VOLUME TWO

Jefferson State Office Building
Renovate Mechanical/Electrical/Life-Safety/ State Office Building
Jefferson City, Missouri

OWNER:

STATE OF MISSOURI
MICHAEL L. PARSON,
GOVERNOR

PROJECT MANAGEMENT:

OFFICE OF ADMINISTRATION
DIVISION OF FACILITIES MANAGEMENT,
DESIGN AND CONSTRUCTION

PROJECT NUMBER: O1911-01
SITE NUMBER: 1001
ASSET NUMBER: 3101001057

JEFFERSON BUILDING

SITE LOCATION MAP
NTS

SHEET LIST:

VOLUME ONE:

VOLUME TWO:

VOLUME THREE:

DESIGN TEAMS:

MCCLURE ENGINEERING
MEP ENGINEERS
McClure Engineering Associates, Inc.

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ISSUANCE:

BID SET

SHEET NUMBER:

G-001.2

SHEETS 85 TO 160 of 244 SHEETS

SHEET 85 OF 244
AUGUST 31, 2023

MECHANICAL

A	COMPRESSED AIR
AD	ACCESS DOOR
AHU	AIR HANDLING UNIT
AP	ACCESS PANEL
AV	AIR VENT
B	BOILER
BV	BALANCE VALVE
BAP	BUILDING ACCESS PANEL
COM	COMMON
CH	CHILLER
CS	CONDENSER WATER SUPPLY
CR	CONDENSER WATER RETURN
CHS	CHILLED HOT SUPPLY
CHR	CHILLED HOT RETURN
CWL	CHILLED WATER LOOP
CHV	CHECK VALVE
CT	COOLING TOWER
CU	CONDENSER UNIT
CV	CONTROL VALVE
CWR	CHILLED WATER RETURN
CWS	CHILLED WATER SUPPLY
D	DAMPER
DISCH	DISCHARGE
DN	DOWN
DP	DIFFERENTIAL PRESSURE
DR	DRAIN LINE
DV	DRAIN VALVE
EF	EXHAUST FAN
ET	EXPANSION TANK
EX	EXISTING
EXH	EXHAUST
F	FLANGE CONNECTION
FC	FLEXIBLE CONNECTION
FCU	FAN COIL UNIT
FOS	FUEL OIL SUPPLY
FOR	FUEL OIL RETURN
FPT	FAN POWERED TERMINAL UNIT
FRD	FIRE RATED DAMPER
T	STEAM TRAP
FTR	FIN TUBE RADIATION
G	GAS
GA	GAUGE
GC	GAUGE COCK
GYS	GLYCOL CHILLED WATER SUPPLY
GYR	GLYCOL CHILLED WATER RETURN
H	HUMIDIFIER
HPS	HIGH PRESSURE STEAM
HPC	HIGH PRESSURE CONDENSATE
HWS	HEATING WATER SUPPLY
HWR	HEATING WATER RETURN
HX	HEAT EXCHANGER
LPS	LOW PRESSURE STEAM
LPC	LOW PRESSURE CONDENSATE
MA	MAKE-UP AIR
MBH	1000 BTU/HR
MC	MECHANICAL COUPLING
MPS	MEDIUM PRESSURE STEAM
MPC	MEDIUM PRESSURE CONDENSATE
MXA	MIXED AIR
NC	NORMALLY CLOSED
NO	NORMALLY OPEN
NP	NON-POTABLE COLD WATER
OA	OUTSIDE AIR
P	PETE'S PLUG
PC	PUMPED CONDENSATE
PD	PUMP DISCHARGE
PR	PRESSURE REGULATOR
PRV	PRESSURE REDUCING VALVE
PWS	POOL WATER SUPPLY
PWR	POOL WATER RETURN
RA	RETURN AIR
RF	RETURN FAN
RLA	RELIEF AIR
RLF	RELIEF FAN
RTU	ROOF TOP UNIT
RV	RELIEF VALVE
SA	SUPPLY AIR
SD	SMOKE DAMPER
SF	SUPPLY FAN
STR	STRAINER
SUC	SUCTION
SUD	SUCTION DIFFUSER
SV	SERVICE VALVE
TH	THERMOMETER
TW	THERMOMETER WELL
U	UNION
UH	UNIT HEATER
UV	UNIT VENTILATOR
V	VENT
VAC	VACUUM
VAV	VARIABLE AIR VOLUME UNIT

CS	CONDENSER WATER SUPPLY
CR	CONDENSER WATER RETURN
CHS	CHILLED-HOT SUPPLY
CHR	CHILLED-HOT RETURN
CWS	CHILLED WATER SUPPLY
CWR	CHILLED WATER RETURN
CWS-F	CHILLED WATER SUPPLY - FAN COIL LOOP
CWR-F	CHILLED WATER RETURN - FAN COIL LOOP
CWL	CHILLED WATER LOOP
DR	DRAIN LINE
G	GAS
GYS	GLYCOL CHILLED WATER SUPPLY
GYR	GLYCOL CHILLED WATER RETURN
HPS	HIGH PRESSURE STEAM
HPC	HIGH PRESSURE CONDENSATE
HWS	HEATING WATER SUPPLY
HWR	HEATING WATER RETURN
HWS-F	HEATING WATER SUPPLY - FAN COIL LOOP
HWR-F	HEATING WATER RETURN - FAN COIL LOOP
LPS	LOW PRESSURE STEAM
LPC	LOW PRESSURE CONDENSATE
MPS	MEDIUM PRESSURE STEAM
MPC	MEDIUM PRESSURE CONDENSATE
PC	PUMPED CONDENSATE
UP	PIPE LINE, TURNED UP
DN	PIPE LINE, TURNED DOWN
BV	BALANCE VALVE
CV	2 WAY CONTROL VALVE
3CV	3 WAY CONTROL VALVE
CHV	CHECK VALVE
DV	DRAIN VALVE
F	FLANGE CONNECTION
	GAUGE AND GAUGE COCK
MC	MECHANICAL COUPLING
P	PETE'S PLUG
PFC	PIPE FLEXIBLE CONNECTOR
PR	PRESSURE REGULATOR
PRV	PRESSURE REDUCING VALVE
RV	RELIEF VALVE
SV	SERVICE VALVE
STR	STRAINER
T	STEAM TRAP
TH	THERMOMETER
TW	THERMOMETER WELL
U	UNION
	METER
	CAP
	CONCENTRIC REDUCER
	ECCENTRIC REDUCER (BOTTOM & TOP LEVEL)

	FLEXIBLE DUCTWORK
	SUPPLY AIR DUCT, DOWN
	SUPPLY AIR DUCT, UP
	RETURN, OUTSIDE, RELIEF OR EXH DUCT DN
	RETURN, OUTSIDE, RELIEF OR EXH DUCT UP
	DROP IN DIRECTION OF ARROW
D M FSD	DAMPER
	AUTOMATIC CONTROL DAMPER
	FIRE RATED DAMPER
FRD BDD	BACK DRAFT DAMPER
	FLEXIBLE DUCT BOOT CONNECTION WITH DAMPER (SEE DETAIL)
AP X"xX"	ACCESS DOOR/PANEL
Ø	ROUND DUCTWORK
	OVAL DUCTWORK
	TURNING VANES
	EXISTING PIPING OR EQUIPMENT TO REMAIN
	EXISTING PIPING OR EQUIPMENT TO BE REMOVED
	NEW PIPING OR EQUIPMENT
RF 1	TYPE OF EQUIPMENT EQUIPMENT DESIGNATION NUMBER OF EQUIPMENT
A 150	TYPE AIR DEVICE DESIGNATION CFM
A M1.1	SECTION REFERENCE SECTION DESIGNATION SHEET WHERE SECTION IS SHOWN
	CONNECT TO EXISTING EQUIPMENT
3	KEYED NOTE DESIGNATION

TEMPERATURE CONTROLS

AHU	AIR HANDLING UNIT
CD	CONTROL DAMPER
CMD	COMMAND
CS	CURRENT SWITCH
CWV	CHILLED WATER VALVE
D	DAMPER
DA	DISCHARGE AIR
DP	DIFFERENTIAL PRESSURE SWITCH
EF	EXHAUST FAN
ES	END SWITCH
F	FLOW
FDBK	FEEDBACK
FM	FLOW METER
H	HUMIDITY
HWV	HEATING WATER VALVE
MXA	MIXED AIR
NC	NORMALLY CLOSED
NO	NORMALLY OPEN
OA	OUTSIDE AIR
OAD	OUTSIDE AIR DAMPER
P	PRESSURE
PWM	PULSE WIDTH MODULATOR
RA	RETURN AIR
RAD	RETURN AIR DAMPER
RF	RETURN FAN
RLAD	RELIEF AIR DAMPER
SA	SUPPLY AIR
SF	SUPPLY FAN
SPD	SPEED
T	TEMPERATURE
VAV	VARIABLE AIR VOLUME BOX
VFD	VARIABLE FREQUENCY DRIVE
VLV	VALVE

M	FLOW METER
M	CONTROL DAMPER

SHEET IS PLOTTED TO SCALE IF ADJACENT LINE MEASURES 1 INCH

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JEFFERSON STATE
OFFICE BUILDING
205 JEFFERSON STREET
JEFFERSON CITY, MO 65101

PROJECT # O1911-01
SITE # 1001
ASSET # 3101001057

REVISION: _____
DATE: _____
REVISION: _____
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DATE: _____
ISSUE DATE:

CAD DWG FILE: M0.1-075107.001
DRAWN BY: AM
CHECKED BY: EP
DESIGNED BY: JW

SHEET TITLE:

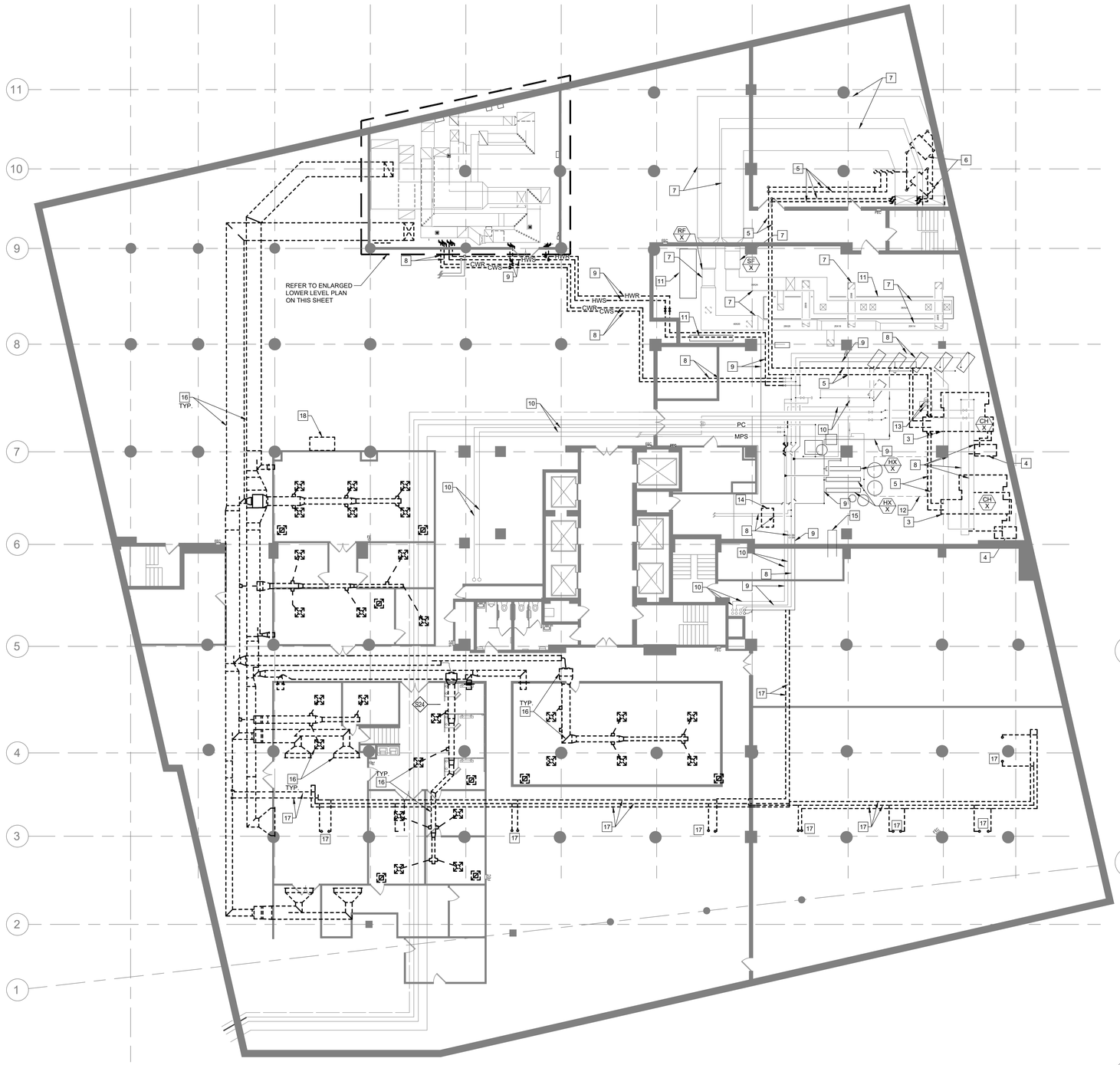
SYMBOLS AND ABBREVIATIONS

SHEET NUMBER:

M0.1

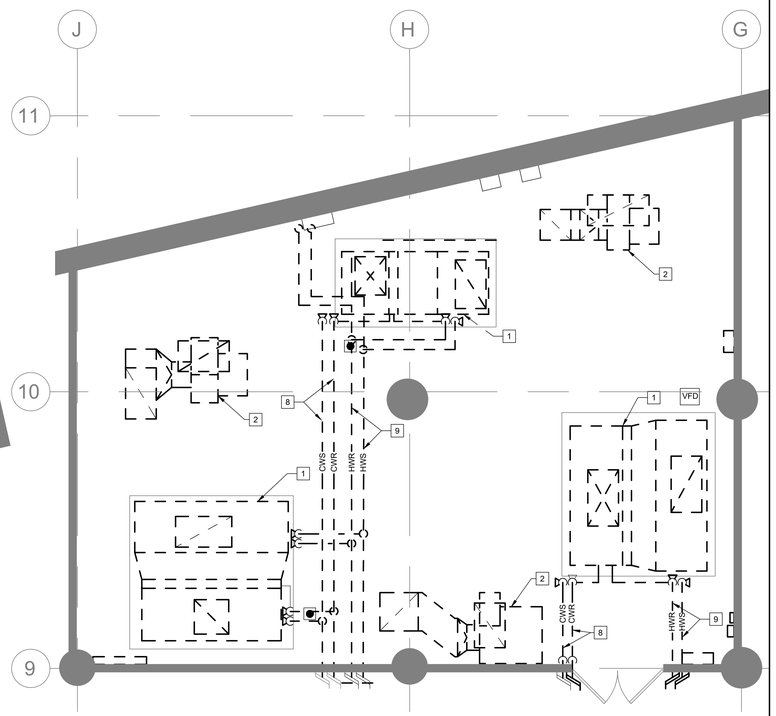
86 OF 244 SHEETS

DATE : August 31, 2023



BASEMENT FLOOR PLAN - MECHANICAL - PARTIAL DEMOLITION

3/32" = 1'-0"



BASEMENT AHU ROOM
FLOOR PLAN LOWER- MECHANICAL - DEMOLITION

1/4" = 1'-0"

GENERAL NOTES

1. EXISTING CHILLED WATER, HEATING WATER, AND CHANGEOVER HEAT/COOL SYSTEMS TO REMAIN ACTIVE UNTIL RENOVATION OF FLOORS 1-14 IS COMPLETE.
2. SEE MD3.01 FOR BASEMENT FLOOR FINAL BASEMENT PLAN.
3. PNEUMATIC CONTROL LINES REMAIN ACTIVE UNTIL FINAL PHASE OF THE PROJECT. SEAL ANY CONNECTIONS FROM REMOVED EQUIPMENT.

KEYED NOTES

1. DEMOLISH AIR HANDLER AND ALL ASSOCIATED PIPING. CONTRACTOR TO REMOVE ASSOCIATED CONCRETE HOUSEKEEPING PAD. CONTRACTOR TO DEMOLISH DUCTWORK TO ALLOW FOR NEW CONNECTION TO NEW AIR HANDLING UNIT, REFER TO NEW WORK ON M3.0 FOR ADDITIONAL INFORMATION.
2. DEMOLISH RETURN FAN. CONTRACTOR TO DEMOLISH DUCTWORK ALLOW FOR NEW CONNECTION TO NEW RETURN FAN. REFER TO NEW WORK ON M3.0 FOR ADDITIONAL INFORMATION. CONTRACTOR TO REMOVE ASSOCIATED CONCRETE HOUSEKEEPING PAD.
3. DEMOLISH CHILLER AND ALL ASSOCIATED PIPING AND ACCESSORIES AND ASBESTOS ABATEMENT. CONTRACTOR TO DEMOLISH HOUSE KEEPING PAD.
4. DEMOLISH CHILLER PUMP AND ALL ASSOCIATED PIPING AND ACCESSORIES. CONTRACTOR TO DEMOLISH HOUSE KEEPING PAD.
5. DEMOLISH CONDENSING WATER PIPING AND ALL ASSOCIATED VAVLES, SUPPORTS, AND HANGERS.
6. DEMOLISH CONDENSING WATER PUMPS AND ALL ASSOCIATED ACCESSORIES. CONTRACTOR TO DEMOLISH HOUSE KEEPING PAD.
7. DUCTWORK SERVING SWITCHGEAR TO REMAIN UNTIL FINAL PHASE.
8. CHILLED WATER SUPPLY AND RETURN LINES AND PUMPS TO REMAIN UNTIL NEW SYSTEM IS ACTIVE ON ALL FLOORS.
9. HEATING WATER SUPPLY AND RETURN LINES AND PUMPS TO REMAIN UNTIL NEW SYSTEM IS ACTIVE ON ALL FLOORS.
10. CHILLED WATER SUPPLY AND RETURN LINES AND PUMPS TO REMAIN UNTIL NEW SYSTEM IS ACTIVE ON ALL FLOORS.
11. ELECTRICAL EQUIPMENT SHOWN FOR REFERENCE ONLY.
12. HATCH TO PAVED LOADING AREA ABOVE. DEMOLISH PAVEMENT AND OPEN HATCH TO REMOVE CHILLERS AND ELECTRICAL GEAR FROM BASEMENT.
13. EXISTING BUILDING CONTROL VALVE (56" VALVE) TO BE RELOCATED. REFER TO NEW WORK ON M3.0 FOR NEW LOCATION.
14. AIR COMPRESSOR TO BE DEMOLISHED IN FINAL PHASE OF PROJECT.
15. BLANK OFF EXISTING 24"x24" DUCT TO LOADING DOCK.
16. EXISTING DUCTWORK, VAVS, AND ALL ASSOCIATED HANGERS, DIFFUSERS, RUNOUTS, AND ACCESSORIES TO BE DEMOLISHED.
17. EXISTING HEATING WATER PIPING SERVING FIRST FLOOR FIN TUBE TO BE DEMOLISHED. CONTRACTOR TO DEMOLISH ALL HANGERS AND ACCESSORIES. FIN TUBE TO REMAIN, SEE NEW WORK FOR ADDITIONAL INFORMATION.
18. EXISTING CRAHU TO BE DEMOLISHED. ASSOCIATED DUCTWORK TO REMAIN AND BE RECONNECTED TO NEW CRAHU BEING INSTALLED AT SAME LOCATION.

SHEET IS PLOTTED TO SCALE IF ADJACENT LINE MEASURES 1 INCH

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RENOVATE MECHANICAL/ ELECTRICAL/LIFE-SAFETY/ STATE OFFICE BUILDING

JEFFERSON STATE OFFICE BUILDING
205 JEFFERSON STREET
JEFFERSON CITY, MO 65101

PROJECT # O1911-01
SITE # 1001
ASSET # 3101001057

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CAD DWG FILE:MD3.0-075107.001
DRAWN BY: AM
CHECKED BY: EP
DESIGNED BY: JW

SHEET TITLE:
BASMENT FLOOR PLAN-MECHANICAL PARTIAL DEMOLITION

SHEET NUMBER:
MD3.0

87 OF 244 SHEETS

DATE : August 31, 2023

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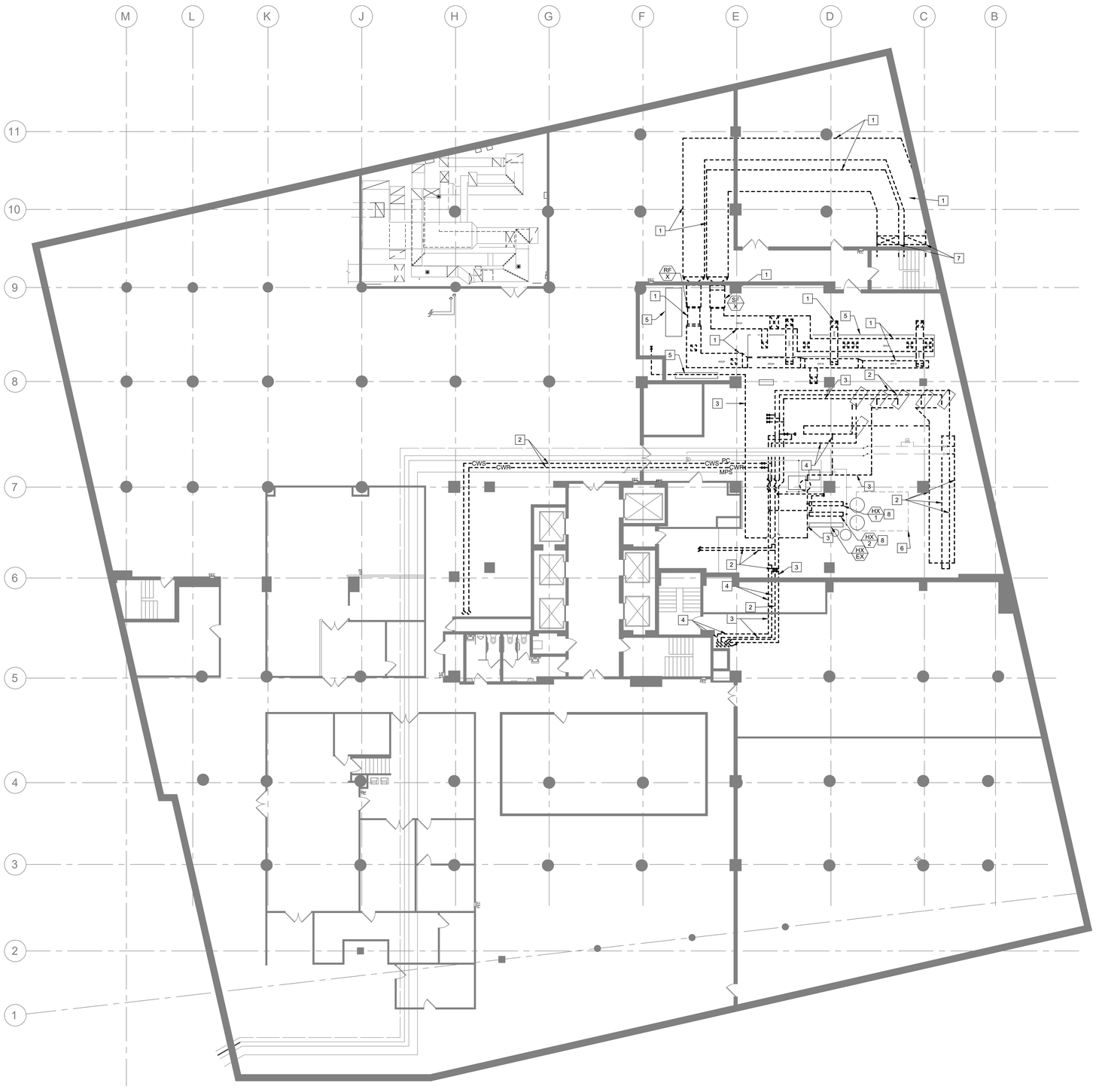

BASEMENT FLOOR PLAN - MECHANICAL - FINAL DEMOLITION

3/32" = 1'-0"

N

GENERAL NOTES

1. EXISTING CHILLED WATER, HEATING WATER, AND CHANGEOVER HEAT/COOL SYSTEMS TO REMAIN ACTIVE UNTIL RENOVATION OF FLOORS 1-14 IS COMPLETE.
2. PNEUMATIC CONTROL LINES REMAIN ACTIVE UNTIL FINAL PHASE OF THE PROJECT. SEAL ANY CONNECTIONS FROM REMOVED EQUIPMENT.

KEYED NOTES

1. DEMOLISH SUPPLY AND RETURN DUCTWORK AND ALL ASSOCIATED DIFFUSERS, HANGERS, AND SUPPORTS. DEMOLISH CEILING HUNG SUPPLY AND RETURN FANS.
2. DEMOLISH CHILLED WATER SUPPLY AND RETURN LINES AND ALL ASSOCIATED ACCESSORIES INCLUDING PUMPS. DEMOLITION OF THE EXISTING PIPING AND PIPING SUPPORTS TO OCCUR AFTER THE NEW SYSTEMS ARE INSTALLED, BALANCED AND ARE FUNCTIONING NORMALLY ON ALL FLOORS.
3. DEMOLISH HEATING WATER SUPPLY AND RETURN LINES AND ALL ASSOCIATED ACCESSORIES INCLUDING PUMPS. DEMOLITION OF THE EXISTING PIPING AND PIPING SUPPORTS TO OCCUR AFTER THE NEW SYSTEMS ARE INSTALLED, BALANCED AND ARE FUNCTIONING NORMALLY ON ALL FLOORS.
4. DEMOLISH CHILLED-HOT WATER SUPPLY AND RETURN LINES AND ALL ASSOCIATED ACCESSORIES INCLUDING PUMPS. DEMOLITION OF THE EXISTING PIPING AND PIPING SUPPORTS TO OCCUR AFTER THE NEW SYSTEMS ARE INSTALLED, BALANCED AND ARE FUNCTIONING NORMALLY ON ALL FLOORS.
5. ELECTRICAL EQUIPMENT TO BE DEMOLISHED IN FINAL PHASE. SEE ELECTRICAL DRAWINGS. SHOWN HERE FOR REFERENCE ONLY.
6. HATCH TO LOADING RAMP ABOVE FOR REFERENCE ONLY. SEE S1.1 FOR DETAILS.
7. PROVIDE SHEET R-12 INSULATED METAL BLANK OFF OF SUPPORTING LOUVERS.
8. EXISTING HEATING WATER HEAT EXCHANGER TO BE DEMOLISHED. DEMOLISH PIPING BACK TO SERVICE VALVE. REFER TO FLOW DIAGRAM ON M5.2

SHEET IS PLOTTED TO SCALE IF ADJACENT LINE MEASURES 1 INCH

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ISSUE DATE:

CAD DWG FILE: MD3.0-075107.001
DRAWN BY: AM
CHECKED BY: EP
DESIGNED BY: JW

SHEET TITLE:
BASMENT FLOOR PLAN-MECHANICAL -FINAL DEMOLITION

SHEET NUMBER:
MD3.01

88 OF 244 SHEETS

DATE : August 31, 2023

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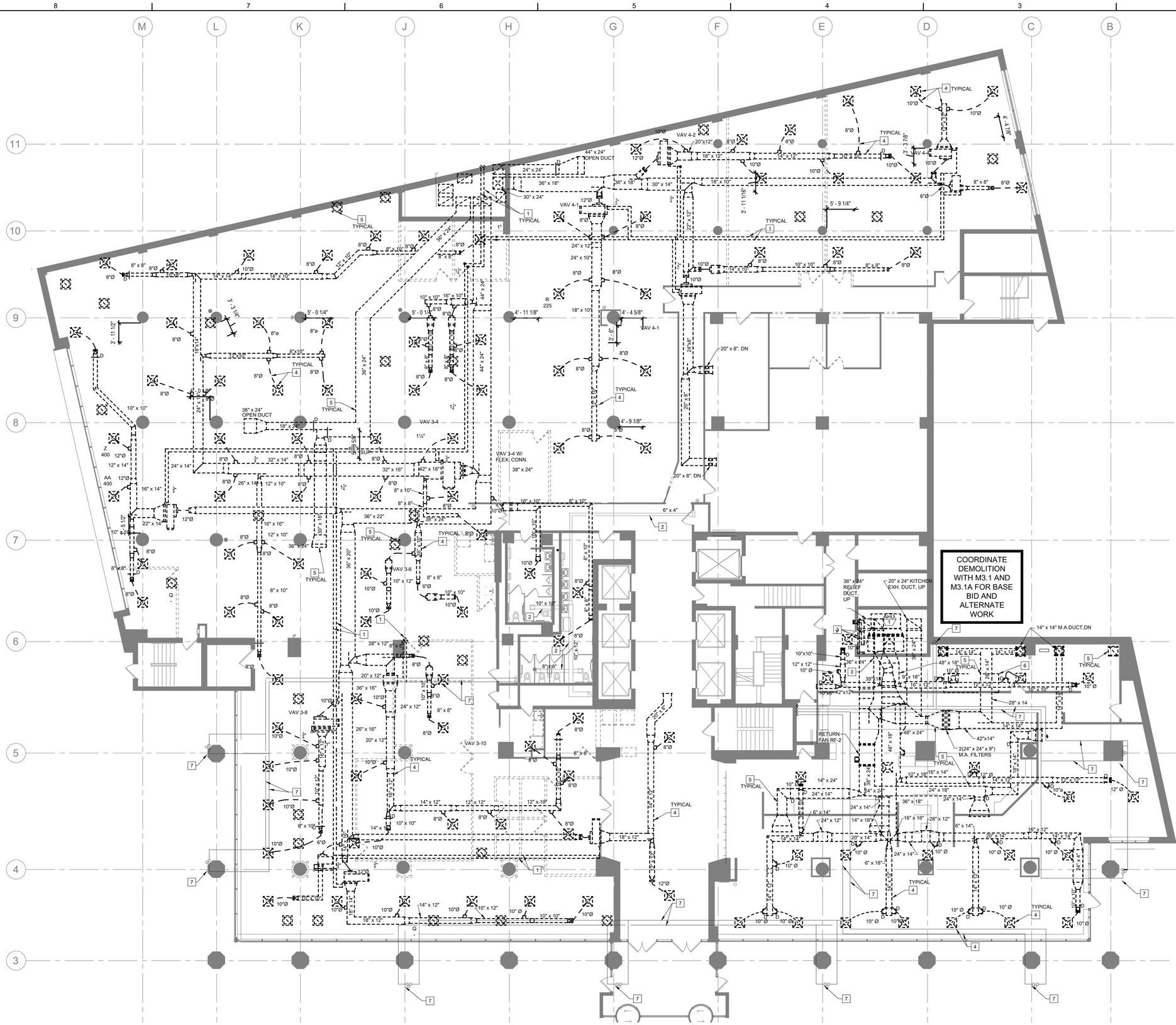

GENERAL NOTES

1. EXISTING CHILLED WATER, HEATING WATER, AND CHANGEOVER HEAT/COOL SYSTEMS TO REMAIN ACTIVE UNTIL RENOVATION OF FLOORS 1-14 IS COMPLETE.
2. PNEUMATIC CONTROL LINES REMAIN ACTIVE UNTIL FINAL PHASE OF THE PROJECT. SEAL ANY CONNECTIONS FROM REMOVED EQUIPMENT.

