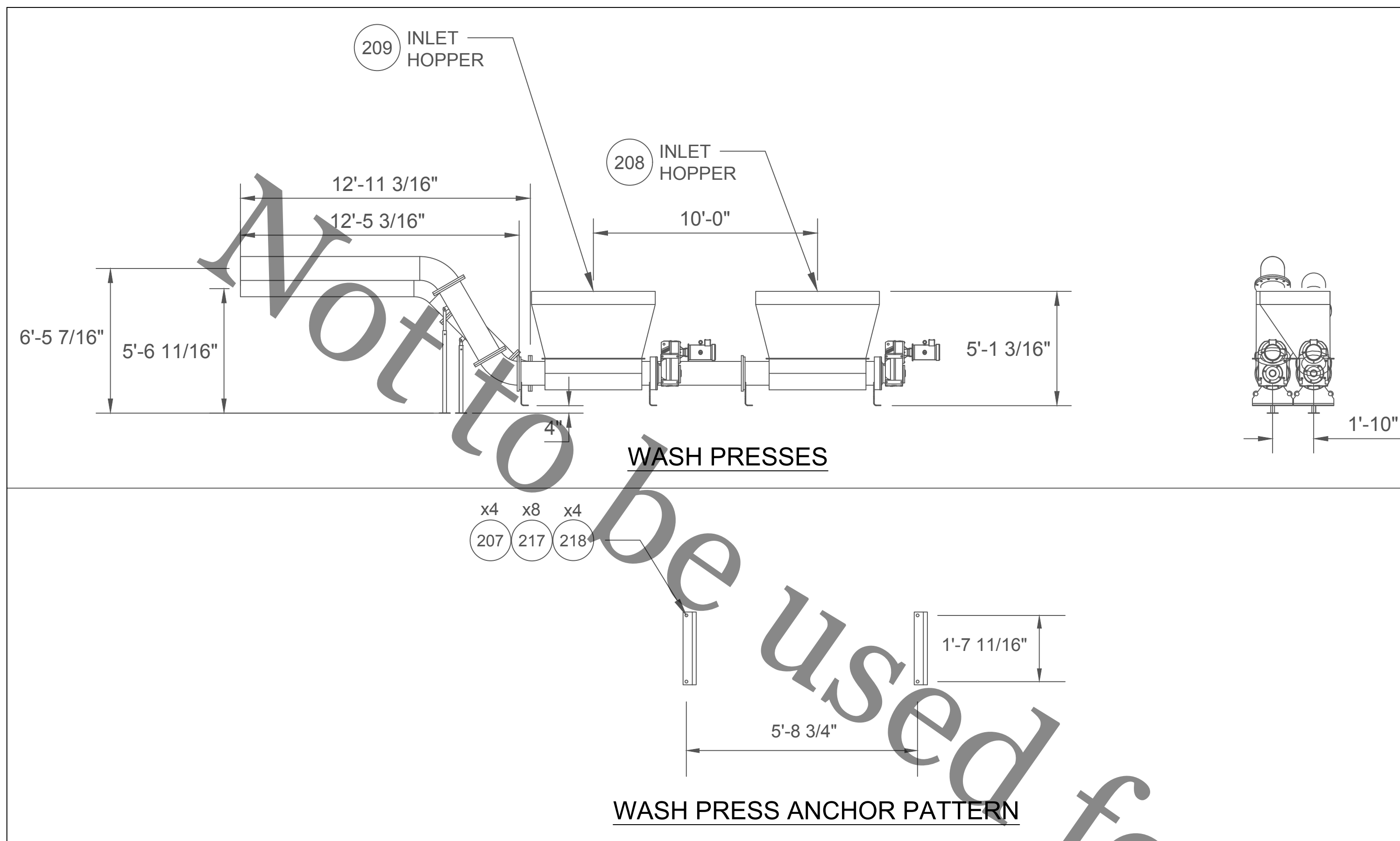
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