# HERITAGE PARK BOOSTER PUMP STATION

425 W 400 S, OREM UT 84058





CODE ANALYSIS



	CODE		
CODE CATEGORY	REFERENCE	CODE REQUIREMENTS	ACTUAL BUILDING DESIGN
APPLICABLE BUILDING CODES		2021 INTERNATIONAL BUILDING CODE 2021 INTERNATIONAL MECHANICAL CODE 2021 INTERNATIONAL FUEL GAS CODE 2021 INTERNATIONAL PLUMBING CODE 2021 INTERNATIONAL FIRE CODE 2021 INTERNATIONAL ENERGY CONSERVATION CODE 2020 NATIONAL ELECTRICAL CODE 2021 UNIFORM CODE FOR BUILDING CONSERVATION 2021 INTERNATIONAL FIRE CODE	2021 INTERNATIONAL BUILDING CODE 2021 INTERNATIONAL MECHANICAL CODE 2021 INTERNATIONAL FUEL GAS CODE 2021 INTERNATIONAL PLUMBING CODE 2021 INTERNATIONAL FIRE CODE 2021 INTERNATIONAL ENERGY CONSERVATION CODE 2020 NATIONAL ELECTRICAL CODE 2021 UNIFORM CODE FOR BUILDING CONSERVATION 2021 INTERNATIONAL FIRE CODE
OCCUPANCY	312.1	U, UTILITY AND MISCELLANEOUS	U WITH ACCESSORY SPACE
OCCUPANCY SEPARATION	TABLE 508.4	SEPARATION NOT REQUIRED	NS
CONSTRUCTION TYPE	CHAPTER 6	TYPE VB	TYPE VB
ALLOWABLE FLOOR AREA	TABLE 506.2	NS 9,000 SF ALLOWABLE	2,747 SF
AREA MODIFICATIONS	SECTION 506 EQUATION 5-3	$Aa = \{At+[At \times If] + [At \times Is]\}$	AREA MODIFCATIONS NOT NEEDED
MAXIMUM HEIGHT	TABLE 504.3	U, UTILITY AND MISCELLANEOUS	BUILDING HEIGHT: 30' - 4"
MAXIMUM STORIES	TABLE 504.4	U: 1 STORY MAX (NS)	BUILDING: 1 STORY
OCCUPANT LOAD	TABLE 1004.5	SEE OCCUPANCY SCHEDULE ON SHEET G0.2	SEE OCCUPANCY SCHEDULE ON SHEET G0.2
ROOF COVERING	TABLE 1505.1	CLASS C FIRE-RESISTANCE	CLASS A METAL ROOF
DRAFT STOPS	SECTION 717.4	NOT REQ'D	NOT REQ'D
FIRE-PROTECTION SYSTEMS	SECTION 903.2.11	AUTOMATIC FIRE SPRINKLING SYSTEM NOT REQUIRED	NOT PROVIDED
EXITS	TABLE 1006.2.1	1 MIN REQ. EXITS PER OCCUPANT LOAD 1-500	ONE ACCESSIBLE EXITS PROVIDED
MAXIMUM COMMON PATH OF EGRESS TRAVEL DISTANCE	TABLE 1006.2.1	OCCUPANT LOAD LESS THAN 30 WITHOUT SPRINKLERS: 100' MAX	COMMON PATH OF EGRESS TRAVEL DISTANCE =64'
FACILITY ACCESSIBILITY	SECTION 1104	ACCESSIBILITY NOT REQUIRED	ACCESSIBILITY NOT PROVIDED
PLUMBING FIXTURES	TABLE 2902.1	TO BE CONSIDERED INDIVIDUALLY BY THE CODE OFFICIAL	PROVIDED:1 W.C. MALE & FEMALE; 1 LAVS M & F; 1 D.F.; 1 S.S

## PROJECT CONTACTS SYMBOL LEGEND EPIC ENGINEERING 1800 NOVELL PLACE 5TH FLOOR PROVO, UT 84606 (385) 255-9063 DON OLSEN **STRUCTURAL EPIC ENGINEERING** 1800 NOVELL PLACE 5TH FLOOR PROVO, UT 84606 (435) 315-3742 JEREMY DYE MECHANICAL & PLUMBING **EPIC ENGINEERING** 1800 NOVELL PLACE 5TH FLOOR PROVO, UT 84606 (435) 315-3742 DILLÓN FUGATE

ELECTRICAL
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KYLE CARLSON

**DEFERRED SUBMITTALS:** 

ROOF TRUSS DESIGN, LADDER CAGE AND LANDING DESIGN, STAIR AND RAILING DESIGN, BRIDGE CRANE DESIGN

SCOPE OF WORK:

DESIGN FOR THE NEW CONSTRUCTION OF A MASONRY BUILDING. BUILDING TO SERVE AS A PUMP STATION WITH ACCESSORY PUBLIC

	0	GRID LINES
	1 A-000	BUILDING SECTION
	A-000	ELEVATION
	A-000	WALL SECTION
	A-000	DETAIL SECTION
	A-000	CALLOUT SECTION
_	1) View Name 1/8" = 1'-0"	DETAIL NAMING
	1i	WALL TYPES
	101 1' - 0" x 1' - 0" SILL Sill Height	WINDOW REFERENCE
	101	DOOR REFERENCE

REFERENCE ELEVATION

ABBREVI	ATION	S
JUM XIMATE JP VAYS NG OL JOINT RETE MASONRY UNIT G IN RETE RUCTION JUOUS NG FOUNTAIN TER NG ST FAN SUL. FINISH SYSTEM SION JOINT RIC/ELECTRICAL TION NG OR DRAIN ATION ATED NG NIZED IRON SIZED M WALL BOARD M BEAM BIBB W METAL DNTAL AY	INT. INSUL. MAX. MECH. MIN. MTL. N.I.C. N.T.S. O.C. O.D. PLYWD. PNTD. R.B. REQ'D REV. RM. R.O. SCHED. STL. STRUCT. SYS. T&B T&G T.O.F. T.O.P T.O.W. TYP. T.S. U.P. VERT. V.T.R. VCT W WD. WC. WP. W.R. W.W.M.	INTERIOR INSULATION MAXIMUM MECHANICAL MINIMUM METAL NOT IN CONTRACT NOT TO SCALE ON CENTER OUTSIDE DIAMETER POWER PLYWOOD PAINTED ROOF DRAIN REGULAR ROUGH SAWN REQUIRED REVISED ROOM ROUGH OPENING SOLID CORE SCHEDULE SHEET SIMILAR SPECIFICATION STANDARD STEEL STRUCTURAL SYSTEM TOP AND BOTTOM TONGUE AND GROVE TOP OF TOP OF FOOTING TOP OF PIER TOP OF WALL TYPICAL TUBULAR STEEL COLUMN UNLESS NOTED OTHERWISE UNDER GROUND POWER VERTICAL VENT THRU ROOF VINYL COMPOSITE TILE WATER WOOD WATER CLOSET WITH WATERPROOF WELDED WIRE FABRIC WOVEN WIRE MESH



SHEET INDEX

SHEET#





#### **GENERAL NOTES CONSTRUCTION:**

1. ALL CONSTRUCTION SHALL BE IN ACCORDANCE WITH THE 2021 INTERNATIONAL BUILDING CODE (IBC). THE CONTRACTOR SHALL BE RESPONSIBLE FOR COORDINATING ALL SUB CONTRACTORS TO MEET THESE REQUIREMENTS.

2. THE CONTRACTOR SHALL BE RESPONSIBLE TO FIELD VERIFY ALL EXISTING CONDITIONS, UTILITIES, MEASUREMENTS, CONNECTIONS, ETC.

3. CONTRACTOR SHALL REPORT ANY DISCREPANCIES IN THE PLANS TO THE ENGINEER PRIOR TO COMMENCING RELATED WORK

4. COORDINATE WITH STRUCTURAL PLANS FOR LOCATION OF SHEAR WALLS, COLUMNS, BEAMS, STEEL FRAMES, ETC. AS REQUIRED.

5. COORDINATE WITH MECHANICAL, PLUMBING AND ELECTRICAL CONTRACTORS AND / OR PLANS FOR LOCATION OF EQUIPMENT, FIXTURES, SCHEDULES, REQUIREMENTS, ETC. AS NEEDED.

6. COORDINATE WITH OWNER AND / OR ENGINEER FOR INTERIOR FINISHES.

7. AN APPROVED NUMBER OR ADDRESS SHALL BE PROVIDED FOR ALL NEW BUILDINGS IN SUCH A POSITION AS TO BE PLAINLY VISIBLE AND LEGIBLE FROM THE STREET OR ROAD FRONTING THE PROPERTY.

