OGDEN CITY FRANCOM PUBLIC SAFETY CENTER
HVAC UPGRADES

2186 Lincoln Ave, Ogden, UT 84401

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CONSULTANTS

PROJECT ENGINEER:

VAN BOERUM & FRANK ASSOCIATES, INC.
181 EAST 5600 SOUTH
MURRAY, UT 84107
(801) 530-3148 (Jacob Beck)

ELECTRICAL ENGINEER:

VAN BOERUM & FRANK ASSOCIATES, INC.
181 EAST 5600 SOUTH
MURRAY, UT 84107
(801) 530-3148 (Lewis Wong)

Vicinity Map NORTH

VBFA
www.vbfa.com

181 East 5600 South
Murray, UT 84107
801.530.3148 T
801.530.3150 F

LICENSED PROFESSIONAL ENGINEER
No. 8325442-2202
JACOB D. BECK
12/09/24
STATE OF UTAH

OGDEN CITY
Francom Public Safety Center
HVAC Upgrades
2186 Lincoln Ave, Ogden, UT 84401

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CONSTRUCTION DOCUMENTS

SHEET CONTENTS

COVER SHEET

C001

LEGEND OF MECHANICAL SYMBOLS AND ABBREVIATIONS

MECHANICAL

- POSITIVE PRESSURE DUCT - RISE
- POSITIVE PRESSURE DUCT - DROP
- NEGATIVE PRESSURE DUCT - RISE
- NEGATIVE PRESSURE DUCT - DROP
- ROUND DUCT - RISE
- ROUND DUCT - DROP
- UNDER FLOOR DUCT
- TURNING VANES
- FRESH AIR LOUVER
- RELIEF AIR OR EXHAUST AIR LOUVER
- CEILING SUPPLY DIFFUSER (12X12 / 200)
- CEILING RETURN REGISTER (22X22 / 200)
- CEILING EXHAUST REGISTER, (BALANCE TO MATCH SUPPLY IF RETURN CFM IS NOT SHOWN) (12X12 / 200)
- SIDEWALL SUPPLY REGISTER (24X10 / 200)
- SIDEWALL EXHAUST OR RETURN REGISTER (24X10 / 200)
- CEILING SUPPLY DIFFUSER WITH FLEXIBLE DUCT (12X12 / 200)
- CEILING AIR GRILLE WITH FLEXIBLE DUCT (12X12 / 200)

TOP FIGURES INDICATE NECK SIZE. BOTTOM FIGURE INDICATES CFM.

- CEILING RETURN AIR GRILE W/ SOUND BOOT
- LINEAR DIFFUSER WITH PLENUM AND FLEXIBLE DUCT CONNECTION. NO. OF SLOTS & SIZE OF SLOT ON TOP, ACTIVE LENGTH AND CFM ON BOTTOM (3-1" SLOTS @ 48" 400)
- FLEXIBLE DUCT CONNECTION
- FLEXIBLE DUCT
- FAN
- FLAT OVAL DUCT WITH NET INSIDE DIMENSIONS SHOWN IN INCHES. (12/8 FO)
- RECTANGULAR DUCT WITH NET INSIDE DIMENSIONS SHOWN IN INCHES. (12/8)
- ROUND DUCT WITH NET INSIDE DIMENSIONS SHOWN IN INCHES. (12Ø)
- INCLINED RISE (UP)
- INCLINED DROP (DN)

WITH RESPECT TO AIR FLOW 15° NOMINAL INCLINE WITH RADIUS TURNS=DEPTH OF DUCT.

- R/W=1. ROUND DUCT SIMILAR TO RECTANGULAR
- RECTANGULAR TO RECTANGULAR OR ROUND TO ROUND DUCT TRANSFORMATION MAXIMUM 15° INCLUDED ANGLE EXCEPT WHERE SHOWN OTHERWISE. (12/12 – 8/8)
- RECTANGULAR TO ROUND DUCT TRANSFORMATION (12/12 – 12Ø)
- BRANCH DUCT SPLIT WITH 6" WIDTH AND MIN. R=WIDTH OF BRANCH DUCT DOWNSTREAM. ELBOW TURNING VANE OPTIONAL.
- TAP ENTRY AREA EQUALS 150% OF BRANCH AREA
- HIGH EFFICIENCY FITTING
- MANUAL VOLUME DAMPER
- FIRE DAMPER IN DUCT, W/ ACCESS PANEL REQD. (FD)
- COMBINATION FIRE/SMOKE DAMPER W/ ACCESS PANEL (FSD)
- SMOKE DAMPER W/ ACCESS PANEL (SD)
- BACK DRAFT DAMPER (BDD)
- ATC DAMPER (ATC / OR)
- ACCESS PANEL IN DUCT OR PLENUM (AD)
- HEATING OR COOLING COIL IN DUCT
- SINGLE DUCT AIR TERMINAL BOX VARIABLE OR CONSTANT VOLUME. MIN. 1-1/2 TERMINAL INLET SIZE STRAIGHT DUCT AT TERMINAL INLET.
- 4-WAY BLOW PATTERN
- 3-WAY BLOW PATTERN
- 2-WAY BLOW PATTERN
- 2-WAY BLOW PATTERN
- 1-WAY BLOW PATTERN
- DUCT SMOKE DETECTOR
- UNIT HEATER

PLUMBING

- FLOOR SINK
- FLOOR DRAIN
- FLOOR CLEAN-OUT OR CLEAN-OUT TO GRADE (FCO / COTG)
- ROOF DRAIN
- DOWNSPOUT NOZZLE
- ARROW INDICATES DIRECTION OF FLOW IN PIPE
- CHECK VALVE
- PRESSURE REDUCING, EXTERNAL PRESSURE VALVE
- PRESSURE REDUCING, SELF CONTAINED VALVE
- ATC VALVE - 2 WAY
- ATC VALVE - 3 WAY
- SOLENOID VALVE
- GATE VALVE
- GATE VALVE - NON RISING STEM
- GLOBE VALVE
- TEMPERATURE AND PRESSURE TEST PORT
- PRESSURE SWITCH (PS)
- GAS COCK
- CALIBRATED BALANCING VALVE WITH GPM INDICATED (0.0 GPM)
- REDUCED PRESSURE BACKFLOW PREVENTOR W/ DRAIN PAN (RPBP)
- BRANCH - BOTTOM CONNECTION
- BRANCH - TOP CONNECTION
- BRANCH - SIDE CONNECTION
- RISE OR DROP
- RISER - DOWN (ELBOW)
- RISER - DOWN (ELBOW)
- VENT THRU ROOF (VTR)
- WATER HAMMER ARRESTOR
- INLINE PUMP
- INLINE PUMP
- CLEAN-OUT
- RELIEF VALVE
- ANGLE VALVE
- FLOW METER
- UNION
- BALANCING COCK
- SHUT-OFF COCK FOR USE WITH PRESSURE GAUGE
- FLEXIBLE EXPANSION JOINT
- THERMOMETER - TEMP RANGE AS INDICATED
- PRESSURE GAUGE WITH SHUT-OFF COCK
- PRESSURE GAUGE WITH PIGTAIL
- LATERAL STRAINER WITH BLOW-OFF VALVE, PROVIDE HOSE END WITH CAP WHERE DISCHARGE IS NOT PIPED TO DRAIN
- BALL VALVE (PIPE SIZES 2" AND SMALLER) BUTTERFLY VALVE (PIPE SIZES 2-1/2" AND LARGER)
- MOTOR OPERATED BUTTERFLY VALVE
- VALVE IN RISE
- AIR VENT-MANUAL
- AIR VENT-AUTO
- FLOW SWITCH
- REDUCER
- CONCENTRIC REDUCER
- ECCENTRIC REDUCER

PLUMBING CONT.

- THERMOSTATIC MIXING VALVE
- HOSE BIBB
- PIPE CAP
- SWITCH
- SENSOR
- THERMOSTAT
- NIGHT THERMOSTAT
- FILL PORT
- DRAIN PAN AND P-TRAP
- FIXTURE FROM LEVEL ABOVE ((NAME))
- FLOW METER ORIFICE (GPM / LB/HR)
- FLANGE
- 90° ELBOW
- STEAM TRAP, F&T=FLOAT & THERMOSTATIC 45° ELBOW
- B=BUCKET, T=THERMOSTATIC (F&T)
- LEADER INDICATES DOWNWARD SLOPE (DN)
- DEMOLITION
- ALIGNMENT GUIDE
- ANCHOR
- LUBRICATED PLUG COCK

SYMBOLS

- PLUMBING FIXTURES (P-1)
- POINT OF CONNECTION
- SECTION TAG - TOP FIGURE IS SECTION NO. BOTTOM FIGURE IS SHEET NO. (A / M-101)
- DETAIL TAG - TOP FIGURE IS DETAIL NO. BOTTOM FIGURE IS SHEET NO. (A / M101)
- EQUIPMENT IDENTIFICATION (EF / 1)
- KEYED NOTE IDENTIFICATION (1)

FIRE

- HOSE VALVE
- NRS GATE VALVE WITH SUPERVISION
- FLOW SWITCH
- FIRE RISER
- SPRINKLER HEAD
- FIRE SPRINKLER WATER (F)

LINETYPES

Symbol	Description
AV	ACID VENT
AW	ACID WASTE
BBD	BOILER BLOW DOWN
BF	BOILER FEED WATER
B	BRINE
CO2	CARBON DIOXIDE
CA	COMPRESSED AIR
CF	CHEMICAL FEED
CHWS	CHILLED WATER SUPPLY
CHWR	CHILLED WATER RETURN
CS	CONDENSER WATER SUPPLY
CR	CONDENSER WATER RETURN
	DOMESTIC COLD WATER (DCW)
	DOMESTIC HOT WATER (DHW)
	DOMESTIC HOT WATER RETURN (DHWR)
DI	DEIONIZED WATER SUPPLY
DIR	DEIONIZED WATER RETURN
E(NAME)	EXISTING PIPING
(NAME)	EXISTING PIPING TO BE REMOVED
GHR	GLYCOL HEAT RECOVERY PIPING
G(NAME)	GLYCOL PIPING SOLUTION
FOR	FUEL OIL RETURN
FOS	FUEL OIL SUPPLY
FOV	FUEL OIL VENT
G	NATURAL GAS
HG	HOT GAS
HFR	HELICOPTER FUEL RETURN
HFS	HELICOPTER FUEL SUPPLY
HP(NAME)	HIGH PRESSURE DOMESTIC WATER
HPC	HIGH PRESSURE CONDENSATE
HPS	HIGH PRESSURE STEAM
HWR	HEATING HOT WATER RETURN
HWS	HEATING HOT WATER SUPPLY
IA	INSTRUMENT AIR
IA 120	INSTRUMENT AIR AT PRESSURE INDICATED
LA	LAB AIR
LV	LAB VACUUM
LPC	LOW PRESSURE CONDENSATE
LPG	LIQUIFIED PETROLEUM GAS
LPS	LOW PRESSURE STEAM
MA	MEDICAL AIR
MA 120	MEDICAL AIR AT PRESSURE INDICATED
MPC	MEDIUM PRESSURE CONDENSATE
MPS	MEDIUM PRESSURE STEAM
MUW	MAKE UP WATER
MV	MEDICAL VACUUM
N	NITROGEN
N20	NITROUS OXIDE
OX	MEDICAL OXYGEN
OX 120	MEDICAL OXYGEN AT PRESSURE INDICATED
	PUMPED CONDENSATE

LINETYPES CONT.

Symbol	Description
RO	REVERSE OSMOSIS WATER SUPPLY
ROR	REVERSE OSMOSIS WATER RETURN
RD	ROOF DRAIN
RDO	ROOF DRAIN OVERFLOW
RL	REFRIGERANT LIQUID
RS	REFRIGERANT SUCTION
	SEWER (BELOW GRADE)
	SEWER (ABOVE GRADE)
SW	SOFT DOMESTIC WATER (SW)
V	VACUUM
	VENT (SEWER)

MECH. GENERAL NOTES

1. DO NOT ROUTE DUCTS AND PIPES ABOVE ELECTRICAL PANELS. ALL ELECTRICAL PANELS MUST HAVE CLEAR ACCESS SPACE IN FRONT OF PANEL 4'-0" DEEP AND 6'-6" HIGH. DO NOT ROUTE DUCTS AND PIPES IN ELECTRICAL ROOMS, EXCEPT DUCTS AND PIPES SERVING THE ROOM.
2. IF CONTRACTOR ENCOUNTERS MATERIAL WHICH MAY CONTAIN ASBESTOS IMMEDIATELY STOP WORK IN THIS AREA AND NOTIFY THE OWNER.
3. PROVIDE CEILING ACCESS PANELS AS REQUIRED WHERE MECHANICAL EQUIPMENT, VALVES, ETC. ARE LOCATED ABOVE INACCESSIBLE CEILINGS.
4. STEEL ROOF DECK SHALL NOT BE USED TO SUPPORT LOADS FROM PIPING, DUCTWORK OR EQUIPMENT, UNLESS NOTED OTHERWISE. HANGER LOADS LESS THAN 50 LBS. MAY BE HUNG FROM THE STEEL ROOF DECK IN CASES WHEN HANGING FROM THE STEEL ROOF DECK CANNOT BE AVOIDED; THE ATTACHMENT METHOD MUST DISTRIBUTE THE LOAD ACROSS THE DECK AS APPROVED BY THE STRUCTURAL ENGINEER.
5. PROVIDE DEFERRED SUBMITTAL ON ALL REQUIRED SEISMIC BRACING FOR PIPING, DUCTWORK, AND EQUIPMENT.

VBFA
www.vbfa.com

181 East 5600 South
Murray, UT 84107
801.530.3148 T
801.530.3150 F

LICENSED PROFESSIONAL ENGINEER
No. 8325442-2202
JACOB D. BECK
12/09/24
STATE OF UTAH

OGDEN CITY
Francom Public Safety Center
HVAC Upgrades
2186 Lincoln Ave, Ogden, UT 84401

CONSTRUCTION DOCUMENTS

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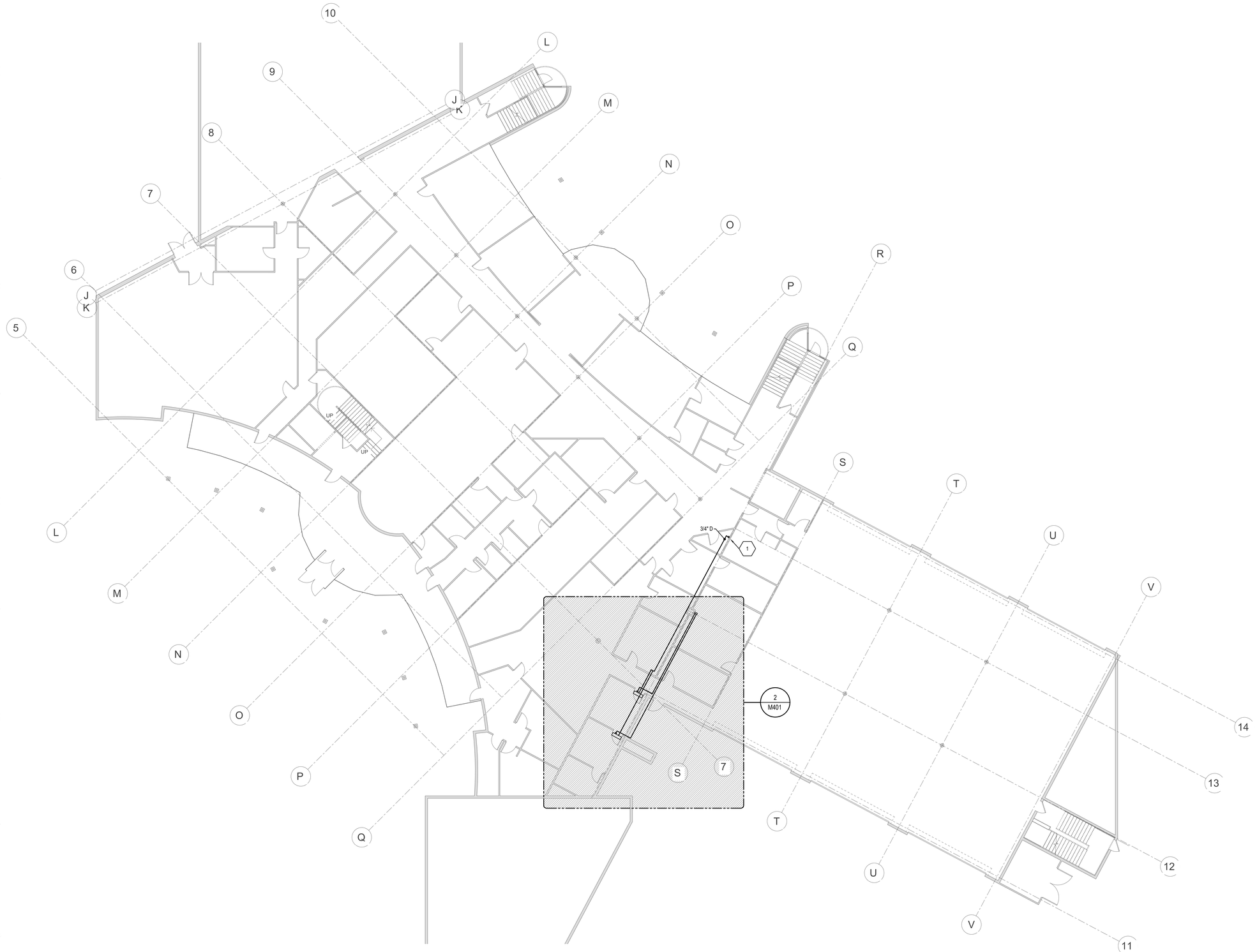
SHEET CONTENTS

MECHANICAL SYMBOLS & LEGEND

M001



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1 MECHANICAL LEVEL 1 PLAN

SCALE: 3/32" = 1'-0"

0' 8' 16' 32'

KEYED NOTES

1. ROUTE CONDENSATE DOWN TO SERVICE SINK BELOW.

GENERAL NOTES

1. CONTRACTOR SHALL FIELD VERIFY EXISTING CONDITIONS PRIOR TO BEGINNING ANY WORK.
2. ROUTING OF NEW WORK IS APPROXIMATE. CONTRACTOR SHALL COORDINATE ROUTING WITH EXISTING CONDITIONS, TYPICAL.
3. CAREFULLY REMOVE AND PROTECT EXISTING CEILING ELEMENTS SUCH AS CEILING TILES, HVAC GRILLES, LIGHT FIXTURES, ETC., AS REQUIRED TO INSTALL NEW WORK. REINSTALL EXISTING ELEMENTS AT SAME LOCATION TO MATCH EXISTING CONDITIONS. ANY CEILING TILES, HVAC GRILLES, LIGHT FIXTURES, ETC., WHICH ARE DAMAGED DURING CONSTRUCTION SHALL BE REPLACED BY THE CONTRACTOR AT NO CHARGE TO THE OWNER.

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www.vbfa.com

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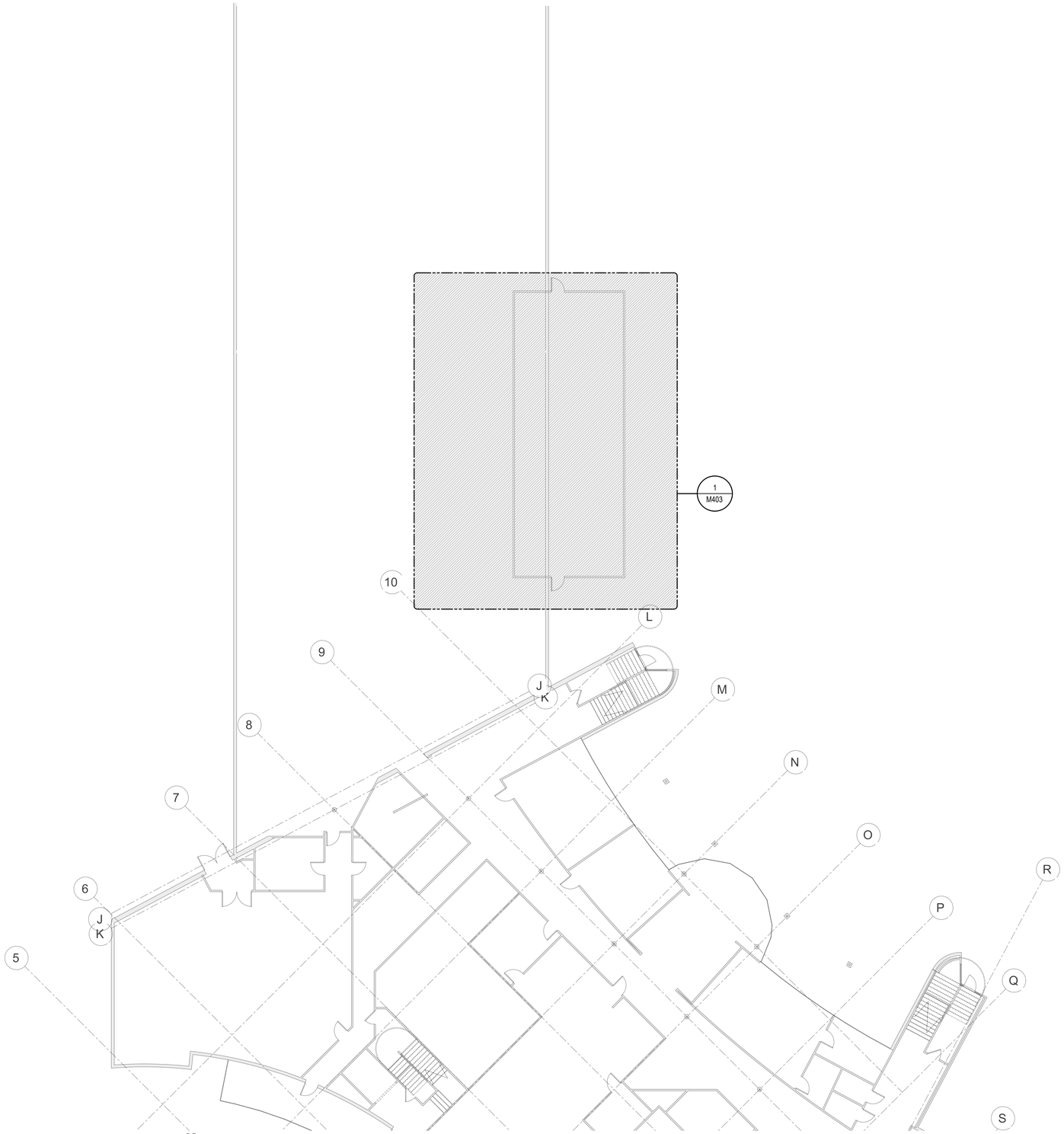
SHEET CONTENTS
MECHANICAL
LEVEL 1 PLAN

M101A



1 MECHANICAL LEVEL 1 PLAN - EXERCISE

SCALE: 3/32" = 1'-0"

0' 8' 16' 32'

KEYED NOTES

1. ROUTE CONDENSATE DOWN TO SERVICE SINK BELOW.

GENERAL NOTES

1. CONTRACTOR SHALL FIELD VERIFY EXISTING CONDITIONS PRIOR TO BEGINNING ANY WORK.
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www.vbfa.com

181 East 5600 South
Murray, UT 84107
801.530.3148 T
801.530.3150 F

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JACOB D. BECK
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OGDEN CITY
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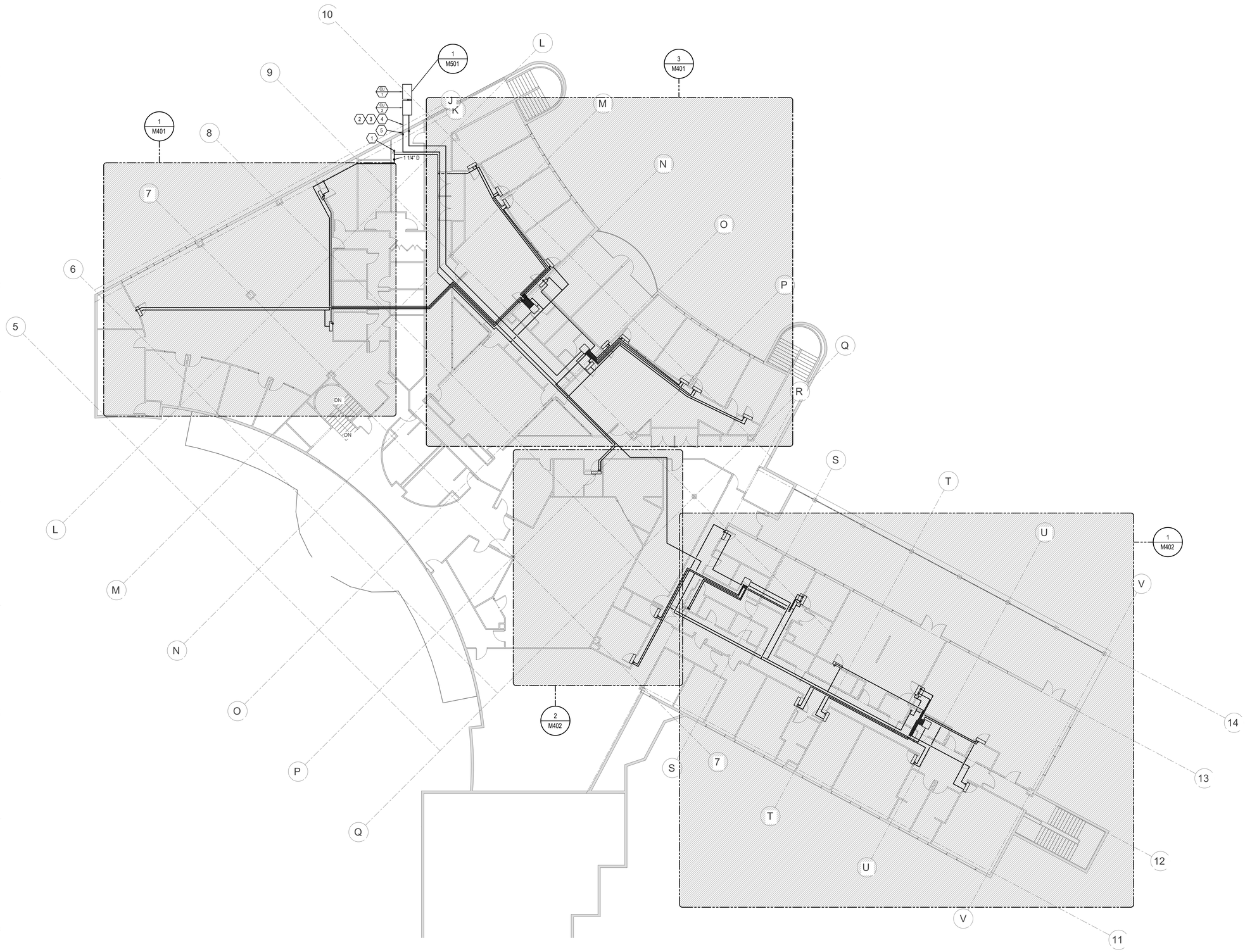
SHEET CONTENTS
MECHANICAL LEVEL 1 PLAN - EXERCISE

M101B



1 MECHANICAL LEVEL 2 PLAN

SCALE: 3/32" = 1'-0"

0' 8' 16' 32'

KEYED NOTES

1. ROUTE CONDENSATE DOWN TO SERVICE SINK BELOW.
2. SUPPORT PIPING ROUTING ON ROOFTOP WITH MIRO INDUSTRIES OR APPROVED EQUAL FREE STANDING PIPE SUPPORTS WITH POLYCARBONATE BASE MATERIAL AND CLAMPS LOCKED TO THE STRUT. PROVIDE WITH ADJUSTABLE SUPPORT HEIGHT. SUPPORT SPACING SHALL BE EVERY 6 FEET ON CENTER MAXIMUM.
3. ISOLATE PIPE FROM SUPPORTS AND CLAMPS WITH HYDROZORB OR CUSH-A-CLAMP SYSTEMS.
4. PROVIDE ALUMINUM JACKET COVERING FOR REFRIGERANT PIPING EXPOSED ON THE ROOF. PROTECTIVE COVERING SHALL BE INSTALLED FROM HEAT PUMPS TO PENETRATIONS AT BUILDING WALL.
5. PIPING, RACKED ON WALL, ROUTES UP TO CEILING. SEE DETAIL 6/M501.

