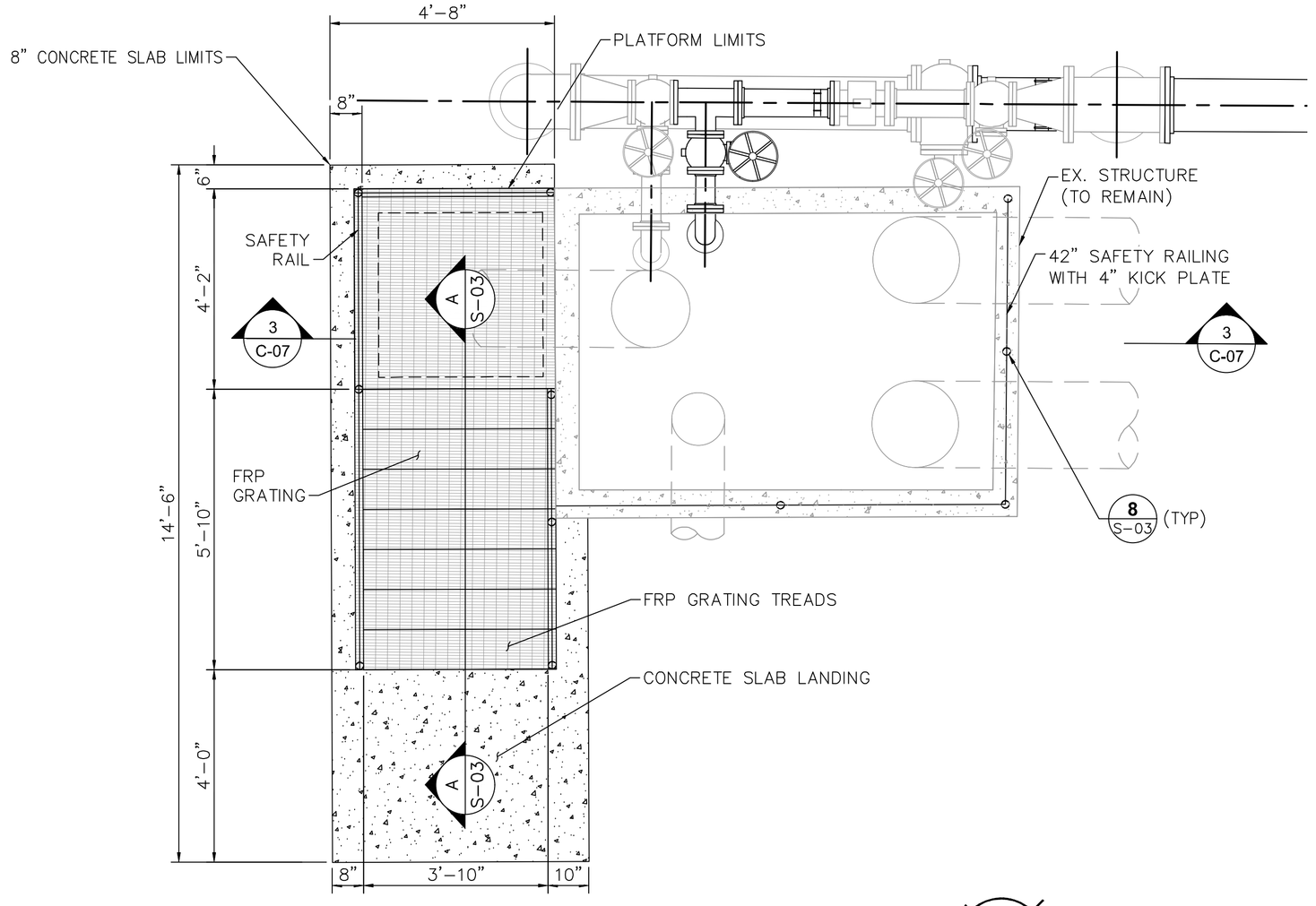


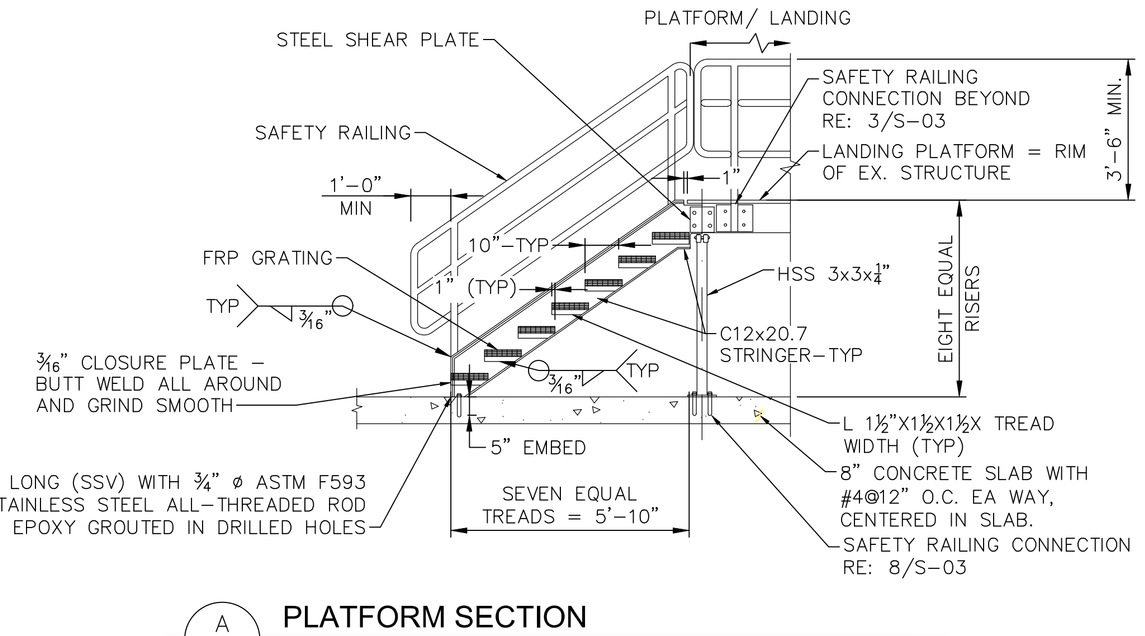
1 S-03 PLATFORM PLAN

SCALE: 1/2" = 1'-0"

NORTH

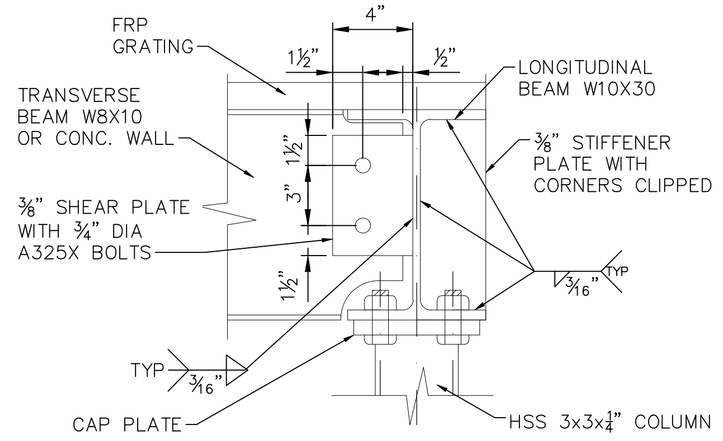
EQUIPMENT PLATFORMS/STATION LANDING STAIRS STRUCTURAL STEEL NOTES:

1. ALL PLATFORM FRAMING MEMBERS SHALL BE GALVANIZED STEEL PER NOTES ON GENERAL STRUCTURAL NOTES SHEET.
2. PLATFORM GRATING NOTES:
   A. PROVIDE AND INSTALL MOLDED OR PULTRUDED FIBERGLASS GRATING (FRP) PER ASTM F3059 WITH THE FOLLOWING PROPERTIES:
      a. 1–1/2" GRID HEIGHT OR MINIMUM THICKNESS TO PROVIDE MINIMUM 5'–0" CLEAR SPAN AT 100 PSF LOAD.
      b. MEDIUM GRIT COLOR TO MATCH EXISTING FRP.
      c. SAFELY SUSTAIN A MINIMUM UNIFORM LOAD OF 100 PSF OR 300 LB CONCENTRATED LOAD PER 2016 CBC TABLE 1607.1.
      d. MINIMUM 5'–0" CLEAR SPAN.
   B. ATTACH GRATING TO PLATFORM FRAMES USING TYPE 316 STAINLESS STEEL SADDLE CLIPS SPACED PER MANUFACTURERS RECOMMENDATIONS.
3. SAFETY RAILING WILL MEET OR EXCEED OSHA 29 CFR 1910.23 AND 29 CFR 1926.502. TOP RAIL AND POST TO BE 2.375 X 0.154 ROUND TUBE STEEL (ASTM A 500 GRADE B) OR APPROVED EQUAL. INTERMEDIATE RAILS TO BE 1.66 X 0.146 ROUND TUBE STEEL (ASTM A 500 GRADE B) OR APPROVED EQUAL. RAILING TO BE GALVANIZED AFTER FABRICATION IN ACCORDANCE WITH ASTM A123. COPE ENDS AND GRIND WELDS SMOOTH AT ALL RAILING CONNECTIONS. POSTS TO BE SPACED 5'–0" MAXIMUM ON CENTER. PROVIDE 4" TOE BOARD AT ALL PROPOSED RAILING LOCATIONS. TOE BOARD SHALL MATCH EXISTING TOE BOARD.
4. CONTRACTOR SHALL SUBMIT PLATFORM FRAMING SHOP DRAWINGS TO THE ENGINEER FOR REVIEW AND APPROVAL. ALTERNATE FRAMING DESIGN AND DETAILS SHALL BEAR THE SIGNATURE AND SEAL OF A CURRENTLY LICENSED ENGINEER IN THE STATE OF CALIFORNIA.