8. PROTECT WOOD AGAINST DECAY AS NOTED AND REQUIRED BY SECTION 2304.11 OF THE 2021 IBC. WHERE REQUIRED PROTECTION FORM DECAY SHALL BE PROVIDED BY THE USE OF NATURALLY DURABLE OR PRESERVATIVE-TREATED WOOD.

- A. WOOD SUPPORTED BY EXTERIOR FOUNDATION WALLS: WOOD FRAMING MEMBERS, INCLUDING WOOD SHEATHING, THAT REST ON EXTERIOR FOUNDATION WALLS AND ARE LESS THAN 8 INCHES FROM EXPOSED EARTH SHALL BE OF NATURALLY DURABLE OR PRESERVATIVE-TREATED WOOD.
- B. GIRDER ENDS: THE ENDS OF WOOD GIRDERS ENTERING EXTERIOR MASONRY OR CONCRETE WALLS SHALL BE PROVIDED WITH A 1/2" AIR SPACE ON TOP, SIDES AND END, UNLESS NATURALLY DURABLE OR PRESERVATIVE TREATED WOOD IS USED.
- C. SUPPORTING MEMBER FOR PERMANENT
  APPURTENANCES: NATURALLY DURABLE OR
  PRESERVATIVE-TREATED WOOD SHALL BE UTILIZED FOR
  THOSE PORTIONS OF WOOD MEMBERS THAT FORM THE
  STRUCTURAL SUPPORTS OF BUILDINGS, BALCONIES,
  PORCHES OR SIMILAR PERMANENT BUILDING
  APPURTENANCES WHERE SUCH MEMBERS ARE
  EXPOSED TO THE WEATHER WITHOUT ADEQUATE
  PROTECTION FROM A ROOF, EAVE, OVERHAND OR
  OTHER COVERING TO PREVENT MOISTURE OR WATER
  ACCUMULATION ON THE SURFACE OR AT JOINTS
  BETWEEN MEMBERS.

9. FIRE BLOCKING SHALL BE CONSTRUCTED OF 2" NOMINAL LUMBER OF (2) THICKNESS OF 1" NOMINAL LUMBER WITH BROKEN LAP JOINTS OR OTHER MATERIALS APPROVED OR TESTED PER SECTION 717.2 OF THE 2021 IBC.

10. STAIR CONSTRUCTION SHALL MEET THE FOLLOWING REQUIREMENTS PER SECTION 1009 OF THE 2021 IBC.

- A. THE MINIMUM STAIRWAY WIDTH SHALL NOT BE LESS THAN 44 INCHES CLEAR WIDTH. STAIRWAYS SERVING AN OCCUPANT LOAD OF LESS THAN 50 SHALL HAVE A WIDTH OF NOT LESS THAN 36 INCHES. HANDRAILS MAY PROJECT INTO THE REQUIRED WIDTH A DISTANCE OF 4 1/2" FROM EACH SIDE OF A STAIRWAY.
- B. HEADROOM: STAIRWAYS SHALL HAVE A MINIMUM HEADROOM CLEARANCE OF 80 INCHES MEASURED VERTICALLY FROM A LINE CONNECTING THE EDGE OF THE NOSING. SUCH HEADROOM SHALL BE CONTINUOUS ABOVE THE STAIRWAY TO THE POINT WHERE THE LINE INTERSECTS THE LANDING BELOW, ONE TREAD DEPTH BEYOND THE BOTTOM RISER. THE MINIMUM CLEARANCE SHALL BE MAINTAINED THE FULL WIDTH OF THE STAIRWAY AND LANDING
- C. STAIR TREADS AND RISERS: STAIR RISER HEIGHTS SHALL BE 7 INCHES MAXIMUM AND 4 INCHES MINIMUM. STAIR TREAD DEPTH SHALL BE 11 INCHES MINIMUM. THE RISER HEIGHT SHALL BE MEASURED VERTICALLY BETWEEN THE LEADING EDGES OF ADJACENT TREADS. THE TREAD DEPTH SHALL BE MEASURED HORIZONTALLY BETWEEN THE VERTICAL PLANES OF THE FOREMOST PROJECTION OF ADJACENT TREADS AND AT A RIGHT ANGLE TO THE TREAD'S LEADING EDGE.
- D. STAIR TREADS AND RISERS SHALL BE OF UNIFORM SIZE AND SHAPE. THE TOLERANCE BETWEEN THE LARGEST AND SMALLEST RISER HEIGHT OR BETWEEN THE LARGEST AND SMALLEST TREAD DEPTH SHALL NOT EXCEED 0.375 INCH MEASURED AT A RIGHT ANGLE TO THE TREADS LEADING EDGE.
- E. STAIRWAY LANDINGS: THERE SHALL BE A FLOOR OR LANDING AT THE TOP AND BOTTOM OF EACH STAIRWAY. THE WIDTH OF LANDINGS SHALL NOT BE LESS THEN THE WIDTH OF STAIRWAYS THEY SERVE. EVERY LANDING SHALL HAVE A MINIMUM DIMENSION MEASURED IN THE DIRECTION OF TRAVEL EQUAL TO THE WIDTH OF THE STAIRWAY. SUCH DIMENSION NEED NOT EXCEED 48 INCHES WHERE THE STAIRWAY HAS A STRAIGHT RUN. DOORS OPENING ONTO A LANDING SHALL NOT REDUCE THE LANDING TO LESS THAN ONE-HALF THE REQUIRED WIDTH. WHEN FULLY OPEN, THE DOOR SHALL NOT PROJECT MORE THAN 7 INCHES INTO A LANDING.
- F. STAIRWAY CONSTRUCTION: ALL STAIRWAYS SHALL BE BUILD OF MATERIALS CONSISTENT WITH THE TYPES PERMITTED FOR THE TYPE OF CONSTRUCTION OF THE BUILDING, EXCEPT THAT WOOD HANDRAILS SHALL BE PERMITTED FOR ALL TYPES OF CONSTRUCTION.
- G. OUTDOOR CONDITIONS: OUTDOOR STAIRWAYS AND OUT DOOR APPROACHES TO STAIRWAYS SHALL BE DESIGNED SO THAT WATER WILL NOT ACCUMULATE ON WALKING SURFACES.
- H. ENCLOSURES UNDER STAIRWAYS. THE WALLS AND SOFFITS WITHIN ENCLOSED USABLE SPACE UNDER ENCLOSED AND UNENCLOSED STAIRWAYS SHALL BE PROTECTED BY 1-HOUR FIRE-RESISTANCE-RATED CONSTRUCTION OR THE FIRE-RESISTANCE RATING OF THE STAIRWAYS ENCLOSURE, WHICHEVER IS GREATER. ACCESS TO THE ENCLOSED SPACE SHALL NOT BE DIRECTLY FROM WITHIN THE STAIR

11. HANDRAILS SHALL MEET THE FOLLOWING REQUIREMENTS PER SECTION 1012 OF THE 2021 IBC

- A. HEIGHTS: HANDRAIL HEIGHT, MEASURED ABOVE STAIR TREAD NOSING, OR FINISH SURFACE OF RAMP SLOPE SHALL BE UNIFORM, NOT LESS THAN 34 INCHES AND NOT MORE THAN 38 INCHES.
- B. HANDRAIL GRASPABILITY: HANDRAILS WITH A CIRCULAR CROSS-SECTION SHALL HAVE AN OUTSIDE DIAMETER OF AT LEAST 1.25 INCHES AND NOT GREATER THAN 2 INCHES OR SHALL PROVIDE EQUIVALENT GRASPABILITY. IF THE HANDRAIL IS NOT CIRCULAR, IT SHALL HAVE A PERIMETER DIMENSION OF AT LEAST 4 INCHES AND NOT GREATER THAN 6.25 INCHES WITH A MAXIMUM CROSS-SECTION DIMENSION OF 2.25 INCHES. EDGE SHALL HAVE A MINIMUM RADIUS OF 0.01 INCHES.
- C. CONTINUITY: HANDRAIL GRIPPING SURFACES SHALL BE CONTINUOUS, WITHOUT INTERRUPTION BY NEWELL POSTS OR OTHER OBSTRUCTIONS.
- D. HANDRAIL EXTENSIONS: HANDRAILS SHALL RETURN TO A WALL GUARD OR THE WALKING SURFACE OR SHALL BE CONTINUOUS TO THE HAND RAIL OF AN ADJACENT STAIR FLIGHT OR RAMP RUN. AT STAIRWAYS WHERE HANDRAILS ARE NOT CONTINUOUS BETWEEN FLIGHTS, THE HANDRAILS SHALL EXTEND HORIZONTALLY AT LEAST 12 INCHES BEYOND THE TOP RISER AND CONTINUE TO SLOPE FOR THE DEPTH OF ONE TREAD BEYOND THE BOTTOM RISER. AT RAMPS WHERE HANDRAILS ARE NOT CONTINUOUS BETWEEN RUNS, THE HANDRAIL SHALL EXTEND HORIZONTALLY ABOVE THE LANDING 12 INCHES MINIMUM BEYOND THE TOP AND BOTTOM RAMPS.
- E. CLEARANCE: CLEAR SPACE BETWEEN A HANDRAIL AND A WALL OR OTHER SURFACE SHALL BE A MINIMUM OF 1.5 INCHES. A HANDRAIL AND A WALL OR OTHER SURFACE ADJACENT TO THE HANDRAIL SHALL BE FREE OF ANY SHARP OR ABRASIVE ELEMENTS.
- F. PROJECTIONS: ON RAMPS, THE CLEAR WIDTH BETWEEN HANDRAILS SHALL BE 36 INCHES MINIMUM. PROJECTIONS INTO THE REQUIRED WIDTH OF STAIRWAYS AND RAMPS AT EACH HANDRAIL SHALL NOT EXCEED 4.5 INCHES AT OR BELOW THE HANDRAIL HEIGHT. PROJECTIONS INTO THE REQUIRED WIDTH SHALL NOT BE LIMITED ABOVE THE MINIMUM HEADROOM HEIGHT REQUIRED.
- G. INTERMEDIATE HANDRAILS: STAIRWAYS SHALL HAVE INTERMEDIATE HANDRAILS LOCATED IN SUCH A MANNER SO THAT ALL PORTIONS OF THE STAIRWAY WIDTH REQUIRED FOR EGRESS CAPACITY ARE WITHIN 30 INCHES OF A HANDRAIL.