KEYED NOTES

1. DEMOLISH CHILLED-HOT WATER PIPING AND ASSOCIATED HANGERS SERVING FAN COIL UNITS.
2. EXISTING EXHAUST DUCT TO REMAIN.
3. DEMOLISH AIR HANDLER AND ALL ASSOCIATED PIPING. CONTRACTOR TO DEMOLISH ASSOCIATED CONCRETE HOUSEKEEPING PAD. CONTRACTOR TO DEMOLISH DUCTWORK TO ALLOW FOR NEW CONNECTION TO NEW AIR HANDLING UNIT, REFER TO NEW WORK ON M3.0 FOR ADDITIONAL INFORMATION.
4. DEMOLISH ALL SUPPLY AIR DUCTWORK AND ALL ASSOCIATED DIFFUSERS AND FLEX DUCT RUN OUTS.
5. DEMOLISH ALL RETURN AIR DUCTWORK AND ASSOCIATED DIFFUSERS.
6. KITCHEN EXHAUST HOOD AND ALL ASSOCIATED DUCTWORK AND ASSOCIATED FIRE SUPPRESSION TO BE DEMOLISHED.
7. EXISTING FAN COIL UNIT SUPPLY AND RETURN TO REMAIN ACTIVE DURING CONSTRUCTION. ABANDON IN PLACE AT END OF CONSTRUCTION.

FIRST FLOOR PLAN - MECHANICAL- DEMOLITION

1/8" = 1'-0"

N

SHEET IS PLOTTED TO SCALE IF ADJACENT LINE MEASURES 1 INCH

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STATE OF MISSOURI
MICHAEL L. PARSON,
GOVERNOR

PHILIP J. WENTZ NUMBER E-29111 STATE OF MISSOURI PROFESSIONAL ENGINEER

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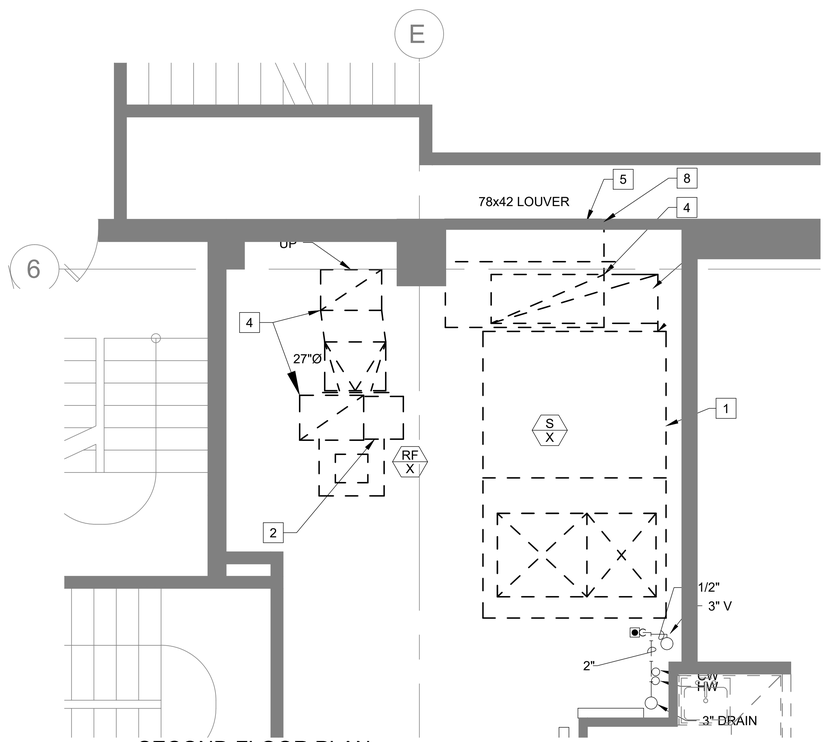
CAD DWG FILE: MD3.1-075107.001
DRAWN BY: AM
CHECKED BY: EP
DESIGNED BY: JW

SHEET TITLE:
FIRST FLOOR PLAN-MECHANICAL -DEMOLITION

SHEET NUMBER:
MD3.1

89 OF 244 SHEETS

DATE : August 31, 2023

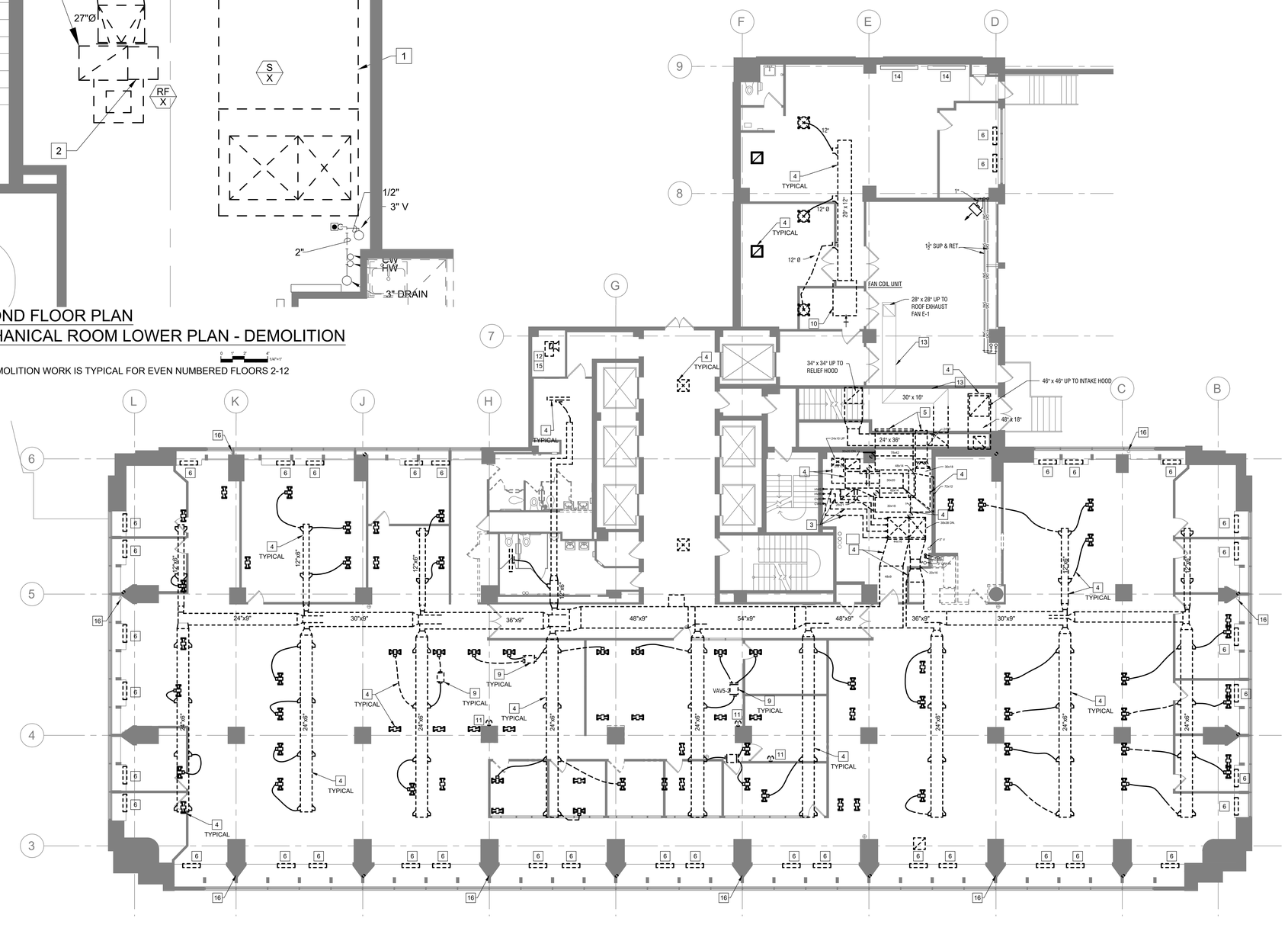


SECOND FLOOR PLAN
MECHANICAL ROOM LOWER PLAN - DEMOLITION

1/4" = 1'-0"

N

NOTE: DEMOLITION WORK IS TYPICAL FOR EVEN NUMBERED FLOORS 2-12



SECOND FLOOR PLAN - MECHANICAL - DEMOLITION

1/8" = 1'-0"

N

NOTE: DEMOLITION WORK IS TYPICAL FOR EVEN NUMBERED FLOORS 2-12

SHEET IS PLOTTED TO SCALE IF ADJACENT LINE MEASURES 1 INCH

GENERAL NOTES

1. DEMOLITION WORK IS TYPICAL FOR EVEN NUMBERED FLOORS 2-12
2. EXISTING CHILLED WATER, HEATING WATER, AND CHANGEOVER HEAT/COOL SYSTEMS TO REMAIN ACTIVE UNTIL RENOVATION OF FLOORS 1-14 IS COMPLETE.
3. PNEUMATIC CONTROL LINES REMAIN ACTIVE UNTIL FINAL PHASE OF THE PROJECT. SEAL ANY CONNECTIONS FROM REMOVED

KEYED NOTES

1. DEMOLISH AIR HANDLER AND ALL ASSOCIATED PIPING, AND DUCTWORK. CONTRACTOR TO DEMOLISH ASSOCIATED CONCRETE HOUSEKEEPING PAD.
2. DEMOLISH RETURN FAN AND ALL ASSOCIATED DUCTWORK, CONTRACTOR TO REMOVE ASSOCIATED CONCRETE HOUSEKEEPING PAD.
3. DEMOLISH HEATING AND CHILLED WATER LINES FROM THIRD FLOOR SERVING AIR HANDLING UNIT. EXISTING RISERS TO REMAIN.
4. DEMOLISH SUPPLY, RETURN, EXHAUST AND OUTSIDE AIR DUCT ALONG WITH ALL ASSOCIATED DAMPERS,DIFFUSERS, AND ACCESSORIES.
5. DEMOLISH EXISTING OUTSIDE AIR LOUVER AND ASSOCIATED DUCTWORK, CONTRACTOR TO PATCH EXTERIOR WALL TO MATCH FINISHED CONDITIONS.
6. DEMOLISH FAN COIL UNIT AND ALL ASSOCIATED PIPING BACK TO MAIN.
7. NOT USED.
8. PROVIDE 20 GA BLANK OFF, PAINT TO MATCH EXISTING CONDITIONS. SEAL WATER TIGHT.
9. DEMOLISH VAV BOX AND ALL ASSOCIATED DUCTWORK.
10. DEMOLISH FAN COIL UNIT AND ALL ASSOCIATED DUCTWORK AND PIPING.
11. DEMOLISH THERMOSTAT AND ALL ASSOCIATED WIRING CONTRACTOR TO PATCH WALL TO MATCH FINISHED CONDITIONS.
12. CONTRACTOR TO DEMOLISH LOBBY PRESSURIZATION FAN AND ASSOCIATED DUCTWORK.
13. EXISTING KITCHEN EXHAUST DUCTWORK FROM KITCHEN HOODS EXISTING TO REMAIN IN BASE BID, ALTERNATE #3&4 CALLS FOR EXISTING KITCHEN EXHAUST DUCTWORK FROM KITCHEN HOODS. DEMOLISH DUCTWORK BACK TO POINT SHOWN. CONTRACTOR TO TEMPORARILY CAP EXISTING DUCT TO REMAIN.
14. EXISTING FIN TUBE TO REMAIN.
15. ABATE INSULATION AND DEMOLISH ABANDONED PIPE RISER. RISERS INCLUDE ABANDONED ICE WATER, SANITARY, HCS, HCS REVERSE SUPPLY, AND HCR PIPING (ALL 2" AND SMALLER) FIRE STOP ALL PENETRATIONS.
16. DEMOLISH HORIZONTAL CONDENSATE DRAIN BRANCHES BACK TO MAIN AND CAP. PREPARE FOR NEW CONNECTION. CONDENSATE STACK TO REMAIN ACTIVE.

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PROJECT # O1911-01
SITE # 1001
ASSET # 3101001057

REVISION:
DATE:
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DATE:
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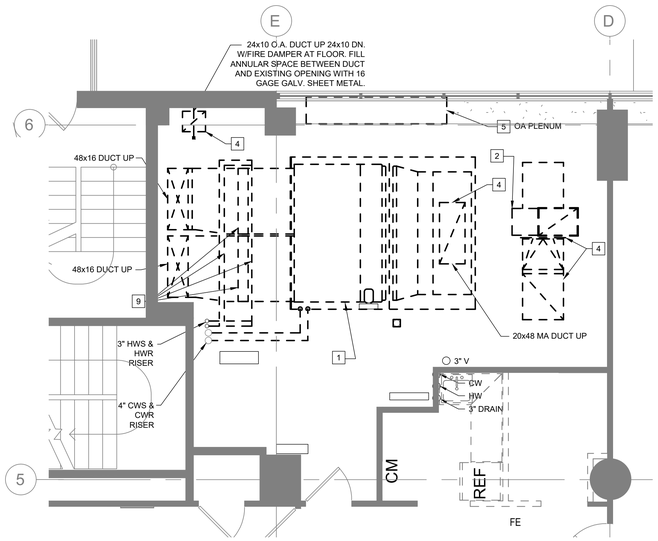
DATE:
ISSUE DATE:

CAD DWG FILE:MD3.2-075107.001
DRAWN BY: AM
CHECKED BY: EP
DESIGNED BY: JW

SHEET TITLE:
SECOND FLOOR PLAN-MECHANICAL -DEMOLITION

SHEET NUMBER:
MD3.2

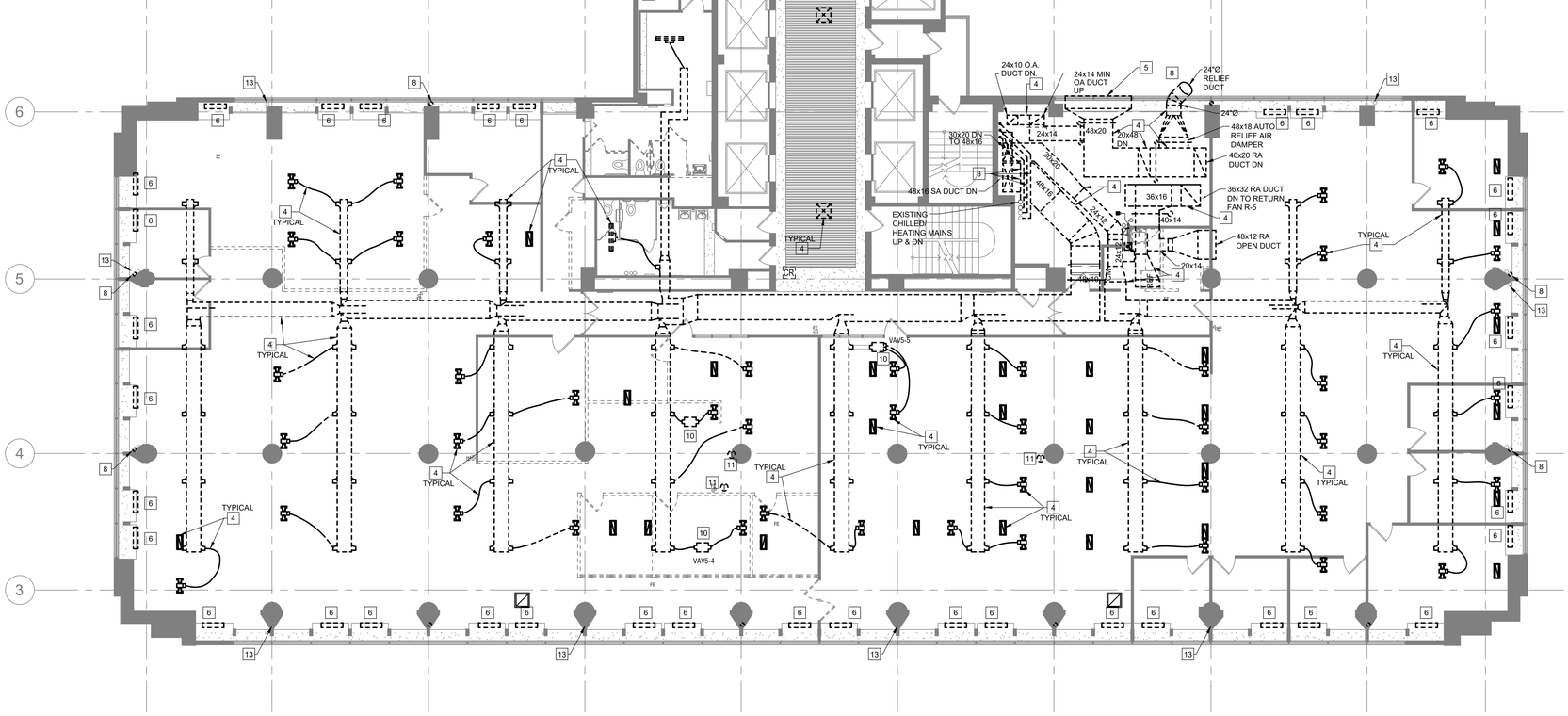
DATE : August 31, 2023



THIRD FLOOR PLAN - MECHANICAL ROOM LOWER - DEMOLITION

1/4" = 1'-0"

NOTE: DEMOLITION WORK IS TYPICAL FOR ODD NUMBERED FLOORS 3-13



THIRD FLOOR PLAN - MECHANICAL - DEMOLITION

1/8" = 1'-0"

NOTE: DEMOLITION WORK IS TYPICAL FOR ODD NUMBERED FLOORS 3-13

SHEET IS PLOTTED TO SCALE IF ADJACENT LINE MEASURES 1 INCH

GENERAL NOTES

1. DEMOLITION WORK IS TYPICAL FOR ODD NUMBERED FLOORS 3-13
2. EXISTING CHILLED WATER, HEATING WATER, AND CHANGEOVER HEAT/COOL SYSTEMS TO REMAIN ACTIVE UNTIL RENOVATION OF FLOORS 1-14 IS COMPLETE.
3. PNEUMATIC CONTROL LINES REMAIN ACTIVE UNTIL FINAL PHASE OF THE PROJECT. SEAL ANY CONNECTIONS FROM REMOVED EQUIPMENT.

KEYED NOTES

1. DEMOLISH AIR HANDLER AND ALL ASSOCIATED PIPING, AND DUCTWORK. CONTRACTOR TO DEMOLISH ASSOCIATED CONCRETE HOUSEKEEPING PAD.
2. DEMOLISH RETURN FAN AND ALL ASSOCIATED DUCTWORK. CONTRACTOR TO REMOVE ASSOCIATED CONCRETE HOUSEKEEPING PAD.
3. DEMOLISH HEATING AND CHILLED WATER LINES SERVING AIR HANDLING UNIT DOWN ON SECOND FLOOR. CHILLED AND HEATING WATER MAINS TO REMAIN.
4. DEMOLISH SUPPLY, RETURN, AND OUTSIDE AIR DUCT ALONG WITH ALL ASSOCIATED DAMPERS, DIFFUSERS, AND ACCESSORIES.
5. DEMOLISH EXISTING OUTSIDE AIR LOUVER AND ASSOCIATED DUCTWORK AND PLENUM. REFER TO NEW WORK ON M4.1 FOR NEW LOUVER AND BLANK OFF LOCATION.
6. DEMOLISH FAN COIL UNIT AND ALL ASSOCIATED PIPING BACK TO MAIN.
7. NOT USED.
8. PROVIDE 20 GA BLANK OFF, PAINT TO MATCH EXISTING CONDITIONS. SEAL WATER TIGHT.
9. DEMOLISH DUCT MOUNTED HEATING COIL AND ALL ASSOCIATED PIPING AND ACCESSORIES. DEMOLISH HEATING WATER PIPING BACK TO MAIN AND CAP.
10. DEMOLISH VAV BOX AND ALL ASSOCIATED DUCTWORK.
11. DEMOLISH THERMOSTAT AND ALL ASSOCIATED WIRING, CONTRACTOR TO PATCH WALL TO MATCH FINISHED CONDITIONS.
12. DEMOLISH EXISTING LOBBY PRESSURIZATION FAN AND ASSOCIATED DUCTWORK.
13. DEMOLISH HORIZONTAL CONDENSATE DRAIN BRANCHES BACK TO MAIN AND CAP. PREPARE FOR NEW CONNECTION. CONDENSATE STACK TO REMAIN ACTIVE.
14. ABATE INSULATION AND DEMOLISH ABANDONED PIPE RISER. RISERS INCLUDE ABANDONED ICE WATER, SANITARY, HCS, HCS REVERSE SUPPLY, AND HCR PIPING (ALL 2" AND SMALLER) FIRE STOP ALL PENETRATIONS.

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PROJECT # O1911-01
SITE # 1001
ASSET # 3101001057

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REVISION: DATE:
ISSUE DATE:

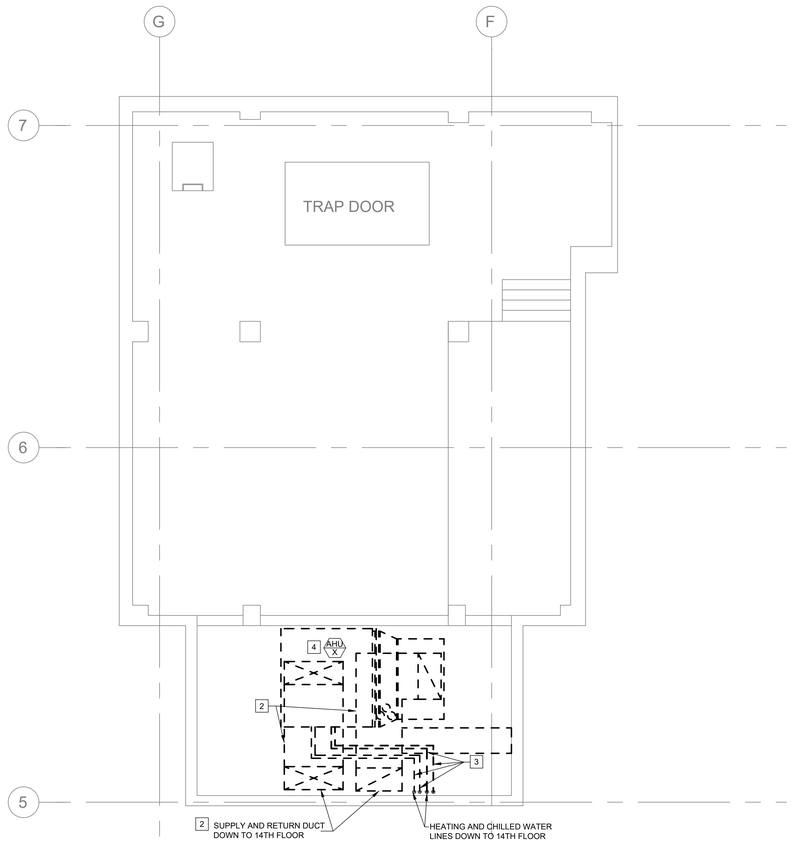
CAD DWG FILE: MD3.3-075107.001
DRAWN BY: AM
CHECKED BY: EP
DESIGNED BY: JW

SHEET TITLE:
THIRD FLOOR PLAN-MECHANICAL -DEMOLITION

SHEET NUMBER:
MD3.3

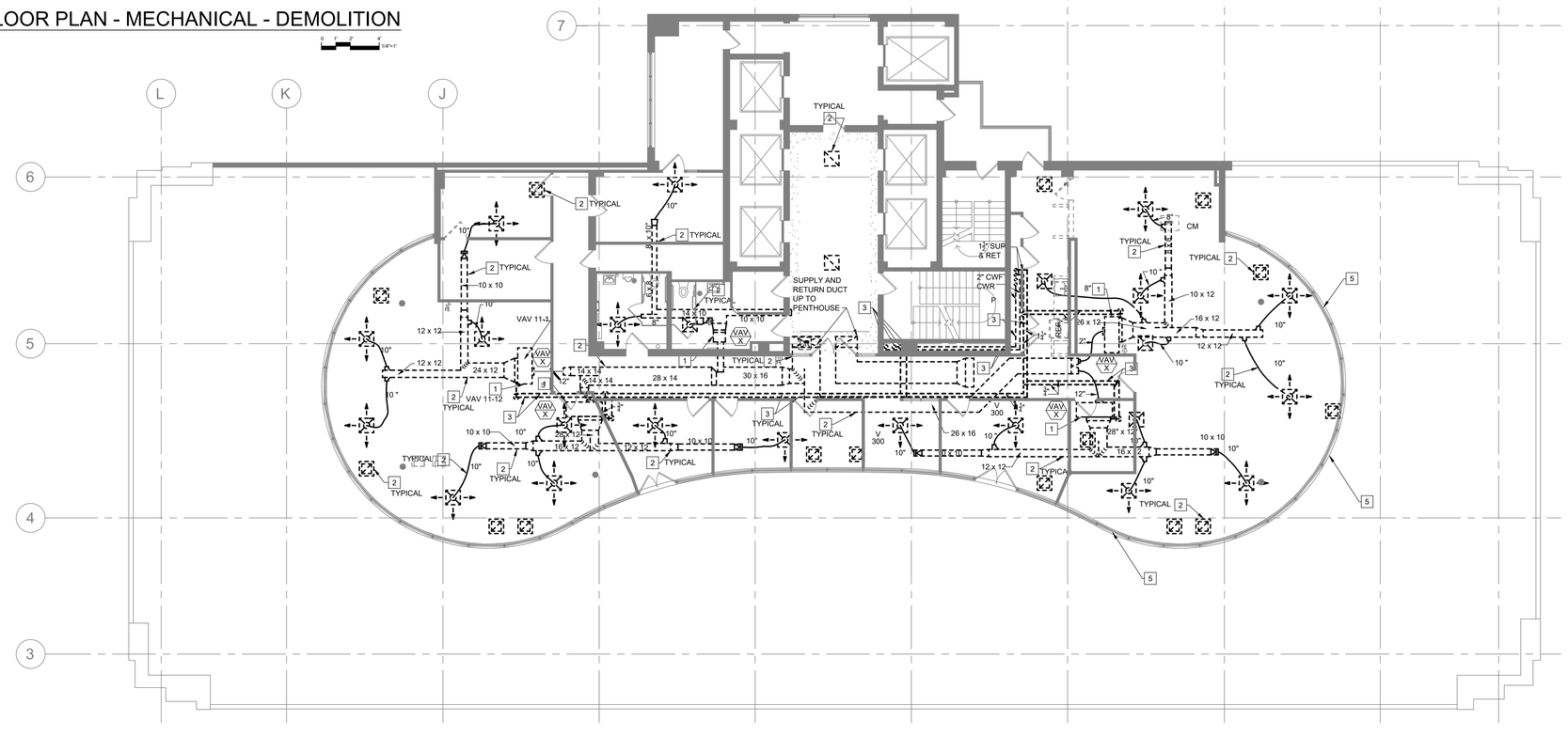
91 OF 244 SHEETS

DATE : August 31, 2023



PENTHOUSE FLOOR PLAN - MECHANICAL - DEMOLITION

1/4" = 1'-0"



FOURTEENTH FLOOR PLAN - MECHANICAL - DEMOLITION

1/8" = 1'-0"

GENERAL NOTES

1. EXISTING CHILLED WATER, HEATING WATER, AND CHANGEOVER HEAT/COOL SYSTEMS TO REMAIN ACTIVE UNTIL RENOVATION OF FLOORS 1-14 IS COMPLETE.
2. PNEUMATIC CONTROL LINES REMAIN ACTIVE UNTIL FINAL PHASE OF THE PROJECT. SEAL ANY CONNECTIONS FROM REMOVED

KEYED NOTES

1. DEMOLISH VAV BOX AND ALL ASSOCIATED PIPING, AND DUCTWORK.
2. DEMOLISH SUPPLY AND RETURN DUCT AND ALL ASSOCIATED DIFFUSERS AND ACCESSORIES..
3. DEMOLISH HEATING AND CHILLED WATER LINES.
4. DEMOLISH AIR HANDLER AND ALL ASSOCIATED PIPING. CONTRACTOR TO DEMOLISH ASSOCIATED CONCRETE HOUSEKEEPING PAD.
5. PERIMETER FIN TUBE TO REMAIN.

