

### ELECTRICAL LEGEND

**SERVICE ENTRANCE**

- Utility Meter (MH = 5'-0" TO TOP)
- Telephone Terminal (MH = 4'-6" TO CENTER)
- Pad Mounted Transformer
- Telephone - Overhead
- Power - Overhead
- Wireway (MH = 5'-6" TO TOP)

**EQUIPMENT**

- Contactor (30 = AMPERE RATING, MH = 4'-6" TO TOP)
- Magnetic Motor Starter (MH = 4'-6" TO TOP)
- Fused Disconnect (MH = 4'-6" TO TOP)
- Unfused Disconnect (MH = 4'-6" TO TOP)
- Enclosed Circuit Breaker
- Motor
- Panelboard (L1A = DESIGNATION, 5'-9" TO TOP)
- Photocell
- Time Clock (MH = 4'-6" TO TOP)
- Combination Motor Starter (MH = 4'-6" TO TOP)
- Thermostat (MH = 4'-6" TO TOP)

**ABBREVIATIONS**

- A AMPERES
- AFB ABOVE FINISHED FLOOR
- AFG ABOVE FINISHED GRADE
- BC BELOW CEILING
- BKR BREAKER
- C CEILING
- DD DUSK TO DAWN
- DTO DUSK TO TIMED OFF
- EM SWITCHED EMERGENCY
- EMT ELECTRICAL METALLIC TUBING
- EN NON-SWITCHED EMERGENCY
- EX EXISTING
- G GROUND FAULT CURRENT INTERRUPTER
- GRG GALVANIZED RIGID CONDUIT
- GRD GROUND
- IG ISOLATED GROUND
- J JUNCTION BOX
- K KEY OPERATED SWITCH
- L SWITCH WITH PILOT LIGHT
- LA LIGHTNING ARRESTOR
- NIC NOT IN CONTRACT
- NL NIGHT LIGHT
- NTS NOT TO SCALE
- O OCCUPANCY SENSING SWITCH
- PVC POLYVINYL CHLORIDE
- R MOTOR RATED SWITCH
- W WEATHERPROOF
- WG WEATHERPROOF/GFC

**GENERAL SYMBOLS**

- Equipment (AC-1 = DESIGNATION - SEE SCHEDULE)
- Flag Note
- Revision
- Room Number
- Section Mark (A = SECTION DESIGNATION, E1 = REFERENCE DRAWING)

**LIGHTING FIXTURES**

- Fluorescent - Lensed (1 = CIRCUIT DESIGNATION, b = SWITCH DESIGNATION, NL = NIGHT LIGHT, HALF SHADED = EMERGENCY)
- Fluorescent - Open
- Ceiling Mounted Downlight
- Wall Bracket (MH - SEE PLANS)
- Emergency Battery Unit

**SWITCHES** (MH = 3'-10" TO CENTER)

- Single Pole Switch (b = SWITCH DESIGNATION, SEE DEVICE SCHEDULE FOR SPECIFICATION)
- Timer Switch

