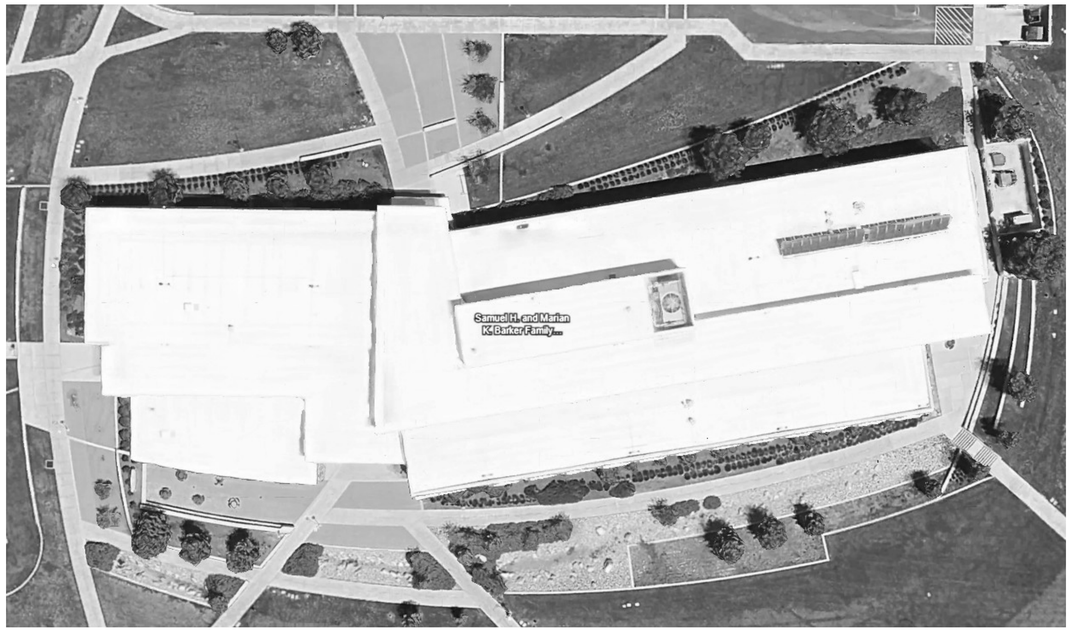
OGDEN WEBER TECHNICAL COLLEGE
HEALTH TECHNOLOGY DEWATERING

OTECH PROJECT NUMBER: 0000010945

PROJECT DESCRIPTION:
THE PROJECT INCLUDES ADDING SEVEN (7) NEW DEWATERING PUMPS AROUND THE BUILDING. DRAINAGE AROUND THE BUILDING IS BEING ADJUSTED TO BE HARD PIPED INSTEAD OF ALLOWING TO RUN THROUGH LANDSCAPE.

PROJECT SHEET INDEX

ARIAL VIEW



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REVIEWED FOR CODE COMPLIANCE
FOR COMPLIANCE WITH THE APPLICABLE CONSTRUCTION CODES IDENTIFIED BELOW.
☒ BUILDING ☒ STRUCTURAL
☒ MECHANICAL ☒ PLUMBING
☒ ELECTRICAL ☒ ENERGY
☒ ACCESSIBILITY ☐ FIRE
PLAN REVIEW ACCEPTANCE OF DOCUMENTS DOES NOT AUTHORIZE CONSTRUCTION TO PROCEED IN VIOLATION OF ANY FEDERAL, STATE, OR LOCAL REGULATIONS.
BY: DATE: 06/30/25
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DFCM

DFCM APPROVAL STAMP

PROFESSIONAL ENGINEER
2-28-25
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NO. 8677128
STATE OF UTAH

OGDEN WEBER TECHNICAL COLLEGE

HEALTH TECHNOLOGY DEWATERING

200 N Washington Blvd
Ogden, UT 84404

Mark:	Date:	Description

ISSUE:	CONSTRUCTION DOCS
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SPECTRUM PROJECT NO:	240764
OTECH PROJECT NO:	0000010945
DRAWN BY:	RHB
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RECORD DRAWING DATE:	
SIGNATURE:	

SHEET TITLE

COVER SHEET

G1

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SYMBOL LEGEND - PIPING

NOTE: ALL ABBREVIATIONS MAY NOT BE USED.

SYMBOL	DESCRIPTION
	SHUT OFF VALVE
	GATE VALVE
	CHECK VALVE
	AUTOMATIC 2-WAY VALVE
	AUTOMATIC 3-WAY VALVE
	GLOBE VALVE
	BALL VALVE
	RELIEF VALVE
	PRESSURE REDUCING VALVE
	BUTTERFLY VALVE
S	SOLENOID VALVE
	ANGLE VALVE
	VENTURI VALVE
	BALANCING OR PLUG COCK
	FLOW SETTER
	EXPANSION VALVE
	GAS COCK
MAV	MANUAL AIR VENT
	STRAINER
	GAUGE COCK
	FLEXIBLE CONNECTION
	PRESSURE GAUGE
	THERMOMETER
	PIPE REDUCER
	REFRIGERANT SITE GLASS
	REFRIGERANT STRAINER
	REFRIGERANT FILTER DRIER
	90 DEGREE ELBOW UP
	90 DEGREE ELBOW DOWN
	90 DEGREE TEE UP
	90 DEGREE TEE DOWN
	PIPE UNION
	PIPE CAP
	PIPE ANCHOR
	FLOAT AND THERMOSTATIC TRAP

SYMBOL LEGEND - MECH

NOTE: ALL ABBREVIATIONS MAY NOT BE USED.

SYMBOL	DESCRIPTION
	SQUARE OR RECTANGULAR SUPPLY DIFFUSER
	SQUARE OR RECTANGULAR RETURN DIFFUSER
	SQUARE OR RECTANGULAR EXHAUST DIFFUSER
	ROUND DIFFUSER
	LINEAR SLOT GRILLE OR DIFFUSER
	FLEXIBLE DUCT
	SIDEWALL GRILLE OR REGISTER
	DUCT HIGH EFFICIENCY TAKE OFF WITH BALANCING DAMPER
	BALANCING DAMPER
	FIRE DAMPER
F	FIRE / SMOKE COMBINATION DAMPER
T S H	THERMOSTAT - SENSOR - HUMIDISTAT

SYMBOL LEGEND - DUCTWORK

NOTE: ALL ABBREVIATIONS MAY NOT BE USED.

SYMBOL	DESCRIPTION
	RECTANGULAR SUPPLY DUCT UP
	RECTANGULAR SUPPLY DUCT DOWN
	RECTANGULAR RETURN DUCT UP
	RECTANGULAR RETURN DUCT DOWN
	RECTANGULAR EXHAUST DUCT UP
	RECTANGULAR EXHAUST DUCT DOWN
	ROUND SUPPLY DUCT UP
	ROUND SUPPLY DUCT DOWN
	ROUND RETURN DUCT UP
	ROUND RETURN DUCT DOWN
	ROUND EXHAUST DUCT UP
	ROUND EXHAUST DUCT DOWN
	OVAL SUPPLY DUCT UP
	OVAL SUPPLY DUCT DOWN
	OVAL RETURN DUCT UP
	OVAL RETURN DUCT DOWN
	OVAL EXHAUST DUCT UP
	OVAL EXHAUST DUCT DOWN
	SPIRAL OVAL DUCT
	SPIRAL ROUND DUCT
	DUCT INSULATION
	DUCT LINING
	90° RECTANGULAR ELBOW WITH TURNING VANES
	90° ROUND RADIUS ELBOW
	GORED OVAL RADIUS ELBOW
	DUCT SIZE OR SHAPE TRANSITION
	DUCT TO BE DEMOLISHED

PIPING LEGEND

NOTE: ALL ABBREVIATIONS MAY NOT BE USED.

ABBREVIATION	DESCRIPTION
——CHWR——	CHILLED WATER RETURN
——CHWS——	CHILLED WATER SUPPLY
——CA——	COMPRESSED AIR
——CD——	CONDENSATE DRAIN
——C02——	CARBON DIOXIDE
——CWR——	CONDENSER WATER RETURN
——CWS——	CONDENSER WATER SUPPLY
——FP——	FIRE PROTECTION
——FOR——	FUEL OIL RETURN
——FOS——	FUEL OIL SUPPLY
——FOV——	FUEL OIL VENT
——GR——	GLYCOL RETURN
——GS——	GLYCOL SUPPLY
——HPC——	HIGH PRESSURE CONDENSATE
——MPC——	MEDIUM PRESSURE CONDENSATE
——LPC——	LOW PRESSURE CONDENSATE
——HPS——	HIGH PRESSURE STEAM
——MPS——	MEDIUM PRESSURE STEAM
——LPS——	LOW PRESSURE STEAM
——HHWR——	HEATING HOT WATER RETURN
——HHWS——	HEATING HOT WATER SUPPLY
——LPG——	LIQUID PROPANE GAS
——MA——	MEDICAL AIR
——NG——	NATURAL GAS
——NO——	NITROUS OXIDE
——O——	OXYGEN
——PC——	PUMPED CONDENSATE
——RG——	REFRIGERANT GAS
——RL——	REFRIGERANT LIQUID
——SMR——	SNOW MELT RETURN
——SMS——	SNOW MELT SUPPLY
——VAC——	VACUUM

SYMBOL LEGEND - MISC

REFERENCE LINES AND SYMBOLS

SYMBOL	DESCRIPTION
- ---	VIEW OR DETAIL INDICATOR: # INDICATES DETAIL NUMBER, SHEET INDICATES DRAWING SHEET WHERE VIEW OR DETAIL IS SHOWN.
- ---	ELEVATION OR SECTION INDICATOR: # INDICATES VIEW NUMBER, SHEET INDICATES DRAWING SHEET WHERE VIEW IS SHOWN.
NAME ###	ROOM / SPACE INDICATOR
#	KEYNOTE INDICATOR
#	REVISION INDICATOR
XX-##	PLUMBING FIXTURE INDICATOR
XX-##	EQUIPMENT INDICATOR
TAG CFM	REGISTER, GRILLE, OR DIFFUSER INDICATOR
OR	BREAKLINE
MATCH LINE SEE XX/XXX	MATCHLINE INDICATOR
	CONTRACT LIMIT LINE: DASHDOT, WIDE LINE
	NEW CONNECTION TO EXISTING
	POINT OF DEMOLITION

ABBREVIATIONS

NOTE: ALL ABBREVIATIONS MAY NOT BE USED.

(E)	EXISTING
(F)	FUTURE
AC	AIR CONDITION(-ING,-ED)
APD	AIR PRESSURE DROP
BD	BALANCING DAMPER
BHP	BRAKE HORSE POWER
BTU	BRITISH THERMAL UNIT
BTUH	BTU/HOUR
CFH	CUBIC FEET PER HOUR
CFM	CUBIC FEET PER MINUTE
CV	CONTROL VALVE
DB	DRY BULB TEMPERATURE
DCW	DOMESTIC COLD WATER
DHW	DOMESTIC HOT WATER
DHWR	DOMESTIC HOT WATER RECIRC
DP	DEPTH, DEEP, OR DROP IN PRESSURE
EA	EXHAUST AIR
EER	ENERGY EFFICIENCY RATIO
EFF	EFFICIENCY
ELEC	ELECTRIC
ELEV	ELEVATION
ENT	ENTERING
EVAP	EVAPORATE(-E, -ING, -ED, -OR)
EWT	ENTERING WATER TEMPERATURE
EXT	EXTERNAL
FD	FIRE DAMPER
FLA	FULL LOAD AMPS
FPI	FINS PER INCH
FPM	FEET PER MINUTE
FPS	FEET PER SECOND
FSD	FIRE SMOKE DAMPER
GE	GREASE EXHAUST
GPH	GALLONS PER HOUR
GPM	GALLONS PER MINUTE
HD	HEAD
HG	MERCURY
HP	HORSEPOWER
HR	HOUR
HTG	HEATING
HZ	HERTZ (FREQUENCY)
IN	INCH
KW	KILOWATT
LAT	LEAVING AIR TEMPERATURE
LBS	POUNDS
LH	LATENT HEAT
LRA	LOCKED ROTOR AMPS
LVG	LEAVING
LWT	LEAVING WATER TEMPERATURE
MBH	THOUSAND BTU PER HOUR
MCA	MINIMUM CIRCUIT AMPS
MFR	MANUFACTURE(-ER, -ED)
NC	NORMALLY CLOSED OR NOISE CRITERIA
NIC	NOT IN CONTRACT
NO	NORMALLY OPEN
NPSH	NET POSITIVE SUCTION HEAD
NTS	NOT TO SCALE
OA	OUTSIDE AIR
OD	OUTSIDE DIAMETER
OZ	OUNCE
PD	PRESSURE DROP OR DIFFERENCE
PG	PROPOLENE GLYCOL
PH	PHASE
PPM	PARTS PER MILLION
PSF	POUNDS PER SQUARE FOOT
PSI	POUNDS PER SQUARE INCH
PSIA	PSI ABSOLUTE
PSIG	PSI GAUGE
RA	RETURN AIR
RECIRC	RECIRCULATE (-ER, -ED, -ING)
REFR	REFRIGERATION
REQD	REQUIRED
RLA	RATED LOAD AMPS
RPM	REVOLUTIONS PER MINUTE
SA	SUPPLY AIR
SCFM	STANDARD CUBIC FEET PER MINUTE
SCW	SOFT COLD WATER
SH	SENSIBLE HEAT
SP	STATIC PRESSURE
SPEC(S)	SPECIFICATION(S)
SQ	SQUARE
SS	SANITARY SEWER, SOIL, WASTE
STD	STANDARD
TA	TRANSFER AIR
TD	TEMP. DROP OR DIFF.
TEMP	TEMPERATURE
TOT	TOTAL
TSTAT	THERMOSTAT
TYP	TYPICAL
V	VOLT, VOLTAGE OR VENT
VAC	VACUUM
VAV	VARIABLE AIR VOLUME
VEL	VELOCITY
VENT	VENT, VENTILATION
VERT	VERTICAL
VFD	VARIABLE FREQUENCY DRIVE
VOL	VOLUME
VTR	VENT THROUGH ROOF
WB	WET BULB TEMP
WC	WATER COLUMN
WG	WATER GAUGE
WPD	WATER PRESSURE DROP
WTR	WATER

MECHANICAL GENERAL NOTES

1. THE MECHANICAL DRAWINGS SHOW THE GENERAL DESIGN, ARRANGEMENT, & EXTENT OF THE MECHANICAL SYSTEM. BECAUSE OF THE SMALL SCALE OF THE DRAWINGS, THESE DRAWINGS DO NOT SHOW ALL OFFSETS, BENDS, OR ELBOWS NECESSARY FOR THE COMPLETE INSTALLATION IN THE SPACE PROVIDED. CONTRACTOR SHALL MAKE ALTERATIONS AS MAY BE NECESSARY TO MAKE THE SYSTEM COMPLETE & OPERATIONAL IN ACCORDANCE WITH THE DESIGN INTENT.
2. MAJOR DEVIATIONS SUCH AS CHANGES IN SIZES, WEIGHTS, QUANTITIES, OR MATERIAL REQUIRE PRIOR APPROVAL BY THE DESIGN ENGINEER.
3. THE DRAWINGS & SPECIFICATIONS HAVE BEEN PREPARED TO SUPPLEMENT EACH OTHER & SHALL BE INTERPRETED AS AN INTEGRAL UNIT WITH THE ITEMS SHOWN ON ONE & NOT THE OTHER BEING FURNISHED & INSTALLED AS THOUGH SHOWN AND CALLED OUT IN BOTH DOCUMENTS.
4. THE ENTIRE MECHANICAL INSTALLATION SHALL CONFORM TO THE REQUIREMENTS OF THE MOST RECENTLY ADOPTED BUILDING CODES, MECHANICAL CODE, PLUMBING CODE, ELECTRICAL CODE, & ALL OTHER APPLICABLE CITY, COUNTY, STATE, & FEDERAL CODES & REGULATIONS IN EFFECT.
5. THE ENTIRE MECHANICAL INSTALLATION SHALL CONFORM TO ALL CODES, RULES, REGULATIONS, & REQUIREMENTS OF THE BUILDING OWNER.
6. ALL MECHANICAL COMPONENTS AND EQUIPMENT SHALL BE INSTALLED TO CONFORM WITH ANY APPLICABLE LOCAL SEISMIC REQUIREMENTS.
7. PRIOR TO FABRICATION & INSTALLATION OF ANY MECHANICAL COMPONENT THE CONTRACTOR SHALL COORDINATE THE INSTALLATION OF ALL MECHANICAL WORK WITH ALL OTHER BUILDING TRADES, INCLUDING BUILDING TRADES HIRED DIRECTLY BY THE OWNER. WHERE CONFLICTS MAY OCCUR, THEY SHALL BE RESOLVED PRIOR TO INSTALLATION.
8. VERIFY ALL REQUIRED SERVICE CONNECTIONS, INCLUDING ELECTRICAL CHARACTERISTICS, FOR ALL EQUIPMENT PRIOR TO ORDERING OR FABRICATING MECHANICAL EQUIPMENT AND COMPONENTS.
9. THE SPACE ABOVE CEILINGS IS LIMITED. CAREFUL COORDINATION IS REQUIRED WITH ALL TRADES BEFORE ANY PIPE, DUCT, OR EQUIPMENT IS ORDERED &/OR INSTALLED. ANY CONFLICTS &/OR CHANGES FOUND DURING INSTALLATION THAT RESULTS FROM THE LACK OF COORDINATION BY THE CONTRACTORS DURING THE SHOP DRAWING PROCESS ARE THE RESPONSIBILITY OF THE CONTRACTOR.
10. ALL MECHANICAL INFORMATION IS NOT SHOWN ON THE MECHANICAL DRAWINGS. THE CONTRACTOR SHALL BE RESPONSIBLE FOR COORDINATION OF ALL INFORMATION ON ALL OTHER CONSTRUCTION DOCUMENTS.
11. THE CONTRACTOR SHALL BE RESPONSIBLE TO REVIEW & USE, WHERE APPROPRIATE, ALL THE MECHANICAL DETAILS SHOWN ON THE DRAWINGS. DETAILS MAY OR MAY NOT BE CALLED OUT ON THE DRAWINGS WITH SYMBOLS OR KEYED NOTES. ANY CHANGES RESULTING FROM FAILURE TO INSTALL THE MECHANICAL SYSTEM WITHOUT USING THE INCLUDED DETAILS SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR.
12. ALL EQUIPMENT SHALL BE INDEPENDENTLY SUPPORTED FROM STRUCTURAL MEMBERS. STRUCTURAL ELEMENTS SHOWN IN DETAILS MAY OR MAY NOT PERTAIN TO ANY PORTION OF THE BUILDING. COORDINATE ALL MOUNTING REQUIREMENTS WITH ARCHITECTURAL & STRUCTURAL DRAWINGS AND SPECIFICATIONS.
13. ALL MECHANICAL COMPONENTS AND EQUIPMENT SHALL BE INSTALLED IN ACCORDANCE WITH ALL MANUFACTURER RECOMMENDATIONS.
14. ALL SIMILAR EQUIPMENT SHALL BE OF THE SAME MANUFACTURER. AIR INLETS & OUTLETS OF SIMILAR TYPES SHALL BE OF THE SAME MANUFACTURER.
15. ANY PART OF THE MECHANICAL INSTALLATION THAT FAILS, IS DEEMED UNFIT, OR BECOMES DAMAGED DURING CONSTRUCTION SHALL BE REPAIRED OR REPLACED BY THE CONTRACTOR AT NO ADDITIONAL COST TO THE OWNER. THE CONTRACTOR SHALL BE RESPONSIBLE FOR EQUIPMENT CHECK-IN, SAFEKEEPING, & DAMAGE.
16. COORDINATE WITH ARCHITECTURAL REFLECTED CEILING PLAN FOR EXACT LOCATION OF ALL CEILING DIFFUSERS & GRILLES.
17. CONTRACTOR SHALL OPERATE INSTALLED &/OR MODIFIED SYSTEMS & DEMONSTRATE ALL ASPECTS OF THE SYSTEM TO THE ENGINEER &/OR OWNER TO PROVE ALL ASSOCIATED SYSTEMS ARE OPERATIONAL.
18. DURING CONSTRUCTION THE CONTRACTOR SHALL MAINTAIN A SET OF AS-BUILT REDLINED RECORD DRAWINGS AT THE PROJECT SITE. ALL CHANGES OR DEVIATIONS IN LAYOUT, ROUTING, EQUIPMENT, COMPONENTS, & ACCESSORIES SHALL BE RECORDED. THESE REDLINED DRAWINGS SHALL BE GIVEN TO THE ARCHITECT / ENGINEER AFTER THE FINAL INSPECTION IN ACCORDANCE WITH PROJECT SPECIFICATIONS.
19. ALL DUCT ELBOWS SHALL BE LONG RADIUS, UNLESS NOTED OTHERWISE.

DEFINITIONS

NOTE: ALL DEFINITIONS MAY NOT BE USED.

INDICATED: THE TERM "INDICATED" REFERS TO GRAPHIC REPRESENTATIONS, NOTES, OR SCHEDULES ON THE DRAWINGS, OTHER PARAGRAPHS OR SCHEDULES IN THE SPECIFICATIONS, AND SIMILAR REQUIREMENTS IN THE CONTRACT DOCUMENTS. WHERE TERMS SUCH AS "SHOWN", "NOTED", "SCHEDULED", AND "SPECIFIED" ARE USED, IT IS TO HELP THE READER LOCATE THE REFERENCE, NO LIMITATION ON LOCATION IS INTENDED.