GENERAL NOTES

1. CONTRACTOR SHALL FIELD VERIFY EXISTING CONDITIONS PRIOR TO BEGINNING ANY WORK.
2. ROUTING OF NEW WORK IS APPROXIMATE. CONTRACTOR SHALL COORDINATE ROUTING WITH EXISTING CONDITIONS, TYPICAL.
3. CAREFULLY REMOVE AND PROTECT EXISTING CEILING ELEMENTS SUCH AS CEILING TILES, HVAC GRILLES, LIGHT FIXTURES, ETC., AS REQUIRED TO INSTALL NEW WORK. REINSTALL EXISTING ELEMENTS AT SAME LOCATION TO MATCH EXISTING CONDITIONS. ANY CEILING TILES, HVAC GRILLES, LIGHT FIXTURES, ETC., WHICH ARE DAMAGED DURING CONSTRUCTION SHALL BE REPLACED BY THE CONTRACTOR AT NO CHARGE TO THE OWNER.

VBFA
www.vbfa.com

181 East 5600 South
Murray, UT 84107
801.530.3148 T
801.530.3150 F

LICENSED PROFESSIONAL ENGINEER
No. 8325442-2203
JACOB D. BECK
12/09/24
STATE OF UTAH

OGDEN CITY
Francom Public Safety Center
HVAC Upgrades
2186 Lincoln Ave, Ogden, UT 84401

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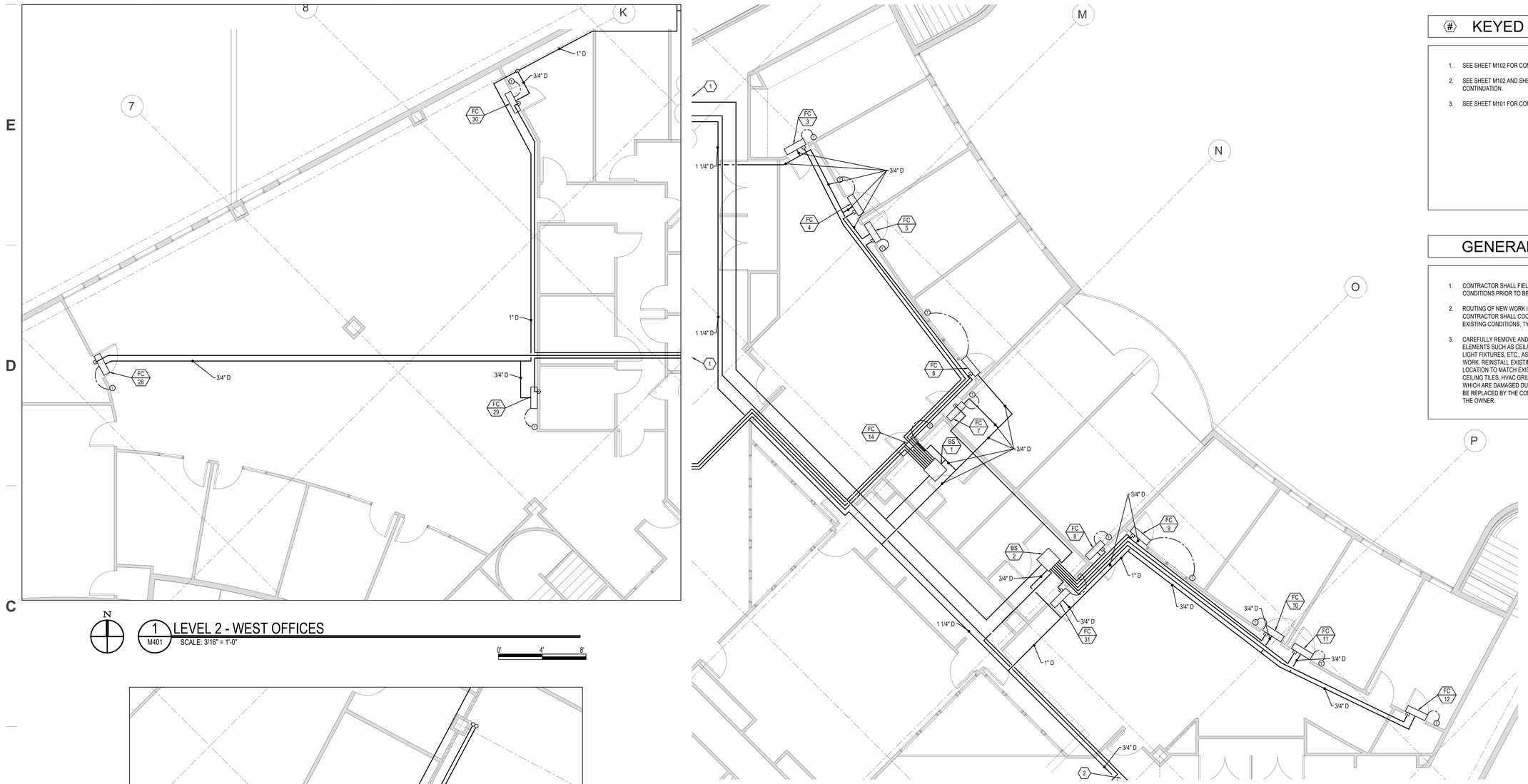
SHEET CONTENTS
MECHANICAL
LEVEL 2 PLAN

M102



1 M401 LEVEL 2 - WEST OFFICES
SCALE: 3/16" = 1'-0"

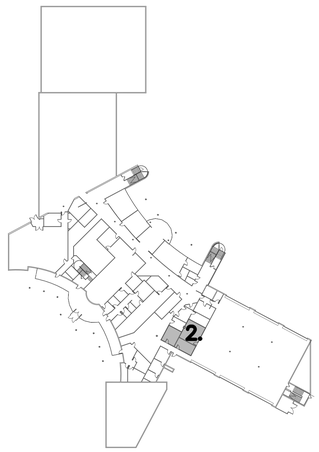
0' 4' 8'

2 M401 LEVEL 1 - OFFICE AND LOCKER ROOM
SCALE: 3/16" = 1'-0"

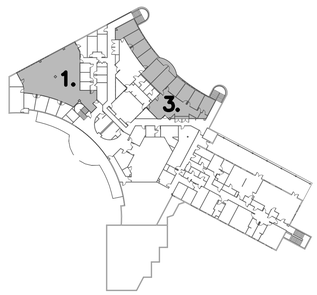
0' 4' 8'

3 M401 LEVEL 2 - NORTH OFFICES
SCALE: 3/16" = 1'-0"

0' 4' 8'



LEVEL 1 - KEY PLAN



LEVEL 2 - KEY PLAN

KEYED NOTES

1. SEE SHEET M102 FOR CONTINUATION.
2. SEE SHEET M102 AND SHEET M402, VIEW 2 FOR CONTINUATION.
3. SEE SHEET M101 FOR CONTINUATION.

GENERAL NOTES

1. CONTRACTOR SHALL FIELD VERIFY EXISTING CONDITIONS PRIOR TO BEGINNING ANY WORK.
2. ROUTING OF NEW WORK IS APPROXIMATE. CONTRACTOR SHALL COORDINATE ROUTING WITH EXISTING CONDITIONS, TYPICAL.
3. CAREFULLY REMOVE AND PROTECT EXISTING CEILING ELEMENTS SUCH AS CEILING TILES, HVAC GRILLES, LIGHT FIXTURES, ETC., AS REQUIRED TO INSTALL NEW WORK. REINSTALL EXISTING ELEMENTS AT SAME LOCATION TO MATCH EXISTING CONDITIONS. ANY CEILING TILES, HVAC GRILLES, LIGHT FIXTURES, ETC., WHICH ARE DAMAGED DURING CONSTRUCTION SHALL BE REPLACED BY THE CONTRACTOR AT NO CHARGE TO THE OWNER.

VBFA
www.vbfa.com

181 East 5600 South
Murray, UT 84107
801.530.3148 T
801.530.3150 F

LICENSED PROFESSIONAL ENGINEER
No. 8325442-2202
JACOB D. BECK
12/09/24
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OGDEN CITY
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SHEET CONTENTS

ENLARGED MECHANICAL PLANS

M401

GENERAL NOTES

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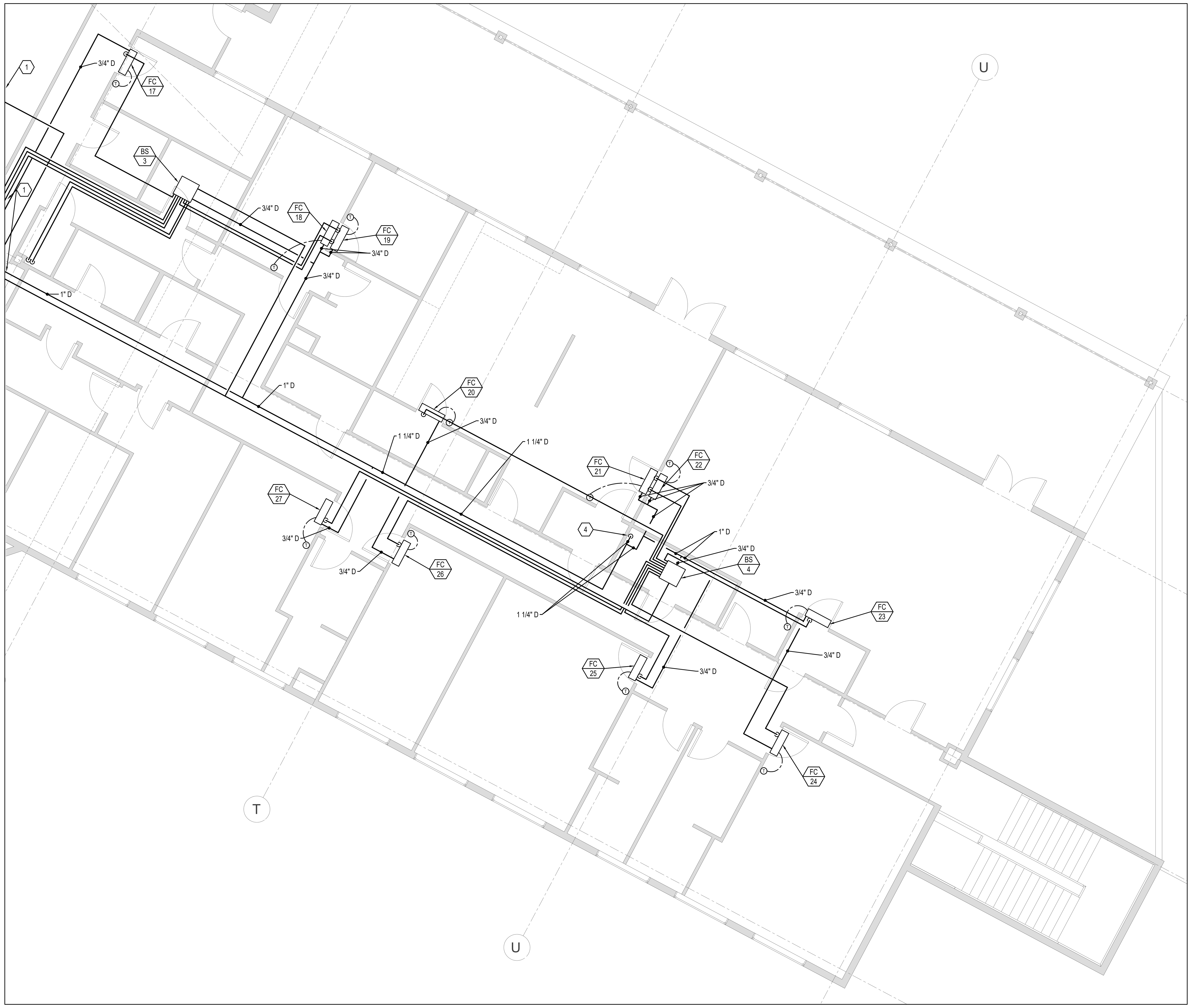
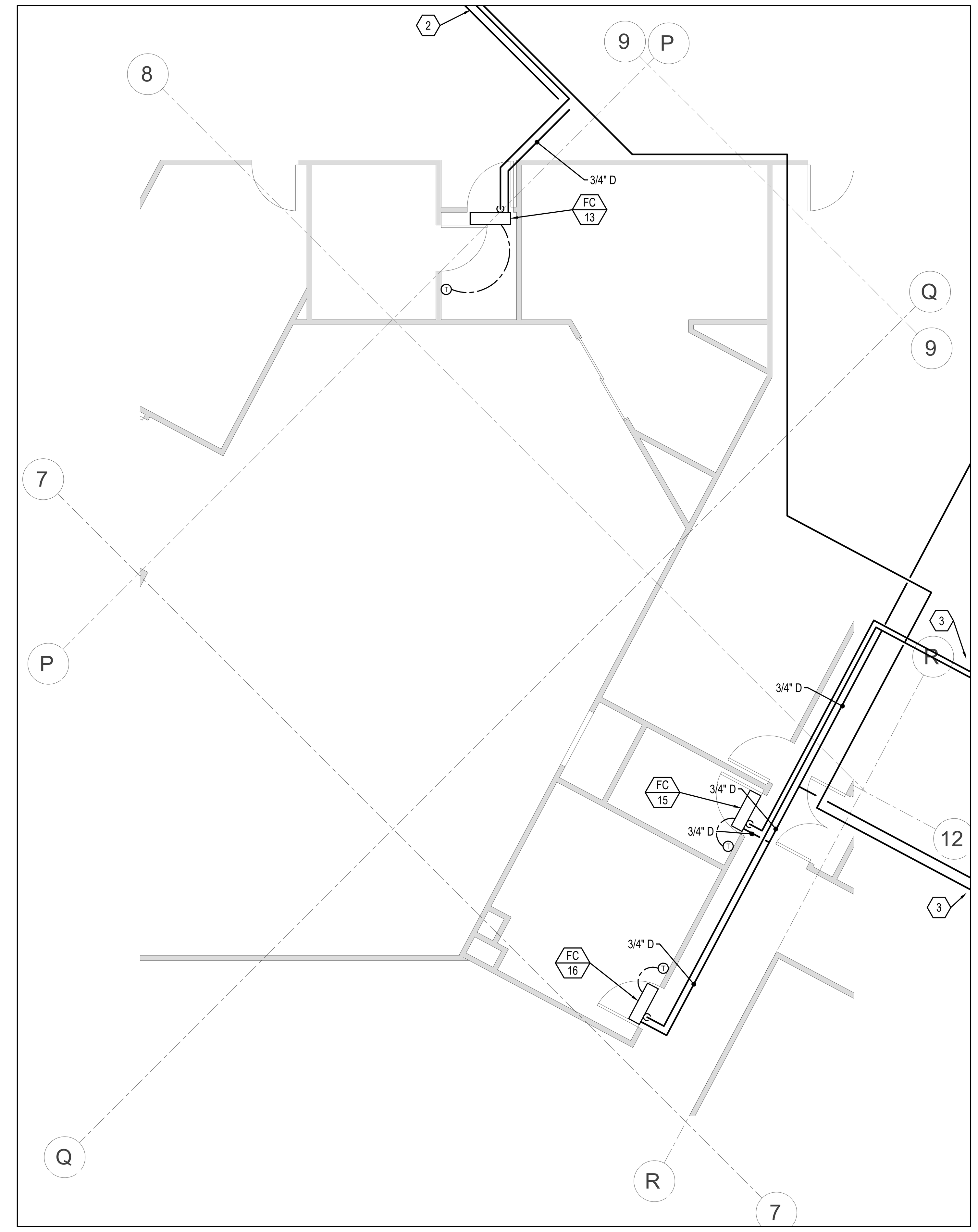
KEYED NOTES

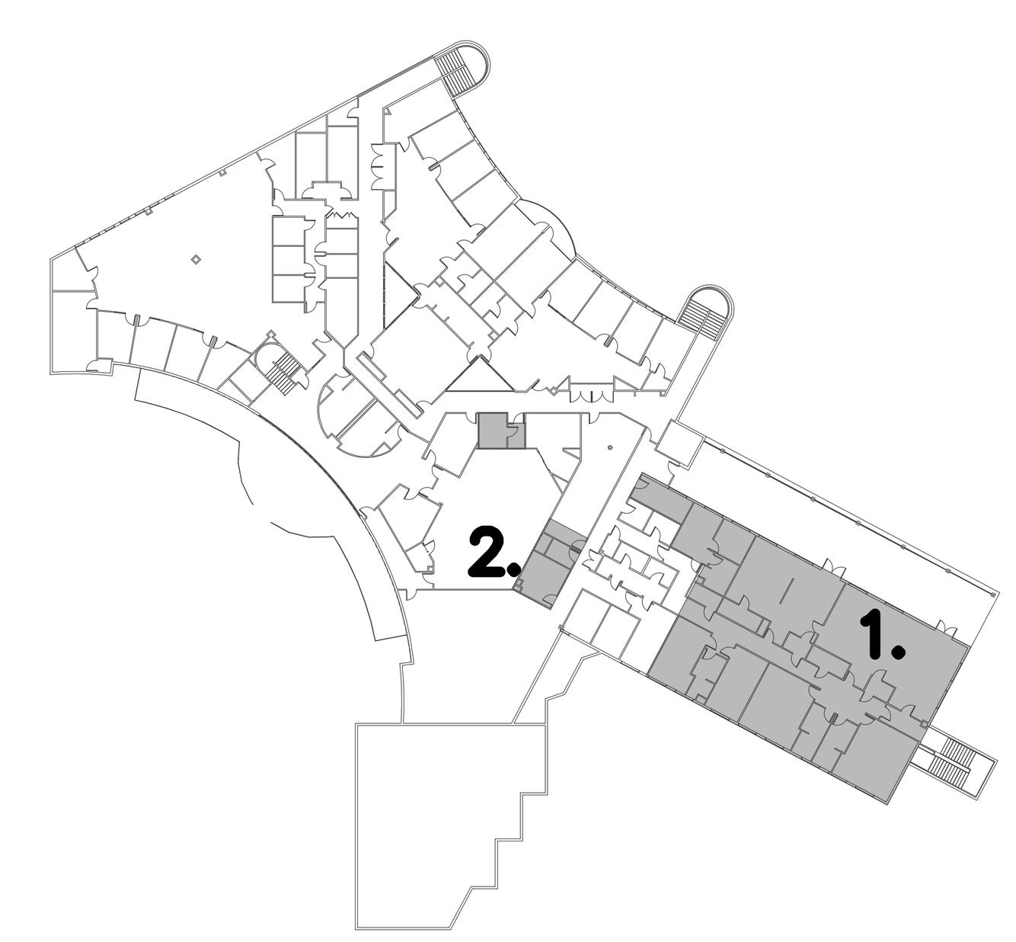
1. SEE SHEET M102 AND SHEET M402, VIEW 2 FOR CONTINUATION.
2. SEE SHEET M102 AND SHEET M401, VIEW 3 FOR CONTINUATION.
3. SEE SHEET M102 AND SHEET M402, VIEW 1 FOR CONTINUATION.
4. ROUTE CONDENSATE DOWN TO SERVICE SINK BELOW.



1 LEVEL 2 - LIVING AREA
M402 SCALE: 3/16" = 1'-0"



2 LEVEL 2 - INTERIOR OFFICES
M402 SCALE: 3/16" = 1'-0"



LEVEL 2 - KEY PLAN

VBFA
www.vbfa.com

181 East 5600 South
Murray, UT 84107
801.530.3148 T
801.530.3150 F

LICENSED PROFESSIONAL ENGINEER
No. 8325442-2202
JACOB D. BECK
12/09/24
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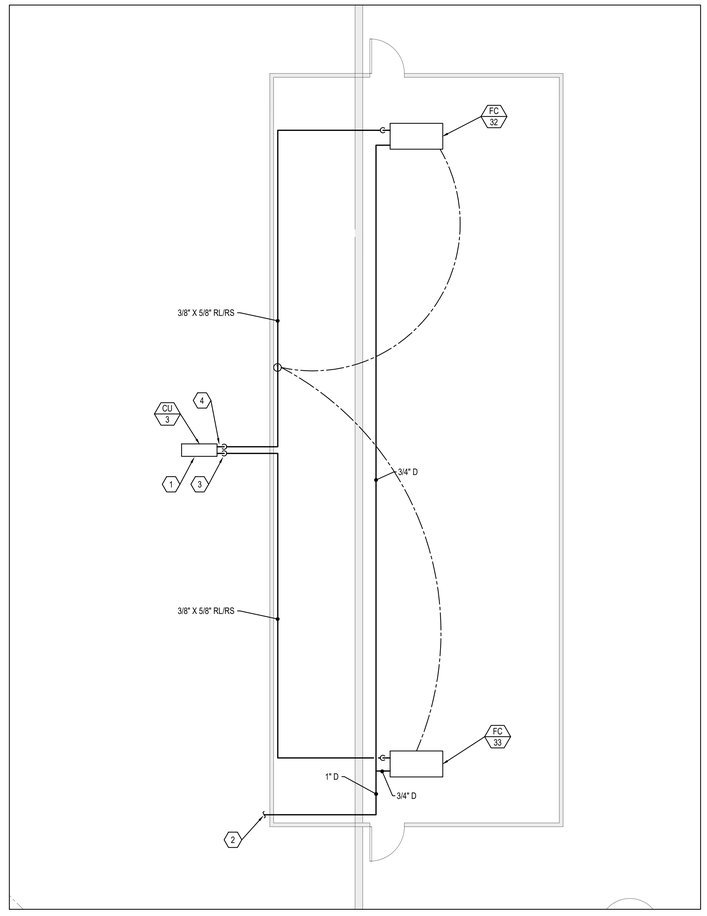
ENLARGED MECHANICAL PLANS

M402

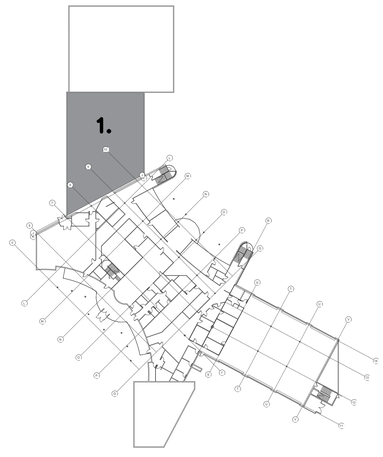


N

1 M403 LEVEL 1 - EXERCISE GYM

SCALE: 3/16" = 1'-0"

0' 4' 8'



LEVEL 1 - KEY PLAN

KEYED NOTES

1. ROOF MOUNTED EQUIPMENT.
2. EXTEND CONDENSATE PIPING TO FLOOR DRAIN IN WATER HEATER ROOM. ROUTE CONDENSATE PIPE DOWN SURFACE OF WALL IN WATER HEATER ROOM AND THEN EXTEND ALONG FLOOR TO FLOOR DRAIN. FIELD VERIFY.
3. PROVIDE LINE SET ENCLOSURE FOR REFRIGERANT PIPING PENETRATIONS THROUGH ROOF. SEE DETAIL 4/M501.
4. PROVIDE ALUMINUM JACKET COVERING FOR REFRIGERANT PIPING EXPOSED ON THE ROOF. PROTECTIVE COVERING SHALL BE INSTALLED FROM HEAT PUMPS TO PENETRATIONS AT BUILDING WALL.

GENERAL NOTES

1. CONTRACTOR SHALL FIELD VERIFY EXISTING CONDITIONS PRIOR TO BEGINNING ANY WORK.
2. ROUTING OF NEW WORK IS APPROXIMATE. CONTRACTOR SHALL COORDINATE ROUTING WITH EXISTING CONDITIONS, TYPICAL.
3. CAREFULLY REMOVE AND PROTECT EXISTING CEILING ELEMENTS SUCH AS CEILING TILES, HVAC GRILLES, LIGHT FIXTURES, ETC., AS REQUIRED TO INSTALL NEW WORK. REINSTALL EXISTING ELEMENTS AT SAME LOCATION TO MATCH EXISTING CONDITIONS. ANY CEILING TILES, HVAC GRILLES, LIGHT FIXTURES, ETC., WHICH ARE DAMAGED DURING CONSTRUCTION SHALL BE REPLACED BY THE CONTRACTOR AT NO CHARGE TO THE OWNER.

VBFA
www.vbfa.com

181 East 5600 South
Murray, UT 84107
801.530.3148 T
801.530.3150 F

LICENSED PROFESSIONAL ENGINEER
No. 8325442-2203
JACOB D. BECK
12/09/24
STATE OF UTAH

OGDEN CITY
Francom Public Safety Center
HVAC Upgrades
2186 Lincoln Ave, Ogden, UT 84401

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VBFA PROJECT #:	240262
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SHEET CONTENTS

ENLARGED MECHANICAL PLANS

M403

VRF HEAT RECOVERY UNIT

ID	MANUFACTURER AND MODEL NUMBER	LOCATION	PHYSICAL WIDTH / HEIGHT / DEPTH (IN)	PHYSICAL WEIGHT (LB)	ELECTRICAL MCA (AMPS)	ELECTRICAL MOCP (AMPS)	ELECTRICAL VOLT/PH/HZ	NOTES
BS-1	DAIKIN BSF8Q54TVJ	SECOND FLOOR	23 / 9.5 / 24	82	0.8	15	208-230/1/60	-
BS-2	DAIKIN BSF8Q54TVJ	SECOND FLOOR	23 / 9.5 / 24	82	0.8	15	208-230/1/60	-
BS-3	DAIKIN BSF8Q54TVJ	SECOND FLOOR	23 / 9.5 / 24	82	0.8	15	208-230/1/60	-
BS-4	DAIKIN BSF8Q54TVJ	SECOND FLOOR	23 / 9.5 / 24	82	0.8	15	208-230/1/60	-

CONDENSING UNIT SCHEDULE - AIR COOLED

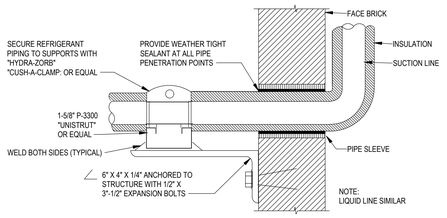
ID	MANUFACTURER AND MODEL NUMBER	REFRIGERANT	TOTAL NOMINAL COOLING CAPACITY (BTUH)	RATED COOLING CAPACITY (BTUH)	RATED HEATING CAPACITY (BTUH)	SUMMER AMBIENT AIR TEMP. DB/WB (°F)	WINTER AMBIENT AIR TEMP. DB/WB (°F)	ELECTRICAL MINIMUM CIRCUIT AMPACITY (MCA)	ELECTRICAL TOTAL (MOCP)	ELECTRICAL VOLTS/ PHASE	PHYSICAL WEIGHT (LBS)	PHYSICAL WIDTH / HEIGHT/ DEPTH (IN)	NOTES
CU-1	DAIKIN REYQ 144	R-410A	144,000	136,916	100,440	97	0	21.3	25	460/3	800	49/ 65/ 30	1,2,3,4,5
CU-2	DAIKIN REYQ 144	R-410A	144,000	129,562	98,556	97	0	21.3	25	460/3	800	49/ 65/ 30	1,2,3,4,5
CU-3	DAIKIN RXTQ 48	R-410A	48,000	43,242	33,577	97	0	32.8	35	208/230/3	176	37/ 39/ 12.6	1,2,3,4,5

1. VARIABLE REFRIGERANT FLOW SYSTEM.
2. ELECTRICAL DATA IS PER EACH MODULE. EACH MODULE HAS A SEPARATE ELECTRICAL CONNECTION.
3. HEATING OUTPUT CAPACITY RATED AT 0 °F. COOLING OUTPUT CAPACITY RATED AT 95 °F.
4. ALL CAPACITIES BASED ON 4500 FEET ELEVATION.
5. UNIT ABLE TO OPERATE DOWN TO -18 °F