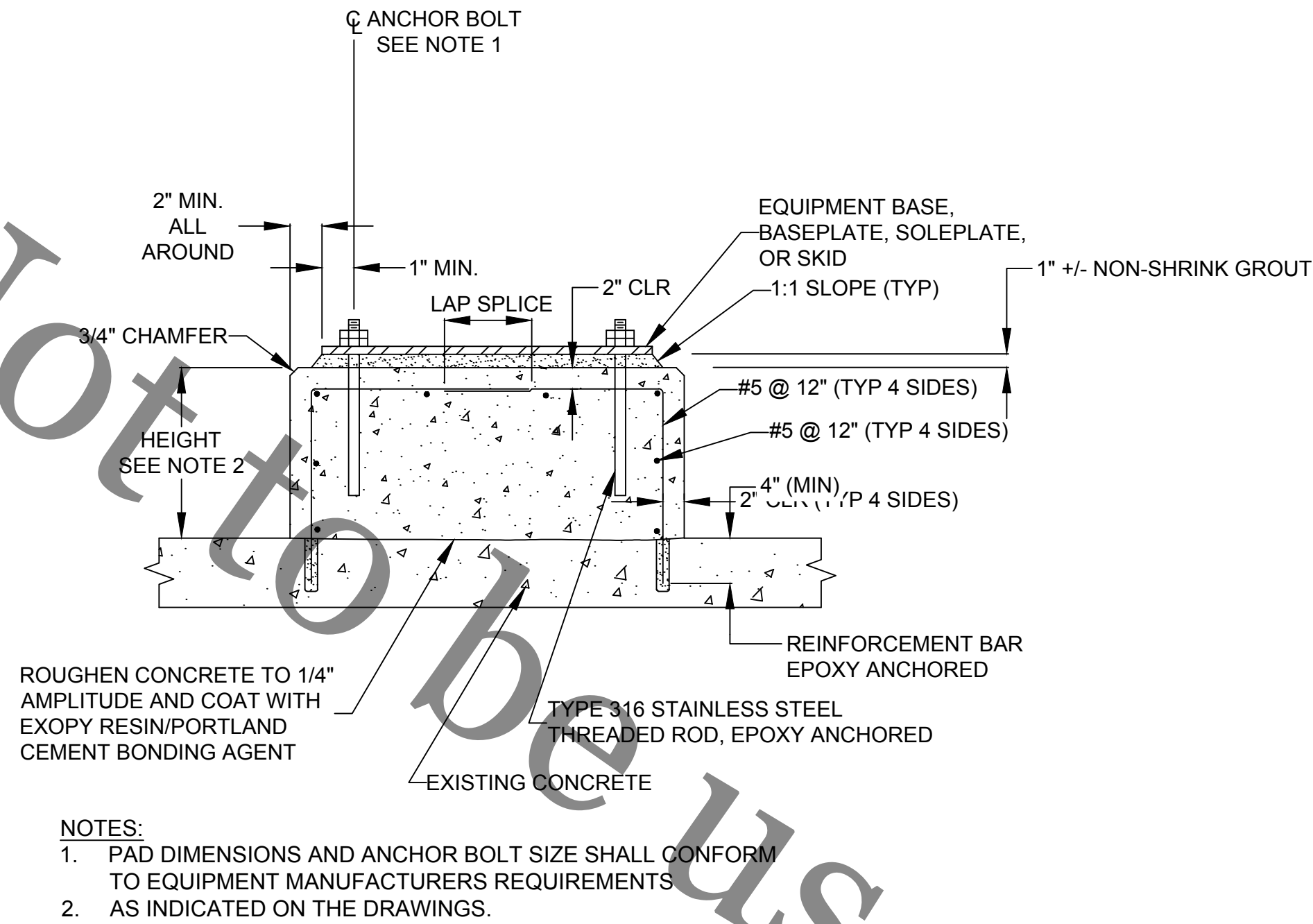
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