**CONDUIT**

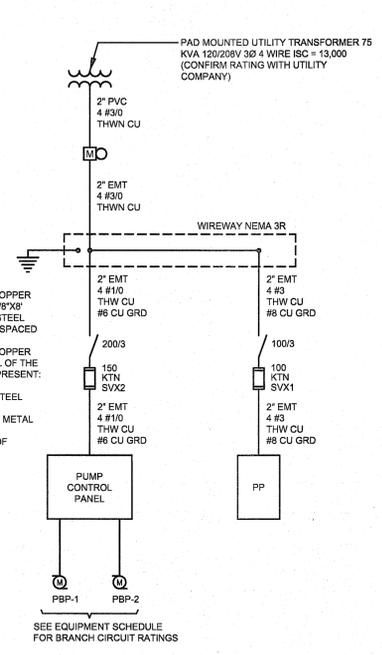
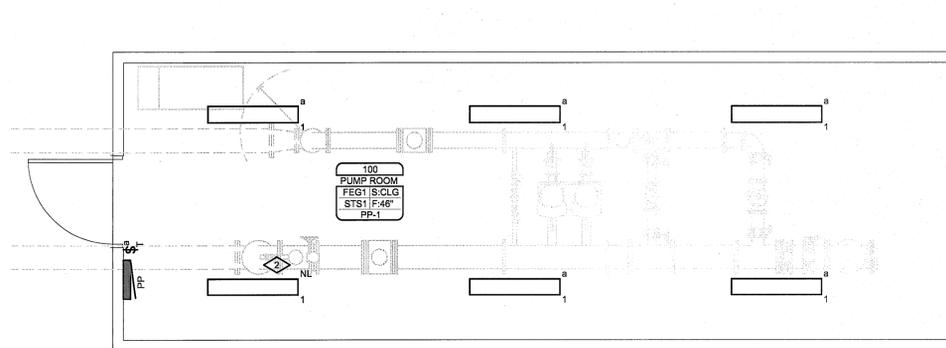
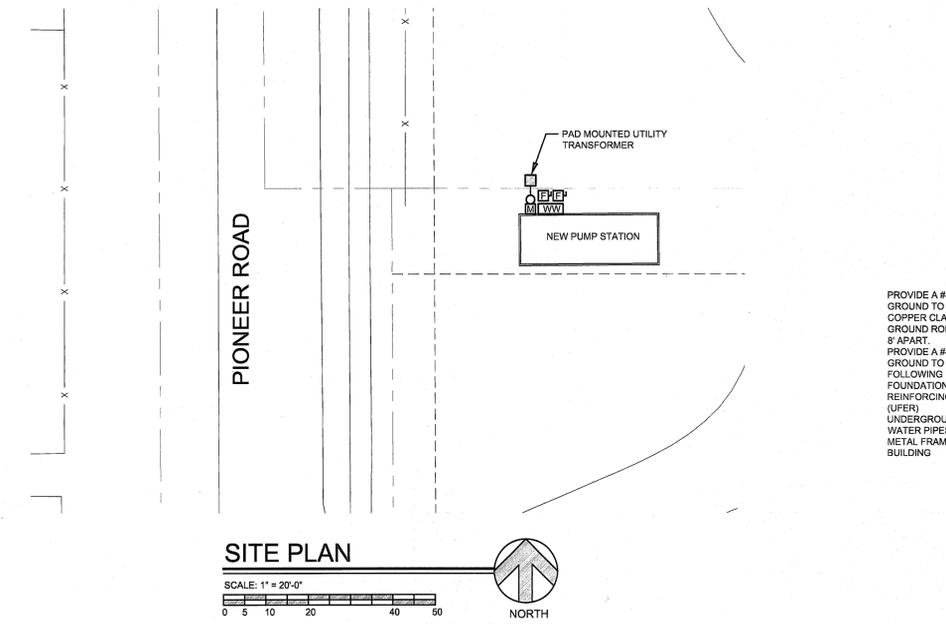
- P1-7 CONCEALED ABOVE GRADE (P1-7 = PANEL & CIRCUIT, HACHURES = # OF WIRES)
- Under Floor/Underground
- Underground Ductbank
- Flex
- Home Run (P1-7 = PANEL & CIRCUIT, HACHURES = # OF WIRES)
- Turning Up
- Turning Down
- Bushed or Capped Conduit
- Surface Raceway (SR)

**OUTLETS** (MH = 1'-6" TO CENTER (+6" = 6" ABOVE COUNTER))

- Duplex Receptacle (8 = CIRCUIT NUMBER (TYPICAL), SEE DEVICE SCHEDULE FOR SPECIFICATION)
- Fourplex Receptacle
- Special - See Device Schedule
- Junction Box - Ceiling or Floor
- Junction Box - Wall
- Multi-Port Signal (2T - TWO TELEPHONE PORTS, 3N - THREE NETWORK PORTS, 4C - FOUR COAXIAL CABLE PORTS)
- Ceiling Receptacle
- Single Receptacle