DIRECTED: TERMS SUCH AS "DIRECTED", "REQUESTED", AUTHORIZED", "SELECTED", "APPROVED", "REQUIRED", AND "PERMITTED" MEAN "DIRECTED BY THE ENGINEER", "REQUESTED BY THE ENGINEER", AND SIMILAR PHRASES.

APPROVED: THE TERM "APPROVED", WHERE USED IN CONJUNCTION WITH THE ENGINEER'S ACTION ON THE CONTRACTOR'S SUBMITTALS, APPLICATIONS, AND REQUESTS, IS LIMITED TO THE ENGINEER'S DUTIES AND RESPONSIBILITIES AS STATED IN GENERAL AND SUPPLEMENTARY CONDITIONS.

FURNISH: THE TERM "FURNISH" IS USED TO MEAN "SUPPLY AND DELIVER TO THE PROJECT SITE, READY FOR UNLOADING, UNPACKING, ASSEMBLY, INSTALLATION, AND SIMILAR OPERATIONS."

INSTALL: THE TERM "INSTALL" IS USED TO DESCRIBE OPERATIONS AT PROJECT SITE INCLUDING THE ACTUAL "UNLOADING, UNPACKING, ASSEMBLY, ERECTION, PLACING, ANCHORING, APPLYING, WORKING TO DIMENSION, FINISHING, CURING, PROTECTING, CLEANING, AND SIMILAR OPERATIONS."

PROVIDE: THE TERM "PROVIDE" MEANS "TO FURNISH AND INSTALL, COMPLETE AND READY FOR THE INTENDED USE."

INSTALLER: AN "INSTALLER" IS THE CONTRACTOR OR AN ENTITY ENGAGED BY THE CONTRACTOR, EITHER AS AN EMPLOYEE, SUBCONTRACTOR, OR SUB-SUBCONTRACTOR, FOR PERFORMANCE OF A PARTICULAR CONSTRUCTION ACTIVITY, INCLUDING INSTALLATION, ERECTION, APPLICATION, AND SIMILAR OPERATIONS. INSTALLERS ARE REQUIRED TO BE EXPERIENCED IN THE OPERATIONS THEY ARE ENGAGED TO PERFORM.

MECHANICAL SHEET INDEX

REVIEWED FOR CODE COMPLIANCE
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☒BUILDING ☒STRUCTURAL
☒MECHANICAL ☒PLUMBING
☒ELECTRICAL ☒ENERGY
☒ACCESSIBILITY ☐FIRE
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PROFESSIONAL ENGINEER 2-28-25 RYAN BOOGAARD NO. 8677128 STATE OF UTAH

OGDEN WEBER TECHNICAL COLLEGE

HEALTH TECHNOLOGY DEWATERING

200 N Washington Blvd
Ogden, UT 84404

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SHEET TITLE

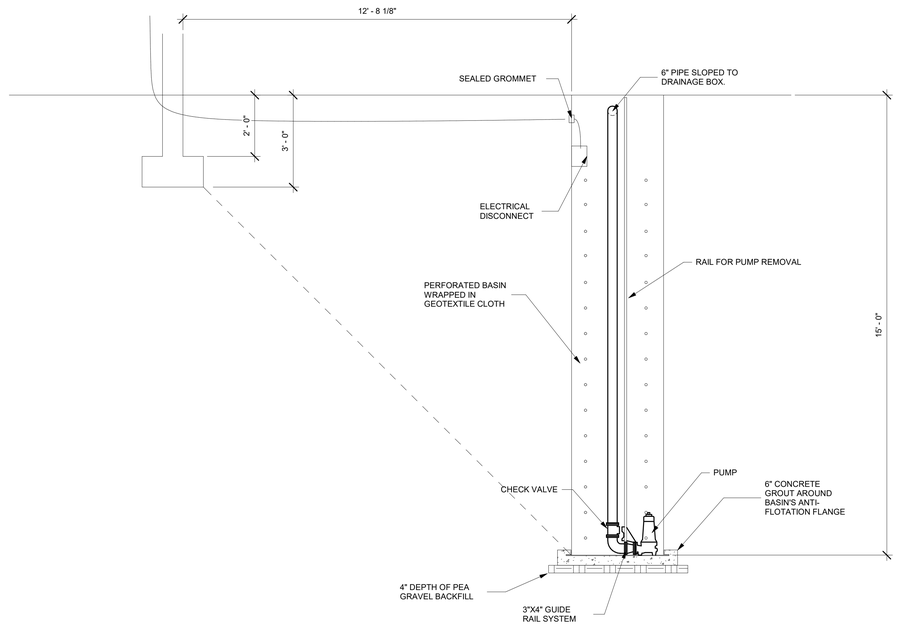
MECHANICAL COVER SHEET

M1

SUMP PUMP SCHEDULE

ACCEPTABLE MANUFACTURERS:	REMARKS:	SCHEDULE KEY:
LIBERTY PUMPS GOULDS ZOELLER	(1) PROVIDE WITH COMPLETE PACKAGED SYSTEM INCLUDING SUMP BASIN, FLOATS, CONTROL PANEL, AND JUNCTION BOX WITH DISCONNECTS. (2) PROVIDE WITH BMS INTEGRATION CAPABILITY. (3) PROVIDE FACTORY AUTHORIZED STARTUP OF EQUIPMENT INCLUDING STARTUP OF ANY FACTORY CONTROLS TO ENSURE PROPER SEQUENCING AND/OR COMMUNICATION TO BMS.	PLUMB = DIVISION 22 MECH = DIVISION 23 ELEC = DIVISION 26 MNFR = MANUFACTURER

LABEL	PUMP TYPE	GRINDER (Y/ N)	GPM	PUMP HD. (FT)	BASIN TYPE	BASIN SIZE	OUTLET SIZE (IN)	NO. OF POWER CONNECTION(S)	ELECTRICAL					DISCONNECT PROVIDED BY (MECH/ ELEC)	MANUFACTURER	MODEL	REMARKS
									VOLT	PH	Hz	HP	MCA				
P-1	DEWATERING	NO	255	20	PERFORATED FIBERGLASS	36"X180"	6"	1	460	3	60	3	6	ELEC	Liberty Pumps, Inc.	LSV304	1,2,3
P-2	DEWATERING	NO	255	20	PERFORATED FIBERGLASS	36"X180"	6"	1	460	3	60	3	6	ELEC	Liberty Pumps, Inc.	LSV304	1,2,3
P-3	DEWATERING	NO	255	20	PERFORATED FIBERGLASS	36"X180"	6"	1	460	3	60	3	6	ELEC	Liberty Pumps, Inc.	LSV304	1,2,3
P-4	DEWATERING	NO	255	20	PERFORATED FIBERGLASS	36"X180"	6"	1	460	3	60	3	6	ELEC	Liberty Pumps, Inc.	LSV304	1,2,3
P-5	DEWATERING	NO	255	20	PERFORATED FIBERGLASS	36"X180"	6"	1	460	3	60	3	6	ELEC	Liberty Pumps, Inc.	LSV304	1,2,3
P-6	DEWATERING	NO	255	20	PERFORATED FIBERGLASS	36"X180"	6"	1	460	3	60	3	6	ELEC	Liberty Pumps, Inc.	LSV304	1,2,3
P-7	DEWATERING	NO	255	20	PERFORATED FIBERGLASS	36"X180"	6"	1	460	3	60	3	6	ELEC	Liberty Pumps, Inc.	LSV304	1,2,3



1 SUMP PUMP DETAIL
SCALE: 1/2" = 1'-0"

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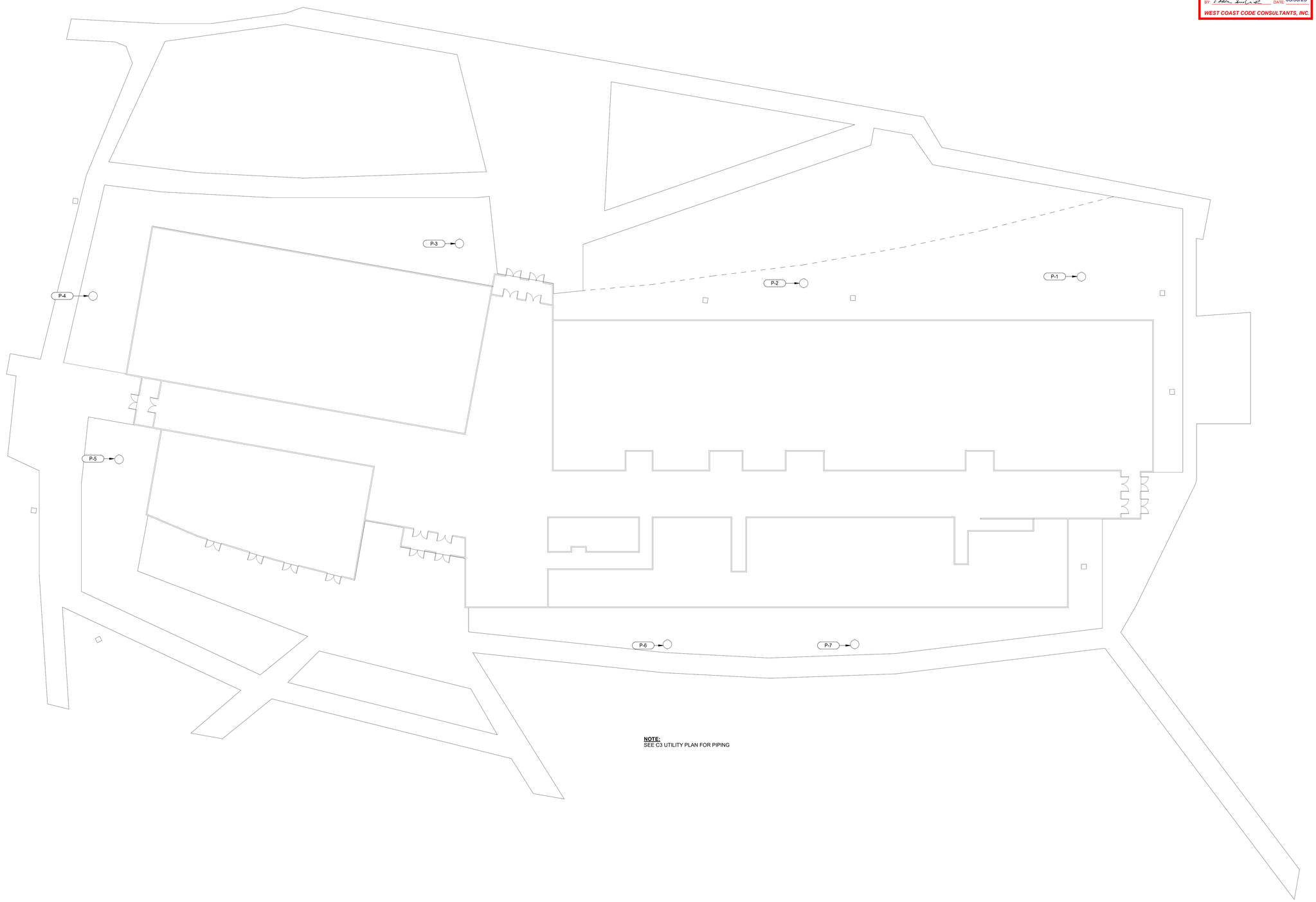
SHEET TITLE
MECHANICAL SCHEDULES

M2



NOTE:
SEE C3 UTILITY PLAN FOR PIPING

1 LEVEL 1 MECHANICAL PLAN
SCALE: 1/16" = 1'-0"

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MECHANICAL SITE PLAN

M3

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SYMBOLS LEGEND

SYMBOL	DESCRIPTION
REFERENCE AND LINE SYMBOLS	
A5 E-501	DETAIL INDICATOR: A5 INDICATES DETAIL NUMBER, E-501 INDICATES DRAWING SHEET WHERE DETAIL IS SHOWN.
A5 E-201	ELEVATION OR SECTION INDICATOR, EXTERIOR: A5 INDICATES ELEVATION OR SECTION NUMBER, E-201 INDICATES DRAWING SHEET WHERE ELEVATION OR SECTION IS SHOWN.
A5 E-201	ELEVATION OR SECTION INDICATOR, INTERIOR: A5 INDICATES ELEVATION OR SECTION NUMBER, E-201 INDICATES DRAWING SHEET WHERE ELEVATION OR SECTION IS SHOWN.
ROOM NAME 100	ROOM IDENTIFIER WITH ROOM NAME AND NUMBER.
1	KEYNOTE INDICATOR.
1	REVISION INDICATOR.
CU-1	EQUIPMENT INDICATOR.
X-X XMDP	MECHANICAL EQUIPMENT INDICATOR. "X-X" INDICATES EQUIPMENT MARK SHOWN ON EQUIPMENT SCHEDULE. "XMDP" IDENTIFIES PANEL EQUIPMENT IS CIRCUITED TO. REFER TO EQUIPMENT SCHEDULE FOR ADDITIONAL INFORMATION.
	BREAK, STRAIGHT: TO BREAK PARTS OF DRAWING
	BREAK, ROUND
MATCH LINE SEE XX/X-XXX	MATCH LINE INDICATOR: CENTER, EXTRA WIDE LINE.
	NEW LINE: MEDIUM LINE.
	HIDDEN FEATURES LINE: HIDDEN, THIN LINE
	EXISTING TO REMAIN LINE: THIN LINE.
	DEMOLITION LINE: DASHED, MEDIUM LINE
	PROPERTY LINE: DASHED, WIDE LINE.
	CONTRACT LIMIT LINE: DASHDOT, WIDE LINE.
WIRING METHODS	
	WIRING.
A-1	SINGLE BRANCH CIRCUIT HOME RUN TO PANELBOARD WITH DEDICATED NEUTRAL CONDUCTOR. LETTER AND NUMBER NOTATION IDENTIFY PANEL AND CIRCUIT NUMBER.
	LOW VOLTAGE WIRING: DIVIDE, MEDIUM LINE.
	CONDUIT STUB. DIMENSION RECORD DRAWINGS AND MARK.
1	CONDUCTOR & CONDUIT ("CC") SCHEDULE INDICATOR. REFER TO ONE-LINE DIAGRAM.
	JUNCTION BOX.
WIRING DEVICES	
WP	RECEPTACLE, DUPLEX WITH GROUND FAULT CIRCUIT INTERRUPTER, WEATHERPROOF: NEMA 5-20R.

SYMBOLS LEGEND

SYMBOL	DESCRIPTION
ELECTRICAL POWER AND DISTRIBUTION	
	FUSE WITH RATING (ONE-LINE DIAGRAM).
	DISCONNECT, FUSED (ONE-LINE DIAGRAM).
	DISCONNECT, NONFUSED (ONE-LINE DIAGRAM).
	DISCONNECT WITH FUSE AND MOTOR STARTER COMBINATION (ONE-LINE DIAGRAM).
	OVERLOAD RELAY (ONE-LINE DIAGRAM).
	STARTER (ONE-LINE DIAGRAM).
	CIRCUIT BREAKER (ONE-LINE DIAGRAM).
S.T.	CIRCUIT BREAKER WITH SHUNT TRIP (ONE-LINE DIAGRAM).
MCP	CIRCUIT BREAKER, MOTOR CIRCUIT PROTECTION (ONE-LINE DIAGRAM).
#AF #AT	CIRCUIT BREAKER, ADJUSTABLE TRIP. "#AF" REPRESENTS FRAME RATING. "#AT" REPRESENTS TRIP UNIT. (ONE-LINE DIAGRAM).
LSIG	CIRCUIT BREAKER, ADJUSTABLE TRIP CURVE. L=LONG TIME CURVE ADJUSTMENT, S=SHORT TIME CURVE ADJUSTMENT, I=INSTANTANEOUS CURVE ADJUSTMENT, G=GROUND FAULT ADJUSTMENT FULLY COMPLIANT WITH NEC 210.13, 215.10 AND 230.95. (ONE-LINE DIAGRAM).
	CIRCUIT BREAKER, SOLID STATE WITH ARC ENERGY REDUCTION SYSTEM INCLUDING ENERGY REDUCING MAINTENANCE SWITCHING WITH LOCAL STATUS INDICATOR FULLY COMPLIANT WITH NEC 240.87 (ONE-LINE DIAGRAM)
	MOTOR.
	TRANSFORMER (ONE-LINE DIAGRAM).
	POTENTIAL TRANSFORMER (PT/VT) (ONE-LINE DIAGRAM).
	CURRENT TRANSFORMER (CT) (ONE-LINE DIAGRAM).
	DELTA CONNECTION (ONE-LINE DIAGRAM).
	WYE CONNECTION (ONE-LINE DIAGRAM).
"1DPHA"	DISTRIBUTION PANELBOARD, MOTOR CONTROL CENTER, PLUG-IN BUSWAY, MEDIUM VOLTAGE SWITCHBOARD (ONE-LINE DIAGRAM).
"1H"	PANELBOARD (ONE-LINE DIAGRAM).
225/3 "1H"	PANELBOARD WITH MAIN LUGS ONLY. BUS SIZE AND PHASE AS SHOWN (ONE-LINE DIAGRAM).
225/3 "1H"	PANELBOARD WITH MAIN CIRCUIT BREAKER. SIZE AND PHASE AS SHOWN (ONE-LINE DIAGRAM).

SYMBOLS LEGEND

SYMBOL	DESCRIPTION
ELECTRICAL POWER AND DISTRIBUTION	
225/3 "1H" 60/3	PANELBOARD WITH MAIN AND SUB FEED CIRCUIT BREAKER (ONE-LINE DIAGRAM).
225/3 "1H" 25/3	PANELBOARD WITH MAIN LUGS ONLY AND SURGE PROTECTION WITH CIRCUIT BREAKER (ONE-LINE DIAGRAM).
225/3 "1H" 225/3 "1H"	PANELBOARD WITH SUB FEED LUGS (ONE-LINE DIAGRAM).
225/3 "1H" "1H"	PANELBOARD WITH CIRCUIT BREAKER AND SUB FEED LUGS (ONE-LINE DIAGRAM).
	CT CABINET PER UTILITY'S REQUIREMENTS (ONE-LINE DIAGRAM).
	CT CABINET PER UTILITY'S REQUIREMENTS (ONE-LINE DIAGRAM).
	TRANSFER SWITCH (ONE-LINE DIAGRAM).
DMM	DIGITAL MULTIMETER (ONE-LINE DIAGRAM).
	EARTH GROUND (ONE-LINE DIAGRAM).
	SERVICE ENTRANCE SURGE PROTECTION (ONE-LINE DIAGRAM).
ANN	GENERATOR, ANNUNCIATOR (ONE-LINE DIAGRAM).
EPO	PUSH BUTTON, REMOTE EMERGENCY STOP.
G	GENERATOR, POWER (ONE-LINE DIAGRAM).
K	KIRK-KEY MECHANICAL INTERLOCK (ONE-LINE DIAGRAM)
M	METER.
	DISCONNECT SWITCH, FUSED.
	DISCONNECT SWITCH, UNFUSED.
	STARTER, COMBINATION WITH DISCONNECT SWITCH.
	STARTER OR MOTOR CONTROLLER.
	PANELBOARD CABINET, FLUSH MOUNTED.
	PANELBOARD CABINET, SURFACE MOUNTED, 1 SECTION.
	PANELBOARD CABINET, SURFACE MOUNTED, 2 SECTION.
DP#__	DISTRIBUTION PANEL OR SWITCHBOARD.

ABBREVIATIONS

NOTE: ALL ABBREVIATIONS MAY NOT BE USED.