A S-03 PLATFORM SECTION

SCALE: NOT TO SCALE



2 S-03 PLATFORM SECTION

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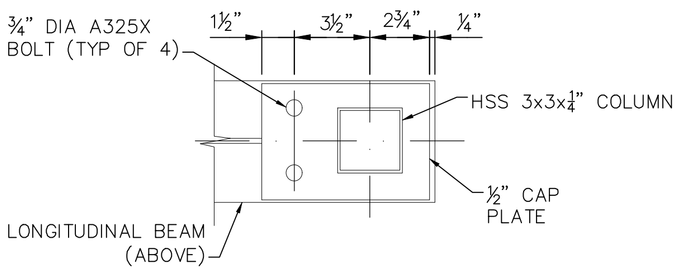
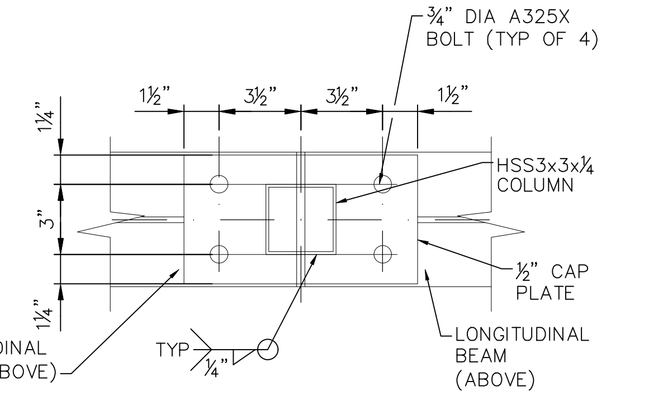


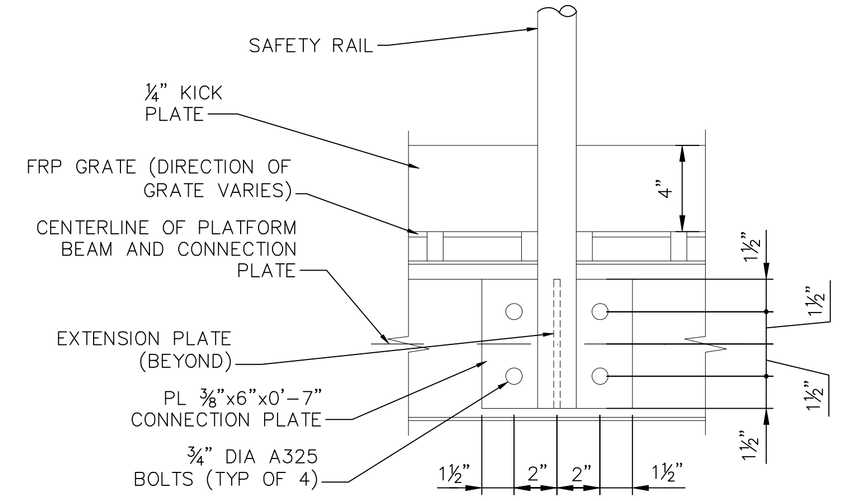
6 S-03 PLATFORM SUPPORT CAP PLATE

SCALE: NOT TO SCALE



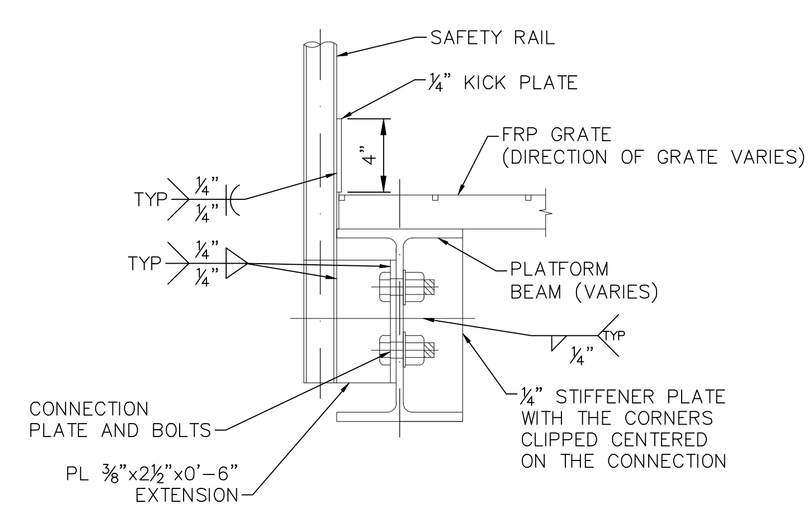
5 S-03 PLATFORM SUPPORT CAP PLATE

SCALE: NOT TO SCALE



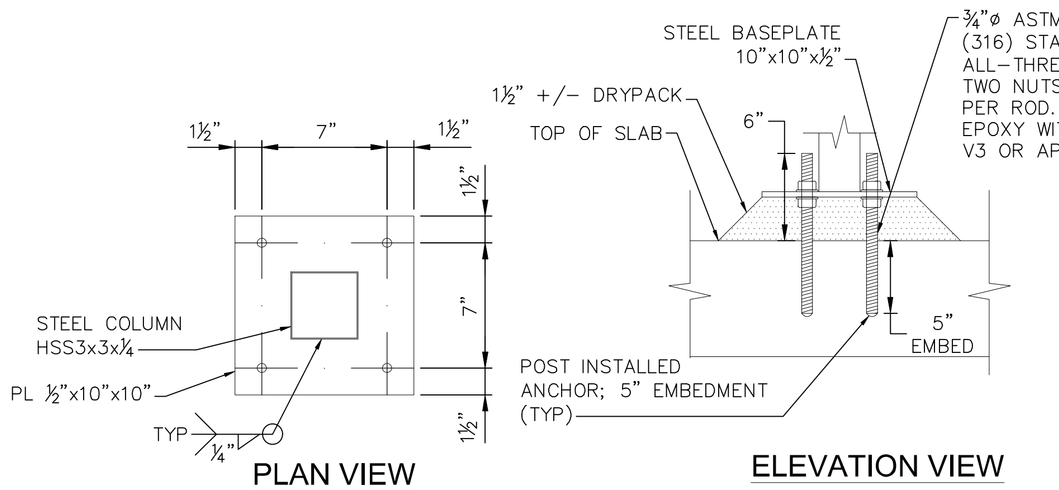
3 S-03 TYPICAL SAFETY RAIL CONNECTION

SCALE: NOT TO SCALE



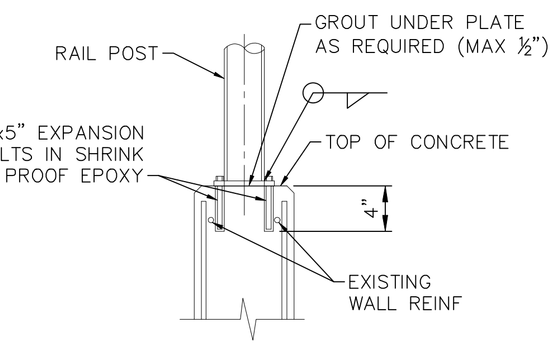
4 S-03 TYPICAL SAFETY RAIL CONNECTION

SCALE: NOT TO SCALE



7 S-03 PLATFORM SUPPORT BASE PLATE

SCALE: NOT TO SCALE



8 S-03 SAFETY RAILING CONNECTION

SCALE: NOT TO SCALE

Kimley»Horn

REV.	DATE	DESCRIPTION	APP.
			KPK DESIGNED
			RKR DRAWN
			KPD CHECKED

COUNTY OF SAN BERNARDINO
DEPARTMENT OF PUBLIC WORKS - SPECIAL DISTRICTS
222 WEST HOSPITALITY LANE, 2ND FLOOR
SAN BERNARDINO, CA 92415-0450
909-386-8800

REGISTERED PROFESSIONAL ENGINEER — JEFFREY M. STROUD — No. C 87953 — EXP: 12/31/21 — CIVIL — STATE OF CALIFORNIA

APPROVED	2/28/2021 DATE
PROJECT ENGINEER	12/28/20 DATE
RECOMMENDED	DATE

LYTLE CREEK NORTH
CSA 70 GH SCREW PRESS
SLUDGE DEWATERING

STRUCTURAL DETAILS I

DRAWING NUMBER S-03
SHEET 19 OF 26
SCALE:
DATE: DEC 2020

ELECTRICAL SYMBOLS

SINGLE LINE DIAGRAMS

- (A) AMMETER
- (V) VOLTMETER
- (M) METER
- (KWH) KILOWATT HOUR METER
- AS AMMETER SWITCH
- VS VOLTMETER SWITCH
- GFP GROUND FAULT PROTECTION
- CURRENT TRANSFORMER
- POTENTIAL TRANSFORMER
- POWER TRANSFORMER SEE NOTE 1.
- CONTROL TRANSFORMER SEE NOTE 2.
- DRAW OUT TYPE EQUIPMENT
- DRAW OUT TYPE HIGH VOLTAGE MOTOR STARTER
- PLUG–IN TYPE EQUIPMENT
- A–24 CIRCUIT BREAKER, 3 POLE UNLESS OTHERWISE INDICATED
- DISCONNECT SWITCH, 3 POLE UNLESS OTHERWISE INDICATED
- OIL FUSE CUTOUTS
- FUSE SEE NOTE 3.
- TRANSFER SWITCH, AUTOMATIC
- RV SIZE 1 MAGNETIC MOTOR STARTER."1" INDICATES SIZE 1. RV INDICATES REDUCED VOLTAGE. 2S INDICATES 2 SPEED. R INDICATES REVERSING.
- MAGNETIC CONTACTOR
- 12 CONDUIT NUMBER 12. SEE CONDUIT AND WIRING SCHEDULE FOR SIZES AND QUANTITIES OF CONDUIT AND WIRES.
- GROUND
- K KIRK KEY INTERLOCKING OF EQUIPMENT
- 2 HP EQUIPMENT FURNISHED, INSTALLED AND CONNECTED UNDER ANOTHER SECTION OF THE CONTRACT.
- PFR PHASE FAILURE RELAY
- SA SURGE ARRESTER
- (#) EXISTING MOTOR (HP SHOWN)
- (#) NEW MOTOR (ESTIMATED HP SHOWN)
- (#) FUTURE MOTOR (ESTIMATED HP SHOWN)
- 1 MANHOLE
- EYS SEAL

NOTES: (ELECTRICAL SYMBOLS)

1. POWER TRANSFORMERS SHALL BE DRY TYPE 480–208Y/120 VOLTS, 3 PHASE 4 WIRE UNLESS OTHERWISE INDICATED.
2. CONTROL TRANSFORMER SHALL BE DRY TYPE 480–120 VOLTS 1 PHASE UNLESS OTHERWISE INDICATED. SEE CONTROL WIRING DIAGRAMS FOR USE OF 120 VOLT CONTROL CIRCUITS CONTROL TRANSFORMERS SHALL BE SIZED TO HANDLE THE LOADS OF ALL RELAYS, PILOT LIGHTS, ETC. CONNECTED THERE TO PLUS 50 VA EXTRA CAPACITY.