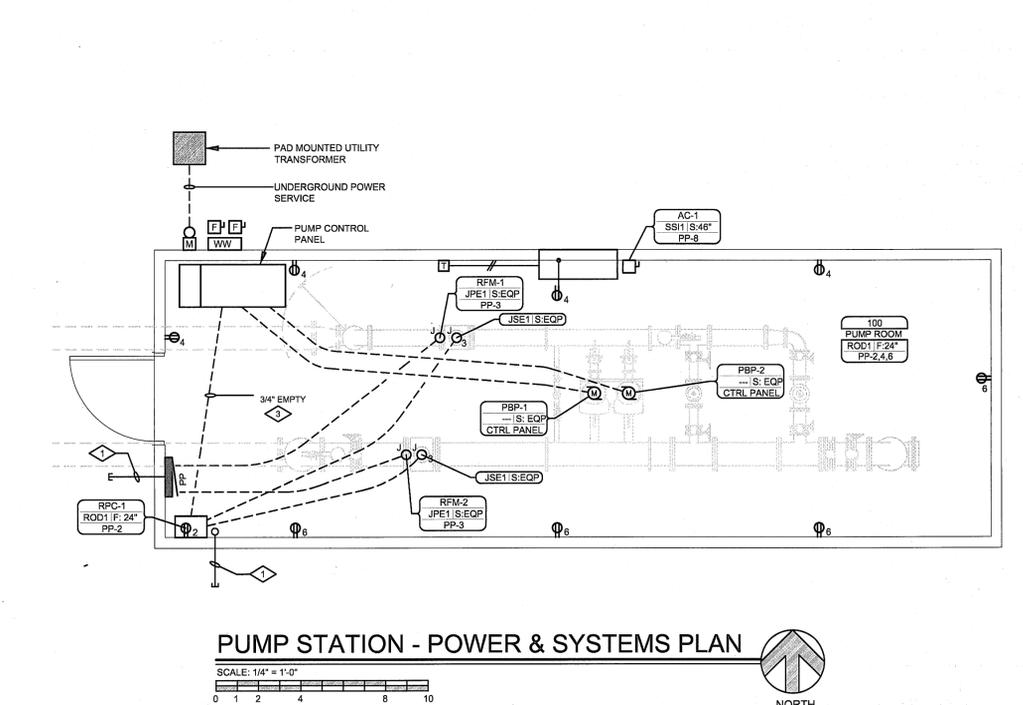
**ONE LINE DIAGRAM**

- Feeder (2-2" PVC, 3 #40, THW - AL, 1 #4 GRD, THW - CU)
- Meter (M)
- Panelboard (LP1 = DESIGNATION)
- Current Transformer
- Fused Switch (60 AMP 3 POLE FRAME, DEVICE # 12, 50 AMP KTRN FUSE)