1P	SINGLE POLE
1PH	SINGLE-PHASE
1WAY	ONE-WAY
2/C	TWO-CONDUCTOR
2WAY	TWO-WAY
3/C	THREE-CONDUCTOR
3WAY	THREE-WAY
4OUT	QUADRUPLE RECEPTACLE OUTLET
4PDT	FOUR-POLE DOUBLE THROW
4PST	FOUR-POLE SINGLE THROW
4W	FOUR-WIRE
4WAY	FOUR-WAY
A	ABOVE COUNTER
AC	ARMORED CABLE
ACS	ACCESS CONTROL SYSTEM
ADA	AMERICANS WITH DISABILITIES ACT
ADJ	ADJACENT
AFF	ABOVE FINISHED FLOOR
AFG	ABOVE FINISHED GRADE
AIC	AMPERE INTERRUPTING CAPACITY
ALUM	ALUMINUM
AMP	AMPERE
ANN	ANNUNCIATOR
AP	ACCESS POINT (WIRELESS DATA)
AR	AS REQUIRED
ASC	AMPS SHORT CIRCUIT
ATS	AUTOMATIC TRANSFER SWITCH
AV	AUDIO VISUAL
AWG	AMERICAN WIRE GAGE
BB XFMR	BUCK-BOOST TRANSFORMER
BFF	BELOW FINISHED FLOOR
BFG	BELOW FINISHED GRADE
C	CEILING MOUNTED
CAT	CATEGORY
CATV	COMMUNITY ANTENNA TELEVISION
CB	CIRCUIT BREAKER
CCBA	CUSTOM COLOR AS SELECTED BY ARCHITECT
CCTV	CLOSED CIRCUIT TELEVISION
CF/CI	CONTRACTOR FURNISHED/ CONTRACTOR INSTALLED
CF/OI	CONTRACTOR FURNISHED/ OWNER INSTALLED
CFBA	CUSTOM FINISH AS SELECTED BY ARCHITECT
CI	CONTACT INDICATOR
CKT	CIRCUIT
CM	CONSTRUCTION MANAGER
CND	CONDUIT
CO	CONVENIENCE OUTLET
COR	CONTRACTING OFFICER'S REPRESENTATIVE
CP	CONTROL PANEL
CR	CARD READER
CT	CURRENT TRANSFORMER
CTV	CABLE TELEVISION
CU	COPPER
dBA	UNIT OF SOUND LEVEL
DPDT	DOUBLE POLE, DOUBLE THROW
DS	DISCONNECT SWITCH
E	ENHANCED
EA	EACH
EM	EMERGENCY
EMT	ELECTRICAL METALLIC TUBING
ENT	ELECTRIC NONMETALLIC TUBING
EPO	EMERGENCY POWER OFF
EQUIP	EQUIPMENT
ER	EQUIPMENT ROOM
EX	EXISTING
F	FURNITURE MOUNTED
FA	FIRE ALARM
FCP	FIRE ALARM CONTROL PANEL
FLA	FULL LOAD AMPS
FMC	FLEXIBLE METAL CONDUIT
FOB	FREIGHT ON BOARD
FPP	FIBER PATCH PANEL
FVNR	FULL VOLTAGE NON-REVERSING
FVR	FULL VOLTAGE REVERSING
GEN	GENERATOR
GFCI	GROUND FAULT INTERRUPTER
GFP	GROUND FAULT PROTECTION
GIG	GIGA HERTZ
GND	GROUND
HD	HEAVY DUTY
HID	HIGH INTENSITY DISCHARGE
HOA	HAND-OFF-AUTOMATIC
HP	HORSE POWER
HPF	HIGH POWER FACTOR
HPS	HIGH PRESSURE SODIUM
HV	HIGH VOLTAGE
HWM	HORIZONTAL WIRE MANAGEMENT
HZ	HERTZ
I/O	INPUT/ OUTPUT
IG	ISOLATED GROUND
IMC	INTERMEDIATE METAL CONDUIT
IN/IS	INSULATED/ ISOLATED
IR	INFRARED
J-BOX	JUNCTION BOX
kV	KILOVOLT
kVA	KILOVOLT AMPERE
kVAR	KILOVOLT AMPERE REACTIVE
kW	KILOWATT
kWh	KILOWATT HOUR
LED	LIGHT EMITTING DIODE
LFMC	LIQUID TIGHT FLEXIBLE METAL CONDUIT
LFNC	LIQUID TIGHT FLEXIBLE NONMETALLIC CONDUIT
LPS	LOW PRESSURE SODIUM
LRA	LOCKED ROTOR AMPS
LTG	LIGHTING
LV	LOW VOLTAGE
MATV	MASTER ANTENNA TELEVISION SYSTEM
MAX	MAXIMUM
MC	METAL CLAD
MCA	MINIMUM CIRCUIT AMPS
MCB	MAIN CIRCUIT BREAKER
MCC	MOTOR CONTROL CENTER
MCP	MOTOR CIRCUIT PROTECTION
MDP	MAIN DISTRIBUTION PANEL
MG	MOTOR GENERATOR
MH	MANHOLE
MIN	MINIMUM
MLO	MAIN LUGS ONLY
MOCP	MAXIMUM OVERCURRENT PROTECTION
MTS	MANUAL TRANSFER SWITCH
NA	NOT APPLICABLE
NC	NORMALLY CLOSED
NEC	NATIONAL ELECTRICAL CODE
NEMA	NATIONAL ELECTRICAL MANUFACTURERS ASSOCIATION
NFC	NATIONAL FIRE CODE
NFPA	NATIONAL FIRE PROTECTION ASSOCIATION
NIC	NOT IN CONTRACT
NL	NIGHT LIGHT
NO	NORMALLY OPEN
NTS	NOT TO SCALE
OC	ON CENTER
OCP	OVER CURRENT PROTECTION
OE	OWNER ELECTRONICS
OF/CI	OWNER FURNISHED/ CONTRACTOR INSTALLED
OF/OI	OWNER FURNISHED/ OWNER INSTALLED
OFP	OBTAIN FROM PLANS
OH DR	OVERHEAD (COILING) DOOR
OL	OVERLOAD
PB	PUSHBUTTON
PF	POWER FACTOR
PH	PHASE
PNL	PANEL
PNM	PLENUM
PR	PAIR
PS	POWER SUPPLY
PT	POTENTIAL TRANSFORMER
PTZ	PAN/TILT/ZOOM
PV	PHOTO VOLTAIC
QTY	QUANTITY
R	REMOVE
RCP	REFLECTED CEILING PLAN
RMC	RIGID METAL CONDUIT
RNC	RIGID NONMETAL CONDUIT
RO	REMOTE DOOR OPEN
RPM	REVOLUTIONS PER MINUTE
RPP	RISER PATCH PANEL
RR	REMOVE AND RELOCATE
S/S	START/STOP
SCA	SHORT CIRCUIT AMPS
SCBA	STANDARD COLOR AS SELECTED BY ARCHITECT
SEC	SECURITY
SF	SQUARE FOOT (FEET)
SFBA	STANDARD FINISH AS SELECTED BY ARCHITECT
SPD	SURGE PROTECTIVE DEVICE
SPDT	SINGLE POLE, DOUBLE THROW
SPEC	SPECIFICATION
SPP	STATION PATCH PANEL
SPST	SINGLE POLE, SINGLE THROW
ST	SINGLE THROW
SWBD	SWITCHBOARD
SWGR	SWITCHGEAR
TL	TWIST LOCK
TP	TELEPHONE POLE
TP	TWISTED PAIR
TR	TELECOMMMUNICATIONS ROOM
TTB	TELEPHONE TERMINAL BOARD
TV	TELEVISION
TVSS	TRANSIENT VOLTAGE SURGE SUPPRESSER
TYP	TYPICAL
UF	UNDERFLOOR
UGND	UNDERGROUND
UPS	UNINTERRUPTIBLE POWER SUPPLY
V	VOLTS
VA	VOLT AMPERE
VFC/VFD	VARIABLE FREQUENCY MOTOR CONTROLLER
VIC	VIDEO INTERCOM SYSTEM
VSS	VIDEO SURVEILLANCE SYSTEM
VWM	VERTICAL WIRE MANAGEMENT
W/	WITH
W/O	WITHOUT
WP	WEATHERPROOF
WPP	WIRELESS PATCH PANEL
XFMR	TRANSFORMER

DEFINITIONS

NOTE: ALL DEFINITIONS MAY NOT BE USED.

INDICATED: THE TERM "INDICATED" REFERS TO GRAPHIC REPRESENTATIONS, NOTES, OR SCHEDULES ON THE DRAWINGS, OTHER PARAGRAPHS OR SCHEDULES IN THE SPECIFICATIONS, AND SIMILAR REQUIREMENTS IN THE CONTRACT DOCUMENTS. WHERE TERMS SUCH AS "SHOWN", "NOTED", "SCHEDULED", AND "SPECIFIED" ARE USED, IT IS TO HELP THE READER LOCATE THE REFERENCE, NO LIMITATION ON LOCATION IS INTENDED.

DIRECTED: TERMS SUCH AS "DIRECTED", "REQUESTED", AUTHORIZED", "SELECTED", "APPROVED", "REQUIRED", AND "PERMITTED" MEAN "DIRECTED BY THE ENGINEER", "REQUESTED BY THE ENGINEER", AND SIMILAR PHRASES.

APPROVED: THE TERM "APPROVED", WHERE USED IN CONJUNCTION WITH THE ENGINEER'S ACTION ON THE CONTRACTOR'S SUBMITTALS, APPLICATIONS, AND REQUESTS, IS LIMITED TO THE ENGINEER'S DUTIES AND RESPONSIBILITIES AS STATED IN GENERAL AND SUPPLEMENTARY CONDITIONS.

FURNISH: THE TERM "FURNISH" IS USED TO MEAN "SUPPLY AND DELIVER TO THE PROJECT SITE, READY FOR UNLOADING, UNPACKING, ASSEMBLY, INSTALLATION, AND SIMILAR OPERATIONS."

INSTALL: THE TERM "INSTALL" IS USED TO DESCRIBE OPERATIONS AT PROJECT SITE INCLUDING THE ACTUAL "UNLOADING, UNPACKING, ASSEMBLY, ERECTION, PLACING, ANCHORING, APPLYING, WORKING TO DIMENSION, FINISHING, CURING, PROTECTING, CLEANING, AND SIMILAR OPERATIONS."

PROVIDE: THE TERM "PROVIDE" MEANS "TO FURNISH AND INSTALL, COMPLETE AND READY FOR THE INTENDED USE."

INSTALLER: AN "INSTALLER" IS THE CONTRACTOR OR AN ENTITY ENGAGED BY THE CONTRACTOR, EITHER AS AN EMPLOYEE, SUBCONTRACTOR, OR SUB-SUBCONTRACTOR, FOR PERFORMANCE OF A PARTICULAR CONSTRUCTION ACTIVITY, INCLUDING INSTALLATION, ERECTION, APPLICATION, AND SIMILAR OPERATIONS. INSTALLERS ARE REQUIRED TO BE EXPERIENCED IN THE OPERATIONS THEY ARE ENGAGED TO PERFORM.

TECHNOLOGY SYSTEMS: THE TERM "TECHNOLOGY SYSTEMS" IS USED TO DESCRIBE ALL LOW VOLTAGE SYSTEMS GENERALLY REFERRED TO AS "SPECIAL SYSTEMS". THESE SYSTEMS INCLUDE BUT ARE NOT NECESSARILY LIMITED TO ALL SYSTEMS WHICH UTILIZE VOLTAGES OF LESS THAN 71 VOLTS SUCH AS SOUND SYSTEMS, VIDEO SYSTEMS, TV SYSTEMS, SECURITY SYSTEMS, VOICE AND DATA CABLING SYSTEMS, ETC...

GENERAL ELECTRICAL NOTES

1. CLARIFICATION METHODS: AT THE TIME OF BIDDING, BIDDERS SHALL FAMILIARIZE THEMSELVES WITH THE DRAWINGS AND SPECIFICATIONS. ANY QUESTIONS, MISUNDERSTANDINGS, CONFLICTS, DELETIONS, DISCONTINUED PRODUCTS, CATALOG NUMBER DISCREPANCIES, DISCREPANCIES BETWEEN THE EQUIPMENT SUPPLIED AND THE INTENT OR FUNCTION OF THE EQUIPMENT, ETC, SHALL BE SUBMITTED TO THE ARCHITECT/ENGINEER IN WRITING FOR CLARIFICATION PRIOR TO ISSUANCE OF THE FINAL ADDENDUM AND BIDDING OF THE PROJECT. WHERE DISCREPANCIES OR MULTIPLE INTERPRETATIONS OCCUR, THE MOST STRINGENT (WHICH IS GENERALLY RECOGNIZED AS THE MOST COSTLY) THAT MEETS THE INTENT OF THE DOCUMENTS SHALL BE ENFORCED.

2. OWNER FURNISHED ITEMS: THE OWNER WILL FURNISH MATERIAL AND EQUIPMENT AS INDICATED IN THE CONTRACT DOCUMENTS TO BE INCORPORATED INTO THE WORK. THESE ITEMS ARE ASSIGNED TO THE INSTALLER AND COSTS FOR RECEIVING, HANDLING, STORAGE, IF REQUIRED, AND INSTALLATION ARE INCLUDED IN THE CONTRACT SUM.
   A. THE INSTALLER'S RESPONSIBILITIES ARE THE SAME AS IF THE INSTALLER FURNISHED THE MATERIALS OR EQUIPMENT.
   B. THE OWNER WILL ARRANGE AND PAY FOR DELIVERY OF OWNER FURNISHED ITEMS FREIGHT ON BOARD JOB SITE AND THE INSTALLER WILL INSPECT DELIVERIES FOR DAMAGE. IF OWNER FURNISHED ITEMS ARE DAMAGED, DEFECTIVE OR MISSING, DOCUMENT DAMAGED ITEMS WITH THE TRANSPORT COMPANY AND THE OWNER WILL ARRANGE FOR REPLACEMENT. THE OWNER WILL ALSO ARRANGE FOR MANUFACTURER'S FIELD SERVICES, AND THE DELIVERY OF MANUFACTURER'S WARRANTIES AND BONDS TO THE INSTALLER.
   C. THE INSTALLER IS RESPONSIBLE FOR DESIGNATING THE DELIVERY DATES OF OWNER FURNISHED ITEMS AND FOR RECEIVING, UNLOADING AND HANDLING OWNER FURNISHED ITEMS AT THE SITE.THE INSTALLER IS RESPONSIBLE FOR PROTECTING OWNER FURNISHED ITEMS FROM DAMAGE, INCLUDING DAMAGE FROM EXPOSURE TO THE ELEMENTS, AND TO REPAIR OR REPLACE ITEMS DAMAGED AS A RESULT OF HIS OPERATIONS.

3. EXPOSED STRUCTURE AREAS (EXCLUDING MECHANICAL, ELECTRICAL, AND COMMUNICATION SPACES): INSTALL RACEWAYS BETWEEN DECK AND STRUCTURE WHEREVER POSSIBLE IN EXPOSED STRUCTURE CEILING AREAS. ROUTE RACEWAYS IN CONCEALED AREAS WHEREVER POSSIBLE. REFER ALL CONDITIONS WHERE RACEWAYS MUST BE INSTALLED WHICH CANNOT COMPLY WITH THESE REQUIREMENTS TO THE ARCHITECT.

4. SUBMITTALS: PROVIDE ORIGINAL ELECTRONIC PDF FORMAT, BOUND, BOOKMARKED (EACH SECTION AND PRODUCT), AND HIGHLIGHTED. JOB NAME AND SUBCONTRACTOR SHALL BE ON THE FRONT COVER. PREPARE INDEX OF EQUIPMENT SUBMITTED IN EACH TAB.

5. REFLECTED CEILING PLANS: COORDINATE THE LOCATION OF LIGHT FIXTURES WITH THE ARCHITECTURAL REFLECTED CEILING PLANS. REFER ALL DISCREPANCIES TO THE ARCHITECT AND ENGINEER.

6. ALL WORK SHALL BE DONE ACCORDING TO THE CURRENT NATIONAL ELECTRIC CODE (NEC), IBC, NFPA, AND IFC. COMPLIANCE AND FINAL APPROVAL IS SUBJECT TO THE ON SITE FIELD INSPECTION OF THE AHJ.

SITE COORDINATION

THE LOCATION, CAPACITY, AND VOLTAGE OF THE LINES ARE ALL IN ACCORDANCE WITH DATA GIVEN THIS OFFICE BY THE UTILITY COMPANY. COORDINATE WITH THE LOCAL UTILITY COMPANY FOR THE INSTALLATION OF THE ELECTRICAL SERVICE. COMPLY WITH UTILITY REGULATIONS. REPORT DISCREPANCIES TO THE ENGINEER.

MAIN POINT OF CONTACT UTILITY

OWTECH ADDRESS — PERSON CONTACTED: PAUL NELSON; PHONE NUMBER: 801-686-5099; EMAIL: PAUL.NELSON@OTECH.EDU

FACILITY MANAGER UTILITY

OWTECH — PERSON CONTACTED: JOSH ULM; PHONE NUMBER: 801-726-3837; EMAIL: JOSH.ULM@OTECH.EDU

ELECTRICAL SHEET INDEX

REVIEWED FOR CODE COMPLIANCE

FOR COMPLIANCE WITH THE APPLICABLE CONSTRUCTION CODES IDENTIFIED BELOW.

[✓] BUILDING [✓] STRUCTURAL
[✓] MECHANICAL [✓] PLUMBING
[✓] ELECTRICAL [✓] ENERGY
[✓] ACCESSIBILITY ☐ FIRE

PLAN REVIEW ACCEPTANCE OF DOCUMENTS DOES NOT AUTHORIZE CONSTRUCTION TO PROCEED IN VIOLATION OF ANY FEDERAL, STATE, OR LOCAL REGULATIONS.

BY: [illegible] DATE: 06/30/25

WEST COAST CODE CONSULTANTS, INC.

SPECTRUM ENGINEERS
324 S. State St., Suite 400
Salt Lake City, UT 84111
801-328-5151
www.spectrum-engineers.com

OTECH

PROFESSIONAL ENGINEER No. 12735266 MARIO SEBASTIAN MARTINEZ STATE OF UTAH
01/24/25

OTECH APPROVAL STAMP

OGDEN WEBER TECHNICAL COLLEGE

HEALTH TECHNOLOGY DEWATERING

200 N Washington Blvd
Ogden, UT 84404

Mark:	Date:	Description

ISSUE: CONSTRUCTION DOCS
DATE: 01.24.25

SPECTRUM PROJECT NO: 240764
OTECH PROJECT NO: 0000010945
DRAWN BY: JKC
CHECKED BY: MSM
DESIGNED BY: MSM
RECORD DRAWING DATE:
SIGNATURE:

SHEET TITLE

ELECTRICAL COVER SHEET

E1

Autodesk Docs://240764 - Otech HC Dewatering/240764 - OTech HC Dewatering - Elec.rvt
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GENERAL SHEET NOTES

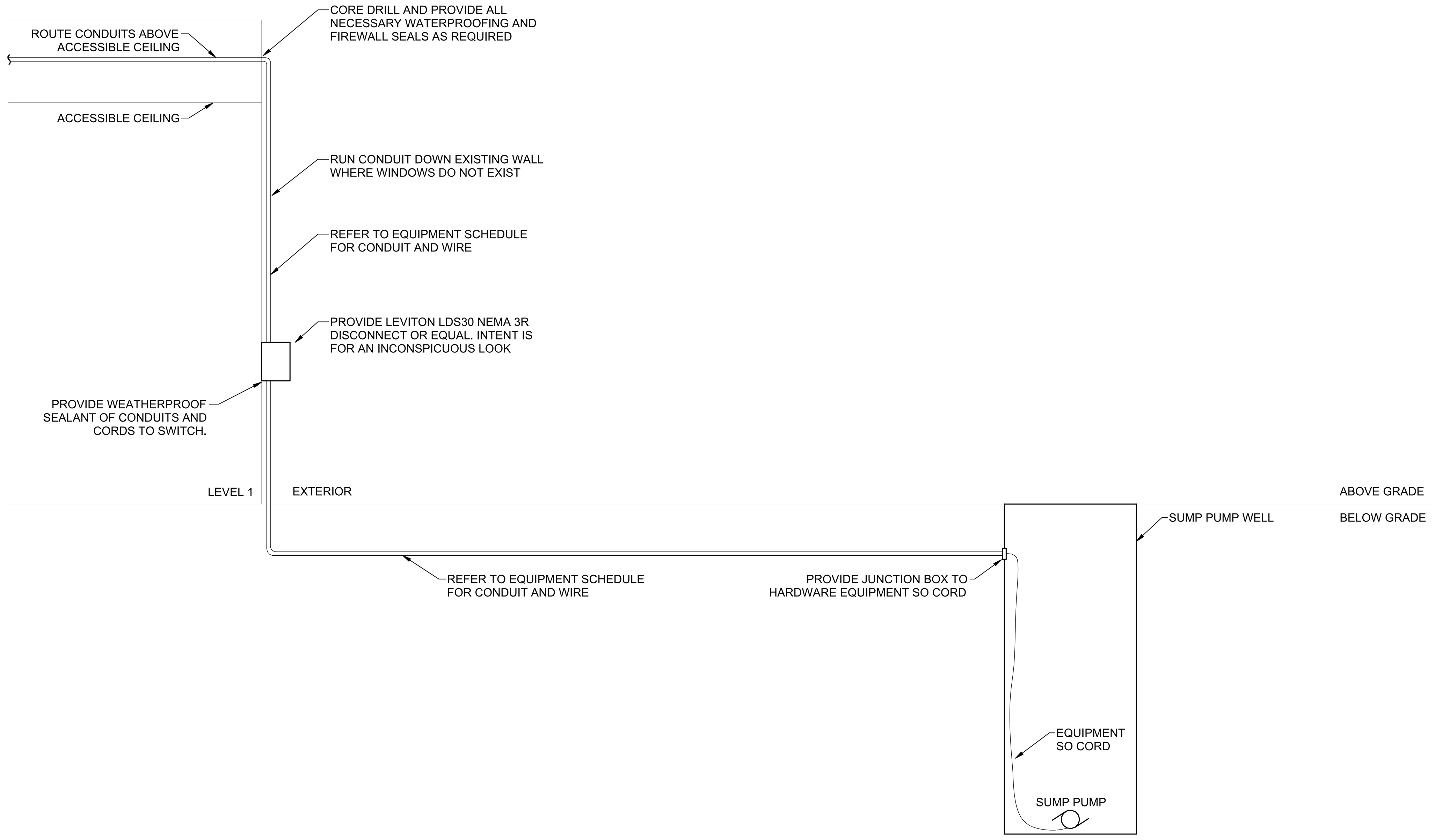
1 MOUNTING HEIGHTS OF ELECTRICAL AND ELECTRONIC EQUIPMENT IN THE FOLLOWING ORDER OF PRIORITY:

A - ELEVATIONS (ARCHITECTURAL, ELECTRICAL, MECHANICAL, ETC).

B - EQUIPMENT SHOP DRAWINGS.

C - FIELD INSTRUCTIONS.

