

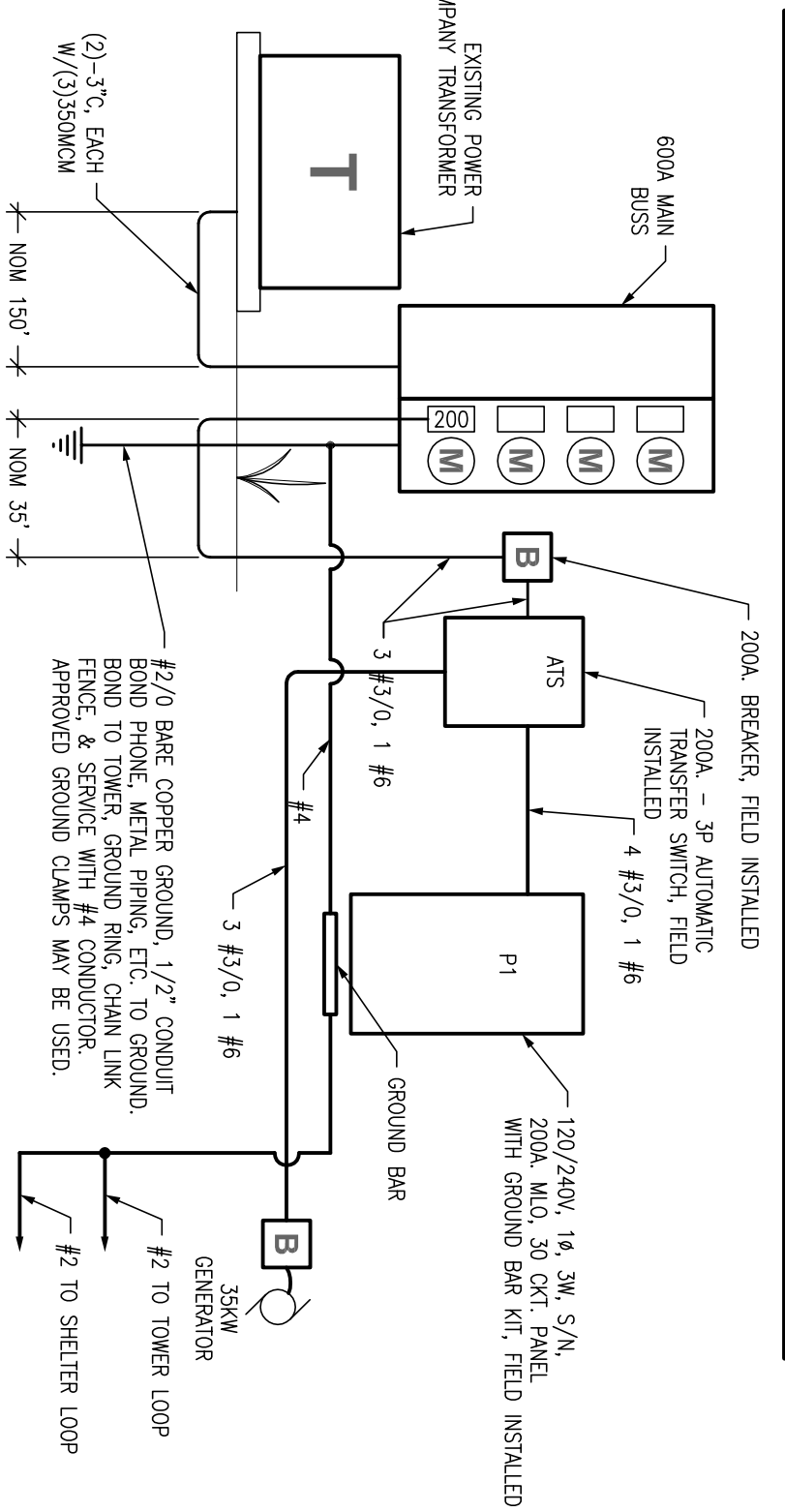
ELECTRICAL SYMBOL SCHEDULE

| | |
|----------|---|
| P2-22/24 | HOME RUN CIRCUIT TO PANEL P2, CIRCUITS 22/24 |
| | EACH ARROW INDICATES ONE CIRCUIT |
| | SHORT HATCH MARKS INDICATE # OF PHASE CONDUCTORS |
| | LONG HATCH MARKS INDICATE # OF NEUTRAL CONDUCTORS |
| | NO HATCH MARKS INDICATES TWO CONDUCTORS |
| | ELECTRICAL SERVICE OR FEEDER WIRING |
| | WIRING IN WALL OR CEILING - WIRING IN FLOOR |
| | RECEPTACLE OUTLET (DUPLEX - QUADRUPLEX - SPLIT WIRED - SPECIAL POWER) |
| | COMMUNICATIONS OUTLET (TELEPHONE - DATA - DATA/HAND) |
| | WALL SWITCH SINGLE POLE (3-WAY - DIMMER - 4-WAY - PULL-UP - SPEED - KICKED - TIMER) |
| | INVADESCENT OR HID LIGHT FIXTURE (CEILING MOUNTED - WALL MOUNTED) |
| | FLUORESCENT LIGHT FIXTURE (ENCLOSED - STRIP) (6 INDICATES SPLIT WIRED) |
| | EXIT LIGHT - EMERGENCY LIGHT - EMERGENCY/EXIT LIGHT |
| | CLOCK RECEPTACLE |
| | ELECTRIC PANEL |
| | SPEAKER - PUSH TO TALK |
| | JUNCTION BOX - RULL BOX |
| | DISCONNECT (FUSED - NONFUSED) |
| | STARTER |
| | OUTLET MOUNT HEIGHT INCHES - (OT PROTECTED - WEATHER PROOF OT) |

MECHANICAL SYMBOL SCHEDULE

| | |
|-----------|--|
| G | GAS PIPING |
| —H—H—H—H— | PIPE FITTINGS (ELL DOWN - TEE DOWN - TEE UP) |
| M | VALVE |
| N | — CHECK VALVE |
| — | — STRAINER |
| — | — BALANCING COCK |
| — | GAS COOK |

| CIRC. LOCATION / DESCRIPTION | BRKR. WATTS | # | WATTS | BRKR. | LOCATION / DESCRIPTION | P1 | |
|------------------------------|-------------|-------|-------|-------|------------------------|----------------------|---------|
| | | | | | | WATTS | A WATTS |