CONTROL WIRING DIAGRAMS

NORMALLY OPEN	NORMALLY CLOSED	DEVICE
⊣⊢	⊣/⊢	CONTACT
		LIMIT SWITCH
		LIMIT SWITCH HELD CLOSED
		LIMIT SWITCH HELD OPEN
		PRESSURE OR VACUUM SWITCH
		LIQUID LEVEL SWITCH
		TEMPERATURE ACTUATED SWITCH
		FLOW SWITCH (AIR, WATER, ETC.)
		PUSH BUTTON SINGLE CIRCUIT MOMENTARY CONTACT.
		PUSH BUTTON SINGLE CIRCUIT LOCK–OUT(LOCATED AT MOTOR UNLESS OTHERWISE NOTED)
		TIMED CONTACT– CONTACT ACTION RELAY ON ENERGIZATION.
		TIMED CONTACT– CONTACT ACTION RELAY ON DE–ENERGIZATION.
		ON–OFF SWITCH.
ESB		EMERGENCY STOP PUSH BUTTON (MAINTAINED CONTACT)
STOP	START	STOP –START PUSH–BUTTON STATION (MAINTAINED CONTACTS).
		H HAND–OFF–AUTO SELECTOR SWITCH SEE NOTE 3. (THREE POSITION).
		A TWO POSITION SELECTOR SWITCH
		R PILOT LIGHT, Y=YELLOW, R=RED, A=AMBER, SEE NOTE 3. B=BLUE, W=WHITE, G=GREEN.
		BELL
		HORN OR SIREN
		CR CONTROL RELAY
		M STARTER COIL
		TDR TIME DELAY RELAY. (0–30 SECONDS UNLESS OTHERWISE NOTED). SEE NOTE 3.
		OL'S MOTOR STARTER OVERLOAD RELAY CONTACTS
		CONTROL TRANSFORMER
		MANUAL MOTOR STARTER
		SOLENOID OPERATED CONTROL VALVE
		1 120 VOLT, 1 PHASE, MOTOR (UNLESS OTHERWISE NOTED)
		RTM RUNNING TIME METER. (ELAPSED TIME METER)
		SPACE HEATERS. (LOCATED AT MOTOR UNLESS OTHERWISE NOTED).
		TERMINALS IN MOTOR CONTROL CENTER/MCP
		CONTACT OR DEVICE REMOTE FROM MOTOR CONTROL CENTER/MCP
		TERMINALS IN MOTOR CONTROL CENTER/MCP
		CONTACT IN MOTOR CONTROL CENTER FOR CONNECTION TO REMOTE DEVICE/MCP
		DEVICE SIGNAL OUTPUT
		DEVICE SIGNAL INPUT

PLANS

- CONDUIT RUN CONCEALED UNDER SLAB OR BELOW GRADE. (CONCEALED IN SLAB WHERE SO NOTED OR WHERE ALLOWED PER SPECIFICATIONS).
- CONDUIT RUN EXPOSED UNLESS OTHERWISE NOTED
- EXISTING CONDUIT RUN
- L(1,3) HOMERUN TO PANEL L, CIRCUITS 1 AND 3
- GROUND WIRE
- CONDUIT UP (OUT TOP OF EQUIPMENT)
- CONDUIT DOWN (OUT BOTTOM OF EQUIPMENT)
- CONDUIT STUBBED OUT AND CAPPED
- LIGHTING FIXTURE MOUNTED ON POLE OR POST OR ABOVE PLATFORM
- CEILING MOUNTED LIGHTING FIXTURE
- BRACKET MOUNTED LIGHTING FIXTURE
- FLOODLIGHT
- FLUORESCENT LIGHTING FIXTURE
- POLE MOUNTED LIGHT FIXTURE
- EXIT LIGHT
- RECESSED LED LIGHTING FIXTURE
- LIGHTING FIXTURES CONNECTED TO EMERGENCY CIRCUITS
- A /100 LIGHTING FIXTURE TYPE A, 100 WATTS, WITH 1 LAMP. SEE LIGHTING FIXTURE SCHEDULE
- $ SINGLE POLE, SINGLE THROW TOGGLE SWITCH
- $2 DOUBLE POLE, SINGLE THROW TOGGLE SWITCH
- $3 THREE–WAY TOGGLE SWITCH
- $4 FOUR–WAY TOGGLE SWITCH
- $M MANUAL MOTOR STARTER

  (AT +48" OR AS NOTED)
- $a OUTLETS SHOWN WITH SUBSCRIPT "a" ADJACENT TO THEM SHALL BE CONTROLLED BY S a
- DUPLEX CONVENIENCE RECEPTACLE AT +18" OR AS NOTED
- SINGLE CONVENIENCE RECEPTACLE AT +18" OR AS NOTED
- SPECIAL PURPOSE RECEPTACLE AT +18" OR AS NOTED, RATING AS INDICATED
- JUNCTION BOX, SIZE AS REQUIRED BY CODE
- THERMOSTAT OUTLET AT +54"
- CLOCK OUTLET AT +7'–6" OR AS NOTED
- TELEPHONE OUTLET AT +18" OR AS NOTED
- TELEPHONE FLOOR OUTLET
- HORN
- P CONTROL DEVICE
  P = PRESSURE SWITCH
  ZS = LIMIT SWITCH
  L = LEVEL SWITCH
  V = CONTROL VALVE
- CONTROL STATION: PUSH–BUTTON STATION OR SELECTOR SWITCH. SEE CONTROL WIRING DIAGRAMS FOR REQUIREMENTS.
- (M) EXISTING MOTOR
- (M) NEW MOTOR
- (M) FUTURE MOTOR
- GROUND WELL
- GROUND ROD
- DISCONNECT SWITCH. SEE SINGLE LINE DIAGRAM FOR SIZE
- LIGHTING PANEL. SURFACE MOUNTED
- SWITCHBOARD, DISTRIBUTION PANEL OR MOTOR CONTROL CENTER
- 12 CONDUIT NUMBER 12. SEE CONDUIT AND WIRING SCHEDULE FOR SIZES AND QUANTITIES OF CONDUIT AND WIRES.
- +12" INDICATES HEIGHT FROM FINISHED FLOOR OR GRADE TO CENTERLINE OF DEVICE.
- (J) ELECTRICAL JUNCTION BOX (SIZE AS REQUIRED)
- W.P. WEATHERPROOF. PROVIDE GASKETS AS REQUIRED
- C.O. CONDUIT ONLY
- FE–184 INSTRUMENTATION DEVICE. SEE PROCESS AND INSTRUMENTATION DRAWINGS FOR DESCRIPTIONS
- E EXISTING PULL BOX (SIZE AS REQUIRED)
- E PULL BOX (SIZE AS REQUIRED)
- OUTPUT TERMINAL
- INPUT TERMINAL

ABBREVIATIONS

AMP AMPERE	GND GROUND	N.C. NORMALLY CLOSED
AL ALUMINUM	HP HORSEPOWER	NEC NATIONAL ELECTRICAL CODE
ATS AUTOMATIC TRANSFER SWITCH	HPS HIGH PRESSURE SODIUM	N.O. NORMALLY OPEN
AWG AMERICAN WIRE GAUGE	HZ HERTZ (CYCLES PER SECOND)	NO. NUMBER
BRK BREAKER	IC INTERRUPTING CAPACITY	PLC PROGRAMMABLE LOGIC CONTROLLER
CAT CATALOG	KV KILOVOLTS	PNL PANEL
CIRC. MIL CIRCULAR MILS (AWG)	LCL LONG CONTINUOUS LOAD	PR PAIR
C.O. CONDUIT ONLY	LTG LIGHTING	PVC POLYVINYL CHLORIDE
CKT CIRCUIT	LED LIGHT EMITTING DIODE	REC RECEPTACLE
CP CONTROL PANEL	MCC MOTOR CONTROL CENTER	RGS RIGID GALVANIZED STEEL
DIA DIAMETER	MCP MAIN CONTROL PANEL	SES SERVICE ENTRANCE SECTION
DWG DRAWING	MCM THOUSAND CIRCULAR MIL (AWG)	SPECS SPECIFICATIONS
EA EACH	MFR MANUFACTURER	SSS SOLID STATE STARTER
ELECT ELECTRICAL	MIN MINIMUM	TEL TELEPHONE
ELEV ELEVATION	MIS MISCELLANEOUS	TDR TIME DELAY RELAY
EXIST EXISTING	MTG MOUNTING	TTB TELEPHONE TERMINAL BACKBOARD
FLA FULL LOAD AMPS		TYP TYPICAL
FUT FUTURE		UCP UNIT CONTROL PANEL
GFCI GROUND FAULT CIRCUIT INTERRUPTER		V VOLTS
		WP WEATHERPROOF
		XFMR TRANSFORMER

GENERAL ELECTRICAL REQUIREMENTS

1. THE COMPLETED INSTALLATION SHALL CONFORM TO ALL APPLICABLE FEDERAL, STATE AND LOCAL CODE ORDINANCES AND REGULATIONS. CONTRACTOR SHALL OBTAIN NECESSARY PERMITS AND INSPECTIONS REQUIRED BY THE AUTHORITIES HAVING JURISDICTION. ALL WORK SHALL BE DONE IN A NEAT, WORKMANLIKE, FINISHED AND SAFE MANNER, ACCORDING TO THE LATEST PUBLISHED N.E.C.A. STANDARDS OF INSTALLATION, UNDER COMPETENT SUPERVISION. INSTALL GROUNDING AS REQUIRED BY THE CODE(S).
2. VISIT THE SITE PRIOR TO BIDDING TO BECOME FAMILIAR WITH EXISTING CONDITIONS AND ALL OTHER FACTORS WHICH MAY AFFECT THE EXECUTION OF THIS WORK. INCLUDE ALL RELATED COSTS IN THE INITIAL BID PROPOSAL.
3. ALL MATERIALS SHALL BE NEW AND OF THE BEST QUALITY, MANUFACTURED IN ACCORDANCE WITH NEMA, ANSI, U.L. OR OTHER APPLICABLE STANDARDS. THE USE OF MANUFACTURER'S NAMES, MODELS, AND NUMBERS IS INTENDED TO ESTABLISH STYLE, QUALITY, APPEARANCE, USEFULNESS AND BID PRICE. PROPOSED SUBSTITUTIONS SHALL BE SUBMITTED IN WRITING AND REVIEWED BY THE ENGINEER BEFORE ORDERING.
4. PROTECT ALL ELECTRICAL MATERIAL AND EQUIPMENT INSTALLED AGAINST DAMAGE BY OTHER TRADES, WEATHER CONDITIONS OR ANY OTHER CAUSES. EQUIPMENT FOUND DAMAGED OR IN OTHER THAN NEW CONDITION WILL BE REJECTED AS DEFECTIVE.
5. LEAVE THE SITE CLEAN, REMOVE ALL DEBRIS, EMPTY CARTONS, TOOLS, CONDUIT, WIRE SCRAPS AND ALL MISCELLANEOUS SPARE EQUIPMENT AND MATERIALS USED IN THE WORK DURING CONSTRUCTION. ALL COMPONENTS SHALL BE FREE OF DUST, GRIT AND FOREIGN MATERIALS, LEFT AS NEW BEFORE FINAL ACCEPTANCE OF WORK.
6. CIRCUIT CONDUCTORS #2 AWG OR SMALLER TO BE STRANDED COPPER TYPE "XHHW" FOR BELOW GRADE INSTALLATION OR STRANDED COPPER TYPE THHN/THWN FOR ABOVE GRADE INSTALLATIONS. #1 AWG OR LARGER SHALL BE COPPER TYPE "XHHW–2" STRANDED COPPER. MINIMUM CONDUCTOR SIZE TO BE #12 AWG WITH #12 GND.
7. UNDERGROUND CONDUITS TO BE SCHEDULE 40 PVC. MINIMUM DEPTH 30", MINIMUM SIZE 1", UNLESS OTHERWISE SHOWN ON THE PLANS. CONDUITS AS SHOWN ARE DIAGRAMATICAL ONLY. EXACT CONDUIT ROUTING SHALL BE DETERMINED IN THE FIELD BY THE CONTRACTOR.
8. OUTDOOR CONDUITS EXPOSED TO BE GALVANIZED RIGID STEEL, MINIMUM SIZE 3/4", UNLESS OTHERWISE NOTED ON THE PLANS. GRS CONDUIT SHALL EXTEND BELOW GRADE TO THE FIRST ELBOW. ALL GRS CONDUIT EXPOSED TO EARTH SHALL BE HALF LAPPED WRAPPED IN SCOTCHRAP 50 10 MIL TAPE OR EQUAL. EXTEND WRAP TO A HEIGHT OF 12" ABOVE GRADE. INDOOR CONDUITS SHALL BE IMC OR EMT UNLESS OTHERWISE SHOWN ON PLAN.
9. ALL SAFETY SWITCHES AND OTHER DISTRIBUTION AND CONTROL ELECTRICAL EQUIPMENT SHALL BE U.L. LISTED AND RATED FOR HEAVY DUTY SERVICE.
10. ALL ELECTRICAL EQUIPMENT, CONDUIT, WIRING, BOXES, ETC. SHALL BE SUBMITTED TO THE ENGINEER FOR REVIEW PRIOR TO ORDERING. THE SUBMITTALS SHALL BE NEATLY GROUPED AND ORGANIZED. PERTINENT INFORMATION SHALL BE HIGHLIGHTED, AND THE SPECIFIC PRODUCT SHALL BE IDENTIFIED. ALL SUBMITTALS SHALL BE COMPLETE, AND PRESENTED IN ONE PACKAGE. THE SUBMITTAL SHALL INCLUDE A COMPLETE LIST OF THE EQUIPMENT AND MATERIALS, INCLUDING THE MANUFACTURER'S NAME, PRODUCT SPECIFICATION, DESCRIPTIVE DATA, TECHNICAL LITERATURE, PERFORMANCE CHARTS, CATALOG CUTS, INSTALLATION INSTRUCTIONS, AND SPARE PART RECOMMENDATIONS FOR EACH DIFFERENT ITEM OF THE EQUIPMENT SPECIFIED.
11. IT IS THE OBLIGATION OF THE CONTRACTOR TO ORGANIZE HIS WORK, SO THAT A COMPLETE ELECTRICAL, INSTRUMENTATION, AND CONTROL SYSTEM FOR THE FACILITY WILL BE PROVIDED, AND WILL BE SUPPORTED BY ACCURATE SHOP AND RECORD DRAWINGS, AND O & M MANUALS.