2 SET BOXES WITH PLASTER RINGS FLUSH WITH FINISHED SURFACE.



D1 TYPICAL PUMP RISER DIAGRAM
SCALE: NTS

D4 TYPICAL RACEWAY EXTERIOR MOUNTING DETAIL
SCALE: NTS

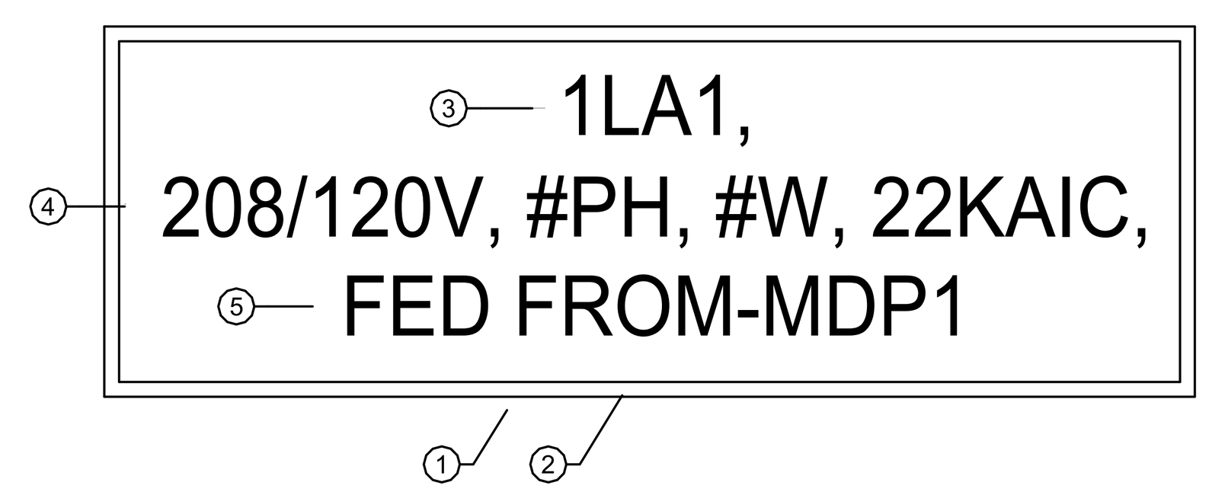
(1) LABEL TO BE PROVIDED AT EACH SWITCHBOARD, PANELBOARD, DISCONNECT/STARTER. LABEL IS TO BE 3" X REQUIRED LENGTH X 1/16" LAMINATED 2-PLY PLASTIC LAMACOID. LETTERS SHALL BE FORMED BY ENGRAVING OUTER WHITE PLY, EXPOSING BLACK PLY BENEATH.

(2) LABEL IS TO BE MOUNTED USING DOUBLE SIDED ADHESIVE TAPE COVERING THE BACK OF THE LABEL.

(3) FIRST LINE: LETTERING IS TO BE 3/8" HIGH, CENTERED, AND FORMATTED AS SHOWN. REPLACE THE LETTER/NUMBER WITH THOSE FOUND ON THE ONE-LINE DIAGRAM.

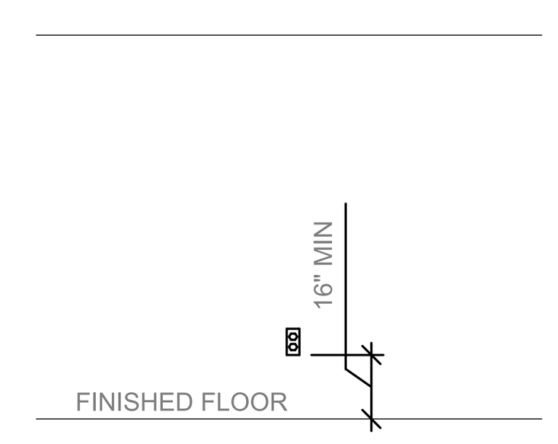
(4) SECOND LINE: LETTERING IS TO BE 3/8" HIGH, CENTERED, AND FORMATTED AS SHOWN. THE FOLLOWING SHALL BE PROVIDED, VOLTAGE, PHASE, NUMBER OF WIRES, AND AIC RATING OF DEVICE.

(5) THIRD LINE: LETTERING IS TO BE 3/8" HIGH, CENTERED, AND FORMATTED AS SHOWN. PROVIDE "FED FROM-" AND REPLACE MDP1 WITH THE DEVICES NAME THAT FEEDS THE PANELBOARD.



NOTE: EMERGENCY PANELS SHALL USE LAMACOID WITH RED OUTERPLY, EXPOSING WHITE LETTERING BENEATH. CONTRACTOR TO USE SAME LABEL SCHEME EXCEPT FIRST 'X' IS REPLACED WITH 'E' FOR EMERGENCY. SECOND 'X' TO BE 'L' FOR LOW OR 'H' FOR HIGH VOLTAGE (480/277V). LAST '#' TO BE REPLACED WITH LETTER INDICATING LOCATION OF PANEL.

C1 TYPICAL PANELBOARD/SWITCHBOARD LABEL
SCALE: NTS



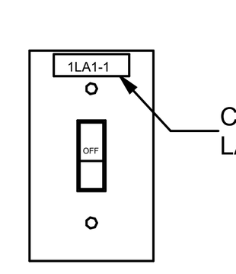
C4 RECEPTACLE MOUNTING DETAILS
SCALE: NTS

*LABEL TO BE CENTERED IN EQUIPMENT, PREFERABLE ON FACE OF EQUIPMENT AND TOWARDS THE TOP.

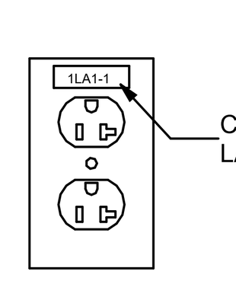
**REFER TO TYPICAL SWITCH/RECEPTACLE LABELING DETAIL FOR LABEL REQUIREMENTS.

***DISPOSE OF AN EXISTING PANELBOARD NAME PLATES WHEN INSTALLING NEW NAME PLATES.

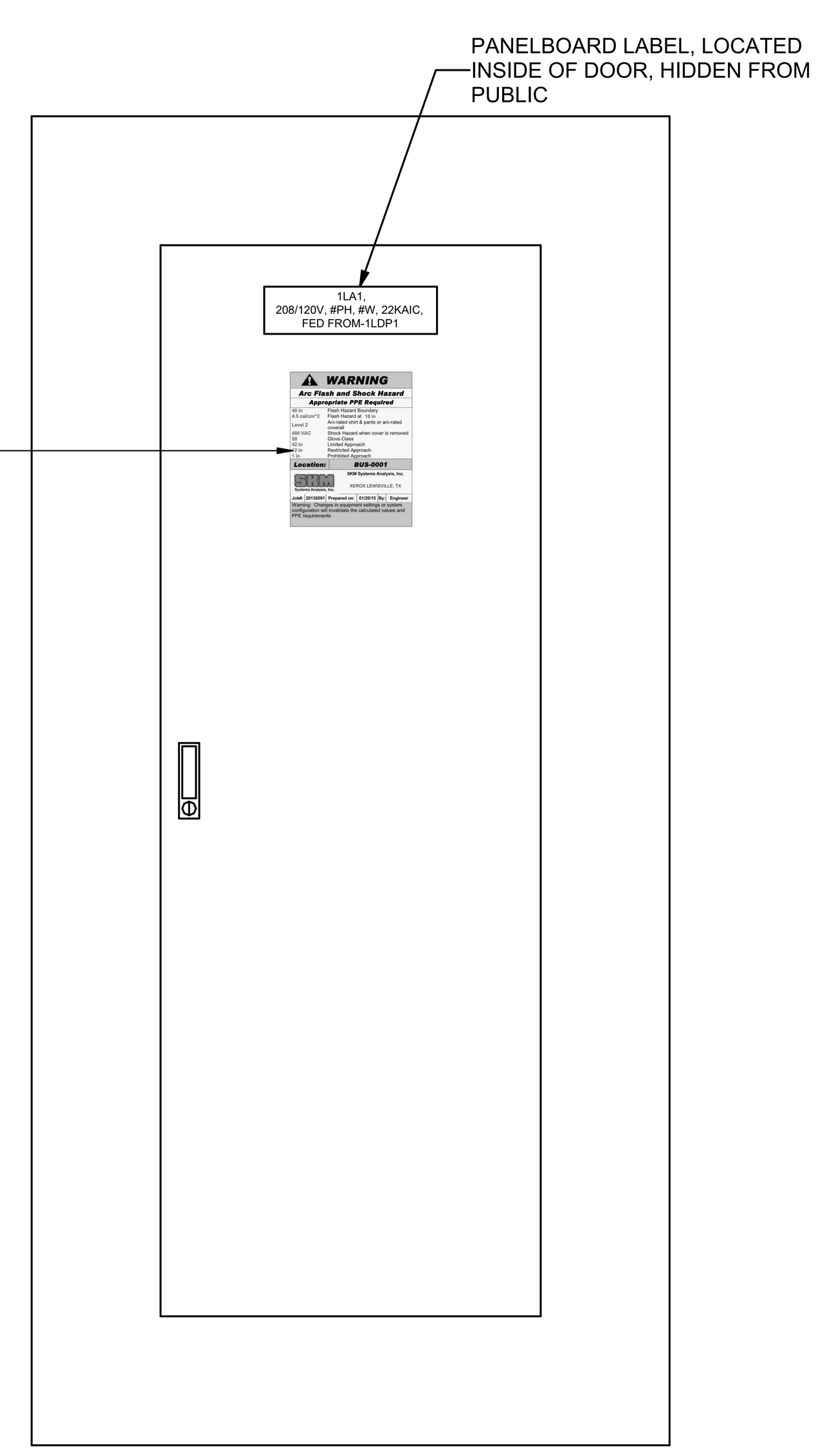
ARC FLASH LABEL LOCATED HERE



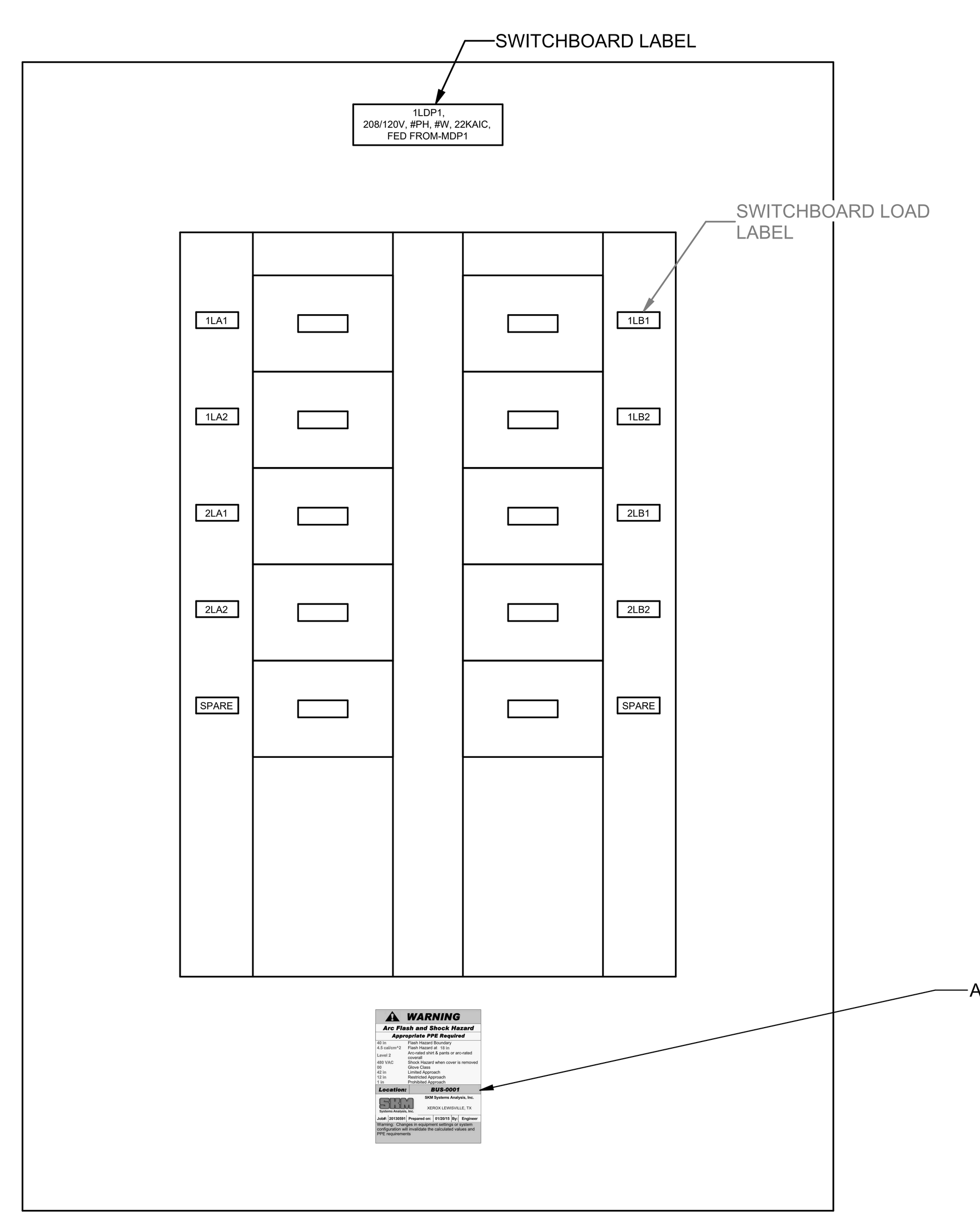
TYPICAL SWITCH LABEL LOCATION



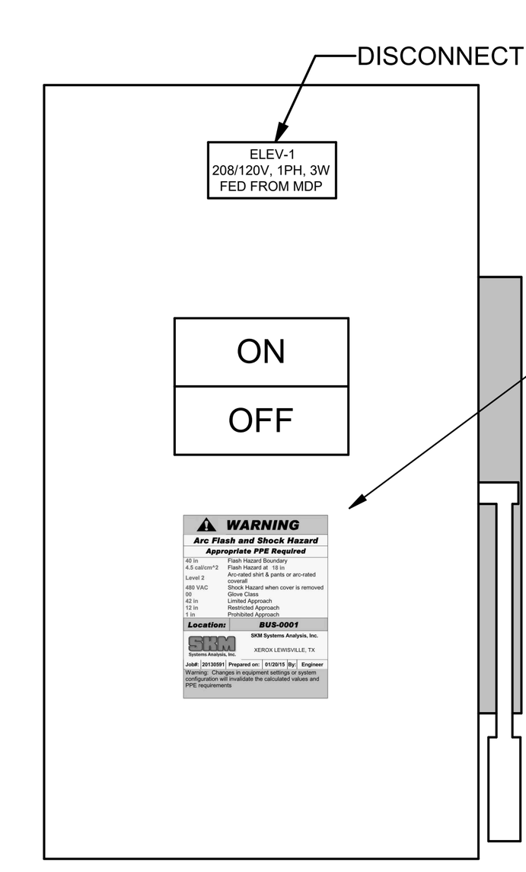
TYPICAL RECEPTACLE LABEL LOCATION



TYPICAL LABELING FOR PANELBOARDS IN NON-PUBLIC LOCATIONS

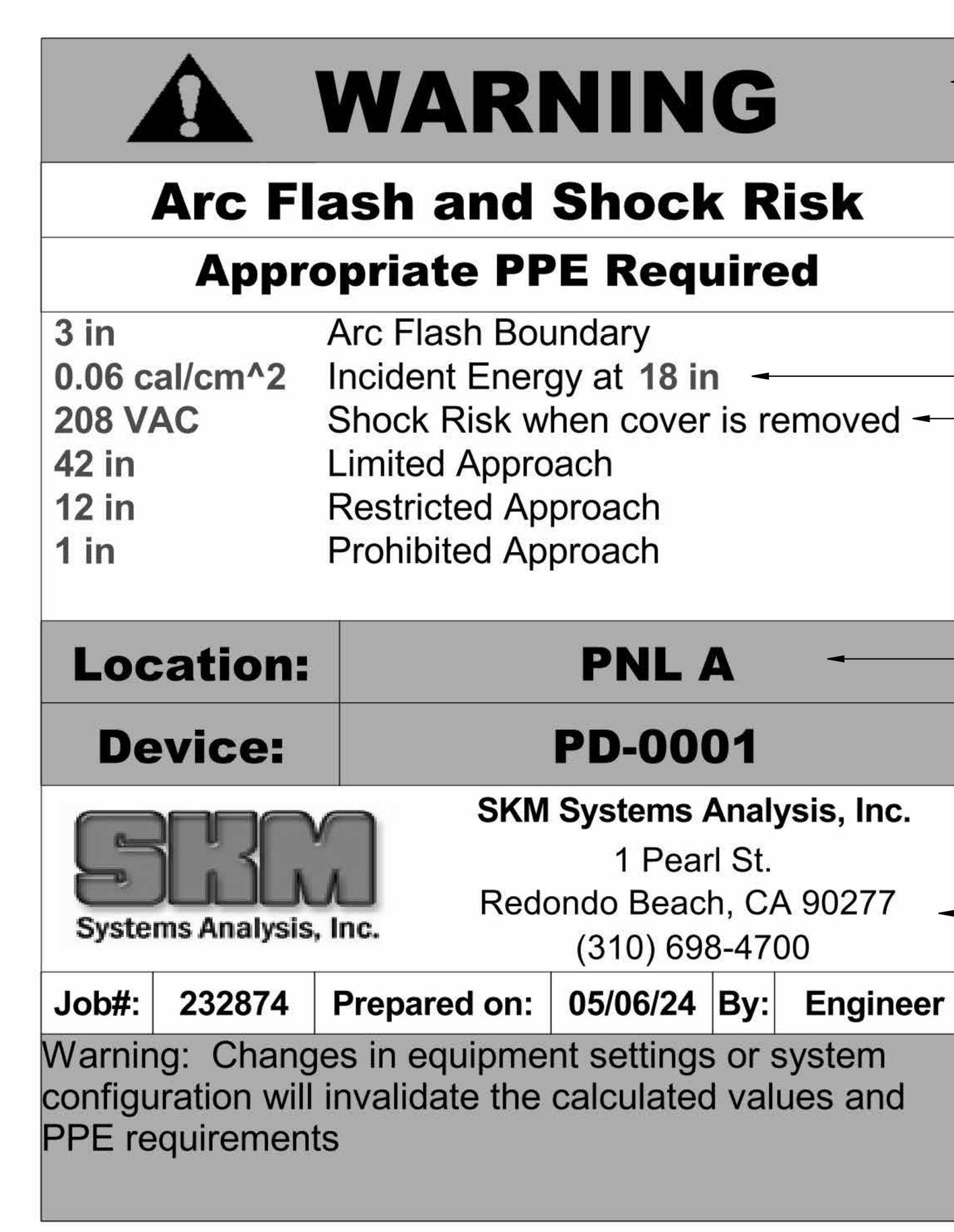


TYPICAL LABELING FOR SWITCHBOARDS



TYPICAL LABELING FOR DISCONNECTS

A1 TYPICAL SWITCH, RECEPTACLE AND PANELBOARD/SWITCHBOARD LABELING LOCATION DETAIL
SCALE: NTS



SHADED AREAS TO BE ORANGE ALL OTHER TO BE WHITE BACKGROUND

(TYP) DISTANCES IN INCHES

COORDINATE VOLTAGE VALUES WITH ONE-LINE

MATCH NAME OF EQUIPMENT WITH NAMES ON ONE-LINE

PROVIDE ADDRESS WHERE SKM ANALYSIS IS PERFORMED

PROVIDE JOB NUMBER "20140543", DATE OF ANALYSIS AND ENGINEER WHO PERFORMED STUDY

*PROVIDE ARC FLASH LABEL WITH VALUES FROM STUDY FOR ALL ELECTRICAL EQUIPMENT, REFER TO SPECIFICATIONS FOR ADDITIONAL DETAILS.