SHEET IS PLOTTED TO SCALE IF ADJACENT LINE MEASURES 1 INCH

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SITE # 1001
ASSET # 3101001057

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CAD DWG FILE: MD3.14-075107.001
DRAWN BY: AM
CHECKED BY: EP
DESIGNED BY: JW

SHEET TITLE:
FOURTEENTH FLOOR PLAN-MECHANICAL -DEMOLTION

SHEET NUMBER:
MD3.14

92 OF 244 SHEETS

DATE : August 31, 2023

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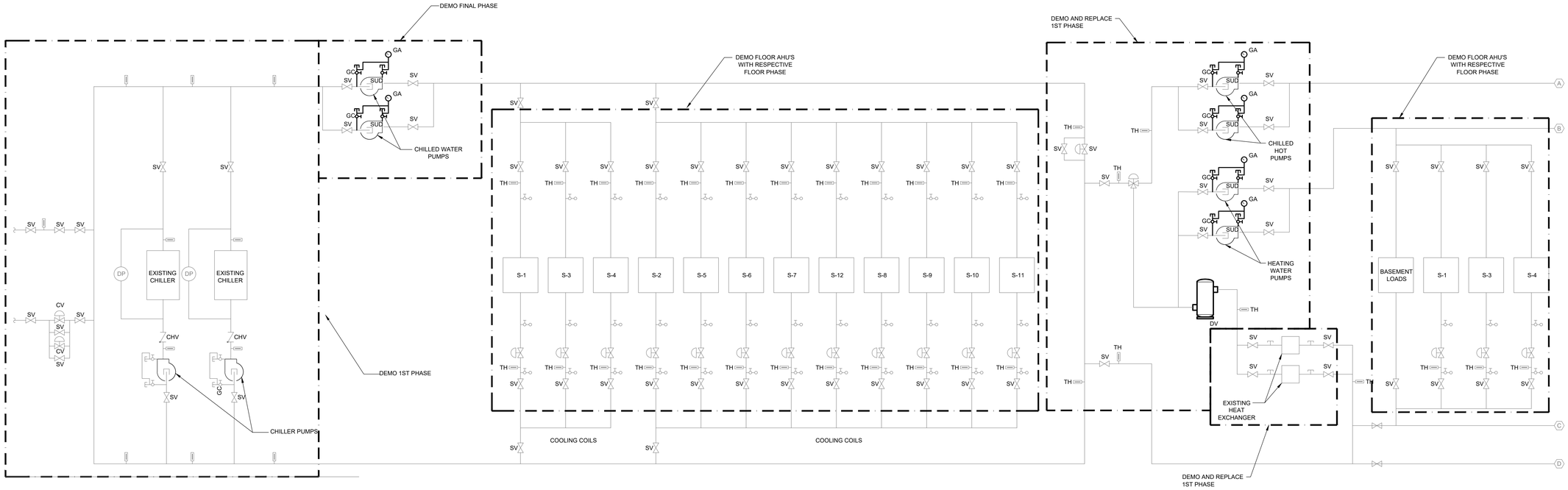

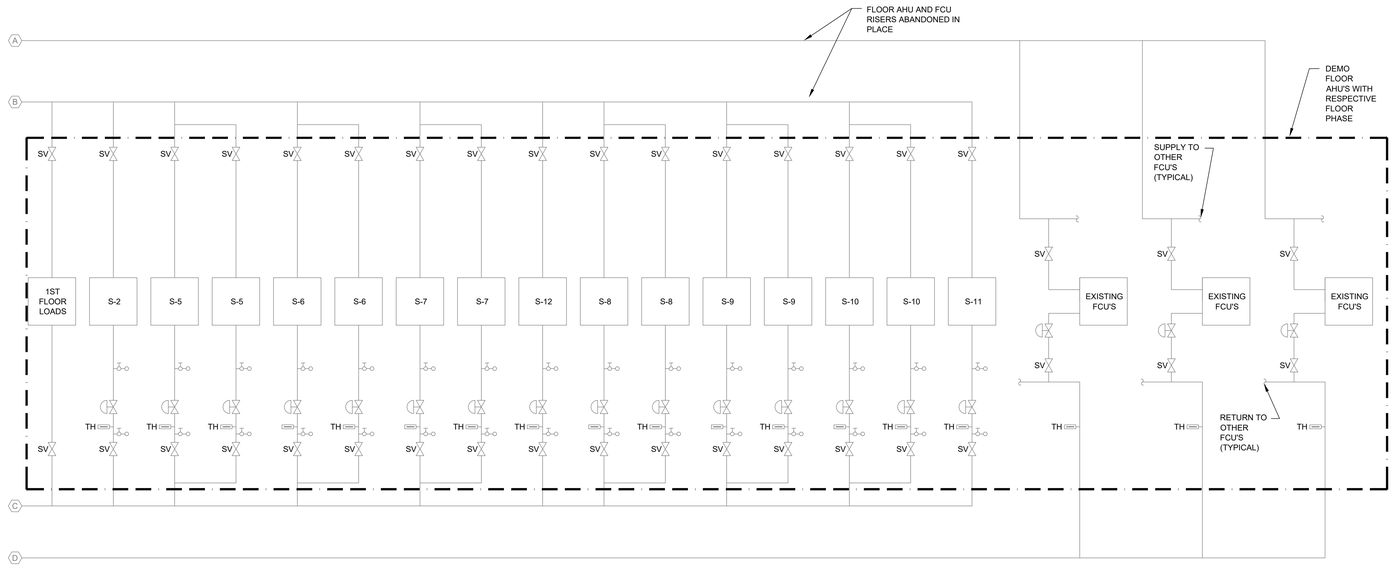

EXISTING CHILLED & HEATING WATER FLOW DIAGRAM - DEMO

N.T.S

SHEET IS PLOTTED TO SCALE IF ADJACENT LINE MEASURES 1 INCH

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CAD DWG FILE: M5.1-075107.001
DRAWN BY: AM
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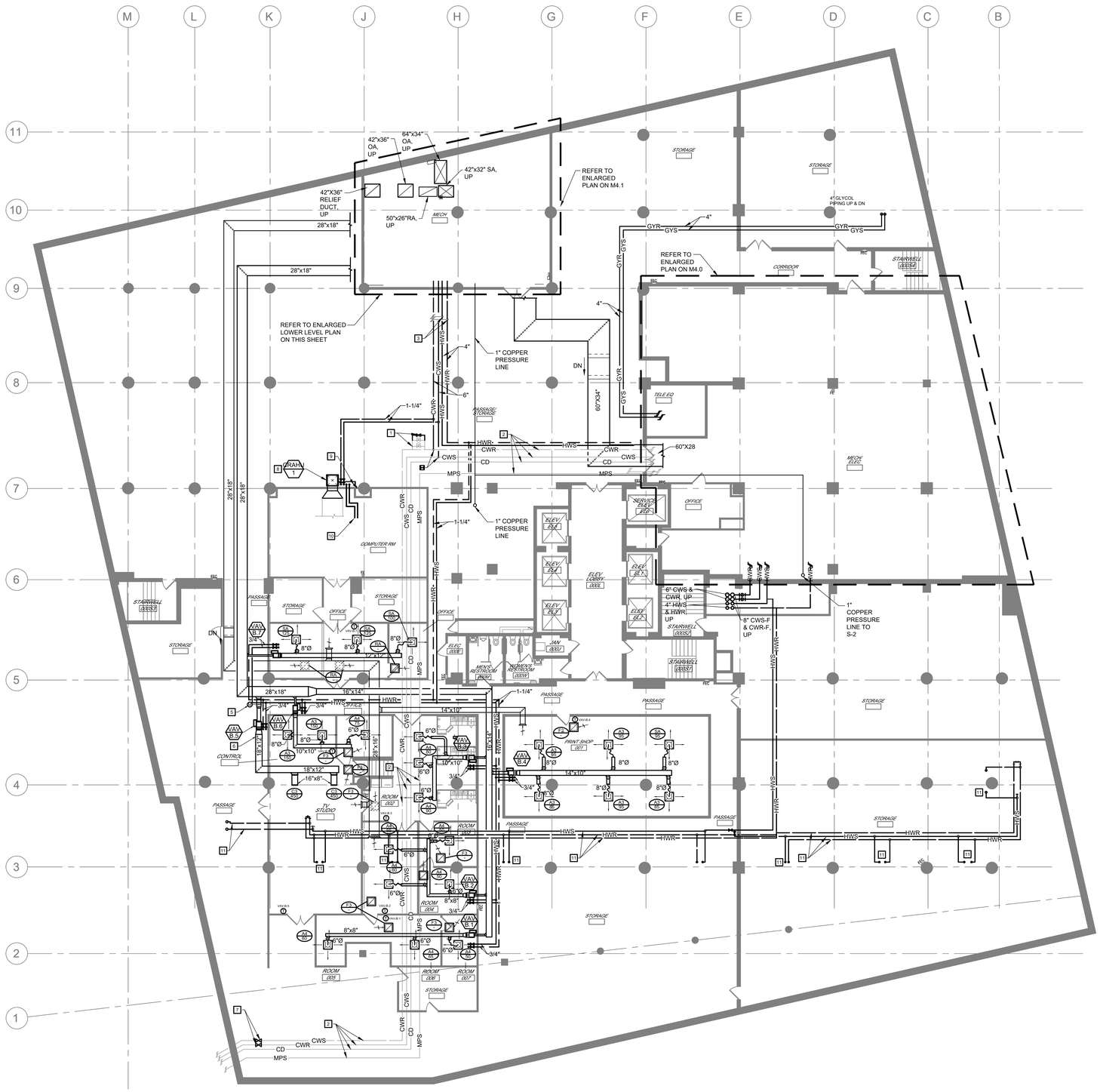
SHEET TITLE:
CHILLED HEATING WATER FLOW DIAGRAM - DEMO

SHEET NUMBER:
MD5.1

93 OF 244 SHEETS

DATE : August 31, 2023



BASEMENT FLOOR PLAN - MECHANICAL

3/32" = 1'-0"

SHEET IS PLOTTED TO SCALE IF ADJACENT LINE MEASURES 1 INCH

KEYED NOTES

1. RELOCATE EXISTING BUILDING CONTROL VALVE (56" VALVE) WITH 1/3-2/3 SPLIT. CONTRACTOR TO INSTALL NEW 3/4" BYPASS AT LOCATION SHOWN. REFER TO MD3.0 FOR EXISTING LOCATION.
2. EXISTING CHILLED WATER, STEAM, AND CONDENSATE PIPING TO AND FROM CAMPUS SYSTEM TO REMAIN.
3. RECONNECT EXISTING HWS AND HWR LINES SERVING BASEMENT TO NEW HWS AND HWR MAINS.
4. NOT USED.
5. TEMPERATURE CONTROLS PROVIDE PUSH BUTTON SWITCH TO FULLY CLOSE DAMPER TO VAV-B.5 DURING RECORDING SESSIONS.
6. PROVIDE 1" INTERNALLY LINED DUCT DOWN STREAM OF VAV B.5.
7. CONTRACTOR TO INSTALL NEW SERVICE VALVES IN EXISTING CHILLED WATER SUPPLY AND RETURN LINES. CONTRACTOR TO INSTALL DRAIN AND AIR VENTS IN CHILLED WATER LINES ON BUILDING SIDE IN PHASE 1 OF CONSTRUCTION.
8. NEW CRAHU AT LOCATION OF EXISITNG CRAHU BEING DEMOLISHED. CONTRACTOR TO MODIFY SUPPLY AND RETURN CONNECTIONS AS NECCESSARY TO CONNECT TO NEW UNIT.
9. CONNECT NEW CRAHU CONDENSATE TO EXISTING CONDENSATE LINE, FIELD VERIFY EXACT CONNECTION POINT.
10. REFRIGERANT PIPING UP TO CONDENSING UNIT ON ROOF. REFER TO INSTALLATION INSTRUCTIONS FOR PIPE SIZES AND SLOPING INFORMATION.
11. CONTRACTOR TO INSTALL NEW HEATING WATER PIPING SERVING EXISTING FIN TUBE ON FIRST FLOOR. CONTRACTOR TO ROUTE 3/4" PIPING UP THROUGH FLOOR AND CONNECT TO EXISTING FIN TUBE HEATERS TO REMAIN.

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CAD DWG FILE: M3.0-075107.001
DRAWN BY: AM
CHECKED BY: EP
DESIGNED BY: JW

SHEET TITLE:
BASEMENT FLOOR PLAN -MECHANICAL

SHEET NUMBER:
M3.0

94 OF 244 SHEETS

DATE : August 31, 2023

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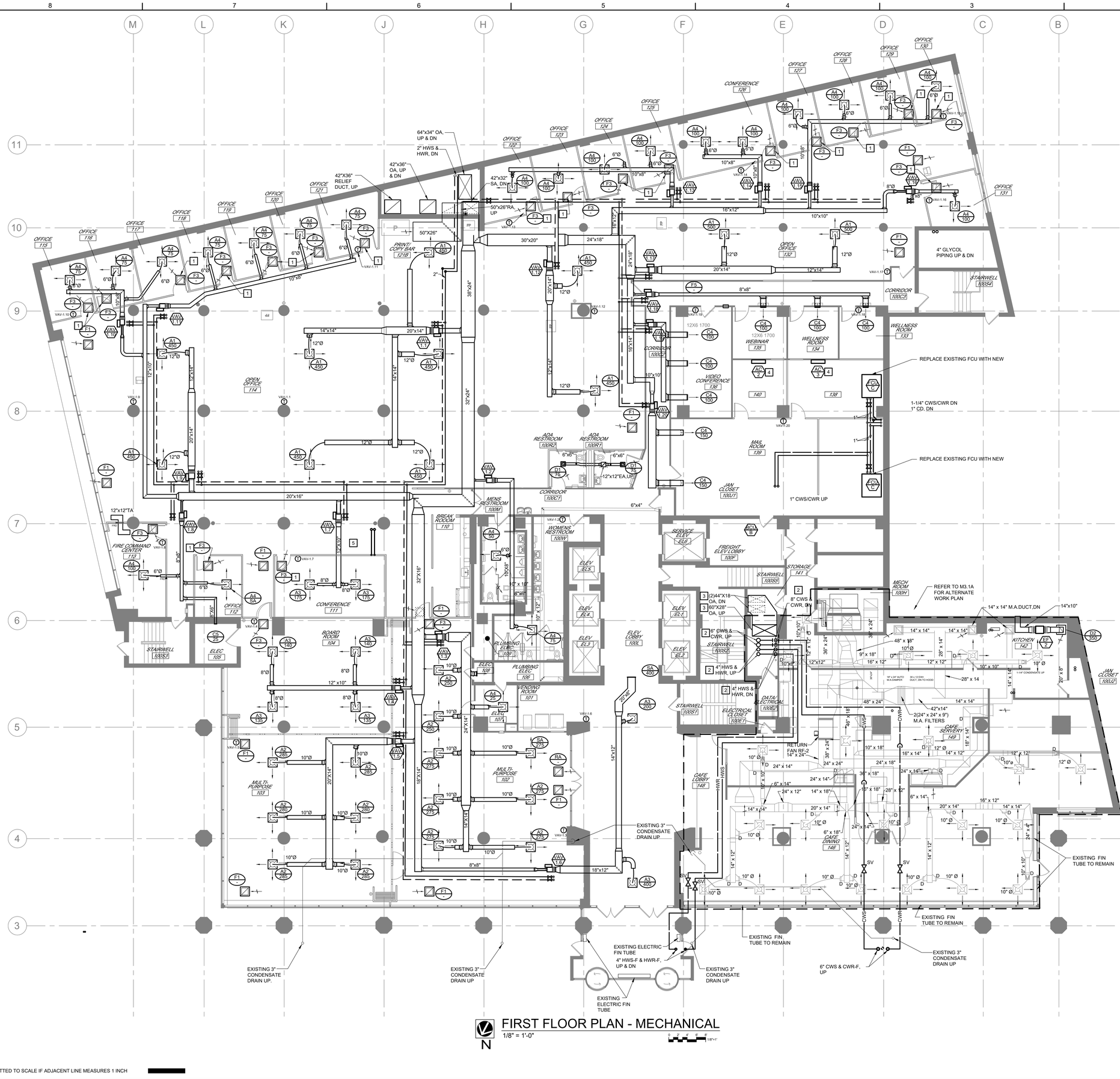

FIRST FLOOR PLAN - MECHANICAL

1/8" = 1'-0"

SHEET IS PLOTTED TO SCALE IF ADJACENT LINE MEASURES 1 INCH

KEYED NOTES

1. INSTALL 12" ROUND ADAPTOR TO RETURN GRILL EXTEND 12"Ø FLEX DUCT 6' PAST OPENING FOR SOUND TRAP.
2. NEW PIPING TO BE INSTALLED AS PART OF BASE BID.
3. NEW DUCTWORK TO BE INSTALLED AS PART OF BASE BID.
4. SPLIT SYSTEM ONLY TO BE INSTALLED FOR ALTERNATE #6.
5. REFRIGERANT PIPING FROM CRAHU-1 IN BASEMENT UP TO CU-1 ON ROOF. REFER TO INSTALLATION INSTRUCTIONS FOR PIPE SLOPING AND PIPE SIZES.

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DRAWN BY: AM
CHECKED BY: EP
DESIGNED BY: JW

SHEET TITLE:
FIRST FLOOR PLAN -MECHANICAL

SHEET NUMBER:
M3.1

95 OF 244 SHEETS

DATE : August 31, 2023

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ALTERNATE #2 SCOPE INCLUDES EXHAUST HOOD, EXHAUST FANS, AHU-1 , RETURN FAN, AND ALL SUPPORTING DUCTWORK, PIPING AND INFASTRUCTURE.

KEYED NOTES

1. CONNECT EXISTING SUPPLY AND RETURN AIR TO NEW AIR HANDLING UNIT. CONTRACTOR TO PROVIDE NEW DUCTWORK AND FITTINGS AS NECESSARY TO MAKE CONNECTIONS.
2. NEW KITCHEN EXHAUST HOOD TO REPLACE EXISTING EXHAUST HOOD TO BE DEMOLISHED. CONNECT TO EXISTING GREASE EXHAUST DUCT.
3. CONTRACTOR TO INSTALL NEW 10"x10" WALL LOUVER.

SHEET IS PLOTTED TO SCALE IF ADJACENT LINE MEASURES 1 INCH

FIRST FLOOR PLAN - MECHANICAL-ALTERNATE

1/4" = 1'-0"

N

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DESIGN AND CONSTRUCTION

RENOVATE MECHANICAL/
ELECTRICAL/LIFE-SAFETY/
STATE OFFICE BUILDING

JEFFERSON STATE
OFFICE BUILDING
205 JEFFERSON STREET
JEFFERSON CITY, MO 65101

PROJECT # O1911-01
SITE # 1001
ASSET # 3101001057

REVISION:
DATE:
REVISION:
DATE:
REVISION:
DATE:
ISSUE DATE:

CAD DWG FILE: M3.1-075107.001
DRAWN BY: AM
CHECKED BY: EP
DESIGNED BY: JW

SHEET TITLE:
FIRST
FLOOR PLAN
-MECHANICAL-ALT

SHEET NUMBER:
M3.1A

96 OF 244 SHEETS

DATE : August 31, 2023

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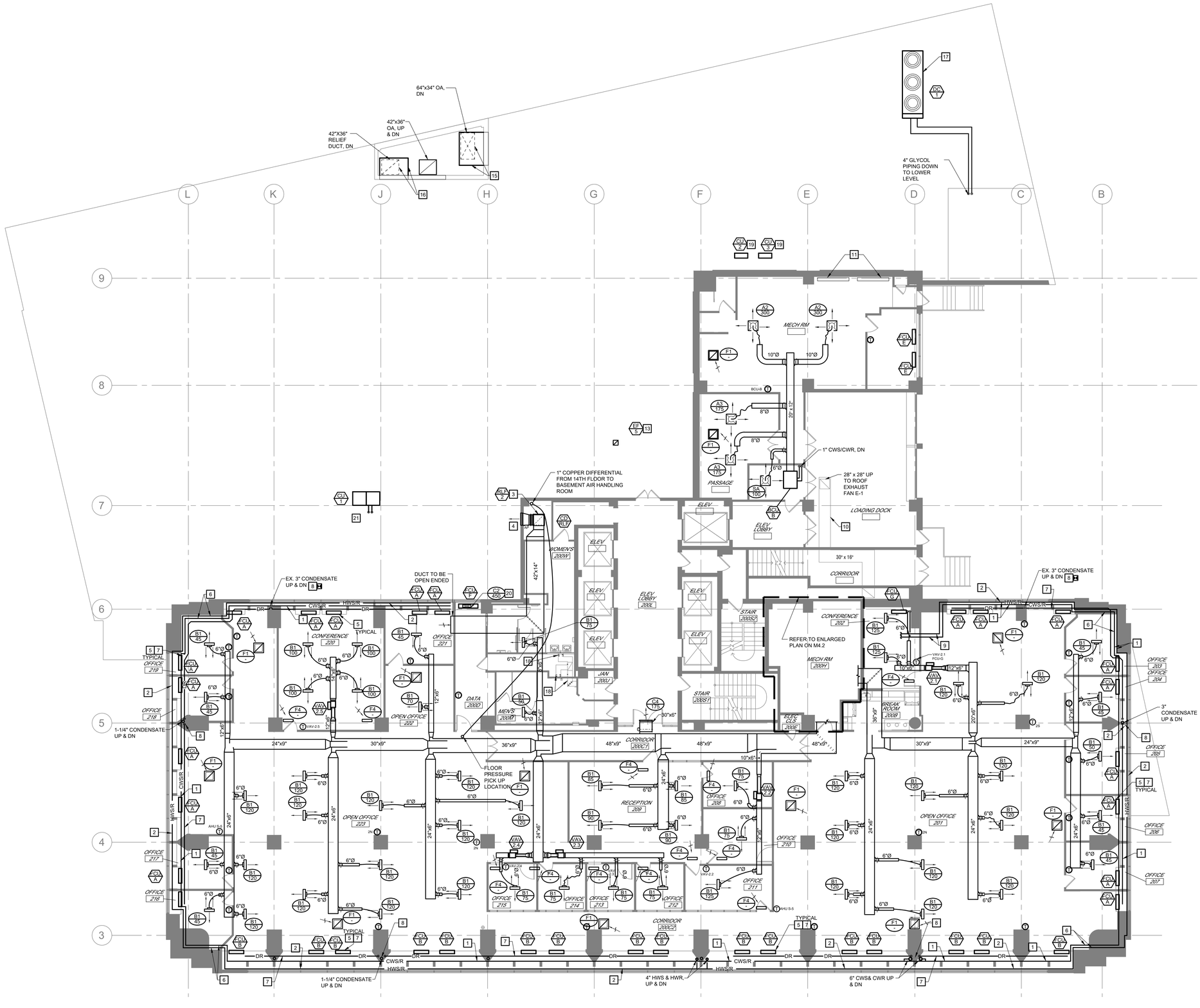

SECOND FLOOR PLAN - MECHANICAL

1/8" = 1'-0"

N

KEYED NOTES

1. CHILLED AND HEATING WATER LINES ROUTED IN CASEWORK. REFER TO SHEET M3.3 SECTION 1 FOR ADDITIONAL INFORMATION.
2. INSULATE 5" TALL CAVITY IN INSULATED PANEL TO PROVIDE FREEZE PROTECTION FOR HYDRONIC PIPING.
3. INSTALL RELIEF FAN ON THE FLOOR. DUCT TO DROP INTO TOP OF UNIT WITH A FLEX CONNECTION. INSTALL IN CONTROL DAMPER IN THE VERTICAL.
4. CONTRACTOR TO ENLARGE EXISTING LOUVER TO 30"x36' AND CONNECT DUCT FROM RELIEF FAN TO NEW LOUVER.
5. REMOVE LAMINATE FRONT REMOVABLE PANEL OF FAN COIL UNIT ENCLOSURE. REUSE TOP OF CASEWORK. REPLACE FCU FRONT PANEL. SEE A502 FOR DETAILS.
6. CONTRACTOR TO DEMOLISH EXISTING GYPSUM PARTITION TO ROUTE HEATING AND CHILLED WATER LINES. CONTRACTOR TO INSTALL NEW GYPSUM PARTITION TO CONCEAL NEW LINES. LINES TO BE INSTALLED ON BUILDING SIDE OF INSULATION.
7. CONTRACTOR TO REPAIR SOFFIT AS REQUIRED TO PIPE CONDENSATE FROM FAN COIL UNITS ON THIS FLOOR AND TO TIE-IN CONDENSATE FROM THE FAN COIL UNITS ABOVE.
8. ROUTE 1" CONDENSATE DRAIN FROM NEARBY FAN COIL UNITS TO CONDENSATE RISER.RECONNECT INTO EXISTING 3" CONDENSATE DRAIN RISER.
9. EXTEND CHILLED AND HEATING WATER SUPPLY AND RETURN LINES INTO MECHANICAL ROOM, REFER TO ENLARGED PLAN ON M4.1 FOR CONTINUATION.
10. EXISTING KITCHEN EXHAUST DUCTWORK TO REMAIN.
11. EXISTING FIN TUBE.
12. RECONNECT INTO EXISTING CHILLED WATER AT THIS LOCATION.
13. INSTALL NEW EXHAUST FAN (EF-5) ON NEW ROOF CURB OPENING. PATCH ROOF TO MATCH EXISTING CONDITIONS.
14. NOT USED.
15. CONNECT NEW 64"x34" OUTSIDE AIR TO EXISTING OUTSIDE AIR LOUVER AND PLENUM BOX. CONTRACTOR TO EXTEND PLENUM BOX AS NECESSARY FOR NEW DUCT.
16. ROUTE NEW 42"x36" RELIEF DUCT TO EXISTING LOUVER. CONTRACTOR TO EXTEND PLENUM BOX AS NECESSARY FOR NEW DUCT.
17. NEW DRY COOLER TO BE LOCATED AT LOCATION OF EXISTING GENERATOR BEING DEMOLISHED. CONTRACTOR TO COORDINATE FINAL LOCATION WITH STRUCTURAL DRAWINGS AND ENGINEER.
18. EXISTING EXHAUST RISER, AND RUN OUTS TO RESTROOMS AND JANITOR CLOSET TO REMAIN.
19. CONTRACTOR TO INSTALL CONDENSING UNIT AS PART OF ALTERNATE #6. CONTRACTOR TO PROVIDE ALL NECESSARY EQUIPMENT RAILS, REFRIGERANT PIPING, AND PIPE CURB.
20. PROVIDE 12" TALL 22"x5" DUCT CAP. INSTALL DIFFUSER IN FRONT FACE OF DUCT.
21. REFRIGERANT PIPING DOWN TO CRAHU IN LOWER LEVEL. CONTRACTOR TO INSTALL PIPE CURB AT ROOF PENETRATION AND SEAL WATER TIGHT.

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PHILIP J WENTZ
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JEFFERSON STATE OFFICE BUILDING
205 JEFFERSON STREET
JEFFERSON CITY, MO 65101

PROJECT # O1911-01
SITE # 1001
ASSET # 3101001057

REVISION: DATE:
REVISION: DATE:
REVISION: DATE:
ISSUE DATE:

CAD DWG FILE: M3.2-075107.001
DRAWN BY: ADL
CHECKED BY: EP
DESIGNED BY: EP

SHEET TITLE:
SECOND FLOOR PLAN - MECHANICAL

SHEET NUMBER:
M3.2

97 OF 244 SHEETS

DATE : August 31, 2023

SHEET IS PLOTTED TO SCALE IF ADJACENT LINE MEASURES 1 INCH

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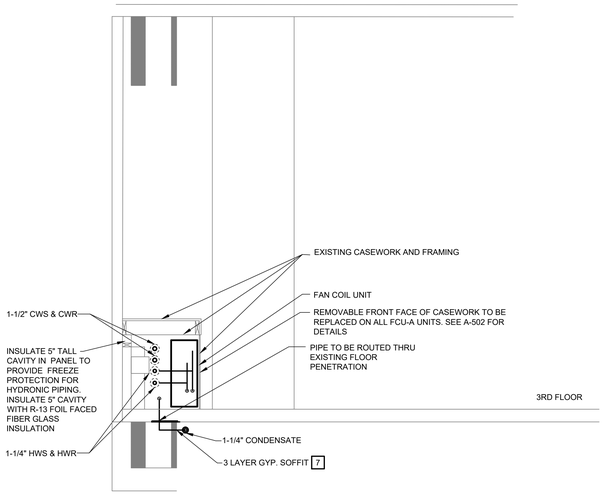
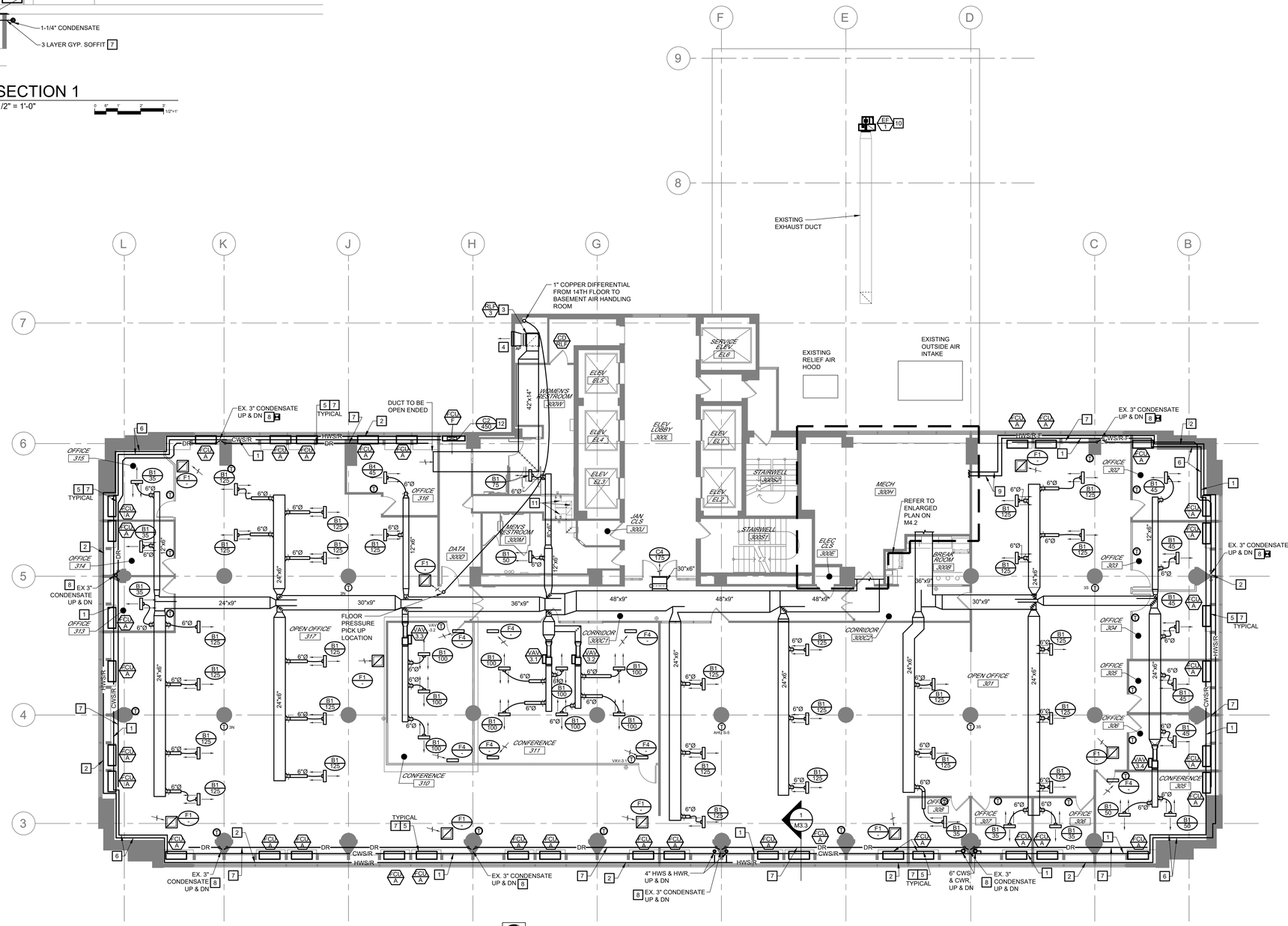


SECTION 1

1/2" = 1'-0"



THIRD FLOOR PLAN - MECHANICAL

1/8" = 1'-0"

N

SHEET IS PLOTTED TO SCALE IF ADJACENT LINE MEASURES 1 INCH

KEYED NOTES

1. CHILLED AND HEATING WATER LINES ROUTED IN CASEWORK, REFER TO SECTION 1 THIS SHEET FOR ADDITIONAL INFORMATION.
2. INSULATE 5" TALL CAVITY IN INSULATED PANEL TO PROVIDE FREEZE PROTECTION FOR HYDRONIC PIPING.
3. INSTALL RELIEF FAN AT FLOOR LEVEL. DUCT TO DROP INTO TOP OF UNIT WITH A FLEX CONNECTION, INSTALL IN CONTROL DAMPER IN THE VERTICAL.
4. CONTRACTOR TO ENLARGE EXISTING LOUVER TO 30"x36' AND CONNECT DUCT FROM RELIEF FAN TO NEW LOUVER.
5. REMOVE LAMINATE FRONT REMOVABLE PANEL OF FAN COIL UNIT ENCLOSURE. REUSE TOP OF CASEWORK, REPLACE FCU FRONT PANEL. SEE A502 FOR DETAILS.
6. CONTRACTOR TO DEMOLISH EXISTING GYPSUM PARTITION TO ROUTE HEATING AND CHILLED WATER LINES. CONTRACTOR TO INSTALL NEW GYPSUM PARTITION TO CONCEAL NEW LINES. LINES TO BE INSTALLED ON BUILDING SIDE OF INSULATION.
7. CONTRACTOR TO REPAIR SOFFIT AS REQUIRED TO PIPE CONDENSATE FROM FAN COIL UNITS ON THIS FLOOR AND TO TIE-IN CONDENSATE FROM THE FAN COIL UNITS ABOVE.
8. ROUTE 1" CONDENSATE DRAIN FROM NEARBY FAN COIL UNITS TO CONDENSATE RISER.RECONNECT INTO EXISTING 3" CONDENSATE DRAIN RISER.
9. EXTEND CHILLED AND HEATING WATER SUPPLY AND RETURN LINES INTO MECHANICAL ROOM. REFER TO ENLARGED PLAN ON M4.1 FOR CONTINUATION.
10. REPLACE EXISTING FAN SCOPE, ALTERNATE #2.
11. EXISTING EXHAUST RISER, AND RUN OUTS TO RESTROOMS AND JANITOR CLOSET TO REMAIN.
12. PROVIDE 12" TALL 22"x5" DUCT CAP. INSTALL DIFFUSER IN FRONT FACE OF DUCT.