12. GUARD RAILS SHALL MEET THE FOLLOWING REQUIREMENTS PER SECTION 1013 OF THE 2021 IBC.

- A. GUARDS SHALL BE LOCATED ALONG OPEN-SIDED WALKING SURFACES, INCLUDING MEZZANINES, EQUIPMENT PLATFORMS, STAIRS, RAMPS AND LANDINGS THAT ARE LOCATED MORE THAN 30 INCHES MEASURED VERTICALLY TO THE FLOOR OR GRADE BELOW AT ANY POINT WITHIN 36 INCHES HORIZONTALLY TO THE EDGE OF THE OPEN SIDE. WHERE GLASS IS USED TO PROVIDE A GUARD OR AS A PORTION OF THE GUARD SYSTEM, THE GUARD SHALL ALSO COMPLY WITH SECTION 2407 OF THE 2021IBC.
- B. HEIGHT: REQUIRED GUARDS SHALL BE NOT LESS THAN 42 INCHES HIGH, MEASURED VERTICALLY ABOVE THE ADJACENT WALKING SURFACES, ADJACENT FIXED SEATING OR THE LINE CONNECTING THE LEADING EDGES OF THE TREADS
- C. OPENING LIMITATIONS: REQUIRED GUARDS SHALL NOT HAVE OPENINGS WHICH ALLOW PASSAGE OF A SPHERE 4 INCHES IN DIAMETER FROM THE WALKING SURFACE TO THE REQUIRED GUARD HEIGHT.
- D. MECHANICAL EQUIPMENT: GUARDS SHALL BE PROVIDED WHERE APPLIANCES, EQUIPMENT, FANS, ROOF HATCH OPENINGS OR OTHER COMPONENTS THAT REQUIRE SERVICE ARE LOCATED WITHIN 10 FEET OF A ROOF EDGE OR OPEN SIDE OF A WALKING SURFACE AND SUCH EDGE OR OPEN SIDE IS LOCATED MORE THAN 30 INCHES ABOVE THE FLOOR, ROOF OR GRADE BELOW. THE GUARD SHALL BE CONSTRUCTED SO AS TO PREVENT THE PASSAGE OF A SPHERE 21 INCHES IN DIAMETER. THE GUARD SHALL EXTEND NOT LESS THAN 30 INCHES BEYOND EACH END OF SUCH APPLIANCE, EQUIPMENT, FAN OR COMPONENT.
- E. ROOF ACCESS: GUARDS SHALL BE PROVIDED WHERE THE ROOF HATCH OPENING IS LOCATED WITHIN 10 FEET OF A ROOF EDGE OR OPEN SIDE OF A WALKING SURFACE AND SUCH EDGE OR OPEN SIDE IS LOCATED MORE THAN 30 INCHES ABOVE THE FLOOR ROOF OR GRADE BELOW. THE GUARD SHALL BE CONSTRUCTED SO AS TO PREVENT THE PASSAGE OF A SPHERE 21 INCHES IN DIAMETER.

13. SAFETY GLAZING SHALL BE INSTALLED IN HAZARDOUS LOCATIONS IDENTIFIED IN SECTION 2406.3 AND SHALL MEET THE REQUIREMENTS PER SECTION 2406 OF THE 2021 IBC.

14. COORDINATE WITH MECHANICAL AND PLUMBING ON PLANS FOR ALL EQUIPMENT AND FIXTURE LOCATION. COORDINATE WITH MECHANICAL AND PLUMBING FIXTURE SCHEDULES. COORDINATE WITH MECHANICAL AND PLUMBING KEY NOTES, IBC AND IPC CODES FOR INSTALLATION REQUIREMENTS.

15. COORDINATE WITH ELECTRICAL PLANS FOR ALL ELECTRICAL SWITCHES, SCHEMATIC WIRING, EQUIPMENT AND FIXTURE LOCATIONS. COORDINATE WITH ELECTRICAL KEY NOTES, INTERNATIONAL BUILDING CODE AND RELATED CODES FOR INSTALLATION REQUIREMENTS.

16. PROVIDE CAULKING AT INTERIOR AND EXTERIOR AT ALL JOINTS BETWEEN DISSIMILAR MATERIALS WITH A CONTINUOUS BEAD OF SILICON BASE CAULK APPROVED BY ENGINEER.

17. APPROVED CORROSION RESISTANT FLASHING SHALL BE PROVIDED IN THE EXTERIOR WALL ENVELOPE IN SUCH A MANNER AS TO PREVENT ENTRY OF WATER INTO THE WALL CAVITY OR PENETRATION OF WATER TO THE BUILDING STRUCTURAL FRAMING COMPONENTS. APPROVED FLASHING SHALL BE INSTALLED AT THE FOLLOWING LOCATIONS.

## ARCHITECTURAL:

1. GRADING SHALL SLOPE A MINIMUM OF 6 INCHES IN THE FIRST 10'-0" AWAY FROM BUILDING.

2. PATIO TO BE 4" CONCRETE SLAB OVER MINIMUM 4" COMPACTED GRAVEL. SLOPE MINIMUM OF 1/8" PER FOOT TO DRAIN AWAY FROM BUILDING. PROVIDE TURNED DOWN GRADE BEAM AT EDGES. DOWEL SLAB INTO FOUNDATION WALLS WITH #4 @ 24 " O/C.

3. GYPSUM BOARD TO BE 1/2" THICK (UNLESS NOTED OTHERWISE ON PLANS) ATTACHED TO FRAMING W/ APPROVED SCREWS AS PER MFG. PROVIDE A LEVEL 4 FINISH AS PER INDUSTRY STANDARDS. PROVIDE SQUARE CORNER BEAD / TRIM FINISH. WALLS TO HAVE SMOOTH FINISH TYPICAL, CEILING TO HAVE SMOOTH FINISH TYPICAL.

4. PROVIDE WATER RESISTANT GYPSUM BOARD IN ALL WET LOCATIONS.

5. BATHTUB AND SHOWER FLOORS AND WALLS ABOVE BATHTUBS WITH INSTALLED SHOWER HEADS SHALL BE FINISHED WITH A NONABSORBENT SURFACE. SUCH WALL SURFACES SHALL EXTEND TO A HEIGHT OF NOT LESS THAN 72" ABOVE THE FLOOR PROVIDE TEMPERED OR LAMENTED SAFETY GLASS DOORS AND ENCLOSURES WHERE INDICATED ON PLANS.

## **ELECTRICAL NOTES:**

1. THE ELECTRICAL SYSTEM TO BE INSTALLED IN STRICT ACCORDANCE WITH LOCAL, STATE, AND NATIONAL CODES. THE CONTRACTOR SHALL PERFORM ALL WORK IN CONFORMITY WITH THESE REGULATIONS WHETHER OR NOT SUCH WORK IS SPECIFICALLY SHOWN ON DRAWINGS.

2. THE CONTRACTOR SHALL BE RESPONSIBLE TO FURNISH AND INSTALL FEEDERS, PANELS BOARDS, RELAY BRANCH CIRCUIT WIRING, CONDUITS, WIRE, METER BASES, COMPLETE WIRING FOR MOTORS, EXHAUST FANS, LINE VOLTAGE CONNECTIONS FOR HVAC EQUIPMENT SPECIALTY LIGHTING FIXTURES, OUTLET BOXES, COVER PLATES, WALL SWITCHES, FIXTURES RECEPTACLES, ETC.

