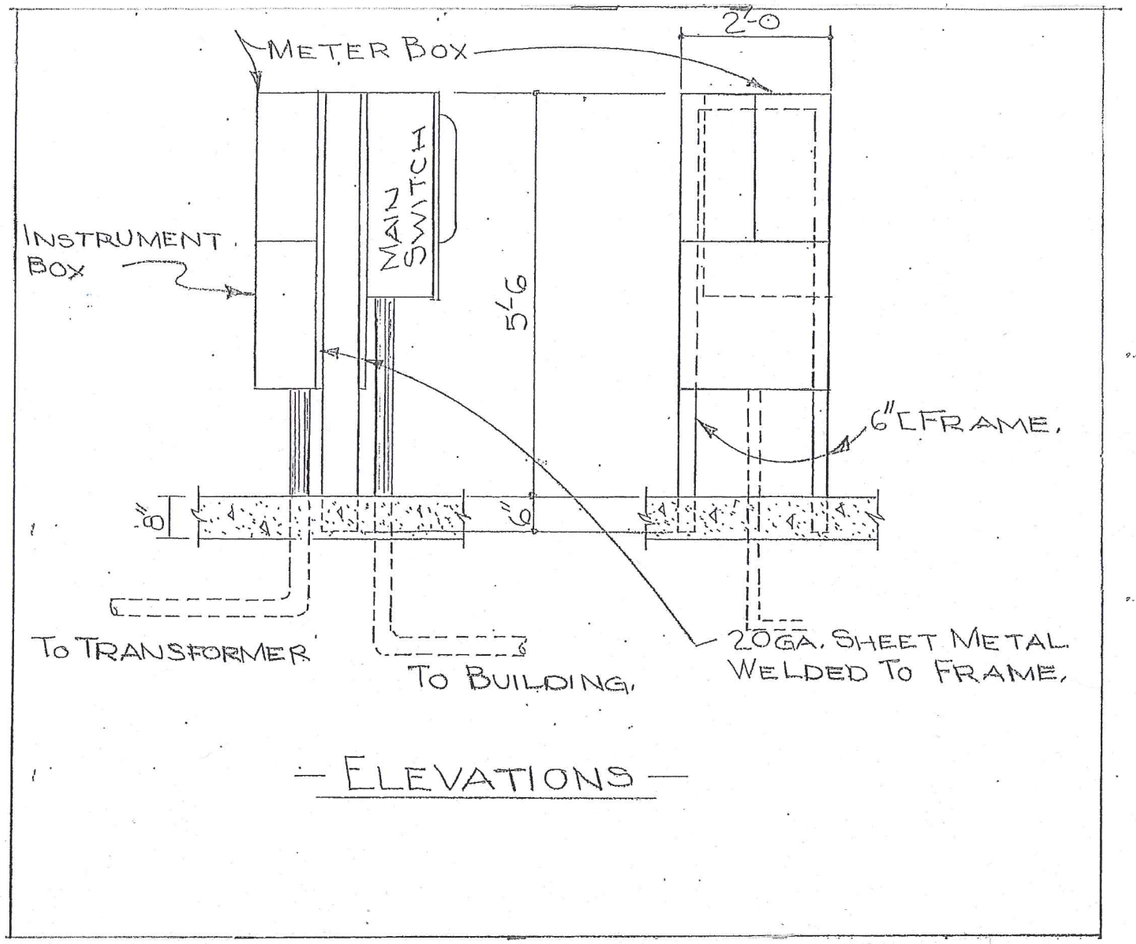
NEW 200 AMPS ELECTRICAL SERVICE TO THE BRINE BUILDING



GENERAL NOTES:

1. PERFORM ALL SITE WORK IN ACCORDANCE WITH THE IOWA DEPARTMENT OF TRANSPORTATION STANDARD SPECIFICATIONS FOR HIGHWAY AND BRIDGE CONSTRUCTION, AS AMENDED TO DATE
2. THE LOCATION OF ALL AERIAL AND UNDER GROUND UTILITY LINES ARE APPROXIMATE OR MAY NOT BE INDICATED IN THESE PLANS. UNDERGROUND FACILITIES, WHETHER INDICATED OR NOT, WILL BE LOCATED AND FLAGGED BY THE UTILITIES AT THE REQUEST OF THE CONTRACTOR. NO EXCAVATION WILL BE PERMITTED IN THE AREA UNTIL ALL SUCH UNDER GROUND UTILITIES HAVE BEEN LOCATED AND IDENTIFIED TO THE SATISFACTION OF ALL PARTIES AND THEN ONLY WITH EXTREME CARE TO AVOID ANY POSSIBILITY OF DAMAGE TO THE UTILITIES
3. CALL FOR EXISTING UTILITY LOCATION STAKES A MINIMUM OF 48 HOURS PRIOR TO DIGGING
4. HAUL ALL DEBRIS RESULTING FROM CONSTRUCTION OPERATIONS OFF-SITE AND DISPOSE OF PROPERLY
5. FURNISH AND MAINTAIN ALL NECESSARY BARRICADES, WARNING SIGNS, LIGHTS AND FLAGMEN AS NECESSARY FOR CONSTRUCTION OPERATIONS. FOLLOW IOWA DEPARTMENT OF TRANSPORTATION STANDARD SPECIFICATIONS
6. PROTECT BY WHATEVER MEANS REQUIRED ALL FENCES, SIGNS, STRUCTURES, UTILITIES, STREETS, BUSHES, TREES, ETC. WHICH ARE NOT DESIGNED FOR REMOVAL; OR ARE OUTSIDE THE LIMITS OF CONSTRUCTION