| 1 RECEPTACLES | 20-1 | 1,080 | A | 2,500 | 35-2 | BRKD 3 TON W/SW HEAT | 2 |
| 3 RECEPTACLES | 20-1 | 720 | B | 2,500 | — | — | 4 |
| 5 LIGHTS | 20-1 | 360 | A | 2,500 | 35-2 | BRKD 3 TON W/SW HEAT | 6 |
| 7 RECEPTACLE | 20-1 | 180 | B | 2,500 | — | — | 8 |
| 9 RECEPTACLE | 20-1 | 540 | A | 0 | — | — | 10 |
| 11 RECEPTACLE | 20-1 | 540 | B | 0 | — | — | 12 |
| 13 | 0 | 0 | A | 0 | — | — | 14 |
| 15 | 0 | 0 | B | 0 | — | — | 16 |
| 17 | 0 | 0 | A | 0 | — | — | 18 |
| 19 | 0 | 0 | B | 0 | — | — | 20 |
| 21 | 0 | 0 | A | 0 | — | — | 22 |
| 23 | 0 | 0 | B | 0 | — | — | 24 |
| 25 | 0 | 0 | A | 0 | — | — | 26 |
| 27 | 0 | 0 | B | 0 | — | — | 28 |
| 29 | 0 | 0 | A | 0 | — | — | 30 |



GENERAL MECHANICAL-ELECTRICAL SPECIFICATIONS

- ALL WORK SHALL BE DONE IN STRICT CONFORMANCE TO THE BUILDING CODES OF THE CITY OF COLUMBIA, MO.
- ALL MATERIALS SHALL BE NEW, FIRST CLASS, AND INSTALLED TO MANUFACTURER'S WRITTEN SPECIFICATIONS.
- ALL SYSTEMS SHALL BE COMPLETE AND OPERABLE IN READY WORK.
- DO ALL EXCAVATION, BACKFILLING, CUTTING, PATCHING, OFFSETTING, ADJUSTING AND BALANCING AS REQUIRED TO COMPLETE THE JOB.
- SPECIFIC MODELS ARE SPECIFIED TO ESTABLISH QUALITY ONLY. ENGINEER'S DECISION SHALL BE FINAL ON ALL MATERIAL SELECTIONS OR SUBSTITUTIONS.
- MAINTAIN SAFETY SIGNS AND BARRIERS AS REQUIRED TO ASSURE SAFE WORKING CONDITIONS.
- QUANTITIES ALL WORKMANSHIP AND MATERIALS FOR ONE YEAR FROM FINAL ACCEPTANCE.
- EACH CONTRACTOR SHALL BE RESPONSIBLE FOR CLEANING UP HIS OWN DEBRIS.
- CONTRACTOR SHALL NOT BE RESPONSIBLE FOR PROPER OPERATION OF OWNER-FURNISHED MATERIALS.
- INSPECT JOB SITE PRIOR TO BIDDING TO DETERMINE EXACT JOB REQUIREMENTS.