- ### GENERAL NOTES:
- PROVIDE A SEPARATE GREEN INSULATED GROUND WIRE SIZED PER NATIONAL ELECTRICAL CODE TABLE 250.122 IN ALL BRANCH CIRCUIT AND FEEDER RACEWAYS CONTAINING POWER CONDUCTORS.
  - CIRCUITS MAY BE COMBINED INTO HOME RUNS OF UP TO SIX CURRENT CARRYING CONDUCTORS INCLUDING NEUTRALS UNLESS OTHERWISE INDICATED. PROVIDE A DEDICATED NEUTRAL CONDUCTOR FOR EACH UNGROUNDED (PHASE) CONDUCTOR. PROVIDE STRIPING FOR THE FULL LENGTH OF EACH NEUTRAL CONDUCTOR MATCHING THE COLOR OF THE PHASE CONDUCTOR.
  - MOUNTING HEIGHTS SHOWN ON THE PLANS TAKE PRECEDENCE OVER DEFAULT MOUNTING HEIGHTS SHOWN IN THE LEGEND.
  - ALL RACEWAYS INSTALLED UNDERGROUND, OR UNDER THE BUILDING SHALL BE NO SMALLER THAN 3/4". ALL CONDUCTORS INSTALLED UNDERGROUND OR UNDER THE BUILDING SHALL BE NO SMALLER THAN #10.
  - ALL CONDUITS SHALL BE BURIED A MINIMUM OF 24" BELOW FINISHED GRADE. BED CONDUITS 6" BELOW AND 6" ABOVE IN LOCAL MATERIAL WITH NO ROCKS LARGER THAN 1" IN DIAMETER, OR IMPORT SAND IF ACCEPTABLE LOCAL MATERIAL IS UNAVAILABLE. PLACE WARNING TAPE 1'-0" ABOVE ALL BURIED CONDUITS. SEE L-LINE DIAGRAM FOR FEEDER CONDUIT SIZES.
  - ALL WIRING DEVICES ARE TO BE INSTALLED FLUSH UNLESS OTHERWISE INDICATED.
  - FLEX SHALL NOT BE USED FOR BRANCH CIRCUIT HOME RUNS. IF AC OR MC CABLE IS ALLOWED BY THE SPECIFICATIONS FOR BRANCH CIRCUIT WIRING, IT SHALL NOT BE USED BETWEEN THE LAST BOX, AND THE PANELBOARD. FLEX SHALL NOT BE USED FOR DEDICATED CIRCUITS.
  - THE MOUNTING HEIGHT OF WIRING DEVICES IS DEFINED AS THE DISTANCE FROM THE FINISHED FLOOR TO THE CENTER OF THE DEVICE BOX.
  - THE FOLLOWING MAIN KEY DEFINES LIGHTING FIXTURES, AND POWER AND SIGNAL WIRING DEVICES IN THE ROOM LISTED. ALL DEVICES IN THIS SPACE ARE TO COMPLY WITH THIS MAIN KEY UNLESS OVERRIDDEN BY A DEVICE TAG.
  - THE FOLLOWING DEVICE TAGS DEFINE LIGHTING SWITCHES, AND POWER AND SIGNAL WIRING DEVICES WHICH ARE DIFFERENT FROM THOSE DEFINED IN THE MAIN KEY. THESE DEVICE TAGS OVERRIDE THE MAIN KEY ONLY FOR THE DEVICE OR DEVICES INDICATED.
  - SEE SPECIFICATIONS FOR ADDITIONAL CONSTRAINTS ON THE INSTALLATION OF WIRING DEVICES BOXES.
- ROOM NUMBER**
- ROOM NAME**
- SCHEDULED LIGHTING FIXTURE**
- SCHEDULED LIGHTING SWITCH**
- SCHEDULED POWER DEVICE**
- SCHEDULED SIGNAL DEVICE**
- PANEL & CIRCUIT DESIGNATION**
- LIGHTING FIXTURE MOUNTING SURFACE OR FLUSH HEIGHT**
- LIGHTING SWITCH MOUNTING SURFACE OR FLUSH HEIGHT**
- POWER DEVICE MOUNTING SURFACE OR FLUSH HEIGHT**
- SIGNAL DEVICE MOUNTING SURFACE OR FLUSH HEIGHT**
- SIGNAL DEVICE MOUNTING SURFACE OR FLUSH HEIGHT**
- POWER DEVICE MOUNTING SURFACE OR FLUSH HEIGHT**
- SIGNAL DEVICE MOUNTING SURFACE OR FLUSH HEIGHT**
- SWITCH OR SIGNAL DEVICE**
- SCHEDULED SIGNAL DEVICE**
- SIGNAL DEVICE MOUNTING SURFACE OR FLUSH HEIGHT**
- POWER DEVICE MOUNTING SURFACE OR FLUSH HEIGHT**
- SIGNAL DEVICE MOUNTING SURFACE OR FLUSH HEIGHT**

- ### NOTES REFERENCED ON THE PLANS:
- 1-1/2" EMPTY CONDUIT. STUB CONDUIT 5'-0" OUTSIDE OF BUILDING FOR FUTURE TELEPHONE SERVICE AND EXTERIOR POWER.
  - WIRE LIGHTING FIXTURE AS NIGHT LIGHT. LIGHT TO BE ON ALL THE TIME.
  - PROVIDE RACEWAYS ONLY FOR PROCESS CONTROL WIRING. PROCESS CONTROL WIRING IS TO BE DONE BY THE OWNER.