"NOT FOR BID"

Kimley»Horn

REV.	DATE	DESCRIPTION	APP.
			KPK DESIGNED
			RKR DRAWN
			KPD CHECKED

COUNTY OF SAN BERNARDINO
DEPARTMENT OF PUBLIC WORKS - SPECIAL DISTRICTS
222 WEST HOSPITALITY LANE, 2ND FLOOR
SAN BERNARDINO, CA 92415–0450
909-386-8800

REGISTERED PROFESSIONAL ENGINEER MICHAEL ANTHONY OSBORN No. 19280 Exp: 09/30/2022 ELECTRICAL STATE OF CALIFORNIA

APPROVED	2/28/2021 DATE
PROJECT ENGINEER	12/28/20 DATE
RECOMMENDED	DATE

LYTLE CREEK NORTH
CSA 70 GH SCREW PRESS
SLUDGE DEWATERING

ELECTRICAL GENERAL NOTES AND SYMBOLS

DRAWING NUMBER E-01
SHEET 20 OF 26
SCALE:
DATE: DEC 2020

EXISTING PLC PANEL (SEE NOTE 5.)
EXISTING MCC-1
NOTE 1.
EXISTING ELECTRICAL BUILDING
EXISTING MCC-1E
PB-01
PB-04
PB-05
NOTE 3.
(TYP.)
PB-02
NOTE 2.
(TYP.)
E-01
E-02
C-01
C-02
C-03
E-04
C-05
E-05
E-06
C-07
C-08
C-09
E-07
C-06
DISTRIBUTION BOX
1
E-05
NOTE 7.
E-23
E-05
C-07
C-08
SCREW
PRESS
1
E-03
1
E-04
SECONDARY
CLARIFIER NO. 1
SECONDARY
CLARIFIER NO. 2
OXIDATION
DITCH
NO. 2

GENERAL NOTES:

1. THE BACKGROUND DATA AND INFORMATION SHOWN ON THIS DRAWING IS REPLICATED FROM DATA PROVIDED BY OTHERS; IT IS INTENDED ONLY TO INDICATE PLANT GENERAL ARRANGEMENT AND IS NOT GUARANTEED TO BE ACCURATE NOR ALL INCLUSIVE.
2. DESIGN INTENT IS TO UTILIZE AS MANY EXISTING CONDUITS AS FEASIBLE. CONTRACTOR SHALL VERIFY EXISTING CONDUIT CAPACITY AND MANDREL CONDUITS TO ENSURE EXISTING CONDUITS CAN BE UTILIZED. CONTRACTOR TO PREPARE BID ALTERNATE PER LINEAR FOOT FOR NEW CONDUIT IN CASE EXISTING SITE CONDUITS ARE UNUSABLE.

ELECTRICAL CONSTRUCTION NOTES:

1. PROVIDE NEW CONNECTION TO EXISTING PANEL. SEE SHEET E-06 FOR ONE-LINE DIAGRAM.
2. PULLBOX LOCATION SHOWN APPROXIMATELY. CONTRACTOR TO CONFIRM LOCATION OF EXISTING PULLBOXES.
3. DESIGN INTENT IS TO REUSE EXISTING CONDUITS. EXISTING CONDUIT LOCATION SHOWN APPROXIMATELY. CONTRACTOR TO CONFIRM LOCATION AND ROUTING OF CONDUIT PRIOR TO INSTALL.
4. CONNECT NEW CONDUIT TO EXISTING PULLBOX.(SEE SHEET E-7 DETAIL 'E'.)
5. CONTRACTOR SHALL INSTALL CONDUIT AND CONDUCTORS FROM FIELD EQUIPMENT TO THE SCADA PANEL AND SHALL TERMINATE ALL CONDUCTORS AT FIELD EQUIPMENT. CONTRACTOR SHALL LABEL ALL WIRE AND COIL 10' OF EXTRA WIRE WITHIN THE PLC PANEL. THE DISTRICT WILL TERMINATE ALL WIRE WITHIN THE PLC PANEL.
6. RELOCATE EXISTING FIXTURE AND POLE TO NEW FOUNDATION LOCATION SHOWN. SEE DETAIL H ON E-28.

NORTH

GRAPHIC SCALE IN FEET
0 5 10 20
SCALE 1" = 10'

A
E-02
ELECTRICAL SITE PLAN
N.T.S.

"NOT FOR BID"

K:\RIV_WATER\195608108 - Lytle Creek Screw Press\4-Design\CAD\PlanSheets\27 ELECTRICAL SITE PLAN.dwg 12/21/2020 1:13 PM

Kimley»Horn

REV.	DATE	DESCRIPTION	APP.
			KPK DESIGNED
			RKR DRAWN
			KPD CHECKED

COUNTY OF SAN BERNARDINO
DEPARTMENT OF PUBLIC WORKS - SPECIAL DISTRICTS
222 WEST HOSPITALITY LANE, 2ND FLOOR
SAN BERNARDINO, CA 92415-0450
909-386-8800

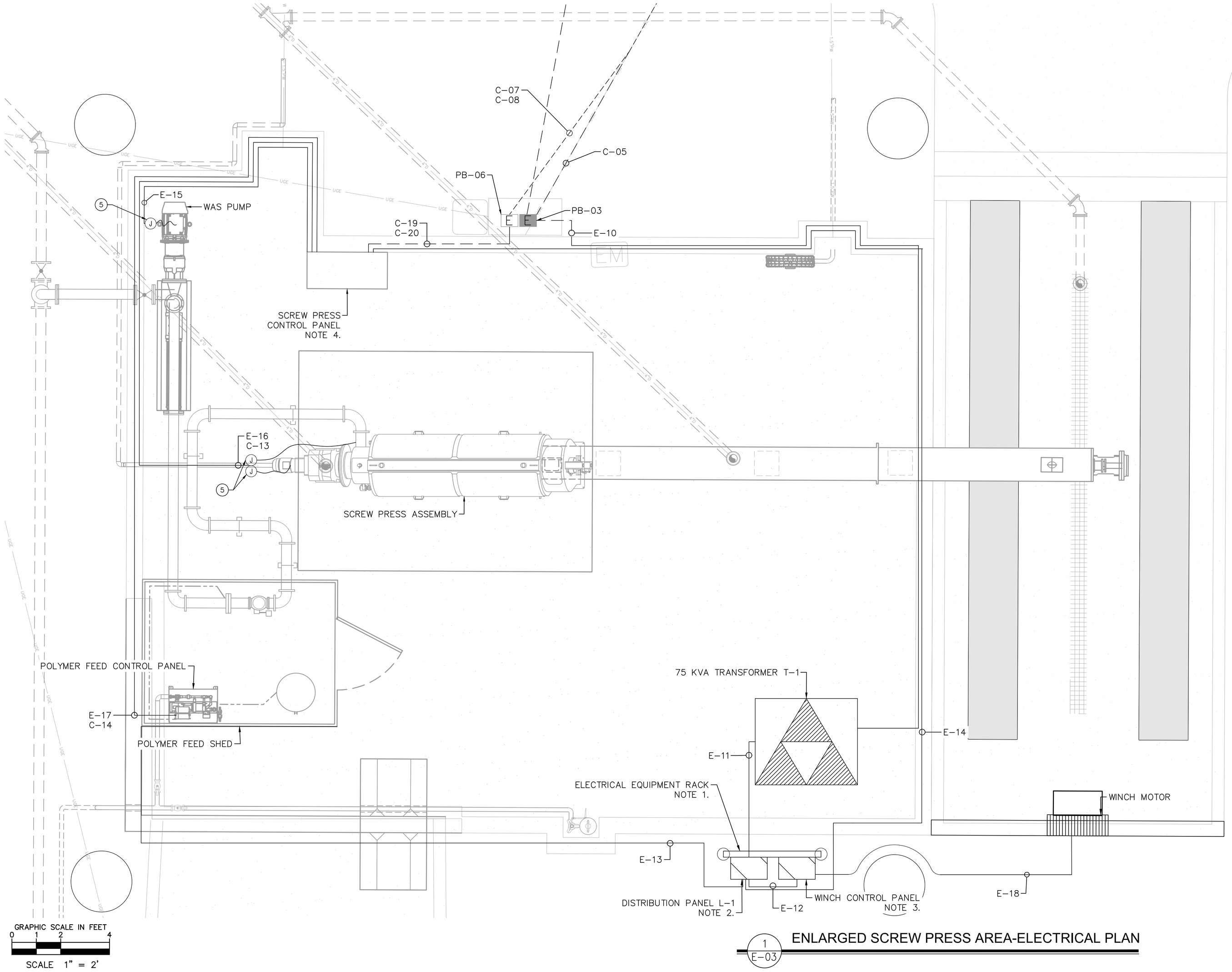
REGISTERED PROFESSIONAL ENGINEER
MICHAEL ANTHONY CORDO
No. 19280
Exp: 09/30/2022
ELECTRICAL
STATE OF CALIFORNIA