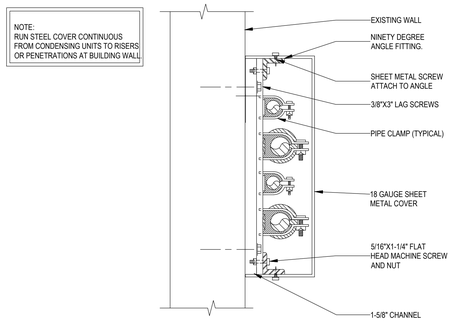
FAN COIL SCHEDULE

ID	MANUFACTURER AND MODEL NUMBER	AREA SERVED	AIRFLOW (CFM)	MAX STATIC PRESSURE (IN. WATER)	COOLING CAPACITY NOMINAL LOAD (BTU/H)	COOLING CAPACITY RATED TOTAL LOAD (BTU/H)	COOLING CAPACITY RATED SENSIBLE LOAD (BTU/H)	COOLING CAPACITY DESIGN ENT AIR TEMP DB/WB (°F)	HEATING CAPACITY LOAD (BTU/H)	HEATING CAPACITY DESIGN ENT AIR TEMP DB (°F)	COIL REFRIG. TYPE	ELECTRICAL MINIMUM CIRCUIT AMPACITY (MCA)	ELECTRICAL TOTAL (MOCP)	ELECTRICAL VOLTS/ PHASE	PHYSICAL WIDTH/ HEIGHT/ DEPTH (IN)	NOTES
FC-1	DAIKIN FXAQ07PVJU	FIRST FLOOR	260	NA	6,000	6,404	5,259	80 / 66.7	7,571	68	R-410A	0.3	15	208/230V-1	31/ 11 / 9.3	1,2,3
FC-2	DAIKIN FXAQ07PVJU	FIRST FLOOR	260	NA	6,000	6,404	5,259	80 / 66.7	7,571	68	R-410A	0.3	15	208/230V-1	31/ 11 / 9.3	1,2,3
FC-3	DAIKIN FXAQ07PVJU	SECOND FLOOR	260	NA	6,000	6,404	5,259	80 / 66.7	7,571	68	R-410A	0.3	15	208/230V-1	31/ 11 / 9.3	1,2,3
FC-4	DAIKIN FXAQ07PVJU	SECOND FLOOR	260	NA	6,000	6,404	5,259	80 / 66.7	7,571	68	R-410A	0.3	15	208/230V-1	31/ 11 / 9.3	1,2,3
FC-5	DAIKIN FXAQ07PVJU	SECOND FLOOR	260	NA	6,000	6,404	5,259	80 / 66.7	7,571	68	R-410A	0.3	15	208/230V-1	31/ 11 / 9.3	1,2,3
FC-6	DAIKIN FXAQ07PVJU	SECOND FLOOR	260	NA	6,000	6,404	5,259	80 / 66.7	7,571	68	R-410A	0.3	15	208/230V-1	31/ 11 / 9.3	1,2,3
FC-7	DAIKIN FXAQ07PVJU	SECOND FLOOR	260	NA	6,000	6,404	5,259	80 / 66.7	7,571	68	R-410A	0.3	15	208/230V-1	31/ 11 / 9.3	1,2,3
FC-8	DAIKIN FXAQ07PVJU	SECOND FLOOR	260	NA	6,000	6,404	5,259	80 / 66.7	7,571	68	R-410A	0.3	15	208/230V-1	31/ 11 / 9.3	1,2,3
FC-9	DAIKIN FXAQ07PVJU	SECOND FLOOR	260	NA	6,000	6,404	5,259	80 / 66.7	7,571	68	R-410A	0.3	15	208/230V-1	31/ 11 / 9.3	1,2,3
FC-10	DAIKIN FXAQ07PVJU	SECOND FLOOR	260	NA	6,000	6,404	5,259	80 / 66.7	7,571	68	R-410A	0.3	15	208/230V-1	31/ 11 / 9.3	1,2,3
FC-11	DAIKIN FXAQ07PVJU	SECOND FLOOR	260	NA	6,000	6,404	5,259	80 / 66.7	7,571	68	R-410A	0.3	15	208/230V-1	31/ 11 / 9.3	1,2,3
FC-12	DAIKIN FXAQ07PVJU	SECOND FLOOR	260	NA	6,000	6,404	5,259	80 / 66.7	7,571	68	R-410A	0.3	15	208/230V-1	31/ 11 / 9.3	1,2,3
FC-13	DAIKIN FXAQ07PVJU	SECOND FLOOR	260	NA	6,000	6,404	5,259	80 / 66.7	7,571	68	R-410A	0.3	15	208/230V-1	31/ 11 / 9.3	1,2,3
FC-14	DAIKIN FXAQ07PVJU	SECOND FLOOR	260	NA	6,000	6,404	5,259	80 / 66.7	7,571	68	R-410A	0.3	15	208/230V-1	31/ 11 / 9.3	1,2,3
FC-15	DAIKIN FXAQ07PVJU	SECOND FLOOR	260	NA	6,000	6,404	5,259	80 / 66.7	7,571	68	R-410A	0.3	15	208/230V-1	31/ 11 / 9.3	1,2,3
FC-16	DAIKIN FXAQ07PVJU	SECOND FLOOR	260	NA	6,000	6,404	5,259	80 / 66.7	7,571	68	R-410A	0.3	15	208/230V-1	31/ 11 / 9.3	1,2,3
FC-17	DAIKIN FXAQ07PVJU	SECOND FLOOR	260	NA	6,000	6,404	5,259	80 / 66.7	7,571	68	R-410A	0.3	15	208/230V-1	31/ 11 / 9.3	1,2,3
FC-18	DAIKIN FXAQ07PVJU	SECOND FLOOR	260	NA	6,000	6,404	5,259	80 / 66.7	7,571	68	R-410A	0.3	15	208/230V-1	31/ 11 / 9.3	1,2,3
FC-19	DAIKIN FXAQ07PVJU	SECOND FLOOR	260	NA	6,000	6,404	5,259	80 / 66.7	7,571	68	R-410A	0.3	15	208/230V-1	31/ 11 / 9.3	1,2,3
FC-20	DAIKIN FXAQ07PVJU	SECOND FLOOR	260	NA	6,000	6,404	5,259	80 / 66.7	7,571	68	R-410A	0.3	15	208/230V-1	31/ 11 / 9.3	1,2,3
FC-21	DAIKIN FXAQ09PVJU	SECOND FLOOR	280	NA	8,000	8,113	6,201	80 / 66.7	9,590	68	R-410A	0.3	15	208/230V-1	31/ 11 / 9.3	1,2,3
FC-22	DAIKIN FXAQ12PVJU	SECOND FLOOR	290	NA	12,000	10,245	7,524	80 / 66.7	12,096	68	R-410A	0.4	15	208/230V-1	31/ 11 / 9.3	1,2,3
FC-23	DAIKIN FXAQ12PVJU	SECOND FLOOR	290	NA	12,000	10,245	7,524	80 / 66.7	12,096	68	R-410A	0.4	15	208/230V-1	31/ 11 / 9.3	1,2,3
FC-24	DAIKIN FXAQ12PVJU	SECOND FLOOR	290	NA	12,000	10,245	7,524	80 / 66.7	12,096	68	R-410A	0.4	15	208/230V-1	31/ 11 / 9.3	1,2,3
FC-25	DAIKIN FXAQ12PVJU	SECOND FLOOR	290	NA	12,000	10,245	7,524	80 / 66.7	12,096	68	R-410A	0.4	15	208/230V-1	31/ 11 / 9.3	1,2,3
FC-26	DAIKIN FXAQ09PVJU	SECOND FLOOR	280	NA	8,000	8,113	6,201	80 / 66.7	9,590	68	R-410A	0.3	15	208/230V-1	31/ 11 / 9.3	1,2,3
FC-27	DAIKIN FXAQ09PVJU	SECOND FLOOR	280	NA	8,000	8,113	6,201	80 / 66.7	9,590	68	R-410A	0.3	15	208/230V-1	31/ 11 / 9.3	1,2,3
FC-28	DAIKIN FXAQ24PVJU	SECOND FLOOR	635	NA	24,000	20,499	14,815	80 / 66.7	23,760	68	R-410A	0.6	15	208/230V-1	41/ 11 / 9.3	1,2,3
FC-29	DAIKIN FXAQ24PVJU	SECOND FLOOR	635	NA	24,000	20,499	14,815	80 / 66.7	23,760	68	R-410A	0.6	15	208/230V-1	41/ 11 / 9.3	1,2,3
FC-30	DAIKIN FXAQ24PVJU	SECOND FLOOR	635	NA	24,000	20,499	14,815	80 / 66.7	23,760	68	R-410A	0.6	15	208/230V-1	41/ 11 / 9.3	1,2,3
FC-31	DAIKIN FXAQ07PVJU	SECOND FLOOR	260	NA	6,000	6,404	5,259	80 / 66.7	7,571	68	R-410A	0.3	15	208/230V-1	31/ 11 / 9.3	1,2,3
FC-32	DAIKIN FXHQ24MVJU	EXERCISE	710	NA	24,000	20,499	14,523	80 / 60.8	24,192	68	R-410A	1.0	15	208/230V-1	55/ 8 / 27	1,2,3
FC-33	DAIKIN FXHQ24MVJU	EXERCISE	710	NA	24,000	20,499	14,523	80 / 60.8	24,192	68	R-410A	1.0	15	208/230V-1	55/ 8 / 27	1,2,3

1. CAPACITIES BASED ON 4500 FEET ELEVATION, HEATING OUTPUT CAPACITY RATED AT 0 °F. COOLING OUTPUT CAPACITY RATED AT 95 °F.
2. EXPOSED MOUNTED FAN COIL UNIT.
3. UNIT TO COME WITH INTEGRAL CONDENSATE PUMP, FLOAT SWITCH, ETC.



7 M501 REFRIGERANT PIPE WALL PENETRATION DETAIL
NO SCALE



6 M501 REFRIGERANT PIPE WALL SUPPORT DETAIL
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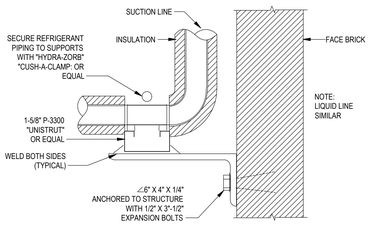

5 M501 REFRIGERANT PIPE WALL DETAIL
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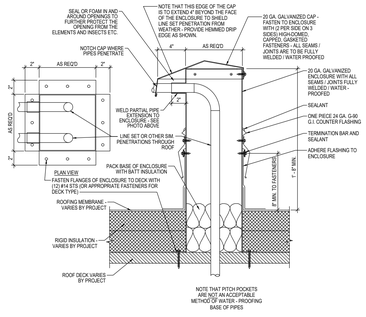

4 M501 LINE SET ENCLOSURE DETAIL
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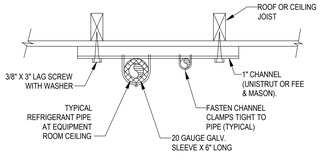
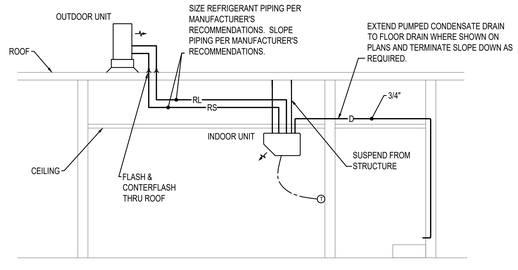
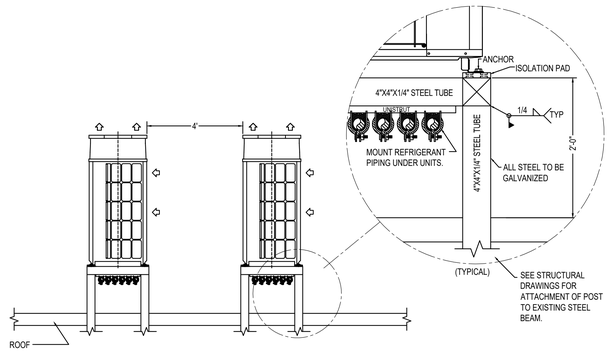


3 M501 REFRIGERANT PIPE CEILING DETAIL
NO SCALE



2 M501 CEILING MOUNTED DUCTLESS SPLIT SYSTEM DETAIL
NO SCALE



1 M501 CONDENSING UNIT SUPPORT DETAIL
NO SCALE

VBFA
www.vbfa.com
181 East 5600 South
Murray, UT 84107
801.530.3148 T
801.530.3150 F

LICENSED PROFESSIONAL ENGINEER
No. 8325442-2203
JACOB D. BECK
12/09/24
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OGDEN CITY
Francom Public Safety Center
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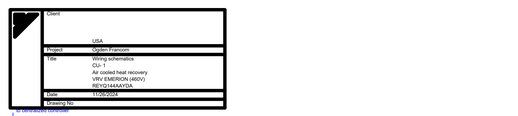
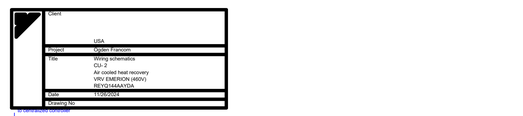
MECHANICAL DETAILS AND SCHEDULES

CONSTRUCTION DOCUMENTS

M501





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www.vbfa.com

181 East 5600 South
Murray, UT 84107
801.530.3148 T
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MECHANICAL SCHEMATICS

CONSTRUCTION DOCUMENTS

M701

ELECTRICAL SYMBOL SCHEDULE

SYMBOL	DEVICE/FIXTURE DESCRIPTION	MOUNTING	COMMENTS
(S) (D) (Q)	(S) SIMPLEX (D) DUPLEX (Q) QUADPLEX OR DOUBLE DUPLEX		
	STANDARD CONVENIENCE OUTLET	18"	
	CONVENIENCE OUTLET, GFCI	18"	
	STANDARD CONVENIENCE OUTLET, HOSPITAL	18"	
	STANDARD CONVENIENCE OUTLET, SWITCHED	18"	
	STANDARD CONVENIENCE OUTLET, CUSTOM HEIGHT	48"UNLESS NOTED	(6)
	CONVENIENCE OUTLET, GFCI, CUSTOM HEIGHT	48"UNLESS NOTED	(6)
	CONVENIENCE OUTLET, ISOLATED GROUND	18"	
	CONVENIENCE OUTLET, GFCI, CUSTOM HEIGHT, HOSPITAL	48"UNLESS NOTED	(6)
	CONVENIENCE OUTLET, FLOOR	FLOOR	
	CONVENIENCE OUTLET, CEILING	CEILING	
	2 CIRCUITS TO EACH DEVICE	18"	
WAV	COMBINATION POWER AND COMMUNICATION FLOOR BOX	FLOOR	
	DUPLEX OUTLET, POP-UP	COUNTERTOP	
	SPECIAL PURPOSE OUTLET		
	DIRECT CONNECTION TO EQUIPMENT		
$_{D}$	CORD DROP OUTLET	SUSPENDED	
$_{CR}$	CORD REEL OUTLET	SUSPENDED	
	POKE THRU, POWER	FLOOR	
	POKE THRU, POWER AND DATA	FLOOR	
WAV	POKE THRU, POWER AND DATA W/AV	FLOOR	
	POWER/VOICE-DATA SERVICE POLE	AS NOTED	
DJU	DISTRIBUTION JUNCTION UNIT		
VFD	VARIABLE FREQUENCY DRIVE		
SPD	SURGE PROTECTION DEVICE		
	JUNCTION BOX	AS NOTED	(12)
	JUNCTION BOX, WALL	AS NOTED	(12)
	JUNCTION BOX, FLOOR	FLOOR	(12)
EV	EV CHARGER		
	CLOCK OUTLET		(*)
^{M}	MANUAL MOTOR CONTROLLER SWITCH WITHOUT TERMINAL OVERLOAD PROTECTION		
^{P}	SWITCH WITH PILOT LIGHT		
TH	MANUAL SWITCH WITH THERMAL OVERLOAD		
^{X}	SINGLE POLE DOOR SWITCH		
	PUSH BUTTON SWITCH, SINGLE	AS NOTED	
	PUSH BUTTON SWITCH, DOUBLE	AS NOTED	
	BUSH BUTTON SWITCH, TRIPLE	AS NOTED	
	EMERGENCY POWER OFF (EPO) SWITCH		
	NON-FUSED DISCONNECT SWITCH		(13) (14)
	FUSED DISCONNECT SWITCH		(13) (14)
	MAGNETIC STARTER		(13) (14)
	MAGNETIC STARTER WITH FUSED DISCONNECT		(13) (14)
	MAGNETIC STARTER WITH BREAKER DISCONNECT		(13) (14)
R	POWER RELAY		(13) (14)
	MOTOR OUTLET		
	MOTOR OUTLET, ROOF MOUNTED	ROOF	
	LIGHTNING PROTECTION AIR TERMINAL	ROOF	
	LIGHTNING PROTECTION BOND PLATE		
	LIGHTNING PROTECTION GROUND ROD	GROUND	
	POKETHRU		
	UTILITY POWER POLE	SEE PLANS	
T	TRANSFORMER	SEE PLANS	
XT	TRANSFORMER	SEE PLANS	
EG	EMERGENCY GENERATOR	SEE PLANS	
GAP	GENERATOR ANNUNCIATOR PANEL	SEE PLANS	
ATS	AUTOMATIC TRANSFER SWITCH	SEE PLANS	
	MAIN DISTRIBUTION POWER PANEL		
	PANEL BOARD, SURFACE	6'-6" TO TOP	
	PANEL BOARD, RECESSED	6'-6" TO TOP	

ELECTRICAL SYMBOL SCHEDULE

SYMBOL	DEVICE/FIXTURE DESCRIPTION	MOUNTING	COMMENTS
	2x4 LINEAR LIGHT FIXTURE	CEILING	(1) (2) (3) (16)
	2x4 LINEAR EMERGENCY LIGHT FIXTURE	CEILING	(1) (2) (3) (16)
	2x4 LINEAR CRITICAL LIGHT FIXTURE	CEILING	(1) (2) (3) (16)
	2x2 LINEAR LIGHT FIXTURE	CEILING	(1) (2) (3) (16)
	2x2 LINEAR EMERGENCY LIGHT FIXTURE	CEILING	(1) (2) (3) (16)
	2x2 LINEAR CRITICAL LIGHT FIXTURE	CEILING	(1) (2) (3) (16)
	RECESSED LIGHT FIXTURE	CEILING	(1) (3)
	RECESSED EMERGENCY LIGHT FIXTURE	CEILING	(1) (3)
	RECESSED WALL WASH LIGHT FIXTURE	CEILING	(1) (3)
	CEILING LIGHT FIXTURE	CEILING	(1) (2)
	PENDANT/CHANDELIER LIGHT FIXTURE	SUSPENDED	(1) (2) (3)
	WALL LIGHT FIXTURE, SURFACE	AS NOTED	(1) (2)
	WALL LIGHT FIXTURE, RECESSED	AS NOTED	(1) (2)
	TRACK LIGHT FIXTURE WITH TRACK	CEILING	(1) (2) (3)
	CEILING FAN	SUSPENDED	
	FLOOD/LANDSCAPE/MONUMENT LIGHT FIXTURE	GROUND	(1) (2) (3)
	AREA LIGHT FIXTURE	POLE	(1) (2)
	BOLLARD LIGHT	GROUND	
	BOLLARD LIGHT, POLE TOP AREA LIGHT	POLE	(1) (2)
	EXIT SIGN, WALL, ARROW INDICATES DIRECTION	7'-6"	(1) (2) (4) (5)
	EXIT SIGN, ARROW INDICATES DIRECTION	CEILING	(1) (4) (5)
	EMERGENCY LIGHT FIXTURE, WALL	7'-6"	(1) (2)
P	PHOTO-ELECTRIC CELL	AS NOTED	
PP	POWER PACK	CEILING	
SP	SLAVE PACK	CEILING	
MP	MINI POWER PACK	CEILING	
RC	ROOM CONTROLLER	CEILING	
ECU	EMERGENCY CONTROL UNIT	CEILING	
	DUAL TECHNOLOGY VACANCY SENSOR	CEILING	(7)
	DUAL TECHNOLOGY VAC. SENSOR, WALL	AS NOTED	(7)
	DUAL TECHNOLOGY VAC. SENSOR WITH DIMMER, WALL	AS NOTED	(7)
	DUAL TECHNOLOGY VAC. SENSOR SWITCH, 1-ZONE	4'-0"	(7)
	DUAL TECHNOLOGY VAC. SENSOR SWITCH WITH DIMMER, 1-ZONE	4'-0"	(7)
	DUAL TECHNOLOGY VAC. SENSOR SWITCH, 2-ZONE	4'-0"	(7)
	DAYLIGHT SENSOR	CEILING	
	PASSIVE INFRARED SENSOR	CEILING	
PS	PARTITION SENSOR	CEILING	
$	SINGLE POLE SWITCH	4'-0"	
$^{2}	DOUBLE POLE, SINGLE THROW SWITCH	4'-0"	
$^{3}	THREE WAY SWITCH	4'-0"	
$^{3}_{a}	THREE WAY SWITCH ATTRIBUTE SIGNIFIES FIXTURE SWITCHING	4'-0"	
$^{4}	FOUR WAY SWITCH	4'-0"	
$$	DUAL LEVEL SWITCH BANK	4'-0"	
$	DIMMER SWITCH	4'-0"	
$	LOW VOLTAGE SWITCH	4'-0"	
$	LOW VOLTAGE DIMMER SWITCH	4'-0"	
$^{K}	KEYED SWITCH, SINGLE POLE	4'-0"	(15)
$^{T}	TIMER SWITCH, SINGLE POLE	4'-0"	(15)
SC	SCENE CONTROLLER	4'-0"	
TP	TOUCH PANEL	4'-0"	
TC	TIME CLOCK	AS NOTED	
	LIGHTING CONTROL PANEL, SURFACE	6'-6" TO TOP	
	LIGHTING CONTROL PANEL, RECESSED	6'-6" TO TOP	

NOTES

(1) SEE LUMINAIRE SCHEDULE FOR FIXTURE TYPES AND DETAILS.
(2) SEE LUMINAIRE SCHEDULE FOR MOUNTING REQUIREMENTS.
(3) WIRE LIGHT FIXTURE FROM ADJACENT J-BOX
(4) CONNECT NEAREST UN-SWITCHED HOT CONDUCTOR TO EMERGENCY BALLAST
(5) DIRECTIONAL ARROWS INDICATE REQUIRED CHEVRONS.
(6) COORDINATE MOUNTING HEIGHT WITH ARCHITECTURAL INTERIOR ELEVATIONS
(7) USE WITH POWER PACK.
(8) "X" IN SYMBOL IS INCHES BETWEEN RECEPTACLE ALONG WIREWAY. SEE DRAWINGS.
(9) PROVIDE UL LISTED DEVICE COMPATIBLE WITH THE FIRE ALARM PANEL/SYSTEM.
(10) MATCH THE VOLTAGE OF THE RELAY WITH THAT OF THE CONTROLLING CIRCUIT.
(11) USE A 4" X 4" BOX WITH A MUD RING TO MATCH THE DEVICE AND INSTALLATION.
(12) PROVIDE MUD RING AND/OR BOX COVER APPROPRIATE FOR DEVICE/FIXTURE SERVED.
(13) USE HEAVY DUTY DEVICE FOR 480 VOLT.
(14) SIZE TO THE EQUIPMENT BEING CONTROLLED
(15) FIRE ALARM PANELS: FACP: FIRE ALARM CONTROL PANEL, NAC: NOTIFICATION APPLIANCE CIRCUIT PANEL, ANNUN: GRAPHIC ANNUNCIATOR PANEL, AND SES: SMOKE EVACUATION SYSTEM PANEL.
(16) LIGHT FIXTURES ARE SCALED WITHIN THE DRAWINGS BASED ON ACTUAL DIMENSIONS.
(17) PROVIDE 5' OF SERVICE LOOP AND TERMINATE IN Z-PORT SURFACE MOUNT BOX.

ABBREVIATIONS

A	AMPS	ER	EXISTING TO BE RELOCATED		LOCAL SWITCHING
AFC	AVAILABLE FAULT CURRENT	EX	EXISTING TO REMAIN	PC	PLUMBING CONTRACTOR
AFF	ABOVE FINISHED FLOOR	FMC	FLEXIBLE METAL CONDUIT	POC	POINT OF CONNECTION
AFG	ABOVE FINISHED GRADE	GC	GENERAL CONTRACTOR	POS	POINT OF SALE
AIC	AMPS INTERR. CAPACITY	GEC	GRND. ELEC. COND. AT SES	R	RELOCATED
AWG	AMERICAN WIRE GAUGE	GFCI	GRND. FLT. CURR. INTERR.	RX	RECEIVER
BC	BARE COPPER	GFEP	GRND. FLT. EQUIP. PROTECT.	RM	ROOF MOUNTED
BFC	BELOW FINISHED CEILING	GND	GROUND	RMC	RIGID METALLIC CONDUIT
BFG	BELOW FINISHED GRADE	IMC	INTER. METAL CONDUIT	RNC	RIGID NON-METALLIC COND.
C	CONDUIT	IG	ISOLATED GROUND	SBJ	SYSTEM BONDING JUMPER
CND	CONDUIT	KCMIL	1000 CIRCULAR MILS (MCM)	SCA	SHORT CIRCUIT AMPERES
CO	CONDUIT ONLY	LFMC	LIQUID-TIGHT FLEX. METAL. COND.	TX	TRANSMITTER
CT	CURRENT TRANSDUCER			TC	TEMP. CONTROL CONTR.
CU	COPPER MATERIAL	LFNC	LIQUID-TIGHT FLEX. NON-METAL. COND.	TR	TAMPERPROOF
DED	DEDICATED			UG	UNDERGROUND
DFA	DROP FROM ABOVE	MC	MECHANICAL CONTRACTOR	UNO	UNLESS NOTED OTHERWISE
EC	ELECTRICAL CONTRACTOR	MCA	MINIMUM CIRCUIT AMPS	VA	VOLT/AMPS
EF	EXHAUST FAN	N1	NEMA 1	VIF	VERIFY IN FIELD
EM	EMER./EGRESS BATTERY	N3R	NEMA 3R	WP	WEATHERPROOF/NEMA 3R
EMT	ELEC. METALLIC TUBING	N	NEW	XP	EXPLOSION PROOF
ENT	ELEC. NON-METAL. TUBING	NL	NIGHT LIGHT, BYPASS	XR	EXISTING TO BE REMOVED