PLUMBING SPECIFICATIONS

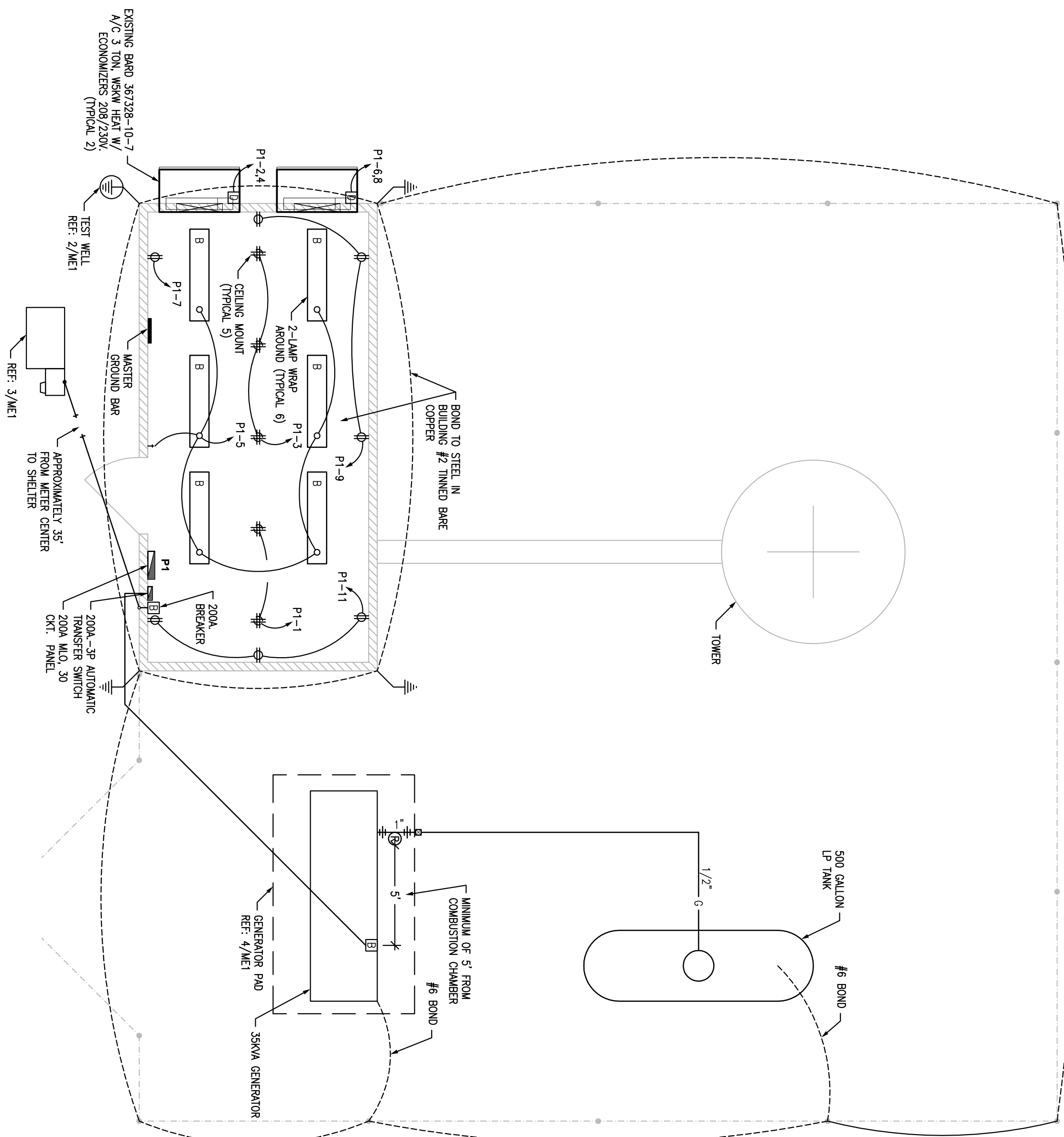
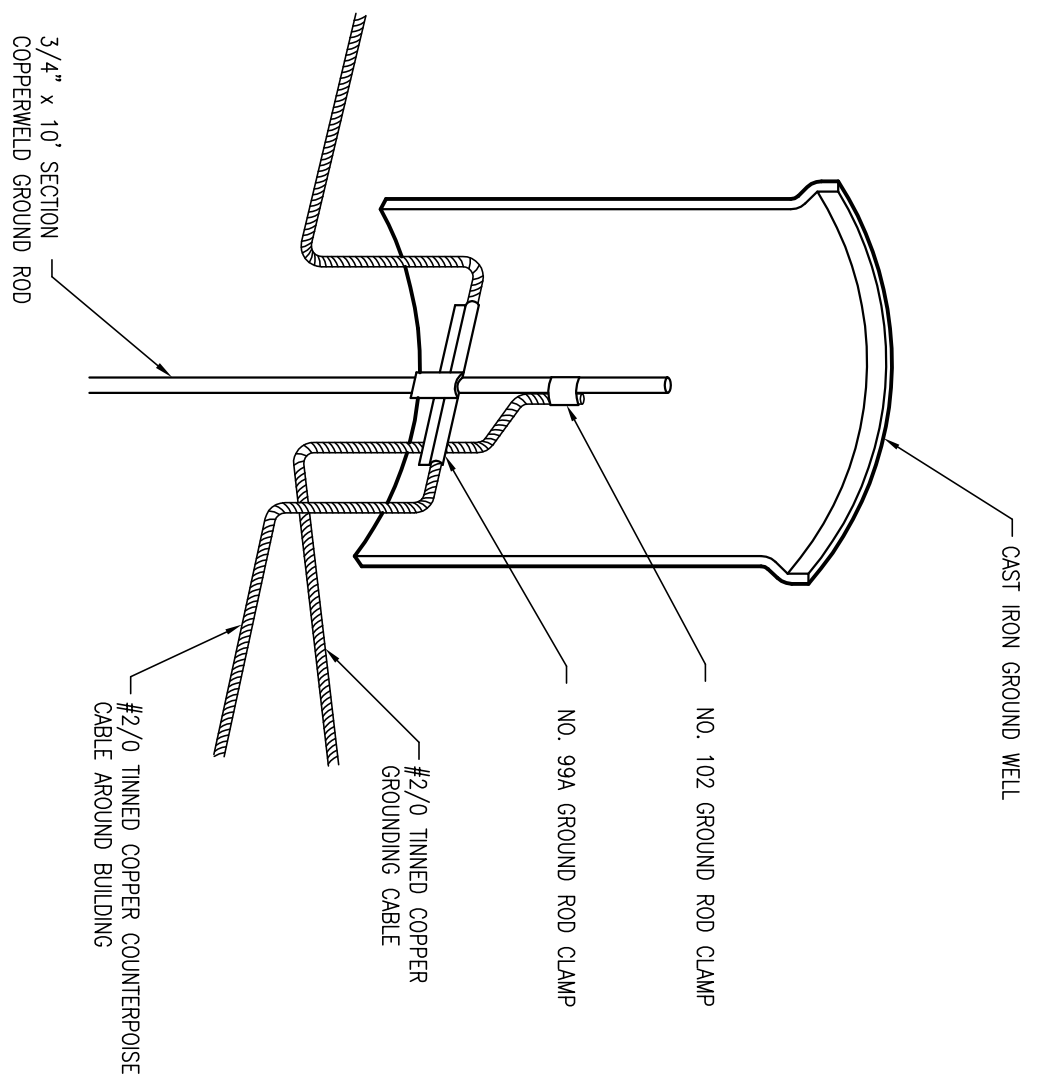