APPROVED	2/28/2021 DATE
PROJECT ENGINEER	12/28/20 DATE
RECOMMENDED	DATE

LYTLE CREEK NORTH
CSA 70 GH SCREW PRESS
SLUDGE DEWATERING

ELECTRICAL SITE PLAN

DRAWING NUMBER	E-02
SHEET	21 OF 26
SCALE:	1" = 10'
DATE:	DEC 2020



NOTES:

1. PROVIDE UNISTRUT RACK FOR ELECTRICAL EQUIPMENT. PROVIDE WEATHERPROOF DUPLEX RECEPTACLE ON RACK SUPPORT POST. CONTRACTOR TO SUBMIT RACK AND FOUNDATION FOR APPROVAL.
2. PROVIDE ELECTRICAL DISTRIBUTION PANEL L-1. SEE PANEL SCHEDULE ON E-06.
3. WINCH CONTROL PANEL BY OTHERS. COORDINATE WITH WINCH MANUFACTURER.
4. SCRESS PRESS CONTROL PANEL TO USE ALLEN BRADLEY 5069-L306ER CONTROLLER, AND PANEL CONTROL VIA PANELVIEW PLUS 7 OPERATOR INTERFACE.
5. PROVIDE JUNCTION BOX NEXT TO EQUIPMENT. EXTEND LIQUID TIGHT FLEXIBLE METALLIC TUBING FOR FINAL CONNECTION TO EQUIPMENT.

"NOT FOR BID"

1 E-03 ENLARGED SCREW PRESS AREA-ELECTRICAL PLAN

Kimley»Horn

REV.	DATE	DESCRIPTION	APP.
			KPK DESIGNED
			RKR DRAWN
			KPD CHECKED

COUNTY OF SAN BERNARDINO
DEPARTMENT OF PUBLIC WORKS - SPECIAL DISTRICTS
222 WEST HOSPITALITY LANE, 2ND FLOOR
SAN BERNARDINO, CA 92415-0450
909-386-8800

REGISTERED PROFESSIONAL ENGINEER MICHAEL ANTHONY OLDFIELD No. 19280 Exp: 09/30/2022 ELECTRICAL STATE OF CALIFORNIA

APPROVED	2/28/2021 DATE
PROJECT ENGINEER	12/28/20 DATE
RECOMMENDED	DATE

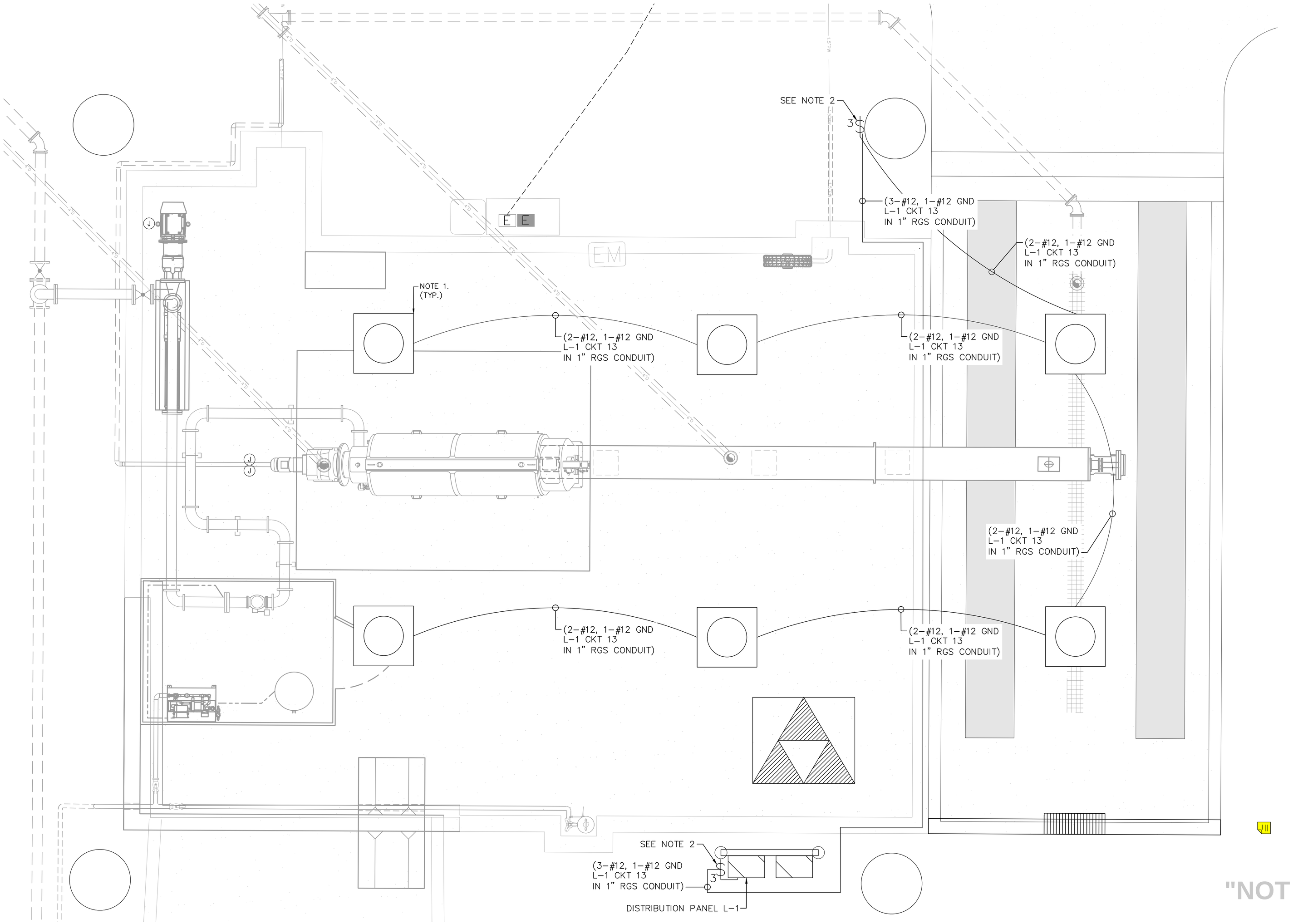
LYTLE CREEK NORTH
CSA 70 GH SCREW PRESS
SLUDGE DEWATERING

SCREW PRESS AREA ELECTRICAL PLAN

DRAWING NUMBER	E-03
SHEET	22 OF 26
SCALE:	1" = 2'
DATE:	DEC 2020

K:\RIV_WATER\195068108 - Lytle Creek Screw Press\4-Design\CAD\PlanSheets\28-32 SCREW PRESS AREA ELECTRICAL PLAN.dwg 12/21/2020 1:14 PM

NOTES:
1. PROVIDE LITHONIA LED FIXTURE DSXSC LED 30C 700 30K T5R MVOLT OR APPROVED EQUAL, MOUNTED UNDERNEATH CANOPY. PROVIDE WEATHERPROOF SWITCH MOUNTED TO ELECTRICAL EQUIPMENT RACK.
2. PROVIDE 3-WAY SWITCH FOR SCREW PRESS LIGHTING WITH WEATHERPROOF EXTRA DUTY COVER.



NORTH

GRAPHIC SCALE IN FEET
0 1 2 4
SCALE 1" = 2'

1 / E-04 SCREW PRESS CANOPY AREA LIGHTING PLAN

"NOT FOR BID"

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REV.	DATE	DESCRIPTION	APP.
			KPK DESIGNED
			RKR DRAWN
			KPD CHECKED

COUNTY OF SAN BERNARDINO
DEPARTMENT OF PUBLIC WORKS - SPECIAL DISTRICTS
222 WEST HOSPITALITY LANE, 2ND FLOOR
SAN BERNARDINO, CA 92415-0450
909-386-8800

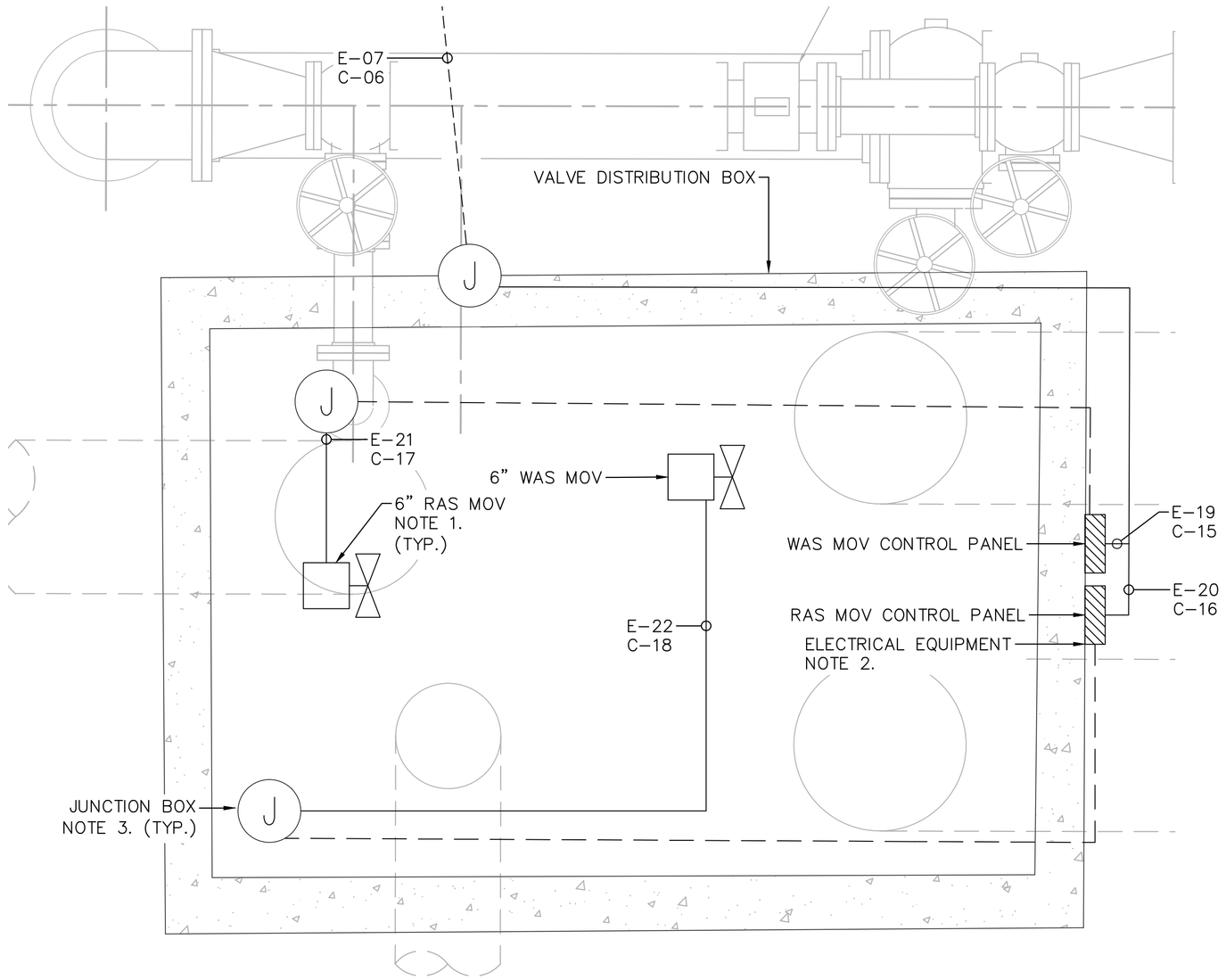
REGISTERED PROFESSIONAL ENGINEER MICHAEL ANTHONY OSBORN No. 19280 Exp: 09/30/2022 ELECTRICAL STATE OF CALIFORNIA