GENERAL NOTES

1. THE ELECTRICAL SYSTEMS DEFINED BY THESE PLANS AND SPECIFICATIONS ARE TO BE CONSTRUCTED AS COMPLETE AND OPERABLE SYSTEMS AND SHALL BE BID WITH THIS INTENT. THE CONTRACTOR SHALL VISIT THE SITE, READ ALL THE RELEVANT DOCUMENTS AND BECOME FAMILIAR WITH THE TYPE OF CONSTRUCTION AND WORK TO BE ACCOMPLISHED. SHOULD ANY ERROR, OMISSION OR CONFLICT EXIST IN EITHER THE PLANS OR SPECIFICATIONS, THE CONTRACTOR SHALL NOTIFY THE ENGINEER IN WRITING BEFORE SUBMITTING HIS BID PRICE SO A CHANGE CAN BE ISSUED IN A PRE-BID ADDENDUM. OTHERWISE, THE CONTRACTOR AND/OR EQUIPMENT SUPPLIER SHALL SUPPLY THE PROPER MATERIALS AND LABOR TO INSTALL COMPLETE AND OPERABLE SYSTEMS AT THEIR OWN EXPENSE. WHEN EACH ELECTRICAL SYSTEM IS COMPLETE, THE CONTRACTOR SHALL TEST AND CONFIRM IT'S PROPER OPERATION. ANY INCOMPLETE SYSTEM SHALL BE MADE COMPLETE AND OPERABLE.
2. THE ARCHITECTURAL AND MECHANICAL PLANS ARE CONSIDERED A PART OF THE ELECTRICAL DOCUMENTS SO FAR AS ANY ELECTRICAL ITEMS THEY MAY CONTAIN. THE ELECTRICAL CONTRACTOR SHALL REFER TO AND COORDINATE WITH THEM. NO EXTRA COST SHALL BE ALLOWED FOR FAILURE TO COORDINATE THE CONTRACT DOCUMENTS WITH OTHER TRADES AND/OR IF EQUIPMENT DIMENSIONS ARE GREATER THAN SPECIFIED AND/OR DIMENSIONED ON THE PLANS.
3. NO ADDITIONS TO THE CONTRACTOR BID WILL BE ALLOWED FOR CHANGES MADE NECESSARY BY INTERFERENCE WITH OTHER WORK.
4. THE ELECTRICAL CONTRACTOR SHALL PROVIDE EQUIPMENT, MATERIALS AND LABOR FOR THE CONNECTIONS OF ALL EQUIPMENT SHOWN ON THE PLANS - ARCHITECTURAL, MECHANICAL, ETC.
5. THIS PROJECT IS TO BE INSTALLED IN STRICT ACCORDANCE WITH LOCAL AND STATE CODES AND THE NEC. IF AT ANY TIME DURING CONSTRUCTION, OR AFTER, SOMETHING IS FOUND TO BE INSTALLED IN VIOLATION OF THE CODES LISTED ABOVE, IT SHALL BE CORRECTED AT THE CONTRACTORS EXPENSE.
6. ALL EQUIPMENT PROVIDED BY THE ELECTRICAL CONTRACTOR SHALL BE LISTED AND LABELED BY A NATIONALLY RECOGNIZED TESTING AGENCY, ACCEPTABLE TO THE AUTHORITY HAVING JURISDICTION, AND BE PROPERLY INSTALLED FOR THE CONDITIONS AND SPACE THAT EQUIPMENT IS BEING INSTALLED WITHIN.
7. THE ELECTRICAL CONTRACTOR SHALL COORDINATE AND CONFIRM THE EXACT LOCATION OF THE POWER PANELS FROM WHICH NEW CIRCUITS ARE BEING FED FROM. VERIFY EXISTING BRANCH CIRCUIT BREAKERS AND PROVIDE NEW BREAKERS AS NECESSARY FOR A COMPLETE AND OPERABLE SYSTEM.
8. THE ELECTRICAL CONTRACTOR SHALL COORDINATE AND CONFIRM THE EXACT LOCATION OF THE TELE/DATA ROOM FROM WHICH NEW TELE/DATA OUTLETS WILL BE FED FROM. VERIFY EXISTING PATCH PANEL SPACES AND PROVIDE NEW PATCH PANELS AS NECESSARY TO LAND ALL NEW TELE/DATA CABLING.
9. THE ELECTRICAL CONTRACTOR SHALL INSTALL A SEPARATE EQUIPMENT GROUNDING CONDUCTOR IN EACH CONDUIT RUN. CONDUIT SHALL NOT BE USED AS AN EQUIPMENT GROUNDING CONDUCTOR. THE ELECTRICAL CONTRACTOR SHALL GROUND THE ELECTRICAL SYSTEM IN ACCORDANCE WITH LOCAL AND NATIONAL CODES.
10. THE ELECTRICAL CONTRACTOR SHALL CONFIRM MINIMUM CODE (NEC) WORKING CLEARANCE BEFORE INSTALLING ANY ELECTRICAL PANELS, CABINETS, DISCONNECT, TRANSFORMERS, ETC. AND SHALL MOVE THE PANELS/EQUIPMENT AT HIS EXPENSE IF REJECTED BY AN INSPECTOR. IF CLEARANCE IS NOT POSSIBLE, THE DESIGNER SHALL BE NOTIFIED IMMEDIATELY IN WRITING.
11. CONDUIT LAYOUTS SHOWN ON THE PLANS ARE DIAGRAMMATIC, NOT INDICATING THE ROUTING REQUIRED. THE EC SHALL ROUTE THE CONDUITS AS REQUIRED BY THE CONDITIONS OF THE INSTALLATION AND SHALL COORDINATE WITH DUCTWORK, PIPING, EQUIPMENT, BUILDING STRUCTURE AND OTHER POTENTIAL OBSTRUCTIONS.
12. THE CONTRACTOR SHALL ALLOW THE MOVEMENT, BEFORE ROUGH-IN, OF ANY ELECTRICAL PANEL, DEVICE, LUMINAIRE, ETC. A DISTANCE OF 10 FEET WITHOUT REQUIRING ADDITIONAL COST TO THE PROJECT.
13. THE ELECTRICAL CONTRACTOR SHALL SECURE ALL CONDUIT TO THE STRUCTURE AS IT IS SET IN PLACE USING INDUSTRY STANDARD METHODS AND PRACTICES.
14. MINIMUM SIZE CONDUIT SHALL BE 3/4". ABOVE GROUND CONDUIT SHALL BE EMT WITH STEEL SET SCREW FITTINGS. UNDERGROUND CONDUIT SHALL BE PVC (SCH40) WITH GRC ELBOWS AND RISERS WRAPPED IN CORROSION RESISTANT MATERIALS WHERE IN DIRECT CONTACT WITH THE SOIL.
15. FLEXIBLE METAL CONDUIT SHALL BE LIMITED TO CONNECTIONS TO LIGHT FIXTURES AND FINAL CONNECTIONS TO MOTORS OR OTHER EQUIPMENT SUBJECT TO VIBRATION. LENGTHS OF FLEXIBLE OR SEAL-TITE CONDUIT SHALL NOT EXCEED 72" INCHES. USE LFMC IN DAMP OR WET LOCATIONS.
16. WIRING DEVICES SHALL MATCH EXISTING COLOR AND FACEPLATE TYPE. COLOR TO MATCH ADJACENT ARCHITECTURAL FINISH. COORDINATE WITH ARCHITECT.
17. TO ASSURE ALL DEVICES ARE RIGIDLY SET, THE ELECTRICAL CONTRACTOR SHALL SECURE ALL DEVICE BOXES WITH BRACKETS, HANGERS, ETC. DESIGNED FOR THE APPLICATION. ANY DEVICE BOXES NOT SECURED WILL BE MADE SECURE AT THE CONTRACTORS EXPENSE.
18. THE ELECTRICAL CONTRACTOR SHALL PROVIDE ALL EMPTY CONDUITS WITH 200LB RATED NYLON PULL CORD.
19. BEFORE ANY ELECTRICAL CONDUIT, BOXES, ETC. ARE COVERED (FLOOR, CEILINGS, WALLS, ETC.), THEY SHALL BE APPROVED BY THE INSPECTING OFFICER (INSPECTOR). THE UNCOVERING AND REPLACEMENT OF ELECTRICAL WORK FOR THE INSPECTION PURPOSES WILL BE AT THE COST OF THE ELECTRICAL CONTRACTOR.
20. ALL BATTERY POWERED OR CONTINUOUS BURN LUMINAIRES SHOWN ON THE PLANS, SUCH AS EXIT LIGHTS, NIGHT LIGHTS, OR EMERGENCY LIGHTS, SHALL BE CONNECTED TO THE UN-SWITCHED LEG OF THE LIGHTING CIRCUIT FEEDING THAT AREA.
21. LUMINAIRES INSTALLED IN THE MECHANICAL ROOM SHALL BE PLACED SO THAT ALL EQUIPMENT IS ADEQUATELY ILLUMINATED AFTER THE MECHANICAL EQUIPMENT IS IN PLACE.
22. ALL LUMINAIRES SHALL BE SUPPORTED FROM THE BUILDING STRUCTURE AND NOT SOLELY FROM THE CEILING GRID OR OTHER NONSTRUCTURAL MEMBER.
23. TO MAINTAIN CONSISTENT LIGHT QUALITY, LUMINAIRES SHALL BE OF THE SAME SURFACE TEMPERATURE AND COLOR RENDERING INDEX, LUMINAIRE TYPES SHALL BE OF THE SAME MANUFACTURER AND LUMEN OUTPUT.
24. WHERE WIRE SIZE IS NOT SHOWN ON THE DRAWINGS FOR 20A, 120 OR 277VAC BRANCH CIRCUITS, THE CIRCUIT SHALL CONSIST OF 2#12(CU,THHN/THWN-2)+1#12(CU,THHN/THWN-2)GND IN 3/4" EMT CONDUIT. THIS WIRE SIZE SHALL BE INCREASED TO #10(CU,THHN) FOR 120VAC BRANCH CIRCUITS WITH OVERALL LENGTHS EXCEEDING 100' TO ACCOMMODATE FOR VOLTAGE DROP. REFER TO EQUIPMENT SCHEDULES, FEEDER SCHEDULES AND NOTES ON DRAWINGS FOR ALL OTHER BRANCH CIRCUIT AND FEEDER WIRE/CONDUIT SIZING.
25. CONDUCTORS SHALL BE COPPER STRANDED, 600VAC RATED, TYPE THHN/THWN-2 UNLESS OTHERWISE NOTED.
26. ELECTRICAL CONTRACTOR SHALL COORDINATE WITH EQUIPMENT SUPPLIERS ON THE EXACT LOCATIONS OF ALL EQUIPMENT AND ELECTRICAL CONNECTIONS, WIRES, AND OVERCURRENT PROTECTION PRIOR TO ROUGH-IN. THE ELECTRICAL CONTRACTOR SHALL MAKE THE FINAL CONNECTION TO ALL EQUIPMENT UNLESS OTHERWISE DIRECTED BY THE EQUIPMENT SUPPLIER.
27. THE ELECTRICAL CONTRACTOR SHALL CLEAN THE ENTIRE ELECTRICAL SYSTEM AFTER COMPLETION OF THE INSTALLATION. REMOVE ALL FINGER PRINTS, FOREIGN MATTER, PAINT, DIRT, GREASE, UN-NEEDED LABELS OR STICKERS FROM FIXTURES AND EQUIPMENT. REMOVE ALL RUBBISH AND DEBRIS ACCUMULATED DURING INSTALLATION FROM THE PREMISES.
28. OBTAIN FROM SUPPLIERS ALL WIRING DIAGRAMS FOR EQUIPMENT PRIOR TO ANY ROUGH-IN. TO ASSURE THAT PROPER CHARACTERISTICS ARE PROVIDED, ANY INCORRECT WIRING OR DEVICES INSTALLED BY THE ELECTRICAL CONTRACTOR WITHOUT THE WIRING DIAGRAM SHALL BE CORRECTED AT THE CONTRACTOR'S EXPENSE. PROVIDE COPIES OF WIRING DIAGRAMS WITHIN EACH PIECE OF EQUIPMENT AND ADDITIONAL COPIES WITH THE OPERATION AND MAINTENANCE MANUALS.
29. THE ELECTRICAL CONTRACTOR SHALL COORDINATE WITH THE MECHANICAL CONTRACTOR TO PROVIDE CONDUIT AND DEVICE MOUNTING BOXES FOR THERMOSTATS AND OTHER MECHANICAL CONTROLS.
30. IT IS THE INTENT OF THE CONSTRUCTION DOCUMENTS FOR ALL DEVICES TO BE FLUSH MOUNTED AND CONDUIT/CABLING INSTALLED CONCEALED WITHIN WALLS/CEILINGS. IN AREAS WHERE CONDUIT MUST BE INSTALLED EXPOSED IT SHALL BE COORDINATED WITH THE ARCHITECT AND/OR ENGINEER. ALL EFFORTS SHALL BE MADE TO CONCEAL WIRING METHODS.
31. PROVIDE AN UPDATED, TYPED PANEL CIRCUIT DIRECTORY FOR ALL PANELS WHERE CIRCUITS HAVE BEEN MODIFIED, ADDED, OR REMOVED BY THE SCOPE OF THIS PROJECT. CIRCUIT DESCRIPTIONS ON THE DIRECTORY SHALL BE UNIQUE AND INDICATE THE ROOM AND EQUIPMENT/DEVICE IT IS FEEDING. DATE DIRECTORY WITH PROJECT COMPLETION DATE. MODIFIED CIRCUITS TO BE IN BOLD.
32. PROVIDE A CLEAR, TYPED LABEL ON THE FACEPLATE OF ALL RECEPTACLES AND LIGHT SWITCHES INDICATING THE CIRCUIT IT IS TIED TO. USE LABELING CONVENTION XX-xx, WHERE "XX" IS THE NAME OF THE PANEL AND "xx" IS THE BRANCH CIRCUIT NUMBER. LABELS LENGTH SHALL NOT EXCEED 1/4" ON EITHER SIDE OF TEXT.
33. FUSED DISCONNECTS TO BE HEAVY DUTY.
34. ALL TELECOMMUNICATIONS WIRING SHALL BE INSTALLED WITHIN CONDUIT UNLESS INSTALLED ABOVE ACCESSIBLE CEILINGS. MINIMUM CONDUIT SIZE FOR TELECOMMUNICATIONS CABLING SHALL BE 1-1/4" EMT, UNLESS OTHERWISE NOTED.
35. FURNISH AND INSTALL TAMPER-RESISTANT RECEPTACLES FOR 120V RECEPTACLES IN AREAS SPECIFIED 210.52 OF THE NEC AND AS REQUIRED UNDER 403.12 OF THE NEC.

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EP201	LEVEL 2 OVERALL ELECTRICAL PLAN
EE201	ENLARGED LEVEL 2 ELECTRICAL PLANS
EE202	ENLARGED LEVEL 2 ELECTRICAL PLANS

VBFA
www.vbfa.com
181 East 5600 South
Murray, UT 84107
801.530.3148 T
801.530.3150 F

PROFESSIONAL ENGINEER
Lewis Wong
No. 9075170
10/21/24
STATE OF UTAH

OGDEN CITY
Francom Public Safety Center
HVAC Upgrades
2186 Lincoln Ave, Ogden, UT 84401

VBFA PROJECT #:	240262
CHECKED BY:	LW
DRAWN BY:	CN
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CONSTRUCTION DOCUMENTS

SHEET CONTENTS
GENERAL LEGEND AND NOTES

EG001

ELECTRICAL SPECIFICATIONS

GENERAL

A. DESCRIPTION
1. FURNISH ALL LABOR, MATERIALS, EQUIPMENT AND TRANSPORTATION AS REQUIRED TO PROPERLY INSTALL A COMPLETE AND OPERABLE ELECTRICAL SYSTEM.

B. RULES AND REGULATIONS
1. ALL WORK AND MATERIALS SHALL BE INSTALLED AS SHOWN AND HEREIN SPECIFIED.
2. THE LATEST EDITIONS OF THE FOLLOWING SPECIFICATIONS, STANDARDS, AND AMENDMENTS, AS ADOPTED BY THE AUTHORITY HAVING JURISDICTION, SHALL FORM A PART OF THIS SPECIFICATION THE SAME AS IF HEREIN WRITTEN OUT IN FULL (ALL MATERIALS AND INSTALLATIONS SHALL CONFORM TO THE APPLICABLE REQUIREMENTS THEREOF):
   a. NFPA (NATIONAL FIRE PROTECTION ASSOCIATION), PUBLICATION NUMBER 70, "NATIONAL, ELECTRICAL CODE"; PUB. NO. 72E, "AUTOMATIC FIRE DETECTORS".
   b. UL (UNDERWRITERS LABORATORIES, INC.).
   c. NEMA (NATIONAL ELECTRICAL MANUFACTURER'S ASSOCIATION).
   d. UBC (UNIFORM BUILDING CODE) AND STANDARD BUILDING CODE.
   e. IBC (INTERNATIONAL BUILDING CODE)
   f. IFC (INTERNATIONAL FIRE CODE)
   g. IECC (INTERNATIONAL ENERGY CONSERVATION CODE)
   h. IEC (INTERNATIONAL ELECTRICAL CODE) STATE AND
   i. LOCAL BUILDING AUTHORITY AND CODES
3. NO REQUIREMENT TO THESE DRAWINGS AND SPECIFICATIONS SHALL BE CONSTRUCTED TO VOID ANY OF THE PROVISIONS OF THE ABOVE SPECIFICATIONS AND STANDARDS.

C. PERMITS AND INSPECTIONS UNLESS OTHERWISE SPECIFIED, THE CONTRACTOR SHALL APPLY, PAY FOR AND SCHEDULE ALL APPLICABLE PERMITS, FEES AND INSPECTIONS REQUIRED BY ANY AND ALL PUBLIC AUTHORITIES HAVING JURISDICTION AND REQUIRING INSPECTION.
1. EC SHALL INCLUDE ALL UTILITY COMPANY CHARGES IN THE BASE BID.

D. WORKMANSHIP AND MATERIALS
1. WORKMANSHIP SHALL BE OF THE BEST QUALITY AND NONE BUT COMPETENT PERSONNEL SKILLED IN THEIR TRADE SHALL BE EMPLOYED. THE CONTRACTOR SHALL FURNISH THE SERVICES OF AN EXPERIENCED SUPERINTENDENT, WHO WILL BE IN CHARGE OF THE EXECUTION OF WORK, UNTIL COMPLETED AND ACCEPTED.
2. UNLESS OTHERWISE HEREIN AFTER SPECIFIED, ALL MATERIALS AND EQUIPMENT UNDER THIS DIVISION OF THE SPECIFICATIONS SHALL BE NEW, OF BEST GRADE AND AS LISTED IN PRINTED CATALOGS OF THE MANUFACTURER. EACH ARTICLE OF IT'S KIND SHALL BE THE STANDARD PRODUCT OF A SINGLE MANUFACTURER.
3. THE OWNER'S REPRESENTATIVE SHALL HAVE THE RIGHT TO ACCEPT OR REJECT MATERIAL EQUIPMENT AND/OR WORKMANSHIP AND DETERMINE WHEN THEY HAVE COMPLIED WITH THE REQUIREMENTS HEREIN SPECIFIED.
4. ALL MANUFACTURED MATERIALS SHALL BE CLEARLY MARKED OR STAMPED WITH THE MANUFACTURER'S NAME AND RATING.
5. REFERENCE TO STANDARDS ARE INTENDED TO BE THE LATEST REVISION OF THE STANDARD SPECIFIED, OR THAT ACCEPTED BY THE AUTHORITY HAVING JURISDICTION.

E. MANUFACTURER'S RECOMMENDATIONS
1. EQUIPMENT INSTALLED UNDER THIS DIVISION OF THE SPECIFICATIONS SHALL BE INSTALLED ACCORDING TO THE MANUFACTURER'S RECOMMENDATIONS, UNLESS OTHERWISE SHOWN ON THE DRAWINGS OR HEREIN SPECIFIED.

F. GUARANTEE ALL MATERIALS AND EQUIPMENT PROVIDED AND INSTALLED UNDER THIS SECTION SHALL BE GUARANTEED FOR A MINIMUM OF ONE YEAR. SHOULD ANY TROUBLE OR MALFUNCTIONS DEVELOP DURING THIS PERIOD DUE TO DEFECTIVE MATERIALS OR FAULTY WORKMANSHIP, THE CONTRACTOR WILL BE HELD LIABLE AND SHALL FURNISH LABOR, MATERIALS AND EQUIPMENT NECESSARY TO CORRECT THE TROUBLE OR MALFUNCTION WITHOUT ADDITIONAL COST TO THE OWNER. ALL DEFECTIVE MATERIAL OR INFERIOR WORKMANSHIP NOTICED DURING THE TIME OF INSTALLATION SHALL BE CORRECTED IMMEDIATELY TO THE ENTIRE SATISFACTION OF THE ARCHITECT, ENGINEER AND OWNER, AT NO ADDITIONAL COST.

G. DEFINITIONS
1. "PROVIDE" - MEANS FURNISH, INSTALL, AND CONNECT, UNLESS OTHERWISE INDICATED.
2. "FURNISH" - MEANS PURCHASE NEW AND DELIVER IN OPERATING ORDER TO PROJECT SITE.
3. "INSTALL" - MEANS TO PHYSICALLY INSTALL THE ITEMS IN-PLACE.
4. "CONNECT" - MEANS MAKE FINAL ELECTRICAL CONNECTIONS FOR A COMPLETE OPERATING PIECE OF EQUIPMENT. THIS INCLUDES PROVIDING CONDUIT, WIRE, TERMINATIONS, ETC. AS APPLICABLE.
5. "OR EQUIVALENT" - MEANS TO PROVIDE EQUIVALENT EQUIPMENT. SUCH EQUIPMENT MUST BE APPROVED BY THE ENGINEER PRIOR TO BIDDING.

H. SUBMITTALS
1. PROVIDE SHOP DRAWINGS AND MANUFACTURER'S LITERATURE OF MATERIALS AND EQUIPMENT AS REQUIRED IN THE GENERAL CONDITIONS, AS DIRECTED BY THE OWNER'S REPRESENTATIVE AND AS LISTED BELOW:
2. CATALOG CUTS
   a. CIRCUIT BREAKERS (EACH SIZE AND TYPE)
   b. SAFETY SWITCHES
   c. MOTOR STARTERS
   d. THERMAL SWITCHES
   e. LIGHT FIXTURES
3. THE ABOVE IS A STANDARD SUBMITTAL REQUIREMENT LIST. ELECTRICAL CONTRACTOR SHALL SUBMIT ALL APPLICABLE ITEMS FOR REVIEW. MATERIAL NOT SUBMITTED AND APPROVED BY THE ARCHITECT, ENGINEER OR OWNER'S REPRESENTATIVE SHALL BE SUBJECT TO REMOVAL AND REPLACEMENT AT THE CONTRACTORS COST IF DIRECTED BY THE ARCHITECT, ENGINEER OR THE OWNER'S REPRESENTATIVE.

ELECTRICAL SPECIFICATIONS

EXECUTION

A. GENERAL
7. ALL MATERIALS SHALL BE INSTALLED IN A PROFESSIONAL MANNER INDICATIVE OF THE TRADE.
8. ALL PENETRATIONS OF THE OUTSIDE WALLS OR ROOF SHALL BE SEALED WITH APPROPRIATE SEALANT OR CAULK FOR THE PARTICULAR SURFACE INVOLVED.
9. PROVIDE CLEAR, TYPED, P-TOUCH LABEL FOR ALL RECEPTACLES COVERPLATES IDENTIFYING THE CIRCUIT NUMBER THAT THE RECEPTACLE IS CIRCUITED TO.
10. PROVIDE UPDATED TYPED PANEL SCHEDULE INDEX FOR ALL PANELS WHERE CIRCUITS HAVE BEEN MODIFIED OR CHANGED.

B. RACEWAYS
1. RACEWAYS SHALL RUN CONCEALED UNLESS OTHERWISE INDICATED. EXPOSED RACEWAY RUNS SHALL BE PARALLEL WITH SUPPORTING WALLS, BEAMS, AND CEILINGS AND WITH EACH OTHER CLOSER THAN 6 INCHES TO ANY WATER PIPE OR HEATER BE INSTALLED AND SHALL NOT FLUME.
2. RACEWAY ENDS SHALL BE REAMED AFTER THREADING AND AFTER CUTTING AND BE MADE TO BUTT IN THE CENTER OF THE COUPLING. THE USE OF RUNNING THREADS IS PROHIBITED.
3. RACEWAYS SHALL BE INSTALLED AS A COMPLETE SYSTEM, CONTINUOUS FROM OUTLET TO OUTLET, CABINET, BOX OR FITTINGS, AND SHALL BE MECHANICALLY CONNECTED SO THAT ADEQUATE ELECTRICAL CONTINUITY FROM ONE TO ANOTHER IS OBTAINED. CONDUITS SHALL BE SUPPORTED WITH ONE OR TWO HOLE STAMPED STEEL OR MALLEABLE IRON STRAPS (SUCH AS MANUFACTURED BY RACO) DESIGNED FOR SUPPORTING CONDUIT. THE SIZE OF STRAP SHALL MATCH THE SIZE OF THE CONDUIT. NAILS, PERFORATED STRAP, OR PLUMBERS TAPE SHALL NOT BE USED FOR SUPPORT OF RACEWAY.
4. PROVIDE 1/8" POLY PULL CORD IN RACEWAYS WITHOUT CONDUCTORS.
5. FOUR 90 DEGREE BENDS MAXIMUM BETWEEN TERMINATIONS OR BOXES.

C. CONDUCTORS
1. ALL CONDUCTORS SHALL BE INSTALLED IN CONDUIT AND COLOR CODED AS FOLLOWS:

PHASE	240/120	208/120	480/277
PHASE A	BLACK	BLACK	BROWN
PHASE B	RED	RED	ORANGE
PHASE C	-	BLUE	YELLOW
NEUTRAL	WHITE	WHITE	GRAY
GROUND	GREEN	GREEN	GREEN

2. MAKE JOINTS, SPLICES, TAPS AND CONNECTIONS IN CONDUCTORS WITH SOLDERLESS CONNECTORS.

D. JUNCTION AND PULL BOXES
1. PULL BOXES SHALL BE PROVIDED WHERE INDICATED AND WHERE NECESSARY TO FACILITATE THE PULLING OF CONDUCTORS. TELEPHONE RACEWAYS SHALL HAVE A MAXIMUM OF TWO 90 DEGREE BENDS BETWEEN TERMINATIONS OR BOXES.

E. GROUNDING
1. INSTALL A CODE SIZED GROUNDING CONDUCTOR IN ALL RACEWAYS. DO NOT USE THE RACEWAY FOR GROUNDING. MAKE GOOD CONTACT AT ALL PANEL BOARDS, OUTLET BOXES, AND JUNCTION OR PULL BOXES TO THE RACEWAY SYSTEM. USE APPROVED BONDING MATERIALS.

G. BONDING
1. BOND ALL PIPING (GAS WATER, ETC) AS REQUIRED BY THE NEC. CONFIRM SYSTEMS TO BE USED WITH MC.

H. SEISMIC REQUIREMENTS
1. IF REQUIRED, RECESSED TYPE LIGHTING FIXTURES, IN ADDITION TO THE STANDARD SEISMIC CLIPS AND SUPPORT ON T-BAR GRID SYSTEM, SHALL HAVE 2#12 STEEL SAFETY WIRES PER FIXTURE. ONE END OF EACH SAFETY WIRE SHALL BE SECURELY FASTENED TO THE BUILDING STRUCTURE. THE OTHER END (6 INCHES LONGER THAN THE T-BAR GRID SUPPORT WIRES) SHALL BE FASTENED TO DIAGONAL CORNERS OF EACH LIGHTING FIXTURE.

I. CUTTING AND PATCHING
1. PERFORM DRILLING, CUTTING, AND PATCHING OF THE GENERAL CONSTRUCTION WORK WHETHER EXISTING OR NEW, AS REQUIRED FOR THE INSTALLATION OF ELECTRICAL WORK. PATCH WITH THE SAME MATERIALS, WORKMANSHIP, AND FINISH AS THE ORIGINAL WORK AND ACCURATELY MATCH ALL SURROUNDING WORK. SUCH WORK WILL BE DONE BY A CRAFTSMAN ACCREDITED IN THE APPLICABLE TRADE UNDER THE CONTRACTOR'S SUPERVISION AND BE ACCEPTABLE TO THE OWNER'S REPRESENTATIVE. COORDINATE WITH OTHER TRADES AND GENERAL CONTRACTOR PRIOR TO CUTTING, DRILLING, OR CORING.

K. TESTING
1. DEMONSTRATE THAT ALL COMPONENTS OF THE WORK OF THIS DIVISION HAVE BEEN PROVIDED AND THAT THEY OPERATE IN ACCORDANCE WITH THE CONTRACT DOCUMENTS.
2. TEST WIRING AND CONNECTORS FOR CONTINUITY, SHORT CIRCUITS AND IMPROPER GROUNDS. TEST EACH LIGHTING AND APPLIANCE PANEL WITH MAINS DISCONNECTED FROM FEEDERS, BRANCHES CONNECTED, WALL SWITCHES CLOSED AND FIXTURES PERMANENTLY CONNECTED AND COMPLETE WITH LAMPS. TEST EACH INDIVIDUAL POWER CIRCUIT WITH THE POWER EQUIPMENT CONNECTED FOR PROPER OPERATION.
3. PROVIDE DETAILED DOCUMENTATION OF EACH TEST PERFORMED TO THE SATISFACTION OF THE OWNER'S REPRESENTATIVE, WITH THE NAMES AND THE SIGNATURES OF QUALIFIED INDIVIDUALS WHO CONDUCTED AND WITNESSED EACH TEST.

ELECTRICAL SPECIFICATIONS

MATERIALS

A. GENERAL
1. MATERIALS AND EQUIPMENT SHALL BE STANDARD CATALOGED PRODUCTS OF MANUFACTURERS REGULARLY ENGAGED IN THE MANUFACTURE OF THE PRODUCT. UL LISTED, AND SHALL BE THE LATEST STANDARD DESIGN THAT CONFORMS TO SPECIFIED MATERIALS AND EQUIPMENT.

B. RACEWAY
1. ELECTRICAL METALLIC TUBING (EMT) SHALL BE USED IN INTERIOR DRY LOCATIONS.
2. GALVANIZED FLEXIBLE STEEL (FMC) OR LIQUID TIGHT STEEL (LFMC) CONDUIT SHALL BE USED FOR CONNECTIONS TO MECHANICAL EQUIPMENT, LUMINAIRES AND TRANSFORMERS AND AS INDICATED. LIQUID TIGHT CONDUIT SHALL BE USED IN EXTERIOR OR DAMP LOCATIONS.
3. SCHEDULE 40 PVC (WITH PVC COATED OR VINYL TAPE DOUBLE WRAPPED RIGID STEEL ELBOWS AND RISES) SHALL BE USED FOR RUNS THAT ARE IN CONTACT WITH THE EARTH.
4. 3/4" CONDUIT SHALL BE THE MINIMUM SIZE CONDUIT.
5. OUTDOOR AND WET OR DAMP LOCATIONS: PROVIDE RIGID STEEL CONDUIT.