EXISTING METERING ARRANGEMENT

400 AMPS SERVICE
1 PHASE 120/240 V.
300 A- FUSETRON
NEMA R3 (RAIN TIGHT)

DOT- MAINTENANCE GARAGE AT MOUNT PLEASANT
906 E. HARVEST DRIVE
MOUNT PLEASANT, IA 52641

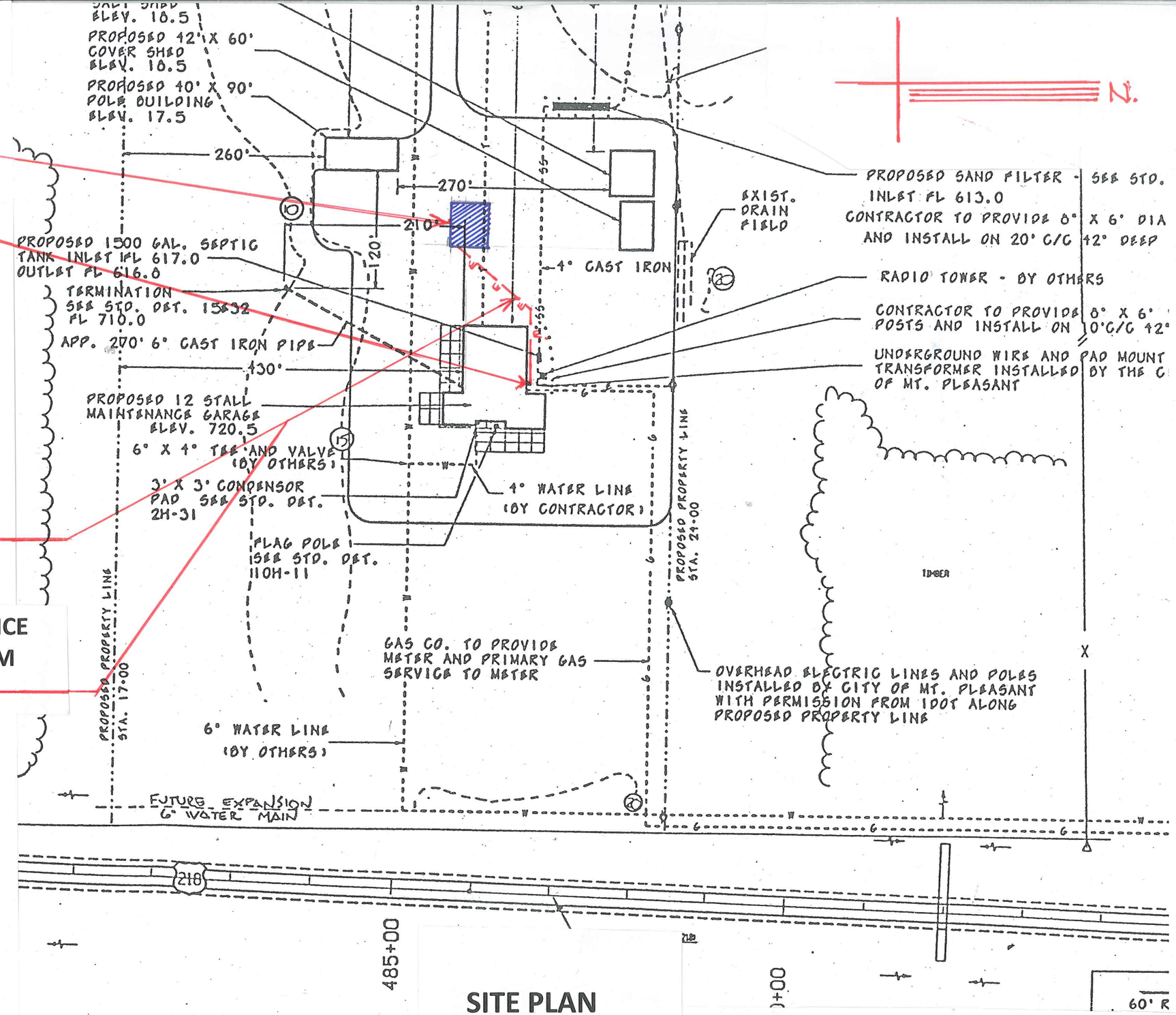
EXISTING BRINE BUILDING

EXISTING METERING ARRANGEMENT

400 AMPS SERVICE
1 PHASE 120/240 V.
300 A FUSETRON
NEMA R3 (RAIN TIGHT)

PROPOSED LINE APPROX. 240' FROM THE MAIN METERING AREA TO THE BRINE BUILDING.

CONTRACTOR TO PROVIDE 200 AMPS SERVICE TO THE BRINE BUILDING FROM THE BOTTOM OF THE METERING EQUIPMENT.