STATE OF MISSOURI
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JEFFERSON CITY, MO 65101

PROJECT # O1911-01
SITE # 1001
ASSET # 3101001057

REVISION:
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REVISION:
DATE:
ISSUE DATE:

CAD DWG FILE: M3.3-075107.001
DRAWN BY: AM
CHECKED BY: EP
DESIGNED BY: JW

SHEET TITLE:
THIRD FLOOR PLAN -MECHANICAL

SHEET NUMBER:
M3.3

98 OF 244 SHEETS

DATE : August 31, 2023

KEYED NOTES

1. CHILLED AND HEATING WATER LINES ROUTED IN CASEWORK. REFER TO SHEET M3.3 SECTION 1 FOR ADDITIONAL INFORMATION.
2. INSULATE 5" TALL CAVITY IN INSULATED PANEL TO PROVIDE FREEZE PROTECTION FOR HYDRONIC PIPING.
3. INSTALL RELIEF FAN ON THE FLOOR. DUCT TO DROP INTO TOP OF UNIT WITH A FLEX CONNECTION, INSTALL CONTROL DAMPER IN THE VERTICAL.
4. CONTRACTOR TO ENLARGE EXISTING LOUVER TO 30"x36' AND CONNECT DUCT FROM RELIEF FAN TO NEW LOUVER.
5. REMOVE LAMINATE FRONT REMOVABLE PANEL OF FAN COIL UNIT ENCLOSURE. REUSE TOP OF CASEWORK. REPLACE FCU FRONT PANEL. SEE A502 FOR DETAILS.
6. CONTRACTOR TO DEMOLISH EXISTING GYPSUM PARTITION TO ROUTE HEATING AND CHILLED WATER LINES. CONTRACTOR TO INSTALL NEW GYPSUM PARTITION TO CONCEAL NEW LINES. LINES TO BE INSTALLED ON BUILDING SIDE OF INSULATION.
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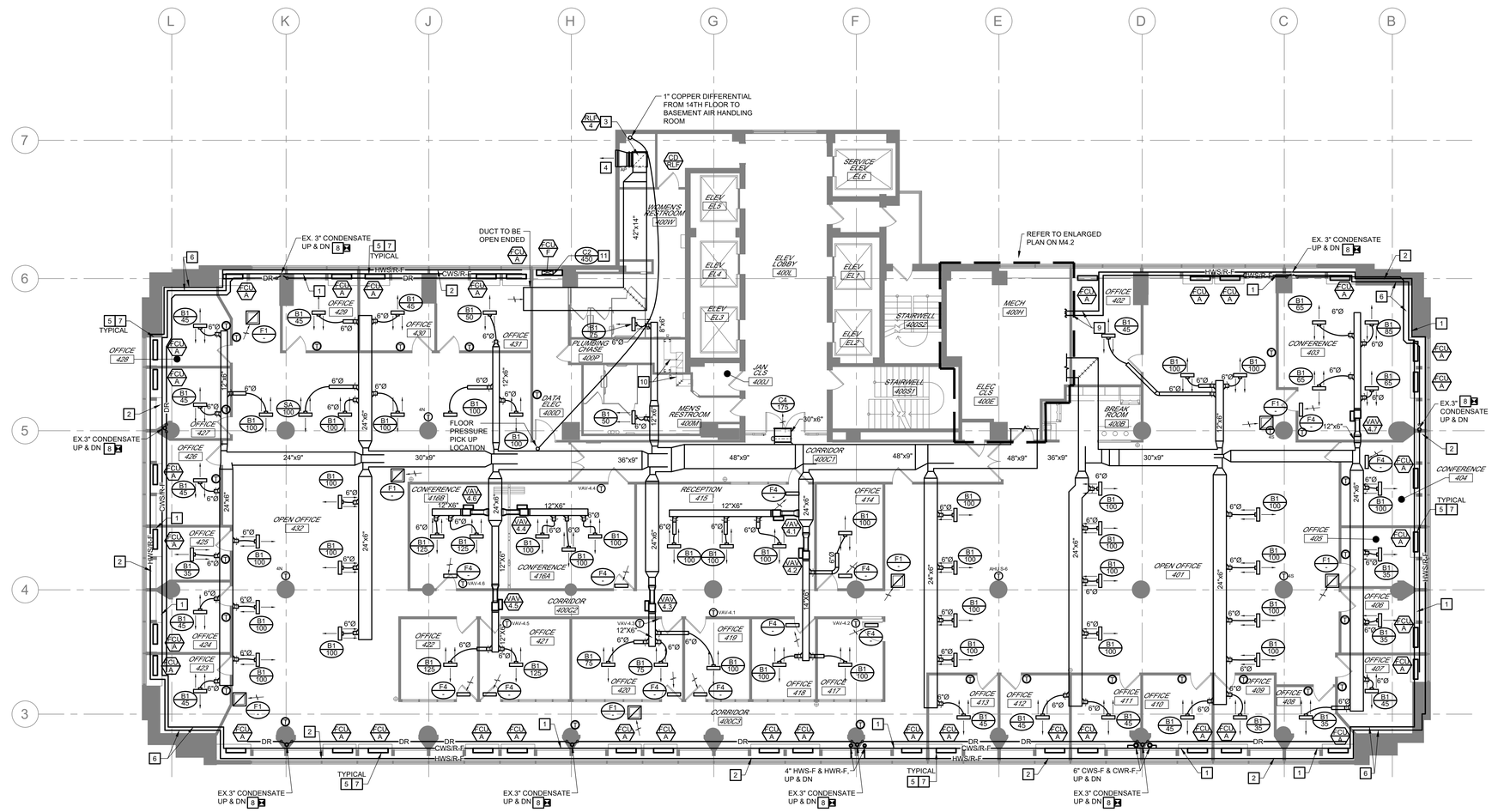
11. PROVIDE 12" TALL 22"x5" DUCT CAP, INSTALL DIFFUSER IN FRONT FACE OF DUCT.



FOURTH FLOOR PLAN - MECHANICAL

N 1/8" = 1'-0"

SHEET IS PLOTTED TO SCALE IF ADJACENT LINE MEASURES 1 INCH

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PHILIP J. WENTZ NUMBER E-29111 — STATE OF MISSOURI — REGISTERED PROFESSIONAL ENGINEER

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205 JEFFERSON STREET
JEFFERSON CITY, MO 65101

PROJECT # O1911-01
SITE # 1001
ASSET # 3101001057

REVISION:
DATE:
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DATE:
REVISION:
DATE:
ISSUE DATE:

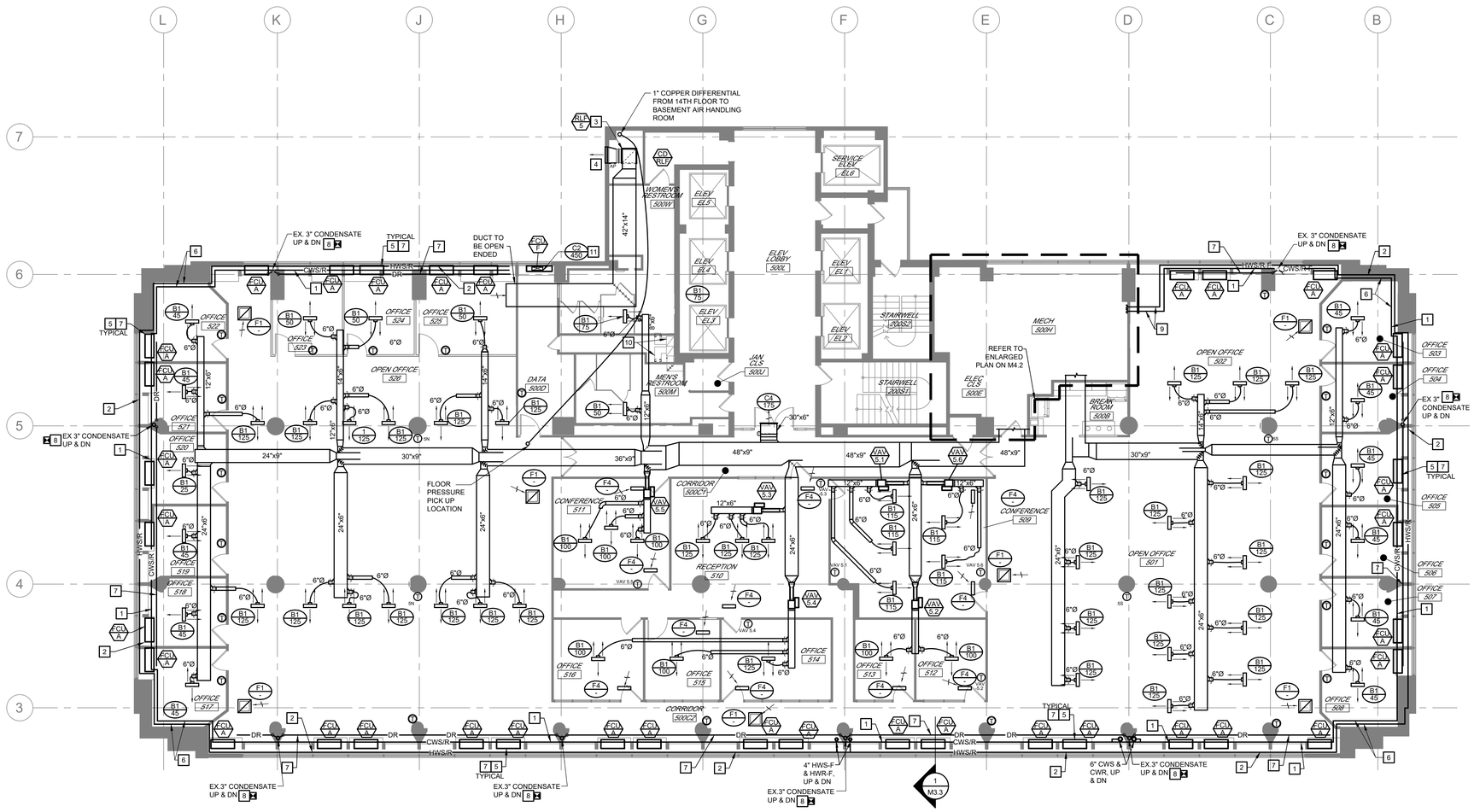
CAD DWG FILE: M3.4-075107.001
DRAWN BY: AM
CHECKED BY: EP
DESIGNED BY: JW

SHEET TITLE:
FOURTH FLOOR PLAN -MECHANICAL

SHEET NUMBER:
M3.4

99 OF 244 SHEETS

DATE : August 31, 2023



KEYED NOTES

1. CHILLED AND HEATING WATER LINES ROUTED IN CASEWORK. REFER TO SHEET M3.3 SECTION 1 FOR ADDITIONAL INFORMATION.
2. INSULATE 5" TALL CAVITY IN INSULATED PANEL TO PROVIDE FREEZE PROTECTION FOR HYDRONIC PIPING.
3. INSTALL RELIEF FAN ON THE FLOOR. DUCT TO DROP INTO TOP OF UNIT WITH A FLEX CONNECTION, INSTALL CONTROL DAMPER IN THE VERTICAL.
4. CONTRACTOR TO ENLARGE EXISTING LOUVER TO 30"x36' AND CONNECT DUCT FROM RELIEF FAN TO NEW LOUVER.
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9. EXTEND CHILLED AND HEATING WATER SUPPLY AND RETURN LINES INTO MECHANICAL ROOM, REFER TO ENLARGED PLAN ON M4.1 FOR CONTINUATION.
10. EXISTING EXHAUST RISER, AND RUN OUTS TO RESTROOMS AND JANITOR CLOSET TO REMAIN.
11. PROVIDE 12" TALL 22"x5" DUCT CAP. INSTALL DIFFUSER IN FRONT FACE OF DUCT.

SHEET IS PLOTTED TO SCALE IF ADJACENT LINE MEASURES 1 INCH

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PROJECT # O1911-01
SITE # 1001
ASSET # 3101001057

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REVISION: DATE:
ISSUE DATE:

CAD DWG FILE: M3.5-075107.001
DRAWN BY: AM
CHECKED BY: EP
DESIGNED BY: JW

SHEET TITLE:
FIFTH FLOOR PLAM -MECHANICAL

SHEET NUMBER:
M3.5

100 OF 244 SHEETS

DATE : August 31, 2023

KEYED NOTES

1. CHILLED AND HEATING WATER LINES ROUTED IN CASEWORK. REFER TO SHEET M3.3 SECTION 1 FOR ADDITIONAL INFORMATION.
2. INSULATE 5" TALL CAVITY IN INSULATED PANEL TO PROVIDE FREEZE PROTECTION FOR HYDRONIC PIPING.
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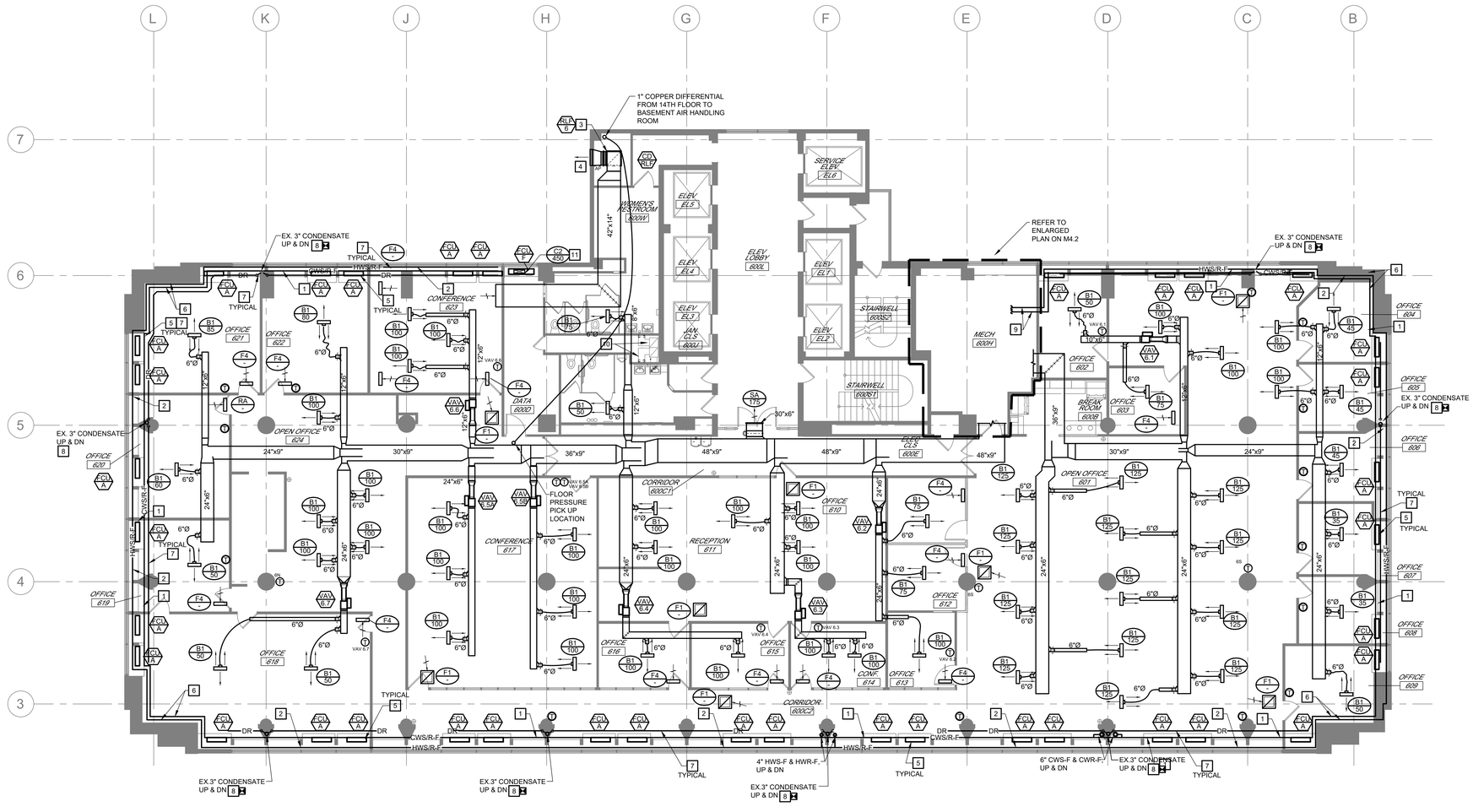

SIXTH FLOOR PLAN - MECHANICAL

1/8" = 1'-0"

N

SHEET IS PLOTTED TO SCALE IF ADJACENT LINE MEASURES 1 INCH

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MICHAEL L. PARSON,
GOVERNOR

PHILIP J. WENTZ NUMBER E-29111 REGISTERED PROFESSIONAL ENGINEER STATE OF MISSOURI

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ISSUE DATE:

CAD DWG FILE:M3.6-075107.001
DRAWN BY: AM
CHECKED BY: EP
DESIGNED BY: JW

SHEET TITLE:
SIXTH
FLOOR PLAN
-MECHANICAL

SHEET NUMBER:
M3.6

101 OF 244 SHEETS

DATE : August 31, 2023

KEYED NOTES

1. CHILLED AND HEATING WATER LINES ROUTED IN CASEWORK. REFER TO SHEET M3.3 SECTION 1 FOR ADDITIONAL INFORMATION.
2. INSULATE 5" TALL CAVITY IN INSULATED PANEL TO PROVIDE FREEZE PROTECTION FOR HYDRONIC PIPING.
3. INSTALL RELIEF FAN ON THE FLOOR. DUCT TO DROP INTO TOP OF UNIT WITH A FLEX CONNECTION, INSTALL CONTROL DAMPER IN THE VERTICAL.
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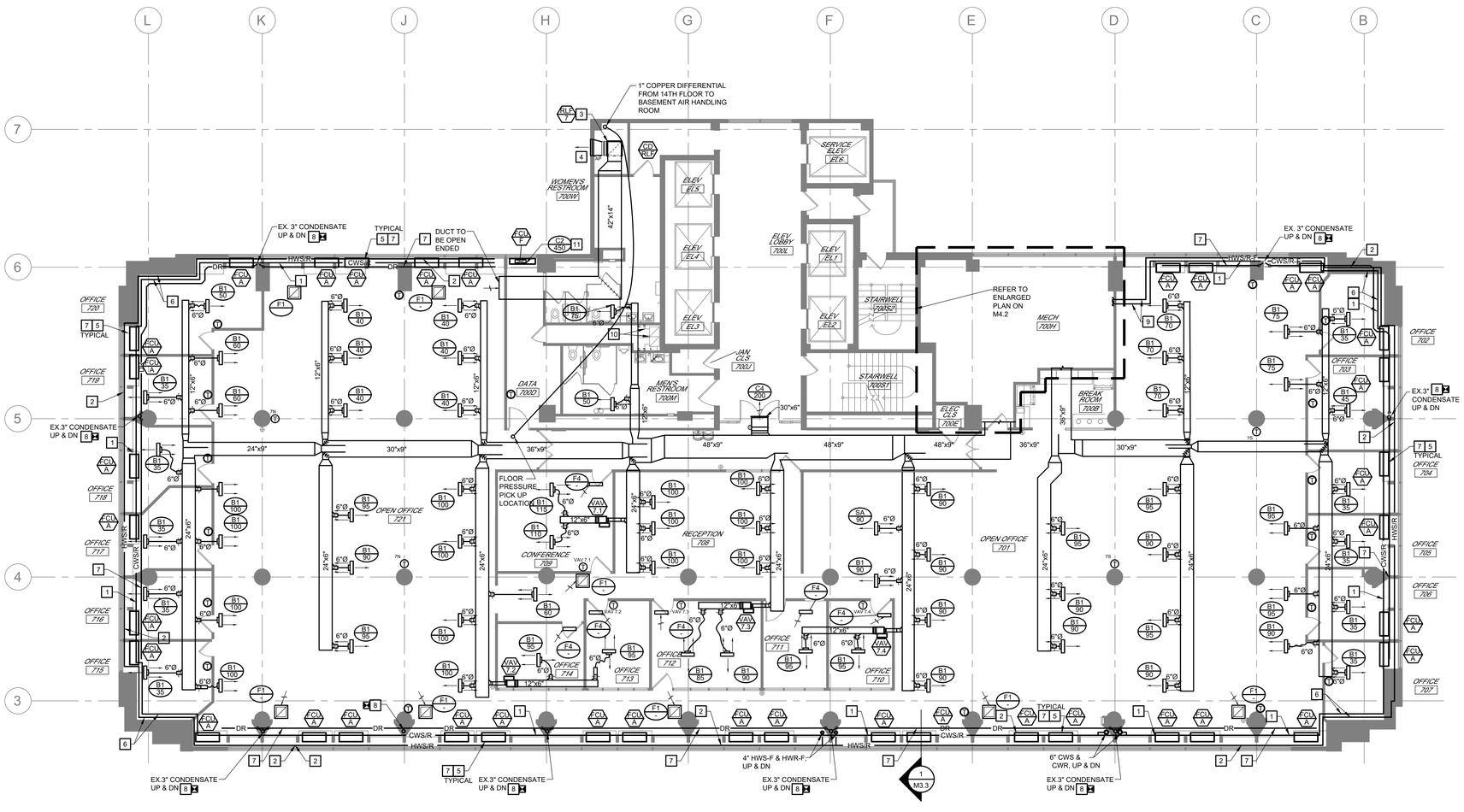

SEVENTH FLOOR PLAN - MECHANICAL
1/8" = 1'-0"

SHEET IS PLOTTED TO SCALE IF ADJACENT LINE MEASURES 1 INCH

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RENOVATE MECHANICAL/ ELECTRICAL/LIFE-SAFETY/ STATE OFFICE BUILDING

JEFFERSON STATE OFFICE BUILDING
205 JEFFERSON STREET
JEFFERSON CITY, MO 65101

PROJECT # O1911-01
SITE # 1001
ASSET # 3101001057

REVISION:
DATE:
REVISION:
DATE:
REVISION:
DATE:
ISSUE DATE:

CAD DWG FILE: M3.7-075107.001
DRAWN BY: AM
CHECKED BY: EP
DESIGNED BY: JW

SHEET TITLE:
SEVENTH FLOOR PLAN -MECHANICAL

SHEET NUMBER:
M3.7

102 OF 244 SHEETS

DATE : August 31, 2023

KEYED NOTES

1. CHILLED AND HEATING WATER LINES ROUTED IN CASEWORK. REFER TO SHEET M3.3 SECTION 1 FOR ADDITIONAL INFORMATION.
2. INSULATE 5" TALL CAVITY IN INSULATED PANEL TO PROVIDE FREEZE PROTECTION FOR HYDRONIC PIPING.
3. INSTALL RELIEF FAN ON THE FLOOR. DUCT TO DROP INTO TOP OF UNIT WITH A FLEX CONNECTION. INSTALL CONTROL DAMPER IN THE VERTICAL.
4. CONTRACTOR TO ENLARGE EXISTING LOUVER TO 30"x36' AND CONNECT DUCT FROM RELIEF FAN TO NEW LOUVER.
5. REMOVE LAMINATE FRONT REMOVABLE PANEL OF FAN COIL UNIT ENCLOSURE. REUSE TOP OF CASEWORK. REPLACE FCU FRONT PANEL. SEE A502 FOR DETAILS.
6. CONTRACTOR TO DEMOLISH EXISTING GYPSUM PARTITION TO ROUTE HEATING AND CHILLED WATER LINES. CONTRACTOR TO INSTALL NEW GYPSUM PARTITION TO CONCEAL NEW LINES. LINES TO BE INSTALLED ON BUILDING SIDE OF INSULATION.
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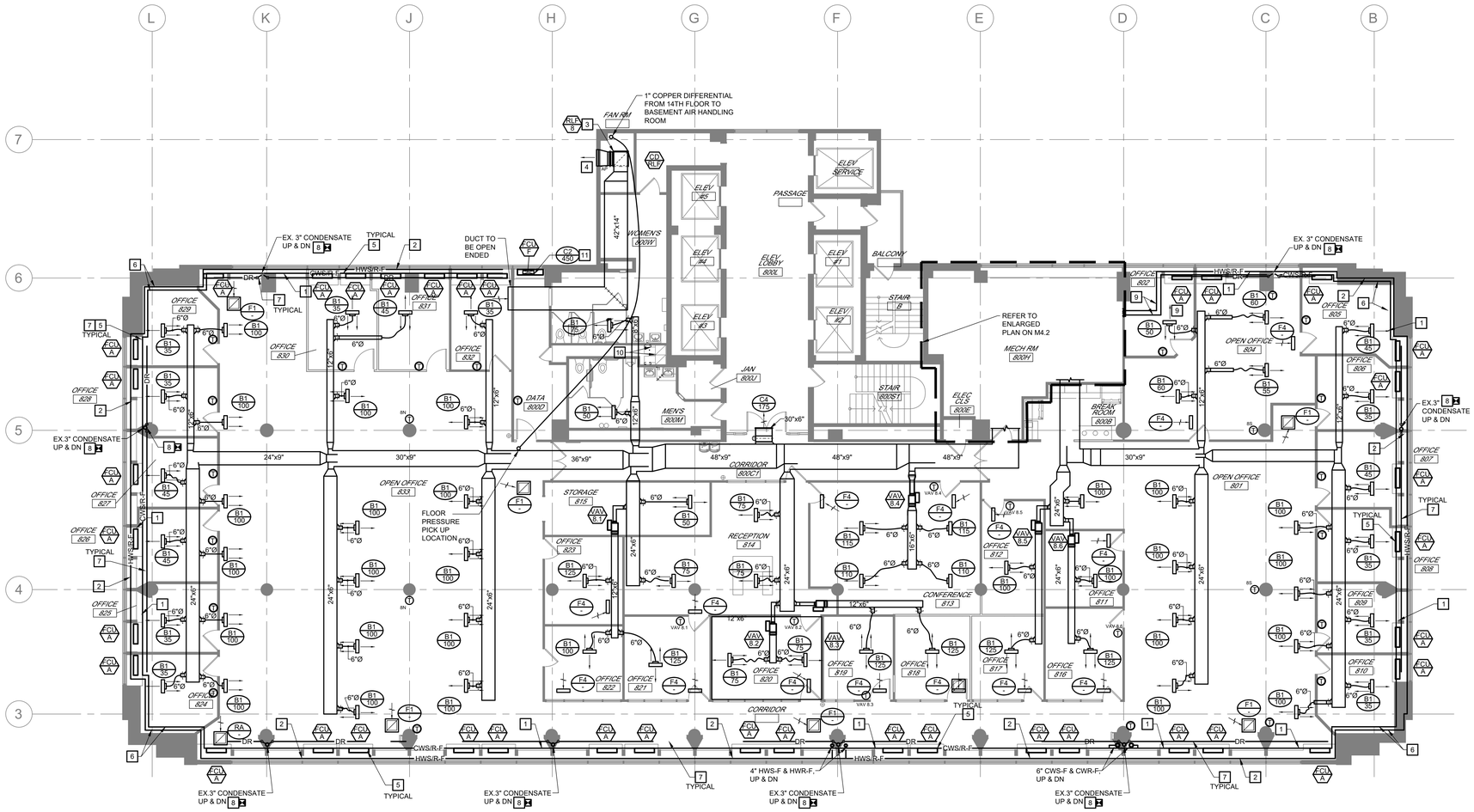
10. EXISTING EXHAUST RISER, AND RUN OUTS TO RESTROOMS AND JANITOR CLOSET TO REMAIN.
11. PROVIDE 12" TALL 22"x5" DUCT CAP, INSTALL DIFFUSER IN FRONT FACE OF DUCT.