GENERAL EQUIPMENT SCHEDULE								
EQUIPMENT DESIGNATION	RATINGS SUPPLIED BY	BRANCH CIRCUIT	OVERCURRENT	CONTROLLER	DISCONNECT @ CONTROLLER	DISCONNECT @ EQUIPMENT	CONTROL DEVICE	EQUIPMENT DESIGNATION & DESCRIPTION
TYPE DESCRIPTION LOCATION	TYPE WIRING BY	PHASE WIRE INSTALLED BY WIRING BY	DEVICE RATING DEVICE TYPE LOCATION	ENCLOSURE SUPPLIED BY INSTALLED BY WIRING BY	ENCLOSURE SUPPLIED BY INSTALLED BY WIRING BY	ENCLOSURE SUPPLIED BY INSTALLED BY WIRING BY	TYPE ENCLOSURE SUPPLIED BY INSTALLED BY WIRING BY	
AC-1 AIR HANDLING PUMP ROOM	208V 19.5A 1PH 2W MECHANICAL SUB	0.50" EMT #10 COPPER NEUTRAL NOT REQ'D #10 COPPER	30 AMPS CIRCUIT BREAKER PANELBOARD	NONE REQUIRED	NONE REQUIRED	NONFUSED SWITCH NEMA 1 ELECTRICAL SUB ELECTRICAL SUB	THERMOSTAT NEMA 1 MECH. SUB ELECTRICAL SUB ELECTRICAL SUB	AC-1: HEAT PUMP
PBP-1 PUMP BOOSTER PUMP STATION	208V 46.2A 3PH 3W 15 HP GENERAL CONTRACTOR ELECTRICAL SUB	0.75" PVC #8 COPPER NEUTRAL NOT REQ'D #10 COPPER	50 AMPS CIRCUIT BREAKER CONTROL PANEL	VFD CTRL PANEL GENERAL CONTRACTOR ELECTRICAL SUB	NONE REQUIRED	NONE REQUIRED	PROCESS CONTROLLER NEMA 1 OWNER OWNER	PBP-1: BOOSTER (15 HP) ---
PBP-2 PUMP BOOSTER PUMP STATION	208V 46.2A 3PH 3W 15 HP GENERAL CONTRACTOR ELECTRICAL SUB	0.75" PVC #8 COPPER NEUTRAL NOT REQ'D #10 COPPER	50 AMPS CIRCUIT BREAKER CONTROL PANEL	VFD CTRL PANEL GENERAL CONTRACTOR ELECTRICAL SUB	NONE REQUIRED	NONE REQUIRED	PROCESS CONTROLLER NEMA 1 OWNER OWNER	PBP-2: BOOSTER (15 HP) ---
RFM-1 PROCESS FLOW METER PUMP STATION	120V 2.0A 1PH 2W GENERAL CONTRACTOR ELECTRICAL SUB	0.75" PVC #12 COPPER #12 COPPER	20 AMPS CIRCUIT BREAKER LOAD CENTER	NONE REQUIRED	NR-IN PANEL	NR-IN PANEL	NONE REQUIRED	RFM-1: FLOW METER PROCESS CONTROL WIRING IS TO BE DONE BY THE OWNER - PROVIDE SIGNAL RACEWAY ONLY.
RFM-2 PROCESS FLOW METER PUMP STATION	120V 2.0A 1PH 2W GENERAL CONTRACTOR ELECTRICAL SUB	0.75" PVC #12 COPPER #12 COPPER	20 AMPS CIRCUIT BREAKER LOAD CENTER	NONE REQUIRED	NR-IN PANEL	NR-IN PANEL	NONE REQUIRED	RFM-2: FLOW METER PROCESS CONTROL WIRING IS TO BE DONE BY THE OWNER - PROVIDE SIGNAL RACEWAY ONLY.
RPC-1 PROCESS CONTROL COMPUTER I.T. CLOSET	120V 3.3A 1PH 2W OWNER MECH. SUB ELECTRICAL SUB	0.50" EMT #12 COPPER #12 COPPER	20 AMPS CIRCUIT BREAKER PANELBOARD	NONE REQUIRED	NONE REQUIRED	PLUG-IN NEMA 3 ELECTRICAL SUB ELECTRICAL SUB	NONE REQUIRED	RPC-1: PROCESS CONTROL COMPUTER PROCESS CONTROL WIRING IS TO BE DONE BY THE OWNER - PROVIDE SIGNAL RACEWAY ONLY.