SITE PLAN

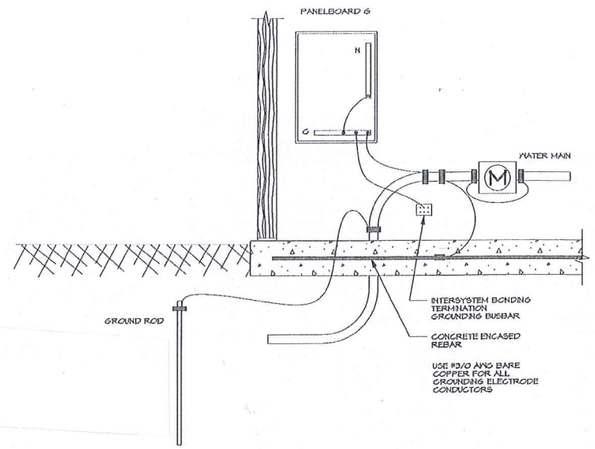
DOT MAINT. GARAGE AT MT. PLEASANT, IA

PANEL G (BRINE BUILDING)										
SHORT CIRCUIT RATING: 22,00 AMPS INSTALLATION: SURFACE, NEMA 4X SIZE OF MAIN: 200 AMP				FED FROM MDP (LOCATED IN MAIN BUILDING)					MAIN BREAKER: 200 AMP 208/120 VOLTS SINGLE PHASE, 3 WIRE	
	DISCRIPTION	PHASE WIRES, GND CONDUIT SIZE	LOAD (VA)	BKR	P H	BKR	LOAD (VA)	PHASE WIRES, GND CONDUIT SIZE	DISCRIPTION	
1	RH-1,2	(2)-#12, #12, 3/4"	1000	1P-20A	A	2P-50A GF	6400	(2)-#8, #8, 3/4"	BRINE MAKER	2
3	OHD	(2)-#12, #12, 3/4"	1200	1P-20A	B					4
5	EF-8 & HD	(2)-#12, #12, 3/4"	1200	1P-20A	C	2P-50A GF	6400	(2)-#8, #8, 3/4"	LOAD OUT PUMP 1	6
7	RECEPT	(2)-#12, #12, 3/4"	720	1P-20A GF	A					8
9	RECEPT	(2)-#12, #12, 3/4"	900	1P-20A GF	B	2P-50A GF	6400	(2)-#8, #8, 3/4"	LOAD OUT PUMP 2	10
11	LIGHTING	(2)-#12, #12, 3/4"	500	1P-20A	C					12
13	FAN RECEPT	(2) #12, #12, 3/4"	360	1P-20A	A	2P-50A GF	6400	(2)-#8, #8, 3/4"	LOAD OUT PUMP 3	14
15	SPARE	-	-	1P-20A	B					16
17	SPARE	-	-	1P-20A	C	2P-50A GF	6400	(2)-#8, #8, 3/4"	FUTURE PUMP	18
19	SPARE	-	-	1P-20A	A					20
21	SPARE	-	-	1P-20A	B	1P-20A		-	SPARE	22
23	SPARE	-	-	1P-20A	C	1P-20A		-	SPARE	24
25					A					26
27	SPD	(4)-#6, #8, 1-1/4"C	NA	3P-60A	B					28
29					C					30

LIGHTING FIXTURE SCHEDULE						
TYPE	MANUFACTURER & MODEL NUMBER	NOMINAL DIMENSIONS	LAMPS	VOLT	DRIVER	POWER
F1	RAZZ RIG-A-LITE FPF14L-S-U-SS	100"L X 6.75" DIA	4000K 12,500 LM	120-277	ELECTRONIC DRIVER	144W
F2	LITHONIA WST LED-2-10A700/40K SR2-MVOLT-PE-DBLXD	9-1/8"W x 14-1/4"L x 11-3/8"D	4000K 4000 LM	120-277	ELECTRONIC DRIVER	47W

GENERAL NOTES

1. ELECTRICAL ENTITIES DRAWN WITH THIS LINETYPE ( ) INDICATES EXISTING TO REMAIN UNLESS OTHERWISE NOTED.
2. ELECTRICAL ENTITIES DRAWN WITH THIS LINETYPE (——) INDICATES NEW TO REMAIN UNLESS OTHERWISE NOTED.
3. ALL WORK REQUIRING THE SHUTDOWN OF SITE UTILITIES MUST BE COORDINATED WITH THE OWNER 72 HOURS IN ADVANCE