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JEFFERSON STATE
OFFICE BUILDING
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JEFFERSON CITY, MO 65101

PROJECT # O1911-01
SITE # 1001
ASSET # 3101001057

REVISION:
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REVISION:
DATE:
ISSUE DATE:

CAD DWG FILE: M3.9-075107.001
DRAWN BY: AM
CHECKED BY: EP
DESIGNED BY: JW

SHEET TITLE:
EIGHTH
FLOOR PLAN
-MECHANICAL

SHEET NUMBER:
M3.8

103 OF 244 SHEETS

DATE : August 31, 2023

KEYED NOTES

1. CHILLED AND HEATING WATER LINES ROUTED IN CASEWORK. REFER TO SHEET M3.3 SECTION 1 FOR ADDITIONAL INFORMATION.
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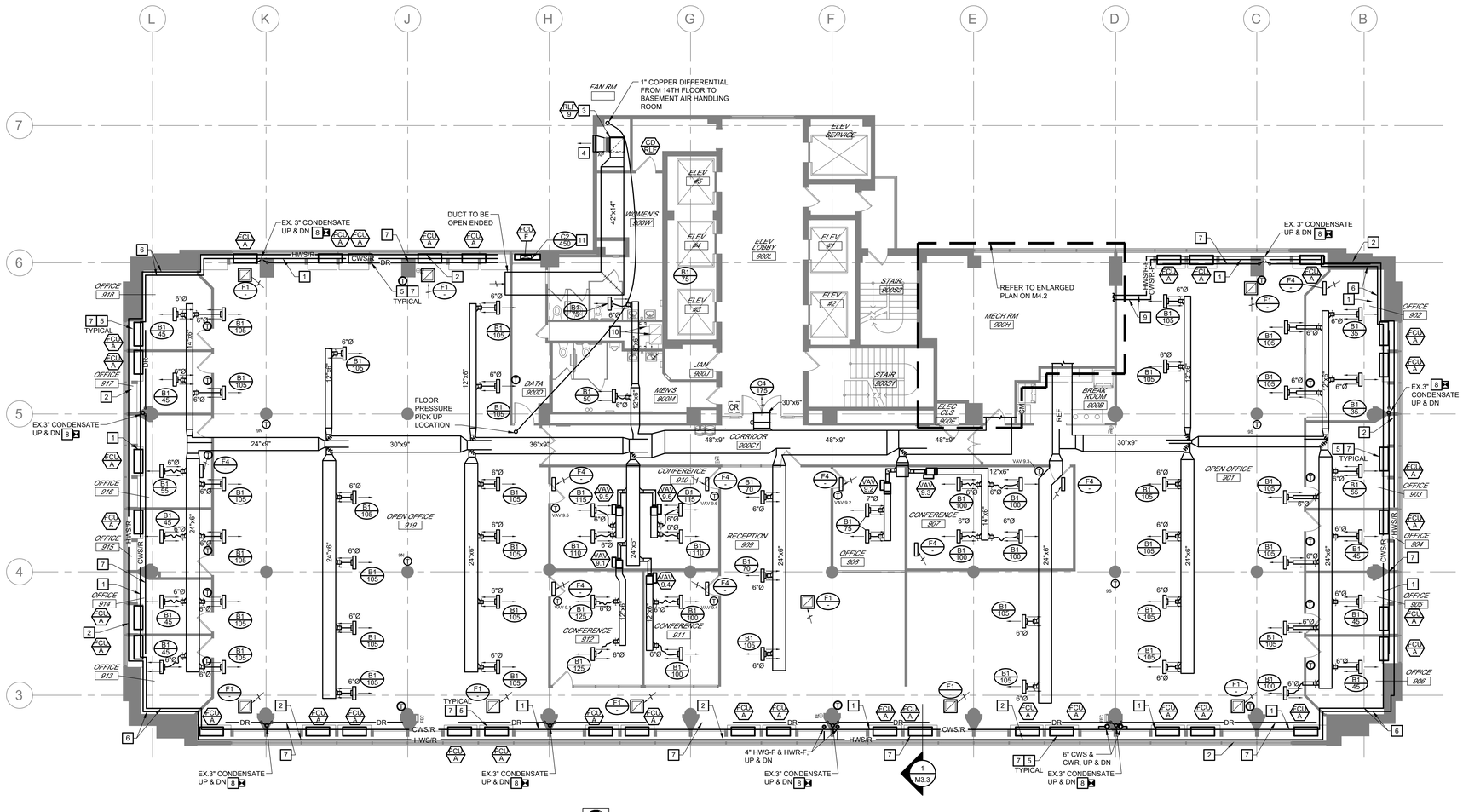

N

NINTH FLOOR PLAN - MECHANICAL

1/8" = 1'-0"

SHEET IS PLOTTED TO SCALE IF ADJACENT LINE MEASURES 1 INCH

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PROJECT # O1911-01
SITE # 1001
ASSET # 3101001057

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REVISION:
DATE:
ISSUE DATE:

CAD DWG FILE:M3.9-075107.001
DRAWN BY: AM
CHECKED BY: EP
DESIGNED BY: JW

SHEET TITLE:
NINTH
FLOOR PLAN -
MECHANICAL

SHEET NUMBER:
M3.9

104 OF 244 SHEETS

DATE : August 31, 2023

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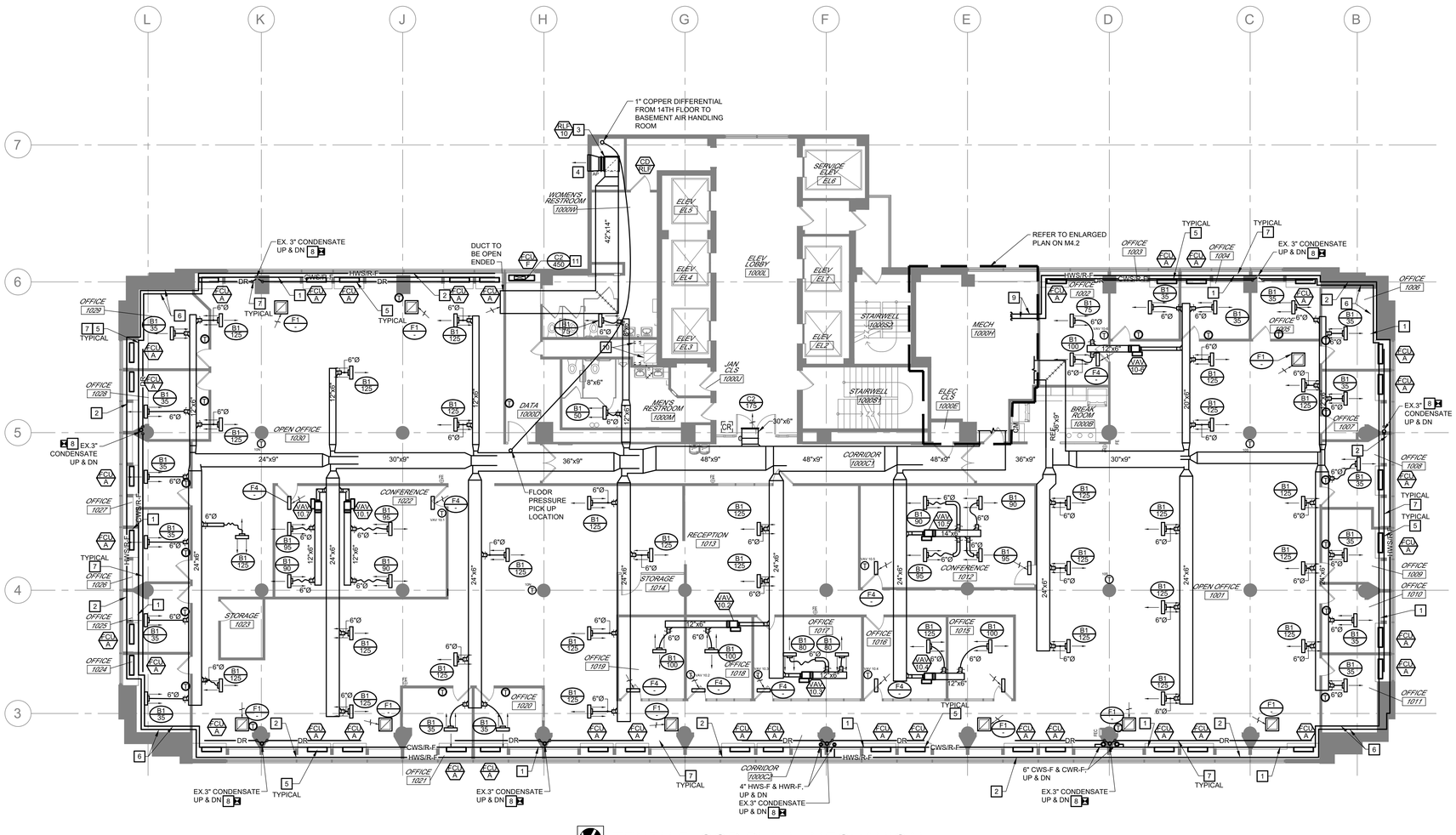

TENTH FLOOR PLAN - MECHANICAL

1/8" = 1'-0"

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PROJECT # O1911-01
SITE # 1001
ASSET # 3101001057

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ISSUE DATE:

CAD DWG FILE:M3.10-075107.001
DRAWN BY: AM
CHECKED BY: EP
DESIGNED BY: JW

SHEET TITLE:
TENTH FLOOR PLAN -MECHANICAL

SHEET NUMBER:
M3.10

105 OF 244 SHEETS

DATE : August 31, 2023

KEYED NOTES

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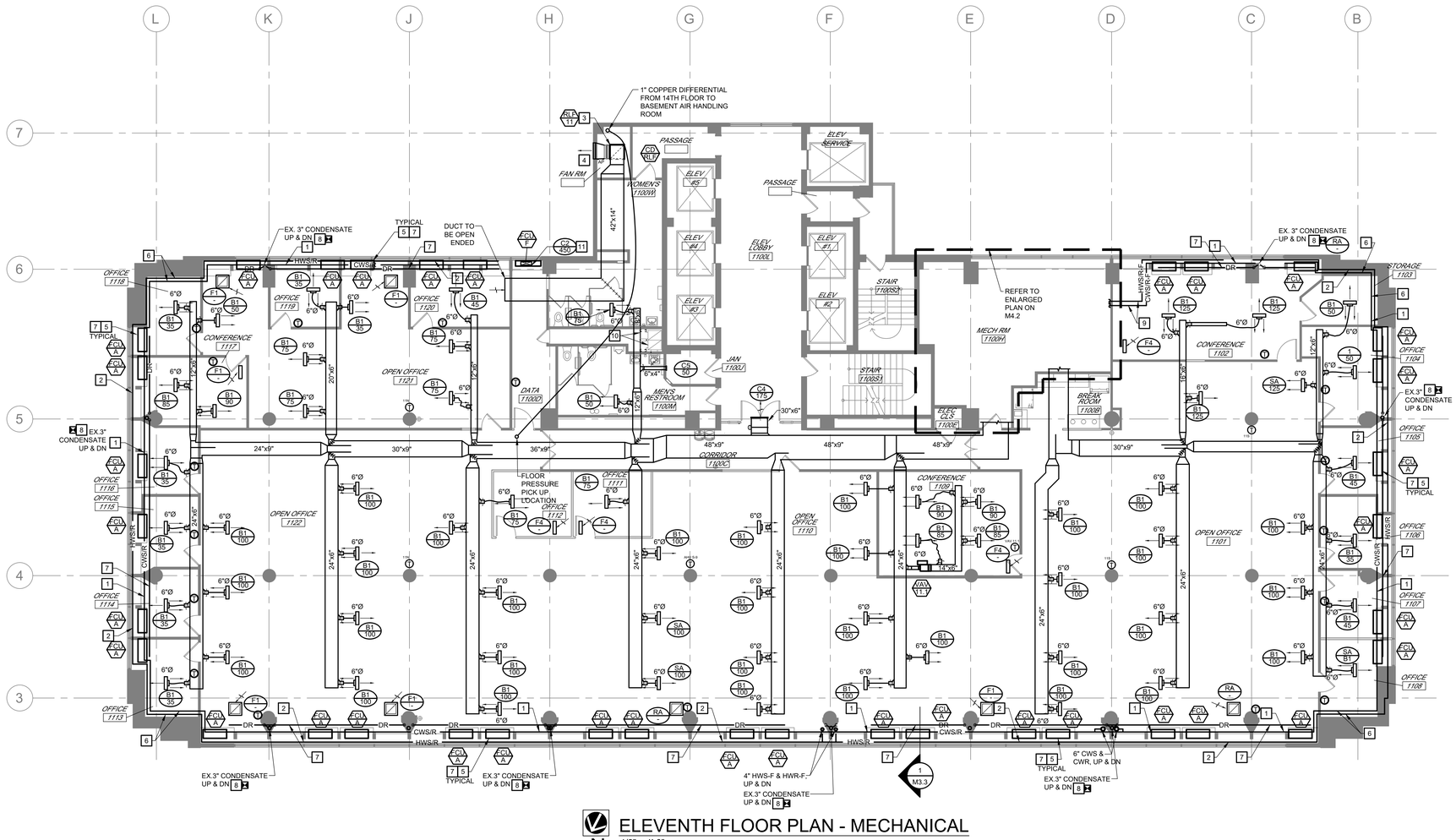

ELEVENTH FLOOR PLAN - MECHANICAL
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PROJECT # O1911-01
SITE # 1001
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REVISION:
DATE:
ISSUE DATE:

CAD DWG FILE:M3.11-075107.001
DRAWN BY: AM
CHECKED BY: EP
DESIGNED BY: JW

SHEET TITLE:
ELEVENTH FLOOR PLAN -MECHANICAL

SHEET NUMBER:
M3.11

106 OF 244 SHEETS

DATE : August 31, 2023

KEYED NOTES

1. CHILLED AND HEATING WATER LINES ROUTED IN CASEWORK. REFER TO SHEET M3.3 SECTION 1 FOR ADDITIONAL INFORMATION.
2. INSULATE 5" TALL CAVITY IN INSULATED PANEL TO PROVIDE FREEZE PROTECTION FOR HYDRONIC PIPING.
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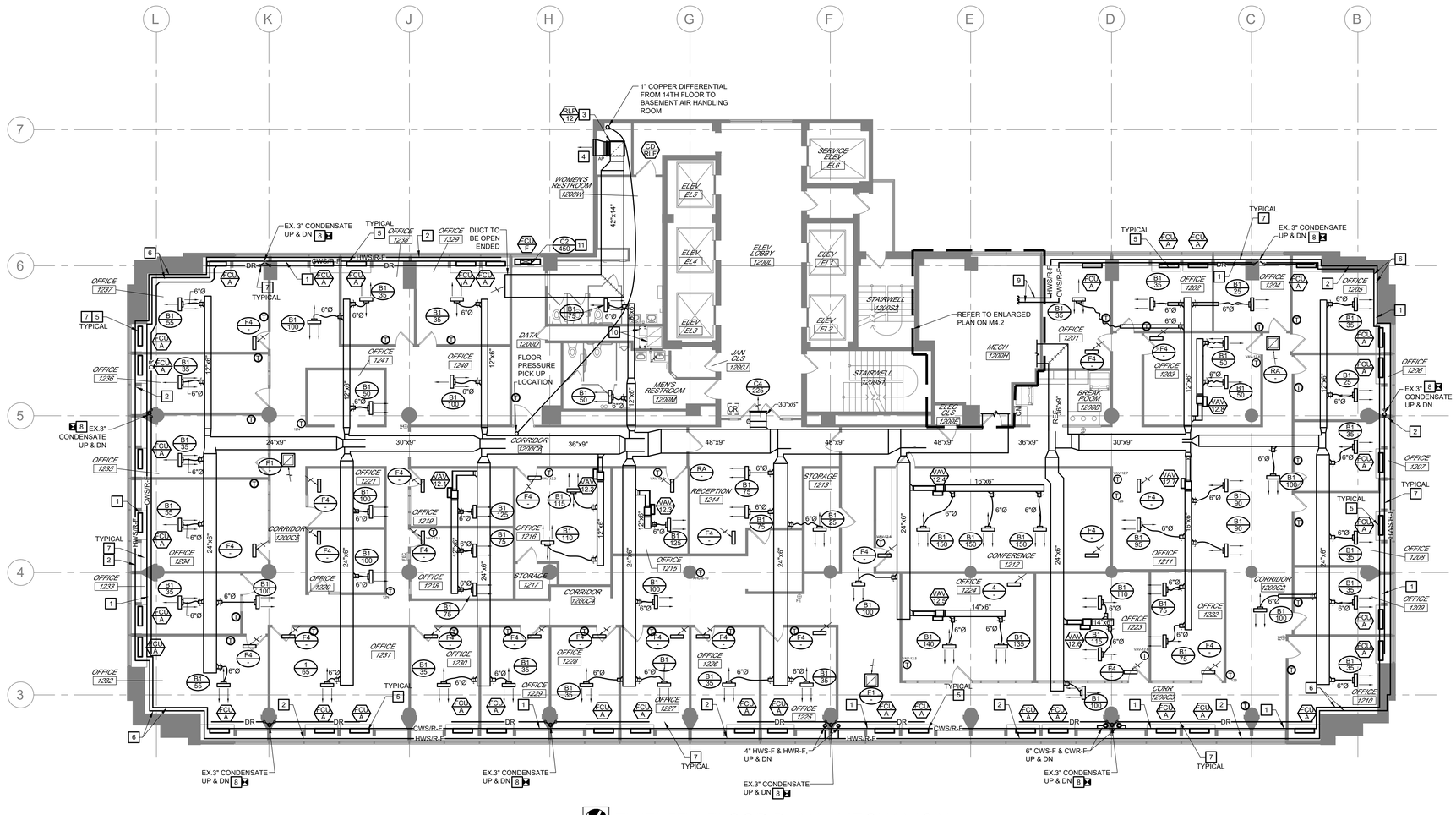

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TWELFTH FLOOR PLAN - MECHANICAL

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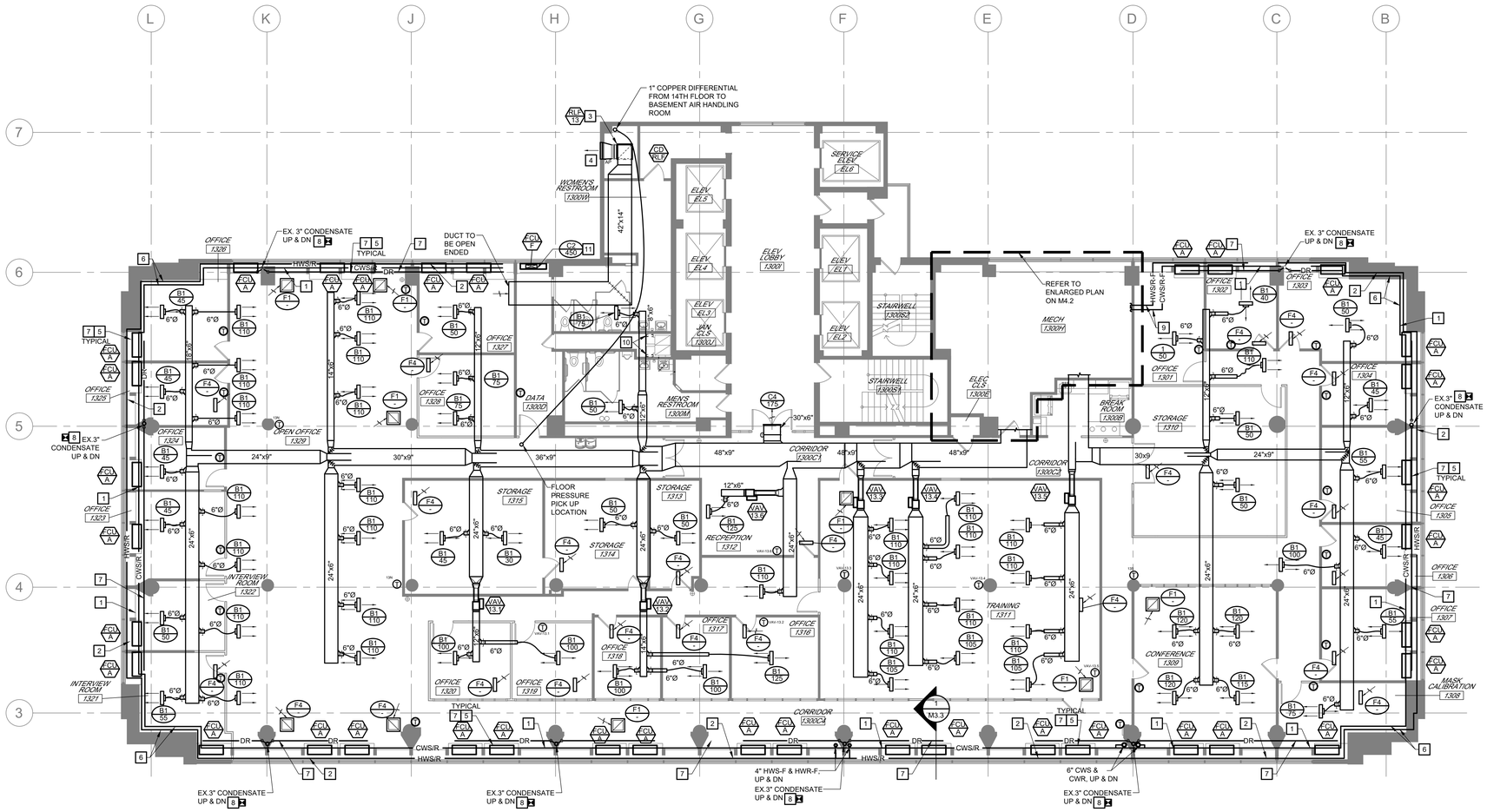
CAD DWG FILE: M3.12
DRAWN BY: AM
CHECKED BY: EP
DESIGNED BY: JW

SHEET TITLE:
TWELFTH FLOOR PLAN -MECHANICAL

SHEET NUMBER:
M3.12

107 OF 244 SHEETS

DATE : August 31, 2023



THIRTEENTH FLOOR PLAN - MECHANICAL

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N

SHEET IS PLOTTED TO SCALE IF ADJACENT LINE MEASURES 1 INCH

KEYED NOTES

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RENOVATE MECHANICAL/ ELECTRICAL/LIFE-SAFETY/ STATE OFFICE BUILDING

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JEFFERSON CITY, MO 65101

PROJECT # O1911-01
SITE # 1001
ASSET # 3101001057

REVISION: DATE:
REVISION: DATE:
REVISION: DATE:
ISSUE DATE:

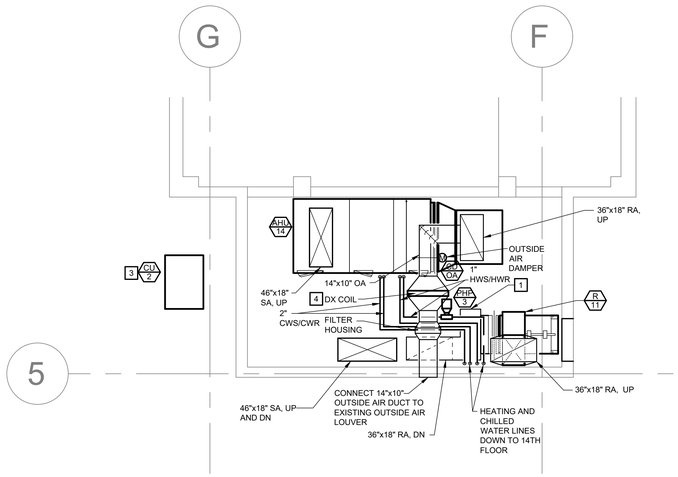
CAD DWG FILE: M3.13-075107.001
DRAWN BY: AM
CHECKED BY: EP
DESIGNED BY: JW

SHEET TITLE:
THIRTEENTH FLOOR PLAN -MECHANICAL

SHEET NUMBER:
M3.13

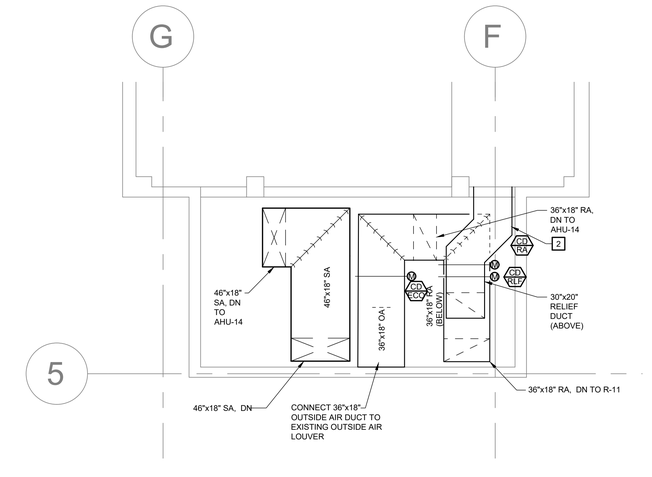
108 OF 244 SHEETS

DATE : August 31, 2023



PENTHOUSE FLOOR PLAN - MECHANICAL - LOWER

1/4" = 1'-0"

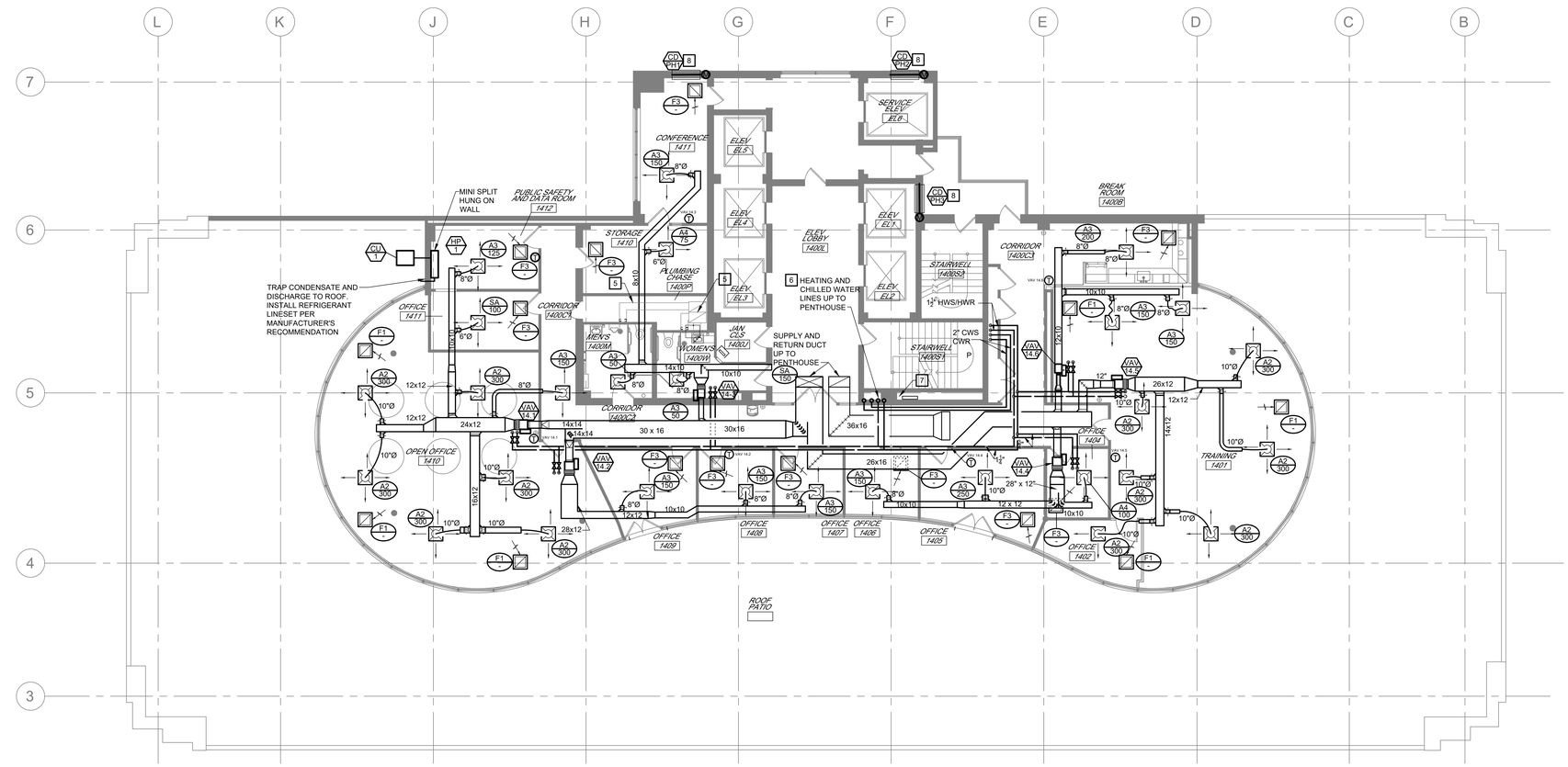


PENTHOUSE FLOOR PLAN - MECHANICAL - UPPER

1/4" = 1'-0"

KEYED NOTES

1. ROUTE 18"x36" RETURN DUCT ALONG FLOOR. EXTEND DUCT ENOUGH TO CONNECT 28"Ø INLET DUCT FOR R-11.
2. CONNECT 30"x20" RELIEF AIR DUCT TO TOP SIDE OF RETURN AIR DUCT. ROUTE RELIEF AIR DUCT OUT THROUGH EXISTING OPENING IN WALL.
3. REMOTE CONDENSING UNIT ON ROOF. CONTRACTOR TO PROVIDE EQUIPMENT RAIL AS NECESSARY. ROUTE REFRIGERANT PIPING TO COIL IN MECHANICAL ROOM. CONTRACTOR TO SEAL WALL PENETRATION WATER TIGHT.
4. ROUTE CONDENSATE FROM DX COIL TO NEAREST FLOOR DRAIN.
5. EXISTING EXHAUST RISER, AND RUN OUTS TO RESTROOMS AND JANITOR CLOSET TO REMAIN.
6. CONTRACTOR TO PATCH WALL TO MATCH FINISHED CONDITIONS.
7. BLOCK AND SEAL EXISTING AIR PATH FROM STAIRWELL TO 14TH FLOOR AT CEILING.
8. INSTALL CONTROL DAMPER IN EXISTING DUCTWORK. DAMPER TO BE FAIL OPEN AND CONTROLLED BY FIRE ALARM SYSTEM.



FOURTEENTH FLOOR PLAN - MECHANICAL

1/8" = 1'-0"

SHEET IS PLOTTED TO SCALE IF ADJACENT LINE MEASURES 1 INCH

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CAD DWG FILE: M3.14-075107.001
DRAWN BY: AM
CHECKED BY: EP
DESIGNED BY: JW

SHEET TITLE:
FOURTEENTH FLOOR PLAN -MECHANICAL

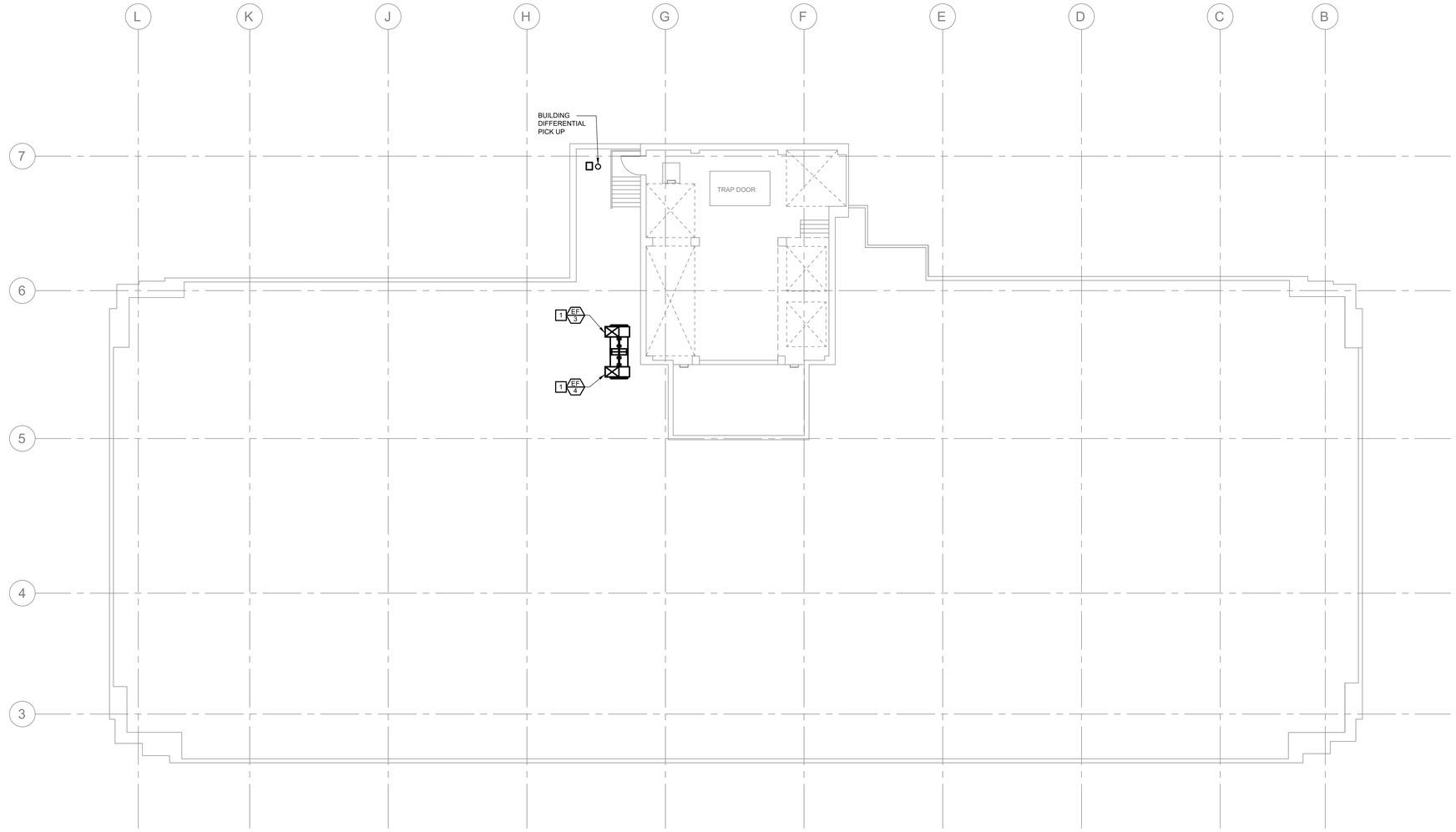
SHEET NUMBER:
M3.14

109 OF 244 SHEETS

DATE : August 31, 2023

KEYED NOTES

1 REPLACE EXISTING EXHAUST FANS WITH NEW IN SAME LOCATION.



PENTHOUSE FLOOR PLANS - MECHANICAL

SCALE : 1/8" = 1'-0"

SHEET IS PLOTTED TO SCALE IF ADJACENT LINE MEASURES 1 INCH

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CAD DWG FILE: M3.15-075107.001
DRAWN BY: AM
CHECKED BY: EP
DESIGNED BY: EP