ELECTRICAL POWER PLAN

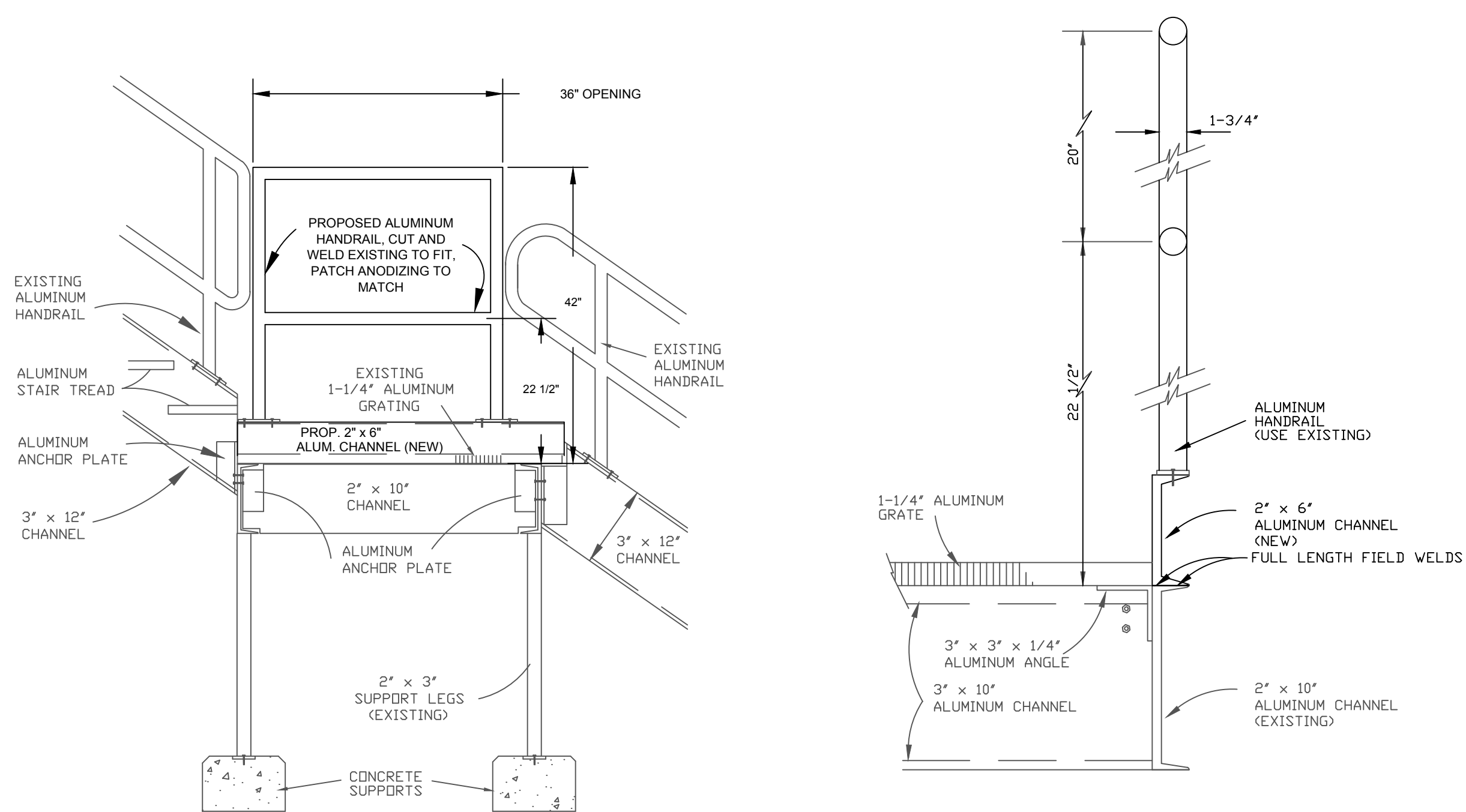