A5 TYPICAL ARC FLASH LABEL
SCALE: NTS

REVIEWED FOR CODE COMPLIANCE
FOR COMPLIANCE WITH THE APPLICABLE CONSTRUCTION CODES IDENTIFIED BELOW.
[✓ BUILDING] [✓ STRUCTURAL]
[✓ MECHANICAL] [✓ PLUMBING]
[✓ ELECTRICAL] [✓ ENERGY]
[✓ ACCESSIBILITY] ☐ FIRE
PLAN REVIEW ACCEPTANCE OF DOCUMENTS DOES NOT AUTHORIZE CONSTRUCTION TO PROCEED IN VIOLATION OF ANY FEDERAL, STATE, OR LOCAL REGULATIONS.
BY: [illegible] DATE: 06/30/25
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OTECH

LICENSED PROFESSIONAL ENGINEER
No. 12735266
MARIO SEBASTIAN MARTINEZ
STATE OF UTAH
01/24/25

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OGDEN WEBER TECHNICAL COLLEGE

HEALTH TECHNOLOGY DEWATERING

200 N Washington Blvd
Ogden, UT 84404

Mark:	Date:	Description

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DATE: 01.24.25

SPECTRUM PROJECT NO: 240764
OTECH PROJECT NO: 0000010945
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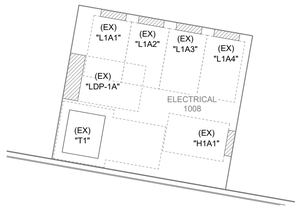
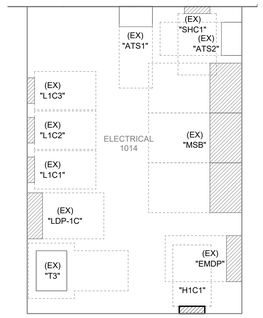
CHECKED BY: MSM
DESIGNED BY: MSM
RECORD DRAWING DATE:
SIGNATURE:

SHEET TITLE
ELECTRICAL DETAILS

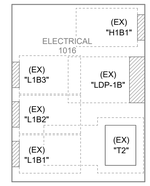
E2



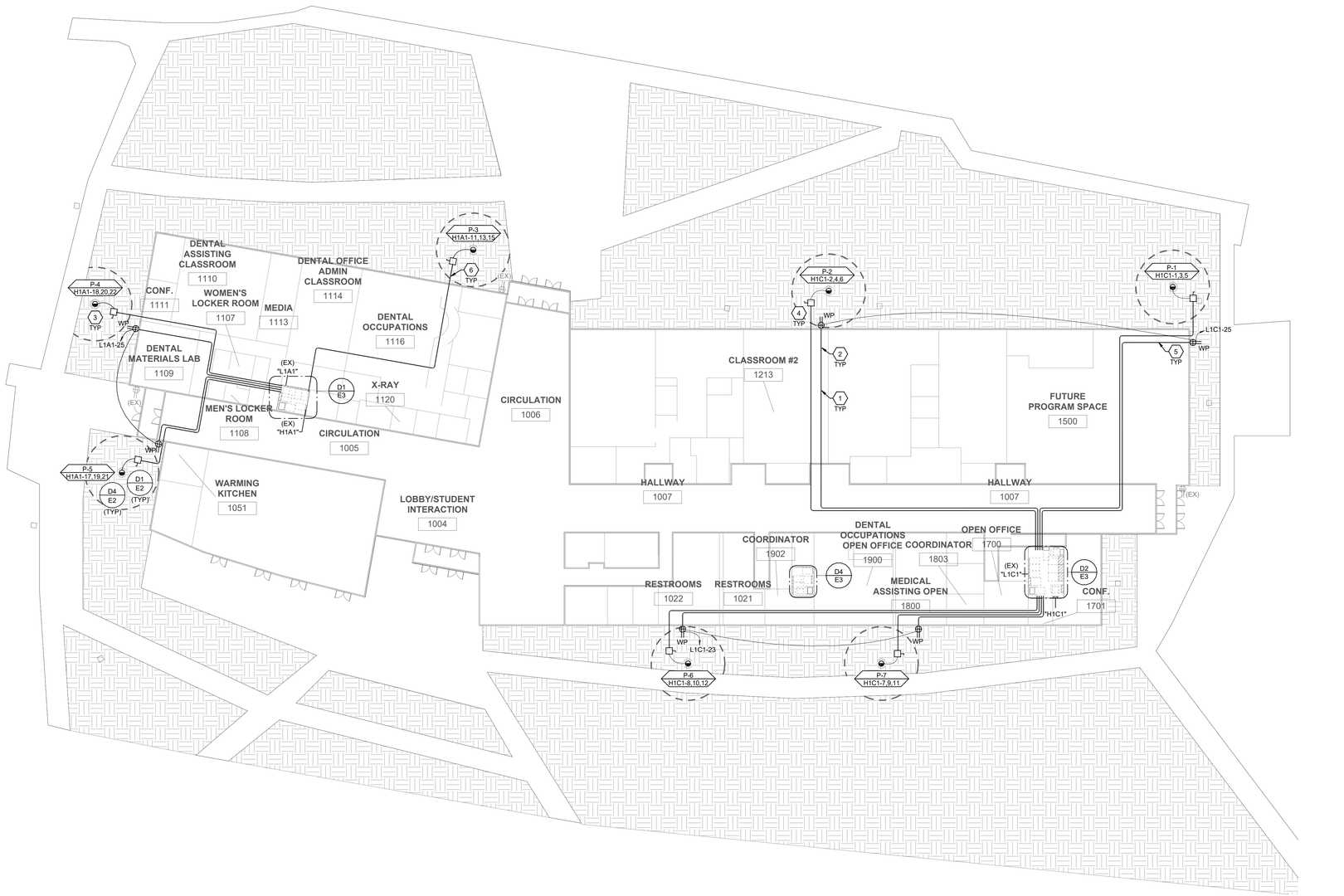
D1 ELECTRICAL 1008 POWER PLAN - ENLARGED
SCALE: 1/4" = 1'-0"



D2 ELECTRICAL 1014 POWER PLAN - ENLARGED
SCALE: 1/4" = 1'-0"



D4 ELECTRICAL 1016 POWER PLAN - ENLARGED
SCALE: 1/4" = 1'-0"



A1 ELECTRICAL SITE PLAN
SCALE: 1" = 20'-0"

GENERAL SHEET NOTES

1 ALL EXTERIOR RECEPTACLES SHOWN SHALL BE NEMA 5-20R GFCI "WEATHER RESISTANT" RECEPTACLE WITH "WEATHER PROOF IN-USE COVER. "

2 REFER TO PLANS FOR CONSTRAINTS ON PHYSICAL DIMENSIONS AND CLEARANCE REQUIREMENTS OF EQUIPMENT. PROVIDE EQUIPMENT DIMENSIONS THAT FALL WITHIN THE CONSTRAINTS OF EACH SPECIFIC LOCATION.

3 UNLESS NOTED OTHERWISE ITEMS SHOWN AS BOLD ARE NEW AND ITEMS SHOWN AS HALFTONED ARE EXISTING TO REMAIN.

SHEET KEYNOTES

1 ROUTING SHOWN IS PROPOSED ROUTING OF CONDUIT ABOVE ACCESSIBLE CEILINGS. ALL CONDUIT WORK PERFORMED INSIDE OF BUILDING SHALL BE CONDUCTED DURING OFF-SCHOOL HOURS AND COORDINATED WITH THE OWNER PRIOR TO BEGINNING WORK.

2 PROVIDE 3#10 IN 3/4" CND FOR ALL CONVENIENCE OUTLETS.

3 CONNECTION FOR PUMP IS 2 FEET BELOW GRADE. SEAL ALL PENETRATIONS TRANSFERRING THROUGH WELL.

4 LOCATIONS OF EQUIPMENT INTENT IS SHOWN. AVOID ALL WINDOWS AND MAINTAIN 25 FOOT DISTANCE LIMITATION FROM EQUIPMENT.

5 ALL PENETRATIONS THROUGH INTERIOR AND EXTERIOR WALLS SHALL BE CORE DRILLED AND PROVIDE ALL NECESSARY WATER PROOFING AND FIREWALL SEALS AS REQUIRED.

6 PAINT CONDUIT TO MATCH EXTERIOR WALL.

REVIEWED FOR CODE COMPLIANCE
FOR COMPLIANCE WITH THE APPLICABLE CONSTRUCTION CODES IDENTIFIED BELOW.
☒ BUILDING ☒ STRUCTURAL
☒ MECHANICAL ☒ PLUMBING
☒ ELECTRICAL ☒ ENERGY
☒ ACCESSIBILITY ☐ FIRE
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DESIGNED BY: MSM
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SHEET TITLE
ELECTRICAL SITE PLAN & ENLARGED PLANS

E3

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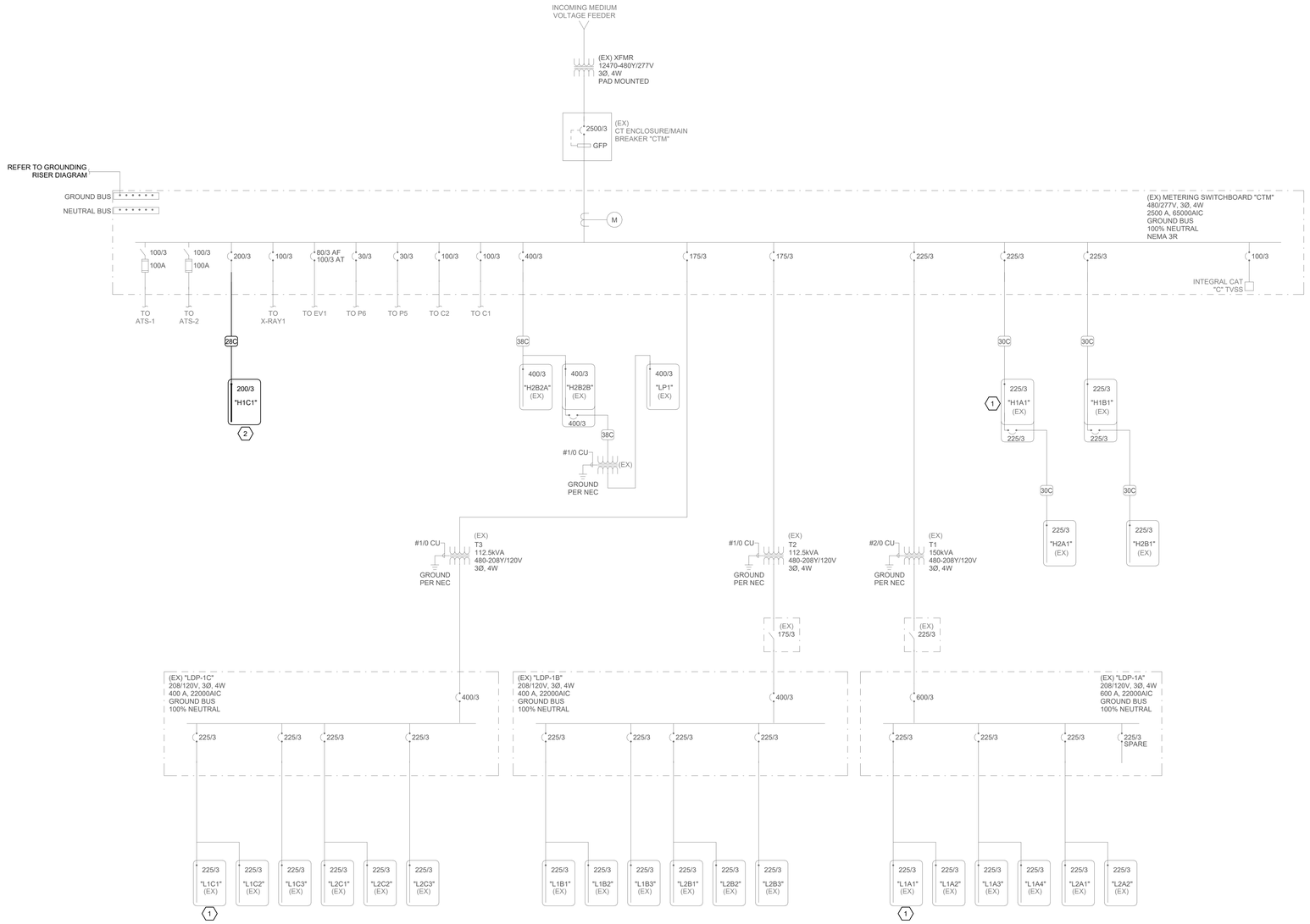

A1 ONE-LINE DIAGRAM
SCALE: NTS

GENERAL SHEET NOTES

1 REFER TO PLANS FOR CONSTRAINTS ON PHYSICAL DIMENSIONS AND CLEARANCE REQUIREMENTS OF EQUIPMENT. PROVIDE EQUIPMENT DIMENSIONS THAT FALL WITHIN THE CONSTRAINTS OF EACH SPECIFIC LOCATION.

2 ALL EQUIPMENT SHALL BE CONSTRUCTED AND BRACED FOR THE SEISMIC CONDITIONS OF THE PROJECT. REFER TO ELECTRICAL SPECIFICATIONS FOR REQUIREMENTS.

3 UNLESS NOTED OTHERWISE ITEMS SHOWN AS BOLD ARE NEW AND ITEMS SHOWN AS HALFTONED ARE EXISTING TO REMAIN.

⬡ SHEET KEYNOTES

1 PROVIDE UPDATED PANEL SCHEDULE.

2 PROVIDE AN ARC FLASH STUDY FOR NEW PANELBOARD. COORDINATE AIC RATING WITH SUBMITTED PANELBOARD.

COPPER CONDUCTOR AND CONDUIT SCHEDULE

SCHEDULE NUMBER
SUBSCRIPT (NOTE 5)
(E.G. 5C IG)

CONDUCTOR AND CONDUIT SCHEDULE NOTES

1. CONDUCTORS SHOWN ARE SHOWN FOR EACH CONDUIT WITH MODIFICATIONS AS NOTED IN NOTE 5. ALL CONDUCTORS SHOWN ARE THWN UNLESS OTHERWISE NOTED.
2. PROVIDE EQUIPMENT GROUND CONDUCTORS PER TABLE 250-122 WHEN CIRCUIT BREAKERS ARE SIZED GREATER THAN AMPERE RATING SHOWN IN TABLE.
3. PROVIDE #10 NEUTRALS FOR MULTIWIRE BRANCH CIRCUITS SERVING COMPUTERS.
4. GROUND (G) CONDUCTOR MAY BE DELETED ON SERVICE ENTRANCE CONDUCTORS.
5. SYMBOL SUBSCRIPTS:
   - "2N": INCLUDE TWO NEUTRAL CONDUCTORS SIZED AS SCHEDULED FOR PHASE AND NEUTRAL CONDUCTORS WHERE THE CONDUCTOR IS #1/0 OR LARGER. INCLUDE A SINGLE 200% RATED CONDUCTOR THAT IS TWICE THE AMPACITY OF THE SCHEDULED PHASE AND NEUTRAL CONDUCTOR WHERE THE CONDUCTOR IS BELOW #1/0 IN SIZE.
   - "CI": PROVIDE CIRCUIT INTEGRITY CABLE; TYPE TWO-HOUR FIRE RESISTIVE CABLES IN CONDUIT OR PROVIDE FEEDER ENCASED IN CONCRETE.
   - "FG": FULL SIZE GROUND, SIZE EQUIPMENT GROUNDING CONDUCTOR TO BE SAME SIZE AS THE PHASE CONDUCTORS.
   - "HH": NEUTRAL CURRENTS EXIST DUE TO HIGH HARMONIC "NONLINEAR" LOADS. CURRENT CARRYING CONDUCTORS DERATED ACCORDINGLY. PROVIDE THE IG/HH SIZE FOR THE EQUIPMENT GROUNDING CONDUCTOR.
   - "IG": INCLUDE IG (INSULATED/ISOLATED GROUND CONDUCTOR) SCHEDULED ALONG WITH THE GROUND OF EQUIPMENT GROUND CONDUCTOR.
   - "MC": PROVIDE FEEDER IN METAL-CLAD CABLE; TYPE MC IN PLACE OF SINGLE CONDUCTORS IN CONDUIT.
   - "SE": SUBSTITUTE "SE" CONDUCTOR FOR "G" CONDUCTOR SHOWN, WHICH IS SIZED FOR THE GROUNDING OF THE SECONDARY OF THE SEPARATELY DERIVED SYSTEM.
   - "SER": PROVIDE SERVICE-ENTRANCE CABLE; TYPE SE OR SER IN PLACE OF SINGLE CONDUCTORS IN CONDUIT.
6. RACEWAY ONLY. CONDUCTORS PROVIDED BY UTILITY.

SYM	AMP	HH AMPS	CONDUIT SIZE	CONDCUTOR (NOTE 1) QTY	SIZE	G	IG/HH	SE	NOTES
1C	20	-	0.75	2	12	12	12	8	2
2C	20	-	0.75	3	12	12	12	8	2
3C	20	24	0.75	4	12	12	12	8	2
4C	30	-	0.75	2	10	10	10	8	2
5C	30	-	0.75	3	10	10	10	8	2
6C	30	32	0.75	4	10	10	10	8	2
7C	40	-	1	2	8	10	8	6	2
8C	40	-	1	3	8	10	8	6	2
9C	40	44	1	4	8	10	8	6	2
10C	55	-	1	2	6	10	8	4	2
11C	55	-	1	3	6	10	8	4	2
12C	55	60	1.25	4	6	10	8	4	2
13C	70	-	1	2	4	8	4	2	2
14C	70	-	1.25	3	4	8	4	2	2
15C	70	76	1.25	4	4	8	4	2	2
16C	85	-	1.25	2	3	8	3	2	2
17C	85	-	1.25	3	3	8	3	2	2
18C	85	92	1.25	4	3	8	3	2	2
19C	95	-	1.25	3	2	8	2	2	2
20C	95	104	1.5	4	2	8	2	2	2
21C	130	-	1.5	3	1	6	2	2	2
22C	130	116	1.5	4	1	6	2	2	2
23C	150	-	2	3	1/0	6	2	1/0	2
24C	150	136	2	4	1/0	6	2	1/0	2
25C	175	-	2	3	2/0	6	2	2/0	2
28C	200	180	2.5	4	3/0	6	2	2/0	2
29C	230	-	2.5	3	4/0	4	2	2/0	2
30C	230	208	2.5	4	4/0	4	2	2/0	2
34C	310	280	3	4	350	3	1/0	3/0	2
35C	380	-	3.5	3	500	3	3/0	3/0	2
37C	400	-	2 EA 2	3	3/0	3	3/0	3/0	2
38C	400	360	2 EA 2.5	4	3/0	3	3/0	3/0	2
42C	620	560	2 EA 3	4	350	1/0	4/0	3/0	2
52C	1240	1120	4 EA 3	4	350	3/0	4/0	3/0	4
55C	2660	2408	7 EA 4	4	500	350	350	350	4

BRANCH CIRCUIT CONDUCTOR AND CONDUIT SIZING TABLE

CIRCUIT AMPACITY/VOLTAGE	CIRCUIT LENGTH	CONDUCTOR SIZE (PHASE, NEUTRAL AND GR)	CONDUIT SIZE
20A/120V	0' - 60'	#12 AWG	0.75" Ø
20A/120V	60' - 95'	#10 AWG	0.75" Ø
20A/120V	95' - 150'	#8 AWG	1" Ø
20A/120V	150' - 240'	#6 AWG	1.25" Ø
20A/277V	0' - 140'	#12 AWG	0.75" Ø
20A/277V	140' - 220'	#10 AWG	0.75" Ø
20A/277V	220' - 350'	#8 AWG	1" Ø
20A/277V	350' - 550'	#6 AWG	1.25" Ø

NOTES:

1. WIRE SIZING IS BASED ON COPPER CONDUCTORS SUPPLYING A 20A, 120V CIRCUIT AT THE INDICATED VOLTAGE, ASSUMED TO BE 80% LOADED (16A), WITH MAXIMUM VOLTAGE DROP OF 3% AT THE LOAD.
2. DOWN-SIZED WIRE AT DEVICE/LOAD AS REQUIRED AND TERMINATE CONDUCTORS IN A SAFE AND CODE COMPLIANT MANNER.
3. CONDUIT SIZE IS BASED ON A MAXIMUM OF 3 CIRCUITS PER CONDUIT, EACH WITH A SEPARATE NEUTRAL CONDUCTOR.

REVIEWED FOR CODE COMPLIANCE
FOR COMPLIANCE WITH THE APPLICABLE CONSTRUCTION CODES IDENTIFIED BELOW.
☒ BUILDING ☒ STRUCTURAL
☒ MECHANICAL ☒ PLUMBING
☒ ELECTRICAL ☒ ENERGY
☒ ACCESSIBILITY ☐ FIRE
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SIGNATURE:		

SHEET TITLE
ONE-LINE DIAGRAM

E4

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2/28/2025 12:45:17 PM

EQUIPMENT SCHEDULE

EQUIPMENT SCHEDULE KEY

E - DIVISION 26
Q - FURNISHED WITH EQUIPMENT, INSTALLED BY DIV.26
I - INTEGRAL

NOTES:

1. PROVIDE MANUAL STARTER WITH THERMAL OVERLOAD AND RELAY FOR ATC/BAS CONTROL.
2. PROVIDE FUSED DISCONNECT ELEVATOR POWER MODULE WITH SHUNT TRIP.
3. INDOOR UNITS FED FROM OUTDOOR UNIT. PROVIDE DISCONNECTS FOR BOTH.
4. SEE TYPICAL PUMP RISER DIAGRAM.

GENERAL NOTES:

1. LOCATE ELECTRICAL EQUIPMENT IN ACCESSIBLE LOCATION, SUCH THAT IT IS WITHIN SIGHT OF THE EQUIPMENT IT IS SERVING, AND COMPLIES WITH N.E.C. REQUIRED CLEARANCES.
2. CONTRACTOR SHALL BE RESPONSIBLE TO COORDINATE AND SIZE FEEDER, STARTER, DISCONNECT AND OVERCURRENT PROTECTION IN ACCORDANCE WITH THE MANUFACTURER'S RECOMMENDATIONS OF ACTUAL EQUIPMENT SUPPLIED.
3. ELECTRICAL CONTRACTOR SHALL REVIEW OTHER DIVISION DRAWINGS FOR ANY ADDITIONAL REQUIREMENTS PRIOR TO BID.
4. ELECTRICAL CONTRACTOR SHALL REVIEW OTHER DIVISION SUBMITTALS FOR ANY EQUIPMENT REQUIRING CONNECTION BY ELECTRICAL CONTRACTOR AND COORDINATE ALL REQUIREMENTS PRIOR TO ROUGH-IN.