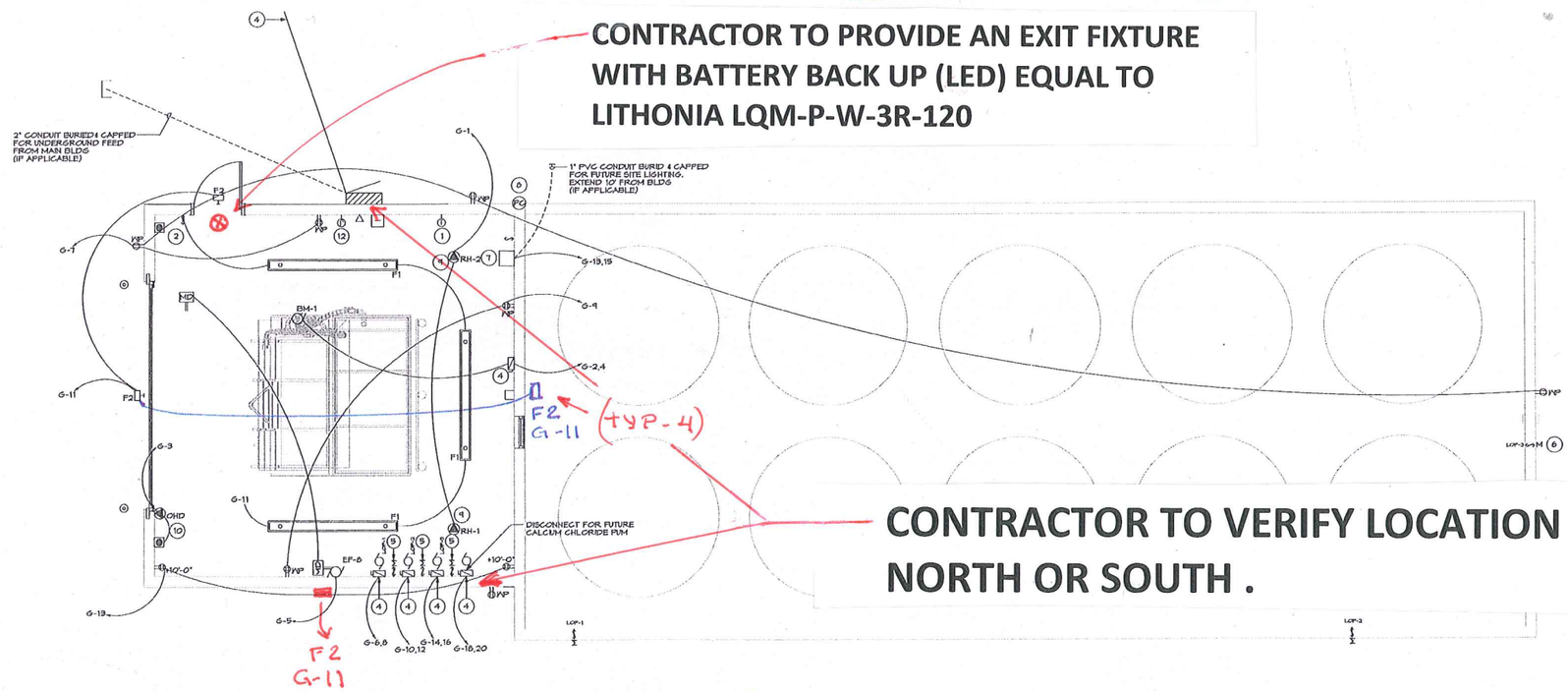


BRINE BUILDING
GROUNDING ELECTRODE SYSTEM
SCALE: N.T.S.