SHEET TITLE:
ROOF AND PENTHOUSE FLOOR PLANS - MECHANICAL

SHEET NUMBER:
M3.15

110 OF 244 SHEETS

DATE : August 31, 2023

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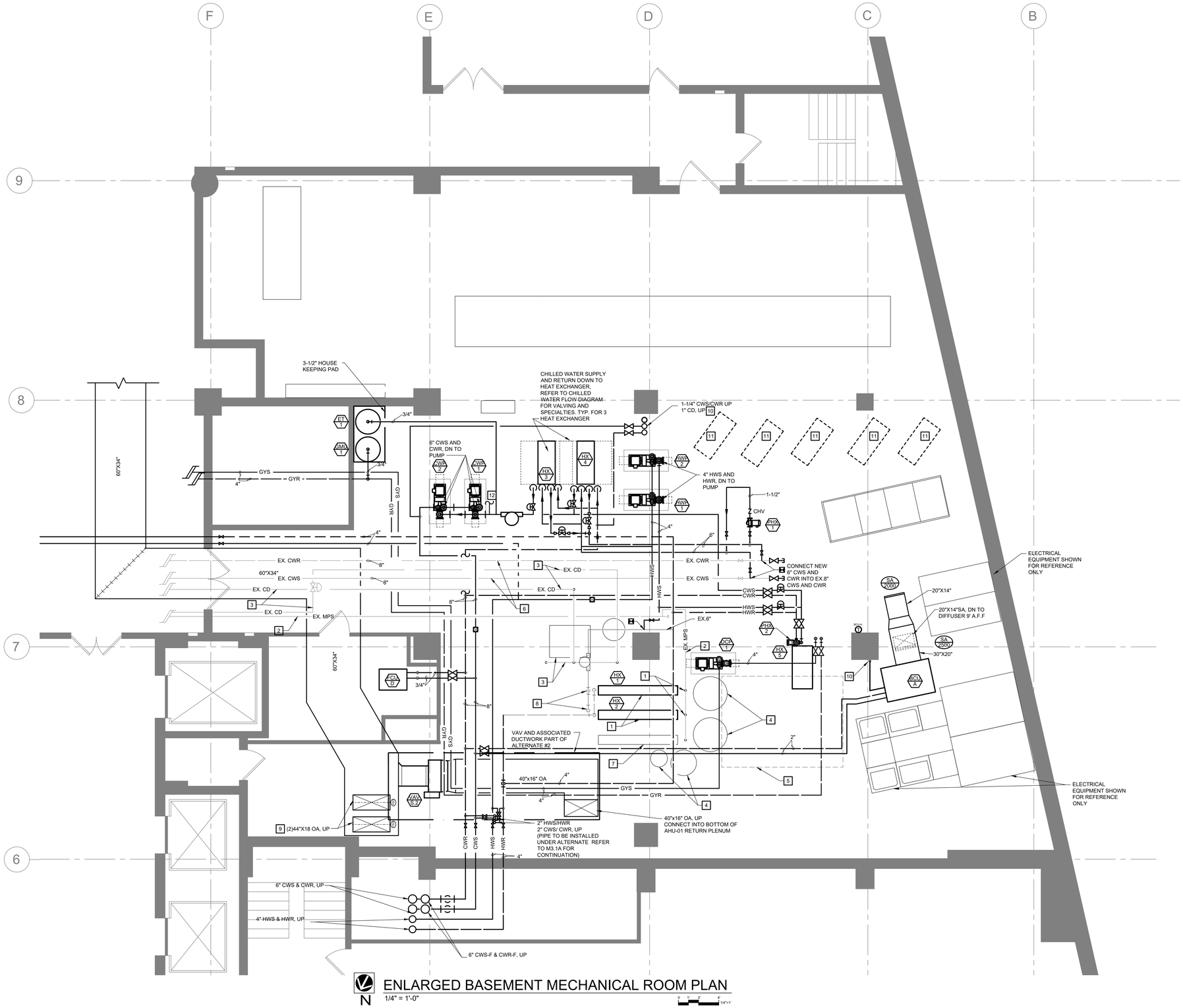

ENLARGED BASEMENT MECHANICAL ROOM PLAN

1/4" = 1'-0"

N

KEYED NOTES

1. NEW BUILDING HEATING WATER HEAT EXCHANGER TO BE INSTALLED AT LOCATION OF EXISTING EXCHANGER BEING DEMOLISHED. CONTRACTOR TO ROUTE NEW STEAM AND CONDENSATE PIPING AT LOCATION OF EXISTING PIPING BEING DEMOLISHED. REFER TO FLOW DIAGRAM ON M5.2 FOR SPECIALTIES.
2. EXISTING STEAM PIPING TO REMAIN.
3. EXISTING CONDENSATE PUMP AND CONDENSATE PIPING TO REMAIN.
4. EXISTING PLUMBING EQUIPMENT TO REMAIN.
5. NEW AIR HANDLING UNITS AND ELECTRICAL GEAR TO BE BROUGHT INTO BUILDING THROUGH HATCH FROM PAVED LOADING AREA ABOVE.SEE SHEET S.1 FOR SLAB REMOVAL AND REPLACEMENT.
6. CONNECTION TO CHILLED WATER WILL REQUIRE SHUT OFF OUTSIDE OF JEFFERSON BUILDING. CONTRACTOR TO COORDINATE WITH FACILITIES MANAGER.
7. EXISTING DOMESTIC HOT WATER HEAT EXCHANGER TO REMAIN.
8. REFER TO HEATING WATER FLOW DIAGRAM FOR NEW PIPING SPECIALTIES AND CONNECTION TO EXISTING HEAT EXCHANGER.
9. INSTALL (2) 44"X18" UP FROM THE TOP OF 60"X28" DUCT THRU WAFFLE SLAB OPENING.
10. 1" CONDENSATE DOWN, ROUTE TO NEAREST FLOOR DRAIN.
11. EXISTING PUMPS TO BE DEMOLISHED, LOCATION SHOWN FOR REFERENCE ONLY.
12. MAKE UP WATER CONNECT, REFER TO FLOW DIAGRAM ON M5.1 FOR DETAILS.

SHEET IS PLOTTED TO SCALE IF ADJACENT LINE MEASURES 1 INCH

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PROJECT # O1911-01
SITE # 1001
ASSET # 3101001057

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ISSUE DATE:

CAD DWG FILE: M4.0-075107.001
DRAWN BY: AM
CHECKED BY: EP
DESIGNED BY: JW

SHEET TITLE:
ENLARGED BASEMENT MECHANICAL ROOM

SHEET NUMBER:
M4.0

111 OF 244 SHEETS

DATE : August 31, 2023

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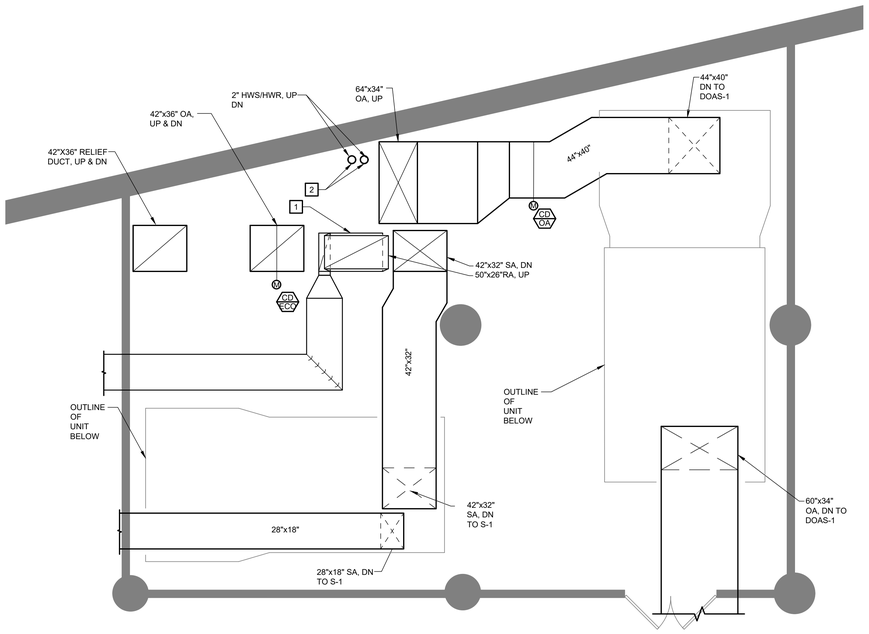
KEYED NOTES

1. 50"x30" PROPORTIONAL SPLIT. SPLIT DUCT 9" AND TRANSITION TO 28"x18" TO SERVE BASEMENT. TRANSITION 41"x30" TO 50"x26" AND ROUTE DUCT UP TO FIRST FLOOR.
2. NEW 2" HWS AND HWR LINES UP TO 1ST FLOOR.



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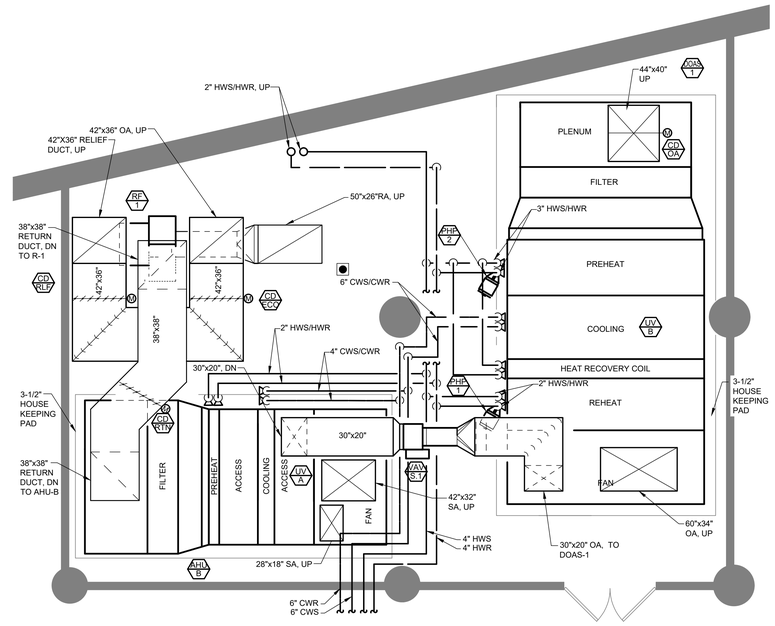
BASEMENT AHU ROOM - ENLARGED FLOOR PLAN - UPPER - MECHANICAL

1/4" = 1'-0"



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BASEMENT AHU ROOM - ENLARGED FLOOR PLAN - LOWER - MECHANICAL

1/4" = 1'-0"

SHEET IS PLOTTED TO SCALE IF ADJACENT LINE MEASURES 1 INCH

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CAD DWG FILE: M3.0-075107.001
DRAWN BY: AM
CHECKED BY: EP
DESIGNED BY: JW

SHEET TITLE:

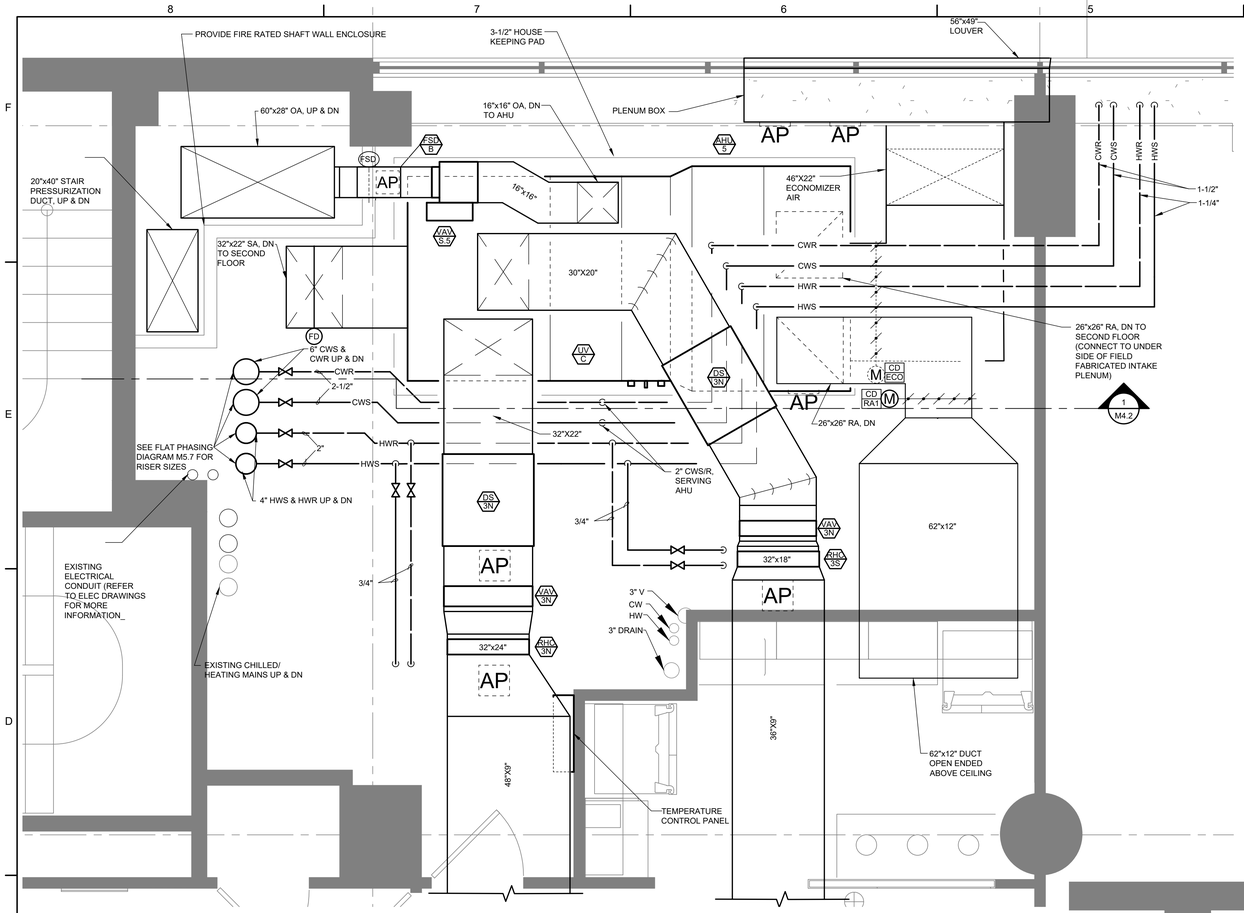
BASEMENT FLOOR PLAN -MECHANICAL

SHEET NUMBER:

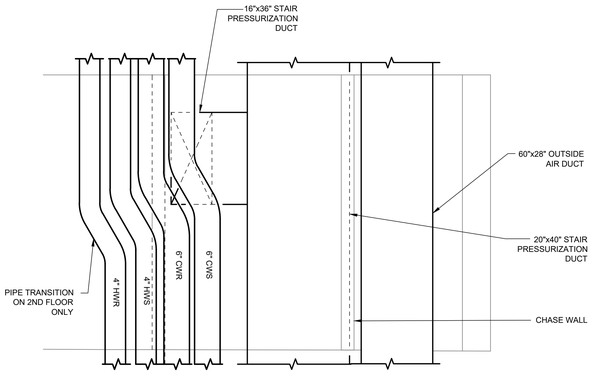
M4.1

112 OF 244 SHEETS

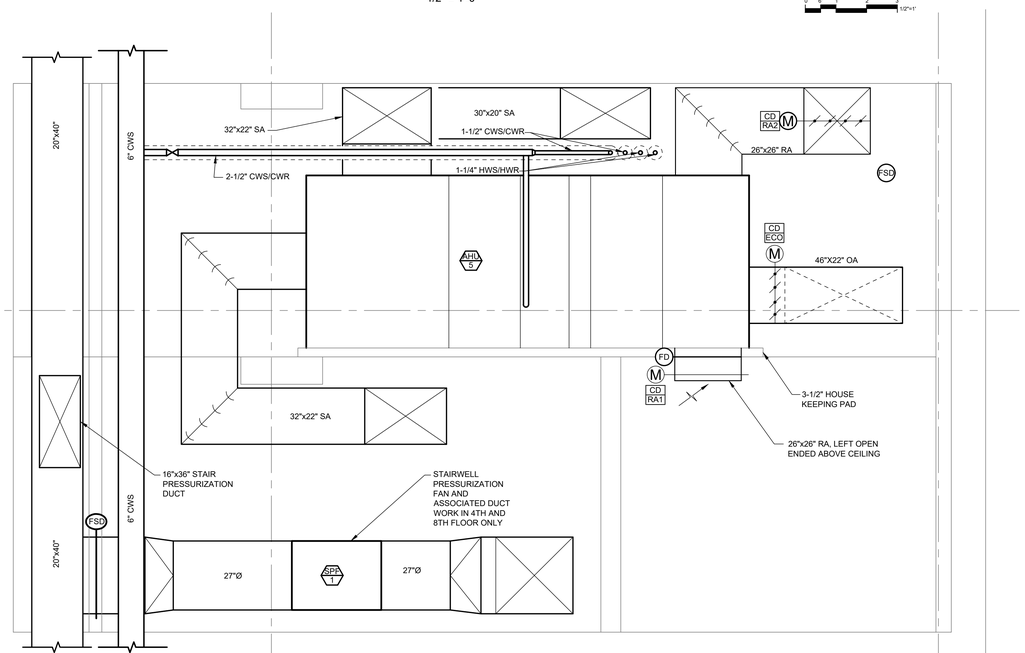
DATE : August 31, 2023



MECHANICAL ROOM PLAN THIRD FLOOR
3RD, 5TH, 7TH, 9TH, 11TH, 13TH FLOORS ONLY
1/2" = 1'-0"



SECTION 2
1/2" = 1'-0"



SECTION 1
1/2" = 1'-0"

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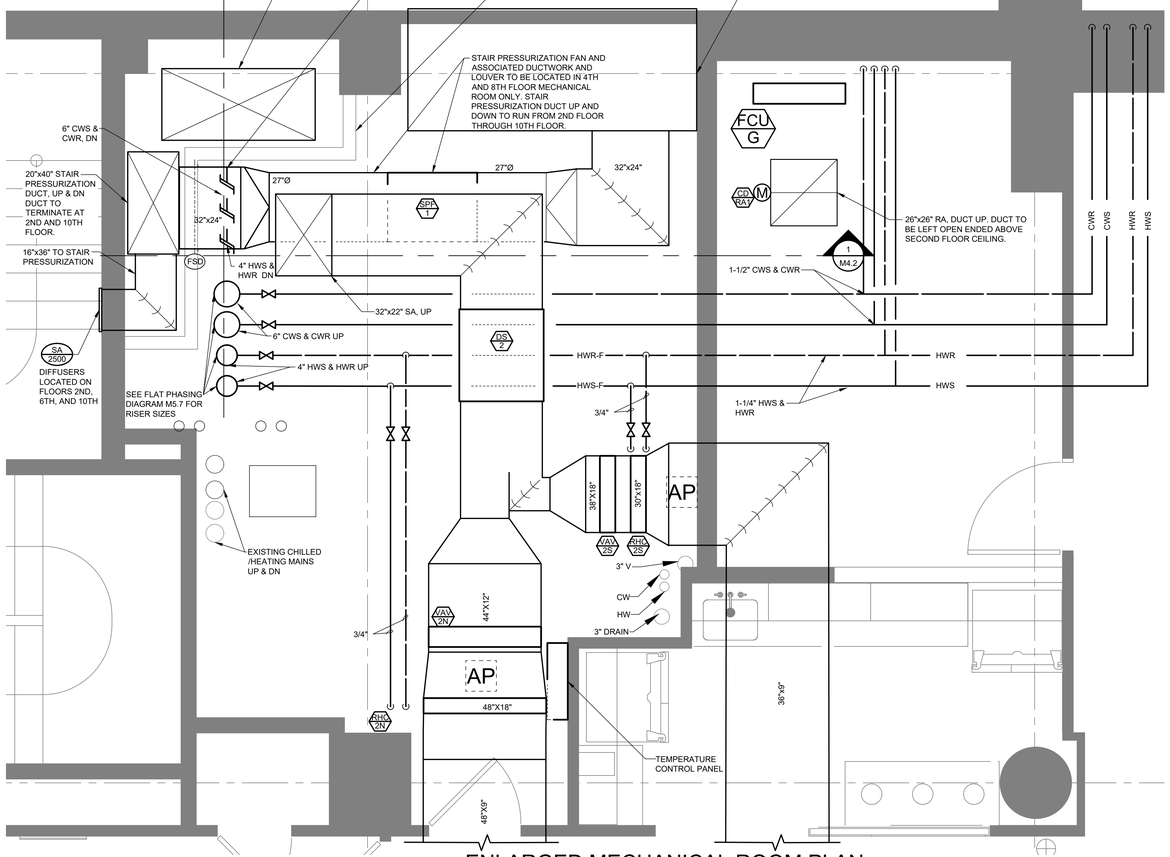

ENLARGED MECHANICAL ROOM PLAN
2ND, 4TH, 6TH, 8TH, 10TH, 12TH FLOORS ONLY
1/2" = 1'-0"

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DRAWN BY: AM
CHECKED BY: EP
DESIGNED BY: JW

SHEET TITLE:
ENLARGED MECHANICAL ROOM PLANS

SHEET NUMBER:
M4.2

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DATE : August 31, 2023

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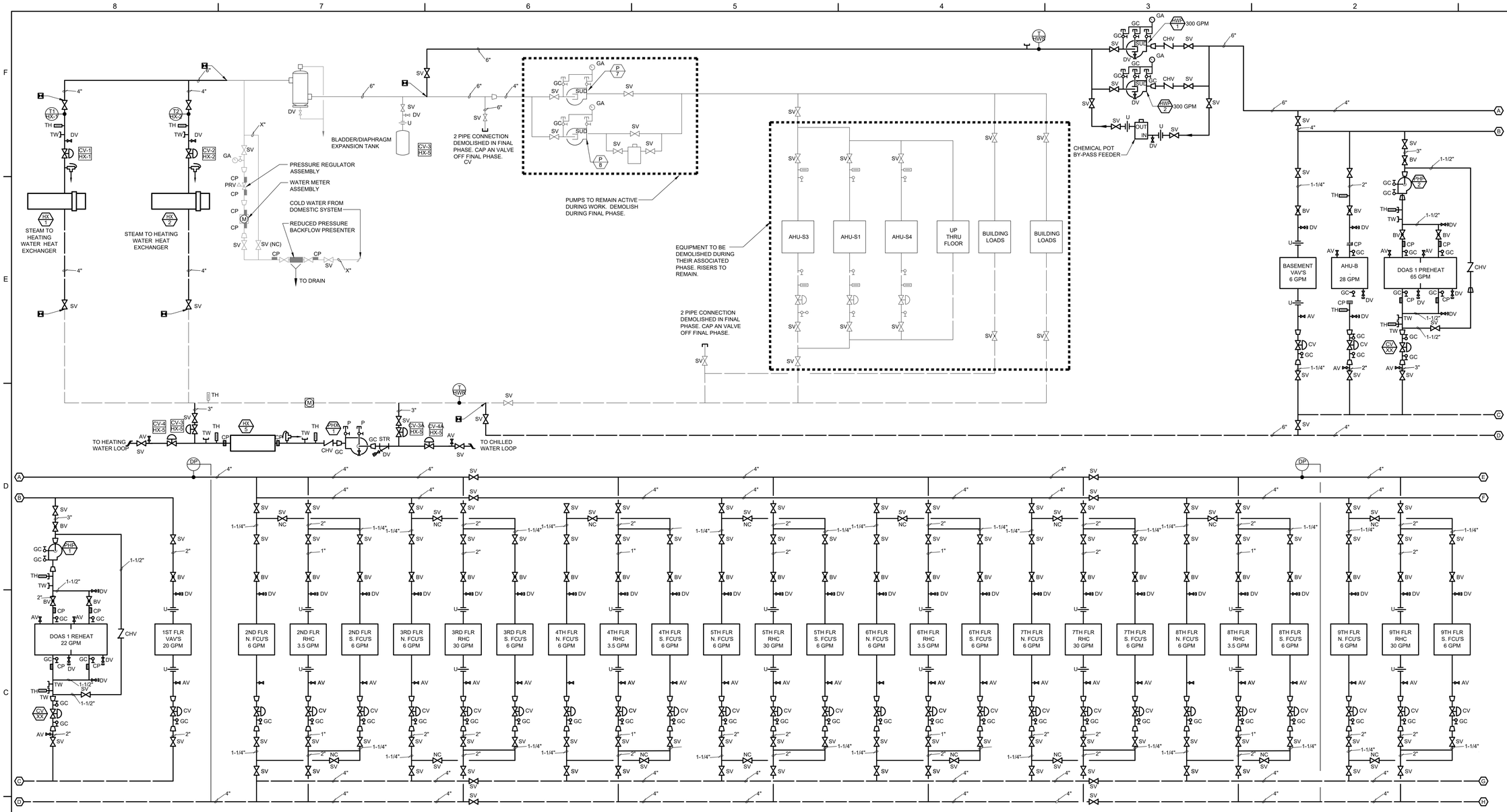
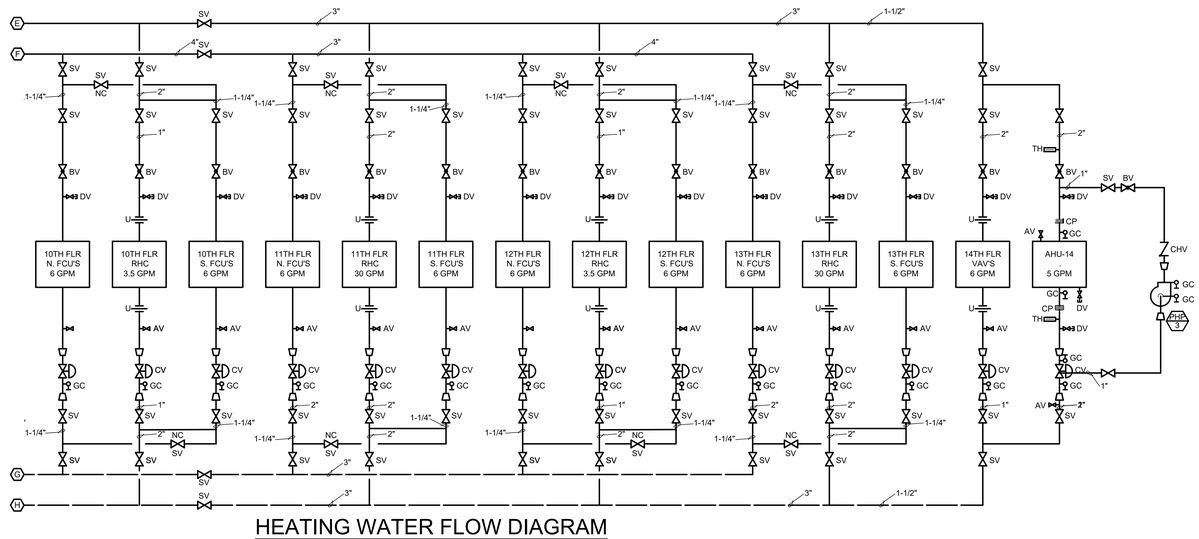
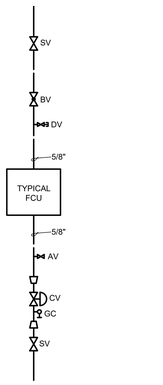


HEATING WATER FLOW DIAGRAM
NO SCALE



HEATING WATER FLOW DIAGRAM
NO SCALE

HEATING WATER FLOW POINTS LIST LOCATED ON SHEET M5.2



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NO SCALE

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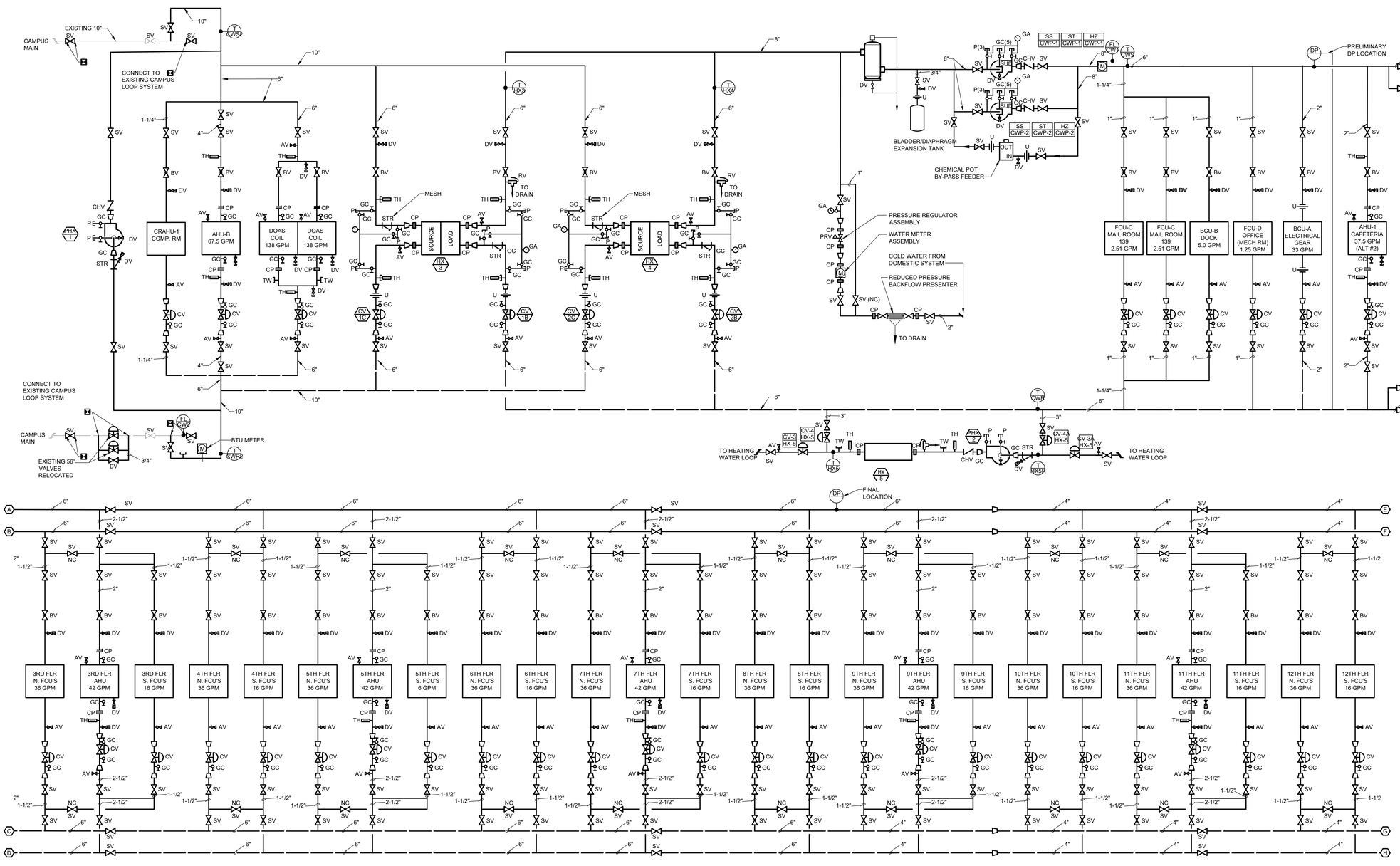
DRAWN BY: AM
CHECKED BY: FP
DESIGNED BY: JW