APPROVED	2/28/2021 DATE
PROJECT ENGINEER	12/28/20 DATE
RECOMMENDED	DATE

LYTLE CREEK NORTH
CSA 70 GH SCREW PRESS
SLUDGE DEWATERING

SCREW PRESS CANOPY AREA LIGHTING PLAN

DRAWING NUMBER	E-04
SHEET	23 OF 26
SCALE:	1" = 2'
DATE:	DEC 2020



NOTES:
1. MOV TO BE SUPPLIED WITH ASSOCIATED CONTROL PANEL LOCATED ON EQUIPMENT RACK. EACH MOV TO HAVE OWN INDEPENDENT CONTROL.
2. SIZE RACK PER MOV CONTROL PANEL DIMENSIONS. MOUNT BOTH MOV CONTROL PANELS ON RAIL.
3. PROVIDE JUNCTION BOX ON OUTSIDE AND INSIDE WALLS OF VALVE DISTRIBUION BOX WHERE NECESSARY TO EXTEND EXISTING CONDUIT TO NEW RAS AND WAS MOV CONTROL PANELS AND VALVES.

1 / E-05 ENLARGED DISTRIBUTION BOX

"NOT FOR BID"

NORTH

GRAPHIC SCALE IN FEET
0 0.5 1 2
SCALE 1" = 1'

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DEPARTMENT OF PUBLIC WORKS - SPECIAL DISTRICTS
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SAN BERNARDINO, CA 92415-0450
909-386-8800

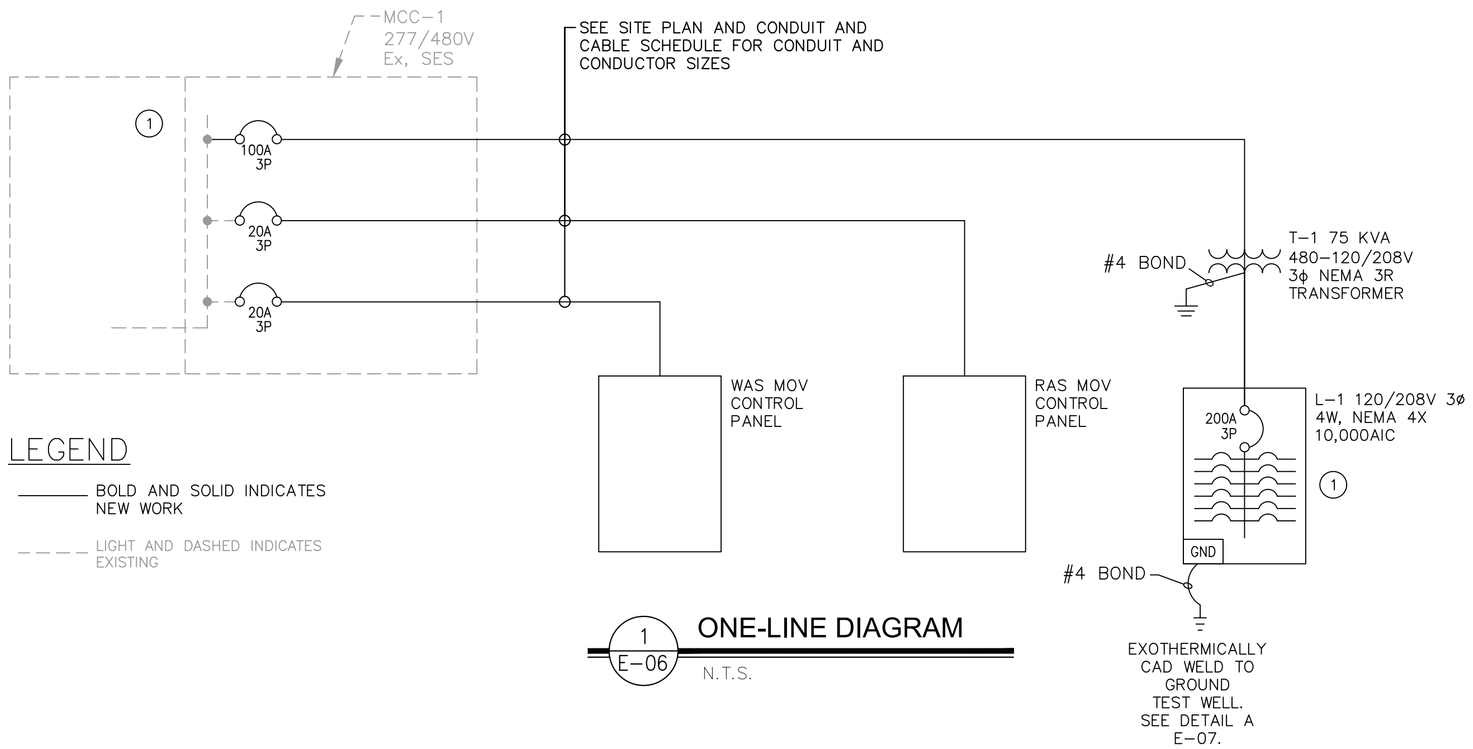
REGISTERED PROFESSIONAL ENGINEER
MICHAEL ANTHONY OLDFIELD
No. 19280
Exp: 09/30/2022
ELECTRICAL
STATE OF CALIFORNIA

APPROVED	2/28/2021 DATE
PROJECT ENGINEER	12/28/20 DATE
RECOMMENDED	DATE

LYTLE CREEK NORTH
CSA 70 GH SCREW PRESS
SLUDGE DEWATERING

RAS/WAS MOV ELECTRICAL
AREA PLAN

DRAWING NUMBER E-05
SHEET 24 OF 26
SCALE: 1" = 1'
DATE: DEC 2020



1 E-06 ONE-LINE DIAGRAM

N.T.S.

CONDUIT AND CABLE SCHEDULE

CONDUIT NO.	CONDUIT SIZE	CONDUIT NEW/EXISTING	CONDUCTORS/CABLE QTY	CONDUCTORS/CABLE SIZE	FROM	TO	CONDUCTORS/CABLE PURPOSE	REMARKS	DWG. No.(S)
E-01	1"	EXISTING	6	10 AWG	MCC-1	PB-01	RAS MOV, WAS MOV POWER		E-02
			1	10 AWG			GROUND		
E-02	2"	EXISTING	3	#1	MCC-1	PB-01	TRANSFORMER T-1		E-02
			1	#8			GROUND		
E-03	1"	EXISTING	—	—	—	—	—	NOT USED	-
			—	—			—		
E-04	1"	EXISTING	6	12 AWG	PB-01	PB-02	RAS MOV , WAS MOV POWER		E-02
			1	12 AWG			GROUND		
E-05	2"	NEW	3	#1	PB-01	PB-03	TRANSFORMER T-1		E-02
			1	#8			GROUND		
E-06	1"	EXISTING	—	—	—	—	—	NOT USED	E-02
			—	—			—		
E-07	1"	EXISTING	6	10 AWG	PB-02	DISTRIBUTION BOX JUNCTION BOX	RAS MOV , WAS MOV POWER	MAKE FINAL CONNECTION TO CONTROL PANEL VIA ABOVE GROUND CONDUIT AND JUNCTION BOX ON DISTRIBUTION BOX WALL.	E-02
			1	10 AWG			GROUND		
E-08	–	EXISTING	—	—	—	—	—	NOT USED	–
			—	—			—		
E-09	–	EXISTING	—	—	—	—	—	NOT USED	–
			—	—			—		
E-10	2"	NEW	3	#1	PB-03	TRANSFORMER T-1	TRANSFORMER T-1		E-03
			1	#8			GROUND		
E-11	2"	NEW	4	#3/0 AWG	TRANSFORMER T-1	PANEL L-1	PANEL L-1 POWER		E-03
			1	#4			GROUND		
E-12	1"	NEW	4	#8 AWG	PANEL L-1	WINCH CONROL PANEL	WINCH CONTROL PANEL		E-03
			1	#10 AWG			GROUND		
E-13	1"	NEW	4	#4 AWG	PANEL L-1	FRP SHED 60A PANEL	FRP SHED POWER		E-04
			1	#10 AWG			GROUND		
E-14	1"	NEW	4	#4 AWG	PANEL L-1	SCREW PRESS CONTROL PANEL	SCREW PRESS POWER		E-04
			1	#10 AWG			GROUND		
E-15	1"	NEW	3	#8 AWG	SCREW PRESS CONTROL PANEL	WAS PUMP	WAS PUMP POWER		E-04
			1	#10 AWG			GROUND		
E-16	1"	NEW	3	#8 AWG	SCREW PRESS CONTROL PANEL	SCREW PRESS MOTOR	SCREW MOTOR POWER		E-04
			1	#10 AWG			GROUND		
E-17	1"	NEW	3	#8 AWG	SCREW PRESS CONTROL PANEL	POLYMER FEED CONTROL PANEL	POLYMER FEED MOTOR POWER		E-04
			1	#10 AWG			GROUND		
E-18	2"	NEW	3	#8 AWG	WINCH CONTROL PANEL	WINCH MOTOR	WINCH MOTOR		E-03
			1	#10 AWG			GROUND		
E-19	1"	NEW	4	12 AWG	DISTRIBUTION BOX JUNCTION BOX	RAS CONTROL PANEL	RAS MOV POWER	MAKE FINAL CONNECTION TO CONTROL PANEL VIA ABOVE GROUND CONDUIT AND JUNCTION BOX ON DISTRIBUTION BOX WALL.	E-05
			1	12 AWG			GROUND		
E-20	1"	NEW	4	12 AWG	DISTRIBUTION BOX JUNCTION BOX	WAS CONTROL PANEL	WAS MOV POWER	MAKE FINAL CONNECTION TO CONTROL PANEL VIA ABOVE GROUND CONDUIT AND JUNCTION BOX ON DISTRIBUTION BOX WALL.	E-05
			1	12 AWG			GROUND		
E-21	1"	NEW	2	12 AWG	RAS CONTROL PANEL	RAS MOV	RAS MOV POWER	USE JUNCTION BOX IF NECESSARY TO MAKE FINAL CONNECTION	E-05
			1	12 AWG			GROUND		
E-22	1"	NEW	2	12 AWG	WAS CONTROL PANEL	WAS MOV	WAS MOV POWER	USE JUNCTION BOX IF NECESSARY TO MAKE FINAL CONNECTION	E-05
			1	12 AWG			GROUND		
E-23	1"	NEW	2	12 AWG	PB-03	RELOCATED SITE LIGHT	POWER	RELOCATE EXISTING POLE AND FIXTURE TO NEW BASE	E-02
			1	12 AWG			GROUND		