C. FITTINGS
1. ALL FITTINGS SHALL BE STEEL/MALLEABLE IRON WITH INSULATING BUSHINGS.

D. OUTLET AND JUNCTION BOXES
1. BOXES IN INTERIOR DRY LOCATIONS SHALL BE GALVANIZED ONE-PIECE PRESSED STEEL, KNOCKOUT TYPE, NOT LESS THAN 4 INCHES SQUARE AND 2 1/8" DEEP; APPLETON, RACO, OR EQUAL.
2. BOXES SHALL BE EQUIPPED WITH PLASTER RINGS, EXTENSION RINGS, AND FIXTURE STUDS AS REQUIRED.
3. BOXES FOR FLOOR OUTLETS SHALL BE UL LISTED FOR USE IN APPLICATION:
   a. POURED IN PLACE IN CONCRETE BOXES SHALL BE LEGRAND RFP TYPE OR APPROVED EQUAL. BOXES SHALL CONTAIN POWER, DATA OR BOTH AS CALLED FOR ON THE PLANS. ACTIVATION COVER: 180 DEGREE COVER OPENING TO LAY FLAT TO REDUCE TRIPPING HAZARDS. SPRING-LOADED SELF-CLOSING SLIDE CABLE EGRESS DOORS TO REDUCE EGRESS OPENING WHEN CABLES ARE EXISTING TO REDUCE TRIP HAZARDS. FLANGELESS FOR TILE APPLICATION. COLOR SHALL BE BY ARCHITECT.
   b. POKE THRU ASSEMBLY FLOOR DEVICES BOXES SHALL BE FACTORY-FABRICATED AND -WIRED ASSEMBLY OF BELOW-FLOOR JUNCTION BOX WITH MULTICHANNELED, THROUGH-FLOOR RACEWAY/FIRESTOP UNIT AND DETACHABLE MATCHING FLOOR SERVICE-OUTLET ASSEMBLY. SERVICE-OUTLET ASSEMBLY: RECESSED TYPE WITH TWO SIMPLEX RECEPTACLES AND SPACE FOR TWO RJ-45 JACKS RECESSED TYPE WITH FOUR SIMPLEX RECEPTACLES AND SPACE FOR FOUR RJ-45 JACKS COMPLYING WITH REQUIREMENTS IN SECTION 27 1500 "COMMUNICATIONS HORIZONTAL CABLING." SIZE: SELECTED TO FIT MINIMUM NOMINAL 4-INCH CORED HOLES IN FLOOR AND MATCHED TO FLOOR THICKNESS. UNIT IS LISTED AND LABELED FOR FIRE RATING OF FLOOR-CEILING ASSEMBLY. WIRING RACEWAYS AND COMPARTMENTS: FOR A MINIMUM OF FOUR NO. 12 AWG CONDUCTORS AND A MINIMUM OF FOUR, FOUR-PAIR CABLES.
   c. FLUSH FURNITURE FEED POKE-THRU ASSEMBLY SHALL BE FACTORY FABRICATED AND CONTAIN (1)3/4" CONDUIT AND (1) 1.5" CONDUIT FOR POWER AND DATA RESPECTIVELY. SIZE: SELECTED TO FIT MINIMUM NOMINAL 4-INCH CORED HOLES IN FLOOR AND MATCHED TO FLOOR THICKNESS. UNIT IS LISTED AND LABELED FOR FIRE RATING OF FLOOR-CEILING ASSEMBLY. WIRING RACEWAYS AND COMPARTMENTS: FOR A MINIMUM OF FOUR NO. 12 AWG CONDUCTORS AND A MINIMUM OF FOUR, FOUR-PAIR CABLES. COVER: SHALL BE FLANGED OR FLANGELESS TO MATCH FLOORING TYPE. COVER COLOR SHALL BE BY ARCHITECT.
4. PROVIDE FLUSH MOUNTING OUTLET BOX IN FINISHED AREAS.
5. BOXES FOR STRUCTURED CABLING (DATA & PHONE) IN INTERIOR DRY LOCATIONS SHALL BE GALVANIZED ONE-PIECE PRESSED STEEL, KNOCKOUT TYPE 4 11/16" x 2 1/8"; APPLETON, RAYCO OR EQUAL.
6. ALL BOXES IN FINISHED SPACES SHALL BE PROVIDED WITH MUD RINGS AS REQUIRED FOR THE DEVICE AND WALL MATERIAL.
7. OUTDOOR AND WET OR DAMP LOCATIONS: PROVIDE CAST METAL OR PVC OUTLET, JUNCTION, AND PULL BOXES.

E. CONDUCTORS
1. ALL CONDUCTORS SHALL BE SOFT DRAWN, ANNEALED COPPER IN RACEWAY SIZED AS SHOWN ON THE PLANS. ALL CONDUCTORS TO BE MINIMUM #12 AWG UNLESS NOTED OTHERWISE #8 AWG AND LARGER SHALL BE STRANDED.
2. CONDUCTORS SHALL BE COPPER, THHN OR THWN-2 COLOR CODED IN ACCORDANCE WITH PART 3, SECTION C. 1. OF THESE SPECIFICATIONS OR AS INDICATED ON THE DRAWINGS.

F. WIRING CONNECTIONS
1. MAKE ALL ELECTRICAL CONNECTIONS.
2. MAKE CONNECTION TO DEVICES USING "PIG-TAILS". DO NOT USE A DEVICE AS A CONNECTION OR A SPLICE UNIT.
3. DO NOT PLACE STRANDED CONDUCTORS DIRECTLY UNDER SCREWS. INSTALL CRIMP-ON, INSULATED, FORK TERMINALS FOR CONDUCTOR TERMINATIONS, OR INSTALL SOLID CONDUCTORS.

G. NAMEPLATES
1. PROVIDE EACH PANEL BOARD, DISCONNECT SWITCH, AND BREAKER IN SWITCHBOARD WITH A MICARTA PLASTIC NAMEPLATE MADE OF WHITE-FACED BLACKCORE PLASTIC LAMINATE. NAMEPLATE SHALL BE MINIMUM 3" WIDE BY 3/4" HIGH FOR PANEL BOARD IDENTIFICATION INCLUDE DESIGNATION, PHASE, VOLTAGE, AND CIRCUIT NUMBER. FASTEN WITH EPOXY GLUE. DOUBLE STICK TAPE IS NOT ACCEPTABLE.

J. FRACTIONAL HORSEPOWER MANUAL STARTER
1. PROVIDE FRACTIONAL HORSEPOWER MANUAL STARTER WITH THE FOLLOWING FEATURES.
   a. MELTING ALLOY TYPE THERMAL OVERLOAD RELAY
   b. RED NEON PILOT LIGHT
   c. THERMAL ELEMENT SIZED FOR MOTOR LOAD
2. PROVIDE A NAMEPLATE ON EACH COMPONENT OF MOTOR CONTROL EQUIPMENT AS SPECIFIED IN "NAMEPLATES".

K. SAFETY SWITCHES
1. THE ELECTRICAL CONTRACTOR SHALL FURNISH AND INSTALL SAFETY SWITCHES AS INDICATED ON THE DRAWINGS OR AS REQUIRED. ALL SAFETY SWITCHES SHALL BE UL LISTED. THE SWITCHES SHALL BE FUSED SAFETY SWITCHES OR NON-FUSED SAFETY SWITCHES AS SHOWN ON THE DRAWINGS OR REQUIRED BY CODE AND SHALL BE MANUFACTURED BY SQUARE D, GENERAL ELECTRIC, SIEMENS OR CUTLER HAMMER.
2. SWITCHES SHALL HAVE A QUICK-MAKE AND QUICK-BREAK OPERATING HANDLE AND MECHANISM WHICH SHALL BE AN INTEGRAL PART OF THE BOX. PADLOCKING PROVISIONS SHALL BE PROVIDED FOR PADLOCKING IN THE OFF POSITION WITH AT LEAST THREE PADLOCKS. SWITCHES SHALL BE HORSEPOWER RATED FOR 250 VOLTS AC OR DC OR 600 VOLTS AC AS REQUIRED. LUGS SHALL BE UL LISTED FOR COPPER AND ALUMINUM CABLE AND SHALL HAVE A TEMPERATURE RATING OF AT LEAST 75 DEGREES C.
3. SWITCHES SHALL BE FURNISHED IN NEMA 1 HEAVY DUTY ENCLOSURES WITH KNOCKOUTS UNLESS OTHERWISE NOTED OR REQUIRED. SWITCHES LOCATED ON THE EXTERIOR OF THE BUILDING OR IN "WET" LOCATIONS SHALL HAVE NEMA 3R ENCLOSURES (WP).
4. THE SAFETY SWITCHES SHALL BE SECURELY MOUNTED IN ACCORDANCE WITH THE NEC. THE CONTRACTOR SHALL PROVIDE ALL MOUNTING MATERIALS AND INSTALL FUSES IN THE FUSED SAFETY SWITCHES. THE FUSES SHALL BE DUAL ELEMENT ON MOTOR CIRCUITS.
5. PROVIDE FUSES AS SPECIFIED BELOW. FUSES SHALL BE INSTALLED SO THAT THE RATING IS CLEARLY VISIBLE WITHOUT REMOVING FUSE. PROVIDE A SPARE FUSE FOR EACH FUSE INSTALLED.
6. PROVIDE A NAMEPLATE ON EACH DISCONNECT SWITCH AS SPECIFIED IN "NAMEPLATES".

L. FUSES
1. FUSES SHALL BE CLASS "RK-1" REJECTION TYPE. FUSES SERVING MOTOR LOADS SHALL BE DUAL ELEMENT WITH A MINIMUM TIME DELAY OF 10 SECONDS AT 500% RATING. FUSES SHALL BE CURRENT LIMITING TIME DELAY TYPE WITH INTERRUPTING CAPACITY OF 200,000 AMP RMS SYMMETRICAL.
2. FUSES SERVING SWITCH OR CIRCUIT BREAKER DISTRIBUTION PANELS, LIGHTING PANEL BOARDS AND OTHER NON - MOTOR LOADS NEED NOT BE TIME DELAY TYPE, BUT SHALL BE CURRENT LIMITING WITH THE INTERRUPTING CAPACITY OF 200,000AMP RMS SYMMETRICAL MINIMUM. FUSES SHALL BE BUSSMAN, GOULD OR LITTELFUSE.
3. PROVIDE FUSES SIZED TO THE MAXIMUM SIZE RECOMMENDED BY THE MANUFACTURER OF THE EQUIPMENT OR AS SHOWN ON THE DRAWINGS IF THE MANUFACTURER DOES NOT HAVE A RECOMMENDED SIZE.

ELECTRICAL SPECIFICATIONS

CONDUCTORS AND CABLES

1.1 CONDUCTOR MATERIAL APPLICATIONS
- A. FEEDERS: COPPER FOR FEEDERS SMALLER THAN NO. 4 AWG; COPPER OR ALUMINUM FOR FEEDERS NO. 4 AWG AND LARGER.
- B. BRANCH CIRCUITS: COPPER. STRANDED FOR NO. 10 AWG AND LARGER.

1.2 CONDUCTOR INSULATION AND MULTICONDUCTOR CABLE APPLICATIONS AND WIRING METHODS
- A. SERVICE ENTRANCE: TYPE THHN/THWN-2 FOR 400 KCMIL AND BELOW, AND TYPE XHHW-2, FOR 500 KCMIL AND LARGER.
- B. FEEDERS: TYPE THHN/THWN-2 FOR 400 KCMIL AND BELOW, AND TYPE XHHW-2, FOR 500 KCMIL AND LARGER. METAL-CLAD CABLE, TYPE MC.
- C. BRANCH CIRCUITS, TYPE THHN/THWN-2, METAL-CLAD CABLE, TYPE MC. PROVIDE MINIMUM #12 AWG.
- D. CORD DROPS AND PORTABLE APPLIANCE CONNECTIONS: TYPE SO, HARD SERVICE CORD WITH STAINLESS-STEEL, WIRE-MESH, STRAIN RELIEF DEVICE AT TERMINATIONS TO SUIT APPLICATION.

1.3 INSTALLATION OF CONDUCTORS AND CABLES
- A. CONCEAL CABLES IN FINISHED WALLS, CEILINGS, AND FLOORS UNLESS OTHERWISE INDICATED.
- B. COMPLETE RACEWAY INSTALLATION BETWEEN CONDUCTOR AND CABLE TERMINATION POINTS ACCORDING TO SECTION 26 0533 "RACEWAYS AND BOXES FOR ELECTRICAL SYSTEMS" PRIOR TO PULLING CONDUCTORS AND CABLES.
- C. USE MANUFACTURER-APPROVED PULLING COMPOUND OR LUBRICANT WHERE NECESSARY; COMPOUND USED MUST NOT DETERIORATE CONDUCTOR OR INSULATION. DO NOT EXCEED MANUFACTURER'S RECOMMENDED MAXIMUM PULLING TENSIONS AND SIDEWALL PRESSURE VALUES.
- D. USE PULLING MEANS, INCLUDING FISH TAPE, CABLE, ROPE, AND BASKET-WEAVE WIRE/CABLE GRIPS, THAT WILL NOT DAMAGE CABLES OR RACEWAY.
- E. INSTALL EXPOSED CABLES PARALLEL AND PERPENDICULAR TO SURFACES OF EXPOSED STRUCTURAL MEMBERS, AND FOLLOW SURFACE CONTOURS WHERE POSSIBLE.
- F. DO NOT EXCEED THREE PHASE CONDUCTORS IN ANY CONDUIT, UNLESS NOTED OTHERWISE.
- G. PROVIDE SEPARATE NEUTRAL CONDUCTOR FOR EACH SINGLE-PHASE BRANCH CIRCUIT. SHARED NEUTRALS ARE NOT ALLOWED, EXCEPT WHERE NOTED OTHERWISE.
- H. WHERE POWERED SYSTEMS FURNITURE CIRCUITS SHARE A COMMON NEUTRAL, PROVIDE MEANS TO SIMULTANEOUSLY DISCONNECT ALL UNGROUNDED CONDUCTORS AT THE POINT WHERE THE BRANCH CIRCUIT ORIGINATES. SHARED NEUTRAL SHALL BE INCREASED BY ONE WIRE SIZE.
- I. THE MAXIMUM NUMBER OF MC OR NM/NMC CABLES IN A SINGLE BORE HOLE IN ANY WOOD STUD SHALL NOT EXCEED 75% FILL OF THE BORE HOLE SIZE THAT IS SPECIFIED BY THE STRUCTURAL DRAWINGS OR SPECIFICATIONS. ONLY ONE BORE HOLE IS ALLOWED PER STUD SPACE.
- J. VOLTAGE DROP: INCREASE BRANCH CIRCUIT BY ONE WIRE SIZE WHEN CIRCUIT LENGTH EXCEEDS 100' AND BY TWO WIRE SIZES WHEN CIRCUIT LENGTH EXCEEDS 200'.

1.4 CONNECTIONS
- A. TIGHTEN ELECTRICAL CONNECTORS AND TERMINALS ACCORDING TO MANUFACTURER'S PUBLISHED TORQUE-TIGHTENING VALUES. IF MANUFACTURER'S TORQUE VALUES ARE NOT INDICATED, USE THOSE SPECIFIED IN UL 486A-486B.
- B. MAKE SPLICES, TERMINATIONS, AND TAPS THAT ARE COMPATIBLE WITH CONDUCTOR MATERIAL AND THAT POSSESS EQUIVALENT OR BETTER MECHANICAL STRENGTH AND INSULATION RATINGS THAN UNSPLICED CONDUCTORS.
  - B.1. USE OXIDE INHIBITOR IN EACH SPLICE, TERMINATION, AND TAP FOR ALUMINUM CONDUCTORS.
- C. WIRING AT OUTLETS: INSTALL CONDUCTOR AT EACH OUTLET, WITH AT LEAST 6 INCHES OF SLACK.

1.5 IDENTIFICATION
- A. IDENTIFY AND COLOR-CODE CONDUCTORS AND CABLES ACCORDING TO SECTION "IDENTIFICATION FOR ELECTRICAL SYSTEMS."
- B. IDENTIFY EACH SPARE CONDUCTOR AT EACH END WITH IDENTITY NUMBER AND LOCATION OF OTHER END OF CONDUCTOR, AND IDENTIFY AS SPARE CONDUCTOR.

1.6 SLEEVE AND SLEEVE-SEAL INSTALLATION FOR ELECTRICAL PENETRATIONS
- A. INSTALL SLEEVES AND SLEEVE SEALS AT PENETRATIONS OF EXTERIOR FLOOR AND WALL ASSEMBLIES.

1.7 FIRESTOPPING
- A. APPLY FIRESTOPPING TO ELECTRICAL PENETRATIONS OF FIRE-RATED FLOOR AND WALL ASSEMBLIES TO RESTORE ORIGINAL FIRE-RESISTANCE RATING OF ASSEMBLY.

1.8 FIELD QUALITY CONTROL
- A. PERFORM THE FOLLOWING TESTS AND INSPECTIONS:
  - A.1. AFTER INSTALLING CONDUCTORS AND CABLES AND BEFORE ELECTRICAL CIRCUITRY HAS BEEN ENERGIZED, TEST SERVICE ENTRANCE AND FEEDER CONDUCTORS FOR COMPLIANCE WITH REQUIREMENTS.
  - A.2. PERFORM EACH VISUAL AND MECHANICAL INSPECTION AND ELECTRICAL TEST STATED IN NETA ACCEPTANCE TESTING SPECIFICATION. CERTIFY COMPLIANCE WITH TEST PARAMETERS.
- B. CABLES WILL BE CONSIDERED DEFECTIVE IF THEY DO NOT PASS TESTS AND INSPECTIONS.

VBFA
www.vbfa.com

181 East 5600 South
Murray, UT 84107
801.530.3148 T
801.530.3150 F

PROFESSIONAL ENGINEER
Lewis Wong
No. 9075170
10/21/24
STATE OF UTAH

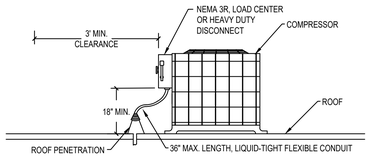
OGDEN CITY
Francom Public Safety Center
HVAC Upgrades
2186 Lincoln Ave, Ogden, UT 84401

VBFA PROJECT #:	240262
CHECKED BY:	LW
DRAWN BY:	CN
CURRENT/ISSUE DATE:	10.21.2024

CONSTRUCTION DOCUMENTS

SHEET CONTENTS
ELECTRICAL SPECIFICATIONS

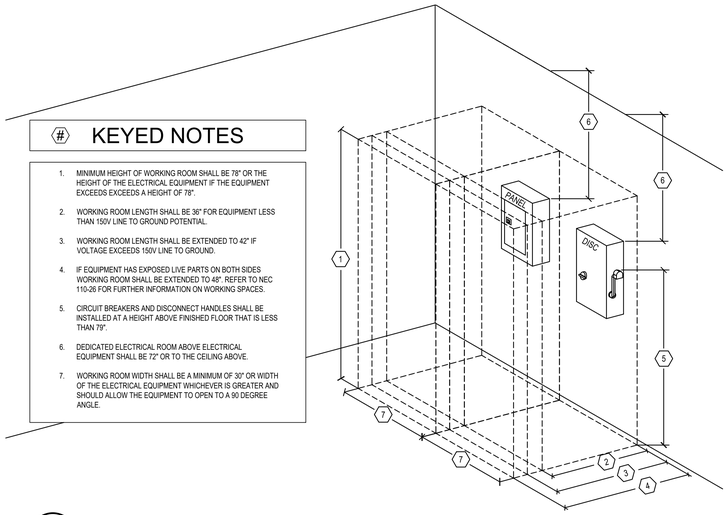
EG002



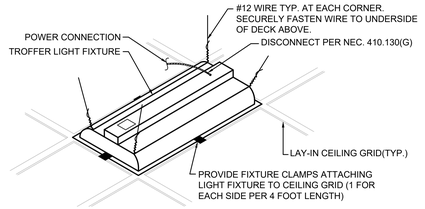
1 / EG501 **ROOF COMPRESSER/DISCONNECT DETAIL (TYP.)**
NO SCALE

KEYED NOTES

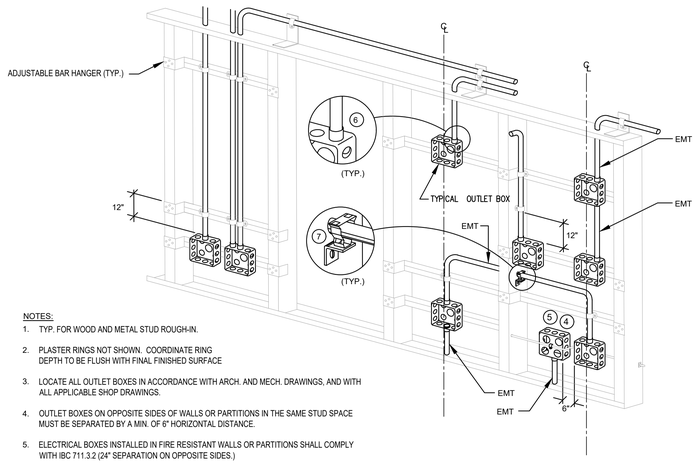
1. MINIMUM HEIGHT OF WORKING ROOM SHALL BE 78" OR THE HEIGHT OF THE ELECTRICAL EQUIPMENT IF THE EQUIPMENT EXCEEDS EXCEEDS A HEIGHT OF 78".
2. WORKING ROOM LENGTH SHALL BE 36" FOR EQUIPMENT LESS THAN 150V LINE TO GROUND POTENTIAL.
3. WORKING ROOM LENGTH SHALL BE EXTENDED TO 42" IF VOLTAGE EXCEEDS 150V LINE TO GROUND.
4. IF EQUIPMENT HAS EXPOSED LIVE PARTS ON BOTH SIDES WORKING ROOM SHALL BE EXTENDED TO 48". REFER TO NEC 110-26 FOR FURTHER INFORMATION ON WORKING SPACES.
5. CIRCUIT BREAKERS AND DISCONNECT HANDLES SHALL BE INSTALLED AT A HEIGHT ABOVE FINISHED FLOOR THAT IS LESS THAN 79".
6. DEDICATED ELECTRICAL ROOM ABOVE ELECTRICAL EQUIPMENT SHALL BE 72" OR TO THE CEILING ABOVE.
7. WORKING ROOM WIDTH SHALL BE A MINIMUM OF 30" OR WIDTH OF THE ELECTRICAL EQUIPMENT WHICHEVER IS GREATER AND SHOULD ALLOW THE EQUIPMENT TO OPEN TO A 90 DEGREE ANGLE.



2 / SHEET **ELECTRICAL EQUIPMENT WORKING SPACES AND CLEARANCES**
NO SCALE



3 / EG501 **RECESSED FIXTURE MOUNTING DIAGRAM**
NO SCALE



NOTES:
1. TYP. FOR WOOD AND METAL STUD ROUGH-IN.
2. PLASTER RINGS NOT SHOWN. COORDINATE RING DEPTH TO BE FLUSH WITH FINAL FINISHED SURFACE
3. LOCATE ALL OUTLET BOXES IN ACCORDANCE WITH ARCH. AND MECH. DRAWINGS, AND WITH ALL APPLICABLE SHOP DRAWINGS.
4. OUTLET BOXES ON OPPOSITE SIDES OF WALLS OR PARTITIONS IN THE SAME STUD SPACE MUST BE SEPARATED BY A MIN. OF 6" HORIZONTAL DISTANCE.
5. ELECTRICAL BOXES INSTALLED IN FIRE RESISTANT WALLS OR PARTITIONS SHALL COMPLY WITH IBC 711.3.2 (24" SEPARATION ON OPPOSITE SIDES.)
6. INSULATED THROAT EMT CONNECTOR.
7. CADDY FASTENER, THROUGH STUD CABLE/CONDUIT SUPPORT 'FB12P'.

4 / EG501 **TYP. ROUGH IN DETAIL**
NO SCALE

VBFA
www.vbfa.com

181 East 5600 South
Murray, UT 84107
801.530.3148 T
801.530.3150 F

OGDEN CITY
Francom Public Safety Center
HVAC Upgrades
2186 Lincoln Ave, Ogden, UT 84401

CONSTRUCTION DOCUMENTS

VBFA PROJECT #:	240262
CHECKED BY:	LW
DRAWN BY:	CN
CURRENT/ISSUE DATE:	10.21.2024

SHEET CONTENTS

ELECTRICAL DETAILS

EG501

PANEL SCHEDULES

Panel P1AA (EX)

NAME: P1AA (EX) | TYPE: NQ | LOCATION: ? | VOLTAGE: 208 / 120 | PH 3 WIRES 4 | AIC AMPS | MOUNTING: FLUSH | FEED: BOTTOM | FEED FROM: ? | MAINS: LUGS ONLY | BUSS RATING: 225 AMPS | DIMS: 20" W, 5.75" D, " H | 42 SPACES

SPECIAL EQUIPMENT: ☑ GROUND BUS ☐ SUB-FEED BREAKER ☐ SUB-FEED LUGS ☐ NEMA 3R ☐ SURGE PROTECTOR

DF	CKT #	CIRCUIT DESCRIPTION	CODE	BRKR P	BRKR AMP	WIRE SIZE	VA LOAD	PHASE VA A	PHASE VA B	PHASE VA C	VA LOAD	WIRE SIZE	BRKR AMP	P	CODE	CIRCUIT DESCRIPTION	CKT #	DF
R	1	OUTLETS 1111		1	20	12	1800	3600			1800	12	20	1		OUTLETS 1093	2	R
R	3	OUTLETS 1105,1098		1	20	12	1800		3600		1800	12	20	1		OUTLETS 1091	4	R
R	5	OUTLETS 1103,1095		1	20	12	1800			3600	1800	12	20	1		OUTLETS 1086	6	R
R	7	OUTLETS 1079,1080		1	20	12	1800	3600			1800	12	20	1		OUTLETS 1078,1080	8	R
R	9	OUTLETS 1080		1	20	12	1800		3600		1800	12	20	1		OUTLETS 1080,1082,1082	10	R
R	11	OUTLETS 1080		1	20	12	1800			3600	1800	12	20	1		OUTLETS 1076,1076	12	R
R	13	OUTLETS 1074		1	20	12	1800	3600			1800	12	20	1		OUTLETS 1110	14	R
R	15	OUTLETS 1066		1	20	12	1800		3600		1800	12	20	1		ELEV. EQUIP ROOM	16	R
R	17	FLOOR BOXES		1	20	12	1800			3600	1800	12	20	1		OUTLETS 1108	18	R
R	19	1066 FRIDGE		1	20	12	1800	1850			50	12	15	2		FC-1,FC-2	20	M
R	21	1066 D.W.		1	20	12	1800		1850		50	-		-	-		22	M
R	23	1066 GFCI'S		1	20	12	1800			1800			20	1		SPARE	24	
R	25	OUTLETS 1066		1	20	12	1800	3600			1800	12	20	1		OUTLETS FLOOR DUCT 1	26	R
R	27	OUTLETS 1066		1	20	12	1800		3600		1800	12	20	1		OUTLETS FLOOR DUCT 1	28	R
R	29	OUTLETS 1064		1	20	12	1800			3600	1800	12	20	1		OUTLETS FLOOR DUCT 1	30	R
R	31	OUTLETS 1063		1	20	12	1800	3600			1800	12	20	1		OUTLETS 1067	32	R
R	33	OUTLETS 1061		1	20	12	1800		3600		1800	12	20	1		OUTLETS 1061	34	R
R	35	OUTLETS 1058		1	20	12	1800			3600	1800	12	20	1		OUTLETS 1061	36	R
R	37	OUTLETS 1058		1	20	12	1800	3600			1800	12	20	1		OUTLETS 1049,1050	38	R
R	39	OUTLETS 1059		1	20	12	1800		3600		1800	12	20	1		OUTLETS 1046	40	R
R	41	OUTLETS 1080		1	20	12	1800			3600	1800	12	20	1		OUTLETS 1049,1055	42	R

CONNECTED VA: 23450 / 23450 / 23400 — 70.3 KVA
CONNECTED AMPS: 195 / 195 / 195 — 195 A
DIVERSIFIED VA: 40 KVA
DIVERSIFIED AMPS: 112 A

DIVERSITY FACTORS (DF): C=CONTINUOUS, M=MOTOR, N=NON-CONTINUOUS, L=LARGEST MOTOR, R=RECEPTACLES, O=OTHER, K=KITCHEN EQUIPMENT

CODES: 1 = SEE DRAWINGS FOR CONDUIT & CONDUCTOR SIZE; 2 = SHUNT-TRIP BREAKER; 3 = GFEP BREAKER; 4 = PROVIDE LOCK OFF DEVICE; 5 = GFCI BREAKER

THIS PANEL, ALL OF ITS LUGS, BREAKERS, ETC. SHALL BE RATED FOR 75°C

NOTES:

Panel P2AB (EX)

NAME: P2AB (EX) | TYPE: NQ | LOCATION: ? | VOLTAGE: 208 / 120 | PH 3 WIRES 4 | AIC AMPS | MOUNTING: FLUSH | FEED: BOTTOM | FEED FROM: ? | MAINS: LUGS ONLY | BUSS RATING: 225 AMPS | DIMS: 20" W, 5.75" D, " H | 42 SPACES