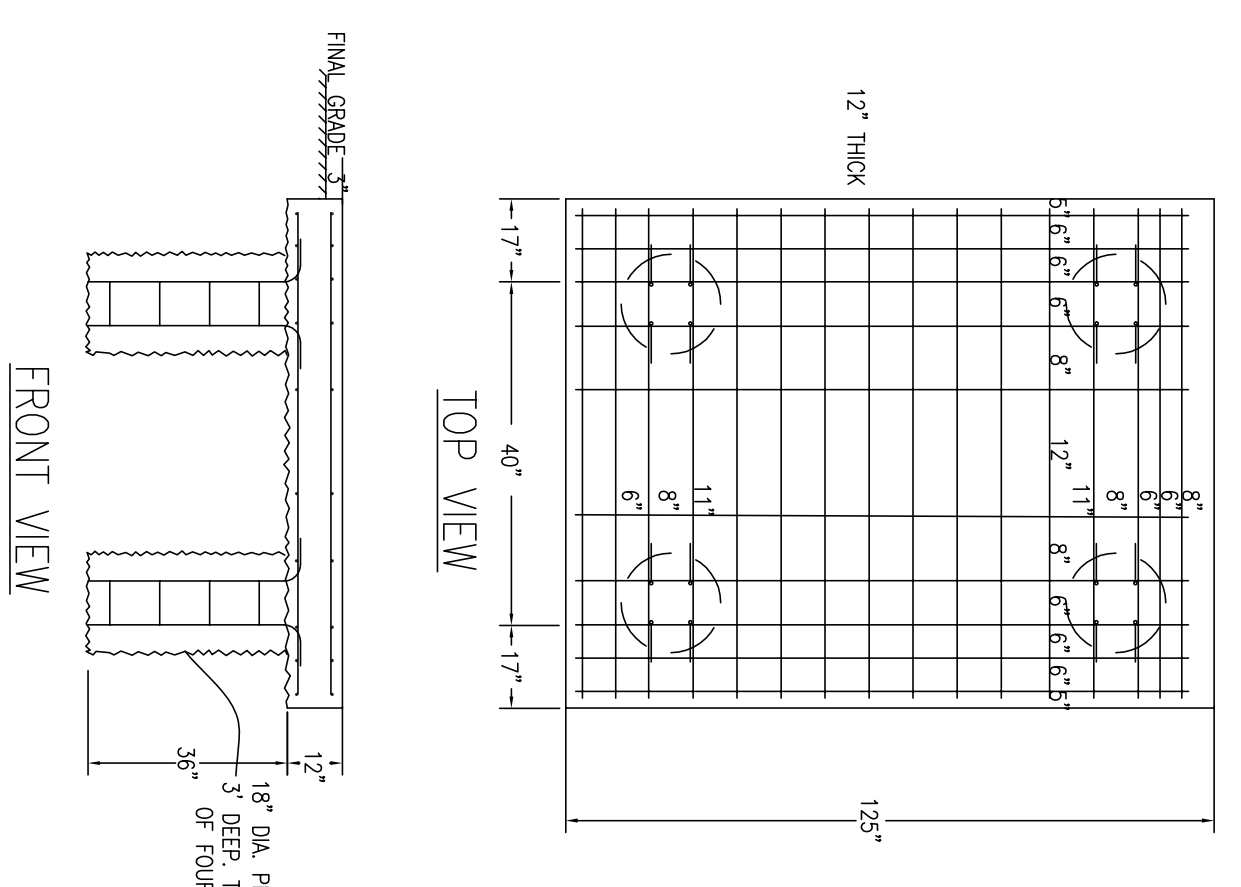
- SEE GENERAL MECHANICAL-ELECTRICAL SPECIFICATIONS.
- PAS PIPING ABOVE OR BELOW GRADE SHALL BE COPPER TUBING OR MEDIUM DENSITY POLYETHYLENE DISCSCOPE 6500 OR EQUAL.