			LOAD DATA							OCPD		DISCONNECT		MOTOR CONTROLLER			NEMA ENCLOSURE RATING	NOTES
LABEL	QTY	DESCRIPTION	HP	kW	MCA	FLA	V	PH	WIRE AND CONDUIT SIZE	DEVICE	FED FROM	PROVIDED BY	DEVICE	PROVIDED BY	DEVICE	SIZES		
P-1	1	DEWATERING PUMP	3	-	-	6	480	3	3 #12, #12 GR 0.75" CND	15/3 CB	H1C1	E	30A/3P NF	I	-	-	-	4
P-2	1	DEWATERING PUMP	3	-	-	6	480	3	3 #12, #12 GR 0.75" CND	15/3 CB	H1C1	E	30A/3P NF	I	-	-	-	4
P-3	1	DEWATERING PUMP	3	-	-	6	480	3	3 #12, #12 GR 0.75" CND	15/3 CB	H1A1	E	30A/3P NF	I	-	-	-	4
P-4	1	DEWATERING PUMP	3	-	-	6	480	3	3 #12, #12 GR 0.75" CND	15/3 CB	H1A1	E	30A/3P NF	I	-	-	-	4
P-5	1	DEWATERING PUMP	3	-	-	6	480	3	3 #12, #12 GR 0.75" CND	15/3 CB	H1A1	E	30A/3P NF	I	-	-	-	4
P-6	1	DEWATERING PUMP	3	-	-	6	480	3	3 #12, #12 GR 0.75" CND	15/3 CB	H1C1	E	30A/3P NF	I	-	-	-	4
P-7	1	DEWATERING PUMP	3	-	-	6	480	3	3 #12, #12 GR 0.75" CND	15/3 CB	H1C1	E	30A/3P NF	I	-	-	-	4

(EX) PANEL: "L1A1"

VOLTS/PHASE/WIRE:	PANEL SIZE & TYPE:	MAIN SIZE AND TYPE:	FED FROM:	CABINET:	LOCATION:	NOTES:
120/208V, 3 PH 4 WIRE	22" W x 6" D, BOLT-ON	225 AMPERE MAIN LUGS		SURFACE		

ACCESSORIES: PANEL DIRECTORY, IDENTIFICATION, GROUNDING BAR — AIC RATING: 22,000

CKT	OCP			LOAD (kVA)				PHASE LOAD				LOAD (kVA)			OCP			CKT
NO	AMP	POLE	BKR	LTG	PWR	CO	DESCRIPTION	A	B	C	DESCRIPTION	CO	PWR	LTG	BKR	POLE	AMP	NO
1	20	1	--	0.0	0.0	0.0	(EX) CORRIDOR OUTLETS	0.0	0.0		(EX) SPARE	0.0	0.0	0.0	--	1	20	2
3	20	1	--	0.0	0.0	0.0	(EX) DENTAL OCCUP. OUTLETS		0.0	0.0	(EX) SPARE	0.0	0.0	0.0	--	1	20	4
5	20	1	--	0.0	0.0	0.0	(EX) DENTAL OCCUP. CHAIR			0.0	0.0	(EX) SPARE	0.0	0.0	0.0	--	1	20	6
7	20	1	--	0.0	0.0	0.0	(EX) DENTAL OCCUP. CHAIR	0.0	0.0			(EX) SPARE	0.0	0.0	0.0	--	1	20	8
9	20	1	--	0.0	0.0	0.0	(EX) DENTAL OCCUP. LT		0.0	0.0		(EX) SPARE	0.0	0.0	0.0	--	1	20	10
11	20	1	--	0.0	0.0	0.0	(EX) DENTAL OCCUP. OUTLETS			0.0	0.0	(EX) SPARE	0.0	0.0	0.0	--	1	20	12
13	20	1	--	0.0	0.0	0.0	(EX) DENTAL OCCUP. OUTLETS	0.0	0.0			(EX) SPARE	0.0	0.0	0.0	--	1	20	14
15	20	1	--	0.0	0.0	0.0	(EX) DENTAL OCCUP. OUTLETS		0.0	0.0		(EX) SPARE	0.0	0.0	0.0	--	1	20	16
17	20	1	--	0.0	0.0	0.0	(EX) DENTAL OCCUP. CHAIR			0.0	0.0	(EX) TOILET OUTLET	0.0	0.0	0.0	--	1	20	18
19	20	1	--	0.0	0.0	0.0	(EX) DENTAL OCCUP. CHAIR	0.0	0.0			(EX) WAITING OUTLET	0.0	0.0	0.0	--	1	20	20
21	20	1	--	0.0	0.0	0.0	(EX) DENTAL OCCUP. CHAIR		0.0	0.0		(EX) ADMIN OUTLETS	0.0	0.0	0.0	--	1	20	22
23	20	1	--	0.0	0.0	0.0	(EX) DENTAL OCCUP. OUTLETS			0.0	0.0	(EX) X-RAY OUTLETS	0.0	0.0	0.0	--	1	20	24
25	**20**	**1**	**EB**	**0.0**	**0.0**	**0.4**	**WP GFCI EXT. OUTLETS WEST**	**0.4**	0.0			(EX) X-RAY OUTLETS	0.0	0.0	0.0	--	1	20	26
27	20	1	--	0.0	0.0	0.0	(EX) SPARE			0.0	0.0	(EX) DARK ROOM OUTLETS	0.0	0.0	0.0	--	1	20	28
29	20	1	--	0.0	0.0	0.0	(EX) SPARE				0.0	0.0	(EX) PANO OUTLETS	0.0	0.0	0.0	--	1	20	30
31	20	1	--	0.0	0.0	0.0	(EX) SPARE	0.0	0.0			(EX) DXP-1	0.0	0.0	0.0	--	1	20	32
33	20	1	--	0.0	0.0	0.0	(EX) SPARE			0.0	0.0	(EX) DX-1	0.0	0.0	0.0	--	1	20	34
35	20	1	--	0.0	0.0	0.0	(EX) SPARE				0.0	0.0	(EX) DX-1	0.0	0.0	0.0	--	1	20	36
37	20	1	--	0.0	0.0	0.0	(EX) SPARE	0.0	0.0			(EX) DX-1	0.0	0.0	0.0	--	1	20	38
39	40	2	--	0.0	0.0	0.0	(EX) DV-1			0.0	0.0	(EX) DAC-1	0.0	0.0	0.0	--	2	70	40
41	--	--	--	--	--	--	--				0.0	0.0	--	--	--	--	--	--	42
TOTALS:							CONNECTED kVA PER PHASE	**0**	**0**	**0**		CONNECTED TOTAL kVA =					**0**		
							CONNECTED AMPS PER PHASE	**3**	**0**	**0**		AVERAGE CONNECTED AMPS PER PHASE =					**1**		

NEC DIVERSIFIED LOAD CALCULATIONS

LIGHTING & CONTINUOUS LOADS:
RECEPTACLES: **0.4 kVA @ 100% = 0.4 kVA**
ALL OTHER LOADS @ 100% : **0.0 kVA**

- 100% CONNECTED LOAD PLUS 25%
- FIRST 10kVA @ 100%, REMAINDER @ 50%
- MOTOR TOTALS INCLUDED IN ALL OTHER LOADS WITH LARGEST MOTOR CALCULATED @ 125% PER NEC

DIVERSIFIED TOTAL kVA = **0**
AVERAGE AMPS PER PHASE = **1**

BKR: GF=GFCI, GF3=30mA GFCI CAPABLE OF BEING LOCKED OUT IN OPEN POSITION, IG=ISOLATED GROUND, AF=AFCI, ST=SHUNT TRIP, RED=PROVIDE RED COLORED BREAKER, AF=ARC FAULT CURRENT INTERRUPTER, GA=COMBINATION OF GROUND FAULT AND ARC FAULT CIRCUIT INTERRUPTER, GS=COMBINATION OF SHUNT TRIP WITH GFCI, EX=EXISTING LOAD, EB=UTILIZE EXISTING CIRCUIT BREAKER FOR NEW LOAD

(EX) PANEL: "L1C1"

VOLTS/PHASE/WIRE:	PANEL SIZE & TYPE:	MAIN SIZE AND TYPE:	FED FROM:	CABINET:	LOCATION:	NOTES:
120/208V, 3 PH 4 WIRE	22" W x 6" D, BOLT-ON	225 AMPERE MAIN LUGS		SURFACE		

ACCESSORIES: PANEL DIRECTORY, IDENTIFICATION, GROUNDING BAR — AIC RATING: 22,000

CKT	OCP			LOAD (kVA)				PHASE LOAD				LOAD (kVA)			OCP			CKT
NO	AMP	POLE	BKR	LTG	PWR	CO	DESCRIPTION	A	B	C	DESCRIPTION	CO	PWR	LTG	BKR	POLE	AMP	NO
1	20	1	--	0.0	0.0	0.0	(EX) PREP ROOM OUTLETS	0.0	0.0		(EX) FUTURE PROG OUTLETS	0.0	0.0	0.0	--	1	20	2
3	20	1	--	0.0	0.0	0.0	(EX) PREP ROOM OUTLETS		0.0	0.0	(EX) CLINICAL LAB OUTLETS	0.0	0.0	0.0	--	1	20	4
5	20	1	--	0.0	0.0	0.0	(EX) PREP ROOM OUTLETS			0.0	0.0	(EX) CLINICAL LAB OUTLETS	0.0	0.0	0.0	--	1	20	6
7	20	1	--	0.0	0.0	0.0	(EX) CLASSROOM OUTLETS	0.0	0.0			(EX) CLINICAL LAB OUTLETS	0.0	0.0	0.0	--	1	20	8
9	20	1	--	0.0	0.0	0.0	(EX) CLASSROOM OUTLETS		0.0	0.0		(EX) CLINICAL LAB OUTLETS	0.0	0.0	0.0	--	1	20	10
11	20	1	--	0.0	0.0	0.0	(EX) CLASSROOM OUTLETS			0.0	0.0	(EX) CLINICAL LAB OUTLETS	0.0	0.0	0.0	--	1	20	12
13	20	1	--	0.0	0.0	0.0	(EX) SYSTEMS FURNITURE	0.0	0.0			(EX) CLINICAL LAB OUTLETS	0.0	0.0	0.0	--	1	20	14
15	20	1	--	0.0	0.0	0.0	(EX) SYSTEMS FURNITURE		0.0	0.0		(EX) CLINICAL LAB OUTLETS	0.0	0.0	0.0	--	1	20	16
17	20	1	--	0.0	0.0	0.0	(EX) LAB OUTLETS			0.0	0.0	(EX) CLINICAL LAB OUTLETS	0.0	0.0	0.0	--	1	20	18
19	20	1	--	0.0	0.0	0.0	(EX) LAB OUTLETS	0.0	0.0			(EX) CLINICAL LAB OUTLETS	0.0	0.0	0.0	--	1	20	20
21	20	1	--	0.0	0.0	0.0	(EX) CONF. OUTLETS		0.0	0.0		(EX) VIDEO OUTLETS	0.0	0.0	0.0	--	1	20	22
23	**20**	**1**	**EB**	**0.0**	**0.0**	**0.4**	**WP GFCI EXT. OUTLETS NE**			**0.4**	0.0	(EX) CLINICAL LAB OUTLETS	0.0	0.0	0.0	--	1	20	24
25	**20**	**1**	**EB**	**0.0**	**0.0**	**0.4**	**WP GFCI EXT. OUTLETS SE**	**0.4**	0.0			(EX) IRRIGATION CONTROL	0.0	0.0	0.0	--	1	20	26
27	20	1	--	0.0	0.0	0.0	(EX) SPARE			0.0	0.0	(EX) SPARE	0.0	0.0	0.0	--	1	20	28
29	20	1	--	0.0	0.0	0.0	(EX) SPARE				0.0	0.0	(EX) SPARE	0.0	0.0	0.0	--	1	20	30
31	20	1	--	0.0	0.0	0.0	(EX) SPARE	0.0	0.0			(EX) SPARE	0.0	0.0	0.0	--	1	20	32
33	20	1	--	0.0	0.0	0.0	(EX) SPARE			0.0	0.0	(EX) SPARE	0.0	0.0	0.0	--	1	20	34
35	20	1	--	0.0	0.0	0.0	(EX) SPARE				0.0	0.0	(EX) SPARE	0.0	0.0	0.0	--	1	20	36
37	20	1	--	0.0	0.0	0.0	(EX) SPARE	0.0	0.0			(EX) SPARE	0.0	0.0	0.0	--	1	20	38
39	20	1	--	0.0	0.0	0.0	(EX) GEN. BATTERY CHARGER			0.0	0.0	(EX) FUTURE PROG OUTLETS	0.0	0.0	0.0	--	1	20	40
41	20	1	--	0.0	0.0	0.0	(EX) GEN. BLOCK HEATER				0.0	0.0	(EX) FUTURE PROG OUTLETS	0.0	0.0	0.0	--	1	20	42
TOTALS:							CONNECTED kVA PER PHASE	**0**	**0**	**0**		CONNECTED TOTAL kVA =					**1**		
							CONNECTED AMPS PER PHASE	**3**	**0**	**3**		AVERAGE CONNECTED AMPS PER PHASE =					**2**		

NEC DIVERSIFIED LOAD CALCULATIONS

LIGHTING & CONTINUOUS LOADS:
RECEPTACLES: **0.7 kVA @ 100% = 0.7 kVA**
ALL OTHER LOADS @ 100% : **0.0 kVA**

- 100% CONNECTED LOAD PLUS 25%
- FIRST 10kVA @ 100%, REMAINDER @ 50%
- MOTOR TOTALS INCLUDED IN ALL OTHER LOADS WITH LARGEST MOTOR CALCULATED @ 125% PER NEC

DIVERSIFIED TOTAL kVA = **1**
AVERAGE AMPS PER PHASE = **2**

BKR: GF=GFCI, GF3=30mA GFCI CAPABLE OF BEING LOCKED OUT IN OPEN POSITION, IG=ISOLATED GROUND, AF=AFCI, ST=SHUNT TRIP, RED=PROVIDE RED COLORED BREAKER, AF=ARC FAULT CURRENT INTERRUPTER, GA=COMBINATION OF GROUND FAULT AND ARC FAULT CIRCUIT INTERRUPTER, GS=COMBINATION OF SHUNT TRIP WITH GFCI, EX=EXISTING LOAD, EB=UTILIZE EXISTING CIRCUIT BREAKER FOR NEW LOAD

(EX) PANEL: "H1A1"

VOLTS/PHASE/WIRE:	PANEL SIZE & TYPE:	MAIN SIZE AND TYPE:	FED FROM:	CABINET:	LOCATION:	NOTES:
480/277 V, 3 PH 4 WIRE	22" W x 6" D, BOLT-ON	225 AMPERE MAIN LUGS		SURFACE		

ACCESSORIES: PANEL DIRECTORY, IDENTIFICATION, GROUNDING BAR — AIC RATING: 0

CKT	OCP			LOAD (kVA)				PHASE LOAD				LOAD (kVA)			OCP			CKT
NO	AMP	POLE	BKR	LTG	PWR	CO	DESCRIPTION	A	B	C	DESCRIPTION	CO	PWR	LTG	BKR	POLE	AMP	NO
1	20	1	--	0.0	0.0	0.0	(EX) KITCHEN/STORAGE LTG	0.0	0.0		(EX) 1ST FLOOR LTG	0.0	0.0	0.0	--	1	20	2
3	20	1	--	0.0	0.0	0.0	(EX) AUDITORIUM LTG		0.0	0.0	(EX) 1ST FLOOR LTG	0.0	0.0	0.0	--	1	20	4
5	20	1	--	0.0	0.0	0.0	(EX) AUDITORIUM LTG			0.0	0.0	(EX) DENTAL OCCUP. LTG	0.0	0.0	0.0	--	1	20	6
7	20	1	--	0.0	0.0	0.0	(EX) EXTERIOR LTG	0.0	0.0			(EX) DENTAL OCCUP. LTG	0.0	0.0	0.0	--	1	20	8
9	20	1	--	0.0	0.0	0.0	(EX) CORRIDOR LTG		0.0	0.0		(EX) DENTAL CLASSRM LTG	0.0	0.0	0.0	--	1	20	10
11	**15**	**3**	**NB**	**0.0**	**5.0**	**0.0**	**P-3 NE DEWATERING PUMP TYP**			**1.7**	0.0	(EX) DENTAL CLASSRM LTG	0.0	0.0	0.0	--	1	20	12
13	**--**	**--**	**--**	**--**	**--**	**--**	**--**	**1.7**	0.0			(EX) DENTAL CLASSRM LTG	0.0	0.0	0.0	--	1	20	14
15	**--**	**--**	**--**	**--**	**--**	**--**	**--**		**1.7**	0.0		(EX) DENTAL CLASSRM LTG	0.0	0.0	0.0	--	1	20	16
17	**15**	**3**	**NB**	**0.0**	**5.0**	**0.0**	**P-5 E. DEWATERING PUMP TYP**			**1.7**	**1.7**	**P-4 NE DEWATERING PUMP TYP**	**0.0**	**5.0**	**0.0**	**NB**	**3**	**15**	**18**
19	**--**	**--**	**--**	**--**	**--**	**--**	**--**	**1.7**	**1.7**			**--**	**--**	**--**	**--**	**--**	**--**	**--**	**20**
21	**--**	**--**	**--**	**--**	**--**	**--**	**--**			**1.7**	**1.7**	**--**	**--**	**--**	**--**	**--**	**--**	**--**	**22**
23	20	1	--	0.0	0.0	0.0	(EX) SPARE				0.0	0.0	(EX) SPARE	0.0	0.0	0.0	--	1	20	24
25	20	1	--	0.0	0.0	0.0	(EX) SPARE	0.0	0.0			(EX) SPARE	0.0	0.0	0.0	--	1	20	26
27	20	1	--	0.0	0.0	0.0	(EX) SPARE			0.0	0.0	(EX) SPARE	0.0	0.0	0.0	--	1	20	28
29	20	1	--	0.0	0.0	0.0	(EX) SPARE				0.0	0.0	(EX) SPARE	0.0	0.0	0.0	--	1	20	30
TOTALS:							CONNECTED kVA PER PHASE	**5**	**5**	**5**		CONNECTED TOTAL kVA =					**15**		
							CONNECTED AMPS PER PHASE	**18**	**18**	**18**		AVERAGE CONNECTED AMPS PER PHASE =					**18**		

NEC DIVERSIFIED LOAD CALCULATIONS

LIGHTING & CONTINUOUS LOADS:
RECEPTACLES:
ALL OTHER LOADS @ 100% : **16.2 kVA**

- 100% CONNECTED LOAD PLUS 25%
- FIRST 10kVA @ 100%, REMAINDER @ 50%
- MOTOR TOTALS INCLUDED IN ALL OTHER LOADS WITH LARGEST MOTOR CALCULATED @ 125% PER NEC

DIVERSIFIED TOTAL kVA = **16**
AVERAGE AMPS PER PHASE = **19**

BKR: GF=GFCI, GF3=30mA GFCI CAPABLE OF BEING LOCKED OUT IN OPEN POSITION, IG=ISOLATED GROUND, AF=AFCI, ST=SHUNT TRIP, RED=PROVIDE RED COLORED BREAKER, AF=ARC FAULT CURRENT INTERRUPTER, GA=COMBINATION OF GROUND FAULT AND ARC FAULT CIRCUIT INTERRUPTER, GS=COMBINATION OF SHUNT TRIP WITH GFCI, EX=EXISTING LOAD, NB=NEW CIRCUIT BREAKER IN EXISTING PANELBOARD

PANEL: "H1C1"

VOLTS/PHASE/WIRE:	PANEL SIZE & TYPE:	MAIN SIZE AND TYPE:	FED FROM:	CABINET:	LOCATION:	NOTES:
480/277 V, 3 PH 4 WIRE	22" W x 6" D, BOLT-ON	200 AMPERE MAIN LUGS		SURFACE		

ACCESSORIES: PANEL DIRECTORY, IDENTIFICATION, GROUNDING BAR — AIC RATING: 65,000

CKT	OCP			LOAD (kVA)				PHASE LOAD				LOAD (kVA)			OCP			CKT
NO	AMP	POLE	BKR	LTG	PWR	CO	DESCRIPTION	A	B	C	DESCRIPTION	CO	PWR	LTG	BKR	POLE	AMP	NO
1	**15**	**3**		**0.0**	**5.0**	**0.0**	**P-1 NW DEWATERING PUMP TYP**	**1.7**	**1.7**		**P-2 NORTH DEWATERING PUMP TYP**	**0.0**	**5.0**	**0.0**		**3**	**15**	**2**
3	**--**	**--**	**--**	**--**	**--**	**--**	**--**			**1.7**	**1.7**	**--**	**--**	**--**	**--**	**--**	**--**	**4**
5	**--**	**--**	**--**	**--**	**--**	**--**	**--**	**--**	**--**			**--**	**--**	**--**	**--**	**--**	**--**	**6**
7	**15**	**3**		**0.0**	**5.0**	**0.0**	**P-7 SOUTH DEWATERING PUMP...**	**1.7**	**1.7**		**P-6 SOUTH DEWATERING PUMP TYP**	**0.0**	**5.0**	**0.0**		**3**	**15**	**8**
9	**--**	**--**	**--**	**--**	**--**	**--**	**--**			**1.7**	**1.7**	**--**	**--**	**--**	**--**	**--**	**--**	**10**
11	**--**	**--**	**--**	**--**	**--**	**--**	**--**	**--**	**--**			**--**	**--**	**--**	**--**	**--**	**--**	**12**
13	**15**	**3**	**--**	**0.0**	**0.0**	**0.0**	**SPARE**	**0.0**	**0.0**		**SPARE**	**0.0**	**0.0**	**0.0**	**--**	**3**	**20**	**14**
15	**--**	**--**	**--**	**--**	**--**	**--**	**--**			**0.0**	**0.0**	**--**	**--**	**--**	**--**	**--**	**--**	**16**
17	**--**	**--**	**--**	**--**	**--**	**--**	**--**	**--**	**--**			**--**	**--**	**--**	**--**	**--**	**--**	**18**
19	**15**	**3**	**--**	**0.0**	**0.0**	**0.0**	**SPARE**	**0.0**	**0.0**		**SPARE**	**0.0**	**0.0**	**0.0**	**--**	**1**	**20**	**20**
21	**--**	**--**	**--**	**--**	**--**	**--**	**--**			**0.0**	**0.0**	**--**	**--**	**--**	**--**	**--**	**--**	**22**
23	**--**	**--**	**--**	**--**	**--**	**--**	**--**	**--**	**--**			**0.0**	**0.0**	**0.0**	**--**	**1**	**20**	**24**
25	**20**	**1**	**--**	**0.0**	**0.0**	**0.0**	**SPARE**	**0.0**	**0.0**		**SPARE**	**0.0**	**0.0**	**0.0**	**--**	**1**	**20**	**26**
27	**20**	**1**	**--**	**0.0**	**0.0**	**0.0**	**SPARE**			**0.0**	**0.0**	**SPARE**	**0.0**	**0.0**	**0.0**	**--**	**1**	**20**	**28**
29	**20**	**1**	**--**	**0.0**	**0.0**	**0.0**	**SPARE**				**0.0**	**0.0**	**SPARE**	**0.0**	**0.0**	**0.0**	**--**	**1**	**20**	**30**
31	**20**	**1**	**--**	**0.0**	**0.0**	**0.0**	**SPARE**	**0.0**	**0.0**			**SPARE**	**0.0**	**0.0**	**0.0**	**--**	**1**	**20**	**32**
33	**20**	**1**	**--**	**0.0**	**0.0**	**0.0**	**SPARE**			**0.0**	**0.0**	**SPARE**	**0.0**	**0.0**	**0.0**	**--**	**1**	**20**	**34**
35	**20**	**1**	**--**	**0.0**	**0.0**	**0.0**	**SPARE**				**0.0**	**0.0**	**SPARE**	**0.0**	**0.0**	**0.0**	**--**	**1**	**20**	**36**
37	**20**	**1**	**--**	**0.0**	**0.0**	**0.0**	**SPARE**	**0.0**	**0.0**			**SPARE**	**0.0**	**0.0**	**0.0**	**--**	**1**	**20**	**38**
39	**20**	**1**	**--**	**0.0**	**0.0**	**0.0**	**SPARE**			**0.0**	**0.0**	**SPARE**	**0.0**	**0.0**	**0.0**	**--**	**1**	**20**	**40**
41	**20**	**1**	**--**	**0.0**	**0.0**	**0.0**	**SPARE**				**0.0**	**0.0**	**SPARE**	**0.0**	**0.0**	**0.0**	**--**	**1**	**20**	**42**
TOTALS:							CONNECTED kVA PER PHASE	**7**	**7**	**7**		CONNECTED TOTAL kVA =					**20**		
							CONNECTED AMPS PER PHASE	**24**	**24**	**24**		AVERAGE CONNECTED AMPS PER PHASE =					**24**		