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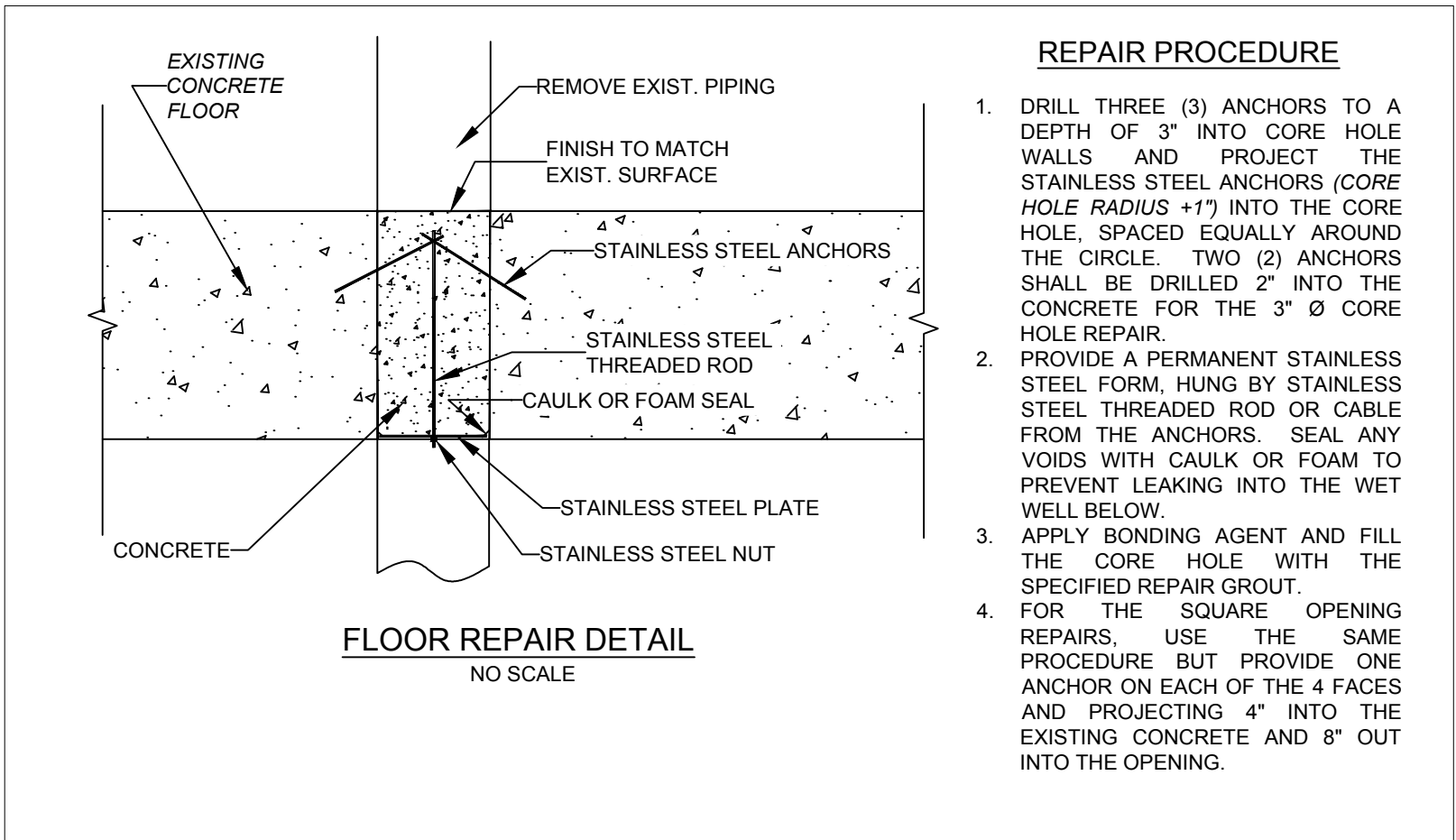