ELECTRICAL SPECIFICATIONS

- SEE GENERAL MECHANICAL-ELECTRICAL SPECIFICATIONS.
- ALL CONDUCTORS SHALL BE COPPER MINIMUM #12 OR LARGER AS REQUIRED OR SHOWN.
- ALL EQUIPMENT SHALL BE RATED FOR 75° C CONDUCTORS.
- ADVANCED CONDUIT OR SCH. 40 P.C.
- ALL WIRING IN NON-FIRE-RATED CONSTRUCTION MAY BE NON-METALLIC SHEATHED CABLE (NMEX).
- ALL OTHER WIRING SHALL BE IN EMT OR MC CABLE.
- WALL SWITCHES SHALL BE LENTON #1220 SERIES, OR APPROVED EQUAL, 20A.
- DUPLEX COMMERCIAL RECEPTACLES SHALL BE LENTON #5362 SERIES, OR APPROVED EQUAL, 20A.
- GROUNDING TYPE GROUND FAULT RECEPTACLES SHALL BE LENTON #7888-LV SERIES. USE SCHEDWING ONLY, NOT BACKWING.
- SPECIAL OUTLETS SHALL BE AS REQUIRED OR SHOWN ON DRAWINGS. COMPLETE WITH COVER PLATE.
- THE ENGINE SYSTEM SHALL BE ELECTRICAL CONTINUOUS AND PROPERLY GROUNDING. REFER TO SPECIFICATIONS FOR WIRING METHODS.
- FURNISH AND INSTALL ALL LIGHTING FIXTURES, LAMPS, FIRES, BREAKERS, ETC. TO COMPLETE THE BRANCH CIRCUITS INDICATED.
- ALL 120V, 20A LIGHTING AND RECEPTACLE CIRCUITS REQUIRING MORE THAN 100' OF CONDUCTORS (ONE WAY) SHALL BE #10 CONDUCTORS.

GENERATOR PAD DETAIL

- CONDUITS MAY LEAVE PAD IN ANY DIRECTION.
- CONDUIT ENTRANCE SIDE MUST FACE AWAY FROM ANY OBSTRUCTIONS.
- OTHER SIDES OF PAD TO BE A MINIMUM OF 3 FT FROM ANY OBSTRUCTIONS.
- CONCRETE TO BE 6 BAG MIX, MIN 4000 PSI @ 28 DAYS, MAX. AGGREGATE = 3/4".
- 5/8" x 8 FT COPPER COLD GROUND ROD TO BE DRIVEN IN DUCT OPENING AS SHOWN.
- DUCT AREA TO BE ENGRAVELLED WITH SAND OR CHAT AFTER CONDUITS ARE PLACED.
- MATCH OPENINGS WITH DESIGNER REQUIREMENTS.
- REINFORCEMENT TO BE #3 REBAR, PLACE AS SHOWN.
- FRAME/ CONDUITS TO BE MINIMUM 48" DEEP PER SPEC. OR 48" STEEP AS SHOWN. 90° ELBOWS SHALL BE LOW ANGLE APPROX. 75°. THE TOP OF THE CONCRETE SHALL BE MINIMUM 18" ABOVE GRADE. THE BOTTOM OF THE CONCRETE SHALL BE MINIMUM 6" BELOW GRADE. THE CONCRETE SHALL BE MINIMUM 4" THICK AT THE CORNERS OF THE CONCRETE PAD. THE CONCRETE SHALL BE MINIMUM 4" THICK AT THE CORNERS OF THE CONCRETE PAD. CUT 8 FT DIA. TO 1 FT BELOW GRADE AND 1 FT ABOVE GRADE. SET IN CONCRETE.



SITE PLAN FINAL CONFIGURATION

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

GROUND WELL

NO SCALE

ELECTRIC RISER DIAGRAM

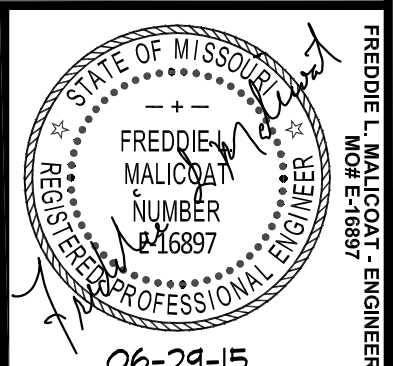
NOT TO SCALE

JOINT COMMUNICATIONS

2600 BATTLE AVENUE
COLUMBIA, BOONE COUNTY, MISSOURI, 65202

MALICOAT - WINSLOW ENGINEERS, P.C.

MISSOURI STATE CERTIFICATE OF AUTHORITY #000421
5649 N. CLEARVIEW ROAD
COLUMBIA, MISSOURI 65202
TEL 573-875-1300
FAX 573-875-1305
FREDDIE MALICOAT, P.E.



06-24-15

TITLE :
MECHANICAL/
ELECTRICAL
PLAN

SHEET :
ME1
OF
ME1

PROJECT : 15171

CONTRACTOR SHALL CHECK
& VERIFY ALL DIMENSIONS
DATE : 06-29-15
REVISIONS :