3. ALL DRAWINGS INDICATE LOCATIONS AS DIAGRAMMATIC. LOCATIONS SHALL BE PER APPROPRIATE CODES AND OWNER. CONTRACTOR TO COORDINATE WITH MECHANICAL CONTRACTOR FOR ALL POWER REQUIREMENTS.

4. ELECTRICAL SERVICE CAPACITY AND SIZE SHALL BE COMPUTED BY METHOD INDICATED IN THE IBC AND NATIONAL ELECTRICAL CODE. PANELS OR CABINETS ENCLOSING FUSES, CIRCUIT BREAKERS, SWITCHES OR OTHER ELECTRICAL SERVICE EQUIPMENT SHALL BE IN AN INCONSPICUOUS ACCESSIBLE AND PROTECTED LOCATION. ELECTRICAL PANEL CLEARANCES TO BE A MINIMUM 30" WIDE 36" DEPTH AND 6'-6" FROM FLOOR TOP. ELECTRICAL METER BASE SHALL BE LOCATED IN AN AREA THAT IS PROTECTED FROM OUTSIDE WEATHER.

5. ALL STRUCTURED WIRING TO HAVE A MINIMUM SEPARATION OF 12" BETWEEN HIGH VOLTAGE WIRING.

#### **MECHANICAL NOTES:**

1. THE MECHANICAL SYSTEM TO BE INSTALLED IN STRICT ACCORDANCE WITH LOCAL, STATE, AND NATIONAL CODES. THE CONTRACTOR SHALL PROVIDE AND INSTALL ALL ITEMS, RELATED TO THE PROJECT, AS PER INDUSTRY STANDARDS.

2. THE MECHANICAL CONTRACTOR TO BE RESPONSIBLE FOR THE COMPLETE MECHANICAL INSTALLATION AND PROVIDE A ONE YEAR WARRANTY AFTER OWNER'S ACCEPTANCE. THE CONTRACTOR SHALL SUPPLY THE OWNER WITH OPERATION AND MAINTENANCE MANUALS.

3. LINE VOLTAGE AND LOW VOLTAGE CONTROL WIRING IS BY THE MECHANICAL CONTRACTOR. COORDINATE WITH THE ELECTRICAL CONTRACTOR.

4. SUBMIT SPECIFICATION SHEETS ON ALL EQUIPMENT TO BE REVIEWED BY ENGINEER.

5. EXHAUST FANS SHALL BE SIZED FOR A MINIMAL RATE OF 50 CFM, DUCTED TO OUTSIDE. FANS TO BE DIRECT DRIVE CENTRIFUGAL UNITS WITH SLOW SPEED MOTOR PROVIDE ACOUSTICAL INSULATION GRILLS, CAPS, ETC.

6. THE CONTRACTOR SHALL LAYOUT AND REFERENCE ALL MECHANICAL DRAWINGS. THESE DRAWINGS SHALL BE FOR THE PURPOSE TO SHOW INTENT. CONTRACTOR SHALL PROVIDE ALL ENGINEERING REQUIRED TO SIZE DUCTS, GRILL, REGISTERS, ETC. REVIEW ALL LOCATIONS AND PLACEMENT FOR GRILLS, ETC. WITH OWNER PRIOR TO PLACEMENT.

7. REMOVE DEBRIS AND TRASH FROM DUCT WORK AND VACUUM CLEAN DUCTS. RETURN SUPPLY AND EXHAUST FANS BEFORE GRILLES AND REGISTERS ARE INSTALLED AND BEFORE CEILINGS AND WALLS ARE PAINTED. THE ADJUSTMENT OF THE AIR SYSTEMS SHALL BE DONE BY THE MECHANICAL CONTRACTOR SYSTEMS SHALL BE ADJUSTED TO WITHIN PLUS OR MINUS 5% OF THE AIR CAPACITY.

8. INSULATE ALL HEATING TRUNK AND BRANCH SUPPLY DUCTS IN UNFINISHED AREAS, CRAWL SPACES, ATTICS AND GARAGES.

9. PROVIDE COMBUSTION AIR TO BOTH THE FURNACE AND

## **GENERAL NOTES**

1. CONTRACTOR IS RESPONSIBLE FOR VERIFYING ALL DIMENSIONS AND CONDITIONS AT THE SITE BEFORE SUBMITTING A BID OR PROCEEDING WITH ANY PORTION OF THE WORK

2. WHENEVER QUESTIONS ARISE OR CONDITIONS ARE ENCOUNTERED WHICH ARE NOT COVERED BY OR ARE IN CONFLICT WITH THE CONTRACT DOCUMENTS, CONTACT PROJECT CONSULTANTS PRIOR TO TAKING ANY FURTHER ACTION.

3. ALL DIMENSIONS ARE TO FACE OF CONCRETE OR FACE OF STUD, U.N.O.

4. DO NOT SCALE DRAWING FOR DIMENSIONS.

5. DIMENSIONS NOTED AS N.T.S. ARE TO BE VERIFIED.

6. ALL WOOD IN CONTACT WITH A WITHIN 8" OF SOILS IS TO BE FIELD TREATED FOR MOISTURE, RODENT AND INSECT PROTECTION

7. THE CONTRACTOR SHALL COORDINATE THE SEQUENCING OF WORK WITH THE OWNER AND ARCHITECT TO MEET THE OWNERS SCHEDULE.

8. CONTRACTOR SHALL LEAVE WORK AREAS BROOM CLEAN AND FREE OF TOOLS, EQUIPMENT, ECT... AT THE END OF EACH SHIFT. ALL CONSTRUCTION ACTIVITY SHALL BE CONTAINED WITHIN CONSTRUCTION BARRICADES OR FENCES. CONTRACTOR SHALL PROTECT OWNERS EXISTING CONSTRUCTION AND EQUIPMENT ADJACENT TO NEW CONSTRUCTION. CONTRACTOR SHALL CLEAN ALL SURFACES TO "LIKE NEW" CONDITION AT THE COMPLETION OF WORK.

9. PROVIDE WATER SUPPLY ROUGH-IN AND ELECTRICAL SUPPLY TO IRRIGATION CONTROLS. PROVIDE PVC SLEEVE UNDER PAVEMENTS AND WALKS.

## **ENERGY NOTES**

 ALL WORK SHALL COMPLY WITH IECC 2021 REQUIREMENTS.
 PROVIDE R-VALUES TO MEET OR EXCEED THOSE FOUND IN TABLE C402.2.
 ROOF: R-49 CAVITY INSULATION
 2x6 WALLS: R-21 CAVITY INSULATION

2x4 WALLS: R-13 CAVITY INSULATION
SLAB: R-10 FOR 36" UN-HEATED SLAB
3. BUILDING ENVELOPE REQUIREMENTS TO MEET OR

3. BUILDING ENVELOPE REQUIREMENTS TO MEET OR EXCEED THOSE FOUND IN TABLE 402.4. ALL FENESTRATION TO BE LABELED BY MANUFACTURER AS PER IECC C303.1.3.

OPERABLE WINDOWS U-FACTOR 0.43 FIXED WINDOWS U-FACTOR 0.36 ENTRANCE DOORS U-FACTOR 0.77 GLAZING SHGC 0.40

#### PLUMBING NOTES:

1. THE PLUMBING SYSTEM TO BE INSTALLED IN STRICT ACCORDANCE WITH LOCAL, STATE AND NATIONAL CODES. THE CONTRACTOR SHALL PROVIDE AND INSTALL ALL ITEMS, RELATED TO THE PROJECT, AS PER INDUSTRY STANDARDS.

2. THE PLUMBING CONTRACTOR TO BE RESPONSIBLE FOR THE COMPLETE PLUMBING INSTALLATION AND PROVIDE A ONE YEAR WARRANTY AFTER OWNERS ACCEPTANCE.

3. VISIT THE JOB SITE PRIOR TO BIDDING THE PROJECT TO BECOME FAMILIAR WITH THE EXISTING CONDITIONS.

4. ALL VENTS SHALL BE GANGED TO THE FEWEST NUMBER POSSIBLE TO PENETRATE ROOF AND SHOULD BE A MINIMUM OF 10'-0" FROM EAVES. ALL VENTS TO BE SIZED AS PER IBC REQUIREMENTS AND OR NOT LESS THAN 3" DIAMETER PIPE. PROVIDE FLASHING AS REQUIRED.

5. SHOWER HEADS SHALL HAVE A FLOW RATE OF 2.5 GPM OR LESS

6. WATER CLOSET TO HAVE 1.6 GAL. MAX. FLUSH TANK.

7. ALL HOSE BIBS SHALL BE NON FREEZE TYPE WITH BACK FLOW PREVENTER

8. WATER HEATER SHALL BE ANCHORED OR STRAPPED IN THE UPPER AND LOWER THIRD OF THE APPLIANCE TO RESIST A HORIZONTAL FORCE EQUAL TO ONE THIRD THE OVERTURNING WEIGHT OF THE WATER HEATER, ACTING IN ANY HORIZONTAL DIRECTION, OR IN ACCORDANCE WITH THE APPLIANCE MANUFACTURERS RECOMMENDATIONS.