NEC DIVERSIFIED LOAD CALCULATIONS

LIGHTING & CONTINUOUS LOADS:
RECEPTACLES:
ALL OTHER LOADS @ 100% : **21.2 kVA**

- 100% CONNECTED LOAD PLUS 25%
- FIRST 10kVA @ 100%, REMAINDER @ 50%
- MOTOR TOTALS INCLUDED IN ALL OTHER LOADS WITH LARGEST MOTOR CALCULATED @ 125% PER NEC

DIVERSIFIED TOTAL kVA = **21**
AVERAGE AMPS PER PHASE = **25**

BKR: GF=GFCI, GF3=30mA GFCI CAPABLE OF BEING LOCKED OUT IN OPEN POSITION, IG=ISOLATED GROUND, AF=AFCI, ST=SHUNT TRIP, RED=PROVIDE RED COLORED BREAKER, AF=ARC FAULT CURRENT INTERRUPTER, GA=COMBINATION OF GROUND FAULT AND ARC FAULT CIRCUIT INTERRUPTER, GS=COMBINATION OF SHUNT TRIP WITH GFCI, EX=EXISTING LOAD

REVIEWED FOR CODE COMPLIANCE
FOR COMPLIANCE WITH THE APPLICABLE CONSTRUCTION CODES IDENTIFIED BELOW.
☒ BUILDING ☒ STRUCTURAL
☒ MECHANICAL ☒ PLUMBING
☒ ELECTRICAL ☒ ENERGY
☒ ACCESSIBILITY ☐ FIRE
PLAN REVIEW ACCEPTANCE OF DOCUMENTS DOES NOT AUTHORIZE CONSTRUCTION TO PROCEED IN VIOLATION OF ANY FEDERAL, STATE, OR LOCAL REGULATIONS.
BY: _____ DATE: 06/30/25
WEST COAST CODE CONSULTANTS, INC.

SPECTRUM ENGINEERS
324 S. State St., Suite 400
Salt Lake City, UT 84111
801-328-5151
www.spectrum-engineers.com

OTECH

LICENSED PROFESSIONAL ENGINEER No. 12735266 MARIO SEBASTIAN MARTINEZ STATE OF UTAH
01/24/25

OTECH APPROVAL STAMP

OGDEN WEBER TECHNICAL COLLEGE

HEALTH TECHNOLOGY DEWATERING

200 N Washington Blvd
Ogden, UT 84404

Mark:	Date:	Description

ISSUE: CONSTRUCTION DOCS
DATE: 01.24.25
SPECTRUM PROJECT NO: 240764
OTECH PROJECT NO: 0000010945
DRAWN BY: JKC
CHECKED BY: MSM
DESIGNED BY: MSM
RECORD DRAWING DATE:
SIGNATURE:

SHEET TITLE
ELECTRICAL SCHEDULES

E5

Legend

(Note: All Items may not appear on drawing)

San. Sewer Manhole	(S)	Top of Walk	TW
Water Manhole	(W)	Top of Concrete	TCN
Storm Drain Manhole	(SD)	Natural Ground	NG
Cleanout	(CO)	Finish Grade	FG
Electrical Manhole	(E)	Match Existing	ME
Catch Basins		Fire Department Connection	FDC
Exist. Fire Hydrant		Finish Contour	90
Fire Hydrant		Exist. Contour	90
Fire Department Connection		Finish Grade	95.33TA
Post Indicator Valve		Exist. Grade	95.72TA
Exist. Water Valve		Ridge Line	R
Water Valve		Direction of Flow	
Sanitary Sewer	S	Existing Asphalt	
Culinary Water	W	New Asphalt	
Gas Line	G	Heavy Duty Asphalt	
Irrigation Line	IW	Existing Concrete	
Storm Drain	SD	New Concrete	
Telephone Line	T	Demo'd Road Base	
Secondary Waterline	SW	Spill Curb & Gutter	
Power Line	P	Demo Tree	
Fire Line	F	Tree To Remain in Place	
Land Drain	LD		
Power pole			
Power pole w/guy			
Light Pole			
Fence	x x x		
Flowline of ditch			
Overhead Power line	OHP		
Corrugated Metal Pipe	CMP		
Concrete Pipe	CP		
Reinforced Concrete Pipe	RCP		
Ductile Iron	DI		
Polyvinyl Chloride	PVC		
Top of Asphalt	TA		
Edge of Asphalt	EA		
Centerline	CL		
Flowline	FL		
Finish Floor	FF		
Top of Curb	TC		
Top of Wall	TWL		

CAUTION NOTICE TO CONTRACTOR

The contractor is specifically cautioned that the location and/or elevation of existing utilities as shown on these plans are based on records of the various utility companies and, where possible, measurements taken in the field. The information is not to be relied on as being exact or complete. The contractor must call the appropriate utility company at least 48 hours before any excavation to request exact field location of utilities. It shall be the responsibility of the contractor to relocate all existing utilities which conflict with the propose improvements shown on the plans.

PRIVATE ENGINEER'S NOTICE TO CONTRACTORS

The Contractor agrees that he shall assume sole and complete responsibility for job site conditions during the course of construction of this project, including safety of all persons and property: that this requirement shall apply continuously and not be limited to normal working hours; and that the contractor shall defend, indemnify, and hold the owner and the engineer harmless from any and all liability, real or alleged, in connection with the performance of work on this project, excepting for liability arising from the sole negligence of the owner or the engineer.

ALL CONSTRUCTION TO CONFORM TO CITY STANDARDS AND SPECIFICATIONS IN RIGHT OF WAY

GENERAL DEMOLITION NOTES:

1. Demolition and site clearing for this contract are to include all areas shown within demolition limits or by note.
2. Refer to site improvement plans for more details on limits of removal.
3. Retain and Protect all curbs, gutters, walks, slabs, walls, fences, flatwork, asphalt, waterlines and meters, gas lines, sewer lines, light poles, buried cables, storm drain piping and structures unless otherwise shown.
4. Basements and other excavated areas to be backfilled with clean granular material compacted to 95% of maximum lab density as determined by ASTM D 1557–78. (Test results to be given to owner)
5. Clear and grub trees, shrubs, and vegetation within construction limits, disposal to be off–site except where noted otherwise.
6. DO NOT interrupt any services or disrupt the operation of any businesses shown outside the demolition limits.
7. If ASBESTOS is found in existing structures, the Asbestos must be removed in a legal manner by a contractor licensed to handle asbestos materials. (Not a part of contract)
8. Remove debris, rubbish, and other materials resulting from the demolition and site clearing operations from the site and dispose of in a legal manner.
9. The location and/or elevation of existing utilities as shown on these plans is based on records of the various utility companies and, where possible, measurements taken in the field. The information is not to be relied upon as being exact or complete. Contractor shall contact authorities having jurisdiction for field locations. Contractor shall be responsible for protection of in place and relocated utilities during construction.
10. Stockpiles shall be graded to maintain slopes not greater than 3 horizontal to 1 vertical. Provide erosion control as needed to prevent sediment transport to adjacent drainage ways.
11. Contractor shall be responsible for disposal of all waste material. Disposal shall be at an approved site for such material. Burning onsite is not permitted.
12. Contractor shall verify with city any street removal, curb cuts, and any restoration required for utility line removal.
13. Install traffic warning devices as needed in accordance with local standards.
14. Contractor shall obtain all permits necessary for demolition from City, County, State or Federal Agencies as required.

REVIEWED FOR CODE COMPLIANCE
FOR COMPLIANCE WITH THE APPLICABLE CONSTRUCTION CODES IDENTIFIED BELOW.
☒ BUILDING ☒ STRUCTURAL
☒ MECHANICAL ☒ PLUMBING
☒ ELECTRICAL ☒ ENERGY
☒ ACCESSIBILITY ☐ FIRE
PLAN REVIEW ACCEPTANCE OF DOCUMENTS DOES NOT AUTHORIZE CONSTRUCTION TO PROCEED IN VIOLATION OF ANY FEDERAL, STATE, OR LOCAL REGULATIONS.
BY: [signature] DATE: 06/30/25
WEST COAST CODE CONSULTANTS, INC.

SPECTRUM ENGINEERS
324 S. State St., Suite 400
Salt Lake City, UT 84111
800-678-7077
801-328-5151
fax: 801-328-5155
www.spectrum-engineers.com

DFCM

DFCM APPROVAL STAMP

LICENSED PROFESSIONAL ENGINEER No. 166484 MARK EUGENE BABBITT 2-18-25 STATE OF UTAH

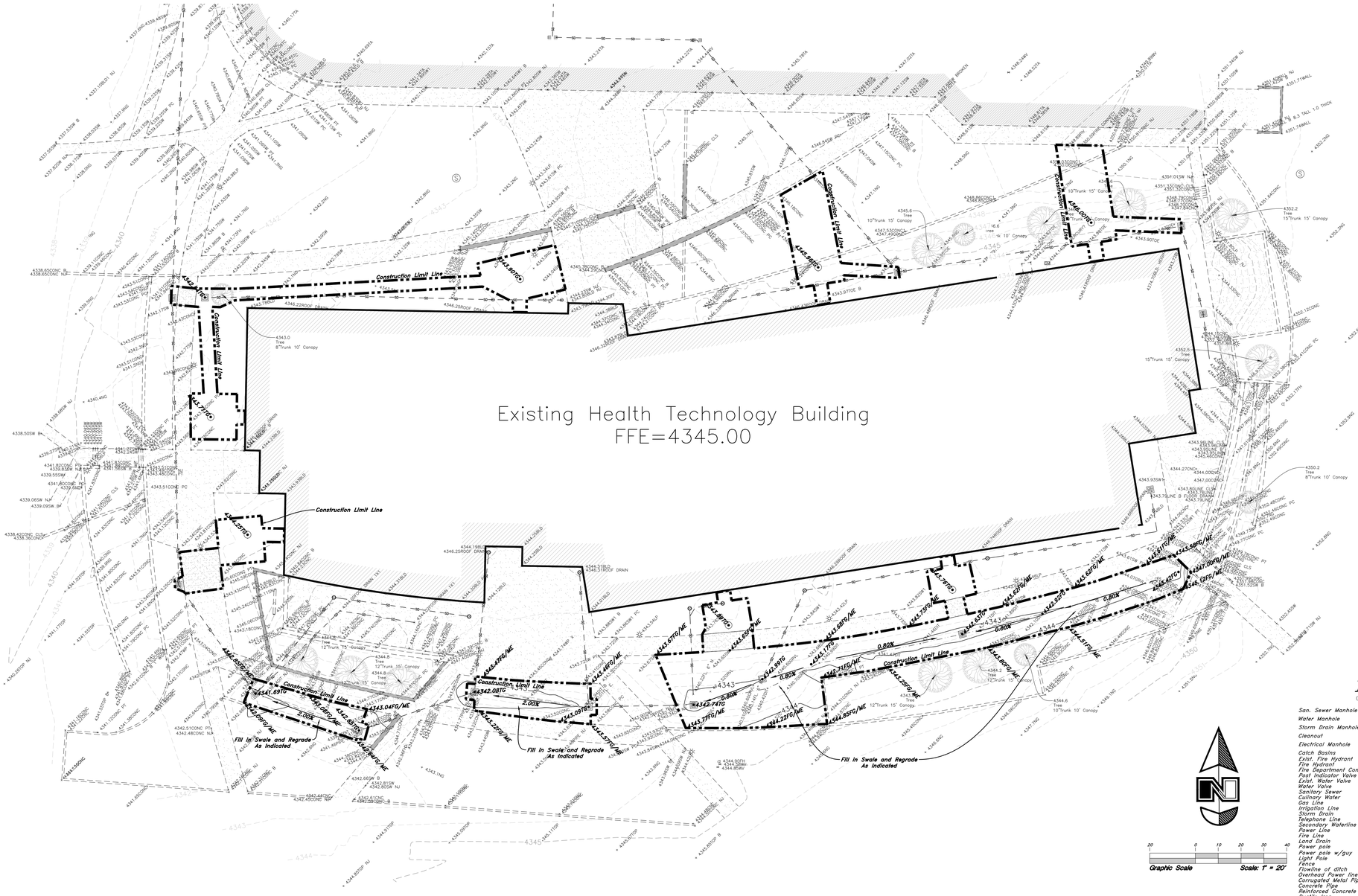
GREAT BASIN ENGINEERING INC
5746 South 1475 East - Suite 200
Ogden, Utah 84403 Main (801)394-4515
S.L.C (801)521-0222 Fax 801-392-7544
www.greatbasinengineering.com

ISSUE: Construction Documents
DATE: 01.24.2025
SPECTRUM PROJECT NO: 240764
DFCM PROJECT NO: 0000010945
DRAWN BY: NWA
CHECKED BY: MEB
DESIGNED BY: NWA
RECORD DRAWING DATE:
SIGNATURE:

SHEET TITLE

Demolition Plan

C1



Legend

(Note: All items may not appear on drawing)

San. Sewer Manhole	S	Top of Walk	TW
Water Manhole	W	Top of Concrete	TCN
Storm Drain Manhole	D	Natural Ground	NG
Cleanout	C	Finish Grade	FG
Electrical Manhole	E	Match Existing	ME
Catch Basins		Fire Department Connection	FDC
Exist. Fire Hydrant		Finish Contour	90
Fire Hydrant		Exist. Contour	90
Fire Department Connection		Finish Grade	95.33TA
Post Indicator Valve		Exist. Grade	95.72TA
Exist. Water Valve		Ridge Line	
Water Valve		Direction of Flow	
Sanitary Sewer	S		
Culinary Water	W	Existing Asphalt	
Gas Line	G		
Irrigation Line	IW	New Asphalt	
Storm Drain	SD		
Telephone Line	T	Heavy Duty Asphalt	
Secondary Waterline	SW		
Power Line	P	Existing Concrete	
Fire Line	F		
Land Drain	LD	New Concrete	
Power pole	PP		
Power pole w/guy		Demo'd Road Base	
Light Pole			
Fence	x x x		
Flowline of ditch		Spill Curb & Gutter	
Overhead Power line	OHP		
Corrugated Metal Pipe	CMP		
Concrete Pipe	CP		
Reinforced Concrete Pipe	RCP	Demo Tree	
Ductile Iron	DI		
Polyvinyl Chloride	PVC		
Top of Asphalt	TA		
Edge of Asphalt	EA		
Centerline	CL		
Flowline	FL		
Finish Floor	FF		
Top of Curb	TC	Tree To Remain In Place	
Top of Wall	TW		

GENERAL GRADING NOTES:

1. All work shall be in accordance with the City Public Works Standard.
2. Cut slopes shall be no steeper than 2 horizontal to 1 vertical.
3. Fill slopes shall be no steeper than 2 horizontal to 1 vertical.
4. Fills shall be compacted per the recommendations of the geotechnical report prepared for the project and shall be certified by the geotechnical engineer.
5. Areas to receive fill shall be properly prepared and approved by the City inspector and geotechnical Engineer prior to placing fill.
6. Fills shall be benched into competent material as per specifications and geotechnical report.
7. All trench backfill shall be tested and certified by the site geotechnical engineer per the grading code.
8. A geotechnical engineer shall perform periodic inspections and submit a complete report and map upon completion of the rough grading.
9. The final compaction report and certification from the geotechnical engineer shall contain the type of field testing performed. Each test shall be identified with the method of obtaining the in-place density, whether sand cone or drive ring and shall be so noted for each test. Sufficient maximum density determinations shall be performed to verify the accuracy of the maximum density curves used by the field technician.
10. Dust shall be controlled by watering.
11. The location and protection of all utilities is the responsibility of the permitee.
12. Approved protective measures and temporary drainage provisions must be used to protect adjoining properties during the grading project.
13. All public roadways must be cleared daily of all dirt, mud and debris deposited on them as a result of the grading operation. Cleaning is to be done to the satisfaction of the city engineer.
14. The site shall be cleared and grubbed of all vegetation and deleterious matter prior to grading.
15. The contractor shall provide shoring in accordance with OSHA requirements for trench walls.
16. Aggregate base shall be compacted per the geotechnical report prepared for the project.
17. Elevations shown on this plan are finish grades. Rough grades are the subgrades of the improvements shown hereon.
18. As part of the construction documents, owner has provided contractor with a topographic survey performed by manual or aerial means. Such survey was prepared for project design purposes and is provided to the contractor as a courtesy. It is expressly understood that such survey may not accurately reflect existing topographic conditions.
19. Erosion Control: Protect all inlet boxes, catch basins, etc. with straw bales or other approved method to strain the storm water during construction. Protect surrounding properties and streets from site runoff with sandbags and earth berms.

Note:
Regrading of Demolished Areas to Match Existing Grades Prior to Demolition Unless Otherwise Noted.

PRIVATE ENGINEER'S NOTICE TO CONTRACTORS

The Contractor agrees that he shall assume sole and complete responsibility for job site conditions during the course of construction of this project, including safety of all persons and property; that this requirement shall apply continuously and not be limited to normal working hours; and that the contractor shall defend, indemnify, and hold the owner and the engineer harmless from any and all liability, real or alleged, in connection with the performance of work on this project, excepting for liability arising from the sole negligence of the owner or the engineer.

ALL CONSTRUCTION TO CONFORM TO CITY STANDARDS AND SPECIFICATIONS IN RIGHT OF WAY

REVIEWED FOR CODE COMPLIANCE
FOR COMPLIANCE WITH THE APPLICABLE CONSTRUCTION CODES IDENTIFIED BELOW.
☒ BUILDING ☒ STRUCTURAL
☒ MECHANICAL ☒ PLUMBING
☒ ELECTRICAL ☒ ENERGY
☒ ACCESSIBILITY ☐ FIRE
PLAN REVIEW ACCEPTANCE OF DOCUMENTS DOES NOT AUTHORIZE CONSTRUCTION TO PROCEED IN VIOLATION OF ANY FEDERAL, STATE, OR LOCAL REGULATIONS.
BY: _____ DATE: 06/30/25
WEST COAST CODE CONSULTANTS, INC.