ELECTRICAL CONSTRUCTION NOTES:

1. CONTRACTOR TO PROVIDE ARC FLASH COORDINATION STUDY FOR EXISTING MCC-1, AS WELL AS PROPOSED PANEL L-1. (SEE SPECIFICATION SECTION 260573.19)

PANEL: L-1

VOLTAGE:120/208 PANEL BUS: 200 AMPS
PHASE, WIRES:3Ø, 4W MAIN: 200A BREAKER
SCCR (AMPS):10,000
SOURCE:MCC-1

DESCRIPTION	VA	CB	CKT	A	B	C	CKT	CB	VA	DESCRIPTION
SCREW PRESS CONTROL PANEL	5000	60/3	1	42			2			SPACE
	5000		3		42		4			SPACE
	5000		5			42	6			SPACE
POLYMER FEED SHED PANEL	3000	60/3	7	25			8			SPACE
	3000		9		25		10			SPACE
	3000		11			25	12			SPACE
SCREW PRESS CANOPY LIGHTING	360	20/1	13	2			14			SPACE
WINCH MOTOR CONTROL PANEL	3333	40/3	15		28		16			SPACE
	3333		17			28	18			SPACE
	3333		19	28			20			SPACE
SPACE			21		0		22			SPACE
SPACE			23			0	24			SPACE
			TOTALS	96.4	94.4	94.4	AMPS			

LOAD CALCULATIONS: SUBTOTAL (VA): 34239
+25% PER NEC (VA): 8560
TOTAL (VA): 42799 @ 208V, 3Ø = 118.9 AMPS

2 E-06 PANEL SCHEDULE L-1

POINT	POINT NAME	SOURCE POINT	SOURCE AMPS	CONDUIT TYPE	CONDUCTOR TYPE	WIRE SIZE/QUANTITY			LOAD (A)	DISTANCE	VOLTAGE	PHASE	XFMR KVA	XFMR %Z	ISC	% VDROP
1	Utility Published Data	42000	42000												42000	
2	T-1 PRIMARY	1	42000	NM	Copper	1	Set of	1	100	250	480	3	75	5	6935	0.0144
3	T-1 SECONDARY	2	6935	NM	Copper	1	Set of	Mar-00	200	0	208	3	75	5	6935	0.0144

1

3 E-06 FAULT CURRENT AND VOLTAGE DROP

CONDUIT AND CABLE SCHEDULE

CONDUIT NO.	CONDUIT SIZE	CONDUIT NEW/EXISTING	CONDUCTORS/CABLE QTY	CONDUCTORS/CABLE SIZE	FROM	TO	CONDUCTORS/CABLE PURPOSE	REMARKS	DWG. No.(S)
C-01	2"	EXISTING	2	4-PR-#16 AWG	PLC PANEL	PB-04	RAS, WAS MOV CONTROL PANELS		E-02
C-02	2"	EXISTING	4	CAT6 CABLE	PLC PANEL	PB-04	SCREW PRESS CONTROL PANEL		E-02
C-03	2"	EXISTING	4	CAT6 CABLE	PLC PANEL	PB-04	SCREW PRESS CONTROL PANEL		E-02
C-04	–	EXISTING	–	–	–	–	–	NOT USED	–
C-05	2"	EXISTING	2	4-PR-#16 AWG	PB-01	PB-05	RAS, WAS MOV CONTROL PANELS		E-02
C-06	2"	EXISTING	2	4-PR-#16 AWG	PB-02	DISTRIBUTION BOX JUNCTION BOX	RAS, WAS MOV CONTROL PANELS	MAKE FINAL CONNECTION TO CONTROL PANEL VIA ABOVE GROUND CONDUIT AND JUNCTION BOX ON DISTRIBUTION BOX WALL.	E-02
C-07	2"	EXISTING	4	CAT6 CABLE	PB-01	PB-06	SCREW PRESS CONTROL PANEL		E-02
C-08	2"	EXISTING	4	CAT6 CABLE	PB-01	PB-06	SCREW PRESS CONTROL PANEL		E-02
C-09	2"	EXISTING	–	–	–	–	–	NOT USED	–
C-10	–	EXISTING	–	–	–	–	–	NOT USED	–
C-11	–	EXISTING	–	–	–	–	–	NOT USED	–
C-12	–	EXISTING	–	–	–	–	–	NOT USED	–
C-13	2"	NEW	1	12-PR-#16 AWG	SCREW PRESS ASSEMBLY	SCREW PRESS CONTROL PANEL	SCREW PRESS SENSOR		E-02
C-14	2"	NEW	1	12-PR-#16 AWG	POLYMER FEED CONTROL PANEL	SCREW PRESS CONTROL PANEL	POLYMER FEED SENSORS		E-02
C-15	2"	NEW	1	4-PR-#16 AWG	DISTRIBUTION BOX JUNCTION BOX	RAS CONTROL PANEL	RAS MOV CONTROL PANEL	MAKE FINAL CONNECTION TO CONTROL PANEL VIA ABOVE GROUND CONDUIT AND JUNCTION BOX ON DISTRIBUTION BOX WALL.	E-05
C-16	2"	NEW	1	4-PR-#16 AWG	DISTRIBUTION BOX JUNCTION BOX	WAS CONTROL PANEL	WAS MOV CONTROL PANEL	MAKE FINAL CONNECTION TO CONTROL PANEL VIA ABOVE GROUND CONDUIT AND JUNCTION BOX ON DISTRIBUTION BOX WALL.	E-05
C-17	2"	NEW	1	4-PR-#16 AWG	RAS CONTROL PANEL	RAS MOV	RAS MOV CONTROL	USE JUNCTION BOX IF NECESSARY TO MAKE FINAL CONNECTION	E-05
C-18	2"	NEW	1	4-PR-#16 AWG	WAS CONTROL PANEL	WAS MOV	WAS MOV CONTROL	USE JUNCTION BOX IF NECESSARY TO MAKE FINAL CONNECTION	E-05
C-19	2"	NEW	4	CAT6 CABLE	SCREW PRESS CONTROL PANEL	PB-06	SCREW PRESS CONTROL PANEL		E-02
C-20	2"	NEW	4	CAT6 CABLE	SCREW PRESS CONTROL PANEL	PB-06	SCREW PRESS CONTROL PANEL		E-02

4 E-06 CONDUIT SCHEDULE

"NOT FOR BID"

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REV.	DATE	DESCRIPTION	APP.
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			RKR DRAWN
			KPD CHECKED

COUNTY OF SAN BERNARDINO
DEPARTMENT OF PUBLIC WORKS - SPECIAL DISTRICTS
222 WEST HOSPITALITY LANE, 2ND FLOOR
SAN BERNARDINO, CA 92415-0450
909-386-8800

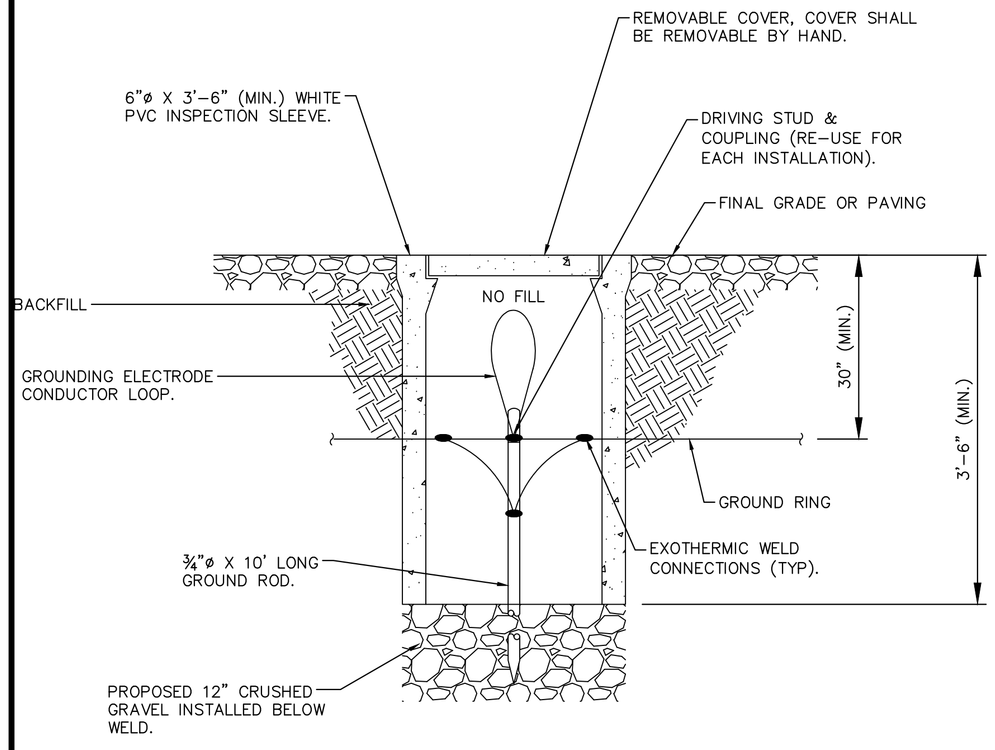
REGISTERED PROFESSIONAL ENGINEER MICHAEL ANTHONY CORDO No. 19280 Exp: 09/30/2021 ELECTRICAL STATE OF CALIFORNIA