9. PROVIDE FLOOR DRAIN AND OR DRIP PAN UNDER WATER HEATER, SPA, HOT TUB, WASHING MACHINE, STEAM SHOWER EQUIPMENT, ETC. IF LOCATED ON WOOD FLOOR STRUCTURE.

10. THE CONTRACTOR SHALL INSTALL ALL PLUMBING FIXTURES IN STRICT ACCORDANCE WITH THE MANUFACTURES INSTRUCTIONS. TAKE CARE DURING BUILDING CONSTRUCTION TO SEE THAT PROVISIONS ARE MADE FOR PROPER FIXTURE SUPPORT AND THAT ROUGH IN PIPING IS ACCURATELY SET AND PROTECTED FROM MOVEMENT OR DAMAGE.

11. THE CONTRACTOR SHALL TEST ALL PIPING INCLUDING DRAINAGE WASTE LINES, WATER PIPING, NATURAL GAS PIPING, ETC. TEST IN ACCORDANCE WITH UNIFORM PLUMBING CODE AND LOCAL CODES AND AUTHORITIES. WATER LINES TO BE DISINFECTED IN ACCORDANCE WITH LOCAL HEALTH DEPARTMENT REGULATIONS.

12. CAULK AROUND ALL PLUMBING FIXTURES AT FLOORS AND WALLS WITH FLEXIBLE CAULKING COMPOUND. COLOR TO MATCH FIXTURE.

13. AFTER FIXTURES HAVE BEEN SET THE CONTRACTOR SHALL CAREFULLY PROTECT THEM FROM DAMAGE UNTIL THE BUILDING IS OCCUPIED BY THE OWNER JUST PRIOR TO ACCEPTANCE OF THE JOB BY THE OWNER, THE CONTRACTOR SHALL CLEAN ALL PLUMBING FIXTURES AND REMOVE LABELS.

14. PROVIDE ANTI-SCALD SHOWER VALVE ON ALL TUBS,

15. WASTE LINES SHALL BE PROVIDED WITH A CLEAN OUT AS REQUIRED. EXTEND CLEAN OUTS TO ACCESSIBLE SURFACE. DO NOT PLACE CLEAN OUTS IN FLOOR UNLESS APPROVED.

16. PLUMBING CONTRACTOR SHALL PROVIDE A TURN OFF VALVE AND DRAIN AT THE LOWEST LEVEL OF THE FACILITY. ALL FIXTURES SHALL BE ABLE TO DRAIN AT THIS POINT. PROVIDE FLOOR DRAIN AT LOCATION OF PLUMBING SYSTEM DRAIN.

17. PLUMBING CONTRACTOR TO ASSESS WATER PRESSURE AND ENSURE ADEQUATE PRESSURE IS AVAILABLE, FOR MULTIPLE FIXTURE USED SIMULTANEOUSLY WITH OUT PRESSURE DECREASE OR TEMPERATURE FLUCTUATION.

18. AN EXPANSION TANK IS TO BE INSTALLED ON THE SUPPLY

LINE TO THE WATER HEATER

12/2/2024 4:41:18 PM

DATE

**CONSTRUCTION NOTES** 



REVISIONS

MARK DATE DESCRIPTION

DRAWN: CRC
DESIGNER: CRC
REVIEWED: JD

PROJECT #

210C001

PROJECT #

210C001

JERÉMY DVE
No. 8845726
ELECTRONIC SEAL
12/02/2024

12/02/2024

BAR SCALE MEASUR FULL SIZE SHEET. FOR A HALF SIZ

SCALES

PROJECT NAME:
HERITAGE PARK BOOSTER
PUMP STATION

425 W 400 S, OREM UT

SHEET TITLE:

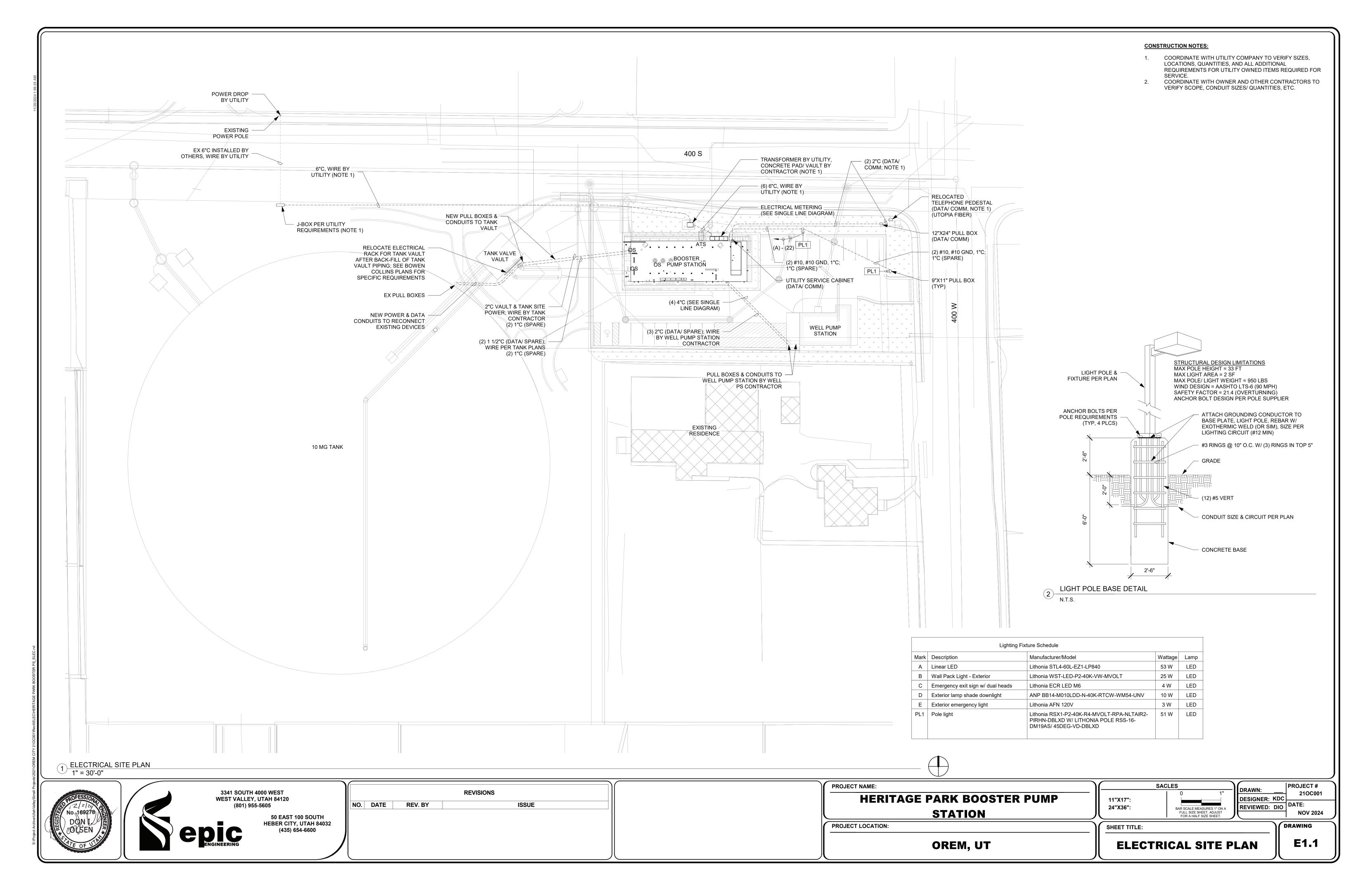
BUILDING GENERAL NOTES

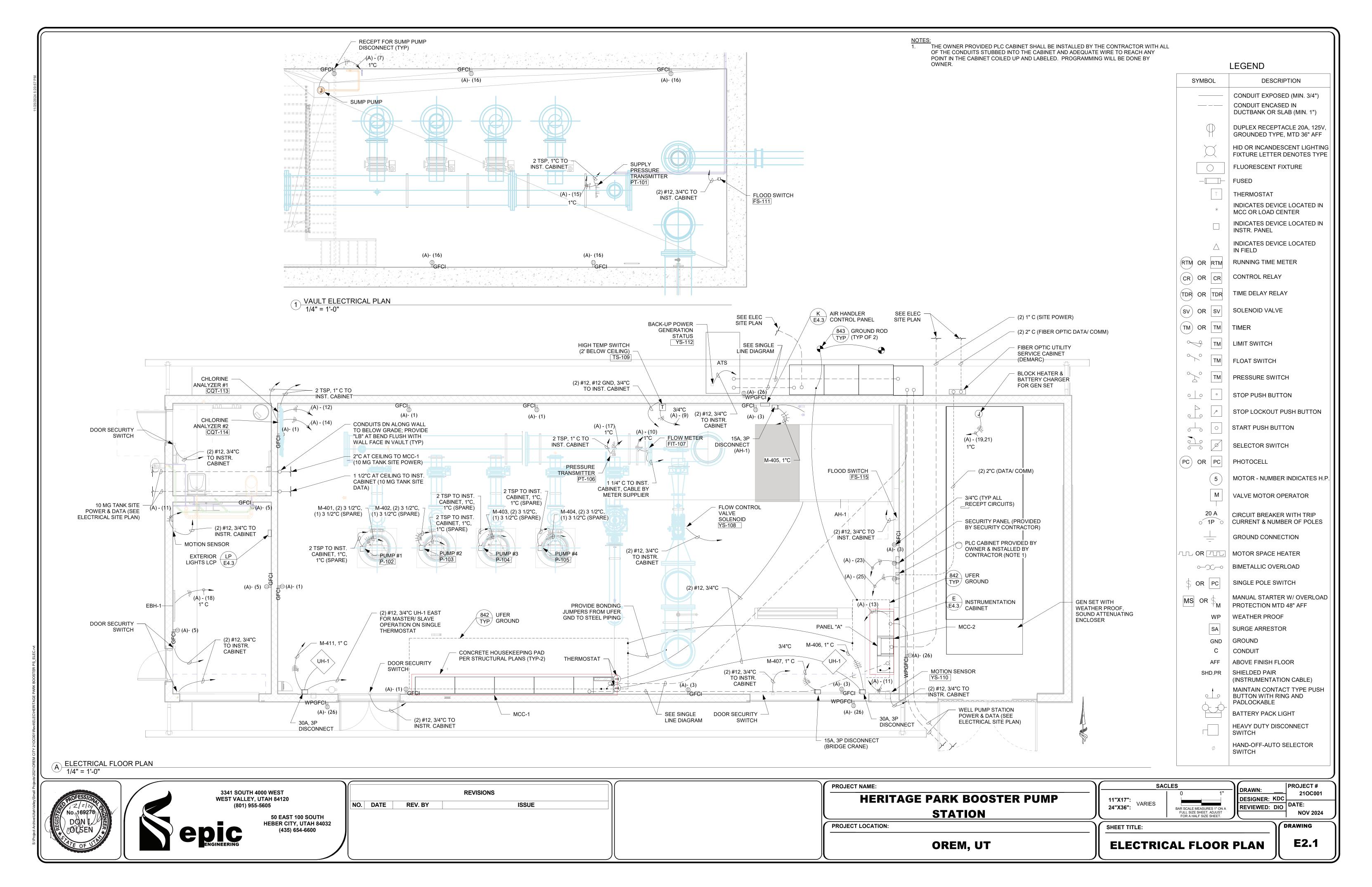
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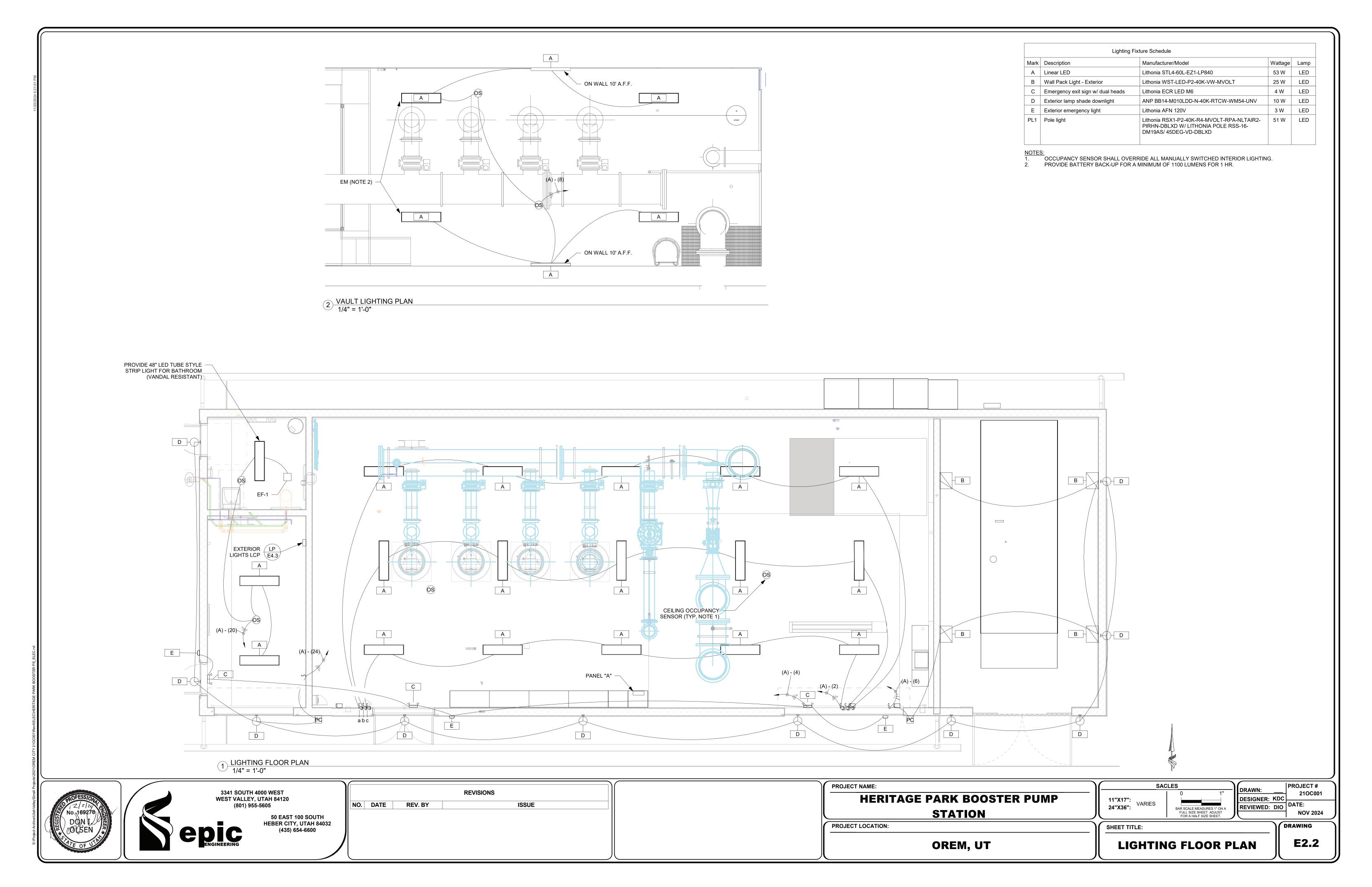
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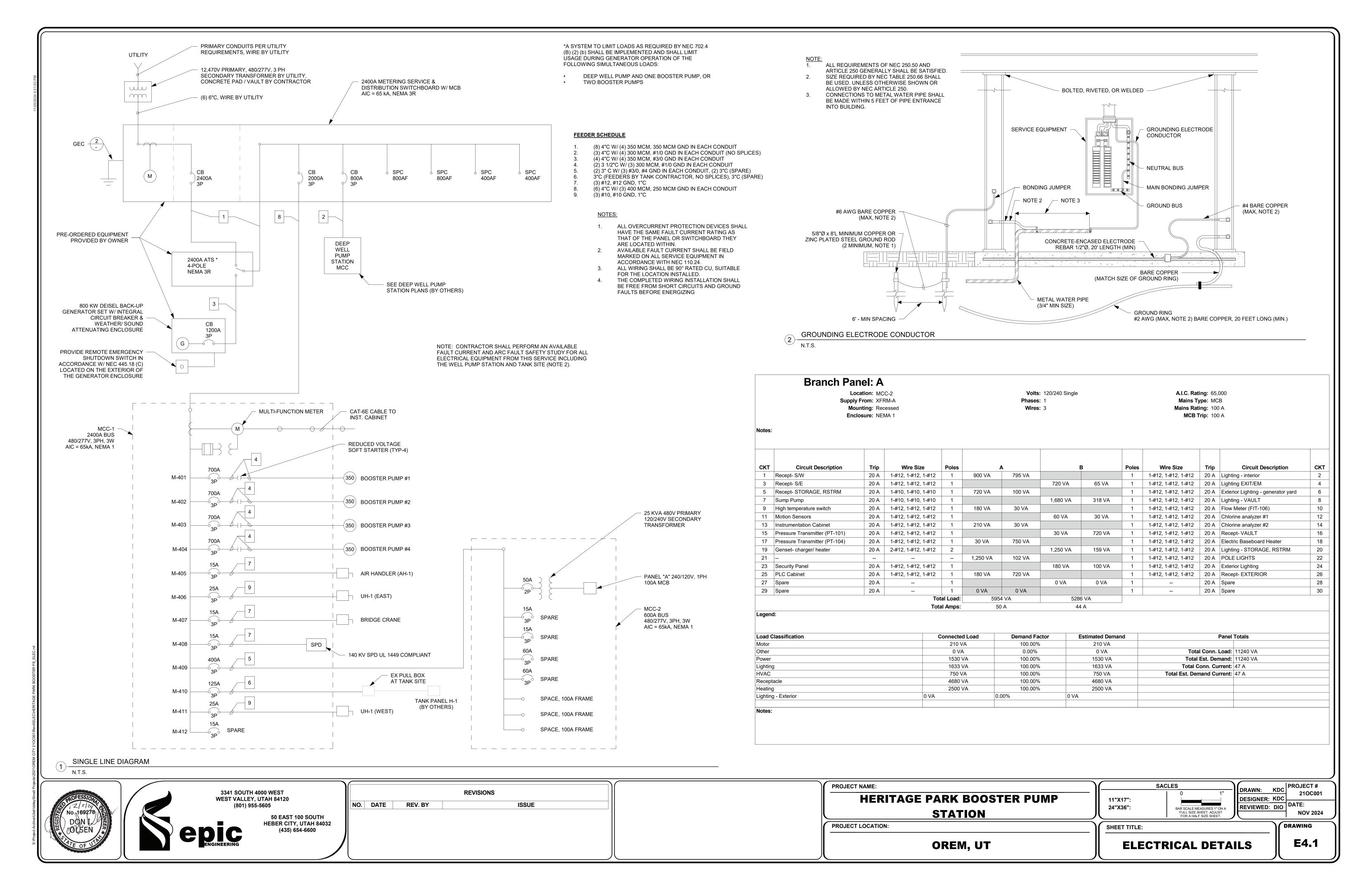
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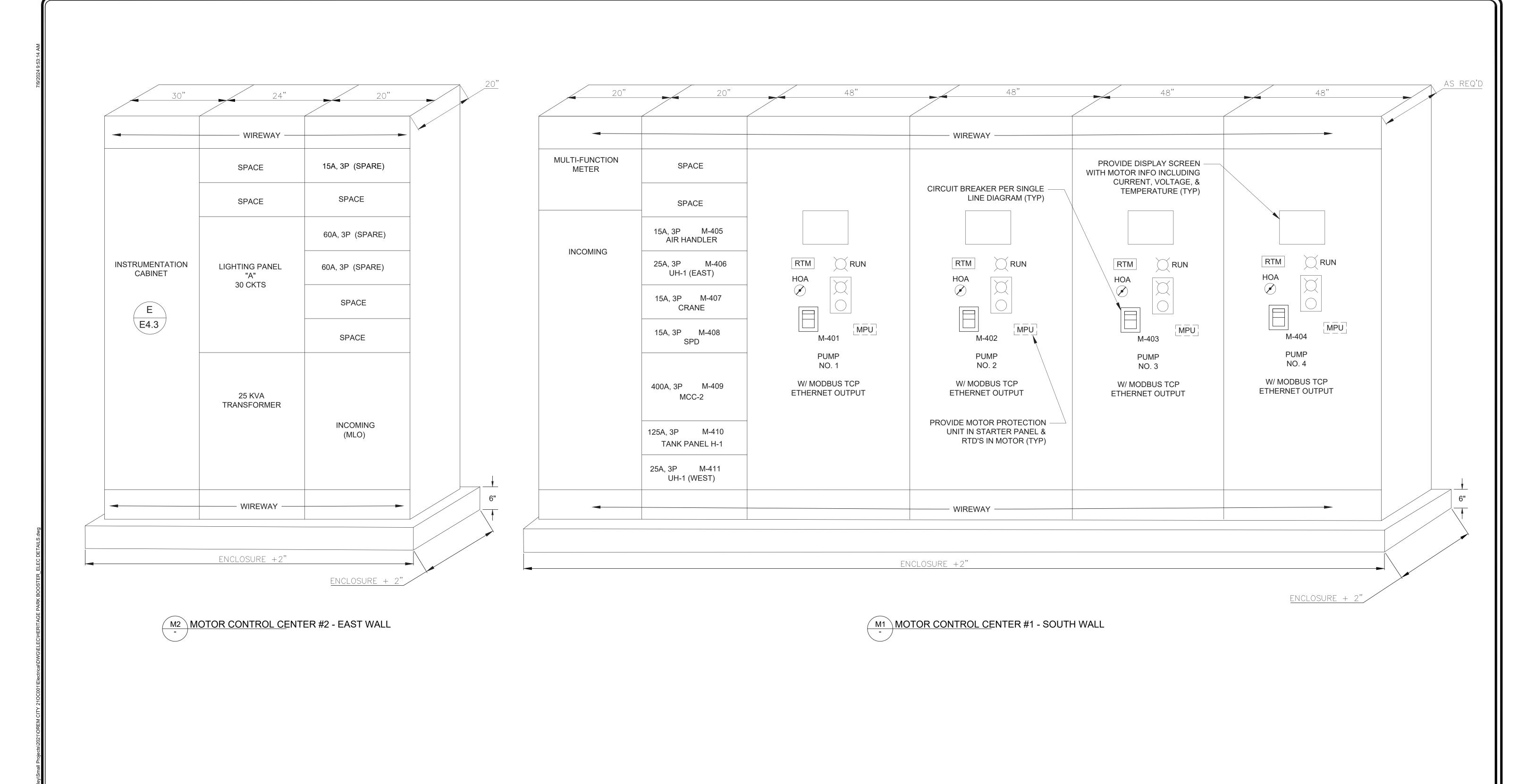
SHEET