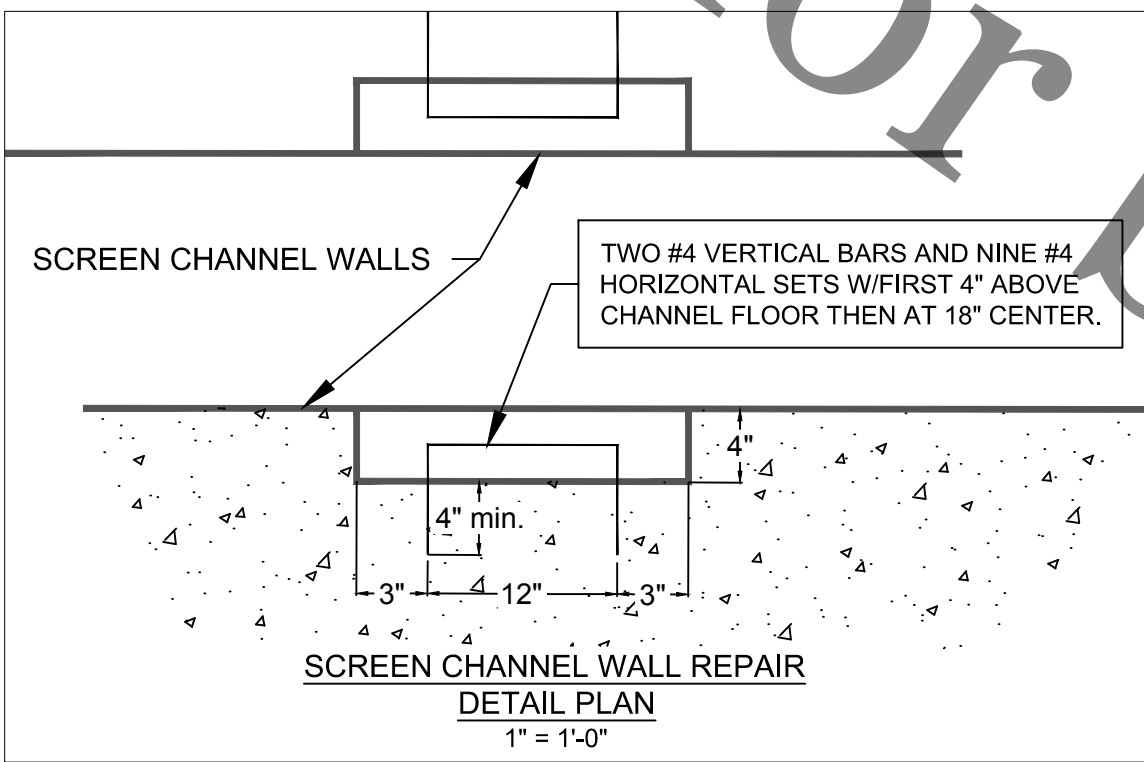




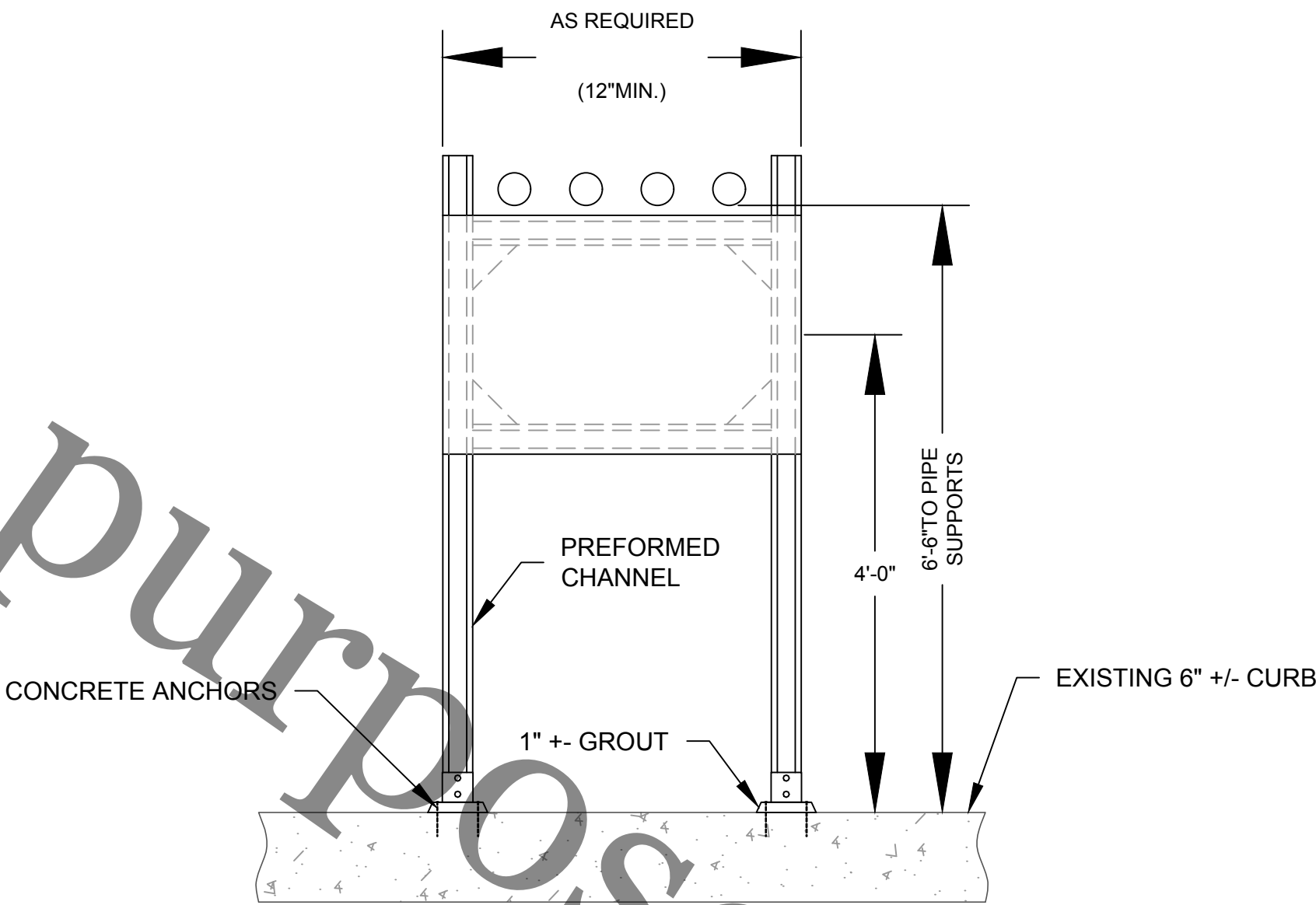
EQUIPMENT BASE ON EXISTING CONCRETE SLAB
 NOT TO SCALE



PLATFORM AND HAND RAIL REPAIR