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DF	CKT #	CIRCUIT DESCRIPTION	CODE	BRKR P	BRKR AMP	WIRE SIZE	VA LOAD	PHASE VA A	PHASE VA B	PHASE VA C	VA LOAD	WIRE SIZE	BRKR AMP	P	CODE	CIRCUIT DESCRIPTION	CKT #	DF
N	1	VFD CONTROL		1	20	12	1800	1800					30	1		SPARE	2	
R	3	PORUE VEND		1	20	12	1800		1800				30	1		SPARE	4	
M	5	BS-3		2	15	12	67			1867	1800	12	20	1		ADA DOORS	6	C
M	7		-	-	-	-	67	1867			1800	12	20	1		PRINTER	8	N
M	9	FC-18		2	15	12	25		1825		1800	12	20	1		VENDING MACHINE	10	R
M	11		-	-	-	-	25			1825	1800	12	20	1		EAST TV OUTLET	12	R
M	13	FC-19		2	15	12	25	50			25	12	15	2		FC-20	14	M
M	15		-	-	-	-	25		50		25	-	-	-	-		16	M
M	17	FC-22, FC-23		2	15	12	66			99	33	12	15	2		FC-21	18	M
M	19		-	-	-	-	66	99			33	-	-	-	-		20	M
M	21	FC-24		2	15	12	33		100		67	12	15	2		BS-4	22	M
M	23		-	-	-	-	33			100	67	-	-	-	-		24	M
	25	SPARE			20			33			33	12	15	2		FC-25	26	M
	27	SPARE			20				33		33	-	-	-	-		28	M
	29	SPARE		1	20					25	25	12	15	2		FC-26	30	M
	31	SPARE		1	20			25			25	-	-	-	-		32	M
	33	SPARE		1	20				25		25	12	15	2		FC-27	34	M
	35	SPARE		1	20					25	25	-	-	-	-		36	M
R	37	ROOFTOP OUTLET		1	20	12	180	180					20	1		SPARE	38	
M	39	DISPATCH ROOFTOP AC		2	30	10	4992		4992				20	1		SPARE	40	
M	41		-	-	30	-	4992			6792	1800	12	20	1		2062 REFER	42	R

CONNECTED VA: 4054 / 8825 / 10733 — 23.6 KVA
CONNECTED AMPS: 34 / 74 / 89 — 66 A
DIVERSIFIED VA: 24 KVA
DIVERSIFIED AMPS: 67 A

DIVERSITY FACTORS (DF): C=CONTINUOUS, M=MOTOR, N=NON-CONTINUOUS, L=LARGEST MOTOR, R=RECEPTACLES, O=OTHER, K=KITCHEN EQUIPMENT

CODES: 1 = SEE DRAWINGS FOR CONDUIT & CONDUCTOR SIZE; 2 = SHUNT-TRIP BREAKER; 3 = GFEP BREAKER; 4 = PROVIDE LOCK OFF DEVICE; 5 = GFCI BREAKER

THIS PANEL, ALL OF ITS LUGS, BREAKERS, ETC. SHALL BE RATED FOR 75°C

NOTES:

Panel P2BA (EX)

NAME: P2BA (EX) | TYPE: NQ | LOCATION: ? | VOLTAGE: 208 / 120 | PH 3 WIRES 4 | AIC AMPS | MOUNTING: FLUSH | FEED: BOTTOM | FEED FROM: ? | MAINS: LUGS ONLY | BUSS RATING: 200 AMPS | DIMS: 20" W, 5.75" D, " H | 42 SPACES

SPECIAL EQUIPMENT: ☑ GROUND BUS ☐ SUB-FEED BREAKER ☐ SUB-FEED LUGS ☐ NEMA 3R ☐ SURGE PROTECTOR

DF	CKT #	CIRCUIT DESCRIPTION	CODE	BRKR P	BRKR AMP	WIRE SIZE	VA LOAD	PHASE VA A	PHASE VA B	PHASE VA C	VA LOAD	WIRE SIZE	BRKR AMP	P	CODE	CIRCUIT DESCRIPTION	CKT #	DF
R	1	RM 2007,2005		1	20	12	1800	3600			1800	12	20	1		RM 2027,2023	2	R
R	3	RM 2003,2004,2040		1	20	12	1800		3600		1800	12	20	1		RM 2021 2022	4	R
R	5	RM 2001,2002,2003		1	20	12	1800			3600	1800	12	20	1		RM 2020 SEC, 2013,2031	6	R
R	7	RM 2013,2017,2020		1	20	12	1800	3600			1800	12	20	1		RM2020	8	R
R	9	RM 2018,2019		1	20	12	1800		3600		1800	12	20	1		RM 2025	10	R
R	11	RM 2011,2012,2010,2009		1	20	12	1800			3600	1800	12	20	1		RM 2020 POWER POLE	12	R
R	13	RM 2020,2030,2029 OUTL		1	20	12	1800	3600			1800	12	20	1		RM 2020 POWER POLE	14	R
R	15	RM 2029,2028,2027		1	20	12	1800		3600		1800	12	20	1		RM 2020 POWER POLE	16	R
R	17	RM 2027,2026,2020		1	20	12	1800			3600	1800	12	20	1		RM 2020 POWER POLE	18	R
R	19	RM2020 POWER POLE		1	20	12	1800	3600			1800	12	20	1		RM 2020 POWER POLE	20	R
R	21	RM 2020 POWER POLE		1	20	12	1800		3600		1800	12	20	1		RM 2020 POWER POLE	22	R
R	23	RM 2020 POWER POLE (		1	20	12	1800			3600	1800	12	20	1		RM 2020 POWER POLE	24	R
R	25	RM 2020 POWER POLE (		1	20	12	1800	3600			1800	12	20	1		RM 2020 POWER POLE	26	R
	27	SPARE		1	20				1800		1800	12	20	1		RM 2020 POWER POLE	28	R
R	29	RM 2080 POWER POLE (		1	20	12	1800			1800			20	1		SPARE	30	
R	31	RM 2080 POWER POLE (		1	20	12	1800	3600			1800	12	20	1		EF-13	32	R
R	33	RM 2020 POWER POLE		1	20	12	1800		3600		1800	12	20	1		RM 2020 WEST WALL CU	34	R
R	35	RM 2020 POWER POLE		1	20	12	1800			3600	1800	12	20	1		RM 2020 WEST WALL CU	36	R
M	37	FC-3		2	15	12	25	50			25	12	15	2		FC-4	38	M
M	39		-	-	-	-	25		50		25	-	-	-	-		40	M
	41	SPARE			20					1800	1800	12	20			WEST PANEL FIRE CONT	42	R

CONNECTED VA: 21650 / 19850 / 21600 — 63.1 KVA
CONNECTED AMPS: 180 / 165 / 180 — 175 A
DIVERSIFIED VA: 37 KVA
DIVERSIFIED AMPS: 102 A

DIVERSITY FACTORS (DF): C=CONTINUOUS, M=MOTOR, N=NON-CONTINUOUS, L=LARGEST MOTOR, R=RECEPTACLES, O=OTHER, K=KITCHEN EQUIPMENT

CODES: 1 = SEE DRAWINGS FOR CONDUIT & CONDUCTOR SIZE; 2 = SHUNT-TRIP BREAKER; 3 = GFEP BREAKER; 4 = PROVIDE LOCK OFF DEVICE; 5 = GFCI BREAKER

THIS PANEL, ALL OF ITS LUGS, BREAKERS, ETC. SHALL BE RATED FOR 75°C

NOTES:

Panel P2AA (EX)

NAME: P2AA (EX) | TYPE: NQ | LOCATION: ? | VOLTAGE: 208 / 120 | PH 3 WIRES 4 | AIC AMPS | MOUNTING: FLUSH | FEED: BOTTOM | FEED FROM: ? | MAINS: LUGS ONLY | BUSS RATING: 225 AMPS | DIMS: 20" W, 5.75" D, " H | 42 SPACES

SPECIAL EQUIPMENT: ☑ GROUND BUS ☐ SUB-FEED BREAKER ☐ SUB-FEED LUGS ☐ NEMA 3R ☐ SURGE PROTECTOR

DF	CKT #	CIRCUIT DESCRIPTION	CODE	BRKR P	BRKR AMP	WIRE SIZE	VA LOAD	PHASE VA A	PHASE VA B	PHASE VA C	VA LOAD	WIRE SIZE	BRKR AMP	P	CODE	CIRCUIT DESCRIPTION	CKT #	DF
R	1	RM 2043 OUTLETS		1	20	12	1800	3600			1800	12	20	1		CORRIDOR 2007,2046 OU	2	R
R	3	RM 2040,2041 OUTLETS		1	20	12	1800		3600		1800	12	20	1		RM 2046,2045,2044 OUTL	4	R
R	5	RM 2037,2038 OUTLETS		1	20	12	1800			3600	1800	12	20	1		RM 2044,2042 OUTLETS	6	R
R	7	RM 2034 OUTLETS		1	20	12	1800	3600			1800	12	20	1		RM 2050 OUTLETS	8	R
R	9	RM 2007,2032,2031,2033		1	20	12	1800		3600		1800	12	20	1		RM 2035 GARBAGE DISP	10	R
R	11	RM 2035 OUTLETS		1	20	12	1800			3600	1800	12	20	1		RM 2052 OUTLETS	12	R
R	13	OUTLETS PENTHOUSE		1	20	12	1800	3600			1800	12	20	1		B-1 PENTHOUSE	14	R
R	15	OUTLETS PENTHOUSE U		1	20	12	1800		3600		1800	12	20	1		B-1 PENTHOUSE	16	R
R	17	OUTLETS PENTHOUSE E		1	20	12	1800			3600	1800	12	20	1		UH-11	18	R
R	19	RM 2043 CEILING J-BOX		1	20	12	1800	3600			1800	12	20	1		PENTHOUSE OUTLETS	20	R
M	21	EF-2		1	20	12	1800		3600		1800	12	20	1		EF-13	22	M
M	23	EF-11		1	20	12	1800			3600	1800	12	20	1		WH-2 PENTHOUSE	24	M
M	25	EX FAN 12 AND OUTLETS		1	20	12	1800	1800						1		SPACE	26	M
M	27	EX FAN 10 SPARE TO J-E		1	20	12	1800		1800					1		SPACE	28	M
M	29	EX FAN 17		1	20	12	1800			1825	25	12	15	2		FC-15	30	M
M	31	FC-13		2	15	12	25	50			25	-	-	-	-		32	M
M	33		-	-	-	-	25		50		25	12	20	2		FC-16	34	M
M	35	FC-17		2	20	12	25			50	25	-	-	-	-		36	M
M	37		-	-	-	-	25	1825			1800	12	20	2		HEAT TRACE 208V	38	M
R	39	SPARE-UNHOOKED PW		1	20	12			1800		1800	-	20	-	-		40	M
R	41	RM 2048 F/A J-BOX		1	20	12	1800			1800			20	1		SPARE	42	

CONNECTED VA: 18075 / 18050 / 18075 — 54.2 KVA
CONNECTED AMPS: 151 / 150 / 151 — 150 A
DIVERSIFIED VA: 40 KVA
DIVERSIFIED AMPS: 112 A

DIVERSITY FACTORS (DF): C=CONTINUOUS, M=MOTOR, N=NON-CONTINUOUS, L=LARGEST MOTOR, R=RECEPTACLES, O=OTHER, K=KITCHEN EQUIPMENT

CODES: 1 = SEE DRAWINGS FOR CONDUIT & CONDUCTOR SIZE; 2 = SHUNT-TRIP BREAKER; 3 = GFEP BREAKER; 4 = PROVIDE LOCK OFF DEVICE; 5 = GFCI BREAKER

THIS PANEL, ALL OF ITS LUGS, BREAKERS, ETC. SHALL BE RATED FOR 75°C

NOTES:

Panel P2BB (EX)

NAME: P2BB (EX) | TYPE: NQ | LOCATION: ? | VOLTAGE: 208 / 120 | PH 3 WIRES 4 | AIC AMPS | MOUNTING: FLUSH | FEED: BOTTOM | FEED FROM: ? | MAINS: LUGS ONLY | BUSS RATING: 200 AMPS | DIMS: 20" W, 5.75" D, " H | 42 SPACES

SPECIAL EQUIPMENT: ☑ GROUND BUS ☐ SUB-FEED BREAKER ☐ SUB-FEED LUGS ☐ NEMA 3R ☐ SURGE PROTECTOR

DF	CKT #	CIRCUIT DESCRIPTION	CODE	BRKR P	BRKR AMP	WIRE SIZE	VA LOAD	PHASE VA A	PHASE VA B	PHASE VA C	VA LOAD	WIRE SIZE	BRKR AMP	P	CODE	CIRCUIT DESCRIPTION	CKT #	DF
M	1	GLYCOL PUMP		1	20	12	1800	1867			67	12	15	2		BS-1	2	M
M	3	GLYCOL PUMP		1	20	12	1800		1867		67	-	-	-	-		4	M
M	5	FC-5		2	15	12	25			92	67	12	15	2		BS-2	6	M
M	7		-	-	-	-	25	92			67	-	-	-	-		8	M
M	9	FC-6		2	15	12	25		50		25	12	20	2		FC-8	10	M
M	11		-	-	-	-	25			50	25	-	-	-	-		12	M
M	13	FC-7		2	15	12	25	50			25	12	20	2		FC-9	14	M
M	15		-	-	-	-	25		50		25	-	-	-	-		16	M
M	17	FC-10		2	20	12	25			50	25	12	20	2		FC-11	18	M
M	19		-	-	-	-	25	50			25	-	-	-	-		20	
M	21	FC-12		2	20	12	25		75		50	12	20	2		FC-31	22	M
M	23		-	-	-	-	25			75	50	-	-	-	-		24	M
M	25	FC-30,28,29		2	20	12	150	330			180	12	20	1		CONV MECH GFCI	26	M
M	27		-	-	-	-	150		175		25	12	20	2		FC-14	28	M
	29	SPARE		1	20					25	25			-	-		30	R
	31	SPARE		1	20			0					20	1		SPARE	32	M
	33	SPARE		1	20				0				20	1		SPARE	34	M
	35	SPARE		1	20					0			20	1		SPARE	36	
	37	SPARE		1	20			0					20	1		SPARE	38	
	39	SPARE		1	20				0				20	1		SPARE	40	
	41	SPARE		1	20					0			20	1		SPARE	42	

CONNECTED VA: 2389 / 2217 / 292 — 4.9 KVA
CONNECTED AMPS: 20 / 18 / 2 — 14 A
DIVERSIFIED VA: 5 KVA
DIVERSIFIED AMPS: 14 A

DIVERSITY FACTORS (DF): C=CONTINUOUS, M=MOTOR, N=NON-CONTINUOUS, L=LARGEST MOTOR, R=RECEPTACLES, O=OTHER, K=KITCHEN EQUIPMENT

CODES: 1 = SEE DRAWINGS FOR CONDUIT & CONDUCTOR SIZE; 2 = SHUNT-TRIP BREAKER; 3 = GFEP BREAKER; 4 = PROVIDE LOCK OFF DEVICE; 5 = GFCI BREAKER

THIS PANEL, ALL OF ITS LUGS, BREAKERS, ETC. SHALL BE RATED FOR 75°C

NOTES:

Panel L2B (EX)

NAME: L2B (EX) | TYPE: NQ | LOCATION: ? | VOLTAGE: 480 / 277 | PH 3 WIRES 4 | AIC AMPS | MOUNTING: FLUSH | FEED: BOTTOM | FEED FROM: ? | MAINS: LUGS ONLY | BUSS RATING: 200 AMPS | DIMS: 20" W, 5.75" D, " H | 42 SPACES

SPECIAL EQUIPMENT: ☑ GROUND BUS ☐ SUB-FEED BREAKER ☐ SUB-FEED LUGS ☐ NEMA 3R ☐ SURGE PROTECTOR

DF	CKT #	CIRCUIT DESCRIPTION	CODE	BRKR P	BRKR AMP	WIRE SIZE	VA LOAD	PHASE VA A	PHASE VA B	PHASE VA C	VA LOAD	WIRE SIZE	BRKR AMP	P	CODE	CIRCUIT DESCRIPTION	CKT #	DF
C	1	2025,2026,2027,2028,202		1	20	12	7680	15360			7680	12	20	1		2024,2002,2003,2004 LTG	2	C
C	3	2020, SEC OFFICE		1	20	12	7680		15360		7680	12	20	1		2007,2014,2015,2018,2021	4	C
C	5	(EXISTING)		1	20	12	7680			15360	7680	12	20	1		RM 2020 INVESTIGATION	6	C
M	7	CU-1		3	30	10	4722	9444			4722	10	30	3		CU-2 LTG	8	M
M	9		-	-	-	-	4722		9444		4722	-	-	-	-		10	M
M	11		-	-	-	-	4722			9444	4722	-	-	-	-		12	M
	13	SPARE		1	20			0					20	1		SPARE	14	
	15	SPARE		1	20				0				20	1		SPARE	16	
	17	SPARE		1	20					0			20	1		SPARE	18	
	19	SPARE		1	20			0					20	1		SPARE	20	
	21	SPARE		1	20				0				20	1		SPARE	22	
	23	SPARE		1	20					0			20	1		SPARE	24	
	25	SPARE		1	20			0					20	1		SPARE	26	
	27	SPARE		1	20				0				20	1		SPARE	28	
	29	SPARE		1	20					0			20	1		SPARE	30	
	31	SPARE		1	20			0					20	1		SPARE	32	
	33	SPARE		1	20				0				20	1		SPARE	34	
	35	SPARE		1	20					0			20	1		SPARE	36	
	37	SPARE		1	20			0					20	1		SPARE	38	
	39	SPARE		1	20				0				20	1		SPARE	40	
	41	SPARE		1	20					0			20	1		SPARE	42	

CONNECTED VA: 24804 / 24804 / 24804 — 74.4 KVA
CONNECTED AMPS: 90 / 90 / 90 — 90 A
DIVERSIFIED VA: 86 KVA
DIVERSIFIED AMPS: 103 A

DIVERSITY FACTORS (DF): C=CONTINUOUS, M=MOTOR, N=NON-CONTINUOUS, L=LARGEST MOTOR, R=RECEPTACLES, O=OTHER, K=KITCHEN EQUIPMENT

CODES: 1 = SEE DRAWINGS FOR CONDUIT & CONDUCTOR SIZE; 2 = SHUNT-TRIP BREAKER; 3 = GFEP BREAKER; 4 = PROVIDE LOCK OFF DEVICE; 5 = GFCI BREAKER

THIS PANEL, ALL OF ITS LUGS, BREAKERS, ETC. SHALL BE RATED FOR 75°C

NOTES:

EQUIPMENT SCHEDULE

TYPE	DESCRIPTION	VOLT	PHASE	LOAD	FLA	WIRE SETS	WIRE QTY	WIRE SIZE	WIRE GND	COND SIZE	OCPD/MOCP	TYPE	DISCONNECT SIZE	DISCONNECT POLE	FUSE SIZE	NEMA SIZE	REMARKS
CU - 1	CONDENSING UNIT	480	3	21.30 MCA	17.0	1	3	10	10	3/4	30	C1	30	3	25	-	9 A
CU - 2	CONDENSING UNIT	480	3	21.30 MCA	17.0	1	3	10	10	3/4	30	C1	30	3	25	-	9 A
CU - 3	CONDENSING UNIT	208	1	32.80 MCA	26.2	1	2	8	10	3/4	40	C1	60	2	40	-	9 A
FC - 1	FAN COIL	208	1	0.30 MCA	0.2	1	2	12	12	3/4	15	C1	-	-	-	-	4 A
FC - 2	FAN COIL	208	1	0.30 MCA	0.2	1	2	12	12	3/4	15	C1	-	-	-	-	4 A
FC - 3	FAN COIL	208	1	0.30 MCA	0.2	1	2	12	12	3/4	15	C1	-	-	-	-	4 A
FC - 4	FAN COIL	208	1	0.30 MCA	0.2	1	2	12	12	3/4	15	C1	-	-	-	-	4 A
FC - 5	FAN COIL	208	1	0.30 MCA	0.2	1	2	12	12	3/4	15	C1	-	-	-	-	4 A
FC - 6	FAN COIL	208	1	0.30 MCA	0.2	1	2	12	12	3/4	15	C1	-	-	-	-	4 A
FC - 7	FAN COIL	208	1	0.30 MCA	0.2	1	2	12	12	3/4	15	C1	-	-	-	-	4 A
FC - 8	FAN COIL	208	1	0.30 MCA	0.2	1	2	12	12	3/4	15	C1	-	-	-	-	4 A
FC - 9	FAN COIL	208	1	0.30 MCA	0.2	1	2	12	12	3/4	15	C1	-	-	-	-	4 A
FC - 10	FAN COIL	208	1	0.30 MCA	0.2	1	2	12	12	3/4	15	C1	-	-	-	-	4 A
FC - 11	FAN COIL	208	1	0.30 MCA	0.2	1	2	12	12	3/4	15	C1	-	-	-	-	4 A
FC - 12	FAN COIL	208	1	0.30 MCA	0.2	1	2	12	12	3/4	15	C1	-	-	-	-	4 A
FC - 13	FAN COIL	208	1	0.30 MCA	0.2	1	2	12	12	3/4	15	C1	-	-	-	-	4 A
FC - 14	FAN COIL	208	1	0.30 MCA	0.2	1	2	12	12	3/4	15	C1	-	-	-	-	4 A
FC - 15	FAN COIL	208	1	0.30 MCA	0.2	1	2	12	12	3/4	15	C1	-	-	-	-	4 A
FC - 16	FAN COIL	208	1	0.30 MCA	0.2	1	2	12	12	3/4	15	C1	-	-	-	-	4 A
FC - 17	FAN COIL	208	1	0.30 MCA	0.2	1	2	12	12	3/4	15	C1	-	-	-	-	4 A
FC - 18	FAN COIL	208	1	0.30 MCA	0.2	1	2	12	12	3/4	15	C1	-	-	-	-	4 A
FC - 19	FAN COIL	208	1	0.30 MCA	0.2	1	2	12	12	3/4	15	C1	-	-	-	-	4 A
FC - 20	FAN COIL	208	1	0.30 MCA	0.2	1	2	12	12	3/4	15	C1	-	-	-	-	4 A
FC - 21	FAN COIL	208	1	0.30 MCA	0.2	1	2	12	12	3/4	15	C1	-	-	-	-	4 A
FC - 22	FAN COIL	208	1	0.40 MCA	0.3	1	2	12	12	3/4	15	C1	-	-	-	-	4 A
FC - 23	FAN COIL	208	1	0.40 MCA	0.3	1	2	12	12	3/4	15	C1	-	-	-	-	4 A
FC - 24	FAN COIL	208	1	0.40 MCA	0.3	1	2	12	12	3/4	15	C1	-	-	-	-	4 A
FC - 25	FAN COIL	208	1	0.40 MCA	0.3	1	2	12	12	3/4	15	C1	-	-	-	-	4 A
FC - 26	FAN COIL	208	1	0.30 MCA	0.2	1	2	12	12	3/4	15	C1	-	-	-	-	4 A
FC - 27	FAN COIL	208	1	0.30 MCA	0.2	1	2	12	12	3/4	15	C1	-	-	-	-	4 A
FC - 28	FAN COIL	208	1	0.60 MCA	0.5	1	2	12	12	3/4	15	C1	-	-	-	-	4 A
FC - 29	FAN COIL	208	1	0.60 MCA	0.5	1	2	12	12	3/4	15	C1	-	-	-	-	4 A
FC - 30	FAN COIL	208	1	0.60 MCA	0.5	1	2	12	12	3/4	15	C1	-	-	-	-	4 A
FC - 31	FAN COIL	208	1	0.60 MCA	0.5	1	2	12	12	3/4	15	C1	-	-	-	-	4 A
FC - 32	FAN COIL	208	1	1.00 MCA	0.8	1	2	12	12	3/4	15	C1	-	-	-	-	4 A
FC - 33	FAN COIL	208	1	1.00 MCA	0.8	1	2	12	12	3/4	15	C1	-	-	-	-	4 A
BS - 1	BRANCH SELECTOR	208	1	0.80 MCA	0.6	1	2	12	12	3/4	15	C1	-	-	-	-	4 A
BS - 2	BRANCH SELECTOR	208	1	0.80 MCA	0.6	1	2	12	12	3/4	15	C1	-	-	-	-	4 A
BS - 3	BRANCH SELECTOR	208	1	0.80 MCA	0.6	1	2	12	12	3/4	15	C1	-	-	-	-	4 A
BS - 4	BRANCH SELECTOR	208	1	0.80 MCA	0.6	1	2	12	12	3/4	15	C1	-	-	-	-	4 A

ABBREVIATIONS:
KW = KILOWATTS; VA = VOLT AMPERES; DISC = DISCONNECT; OCPD = OVERCURRENT PROTECTIVE DEVICE
V/PH = VOLTAGE/PHASE; KVA = KILOVOLT AMPERES; GND = GROUND; COND = CONDUIT
HP = HORSEPOWER; FLA = FULL LOAD AMPERES; STR = STARTER; MOCP = MAXIMUM OCPD (LISTED BY THE MANUFACTURE
W = WATTS; MCA = MINIMUM CIRCUIT AMPACITY; PL = POLE

REMARKS:
1. NEMA 1 FUSED DISCONNECT SWITCH
2. NEMA 1 NON-FUSED DISCONNECT SWITCH
3. BREAKER IN ENCLOSURE
4. MANUAL STARTER WITH THERMAL OVERLOAD
5. MANUAL MOTOR CONTROLLER W/OUT THERMAL OVERLOAD
6. MAGNETIC STARTER
7. MAGNETIC STR/NON-FUSED DISCONNECT COMBINATION
8. MAGNETIC STR/FUSED DISCONNECT COMBINATION
9. NEMA 3R FUSED DISCONNECT SWITCH
10. NEMA 3R NON-FUSED DISCONNECT SWITCH
11. VARIABLE FREQUENCY DRIVE
12. RECEPTACLE/SPECIAL PURPOSE OUTLET/ETC.
13. DIRECT CONNECTION
14. DUCT DETECTOR IN RETURN AIR DUCT. PROVIDE RELAY/CONTROL MODULE AND 120V POWER AS REQUIRED TO TIE TO FIRE ALARM FOR AUTOMATIC SHUT OFF.
15. CONTROLLED WITH LIGHTS
16. LM-EB DISCONNECT W/CNTRL WIRING TO VFD
17. SPLIT SYSTEM. INDOOR UNIT FED FROM OUTDOOR UNIT.

REMARKS:
A. FURNISHED, INSTALLED AND CONNECTED UNDER DIVISION 26.
B. FURNISHED AND INSTALLED UNDER ANOTHER DIVISION REQUIRING CONNECTION UNDER DIV
C. FURNISHED UNDER ANOTHER DIVISION BUT INSTALLED AND CONNECTED UNDER DIV 26.
D. FURNISHED, INSTALLED AND CONNECTED UNDER ANOTHER DIVISION.
E. FURNISHED AND INSTALLED UNDER DIV 26 REQUIRING CONNECTION UNDER ANOTHER DIVISI

OCPD TYPES:
C1 = THERMAL MAGNETIC CIRCUIT BREAKER
C2 = MAGNETIC ONLY CIRCUIT BREAKER

NOTES:
- THE DIVISION 26 CONTRACTOR MAY INCREASE THE CONDUIT SIZE BY ONE INCREMENTAL SIZE TO FACILITATE INSTALLATION OR TO HELP WITH MATERIAL AVAILABILITY/COST.

GENERAL NOTE: THE EC SHALL COORDINATE ALL REQUIREMENTS (IE: MOCP SIZE, UNIT THERMAL PROTECTION, ETC) WITH APPROVED MECHANICAL SHOP DRAWINGS/SUBMITTALS AND BRING UP ANY DISCREPANCIES WITH THE ELECTRICAL ENGINEER OF RECORD IN WRITING PRIOR TO ROUGH-IN AND ORDERING OF MATERIALS.