SHEET TITLE:
HEATING WATER FLOW DIAGRAM

SHEET NUMBER:
M5.0

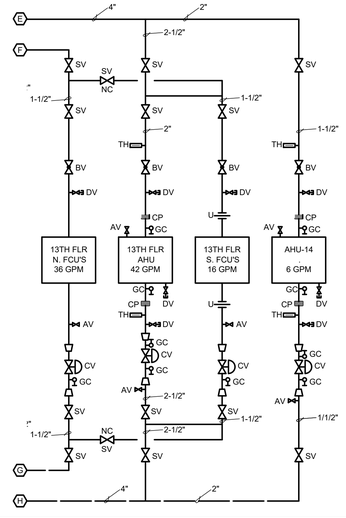
114 OF 244 SHEETS

DATE : August 31, 2023

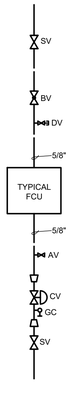


CHILLED WATER FLOW DIAGRAM

N.T.S



SHEET IS PLOTTED TO SCALE IF ADJACENT LINE MEASURES 1 INCH



CHILLED WATER FLOW POINTS LIST LOCATED ON SHEET M5.2

TYPICAL FAN COIL UNIT

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DIVISION OF FACILITIES MANAGEMENT,
DESIGN AND CONSTRUCTION

RENOVATE MECHANICAL/ ELECTRICAL/LIFE-SAFETY/ STATE OFFICE BUILDING

JEFFERSON STATE OFFICE BUILDING
205 JEFFERSON STREET
JEFFERSON CITY, MO 65101

PROJECT # O1911-01
SITE # 1001
ASSET # 3101001057

REVISION:
DATE:
REVISION:
DATE:
REVISION:
DATE:
ISSUE DATE:

CAD DWG FILE:M5.1-075107.001
DRAWN BY: AM
CHECKED BY: EP
DESIGNED BY: JW

SHEET TITLE:
CHILLED WATER FLOW DIAGRAM

SHEET NUMBER:
M5.1

115 OF 244 SHEETS

DATE : August 31, 2023

S:\075107.001 JEFF CITY OFFICE BLDG HVAC SYSTEM DESIGN\MECH\M5.1 - 075107.001.dwg 2023-10-31 12:08 Allteken

HEATING WATER POINTS LIST

POINT DESCRIPTION									ALARM			STARTUP TREND			OPERATIONAL TREND			FIELD DEVICE DESCRIPTION			NOTES
TYPE	SYSTEM	NAME	DESCRIPTION	TYPE	SET-POINT	UNITS	MONITOR	ADJUST	NOTIFY	THRESHOLD	LEVEL	TREND	FREQ	ARCHIVE	TREND	FREQ	ARCHIVE	INSTRUMENT TYPE	SIGNAL	RANGE	
AI	-	T-OA	OUTSIDE AIR TEMP.	TEMP.	-	°F	-	-	-	-	-	-	-	-	-	-	-		-	-	
AI	-	H-OA	OUTSIDE AIR RELATIVE HUMIDITY	HUMIDITY	-	% RH	-	-	-	-	-	-	-	-	-	-	-		-	-	
TYPICAL PUMP CONTROL POINTS HWP-1, HWP-2																					
DO	HW	SS-P	PUMP ENABLE	START/STOP	-	-	X	YES	-	-	-	-	-	-	-	-	-	HARD WIRE TO VFD TERMINAL STRIP	-	-	
AO	HW	HZ-P	PUMP SPEED	VFD	PID OUTPUT	% SPEED	X	OVERRIDE	-	-	-	X	15 MIN.	1 WEEK	X	15 MIN.	1 WEEK	HARD WIRE TO VFD TERMINAL STRIP	4-20 mA	0-100%	
DI	HW	ST-P	PUMP STATUS	ALM/NORM	-	ON/OFF	X	-	X	STATUS = OFF WHEN CMD = ON	1	-	-	-	-	-	-	CURRENT SENSING RELAY	CONTACT	-	
TYPICAL PUMP CONTROL POINTS PHP-1, PHP-2, PHP-3																					
DO	HW	SS-P	PUMP ENABLE	START/STOP	-	-	X	YES	-	-	-	-	-	-	-	-	-	HARD WIRE TO VFD TERMINAL STRIP	-	-	
DI	HW	ST-P	PUMP STATUS	ALM/NORM	-	ON/OFF	X	-	X	STATUS = OFF WHEN CMD = ON	1	-	-	-	-	-	-	CURRENT SENSING RELAY	CONTACT	-	
AI	HW	DP-HW	HEATING WATER LOOP PRESSURE	PRESSURE	-	* W.C.	-	-	-	-	-	-	-	-	-	-	-		4-20 mA		
AI	HW	F-HWS	HEATING WATER LOOP FLOW	FLOW METER		GPM															
AI	HW	F-CWT	TERICARY CHILLED WATER LOOP FLOW	FLOW METER		GPM															
AO	HW	CV-1	HX-1 HEATING WATER CONTROL VALVE	VALVE	PID OUTPUT	% OPEN	X	OVERRIDE	-	-	-	X	15 MIN.	1 WEEK	X	15 MIN.	1 WEEK	MODULATING ELECTRONIC ACTUATOR	4-20 mA	0-100%	
AO	HW	CV-2	HX-2 HEATING WATER CONTROL VALVE	VALVE	PID OUTPUT	% OPEN	X	OVERRIDE	-	-	-	X	15 MIN.	1 WEEK	X	15 MIN.	1 WEEK	MODULATING ELECTRONIC ACTUATOR	4-20 mA	0-100%	
AO	HW	CV-3	HX-5 TERCIARY LOOP CONTROL VALVE	VALVE	PID OUTPUT	% OPEN	X	OVERRIDE	-	-	-	X	15 MIN.	1 WEEK	X	15 MIN.	1 WEEK	MODULATING ELECTRONIC ACTUATOR	4-20 mA	0-100%	
AI	HW	T-HX1	HEAT EXCHANGER BUILDING SUPPLY TEMP	TEMP	-	°F	X	-	-	-	-	X	1 MIN.	1 DAY	X	15 MIN.	1 WEEK	RTD INSERTION ELEMENT	OHMS	0-150°F	
AI	HW	T-HX2	HEAT EXCHANGER BUILDING SUPPLY TEMP	TEMP	-	°F	X	-	-	-	-	X	1 MIN.	1 DAY	X	15 MIN.	1 WEEK	RTD INSERTION ELEMENT	OHMS	0-150°F	
AI	HW	T-HWS	BUILDING HEATING WATER SUPPLY TEMP	TEMP	-	°F	X	-	-	-	-	X	1 MIN.	1 DAY	X	15 MIN.	1 WEEK	RTD INSERTION ELEMENT	OHMS	0-150°F	
AI	HW	T-HWR	BUILDING HEATING WATER RETURN TEMP	TEMP	-	°F	X	-	-	-	-	X	1 MIN.	1 DAY	X	15 MIN.	1 WEEK	RTD INSERTION ELEMENT	OHMS	0-150°F	
AO	STEAM	CV-ST1	STEAM CONTROL VALVE - HX	VALVE	PID OUTPUT	% OPEN	X	OVERRIDE	-	-	-	X	15 MIN.	1 WEEK	X	15 MIN.	1 WEEK	MODULATING ELECTRONIC ACTUATOR	4-20 mA	0-100%	
AO	STEAM	CV-ST2	STEAM CONTROL VALVE - HX	VALVE	PID OUTPUT	% OPEN	X	OVERRIDE	-	-	-	X	15 MIN.	1 WEEK	X	15 MIN.	1 WEEK	MODULATING ELECTRONIC ACTUATOR	4-20 mA	0-100%	

DI	DIGITAL INPUT
DO	DIGITAL OUTPUT
AI	ANALOG INPUT
AO	ANALOG OUTPUT
HW	HARD WIRED INTERLOCK/SAFETY MONITORED BY BMS
COS	CHANGE OF STATE

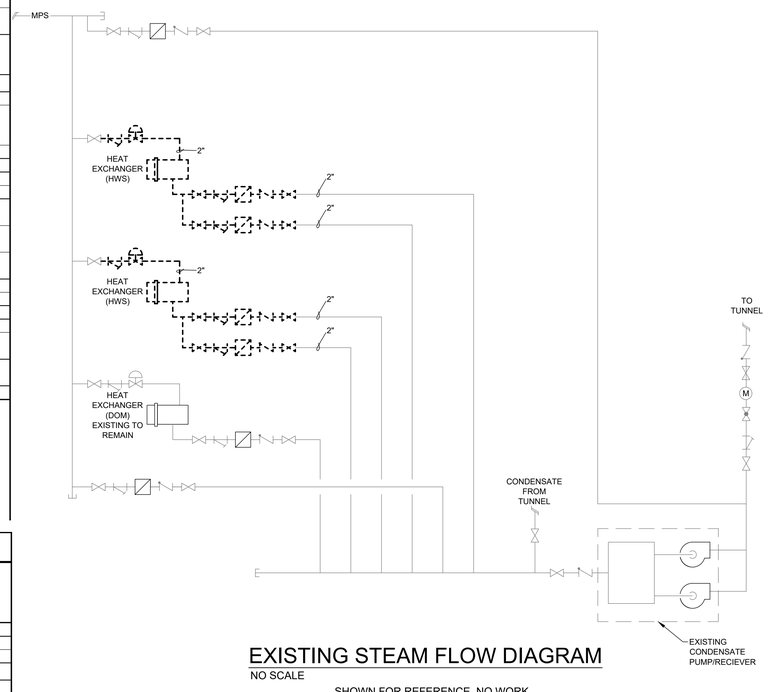
ALARM LEVELS	EXAMPLES
1	EQUIPMENT FAILURE (NOTIFY SECURITY / MAINTENANCE PERSONNEL)
2	OUT OF RANGE (NOTIFY MAINTENANCE PERSONNEL)
3	GENERAL MAINTENANCE (NO PAGING NECESSARY)

CHILLED WATER POINTS LIST

POINT DESCRIPTION									ALARM			STARTUP TREND			OPERATIONAL TREND			FIELD DEVICE DESCRIPTION			NOTES
TYPE	SYSTEM	NAME	DESCRIPTION	TYPE	SET-POINT	UNITS	MONITOR	ADJUST	NOTIFY	THRESHOLD	LEVEL	TREND	FREQ	ARCHIVE	TREND	FREQ	ARCHIVE	INSTRUMENT TYPE	SIGNAL	RANGE	
AI	-	T-OA	OUTSIDE AIR TEMP.	TEMP.	-	°F	-	-	-	-	-	-	-	-	-	-	-		-	-	
AI	-	H-OA	OUTSIDE AIR RELATIVE HUMIDITY	HUMIDITY	-	% RH	-	-	-	-	-	-	-	-	-	-	-		-	-	
TYPICAL PUMP CONTROL POINTS (CWP-1, CWP-2, DCP-1, PHX-1, PHX-2)																					
DO	CW	SS-P	PUMP ENABLE	START/STOP	-	-	X	YES	-	-	-	-	-	-	-	-	-	HARD WIRE TO VFD TERMINAL STRIP	-	-	
AO	CW	HZ-P	PUMP SPEED	VFD	PID OUTPUT	% SPEED	X	OVERRIDE	-	-	-	X	15 MIN.	1 WEEK	X	15 MIN.	1 WEEK	HARD WIRE TO VFD TERMINAL STRIP	4-20 mA	0-100%	
DI	CW	ST-P	PUMP STATUS	ALM/NORM	-	ON/OFF	X	-	X	STATUS = OFF WHEN CMD = ON	1	-	-	-	-	-	-	CURRENT SENSING RELAY	CONTACT	-	
AI	CW	DP-CW	CHILLED WATER TERCIARY LOOP PRESSURE	PRESSURE	-	* W.C.	-	-	-	-	-	-	-	-	-	-	-	DUCT MOUNTED PRESSURE SENSOR	4-20 mA	0-3" W.C.	
AI	CW	F-CW2	SECONDARY LOOP CHILLED WATER LOOP FLOW	FLOW METER		GPM															
AI	CW	F-CW1	TERICARY CHILLED WATER LOOP FLOW	FLOW METER		GPM															
AO	CW	CV-1C	HX-3 SECONDARY LOOP CONTROL VALVE	VALVE	PID OUTPUT	% OPEN	X	OVERRIDE	-	-	-	X	15 MIN.	1 WEEK	X	15 MIN.	1 WEEK	MODULATING ELECTRONIC ACTUATOR	4-20 mA	0-100%	
AO	CW	CV-2C	HX-4 SECONDARY LOOP CONTROL VALVE	VALVE	PID OUTPUT	% OPEN	X	OVERRIDE	-	-	-	X	15 MIN.	1 WEEK	X	15 MIN.	1 WEEK	MODULATING ELECTRONIC ACTUATOR	4-20 mA	0-100%	
AO	CW	CV-1B	HX-3 TERCIARY LOOP CONTROL VALVE	VALVE	PID OUTPUT	% OPEN	X	OVERRIDE	-	-	-	X	15 MIN.	1 WEEK	X	15 MIN.	1 WEEK	MODULATING ELECTRONIC ACTUATOR	4-20 mA	0-100%	
AO	CW	CV-2B	HX-4 TERCIARY LOOP CONTROL VALVE	VALVE	PID OUTPUT	% OPEN	X	OVERRIDE	-	-	-	X	15 MIN.	1 WEEK	X	15 MIN.	1 WEEK	MODULATING ELECTRONIC ACTUATOR	4-20 mA	0-100%	
AO	CW	CV-3	HX-5 TERCIARY LOOP CONTROL VALVE	VALVE	PID OUTPUT	% OPEN	X	OVERRIDE	-	-	-	X	15 MIN.	1 WEEK	X	15 MIN.	1 WEEK	MODULATING ELECTRONIC ACTUATOR	4-20 mA	0-100%	
AI	CW	T-CWS2	CHILLED WATER SECONDARY SUPPLY TEMP	TEMP	-	°F	X	-	-	-	-	X	1 MIN.	1 DAY	X	15 MIN.	1 WEEK	RTD INSERTION ELEMENT	OHMS	0-150°F	
AI	CW	T-CWS	CHILLED WATER BUILDING SUPPLY TEMP	TEMP	-	°F	X	-	-	-	-	X	1 MIN.	1 DAY	X	15 MIN.	1 WEEK	RTD INSERTION ELEMENT	OHMS	0-150°F	
AI	CW	T-CWR2	CHILLED WATER SECONDARY RETURN TEMP	TEMP	-	°F	X	-	-	-	-	X	1 MIN.	1 DAY	X	15 MIN.	1 WEEK	RTD INSERTION ELEMENT	OHMS	0-150°F	
AI	CW	T-CWR	CHILLED WATER BUILDING RETURN TEMP	TEMP	-	°F	X	-	-	-	-	X	1 MIN.	1 DAY	X	15 MIN.	1 WEEK	RTD INSERTION ELEMENT	OHMS	0-150°F	
AI	CW	T-HX3	HEAT EXCHANGER BUILDING SUPPLY TEMP	TEMP	-	°F	X	-	-	-	-	X	1 MIN.	1 DAY	X	15 MIN.	1 WEEK	RTD INSERTION ELEMENT	OHMS	0-150°F	
AI	CW	T-HX4	HEAT EXCHANGER BUILDING SUPPLY TEMP	TEMP	-	°F	X	-	-	-	-	X	1 MIN.	1 DAY	X	15 MIN.	1 WEEK	RTD INSERTION ELEMENT	OHMS	0-150°F	
AI	CW	T-HX5	HEAT EXCHANGER SUPPLY TEMP	TEMP	-	°F	X	-	-	-	-	X	1 MIN.	1 DAY	X	15 MIN.	1 WEEK	RTD INSERTION ELEMENT	OHMS	0-150°F	
AI	CW	T-HX5R	HEAT EXCHANGER SECONDARY RETURN	TEMP	-	°F	X	-	-	-	-	X	1 MIN.	1 DAY	X	15 MIN.	1 WEEK	RTD INSERTION ELEMENT	OHMS	0-150°F	

DI	DIGITAL INPUT
DO	DIGITAL OUTPUT
AI	ANALOG INPUT
AO	ANALOG OUTPUT
HW	HARD WIRED INTERLOCK/SAFETY MONITORED BY BMS
COS	CHANGE OF STATE

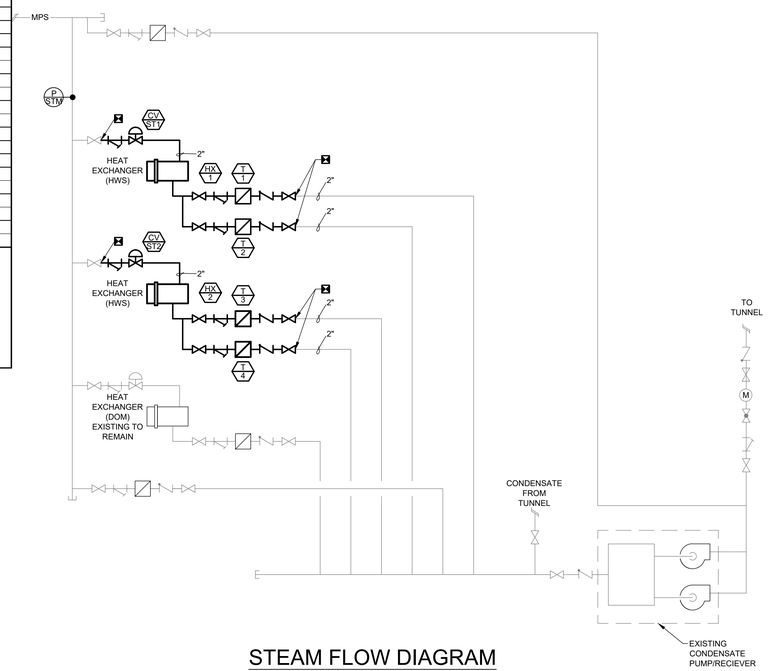
ALARM LEVELS	EXAMPLES
1	EQUIPMENT FAILURE (NOTIFY SECURITY / MAINTENANCE PERSONNEL)
2	OUT OF RANGE (NOTIFY MAINTENANCE PERSONNEL)
3	GENERAL MAINTENANCE (NO PAGING NECESSARY)



EXISTING STEAM FLOW DIAGRAM

NO SCALE

SHOWN FOR REFERENCE, NO WORK



STEAM FLOW DIAGRAM

NO SCALE

SHEET IS PLOTTED TO SCALE IF ADJACENT LINE MEASURES 1 INCH

STATE OF MISSOURI
MICHAEL L. PARSON, GOVERNOR

PHILIP J WENTZ
MO STATE LIC. E-29111

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OFFICE OF ADMINISTRATION
DIVISION OF FACILITIES MANAGEMENT,
DESIGN AND CONSTRUCTION

RENOVATE MECHANICAL/ ELECTRICAL/LIFE-SAFETY/ STATE OFFICE BUILDING

JEFFERSON STATE OFFICE BUILDING
205 JEFFERSON STREET
JEFFERSON CITY, MO 65101

PROJECT # O1911-01
SITE # 1001
ASSET # 3101001057

REVISION:
DATE:
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ISSUE DATE:

CAD DWG FILE: M5.2-075107.001
DRAWN BY: AM
CHECKED BY: EP
DESIGNED BY: JW

SHEET TITLE:
STEAM FLOW DIAGRAM

SHEET NUMBER:
M5.2

116 OF 244 SHEETS

DATE : August 31, 2023

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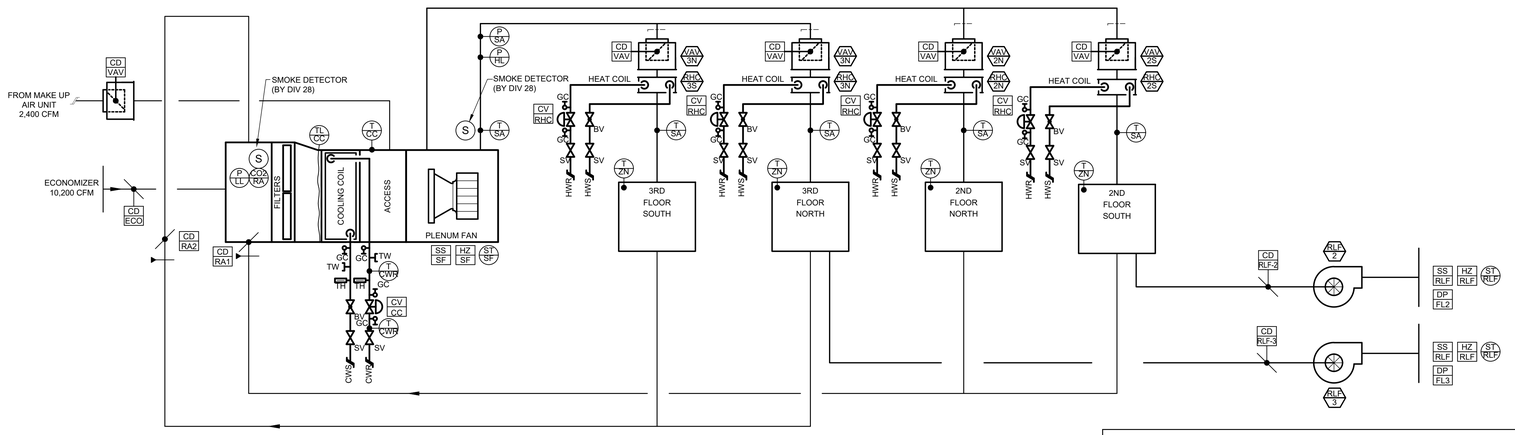
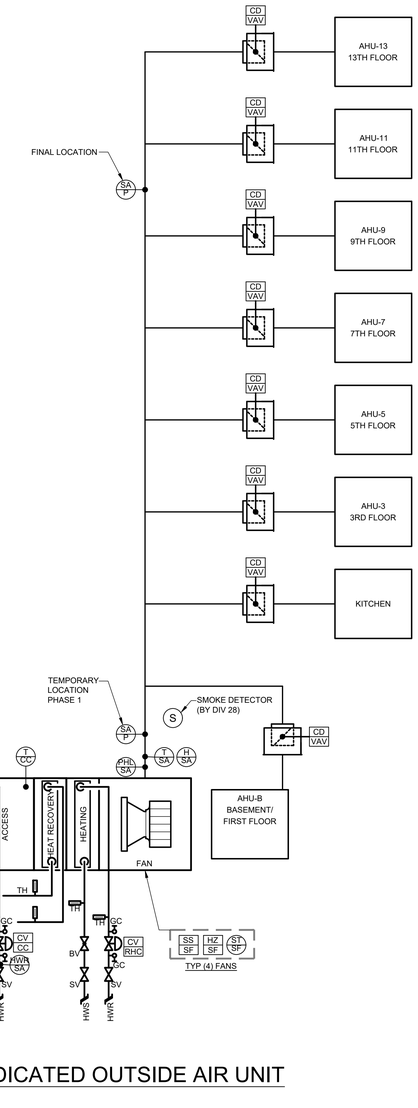


TYPICAL STACK AIRFLOW DIAGRAM - NEW

NO SCALE

TYPICAL FOR UNITS AHU-3,5,7,9,11,13



DEDICATED OUTSIDE AIR UNIT

N.T.S.

DOAS POINTS LIST

POINT DESCRIPTION									ALARM			STARTUP TREND			OPERATIONAL TREND			FIELD DEVICE DESCRIPTION				NOTES
TYPE	SYSTEM	NAME	DESCRIPTION	TYPE	SET-POINT	UNITS	MONITOR	ADJUST	NOTIFY	THRESHOLD	LEVEL	TREND	FREQ	ARCHIVE	TREND	FREQ	ARCHIVE	INSTRUMENT TYPE	SIGNAL	RANGE	
AI	-	T-OA	OUTSIDE AIR TEMP.	TEMP.	-	°F	-	-	-	-	-	-	-	-	-	-	-		-	-	
AI	-	H-OA	OUTSIDE AIR RELATIVE HUMIDITY	HUMIDITY	-	% RH	-	-	-	-	-	-	-	-	-	-	-		-	-	
			DOAS-1 CONTROL POINTS																		
DO	DOAS-1	SS-SF	SUPPLY FAN ENABLE	START/STOP	-	-	X	YES	-	-	-	-	-	-	-	-	-	HARD WIRE TO VFD TERMINAL STRIP	-	-	4 INDEPENDENT VFDS
AO	DOAS-1	HZ-SF	SUPPLY FAN SPEED	VFD	PID OUTPUT	% SPEED	X	OVERRIDE	-	-	-	X	15 MIN	1 WEEK	X	15 MIN	1 WEEK	HARD WIRE TO VFD TERMINAL STRIP	4-20 mA	0-100%	4 INDEPENDENT VFDS
DI	DOAS-1	ST-SF	SUPPLY FAN STATUS	ALM/NORM	-	ON/OFF	X	-	X	STATUS = OFF WHEN CMD = ON	1	-	-	-	-	-	-	CURRENT SENSING RELAY	CONTACT	-	4 INDEPENDENT VFDS
AI	DOAS-1	P-SA	SUPPLY AIR PRESSURE	PRESSURE	-	" W.C.	-	-	-	-	-	-	-	-	-	-	-	DUCT MOUNTED PRESSURE SENSOR	4-20 mA	0-3" W.C.	
HW	DOAS-1	PHL-SA	SUPPLY AIR PRESSURE HIGH LIMIT	PRESSURE	-	" W.C.	-	-	-	-	-	-	-	-	-	-	-			0-3" W.C.	
AI	DOAS-1	T-SA	SUPPLY AIR TEMPERATURE	TEMP.	SEE SEQ	°F	X	-	X	SAT < 40F	2	X	15 MIN.	1 WEEK	X	15 MIN.	1 WEEK	RIGID DUCT TEMPERATURE SENSOR	4-20 mA	0-100°F	
AI	DOAS-1	H-SA	SUPPLY AIR RELATIVE HUMIDITY	HUMIDITY	-	% RH	-	-	-	-	-	-	-	-	-	-	-		-	-	
AO	DOAS-1	CV-RHC	REHEAT COIL CONTROL VALVE	VALVE	PID OUTPUT	% OPEN	X	OVERRIDE	-	-	-	X	15 MIN	1 WEEK	X	15 MIN	1 WEEK	MODULATING ELECTRONIC ACTUATOR	4-20 mA	0-100%	FAIL OPEN
BO	DOAS-1	CV-ER1	ENERGY RECOVERY VALVE	VALVE	PID OUTPUT	% OPEN	X	OVERRIDE	-	-	-	X	15 MIN.	1 WEEK	X	15 MIN.	1 WEEK	2 POSITION VALVE ACTUATOR	4-20 mA	0-100%	FAIL OPEN
BO	DOAS-1	CV-ER1	ENERGY RECOVERY VALVE	VALVE	PID OUTPUT	% OPEN	X	OVERRIDE	-	-	-	X	15 MIN.	1 WEEK	X	15 MIN.	1 WEEK	2 POSITION VALVE ACTUATOR	4-20 mA	0-100%	FAIL OPEN
AI	DOAS-1	T-CWR	COOLING COIL WATER RETURN	TEMP.	-	°F	X	-	-	-	-	X	1 MIN.	1 DAY	X	15 MIN.	1 WEEK	RTD INSERTION ELEMENT	OHMS	0-150°F	
AI	DOAS-1	T-CC	COOLING COIL LEAVING AIR TEMP.	TEMP.	SEE SEQ	°F	X	-	X	<45 OR >95	2	X	15 MIN	1 WEEK	X	15 MIN.	1 WEEK	RTU MOUNTED AVERAGING THERMISTOR	4-20 mA	0-100°F	
AO	DOAS-1	CV-CC	COOLING COIL CONTROL VALVE	VALVE	PID OUTPUT	% OPEN	X	OVERRIDE	-	-	-	X	15 MIN.	1 WEEK	X	15 MIN.	1 WEEK	MODULATING ELECTRONIC ACTUATOR	4-20 mA	0-100%	FAIL OPEN
AI	DOAS-1	T-HWR	PHC HEATING WATER RETURN	TEMP.	-	°F	X	-	-	-	-	X	1 MIN.	1 DAY	X	15 MIN.	1 WEEK	RTD INSERTION ELEMENT	OHMS	0-150°F	
AI	DOAS-1	T-PHC	PREHEAT COIL LEAVING AIR TEMP.	TEMP.	SEE SEQ.	°F	X	-	X	<45 OR >95	2	X	15 MIN	1 WEEK	X	15 MIN.	1 WEEK	RTU MOUNTED AVERAGING THERMISTOR	4-20 mA	0-100°F	
HW	DOAS-1	TL-CC	COOLING COIL LOW TEMP. SWITCH	TEMP.	38	°F	X	-	X	DISCRETE	1	-	-	-	-	-	-	RTU MOUNTED LOW LIMIT FREEZE-STAT	-	-	HW SAFETY TO VFD
AO	DOAS-1	CV-PHC	PREHEAT COIL CONTROL VALVE	VALVE	PID OUTPUT	% OPEN	X	OVERRIDE	-	-	-	X	15 MIN.	1 WEEK	X	15 MIN.	1 WEEK	MODULATING ELECTRONIC ACTUATOR	4-20 mA	0-100%	FAIL OPEN
DO	DOAS-1	SS-PHP2	CIRCULATOR PUMP ENABLE	START/STOP	-	-	X	YES	-	-	-	X	15 MIN	1 WEEK	-	-	-	RELAY	-	-	HEATING COIL PUMP
DI	DOAS-1	ST-PHP2	CIRCULATOR PUMP STATUS	ALM / NORM	-	-	X	-	X	DISCRETE	2	-	-	-	-	-	-	CURRENT SENSING RELAY	CONTACT	-	
DO	DOAS-1	CD-OA	OUTSIDE AIR DAMPER	DAMPER	-	% OPEN	X	OVERRIDE	-	-	-	X	15 MIN	1 WEEK	-	-	-	2 POSITION DAMPER ACTUATOR	24V		FAIL CLOSE
			TYPICAL VAV BOX CONTROLS																		
AI	VAV	F-OA	VAV AIR FLOW	AIRFLOW	-	CFM	X	-	X		1	-	-	-	-	-	-		4-20 mA		
AO	VAV	CD-VAV	VAV CONTROL DAMPER	DAMPER	-	-	X		-	-		X	15 MIN	1 WEEK	-	-	-			-	

		ALARM LEVELS	EXAMPLES
DI	DIGITAL INPUT	1	EQUIPMENT FAILURE (NOTIFY SECURITY / MAINTENANCE PERSONNEL)
DO	DIGITAL OUTPUT	2	OUT OF RANGE (NOTIFY MAINTENANCE PERSONNEL)
AI	ANALOG INPUT	3	GENERAL MAINTENANCE (NO PAGING NECESSARY)
AO	ANALOG OUTPUT		
HW	HARD WIRED INTERLOCK/SAFETY MONITORED BY BMS		
COS	CHANGE OF STATE		