SPECTRUM ENGINEERS
324 S. State St., Suite 400
Salt Lake City, UT 84111
800-678-7077
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LICENSED PROFESSIONAL ENGINEER — No. 166184 — MARK EUGENE BABBITT — 2-18-25 — STATE OF UTAH

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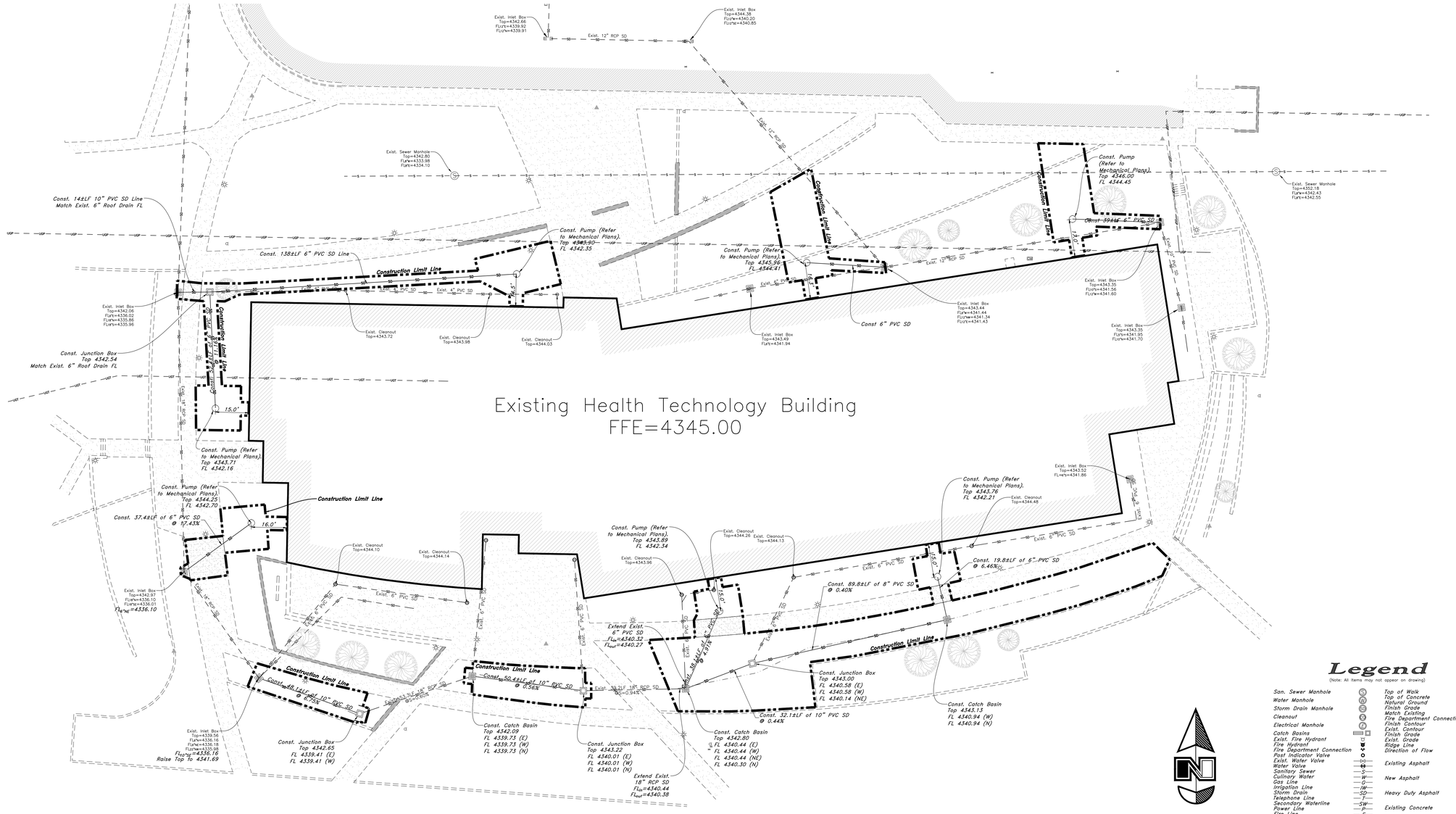
ISSUE: Construction Documents
DATE: 01.24.2025

SPECTRUM PROJECT NO: 240764
DFCM PROJECT NO: 0000010945
DRAWN BY: NWA
CHECKED BY: MEB
DESIGNED BY: NWA
RECORD DRAWING DATE:
SIGNATURE:

SHEET TITLE

Grading Plan

C2



GENERAL UTILITY NOTES:

1. Coordinate all utility connections to building with plumbing plans and building contractor.
2. Verify depth and location of all existing utilities prior to constructing any new utility lines. Notify Civil Engineer of any discrepancies or conflicts prior to any connections being made.
3. All catch basin and inlet box grates are to be bicycle proof.
4. All inlet boxes located in curb and gutter are to be placed parallel to the curb and gutter and set under the frame and grate. Improperly placed boxes will be removed and replaced at no additional cost to the owner. Precast or cast in place boxes are acceptable.
5. Refer to the site electrical plan for details and locations of electrical lines, transformers and light poles.
6. Gas lines, telephone lines, and cable TV lines are not a part of these plans unless otherwise noted.
7. Field verify all existing and/or proposed Roof Drain/Roof Drain down spout connections to Storm Water System with Civil, Plumbing & Architectural plans. Notify Engineer of any discrepancies.
10. All gravity flow utility lines shall be installed prior to any pressurized utilities unless written permission is obtained from the engineer of record before construction begins.

UTILITY PIPING MATERIALS:

All piping to be installed per manufacturers recommendations. Refer to project specifications for more detailed information regarding materials, installation, etc.

STORM DRAIN LINES

1. 12" pipes or smaller – Polyvinyl Chloride (PVC) sewer pipe, ASTM D3034, Type PSM, SDR 35

   2. 12" or larger – Reinforced Concrete Pipe, ASTM C76, Class III up to 13' of cover, Class IV for 13' to 21' of cover, Class V for 21' to 32' of cover, and Special Design for cover greater than 32 feet.

NATURAL GAS SERVICE LATERALS (QUESTAR)

1. PLASTIC PIPING MATERIAL: Plastic polyethylene pipe materials and compression couplings must be approved for natural gas applications and must be installed underground. All plastic pipe and fittings must conform to ASTM D2513 (60 psi and above high density pipe approved 3408).
2. Plastic pipe must be joined by individuals qualified in the heat fusion method of connecting pipe and fittings or approved mechanical fittings. A minimum number 18 insulated yellow copper tracer wire shall be installed with underground nonmetallic gas piping and shall terminate above grade at each end. Tracer wire shall not come in contact with plastic piping.
3. Risers and prefabricated risers inserted with plastic pipe shall conform to ASTM D2513, shall be metallic, have a space of 10 inches from the bottom of the service valve and grade, and shall be wrapped or coated to a point at least 6 inches above grade or protected in an approved manner. When a riser connects underground to plastic pipe, the underground horizontal metallic portion of the riser shall extend at least 12 inches before connecting to the plastic pipe by means of an approved transition fitting, adapter or heat fusion.
4. Plastic pipe used underground for customer fuel lines must be approved polyethylene material and be buried a minimum of 12 inches. It shall not be used inside buildings or above ground. PVC (Polyvinyl Chloride) is not approved for piping systems in Questar Gas's service area. individual gas lines (metallic or plastic) to single outside appliance (outside lights, grilles, etc.) shall be installed a minimum of 8 inches below grade, provided such installation is approved and installed in locations not susceptible to physical damage.

CAUTION NOTICE TO CONTRACTOR

The contractor is specifically cautioned that the location and/or elevation of existing utilities as shown on these plans are based on records of the various utility companies and, where possible, measurements taken in the field. The information is not to be relied on as being exact or complete. The contractor must call the appropriate utility company at least 48 hours before any excavation to request exact field location of utilities. It shall be the responsibility of the contractor to relocate all existing utilities which conflict with the propose improvements shown on the plans.

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ALL CONSTRUCTION TO CONFORM TO CITY STANDARDS AND SPECIFICATIONS IN RIGHT OF WAY

Note:
Refer to Original Structural Plans and Detail #4 on Sheet C4 for excavation requirements near Footings. Original Geotechnical Engineer to be contacted Prior to Excavation Near Geopiered Footing.

REVIEWED FOR CODE COMPLIANCE
FOR COMPLIANCE WITH THE APPLICABLE CONSTRUCTION CODES IDENTIFIED BELOW.
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☒ MECHANICAL ☒ PLUMBING
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☒ ACCESSIBILITY ☐ FIRE

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ISSUE: Construction Documents
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SPECTRUM PROJECT NO: 240764
DFCM PROJECT NO: 0000010945
DRAWN BY: NWA
CHECKED BY: MEB
DESIGNED BY: NWA
RECORD DRAWING DATE:
SIGNATURE:

SHEET TITLE

Utility Plan

C3

REVIEWED FOR CODE COMPLIANCE

FOR COMPLIANCE WITH THE APPLICABLE CONSTRUCTION CODES IDENTIFIED BELOW

- ☒ BUILDING
- ☒ MECHANICAL
- ☒ ELECTRICAL
- ☒ ACCESSIBILITY
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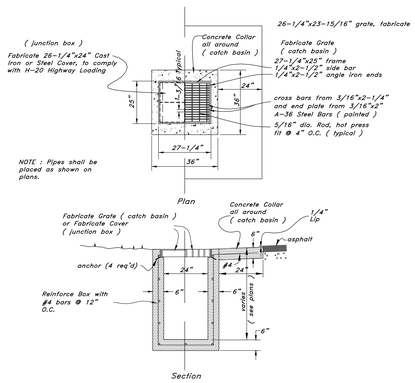
SHEET TITLE

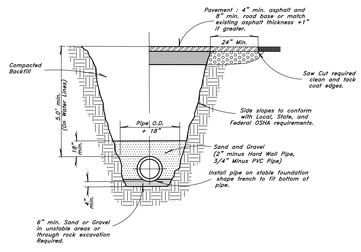
Details

C4



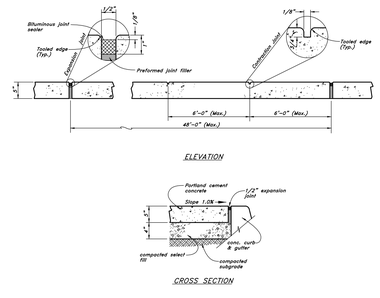
1 Catch Basin/Junction Box

Not to Scale



2 Typical Trench Detail

Not to Scale



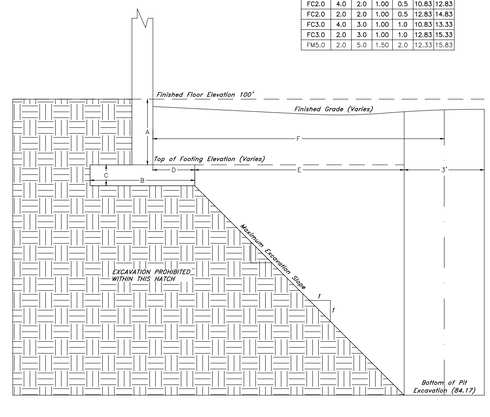
3 CONCRETE SIDEWALK

Not to Scale

Note: Refer to Original Structural Plans for Footing Types Near Pump Locations. If a Footing is Exposed for Pit Excavation and the Desired Depth Cannot be Reached Per the Requirements in this Detail, Contact the Civil Engineer.

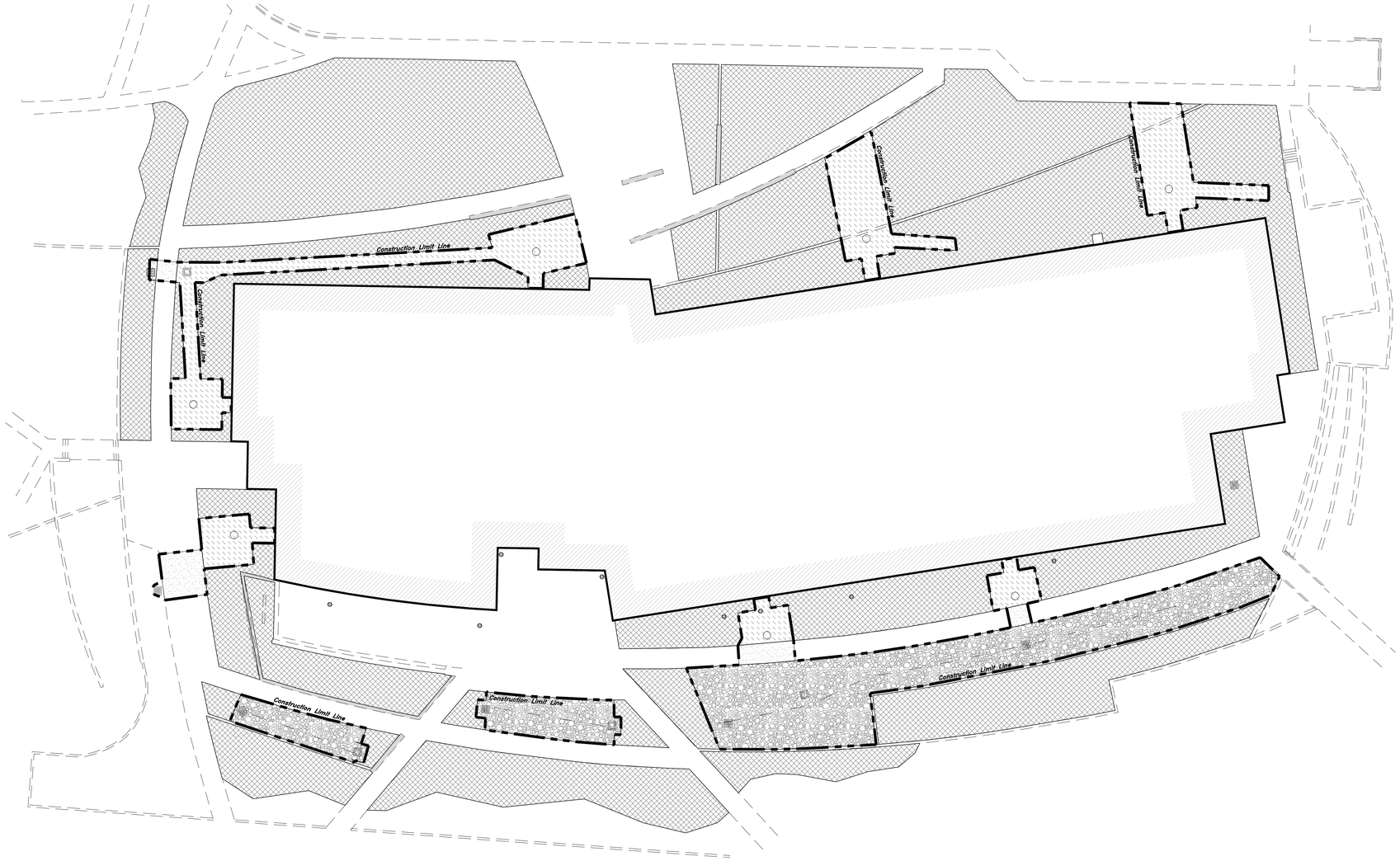
Footing Type	Dimension [ft]					
	A	B	C	D	E	F
FS10.0	4.0	10.0	1.50	4.5	10.33	16.33
FS10.0	2.0	10.0	1.50	4.5	12.33	18.33
FS11.0	4.0	11.0	1.67	5.0	10.16	16.66
FS11.0	2.0	11.0	1.67	5.0	12.16	18.66
FS12.0	4.0	12.0	1.83	5.5	10.00	17.00
FS12.0	2.0	12.0	1.83	5.5	12.00	19.00
FC2.0	4.0	2.0	1.00	0.5	10.83	12.83
FC2.0	2.0	2.0	1.00	0.5	12.83	14.83
FC3.0	4.0	3.0	1.00	1.0	10.83	13.33
FC3.0	2.0	3.0	1.00	1.0	12.83	15.33
FMS.0	2.0	5.0	1.50	2.0	12.33	15.83

Dimension Descriptions:
A = Distance from Finished Floor to Top of Footing
B = Footing Width
C = Footing Thickness
D = Distance from Outside of Wall to Footing TOE
E = Minimum Distance from Footing Toe to Desired Elevation (84.17')
F = Minimum Distance from Outside of Wall to Desired Elevation (84.17)



4 Excavation Near Footing

Not to Scale



20 0 10 20 30 40

Graphic Scale Scale: 1" = 20'

LANDSCAPE SCHEDULE

SYMBOL	QTY	BOTANICAL / COMMON NAME	CONT	TYPE	SPACING
GROUND COVERS					
	41,326 sf	EXISTING LANDSCAPE TO REMAIN Protect and Maintain Existing Plantings, Mulch Irrigation, and Mowstrips. Repair Any Areas Distrubed By Construction.	-		
	6,460 sf	REMOVE AND REPLACE EXIST. STONE Remove and Stockpile Exist. Boulders and Stone Mulch. After Regrading, Install Dewitt Pro5 Weed Barrier Fabric and Re-Install boulders and Mulch.	-	STONE	
	5,249 sf	REPAIR LANDSCAPE Catalog Removed Plants, Mulch, Mowstrips, and Irrigation. Replace With the Same Quantity and Plant Species. Replace Mowstrips. Install new Dewitt Pro5 Fabric, Install Mulch to Match Existing, and Repair Irrigation With Like Equipment.	-		

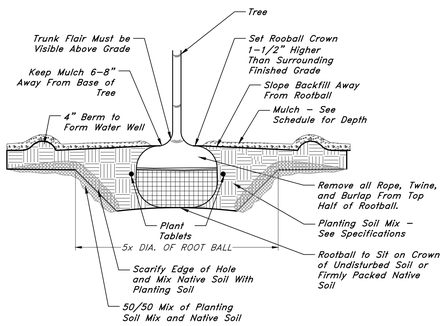
LANDSCAPE NOTES

1. EXAMINE THE SITE CONDITIONS, THE SUBGRADE AND VERIFY THE DEPTHS OF TOPSOIL AND MULCH. NOTIFY THE ARCHITECT IN WRITING OF ANY UNSATISFACTORY CONDITIONS. DO NOT BEGIN LANDSCAPE WORK UNTIL UNSATISFACTORY CONDITIONS HAVE BEEN RESOLVED.
2. ALL PLANTS REMOVED OR DAMAGED BY CONSTRUCTION ACTIVITY SHALL BE REPLACED WITH THE SAME SPECIES. CONTRACTOR TO DOCUMENT AREAS TO BE DISTURBED AND VERIFY PLANT QUANTITIES THAT WILL BE REPLACED.
3. SPACING OF NEW PLANTS TO MATCH EXISTING SPACING.
4. VERIFY LOCATIONS OF ALL UTILITIES PRIOR TO ANY DIGGING. ANY DAMAGE TO EXISTING UTILITIES CAUSED BY THIS CONTRACTOR SHALL BE REPAIRED AT NO ADDITIONAL EXPENSE TO THE OWNER.
5. TOPSOIL IS TO BE IMPORTED TO THE SITE. SUBMIT TOPSOIL TEST. SCREEN AND AMEND TO MEET THE FOLLOWING STANDARDS:
   - 5.1. ORGANIC MATTER: GREATER THAN 1.0%
   - 5.2. SOLUBLE SALTS: LESS THAN 4 dS/m
   - 5.3. PH: BETWEEN 5.0 AND 8.2
   - 5.4. TEXTURE: SAND: 15–60%, SILT: 10–60% CLAY 5–30%.
   - 5.5. SODIUM ADSORPTION RATIO (SAR): BELOW 10 FOR SANDY CLAY LOAM, SANDY LOAM AND LOAM. BELOW 7 FOR SILT LOAM, SILTY CLAY LOAM, AND CLAY LOAM.
   - 5.6. COARSE FRAGMENTS 2mm AND SMALLER: LESS THAN 5%.
   - 5.7. NO ROCKS OVER 1.5"
6. CONTRACTOR IS RESPONSIBLE FOR PROVIDING 6" OF TOPSOIL FOR TURF AND 12" OF TOPSOIL FOR SHRUBS AND TREES.
7. THE LANDSCAPE CONTRACTOR IS RESPONSIBLE FOR FINISH GRADE ELEVATIONS. ALLOW FOR SPECIFIED TOPSOIL AND MULCH LAYER THICKNESS. COORDINATE ROUGH GRADING WITH THE GENERAL CONTRACTOR.
8. ALL PLANT MATERIAL MUST MEET THE FOLLOWING SIZES:
   - 8.1. TREES 2" CALIPER
   - 8.2. SHRUBS 5 GALLON
   - 8.3. GRASSES 1 GALLON
   - 8.4. PERENNIALS 1 GALLON

   PLANT MATERIAL THAT DOES NOT MEET THE QUALITY STANDARDS OF THE PROJECT WILL BE REFUSED BY THE LANDSCAPE ARCHITECT.
9. TURFGRASS SHALL BE REPAIRED WITH SOD. SOD SHALL BE CERTIFIED NUMBER 1 QUALITY/PREMIUM SOD – SEE SPECIFICATIONS.
10. REPAIR AREAS SHOWN ARE ESTIMATES OF POTENTIAL DISTURBANCES. CONTRACTOR IS RESPONSIBLE FOR REPAIR OF ANY LANDSCAPE AND IRRIGATION DISTURBED BY THIS CONTRACTOR AND ASSOCIATED SUB-CONTRACTORS.

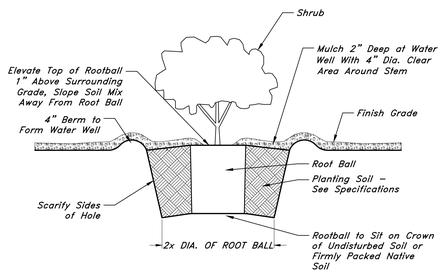
IRRIGATION REMODEL NOTES

1. THIS PROJECT REQUIRES THE REMODEL OF AN EXISTING IRRIGATION SYSTEM. PROTECT AND MAINTAIN PORTIONS OF THE EXISTING SYSTEM TO REMAIN.
2. COORDINATE WITH OWNER FOR ANY DISRUPTIONS OF SERVICE. CONTRACTOR IS RESPONSIBLE FOR HAND WATERING VEGETATION THAT LACKS WATER DUE TO DISRUPTION OF SERVICE. ANY PLANTS LOST DUE TO LACK OF WATER DUE TO CONTRACTOR NEGLIGENCE WILL BE REPLACED AT NOT COST TO THE OWNER.
3. FIELD VERIFY THE LOCATIONS AND SIZES OF THE EXPECTED TIE-INS FOR MAIN LINES AND LATERAL LINES.
4. MAINTAIN AND PROTECT THE EXISTING CONTROLLER AND EXISTING CONTROL WIRES THAT ARE TO REMAIN. CONTRACTOR TO SUPPLY EQUIPMENT AND WIRING NECESSARY TO MAKE NEW EQUIPMENT WORK WITH EXISTING EQUIPMENT.
5. ANY MAINLINES OR LATERAL LINES RUNNING THROUGH WORK AREAS SHALL BE RE-ROUTED AROUND THE WORK AREA.
6. DRIPLINES SHALL BE CUT AND CAPPED DURING CONSTRUCTION AND SUPPLY RUN AROUND DISTURBANCES TO KEEP DRIP AREAS OPERATIONAL THROUGHOUT CONSTRUCTION.



Notes:
1. If Wire Basket is Present, Cut and Fold Down Top Half of Wire Basket.

2 TREE PLANTING
NTS 32 9343.01-01



1 SHRUB PLANTING
NTS 32 9333.01-01

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STATE OF UTAH
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SHEET TITLE

Landscape Plan

LP1

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- ☒ MECHANICAL
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