Panel P1BA (EX)

NAME: P1BA (EX) | TYPE: NQ | LOCATION: ? | VOLTAGE: 208 / 120 | PH 3 WIRES 4 | AIC AMPS | MOUNTING: FLUSH | FEED: BOTTOM | FEED FROM: ? | MAINS: LUGS ONLY | BUSS RATING: 225 AMPS | DIMS: 20" W, 5.75" D, " H | 42 SPACES

SPECIAL EQUIPMENT: ☑ GROUND BUS ☐ SUB-FEED BREAKER ☐ SUB-FEED LUGS ☐ NEMA 3R ☐ SURGE PROTECTOR

DF	CKT #	CIRCUIT DESCRIPTION	CODE	BRKR P	BRKR AMP	WIRE SIZE	VA LOAD	PHASE VA A	PHASE VA B	PHASE VA C	VA LOAD	WIRE SIZE	BRKR AMP	P	CODE	CIRCUIT DESCRIPTION	CKT #	DF
R	1	OUTLETS RM 1014		1	20	12	1800	3600			1800	12	20	1		OUTLETS 1005, 1007, 100	2	R
R	3	OUTLETS RM 1014		1	20	12	1800		3600		1800	12	20	1		OUTLETS 1001, 1004, 101	4	R
R	5	TREADMILL PLUG GYM		1	20	12	1800			3600	1800	12	20	1		OUTLETS 1001	6	R
	7	SPARE		1	20			1800			1800	12	20	1		OUTLETS 1012	8	R
R	9	OUTLETS 1008, 1019, 10		1	20	12	1800		3600		1800	12	20	1		OUTLETS 1010, 1011, 102	10	R
R	11	OUTLETS 1002, 1009, 10		1	20	12	1800			3600	1800	12	20	1		OUTLETS 1013, 1028	12	R
R	13	OUTLETS 1043, 1040		1	20	12	1800	3600			1800	12	20	1		OUTLETS 1039, 1040	14	R
R	15	OUTLETS 1038		1	20	12	1800		3600		1800	12	20	1		OUTLETS 1039, 1040	16	R
R	17	OUTLETS 1040		1	20	12	1800			3600	1800	12	20	1		OUTLETS 1047, 1050	18	R
R	19	OUTLETS 1024, 1037		1	20	12	1800	3600			1800	12	20	1		OUTLETS 1016, 1017	20	R
R	21	OUTLETS 1046		1	20	12	1800		4529		2729	8	40	2		GYM AC CU-3	22	M
R	23	GAS METER		1	20	12	1800			4529	2729	-	-	-	-		24	M
	25	SPARE		1	20			166			166	12	20	2		GYM AC FC-32 & 33	26	M
	27	SPARE		1	20				166		166	-	-	-	-		28	M
R	29	OULET EXERCISE ROOM		1	20	12	1800			1980	180	12	20	1		GYM ROOF AC GFCI	30	R
	31	SPARE		1	20			0					20	1		SPARE	32	
	33	SPARE		1	20				0				20	1		SPARE	34	
	35	SPARE		1	20					0			20	1		SPARE	36	
	37	SPARE		1	20			0					20	1		SPARE	38	
	39	SPARE		1	20				0				20	1		SPARE	40	
	41	SPARE		1	20					0			20	1		SPARE	42	

CONNECTED VA: 12766 / 15495 / 17309 — 45.6 KVA
CONNECTED AMPS: 106 / 129 / 144 — 126 A
DIVERSIFIED VA: 31 KVA
DIVERSIFIED AMPS: 85 A

DIVERSITY FACTORS (DF): C=CONTINUOUS, M=MOTOR, N=NON-CONTINUOUS, L=LARGEST MOTOR, R=RECEPTACLES, O=OTHER, K=KITCHEN EQUIPMENT

CODES: 1 = SEE DRAWINGS FOR CONDUIT & CONDUCTOR SIZE; 2 = SHUNT-TRIP BREAKER; 3 = GFEP BREAKER; 4 = PROVIDE LOCK OFF DEVICE; 5 = GFCI BREAKER

THIS PANEL, ALL OF ITS LUGS, BREAKERS, ETC. SHALL BE RATED FOR 75°C

NOTES:

GENERAL NOTE

A. PROVIDE NEW BREAKERS FOR NEW CIRCUITS IN PANELS AS REQUIRED. BREAKERS SHALL MATCH EXISTING AIC RATING OF PANEL.

VBFA
www.vbfa.com

181 East 5600 South
Murray, UT 84107
801.530.3148 T
801.530.3150 F

PROFESSIONAL ENGINEER — Lewis Wong — No. 9075170 — 10/21/24 — STATE OF UTAH

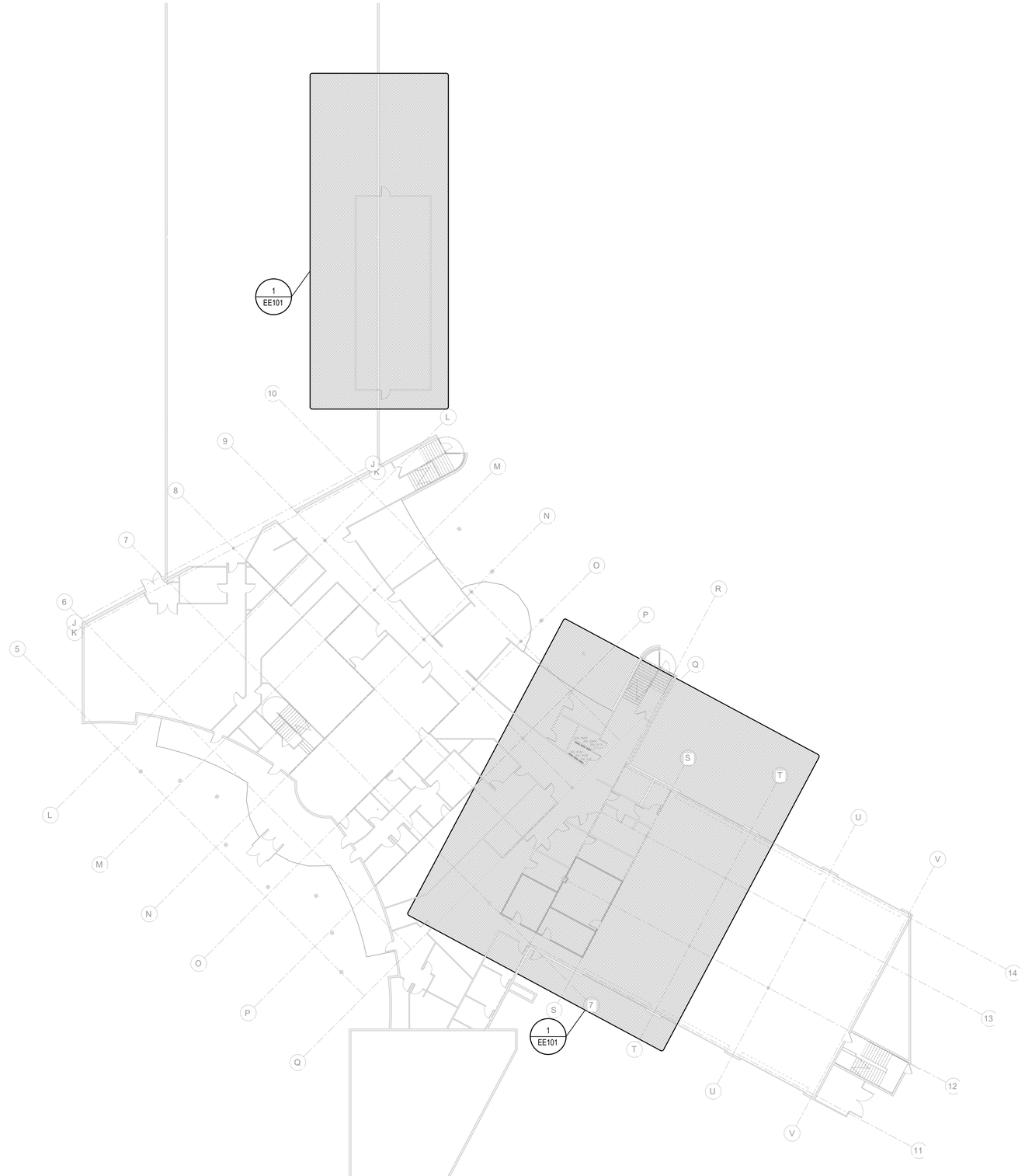
OGDEN CITY
Francom Public Safety Center
HVAC Upgrades
2186 Lincoln Ave, Ogden, UT 84401

CONSTRUCTION DOCUMENTS

VBFA PROJECT #:	240262
CHECKED BY:	LW
DRAWN BY:	CN
CURRENT/ISSUE DATE:	10.21.2024

SHEET CONTENTS
PANEL SCHEDULES

EG601



1 LEVEL 1 OVERALL ELECTRICAL PLAN
EP101 SCALE: 1/16"=1'-0"

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181 East 5600 South
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801.530.3148 T
801.530.3150 F

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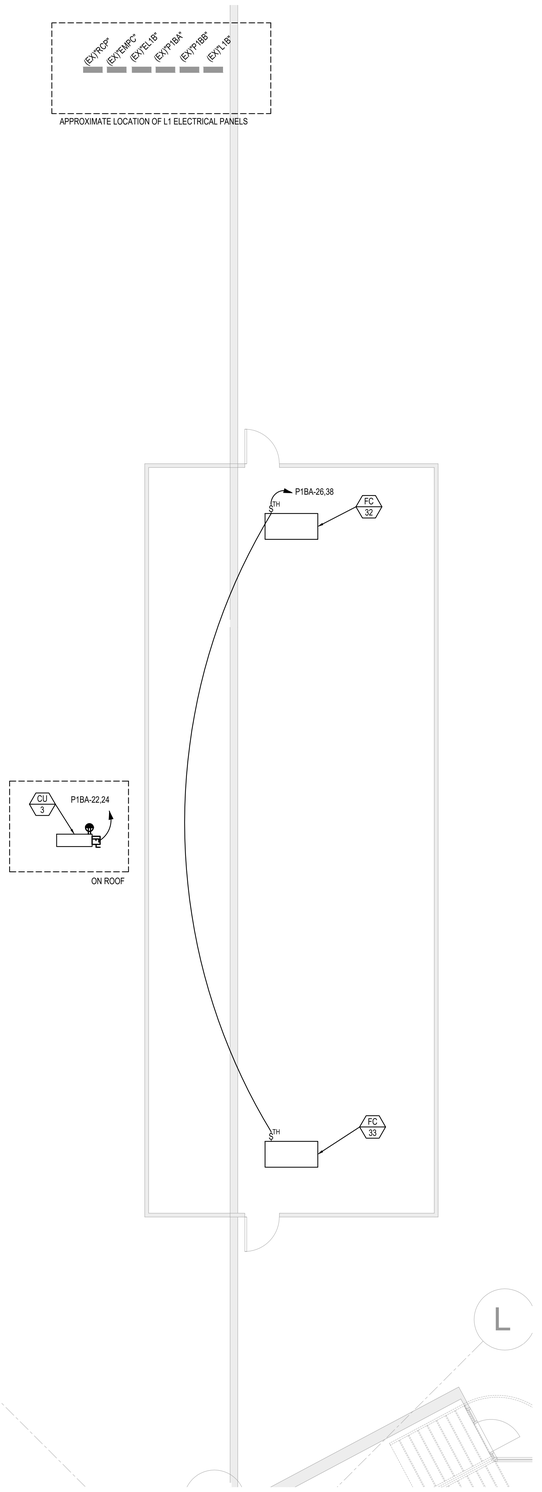
LEVEL 1 OVERALL ELECTRICAL PLAN

EP101

1 EE101 ENLARGED LEVEL 1 ELECTRICAL PLANS
SCALE: 3/16"=1'-0"



1 EE101 ENLARGED LEVEL 1 ELECTRICAL PLANS
SCALE: 3/16"=1'-0"

GENERAL NOTES

A. EC SHALL COORDINATE WITH ALL OTHER TRADES DURING DEMOLITION AND CONSTRUCTION TO FACILITATE TIMELY WORK.
B. ALL AREAS ARE TO BE KEPT CLEAN AND CLEAR OF DEBRIS AT ALL TIMES.
C. CONTRACTOR SHALL PATCH AND REPAIR ALL WALLS, CEILINGS ETC. TO MATCH EXISTING CONDITIONS.
D. ROUTE ALL CONDUIT IN A NEAT AND ORDERLY FASHION. ALL CONDUIT IN FINISHED SPACES SHALL BE CONCEALED ABOVE CEILINGS OR IN WALLS UNLESS OTHERWISE INDICATED ON THE PLANS.
E. BRANCH CIRCUITS SHALL NOT EXCEED 3% VOLTAGE DROP.
F. PROVIDE UPDATED TYPED CIRCUIT DIRECTORY WITH UNIQUE CIRCUIT DESCRIPTIONS PER NEC 408.4 FOR PANELS AFFECTED BY THIS PROJECT.
G. WIRE COUNTS FOR CIRCUIT CONDUCTORS ARE NOT SHOWN. PROVIDE PROPER NUMBER OF CONDUCTORS TO ACHIEVE CIRCUIT AND SWITCHING CONNECTIONS SHOWN.
H. CIRCUIT NUMBERS AT DEVICES CORRESPOND TO BREAKERS. BRANCH CIRCUITS SHALL BE SIZED ACCORDING TO THE CIRCUIT BREAKER RATING, UNLESS INDICATED OTHERWISE ON THE ELECTRICAL EQUIPMENT SCHEDULE.
I. DEVICES/EQUIPMENT SHOWN IN GRAY ARE EXISTING TO REMAIN. PRESERVE AND PROTECT. MAINTAIN EXISTING CIRCUIT INTEGRITY.
J. RELOCATE OR DISCONNECT AND RECONNECT ANY EXISTING LIGHTING FIXTURES AFFECTED BY THIS PROJECT. EXTEND CONDUCTORS AS REQUIRED FOR RELOCATION TO ACCOMODATE NEW MECHANICAL EQUIPMENT. COORDINATE WORK WITH MECHANICAL CONTRACTOR.

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181 East 5600 South
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ENLARGED LEVEL 1 ELECTRICAL PLANS

EE101

1 LEVEL 2 OVERALL ELECTRICAL PLAN
1 EP201 SCALE: 1/16"=1'-0"

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801.530.3148 T
801.530.3150 F

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No. 9075170
10/21/24
STATE OF UTAH

OGDEN CITY
Francom Public Safety Center
HVAC Upgrades
2186 Lincoln Ave, Ogden, UT 84401

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SHEET CONTENTS

LEVEL 2 OVERALL ELECTRICAL PLAN

EP201

GENERAL NOTES

A. EC SHALL COORDINATE WITH ALL OTHER TRADES DURING DEMOLITION AND CONSTRUCTION TO FACILITATE TIMELY WORK.
B. ALL AREAS ARE TO BE KEPT CLEAN AND CLEAR OF DEBRIS AT ALL TIMES.
C. CONTRACTOR SHALL PATCH AND REPAIR ALL WALLS, CEILINGS ETC. TO MATCH EXISTING CONDITIONS.
D. ROUTE ALL CONDUIT IN A NEAT AND ORDERLY FASHION. ALL CONDUIT IN FINISHED SPACES SHALL BE CONCEALED ABOVE CEILINGS OR IN WALLS UNLESS OTHERWISE INDICATED ON THE PLANS.
E. BRANCH CIRCUITS SHALL NOT EXCEED 3% VOLTAGE DROP.
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G. WIRE COUNTS FOR CIRCUIT CONDUCTORS ARE NOT SHOWN. PROVIDE PROPER NUMBER OF CONDUCTORS TO ACHIEVE CIRCUIT AND SWITCHING CONNECTIONS SHOWN.
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I. DEVICES/EQUIPMENT SHOWN IN GRAY ARE EXISTING TO REMAIN. PRESERVE AND PROTECT. MAINTAIN EXISTING CIRCUIT INTEGRITY.
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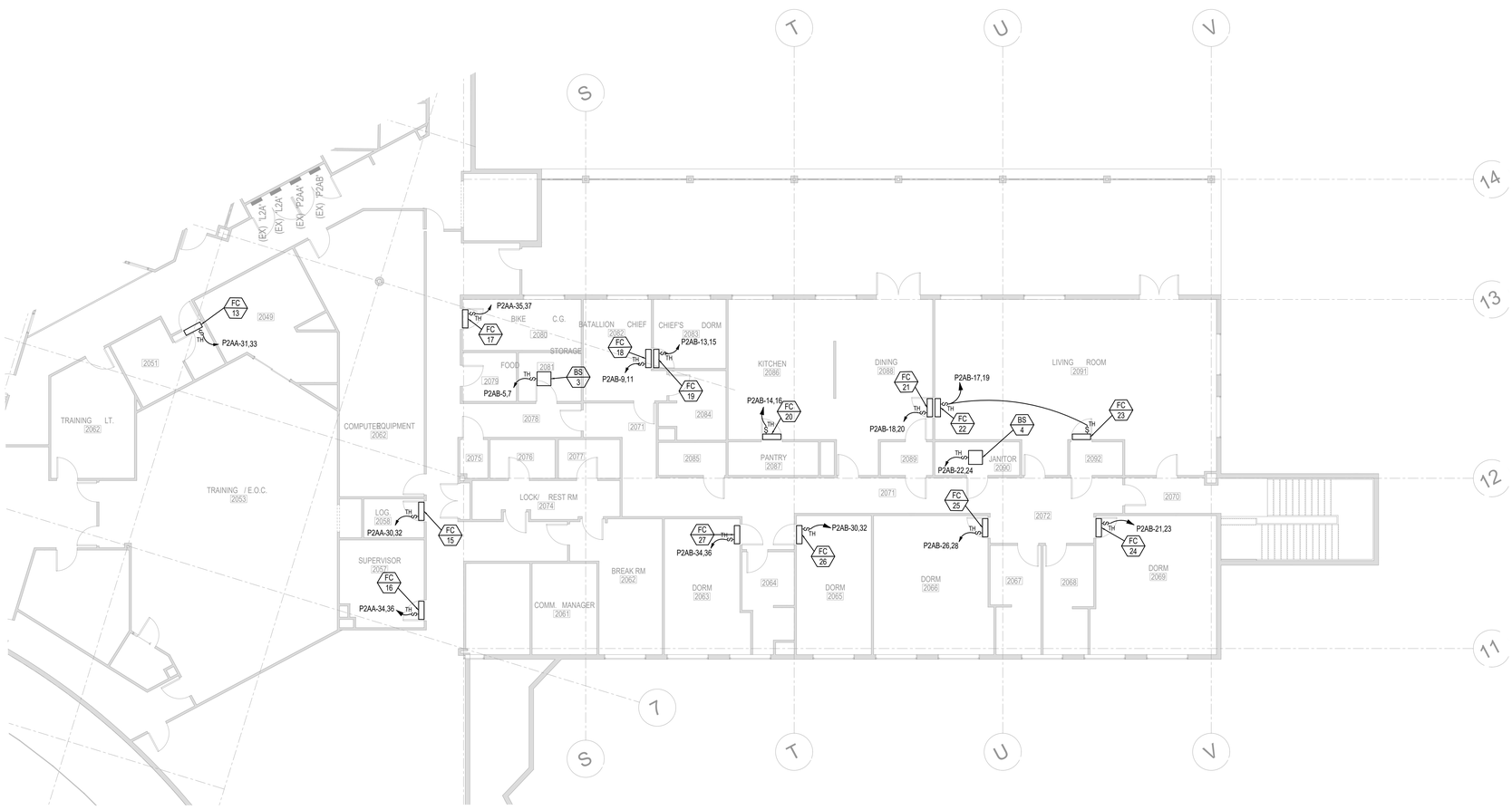

1 LEVEL 2 AREA B ELECTRICAL PLAN
EE201 SCALE: 1/8"=1'-0"

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Murray, UT 84107
801.530.3148 T
801.530.3150 F

PROFESSIONAL ENGINEER
Lewis Wong
No. 9075170
10/21/24
STATE OF UTAH

OGDEN CITY
Francom Public Safety Center
HVAC Upgrades
2186 Lincoln Ave, Ogden, UT 84401

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CONSTRUCTION DOCUMENTS

SHEET CONTENTS
ENLARGED LEVEL 2 ELECTRICAL PLANS

EE201

GENERAL NOTES

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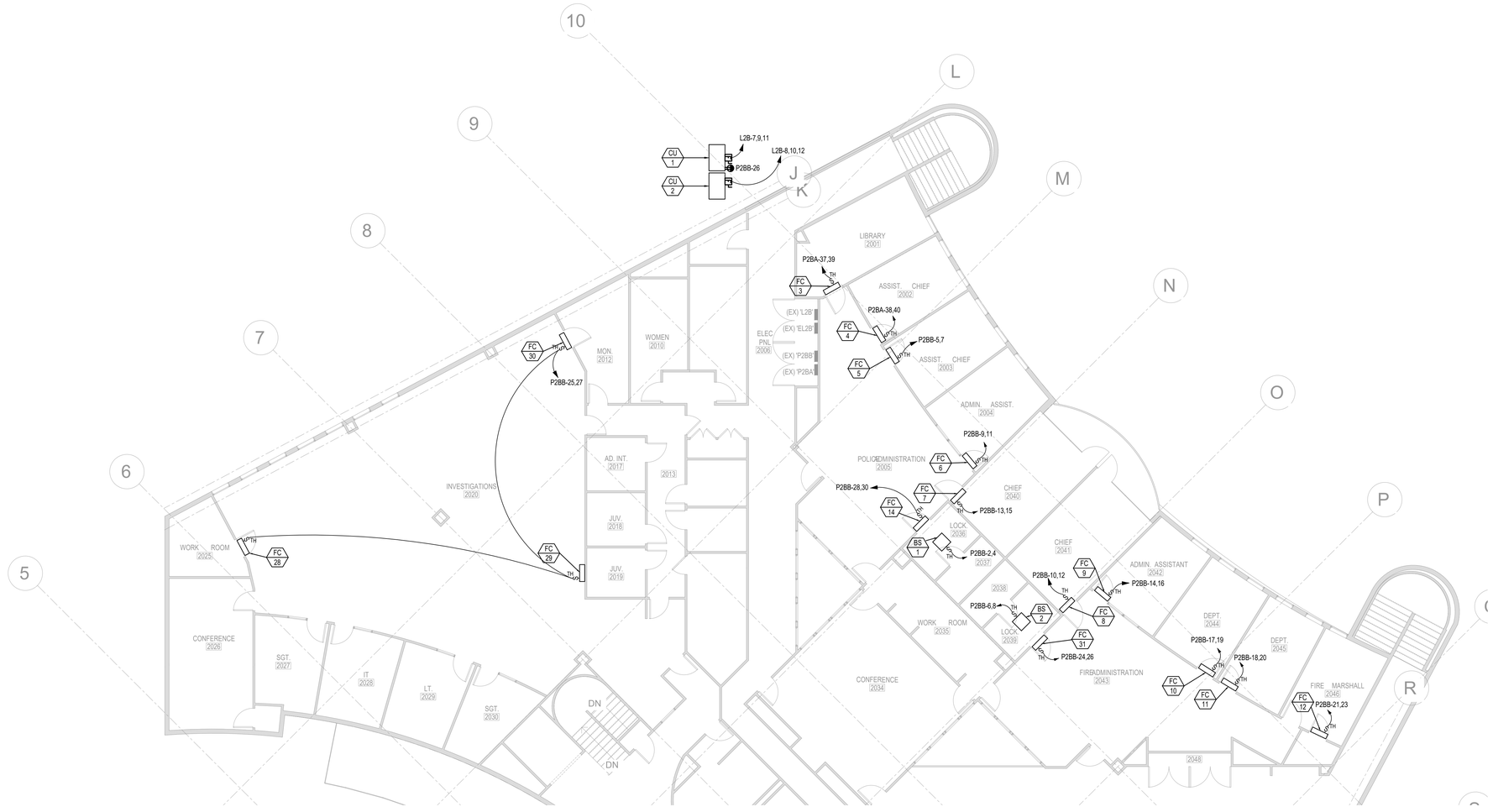
B. ALL AREAS ARE TO BE KEPT CLEAN AND CLEAR OF DEBRIS AT ALL TIMES.
C. CONTRACTOR SHALL PATCH AND REPAIR ALL WALLS, CEILINGS ETC. TO MATCH EXISTING CONDITIONS.
D. ROUTE ALL CONDUIT IN A NEAT AND ORDERLY FASHION. ALL CONDUIT IN FINISHED SPACES SHALL BE CONCEALED ABOVE CEILINGS OR IN WALLS UNLESS OTHERWISE INDICATED ON THE PLANS.
E. BRANCH CIRCUITS SHALL NOT EXCEED 3% VOLTAGE DROP.
F. PROVIDE UPDATED TYPED CIRCUIT DIRECTORY WITH UNIQUE CIRCUIT DESCRIPTIONS PER NEC 408.4 FOR PANELS AFFECTED BY THIS PROJECT.
G. WIRE COUNTS FOR CIRCUIT CONDUCTORS ARE NOT SHOWN. PROVIDE PROPER NUMBER OF CONDUCTORS TO ACHIEVE CIRCUIT AND SWITCHING CONNECTIONS SHOWN.
H. CIRCUIT NUMBERS AT DEVICES CORRESPOND TO BREAKERS. BRANCH CIRCUITS SHALL BE SIZED ACCORDING TO THE CIRCUIT BREAKER RATING, UNLESS INDICATED OTHERWISE ON THE ELECTRICAL EQUIPMENT SCHEDULE.
I. DEVICES/EQUIPMENT SHOWN IN GRAY ARE EXISTING TO REMAIN. PRESERVE AND PROTECT. MAINTAIN EXISTING CIRCUIT INTEGRITY.
J. RELOCATE OR DISCONNECT AND RECONNECT ANY EXISTING LIGHTING FIXTURES AFFECTED BY THIS PROJECT. EXTEND CONDUCTORS AS REQUIRED FOR RELOCATION TO ACCOMODATE NEW MECHANICAL EQUIPMENT. COORDINATE WORK WITH MECHANICAL CONTRACTOR.



N

1 EE202 LEVEL 2 - WEST OFFICES
SCALE: 1/8"=1'-0"

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181 East 5600 South
Murray, UT 84107
801.530.3148 T
801.530.3150 F

PROFESSIONAL ENGINEER
Lewis Wong
No. 9075170
10/21/24
STATE OF UTAH

OGDEN CITY
Francom Public Safety Center
HVAC Upgrades
2186 Lincoln Ave, Ogden, UT 84401

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CONSTRUCTION DOCUMENTS

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ENLARGED LEVEL 2 ELECTRICAL PLANS

EE202

STRUCTURAL DRAWING LEGEND

CONCRETE CONSTRUCTION

- CONCRETE SPOT FOOTING
- CONCRETE CONTINUOUS FOOTING
- CONCRETE WALL
- CONCRETE COLUMN
- CONCRETE PIER (CAST INTEGRAL WITH WALL)
- CONCRETE BEAM / JOIST FRAMING MEMBER
- CONCRETE LINTEL / BEAM (INTEGRAL WITH WALL)
- C.J. CONCRETE SLAB CONTROL/CONSTRUCTION JOINT (SEE GENERAL STRUCTURAL NOTES)
- REINFORCED CAST IN PLACE CONCRETE SUSPENDED SLAB
- CONCRETE SLAB ON GRADE (SEE CONCRETE SLAB ON GRADE SCHEDULE)
- SLAB ON GRADE BLOCKOUT AROUND ALL COLUMNS
- FOOTING STEP
- HELICAL PILE (DESIGNED BY MANUFACTURER) SEE PLAN FOR REQUIRED LOADING
- LATERAL LOAD HELICAL PILE (DESIGNED BY MANUFACTURER) SEE PLAN FOR REQUIRED LOADING

MASONRY CONSTRUCTION

- MASONRY WALL
- MASONRY LINTEL (INTEGRAL)
- MASONRY JAMB COLUMN (INTEGRAL)
- MASONRY COLUMN (FREE-STANDING)
- MASONRY COLUMN (INTEGRAL)

STEEL CONSTRUCTION

- STEEL COLUMN (WIDE FLANGE SHAPE)
- STEEL COLUMN (HSS)
- STEEL COLUMN (HSS ROUND)
- STEEL BASE PLATE
- STEEL BEAM / JOIST FRAMING MEMBER
- DRAG STRUT CONNECTION (SEE STEEL CONNECTION SCHEDULE)
- MOMENT FRAME CONNECTION (SEE STRUCTURAL ELEVATIONS)
- BRACED FRAME CONNECTION (SEE STRUCTURAL ELEVATIONS)
- DOUBLE SHEAR CONNECTION (SEE STEEL CONNECTION SCHEDULE)
- CANTILEVER MOMENT CONNECTION (SEE STRUCTURAL DETAILS)
- BEAM SIZE (X) C=Y"
  BEAM SIZE = BEAM DESIGNATION
  X = # OF HEADED STUDS (SPACED UNIFORMLY ACROSS BEAM)
  Y = BEAM CAMBER (CROWN UPWARD @ MIDSPAN)
  Z = SPECIAL REACTIONS OR OTHER NOTES
  ALL BEAM ENDS UNLESS NOTED WITH SPECIAL SYMBOL OR DETAILED OTHERWISE ARE TO BE SIMPLE SHEAR TAB CONNECTIONS (SEE SCHEDULE)
- STEEL ROOF DECK (SEE PLANS AND GENERAL NOTES FOR SPECIFIC INFORMATION)
- CONCRETE SLAB ON STEEL DECK (SEE PLANS AND GENERAL NOTES FOR SPECIFIC INFORMATION)

WOOD CONSTRUCTION

- PLYWOOD / OSB WOOD DECK (SEE WOOD DECK SCHEDULE)
- WOOD BEARING WALL
- WOOD SHEARWALL
- WOOD HEADER (INTEGRAL WITH WALL)
- WOOD COLUMN (INTEGRAL WITH WALL)
- WOOD COLUMN (FREE-STANDING)
- H# HOLDOWN AS DESIGNATED (SEE SCHEDULE)
- A WOOD SHEAR WALL (SEE SCHEDULE)