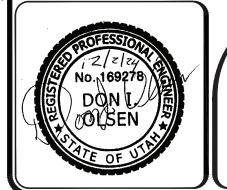






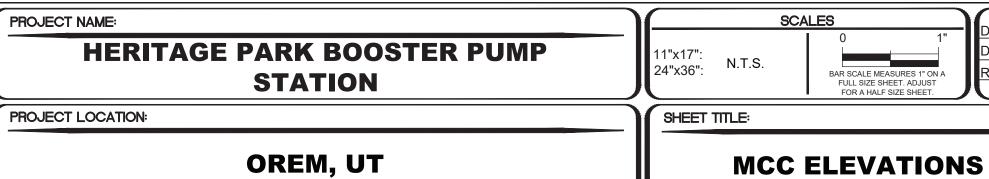








			REVISION
NO	DATE	REV. BY	ISSUE
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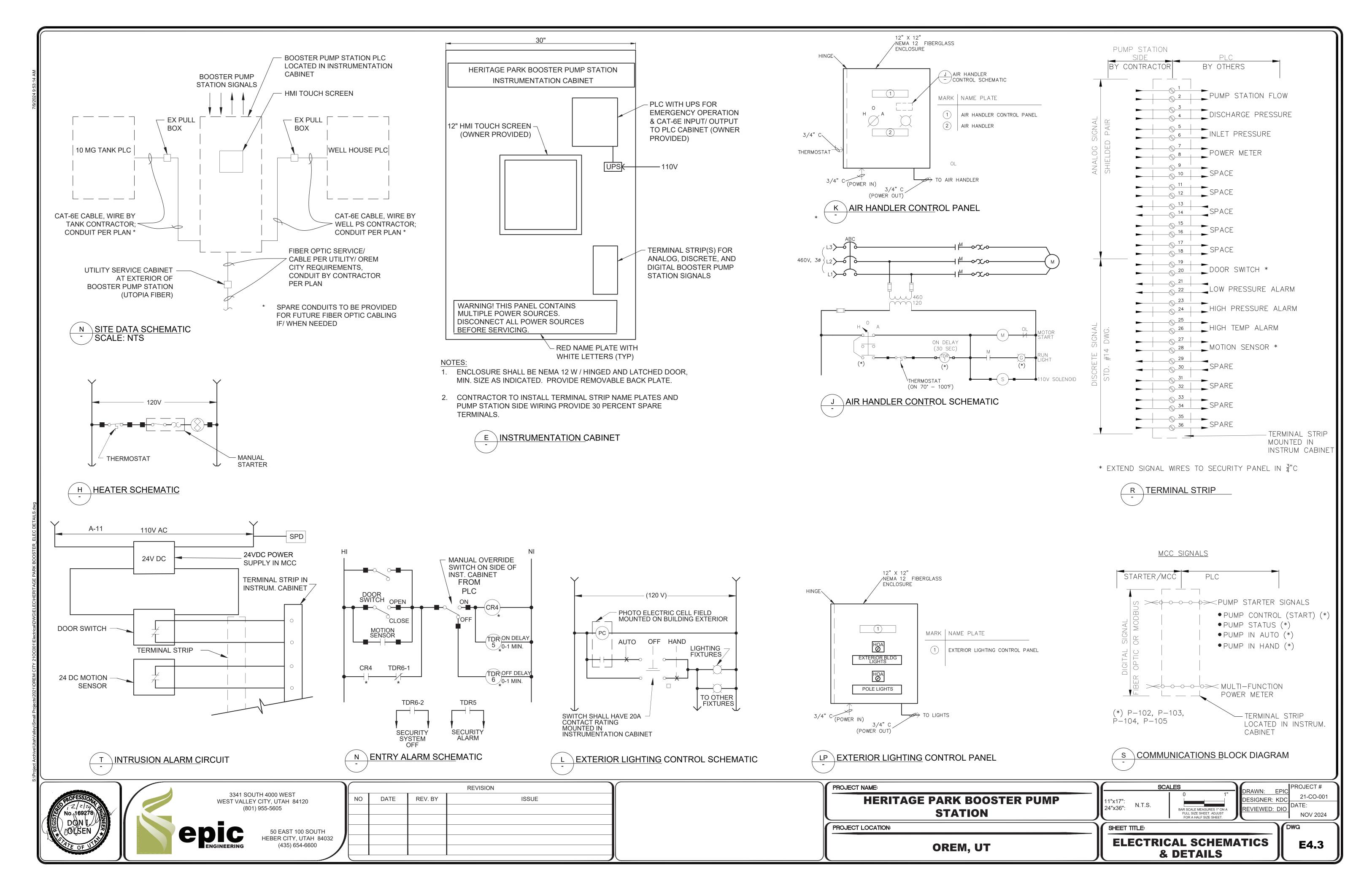
OREM, UT