APPROVED	2/28/2021 DATE
PROJECT ENGINEER	12/28/20 DATE
RECOMMENDED	DATE

LYTLE CREEK NORTH
CSA 70 GH SCREW PRESS
SLUDGE DEWATERING

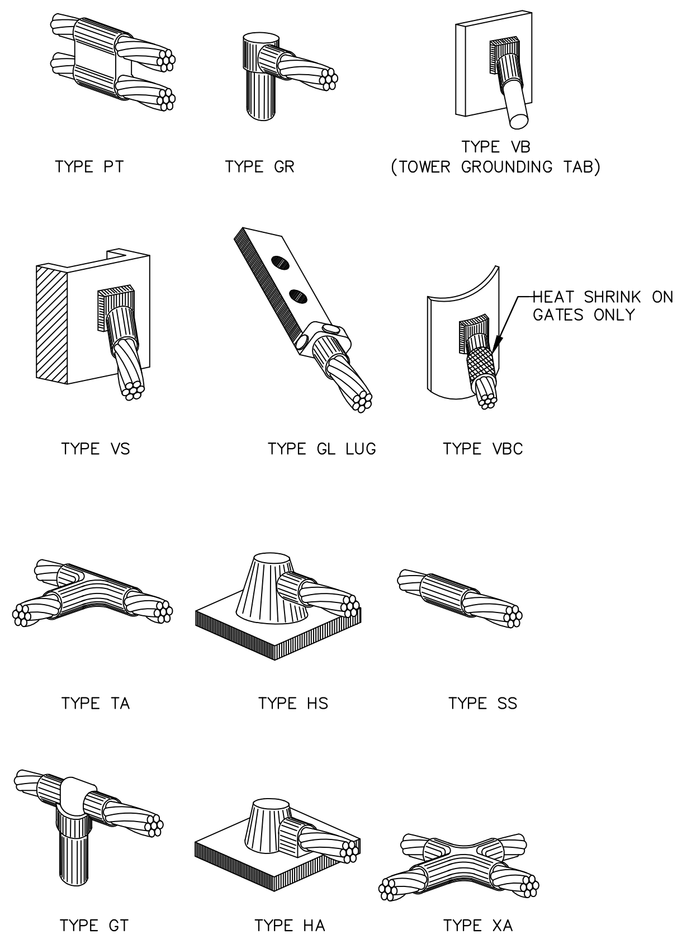
CONDUIT SCHEDULE AND ONE-LINE

DRAWING NUMBER E-06
SHEET 25 OF 26
SCALE:
DATE: DEC 2020



A E-07 GROUND WELL WITH GROUND ROD

N.T.S.

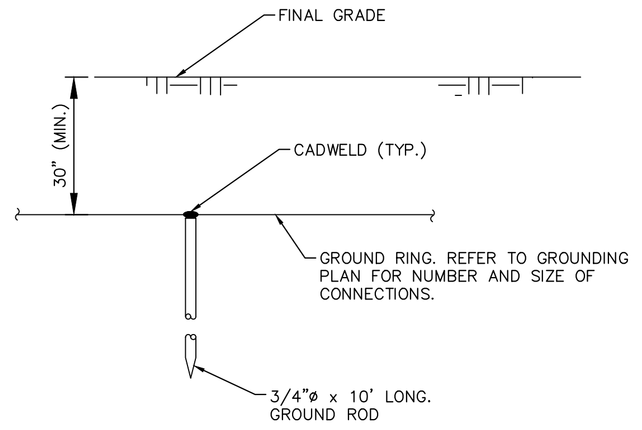


NOTES:

1. CADWELD "TYPES" SHOWN ABOVE ARE EXAMPLES. PROVIDE APPROPRIATE TYPES AS REQUIRED.

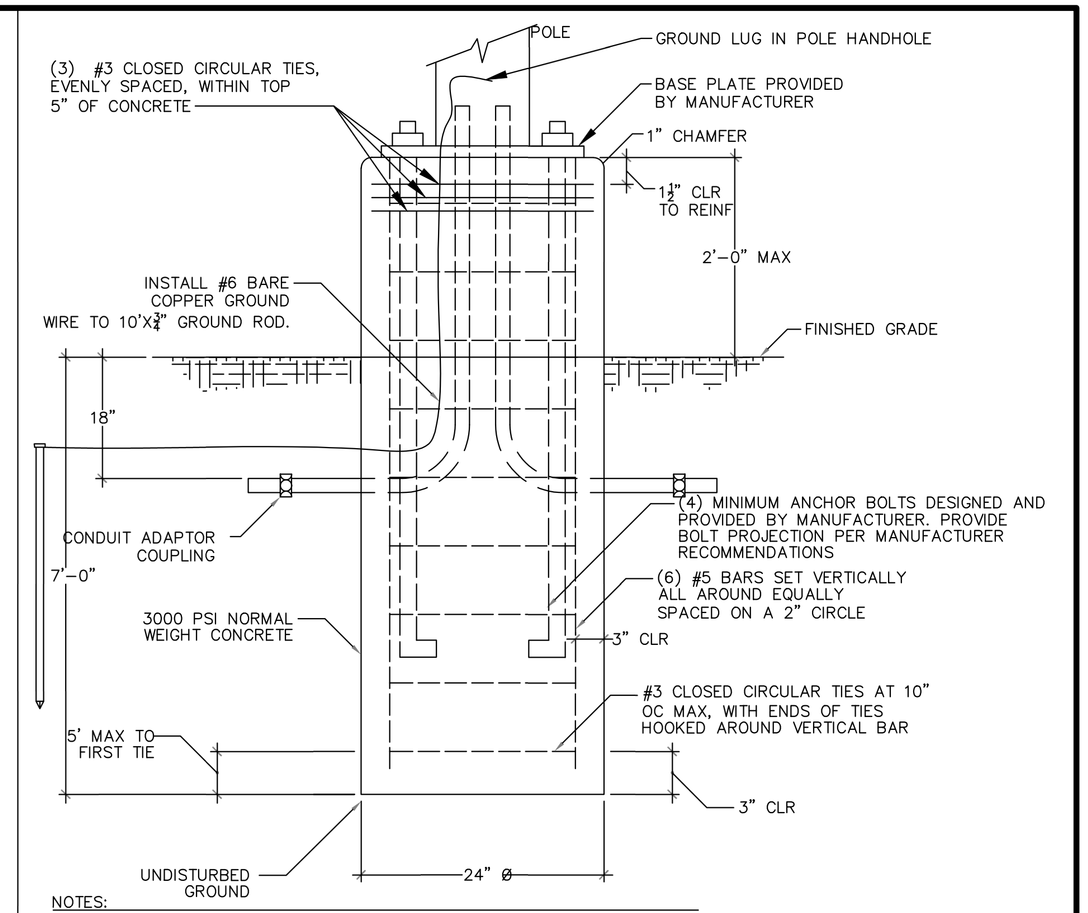
B E-07 TYPICAL CAD WELDS

N.T.S.



C E-07 GROUND ROD DETAIL

N.T.S.

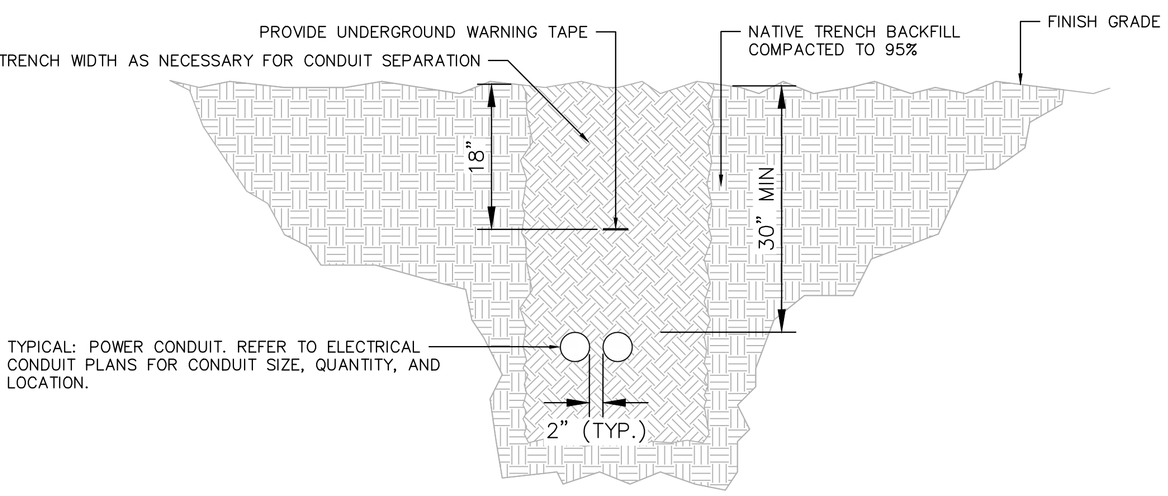


NOTES:

1. IT SHALL BE THE CONTRACTORS RESPONSIBILITY TO CHECK AND VERIFY ALL ANCHOR BOLT DIMENSIONS (SIZE, BOLT CIRCLE, ETC.) WITH THE CONTRACTOR WHO WILL BE INSTALLING THE LIGHTING STANDARD PRIOR TO INSTALLATION OF THE FOUNDATIONS.
2. CHAMFER EXPOSED EDGES OF ALL FOUNDATIONS.
3. PROVIDE INSULATING GROUNDING BUSHING ON EXPOSED ENDS (IN BASE OF POLE) OF ALL GALVANIZED STEEL BENDS.
4. VARIES – 2'-0" AFG IN PARKING LOT AREAS; 6" AFG IN GRASSY LOCATIONS.
5. THIS DETAIL IS ONLY APPLICABLE FOR 30' MAX LIGHT POLE HEIGHT (ABOVE CONCRETE PEDESTAL) WITH 6" SQ CROSS SECTION AND DOUBLE LUMINAIRE (180 DEG) WITH LUMINAIRE EPA=2.4 COMBINED (MAX). ALL OTHER LIGHT POLE AND/OR LUMINAIRE TYPES MUST BE SUBMITTED TO THE DESIGN TEAM FOR REVIEW AND VERIFICATION OF FOOTING DESIGN.

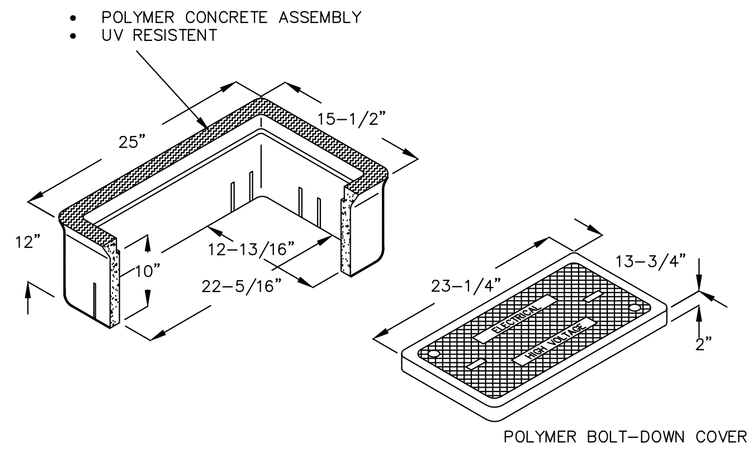
H E-07 POLE FOUNDATION DETAIL

N.T.S.



D E-07 TRENCH DETAIL

N.T.S.



E E-07 ELECTRICAL PULL BOX DETAIL

N.T.S.

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LYTLE CREEK NORTH
CSA 70 GH SCREW PRESS
SLUDGE DEWATERING

ELECTRICAL DETAILS

DRAWING NUMBER E-07
SHEET 26 OF 26
SCALE:
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