GENERAL ANNOTATIONS

- STACKED STRUCTURAL TAGS REPRESENT STRUCTURAL RELATIONSHIPS BETWEEN VARIOUS ELEMENTS
- SLOPED 1/4 ROOF SLOPE DESIGNATION (SEE ARCH FOR ACTUAL SLOPES)
- COLUMN W/ BASE PLATE SUPPORTED ON PIER / WALL SUPPORTED ON FOOTING (SEE STRUCTURAL SCHEDULES FOR ALL DIMENSIONS AND INFORMATION)
- SPECIAL DECK OR FLOOR AREA
- FSX.X CONCRETE FOOTING TAG
- DETAIL OR PLAN REFERENCE: 1 TYP / A101 — TYPICAL (TYP) OR SIMILAR (SIM) DETAIL; SHEET REFERENCE
- XC# COLUMN TAG (X=MATERIAL, #=DESIGNATION) C=CONCRETE, M=MASONRY, S=STEEL, W=WOOD
- SECTION REFERENCE: 1 TYP / A101 — TYPICAL (TYP) OR SIMILAR (SIM) DETAIL; SHEET REFERENCE
- XW# WALL TAG (X=MATERIAL, #=DESIGNATION) C=CONCRETE, M=MASONRY, W=WOOD
- XB# BEAM TAG (X=MATERIAL, #=DESIGNATION) C=CONCRETE, M=MASONRY, W=WOOD
- ELEVATION REFERENCE: S1 / S101 — SHEET REFERENCE
- XL# LINTEL TAG (X=MATERIAL, #=DESIGNATION) C=CONCRETE, M=MASONRY
- 98'-0" ELEVATION AT TOP OF FOOTING
- N DESIGNATES PLAN NORTH
- STEP CHANGE IN ELEVATION
- GREY TONE OR LIGHTER DRAWING ELEMENTS DESIGNATE EXISTING STRUCTURAL COMPONENTS AND/OR ELEMENTS

STRUCTURAL ABBREVIATIONS

ABV	ABOVE	K	KIP(S) = 1000 POUNDS
ADD'L	ADDITIONAL	KLF	KIPS PER LINEAL FOOT
ALT	ALTERNATE	KSF	KIPS PER SQUARE FOOT
ARCH	ARCHITECT(URAL)	KSI	KIPS PER SQUARE INCH
BLDG	BUILDING	LBS	POUNDS
BLW	BELOW	LG	LIGHT GAUGE
BTM	BOTTOM	LLH	LONG LEG HORIZONTAL
BTWN	BETWEEN	LLV	LONG LEG VERTICAL
CJ	CONTROL OR CONSTRUCTION JOINT	LSH	LONG SIDE HORIZONTAL
CJP	COMPLETE JOINT PENETRATION	LW	LIGHT-WEIGHT
CLR	CLEAR	MANUF	MANUFACTURER
CMU	CONCRETE MASONRY UNIT	MAX	MAXIMUM
COL	COLUMN	MCH	MASONRY COLUMN
CONC	CONCRETE	MECH	MECHANICAL
CONST	CONSTRUCTION	MEP	MECH/ELEC/PLUMB
CONT	CONTINUOUS	MIN	MINIMUM
COORD	COORDINATE	MISC	MISCELLANEOUS
CRW#	CONCRETE RETAINING WALL	ML#	MASONRY LINTEL
CTR	CENTER(ED)	MW#	MASONRY WALL
CW#	CONCRETE WALL	NS	NON-SHRINK
DBA	DEFORMED BAR ANCHOR	NTS	NOT TO SCALE
DBL	DOUBLE	NW	NORMAL WEIGHT
DIA	DIAMETER	OC	ON CENTER
DIM	DIMENSION	OF	OUTSIDE FACE
DWG	DRAWING	OPP	OPPOSITE
EF	EACH FACE	OWSJ	OPEN WEB STEEL JOIST
EJ	SEISMIC ISOLATION JOINT	PCF	POUNDS PER CUBIC FOOT
EA	EACH	PL	PLATE
ELEC	ELECTRICAL	PLF	POUNDS PER LINEAL FOOT
ELEV	ELEVATION	PSF	POUND PER SQUARE FOOT
EQ	EQUAL	PSI	POUND PER SQUARE INCH
EQUIP	EQUIPMENT	REINF	REINFORCING
EXIST	EXISTING	REQD	REQUIRED
EXT	EXTERIOR	SC#	STEEL COLUMN
FF	FINISH FLOOR	SIM	SIMILAR
FC#	CONTINUOUS FOOTING	SOG	SLAB ON GRADE
FS#	SPOT FOOTING	SOMD	SLAB ON METAL DECK
FT	FOOT	STD	STANDARD
FTG	FOOTING	STIFF	STIFFENER
FDTN	FOUNDATION	STL	STEEL
GA	GAUGE	T+B	TOP AND BOTTOM
GALV	GALVANIZED	TOF	TOP OF FOOTING
GLB	GLUE-LAMINATED BEAM	TOS	TOP OF SLAB
GR	GRADE	TOW	TOP OF WALL
GSN	GENERAL STRUCTURAL NOTES	TYP	TYPICAL
HK	HOOK	UNO	UNLESS NOTED OTHERWISE
HSA	HEADED STUD ANCHOR	VERT	VERTICAL
HORIZ	HORIZONTAL	VIF	VERIFY IN FIELD
HT	HEIGHT	W/	WITH
INT	INTERIOR	W/C	WATER / CEMENT RATIO
IF	INSIDE FACE	WC#	WOOD COLUMN
IBC	INTERNATIONAL BUILDING CODE	WWF	WELDED WIRE FABRIC
IEBC	INTERNATIONAL EXISTING BUILDING CODE		
ICC	INTERNATIONAL CODES COUNCIL		
IN	INCH		

GENERAL PROJECT INSTRUCTIONS

1. GENERAL NOTES: THESE GENERAL STRUCTURAL NOTES DO NOT SUPERSEDE THE PROJECT SPECIFICATIONS, BUT ARE INTENDED TO BE COMPLIMENTARY TO THEM. CONSULT THE PROJECT SPECIFICATIONS FOR ADDITIONAL REQUIREMENTS IN EACH SECTION. NOTATION AND SPECIFIC DETAILS ON THE DRAWINGS TAKE PRECEDENCE OVER THESE NOTES AND TYPICAL DETAILS.
2. CONTRACT DRAWINGS: THE PRIME CONTRACT DRAWINGS ARE THE ARCHITECTURAL DRAWINGS. THESE STRUCTURAL DRAWINGS ARE SUPPLEMENTARY TO THE ARCHITECTURAL DRAWINGS. ALL OMISSIONS OR CONFLICTS, INCLUDING DIMENSIONS, BETWEEN THE VARIOUS ELEMENTS OF THE STRUCTURAL DRAWINGS AND/OR SPECIFICATIONS SHALL BE BROUGHT TO THE ATTENTION OF THE ARCHITECT BEFORE PROCEEDING WITH ANY WORK INVOLVED. IN CASE THERE IS A CONFLICT BETWEEN DRAWINGS, FOLLOW THE MOST STRINGENT REQUIREMENT, SUBMIT A REQUEST FOR INFORMATION, AND/OR PROCEED AS DIRECTED BY THE ARCHITECT WITHOUT ANY ADDITIONAL COST TO THE OWNER. ANY WORK DONE BY THE CONTRACTOR AFTER DISCOVERY OF SUCH DISCREPANCY SHALL BE DONE AT THE CONTRACTOR'S RISK.
3. STRUCTURAL DRAWINGS: THESE STRUCTURAL DRAWINGS SHALL BE USED IN CONJUNCTION WITH THE ARCHITECTURAL AND OTHER CONSULTANT DRAWINGS. ONLY THE PRIMARY STRUCTURAL ELEMENTS AND SYSTEMS ARE INDICATED WITHIN THESE STRUCTURAL DRAWINGS. ALL STRUCTURAL DETAILS ARE REPRESENTATIVE IN NATURE AND ARE NOT TO BE SCALED FOR ANY REASON. MANY OTHER ELEMENTS SUCH AS, ARCHITECTURAL LAYOUTS, ELEVATIONS, SLOPES, DEPRESSIONS, CURBS, MECHANICAL/ELECTRICAL EQUIPMENT, EXTERIOR LIGHT GAUGE FRAMING, STAIRS, ETC. ARE GENERALLY NOT SHOWN IN THESE STRUCTURAL DRAWINGS. IT IS INTENDED THAT ALL SHOP DRAWINGS AND DETAILING OF STRUCTURAL ELEMENTS WILL REQUIRE INFORMATION FROM ALL CONTRACT DOCUMENTS, NOT JUST THESE STRUCTURAL DRAWINGS.
4. PROJECT COORDINATION: IT IS THE RESPONSIBILITY OF THE GENERAL CONTRACTOR TO COORDINATE ALL ITEMS WITH ALL TRADES TO INSURE THERE ARE NO CONFLICTS BETWEEN OTHER TRADES AND THE STRUCTURAL ELEMENTS. ANY OPENINGS, PENETRATIONS, OR ATTACHMENTS TO ANY STRUCTURAL ELEMENT IS THE RESPONSIBILITY OF THE GENERAL CONTRACTOR AND SHALL BE COORDINATED WITH THE ARCHITECT/ENGINEER.
5. SUBMITTALS: STRUCTURAL SUBMITTALS SHALL ONLY BE SUBMITTED TO THE STRUCTURAL ENGINEER FOR REVIEW AFTER THE GENERAL CONTRACTOR HAS REVIEWED AND APPROVED THE SUBMITTAL. CONTRACTOR SHALL ALLOW AT LEAST 10 BUSINESS DAYS (2 WEEKS) FOR EACH SUBMITTAL TO BE REVIEWED. IF AN ITEM IS SUBMITTED WHILE ANOTHER SUBMITTAL IS UNDER REVIEW, THE 10 DAY REVIEW PERIOD FOR THAT NEWLY SUBMITTED ITEM DOES NOT BEGIN UNTIL THE PREVIOUS SUBMITTAL IS COMPLETE. THE SHOP DRAWING REVIEW PROCESS SHALL NOT RELIEVE THE CONTRACTOR OF ANY RESPONSIBILITY OF COMPLETING THE PROJECT ACCORDING TO THE CONTRACT DOCUMENTS, REGARDLESS OF INFORMATION SHOWN IN THE REVIEW COMMENTS. SHOP DRAWINGS MADE FROM REPRODUCTIONS OF THESE STRUCTURAL DRAWINGS WILL BE REJECTED.
6. SHORING AND BRACING REQUIREMENTS: THE STRUCTURAL SYSTEMS SHOWN IN THESE DRAWINGS SHALL NOT BE CONSIDERED STABLE UNTIL ALL STRUCTURAL ELEMENTS ARE IN PLACE AND COMPLETED. IT IS THEREFORE THE RESPONSIBILITY OF THE GENERAL CONTRACTOR TO DETERMINE THE METHOD OF CONSTRUCTION SEQUENCE, AS WELL AS PROVIDE ANY SHORING, BRACING, ETC. TO INSURE THE STRUCTURE IS STABLE UNTIL ALL ELEMENTS ARE COMPLETED.
7. FIELD VERIFICATION: THE GENERAL CONTRACTOR SHALL FIELD VERIFY ALL DIMENSIONS, AND CONDITIONS. IF THE CONTRACT DRAWINGS DO NOT REPRESENT ACTUAL CONDITIONS, CONTRACTOR SHALL NOTIFY ARCHITECT/ENGINEER PRIOR TO FABRICATION OR CONSTRUCTION WITHIN THAT AREA. IF CONTRACTOR PROCEEDS WITH ANY WORK WITHOUT PROPERLY FIELD VERIFYING DIMENSIONS, CONTRACTOR IS RESPONSIBLE FOR ALL CONSTRUCTION AND DESIGN COSTS ASSOCIATED WITH FIXING THE SITUATION.
8. PERMIT PLAN CHECK: PRIOR TO OBTAINING FINAL BUILDING PERMITS FROM THE BUILDING OFFICIAL AND OTHER AUTHORITIES HAVING JURISDICTION, ALL PRICING, BIDDING, OR CONSTRUCTION PROGRESS IS DONE AT THE CONTRACTOR'S OWN RISK. CHANGES TO THESE DRAWINGS MAY BE REQUIRED AS PART OF THE PLAN CHECK AND PERMITTING PROCESS AND THUS STRUCTURAL DESIGN STUDIO, INC. WILL NOT BE HELD LIABLE (FINANCIAL OR OTHERWISE) FOR ANY CHANGES MADE TO THESE DRAWINGS.
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CRITERIA FOR STRUCTURAL DESIGN

1. **GOVERNING BUILDING CODES AND GENERAL DESIGN STANDARDS**
   A. 2021 INTERNATIONAL BUILDING CODE (IBC)
   B. ASCE/SEI 7-16 MINIMUM DESIGN LOADS FOR BUILDINGS AND OTHER STRUCTURES
   C. 2021 INTERNATIONAL EXISTING BUILDING CODE (IEBC) - PRESCRIPTIVE METHOD
2. **ROOF LIVE LOADING:**
   A. ROOF LIVE LOAD = 20 PSF
   B. ROOF SNOW LOAD = 29 PSF
      a. GROUND SNOW LOAD, Pg = 37 PSF
      b. FLAT ROOF SNOW LOAD, Pf = 29 PSF
      c. SNOW EXPOSURE FACTOR, Ce = 1.00
      d. IMPORTANCE FACTOR, Is = 1.10
      e. THERMAL FACTOR, Ct = 1.00
      f. SLOPE FACTOR(S), Cs = 1.00
3. **SEISMIC DESIGN CRITERIA AND PARAMETERS:**
   A. RISK CATEGORY III (SUBSTANTIAL HAZARD) - BUILDING TYPE
   B. SEISMIC DESIGN CATEGORY = D
   C. SPECTRAL RESPONSE ACCELERATIONS:
      Ss = 1.36 g Sds = 1.09 g
      S1 = 0.50 g Sd1 = 0.60 g
   D. SOIL SITE CLASS = SITE CLASS-D (DEFAULT)
      Fa = 1.20 Fv = 1.80
   E. BASIC SEISMIC-FORCE-RESISTING SYSTEM: SPECIAL STEEL MOMENT FRAMES
      R = 8.00 Cd = 5.50 Ω = 3.00
   F. IMPORTANCE FACTOR, Ie = 1.25
4. **WIIND DESIGN CRITERIA:**
   A. BASIC WIND SPEED (Vult) = 110 MPH
   B. ALLOWABLE STRESS WIND DESIGN SPEED (V) = 85 MPH
   C. RISK CATEGORY III (SUBSTANTIAL HAZARD) - BUILDING TYPE
   D. EXPOSURE CATEGORY = EXPOSURE C (ALL OTHERS)
   E. INTERNAL PRESSURE COEFFICIENT (Gcpi) = ±0.18
   F. TOPOGRAPHIC FACTOR (Kht) = 1.00

STEEL MATERIAL & DESIGN PROPERTIES

1. **CODES AND STANDARDS:** GENERAL CONTRACTOR AND ALL SUBCONTRACTORS SHALL COMPLY WITH THE FOLLOWING STANDARDS:
   A. AMERICAN INSTITUTE OF STEEL CONSTRUCTION (AISC) 360-16, "SPECIFICATION FOR STRUCTURAL STEEL BUILDINGS."
   B. DETAILING AND SHOP DRAWING PRODUCTION FOR STRUCTURAL ELEMENTS WILL REQUIRE INFORMATION (INCLUDING DIMENSIONS) CONTAINED IN ARCHITECTURAL, STRUCTURAL, AND/OR OTHER CONSULTANTS' DRAWINGS.
   C. AMERICAN WELDING SOCIETY (AWS) D1.4/D1.4M, "STRUCTURAL WELDING CODE – STEEL"
2. **STEEL MATERIALS AND PROPERTIES:**
   A. RECTANGULAR AND SQUARE HOLLOW STRUCTURAL SECTIONS (HSS): ASTM A500, GRADE C (F_Y = 50 KSI).
   B. ALL OTHER SHAPES AND PLATES: ASTM A36 (F_Y = 36 KSI), EXCEPT AS NOTED OTHERWISE.

STEEL FRAMING & CONNECTIONS

1. **CONSTRUCTION REQUIREMENTS:**
   A. STRUCTURAL STEEL SHAPES AND PLATES SHALL BE FABRICATED FROM ROLLED (MILLED) SINGLE-PIECE SECTIONS WITHOUT ANY SPLICES, UNLESS OTHERWISE NOTED.
   B. UNLESS NOTED OTHERWISE, ALL STRUCTURAL SHAPES AND MISCELLANEOUS STEEL, PLATES, BOLTS, AND ANCHORS EXPOSED TO OUTDOOR ELEMENTS SHALL BE GALVANIZED OR PAINTED WITH APPROVED RUST INHIBITING PRIMER.
   C. AT ALL BEAM BEARING POINTS AND CONCENTRATED LOADS (I.E. COLUMN TRANSFER BEAMS, GIRDERS, ETC.) PROVIDE FULL-HEIGHT WEB STIFFENER PLATES TO EACH SIDE OF BEAM. STIFFENER PLATES SHALL BE WELDED USING A THREE SIDED FILLET WELD ON BOTH SIDES OF THE STIFFENER PLATE AND THE STIFFENER PLATES SHALL BE THE SAME THICKNESS AS THE BEAM WEB.
2. **WELDING CONNECTIONS:**
   A. WELDING IS TO ONLY BE COMPLETED BY AWS CERTIFIED WELDERS WHO HAVE BEEN CERTIFIED FOR THE TYPE OF WELDS BEING PERFORMED.
   B. MINIMUM WELDS: ALL INTERSECTING STEEL SHAPES THAT ARE NOT BOLTED SHALL BE CONNECTED BY AN ALL AROUND FILLET WELD. FILLET WELD SIZES NOT DESIGNATED SHALL BE THE SAME SIZE AS THE THINNEST OF THE CONNECTED PARTS. AS A MINIMUM, IF WELDS ARE NOT SPECIFIED IN DRAWINGS, PROVIDE 1/4 FILLET WELD ALL AROUND.
   C. ALL ELECTRODES USED SHALL BE E70 XX UNLESS NOTED OTHERWISE.

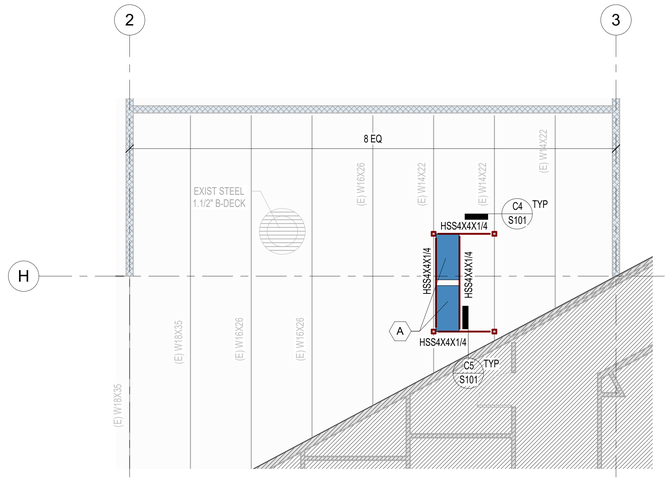
STATEMENT OF SPECIAL INSPECTIONS (STRUCTURAL)

1. IN ADDITION TO STANDARD INSPECTIONS BY THE BUILDING OFFICIAL REQUIRED IN IBC SECTION 110, THE OWNER SHALL EMPLOY ONE OR MORE SPECIAL INSPECTORS TO PROVIDE INSPECTIONS AS REQUIRED IN IBC SECTION 1704 AND 1705. THESE SECTIONS REFER TO THE SPECIAL INSPECTIONS PERTAINING TO THE STRUCTURAL SYSTEM ONLY AND DOES NOT ENCOMPASS INSPECTIONS REQUIRED BY OTHER DISCIPLINES.
2. UNLESS WAIVED BY THE BUILDING OFFICIAL, THE CONTRACTOR SHALL COORDINATE AND COOPERATE WITH THE REQUIRED INSPECTIONS.
3. TYPES OF WORK REQUIRING SPECIAL INSPECTION AND TESTING ON THIS PROJECT ARE LISTED IN THE FOLLOWING MATERIAL SPECIFIC TABLES. THESE TABLES ARE NOT MEANT TO ENCOMPASS ALL SPECIAL INSPECTIONS ON THE PROJECT, JUST THOSE DIRECTLY RELATED TO ELEMENTS AND MATERIALS USED FOR STRUCTURAL SUPPORT.
4. STRUCTURAL OBSERVATIONS (WHEN REQUIRED BY BUILDING OFFICIAL)
   A. STRUCTURAL OBSERVATIONS MAY BE PERFORMED AS DEEMED NECESSARY BY THE STRUCTURAL ENGINEER OF RECORD.
   B. OBSERVATION VISITS TO THE SITE BY THE ENGINEER'S FIELD REPRESENTATIVES SHALL NOT BE CONSTRUED AS AN INSPECTION OR APPROVAL OF CONSTRUCTION.

STRUCTURAL STEEL WELDING INSPECTION AND TESTING TABLE

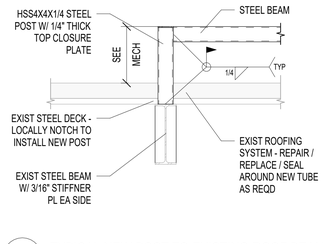
VERIFICATION + INSPECTION	QC	QA
INSPECTION TASKS PRIOR TO WELDING		
WELDING QUALIFICATION RECORDS AND CONTINUITY RECORDS	P	O
WELDING PROCEDURE SPECIFICATIONS (WPSs) AVAILABLE	P	P
MANUFACTURER CERTIFICATIONS FOR WELDING CONSUMABLE AVAILABLE.	P	P
MATERIAL IDENTIFICATION (TYPE/GRADE)	O	O
WELDER IDENTIFICATION SYSTEM	O	O
FIT-UP OF FILLET WELDS -- DIMENSIONS (ALIGNMENT, GAPS AT ROOT) -- CLEANLINESS (CONDITION OF STEEL SURFACES) -- TACKING (TACK WELD QUALITY AND LOCATION)	O	O
CHECK WELDING EQUIPMENT	O	-
INSPECTION TASKS DURING WELDING		
CONTROL AND HANDLING OF WELDING CONSUMABLES -- PACKAGING -- EXPOSURE CONTROL	O	O
NO WELDING OVER CRACKED TACK WELDS	O	O
ENVIRONMENTAL CONDITIONS -- WIND SPEED WITHIN LIMITS -- PRECIPITATION AND TEMPERATURE	O	O
WPS FOLLOWED -- SETTINGS ON WELDING EQUIPMENT -- TRAVEL SPEED -- SELECTED WELDING MATERIALS -- SHIELDING GAS TYPE/FLOW RATE -- PREHEAT APPLIED -- INTERPASS TEMPERATURE MAINTAINED (MIN/MAX) -- PROPER POSITION (F, V, H, OH)	O	O
WELDING TECHNIQUES -- INTERPASS AND FINAL CLEANING -- EACH PASS WITHIN PROFILE LIMITATIONS -- EACH PASS MEETS QUALITY REQUIREMENTS	O	O
PLACEMENT AND INSTALLATION OF STEEL HEADED STUD ANCHORS	P	P
INSPECTION TASKS AFTER WELDING		
WELDS CLEANED	O	O
SIZE, LENGTH AND LOCATION OF WELDS	P	P
WELDS MEET VISUAL ACCEPTANCE CRITERIA -- CRACK PROHIBITION -- WELD/BASE-METAL FUSION -- CRATER CROSS SECTION -- WELD PROFILES -- WELD SIZE -- UNDERCUT -- POROSITY	P	P
ARC STRIKES	P	P
K-AREA	P	P
REPAIR ACTIVITIES	P	P
DOCUMENT ACCEPTANCE OR REJECTION OF WELDED JOINT OR MEMBER	P	P
NO PROHIBITED WELDS HAVE BEEN ADDED WITHOUT THE APPROVAL OF EOR	O	O

NOTES:
QC = REPRESENTS QUALITY CONTROL PERSONNEL PROVIDED BY THE FABRICATOR AND THE ERECTOR WHO ARE QUALIFIED TO PERFORM REQUIRED TASKS.
QA = REPRESENTS QUALITY ASSURANCE PERSONNEL PROVIDED BY OTHERS (OWNER ENGAGED) AS REQUIRED BY JURISDICTION AND/OR OWNER.
O = REPRESENTS PERIODIC INSPECTION AND/OR OBSERVATION REQUIRED DURING THE GIVEN TASK.
P = REPRESENTS CONTINUOUS INSPECTION AND/OR OBSERVATION REQUIRED DURING THE GIVEN TASK.
1. TABLE IS SPECIFICALLY BASED UPON SECTION 1705.2 AND 1705.12.1 OF THE INTERNATIONAL BUILDING CODE AS WELL AS AISC 360, CHAPTER N. FABRICATOR/ERECTOR AND SPECIAL INSPECTOR AND/OR TESTING AGENCY IS RESPONSIBLE FOR FOLLOWING THE REQUIREMENTS OUTLINED IN THESE SECTIONS OF THE CODE AND ENSURING THEY ARE IN COMPLIANCE WITH BUILDING CODE AND JURISDICTIONAL REQUIREMENTS RELATED TO INSPECTION, TESTING AND REPORTING.



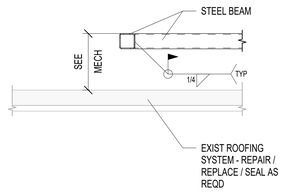
B4 / S101 EXISTING LOW ROOF FRAMING PLAN
Scale: 3/16" = 1'-0"

NOTE: ATTACHMENT OF MECH EQUIP TO STEEL FRAME BY SUPPLIER



C4 / S101 TYPICAL NEW POST TO EXISTING ROOF BEAM
Scale: NTS

NOTE: ATTACHMENT OF MECH EQUIP TO STEEL FRAME BY SUPPLIER



C5 / S101 TYPICAL NEW BEAM TO BEAM
Scale: NTS

ROOF FRAMING PLAN NOTES

1. ALL DIMENSIONS SHOWN ON THIS PLAN ARE FOR GENERAL INFORMATION ONLY. CONTRACTOR TO COORDINATE ALL DIMENSIONS WITH MECHANICAL AND EXISTING CONDITIONS.
2. CONTRACTOR TO COORDINATE SIZE, WEIGHT, LOCATIONS AND SUPPORT OF ALL EQUIPMENT WITH ARCHITECTURAL, MECHANICAL, AND ELECTRICAL DRAWINGS.
3. CONTRACTOR IS RESPONSIBLE FOR THE CONSTRUCTION SEQUENCE FOR ALL STRUCTURAL ELEMENTS IN THE PROJECT. CONTRACTOR IS RESPONSIBLE TO PROVIDE ANY SHORING OR BRACING AS NEEDED UNTIL STRUCTURE IS COMPLETE.
4. CONTRACTOR SHALL FIELD VERIFY ALL EXISTING STRUCTURAL ELEMENTS, SIZES, DIMENSIONS, LOCATIONS, ETC. ANY DISCREPANCIES SHALL BE REPORTED TO THE ENGINEER.
5. CONTRACTOR SHALL FIELD VERIFY THE CONDITION OF EXISTING ELEMENTS. ANY VISIBLE DETERIORATION OR DAMAGE SHALL BE REPORTED TO THE ENGINEER.
6. CONTRACTOR SHALL TAKE SPECIAL CARE DURING DEMOLITION NOT TO DAMAGE ANY STRUCTURAL ELEMENT THAT IS TO REMAIN. ANY DAMAGED ELEMENTS MUST BE REPAIRED/REPLACED AT NO ADDITIONAL COST TO OWNER.
7. WHERE POSTS PENETRATE ROOFING CONTRACTOR TO PROVIDE ROOFING AND SEALING OF THE ROOF SYSTEM AROUND THE STEEL POSTS.

(A) KEYNOTES

A	800# MECHANICAL ROOF UNIT - VERIFY DIMENSIONS WITH PURCHASED MECHANICAL EQUIPMENT.

181 E. 5600 S.
Suite 200
Murray, Utah 84107

TEL 801/530-3148
FAX 801/530-3150

http://www.VBFA.com

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structural DESIGN STUDIO
2225 E. Murray Holladay Rd. #110
Salt Lake City, Utah 84117
801.274.3950 :: structuraldx.com

CLIENT:
OGDEN CITY

THIS SQUARE APPEARS 1/2"x1/2" ON FULL SIZE SHEETS

NO	DATE	REVISION

JEFFREY B. AMBROSE 4768873 PROFESSIONAL STRUCTURAL ENGINEER STATE OF UTAH
10/21/2024

PROJECT NAME:
FRANCOM PUBLIC SAFETY CENTER HVAC UPGRADES

2186 LINCOLN AVE
OGDEN, UT 84401

DRAWING TITLE:
STRUCTURAL FRAMING INFORMATION

FILE: --
DRAWN BY: SDS
CHECKED BY: SDS
PROJ. NO: 240262
DRAWING NO: **S101**