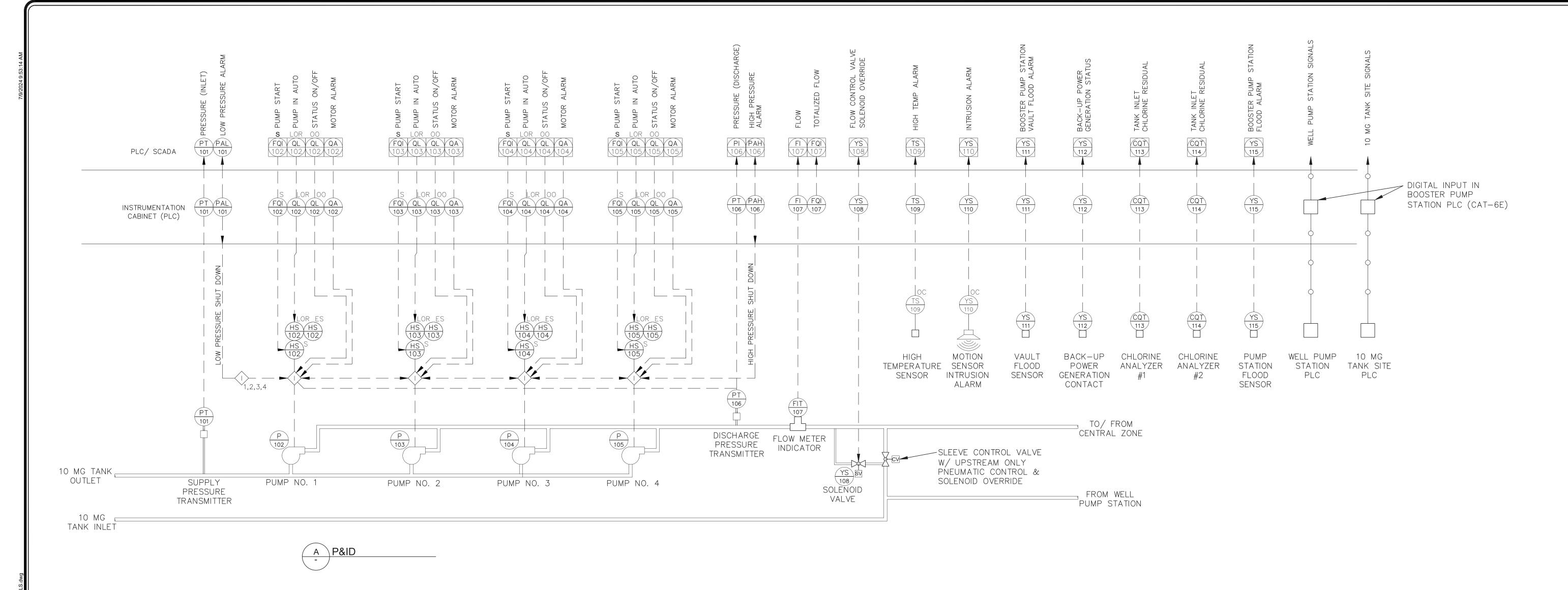
DWG

DESIGNER: KD0

**E4.2** 

NOV 2024





INSTRUMENTATION FUNCTION DESIGNATORS

> CONVERT FROM/TO, WHERE: I=CURRENT A= ANALOG O=ELECTROMAG, SONIC B= BINARY P=PNEUMATIC D= DIGITAL R=RESISTANCE E= VOLTAGE

HAND-AUTO HAND-OFF-AUTO LOCKOUT CLOSE LOC LOCAL-OFF-REMOTE LOR LOS LOCKOUT STOP LOCAL-REMOTE

H= HYDRAULIC

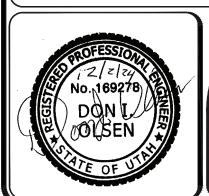
OPEN-CLOSE 00 ON-OFF OSC OPEN-STOP-CLOSE

RESET SLOS START-LOCKOUT STOP START-STOP

START SPEED CONTROL **EMERGENCY START** OVERLOAD LEAD-LAG

LOCAL-PLC

FIDOT I FT		0116	2055011015755			EIDOT I E		0114		7.0	5,507.15				
FIRST-LET	ITER	SUC	CCEEDING-LETTER	S		FIRST-LETTER		SUCCEEDING-LETTERS		FIRST-LETTER		SUCCEEDING-LETTERS			
MEASURED OR INITIATING VARIABLE	MODIFIER	READOUT OR PASSIVE FUNCTION	OUTPUT FUNCTION	MODIFIER		MEASURED OR INITIATING VARIABLE	MODIFIER	READOUT OR PASSIVE FUNCTION	OUTPUT FUNCTION	MODIFIER	MEASURED OR INITIATING VARIABLE	MODIFIER	READOUT OR PASSIVE FUNCTION	OUTPUT FUNCTION	MODIFIER
A ANALYSIS		ALARM			J	POWER	SCAN				R RADIATION		RECORD		
BURNER, COMBUSTION		USER'S CHOICE	USER'S CHOICE	USER'S CHOICE	К	TIME, TIME SCHEDULE	TIME RATE OF CHANGE		CONTROL STATION		S SPEED, FREQUENCY	SAFETY	STATUS	SWITCH	
C USER'S CHOICE			CONTROL		L	LEVEL		LIGHT		LOW	T TEMPERATURE			TRANSMIT	
O USER'S CHOICE	DIFFERENTIAL				T <sub>M</sub>	USER'S CHOICE	MOMENTARY			MIDDLE	U MULTIVARIABLE		MULTIFUNCTION	MULTIFUNCTION	MULTIFUNCTION
E VOLTAGE		SENSOR, (PRIM. ELEMENT)				TORQUE		USER'S CHOICE	USER'S CHOICE		V VIBRATION, MECH. ANALYSIS			VALVE, DAMPER LOUVER	
FLOW RATE	RATIO(FRACTION)							ORIFICE,	OOLIVO ONOIGE		W WEIGHT, FORCE		WELL		
G USER'S CHOICE		GLASS, VIEWING DEVICE						RESTRICTION			X UNCLASSIFIED	X AXIS	UNCLASSIFIED	UNCLASSIFIED	UNCLASSIFIED
H HAND		VIEWING DEVICE		HIGH	P	PRESSURE, VACUUM		POINT (TEST) CONNECTION			Y EVENT, STATE	Y AXIS		RELAY, COMPUTE, CONVERT	
CURRENT (ELEC.)		INDICATE		THOTT	Q	QUANTITY	INTEGRATE, TOTALIZE				OR PRESENCE POSITION,	Z AXIS		DRIVER, ACTUATOR,	





3341 SOUTH 4000 WEST WEST VALLEY CITY, UTAH 84120 (801) 955-5605

50 EAST 100 SOUTH HEBER CITY, UTAH 84032 (435) 654-6600

			REVISION			
NO	DATE	REV. BY	ISSUE			
<b>/</b>						

PROJECT NAME: **HERITAGE PARK BOOSTER PUMP STATION** 

11"x17": N.T.S. 24"x36": SHEET TITLE:

P&ID

PROJECT# 21-CO-001 DESIGNER: KD0 NOV 2024 DWG

PROJECT LOCATION: OREM, UT

**E4.4** 