NOTES

1. LINE VOLTAGE THERMOSTAT FOR RADIAN HEATERS. SIMILAR AND EQUAL TO FECO TF115-001 WITH NEMA 4X ENCLOSURE AND STAINLESS STEEL SENSING ELEMENTS FOR WET AND CORROSIVE ENVIRONMENT.
2. NEMA 4X ENCLOSURE WITH PUSH BUTTON AND TIMER RELAY (SIMILAR AND EQUAL TO SQUARE D 9050JCK24V20 WITH CLASS 8501 SOCKET) FOR 2-HOUR DELAY OFF FUNCTION. CIRCUIT TO MOTOR OPERATED DAMPERS (TYP.) AND EXHAUST FAN. LOCATE PUSH BOTTON ADJACENT TO LIGHT SWITCH.
3. PANEL BOARD G. REFERENCE GROUNDING AND BONDING DETAIL. PROVIDE TYPE 2 SPD IN NEMA 4X CABINET. LOATE PUSH BUTTON ADJACENT TO LIGHT SWITCH.
4. FUSED DISCONNECT SWITCH: 208VAC, 1-PHASE, 2-WIRE, NEMA 4X, 60A FUSED AT 35A. PROVIDE 3/4" SEALITE CONNECTION FROM DISCONNECT TO MOTOR. COORDINATE EXACT LOCATION WITH OWNER.
5. LOAD OUT PUMP PRIMING SWITCH. PROVIDE NEMA 4XSWITCH ENCLOSURE WITH 3/4" PVC CONDUIT TO PUMP CONTROLLER. SWITCH AND WIRING PROVIDED BY OWNER.
6. LOADOUT PUMP OUTPUT SWITCH. PROVIDE NEMA 4X SWITCH ENCLOSURE WITH 3/4" PVC CONDUIT TO PUMP CONTROLLER. PROVIDE (2) LENGTHS OF PVC-COATED UNISTRUT, FIRMLY SECURED TO CONTAINMENT WALL TO MOUNT SWITCH AT SPECIFIED HEIGHT. SWITCH AND WIRING PROVIDED BY OWNER.
7. SITE LIGHTING OF (208VAC, 20A, 1-PHASE, 2-WIRE, NEMA 4X) AND OVERRIDE SWITCH (208VAC, 20A, 1-PHASE, 2-WIRE, NEMA 4X) IS OPTIONAL.
8. EXTERIOR WALL MOUNTED PHOTOCELL. CIRCUIT TO SITE LIGHTING POWER PACK. REFERENCE CONTROL WIRING SCHEMATIC FOR ADDITIONAL INFORMATION.
9. RADIANT HEATING BURNER CONNECTION. CONNECT TO CORRESPONDING LINE VOLTAGE THERMOSTAT (NOTE 1). PROVIDE NEMA 5L-20P CORD CAP AND WATERTIGHT NEMA 5L-20R RECEPTACLE.
10. OVERHEAD DOOR OPERATOR PROVIDED BY OTHERS. POWER AND CONTROL WIRING BY CONTRACTOR. CIRCUIT POWER AS INDICATED AND WIRE OPEN-STOP-CLOSE CONTROLS & SAFETY DEVICES PER MANUFACTURERS INSTRUCTIONS.
11. PROVIDE 208/120VAC, 1 PHASE, 3 WIRE, 200A ELECTRIC SERVICE TO BRINE BUILDING (UNLESS POWER IS PROVIDED BY MAIN BUILDING) PROVIDE 200A METER SOCKET. COORDINATE WITH UTILITY PROVIDER AND THE OWNER.
12. SPEAKER J-BOX. PROVIDE NEMA 4X, 6" x 6" x 4" J-BOX AT 10'0" AFF AND 1" CONDUIT ROUTED BACK TO COMMUNICATIONS JUNCTION BOX. COORDINATE EXACT LOCATION WITH OWNER. SPEAKER AND ASSOCIATED WIRING PROVIDED BY OWNER.

CONTRACTOR TO PROVIDE AN EXIT FIXTURE WITH BATTERY BACK UP (LED) EQUAL TO LITHONIA LQM-P-W-3R-120



CONTRACTOR TO VERIFY LOCATION WITH OWNER NORTH OR SOUTH .

ELECTRICAL PLAN
SCALE: 1/4"=1'-0"

BRINE BUILDING

DISTRICT: XX
COUNTY: XXXX
PROJECT NUMBER: BG-XXXX(000)-XX-XX

BRINE BUILDING PROTOTYPE "A"
BRINE BUILDING - ELECTRICAL PLAN

IOWADOT
SMARTER SUPPLER CUSTOMER FOCUSED
OFFICE OF SUPPORT SERVICES
800 LINCOLN WAY
AMES, IOWA 50010 | 515-239-1299

DATE: 8 JUNE 2015
DRAWN BY: DESIGN TEAM
APPROVED:
REVISIONS:

SHEET 4 OF 4
BE-1

DGN_LOC