- NOTES
 1. PREFORMED CHANNEL SIZE & SPACING AS REQUIRED FOR NUMBER & SIZE OF CONDUITS OR PANELS.
 2. ALL PREFORMED CHANNELS, HARDWARE, & CONCRETE ANCHORS TO BE STAINLESS STEEL.
 3. PROVIDE CROSS BRACING & SUPPORT LEGS EVERY 3 FEET FOR PANEL SUPPORTS.



ELECTRICAL EQUIPMENT AND CONDUIT
 SUPPORT MOUNTING STAND DETAIL
 NOT TO SCALE



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DETAILS

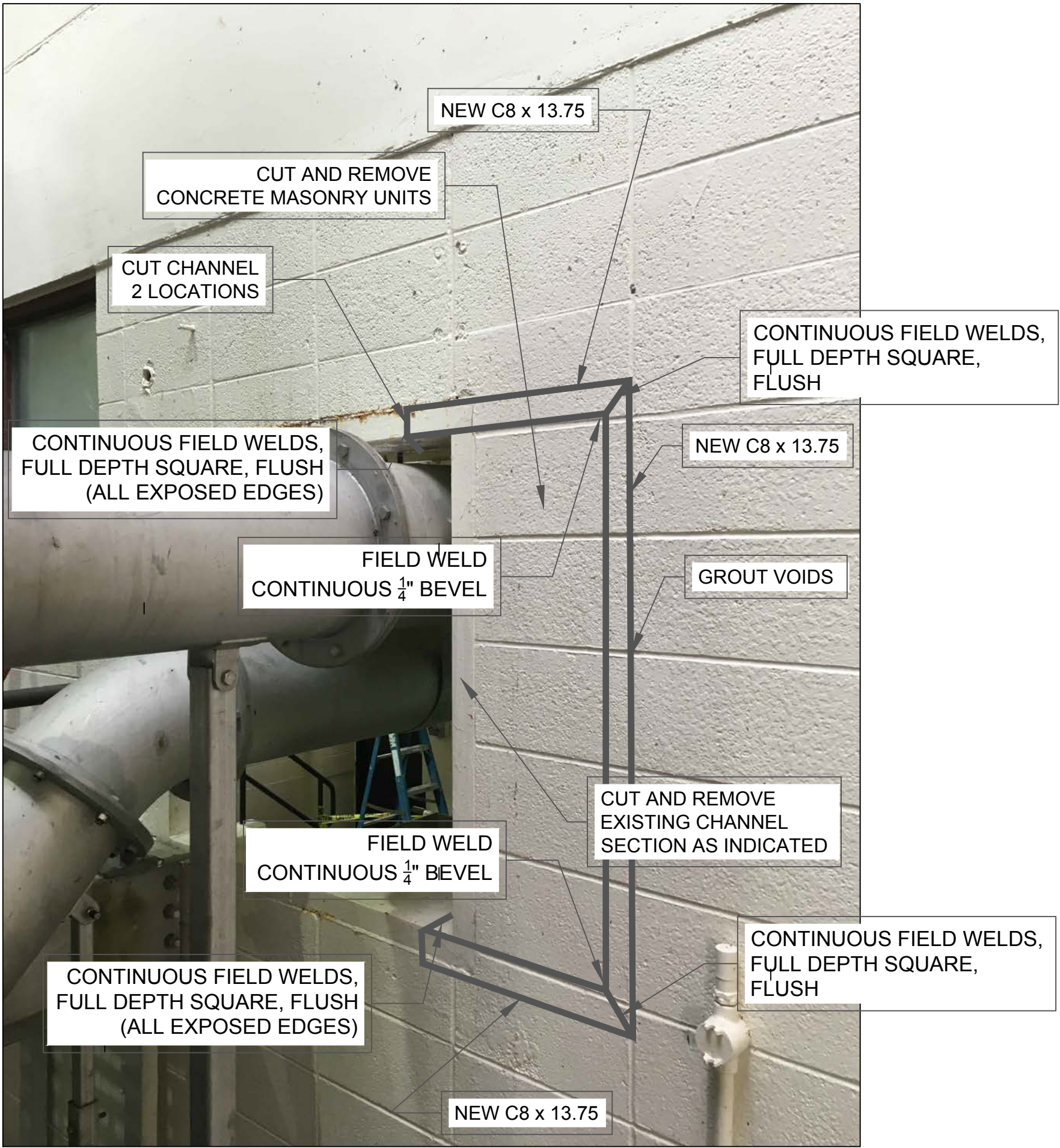
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Not to be used for bidding purposes



CURB FOR ELECTRICAL MOUNTING



WALL OPENING STEEL CHANNEL



SAMPLE ROOM - NORTH WALL

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DETAIL - PHOTOS OF EXISTING AREAS

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