GENERAL NOTES:  
 1. CONFIRM EQUIPMENT VOLTAGE, PHASES, OVERCURRENT DEVICE TYPE AND RATING WITH EQUIPMENT SUBMITTALS PRIOR TO ELECTRICAL ROUGH-IN.  
 2. RACEWAY MATERIAL SHOWN IS THE PRIMARY TYPE REQUIRED. SEE PLANS AND SPECIFICATIONS FOR OTHER RACEWAY TYPES WHICH MAY BE REQUIRED.

LIGHTING FIXTURE			
LIGHTING FIXTURE DESCRIPTION	MANUFACTURER	LAMP	BALLAST / DRIVER
FEG1 FLUORESCENT ENCLOSED AND GASKETED MOUNTING: CEILING SURFACE WIDTH / PROJECTION: 8.125" FIXTURE HEIGHT: 4.75" APERTURE: RECTANGULAR	LITHONIA CATALOG # 1ST HALF: DMSW 2 54TSHO M CATALOG # 2ND HALF: VOL 1 GBS10PS90 HOUSING: WHITE PAINTED SHEET STEEL ELECTRICAL RATING: 117 WATTS 120 VOLTS DIFFUSER: ACRYLIC IMPACT REFLECTOR: NONE ENVIRONMENT: -20F TO 120 DEG F & DAMP AIMING: DIRECT	G.E. QUANTITY: 2 INITIAL LUMENS PER LAMP: 5000 COLOR RENDERING INDEX: >=85 COLOR TEMPERATURE: 3500 DEGREES K RATED LIFE: >=30,000 HOURS NOMINAL WATTS: 54 ENVELOPE SHAPE: LINEAR T5 LAMP TYPE: FLUORESCENT	MANUFACTURER: ADVANCE QUANTITY: 1 BALLAST FACTOR: >=1.00 POWER FACTOR: >=50 HARMONICS: <=20% TYPE: OUTDOOR WEATHERPROOF STARTING: PROGRAM ENVIRONMENT: -20F TO 120 DEG F & DAMP BATTERY BACK-UP: BATTERY NOT REQUIRED

GENERAL NOTES:  
 1. PROVIDE SPECIFIED FIXTURES. EQUIVALENT FIXTURES BY A LISTED ALTERNATE MANUFACTURER OR SUBMIT FIXTURE CUTS FOR APPROVAL 5 DAYS PRIOR TO THE BID DATE.  
 2. IF THE FIXTURE CATALOG NUMBER CONFLICTS WITH THE FIXTURE DESCRIPTION, THE FIXTURE DESCRIPTION TAKES PRECEDENCE.  
 3. THE FIXTURE MANUFACTURER SHALL SUPPLY LAMPS AND ALL MOUNTING ACCESSORIES NECESSARY FOR THE INSTALLATION OF HIS FIXTURES.  
 4. LAMPS PROVIDED SHALL HAVE THE LOWEST MERCURY CONTENT AVAILABLE FOR THEIR TYPE, AND SHALL BE TCLP COMPLIANT IF AVAILABLE.  
 5. SUBMIT AND RECEIVE APPROVAL FROM THE ENGINEER FOR ALL LIGHT FIXTURES, BALLASTS, AND BACK-UP BATTERIES PRIOR TO RELEASING FIXTURES FOR MANUFACTURE.



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**DELTA EMERGENCY**  
**BOOSTER PUMP STATION**  
 Delta, Colorado

**PUMP STATION PLAN**

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