STACK AIR HANDLER POINTS LIST

POINT DESCRIPTION									ALARM			STARTUP TREND			OPERATIONAL TREND			FIELD DEVICE DESCRIPTION				NOTES
TYPE	SYSTEM	NAME	DESCRIPTION	TYPE	SET-POINT	UNITS	MONITOR	ADJUST	NOTIFY	THRESHOLD	LEVEL	TREND	FREQ	ARCHIVE	TREND	FREQ	ARCHIVE	INSTRUMENT TYPE	SIGNAL	RANGE	
AI	-	T-OA	OUTSIDE AIR TEMP.	TEMP.	-	°F	-	-	-	-	-	-	-	-	-	-	-		-	-	
AI	-	H-OA	OUTSIDE AIR RELATIVE HUMIDITY	HUMIDITY	-	% RH	-	-	-	-	-	-	-	-	-	-	-		-	-	
			TYPICAL AIR HANDLER POINTS LIST																		
DO	AHU	SS-SF	SUPPLY FAN ENABLE	START/STOP	-	-	X	YES	-	-	-	-	-	-	-	-	-	HARD WIRE TO VFD TERMINAL STRIP	-	-	
AO	AHU	HZ-SF	SUPPLY FAN SPEED	VFD	PID OUTPUT	% SPEED	X	OVERRIDE	-	-	-	X	15 MIN.	1 WEEK	X	15 MIN.	1 WEEK	HARD WIRE TO VFD TERMINAL STRIP	4-20 mA	0-100%	
DI	AHU	ST-SF	SUPPLY FAN STATUS	ALM/NORM	-	ON/OFF	X	-	X	STATUS = OFF WHEN CMD = ON	1	-	-	-	-	-	-	CURRENT SENSING RELAY	CONTACT	-	
AI	AHU	P-SA	SUPPLY AIR DIFFERENTIAL PRESSURE	PRESSURE	-	" W.C.	-	-	-	-	-	-	-	-	-	-	-	UNIT MOUNTED DIFFERENTIAL PRESSURE SENSOR	4-20 mA	0-3" W.C.	
HW	AHU	PHL-SA	SUPPLY AIR PRESSURE HIGH LIMIT	PRESSURE	-	" W.C.	-	-	-	-	-	-	-	-	-	-	-			0-3" W.C.	
HW	AHU	PLL-RA	RETURN PRESSURE LOW LIMIT	PRESSURE	-	" W.C.	-	-	-	-	-	-	-	-	-	-	-			0-3" W.C.	
AI	AHU	T-SA	SUPPLY AIR TEMPERATURE	TEMP	SEE SEQ.	°F	X	-	X	SAT < 40F	2	X	15 MIN.	1 WEEK	X	15 MIN.	1 WEEK	RIGID DUCT TEMPERATURE SENSOR	4-20 mA	0-100°F	
AO	AHU	CD-RA1	RETURN DAMPER	DAMPER	-	-	X		-	-		X	15 MIN	1 WEEK	-	-	-			-	
AO	AHU	CD-RA2	RETURN DAMPER	DAMPER	-	-	X		-	-		X	15 MIN	1 WEEK	-	-	-			-	
AI	AHU	T-CWR	COOLING COIL WATER RETURN	TEMP	-	°F	X	-	-	-	-	X	1 MIN.	1 DAY	X	15 MIN.	1 WEEK	RTD INSERTION ELEMENT	OHMS	0-150°F	
AI	AHU	T-CC	COOLING COIL LEAVING AIR TEMP.	TEMP.	SEE SEQ.	°F	X	-	X	<45 OR >95	2	X	15 MIN.	1 WEEK	X	15 MIN.	1 WEEK	RTU MOUNTED AVERAGING THERMISTOR	4-20 mA	0-100°F	
AO	AHU	CV-CC	COOLING COIL CONTROL VALVE	VALVE	PID OUTPUT	% OPEN	X	OVERRIDE	-	-	-	X	15 MIN.	1 WEEK	X	15 MIN.	1 WEEK	MODULATING ELECTRONIC ACTUATOR	4-20 mA	0-100%	FAIL OPEN
AI	AHU	T-CWR	COOLING COIL WATER RETURN	TEMP	-	°F	X	-	-	-	-	X	1 MIN.	1 DAY	X	15 MIN.	1 WEEK	RTD INSERTION ELEMENT	OHMS	0-100	
HW	AHU	TL-CC	COOLING COIL LOW TEMP. SWITCH	TEMP.	38	°F	X	-	X	DISCRETE	1	-	-	-	-	-	-	RTU MOUNTED LOW LIMIT FREEZE-STAT	-	-	HW SAFETY TO VFD
AO	AHU	CD-ECO	ECONOMIZER AIR DAMPER	DAMPER	-	%OPEN	X	OVERRIDE	-	-	-	X	15 MIN.	1 WEEK	-	-	-	MODULATING DAMPER ACTUATOR	4-20mA	0-100%	FAIL CLOSE
AI	AHU	CO2-RA	RETURN AIR CARBON DIOXIDE	TEMP	SEE SEQ.	°F	X	-	X	SAT < 40F	2	X	15 MIN.	1 WEEK	X	15 MIN.	1 WEEK		4-20 mA	0-100°F	
AI	AHU	T-ZN	ROOM TEMP.	TEMP.	SEE SEQ.	°F	X	OVERRIDE	X	<65 OR >80	2	X	15 MIN	1 WEEK	-	-	-	ROOM SENSOR	OHMS	0-100°F	
			TYPICAL RELIEF FAN																		
DO	RLF	SS-RLF	RELIEF FAN ENABLE	START/STOP	-	-	X	YES	-	-	-	-	-	-	-	-	-	HARD WIRE TO RIB	-	-	
DI	RLF	ST-RLF	RELIEF FAN STATUS	ALM/NORM	-	ON/OFF	X	-	X	STATUS = OFF WHEN CMD = ON	1	-	-	-	-	-	-	CURRENT SENSING RELAY	CONTACT	-	
AO	RLF	HZ-RLF	RELIEF FAN SPEED	ECM MOTOR	PID OUTPUT	% SPEED	X	OVERRIDE	-	-	-	X	15 MIN.	1 WEEK	X	15 MIN.	1 WEEK		2-10V	0-100%	
AO	RLF	CD-RLF	MOTORIZED DAMPER	DAMPER	-	% OPEN	X	OVERRIDE	-	-	-	X	15 MIN.	1 WEEK	-	-	-	MODULATING DAMPER ACTUATOR	4-20mA	0-100%	
AI	RLF	DP-FL	BUILDING DIFFERENTIAL PRESSURE SENSORS	PRESS.	SEE SEQ.	IN.W.C.	X	X	X	< -0.1 OR > 0.05	3	X	15 MIN	1 WEEK	X	15 MIN	1 WEEK	VERY LOW DIFF. PRESS. TRANS.	4-20 mA	-0.1 TO 0.1 IN.W.C.	
			TYPICAL FAN COIL UNIT																		
DO	FCU	SS-SF	SUPPLY FAN ENABLE	START/STOP	-	-	X	YES	-	-	-	-	-	-	-	-	-	HARD WIRE TO RIB	-	-	
AI	FCU	T-SA	SUPPLY AIR TEMPERATURE	TEMP	SEE SEQ.	°F	X	-	X	SAT < 40F	2	X	15 MIN.	1 WEEK	X	15 MIN.	1 WEEK		4-20 mA	0-100°F	
AI	FCU	CV-HC	HEATING COIL CONTROL VALVE	VALVE	PID OUTPUT	% OPEN	X	OVERRIDE	-	-	-	X	15 MIN.	1 WEEK	X	15 MIN.	1 WEEK	MODULATING ELECTRONIC ACTUATOR	4-20 mA	0-100%	
AI	FCU	CV-CC	COOLING COIL CONTROL VALVE	VALVE	PID OUTPUT	% OPEN	X	OVERRIDE	-	-	-	X	15 MIN.	1 WEEK	X	15 MIN.	1 WEEK	MODULATING ELECTRONIC ACTUATOR	4-20 mA	0-100%	
AI	FCU	T-ZN	ROOM TEMP.	TEMP.	SEE SEQ.	°F	X	OVERRIDE	X	<65 OR >80	2	X	15 MIN	1 WEEK	-	-	-	ROOM SENSOR	OHMS	0-100°F	
			TYPICAL PRIMARY ZONE VAV BOX CONTROLS																		
AI	VAV	F-OA	VAV AIR FLOW	AIRFLOW	-	CFM	X	-	X		1	-	-	-	-	-	-		4-20 mA		
AO	VAV	CD-OA	VAV CONTROL DAMPER	DAMPER	-	-	X		-	-		X	15 MIN	1 WEEK	-	-	-			-	
AI	VAV	CV-RHC	REHEAT COIL CONTROL VALVE	VALVE	PID OUTPUT	% OPEN	X	OVERRIDE	-	-	-	X	15 MIN.	1 WEEK	X	15 MIN.	1 WEEK	MODULATING ELECTRONIC ACTUATOR	4-20 mA	0-100%	
AI	VAV	T-SA	SUPPLY AIR TEMPERATURE	TEMP	SEE SEQ.	°F	X	-	X	SAT < 40F	2	X	15 MIN.	1 WEEK	X	15 MIN.	1 WEEK	RIGID DUCT TEMPERATURE SENSOR	4-20 mA	0-100°F	
			TYPICAL SECONDARY ZONE VAV BOX CONTROLS																		
AI	VAV	F-OA	VAV AIR FLOW	AIRFLOW	-	CFM	X	-	X		1	-	-	-	-	-	-		4-20 mA		
AO	VAV	CD-OA	VAV CONTROL DAMPER	DAMPER	-	-	X		-	-		X	15 MIN	1 WEEK	-	-	-			-	

		ALARM LEVELS	EXAMPLES
DI	DIGITAL INPUT	1	EQUIPMENT FAILURE (NOTIFY SECURITY / MAINTENANCE PERSONNEL)
DO	DIGITAL OUTPUT	2	OUT OF RANGE (NOTIFY MAINTENANCE PERSONNEL)
AI	ANALOG INPUT	3	GENERAL MAINTENANCE (NO PAGING NECESSARY)
AO	ANALOG OUTPUT		
HW	HARD WIRED INTERLOCK/SAFETY MONITORED BY BMS		
COS	CHANGE OF STATE		

SHEET IS PLOTTED TO SCALE IF ADJACENT LINE MEASURES 1 INCH

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STATE OFFICE BUILDING

JEFFERSON STATE
OFFICE BUILDING
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JEFFERSON CITY, MO 65101

PROJECT # O1911-01
SITE # 1001
ASSET # 3101001057

REVISION:
DATE:
REVISION:
DATE:
REVISION:
DATE:
ISSUE DATE:

CAD DWG FILE: M5.3-075107.001
DRAWN BY: AM
CHECKED BY: EP
DESIGNED BY: JW

SHEET TITLE:

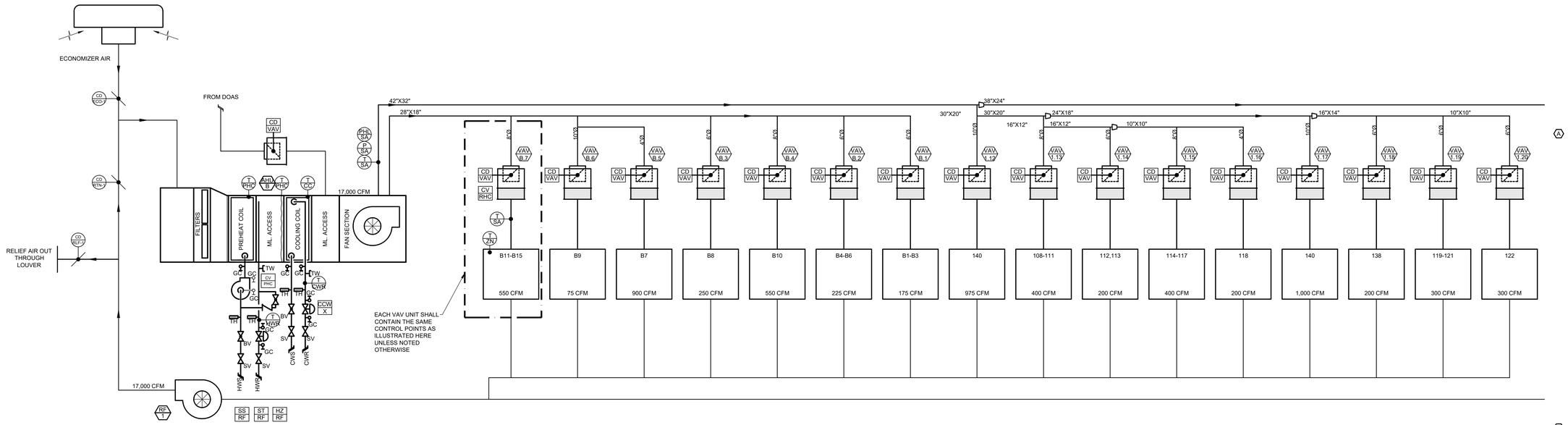
AIR
FLOW
DIAGRAM

SHEET NUMBER:

M5.3

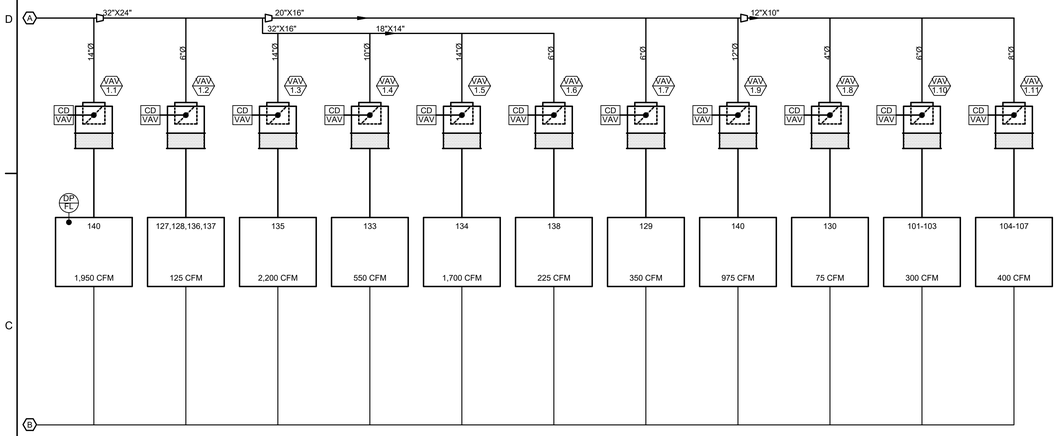
117 OF 244 SHEETS

DATE : August 31, 2023



FIRST FLOOR / BASEMENT (AHU-B) AIRFLOW DIAGRAM

NO SCALE



AHU-B POINTS LIST

POINT DESCRIPTION									ALARM		STARTUP TREND			OPERATIONAL TREND			FIELD DEVICE DESCRIPTION			NOTES
TYPE	SYSTEM	NAME	DESCRIPTION	TYPE	SET-POINT	UNITS	MONITOR	ADJUST	NOTIFY	THRESHOLD	LEVEL	TREND	FREQ	ARCHIVE	TREND	FREQ	ARCHIVE	INSTRUMENT TYPE	SIGNAL	RANGE	
AI	-	T-OA	OUTSIDE AIR TEMP.	TEMP.	-	°F	-	-	-	-	-	-	-	-	-	-	-		-	-	
AI	-	H-OA	OUTSIDE AIR RELATIVE HUMIDITY	HUMIDITY	-	% RH	-	-	-	-	-	-	-	-	-	-	-		-	-	
			AH-B CONTROL POINTS																		
DO	AHU-B	SS-SF	SUPPLY FAN ENABLE	START/STOP	-	-	X	YES	-	-	-	-	-	-	-	-	-	HARD WIRE TO VFD TERMINAL STRIP	-	-	4 INDEPENDENT VFDS
AO	AHU-B	HZ-SF	SUPPLY FAN SPEED	VFD	PID OUTPUT	% SPEED	X	OVERRIDE	-	-	-	X	15 MIN.	1 WEEK	X	15 MIN.	1 WEEK	HARD WIRE TO VFD TERMINAL STRIP	4-20 mA	0-100%	4 INDEPENDENT VFDS
DI	AHU-B	AL-SF	SUPPLY FAN STATUS	ALM/NORM	-	ON/OFF	X	-	X	STATUS = OFF WHEN CMD = ON	1	-	-	-	-	-	-	CURRENT SENSING RELAY	CONTACT	-	4 INDEPENDENT VFDS
AI	AHU-B	P-SA	SUPPLY AIR PRESSURE	PRESSURE	-	" W.C.	-	-	-	-	-	-	-	-	-	-	-	DUCT MOUNTED PRESSURE SENSOR	4-20 mA	0-3" W.C.	
HW	AHU-B	PHL-SA	SUPPLY AIR PRESSURE HIGH LIMIT	PRESSURE	-	" W.C.	-	-	-	-	-	-	-	-	-	-	-			0-3" W.C.	
AI	AHU-B	T-SA	SUPPLY AIR TEMPERATURE	TEMP.	SEE SEQ.	°F	X	-	X	SAT < 40F	2	X	15 MIN.	1 WEEK	X	15 MIN.	1 WEEK	RIGID DUCT TEMPERATURE SENSOR	4-20 mA	0-100°F	
AI	AHU-B	T-CC	COOLING COIL LEAVING AIR TEMP.	TEMP.	SEE SEQ.	°F	X	-	X	<45 OR >95	2	X	15 MIN.	1 WEEK	X	15 MIN.	1 WEEK	RTU MOUNTED AVERAGING THERMISTOR	4-20 mA	0-100°F	
AO	AHU-B	CV-CC	COOLING COIL CONTROL VALVE	VALVE	PID OUTPUT	% OPEN	X	OVERRIDE	-	-	-	X	15 MIN.	1 WEEK	X	15 MIN.	1 WEEK	MODULATING ELECTRONIC ACTUATOR	4-20 mA	0-100%	FAIL OPEN
AI	AHU-B	T-CWR	COOLING COIL LEAVING WATER TEMP.	TEMP.	SEE SEQ.	°F	X	-	X	<40 OR >95	2	X	15 MIN.	1 WEEK	X	15 MIN.	1 WEEK		4-20 mA	0-100°F	
AI	AHU-B	T-PHC	PREHEAT COIL LEAVING AIR TEMP.	TEMP.	SEE SEQ.	°F	X	-	X	<45 OR >95	2	X	15 MIN.	1 WEEK	X	15 MIN.	1 WEEK	RTU MOUNTED AVERAGING THERMISTOR	4-20 mA	0-100°F	
HW	AHU-B	TL-PHC	PREHEAT COIL LOW TEMP. SWITCH	TEMP.	38	°F	X		X	DISCRETE	1	-	-	-	-	-	-	RTU MOUNTED LOW LIMIT FREEZE-STAT	-	-	HW SAFETY TO VFD
AO	AHU-B	CV-PHC	PREHEAT COIL CONTROL VALVE	VALVE	PID OUTPUT	% OPEN	X	OVERRIDE	-	-	-	X	15 MIN.	1 WEEK	X	15 MIN.	-	MODULATING ELECTRONIC ACTUATOR	4-20 mA	0-100%	FAIL OPEN
AI	AHU-B	T-HWR	HEATING COIL LEAVING WATER TEMP.	TEMP.	SEE SEQ.	°F	X	-	X	<40 OR >95	2	X	15 MIN.	1 WEEK	X	15 MIN.	1 WEEK		4-20 mA	0-100°F	
DO	AHU-B	SS-PHP1	CIRCULATOR PUMP ENABLE	START/STOP	-	-	X	YES	-	-	-	X	15 MIN.	1 WEEK	-	-	-	RELAY	-	-	HEATING COIL PUMP
DI	AHU-B	ST-PHP1	CIRCULATOR PUMP STATUS	ALM / NORM	-	-	X	-	X	DISCRETE	2	-	-	-	-	-	-	CURRENT SENSING RELAY	CONTACT	-	
DO	AHU-B	SS-RF	RETURN FAN ENABLE	START/STOP	-	-	X	YES	-	-	-	-	-	-	-	-	-	HARD WIRE TO VFD TERMINAL STRIP	-	-	
AO	AHU-B	HZ-RF	RETURN FAN SPEED	VFD	PID OUTPUT	% SPEED	X	OVERRIDE	-	-	-	X	15 MIN.	1 WEEK	X	15 MIN.	1 WEEK	HARD WIRE TO VFD TERMINAL STRIP	4-20 mA	0-100%	
DI	AHU-B	AL-RF	RETURN FAN STATUS	ALM/NORM	-	ON/OFF	X	-	X	STATUS = OFF WHEN CMD = ON	1	-	-	-	-	-	-	CURRENT SENSING RELAY	CONTACT	-	
AI	AHU-B	P-MA	MIXED AIR PRESSURE	PRESSURE	-	" W.C.	-	-	-	-	-	-	-	-	-	-	-	DUCT MOUNTED PRESSURE SENSOR	4-20 mA	0-1"	
AI	AHU-B	T-MA	MIXED AIR TEMPERATURE	TEMP.	SEE SEQ.	°F	X	-	X	SAT < 40F	2	X	15 MIN.	1 WEEK	X	15 MIN.	1 WEEK	RIGID DUCT TEMPERATURE SENSOR	4-20 mA	0-100°F	
AO	AHU-B	CD-ECO	OUTSIDE AIR DAMPER	DAMPER	-	% OPEN	X	OVERRIDE	-	-	-	X	15 MIN.	1 WEEK	-	-	-	MODULATING ELECTRONIC ACTUATOR	24V		FAIL CLOSE
AO	AHU-B	CD-RTN	RETURN AIR DAMPER	DAMPER	-	% OPEN	X	OVERRIDE	-	-	-	X	15 MIN.	1 WEEK	-	-	-	MODULATING ELECTRONIC ACTUATOR	24V		
AO	AHU-B	CD-RLF	RELIEF AIR DAMPER	DAMPER	-	% OPEN	X	OVERRIDE	-	-	-	X	15 MIN.	1 WEEK	-	-	-	MODULATING ELECTRONIC ACTUATOR	24V		FAIL CLOSE
AI	AHU-B	DP-FL	BUILDING DIFFERENTIAL PRESSURE SENSORS	PRESS.	SEE SEQ.	IN.W.C.	X	X	X	< -0.1 OR > 0.05	3	X	15 MIN	1 WEEK	X	15 MIN	1 WEEK	VERY LOW DIFF. PRESS. TRANS.	4-20 mA	-0.1 TO 0.1 IN.W.C.	
			TYPICAL VAV BOX CONTROLS																		
AI	VAV	F-OA	VAV AIR FLOW	AIRFLOW	-	CFM	X	-	X		1	-	-	-	-	-	-		4-20 mA		
AO	VAV	CD-OA	VAV CONTROL DAMPER	DAMPER	-	-	X	-	-	-	-	X	15 MIN	1 WEEK	-	-	-			-	
AO	VAV	CV-RHC	REHEAT COIL CONTROL VALVE	VALVE	PID OUTPUT	% OPEN	X	OVERRIDE	-	-	-	X	15 MIN.	1 WEEK	X	15 MIN.	1 WEEK	MODULATING ELECTRONIC ACTUATOR	4-20 mA	0-100%	
AI	VAV	T-SA	SUPPLY AIR TEMPERATURE	TEMP.	SEE SEQ.	°F	X	-	X	SAT < 40F	2	X	15 MIN.	1 WEEK	X	15 MIN.	1 WEEK	RIGID DUCT TEMPERATURE SENSOR	4-20 mA	0-100°F	

		ALARM LEVELS	EXAMPLES
DI	DIGITAL INPUT		
DO	DIGITAL OUTPUT	1	EQUIPMENT FAILURE (NOTIFY SECURITY / MAINTENANCE PERSONNEL)
AI	ANALOG INPUT	2	OUT OF RANGE (NOTIFY MAINTENANCE PERSONNEL)
AO	ANALOG OUTPUT	3	GENERAL MAINTENANCE (NO PAGING NECESSARY)
HW	HARD WIRED INTERLOCK/SAFETY MONITORED BY BMS		
COS	CHANGE OF STATE		

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JEFFERSON STATE OFFICE BUILDING
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JEFFERSON CITY, MO 65101

PROJECT # O1911-01
SITE # 1001
ASSET # 3101001057

REVISION: DATE:
REVISION: DATE:
REVISION: DATE:
ISSUE DATE:

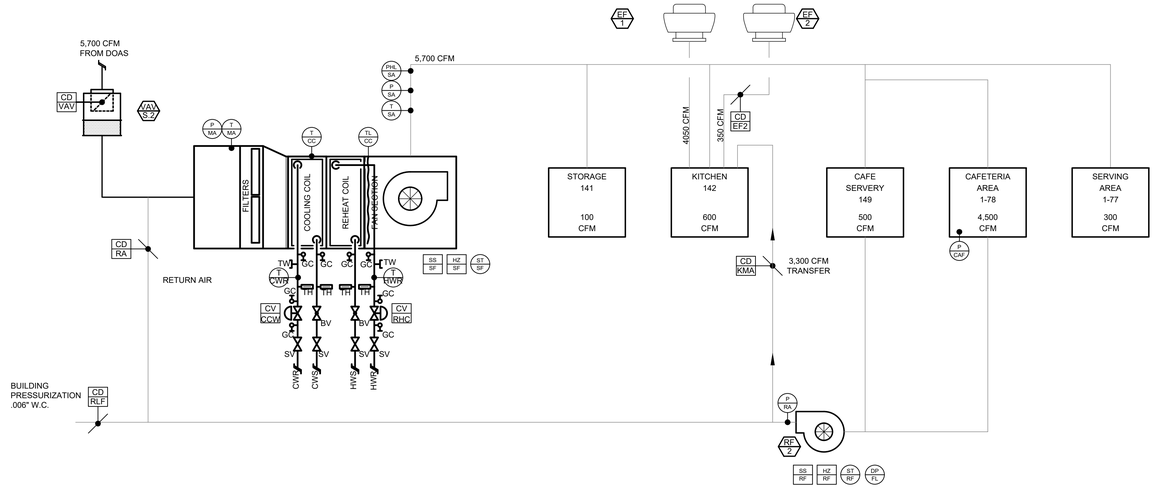
CAD DWG FILE: M5.4-075107.001
DRAWN BY: AM
CHECKED BY: EP
DESIGNED BY: JW

SHEET TITLE:
AIR FLOW DIAGRAM

SHEET NUMBER:
M5.4

118 OF 244 SHEETS

DATE : August 31, 2023



KITCHEN UNIT FLOW DIAGRAM (AHU-1) SUPPLY - ALTERNATE #2

NO SCALE

AHU-1 POINTS LIST

POINT DESCRIPTION									ALARM			STARTUP TREND			OPERATIONAL TREND			FIELD DEVICE DESCRIPTION			NOTES
TYPE	SYSTEM	NAME	DESCRIPTION	TYPE	SET-POINT	UNITS	MONITOR	ADJUST	NOTIFY	THRESHOLD	LEVEL	TREND	FREQ	ARCHIVE	TREND	FREQ	ARCHIVE	INSTRUMENT TYPE	SIGNAL	RANGE	
AI	-	T-OA	OUTSIDE AIR TEMP.	TEMP.	-	°F	-	-	-	-	-	-	-	-	-	-	-		-	-	
AI	-	H-OA	OUTSIDE AIR RELATIVE HUMIDITY	HUMIDITY	-	% RH	-	-	-	-	-	-	-	-	-	-	-		-	-	
AHU-1 CONTROL POINTS																					
DO	AHU-1	SS-SF	SUPPLY FAN ENABLE	START/STOP	-	-	X	YES	-	-	-	-	-	-	-	-	-	HARD WIRE TO VFD TERMINAL STRIP	-	-	
AO	AHU-1	HZ-SF	SUPPLY FAN SPEED	VFD	PID OUTPUT	% SPEED	X	OVERRIDE	-	-	-	X	15 MIN.	1 WEEK	X	15 MIN.	1 WEEK	HARD WIRE TO VFD TERMINAL STRIP	4-20 mA	0-100%	
DI	AHU-1	ST-SF	SUPPLY FAN STATUS	ALM/NORM	-	ON/OFF	X	-	X	STATUS = OFF WHEN CMD = ON	1	-	-	-	-	-	-	CURRENT SENSING RELAY	CONTACT	-	
AI	AHU-1	P-SA	SUPPLY AIR PRESSURE	PRESSURE	-	" W.C.	-	-	-	-	-	-	-	-	-	-	-	DUCT MOUNTED PRESSURE SENSOR	4-20 mA	0-3" W.C.	
HW	AHU-1	PHL-SA	SUPPLY AIR PRESSURE HIGH LIMIT	PRESSURE	-	" W.C.	-	-	-	-	-	-	-	-	-	-	-			0-3" W.C.	
AI	AHU-1	T-SA	SUPPLY AIR TEMPERATURE	TEMP	SEE SEQ.	°F	X	-	X	SAT < 40F	2	X	15 MIN.	1 WEEK	X	15 MIN.	1 WEEK	RIGID DUCT TEMPERATURE SENSOR	4-20 mA	0-100°F	
HW	AHU-1	TL-CC	COOLING COIL LOW TEMP. SWITCH	TEMP.	38	°F	X	-	X	DISCRETE	1	-	-	-	-	-	-	RTU MOUNTED LOW LIMIT FREEZE-STAT	-	-	HW SAFETY TO VFD
AO	AHU-1	CV-RHC	REHEAT COIL CONTROL VALVE	VALVE	PID OUTPUT	% OPEN	X	OVERRIDE	-	-	-	X	15 MIN.	1 WEEK	X	15 MIN.		MODULATING ELECTRONIC ACTUATOR	4-20 mA	0-100%	FAIL OPEN
DO	AHU-1	CD-RA	RETURN AIR DAMPER	DAMPER	-	% OPEN	X	OVERRIDE	-	-	-	X	15 MIN.	1 WEEK	-	-	-	MODULATING ELECTRONIC ACTUATOR	24V		
AI	AHU-1	P-MA	MIXED AIR PRESSURE	PRESSURE	-	" W.C.	-	-	-	-	-	-	-	-	-	-	-	DUCT MOUNTED PRESSURE SENSOR	4-20 mA	0-1"	
AI	AHU-1	T-MA	MIXED AIR TEMPERATURE	TEMP	SEE SEQ.	°F	X	-	X	SAT < 40F	2	X	15 MIN.	1 WEEK	X	15 MIN.	1 WEEK	RIGID DUCT TEMPERATURE SENSOR	4-20 mA	0-100°F	
DO	AHU-1	CD-RLF	OUTSIDE AIR DAMPER	DAMPER	-	% OPEN	X	OVERRIDE	-	-	-	X	15 MIN.	1 WEEK	-	-	-	MODULATING ELECTRONIC ACTUATOR	24V		FAIL CLOSE
DO	AHU-1	CD-KMA	KITCHEN MAKE UP AIR DAMPER	DAMPER	-	% OPEN	X	OVERRIDE	-	-	-	X	15 MIN.	1 WEEK	-	-	-	MODULATING ELECTRONIC ACTUATOR	24V		
DO	AHU-1	SS-RF	RETURN FAN ENABLE	START/STOP	-	-	X	YES	-	-	-	-	-	-	-	-	-	HARD WIRE TO VFD TERMINAL STRIP	-	-	
AO	AHU-1	HZ-RF	RETURN FAN SPEED	VFD	PID OUTPUT	% SPEED	X	OVERRIDE	-	-	-	X	15 MIN.	1 WEEK	X	15 MIN.	1 WEEK	HARD WIRE TO VFD TERMINAL STRIP	4-20 mA	0-100%	
DI	AHU-1	ST-RF	RETURN FAN STATUS	ALM/NORM	-	ON/OFF	X	-	X	STATUS = OFF WHEN CMD = ON	1	-	-	-	-	-	-	CURRENT SENSING RELAY	CONTACT	-	
AO	AHU-1	CV- FT	FIN TUBE CONTROL VALVE	VALVE	PID OUTPUT	% OPEN	X	OVERRIDE	-	-	-	X	15 MIN.	1 WEEK	X	15 MIN.		MODULATING ELECTRONIC ACTUATOR	4-20 mA	0-100%	

DI	DIGITAL INPUT
DO	DIGITAL OUTPUT
AI	ANALOG INPUT
AO	ANALOG OUTPUT
HW	HARD WIRED INTERLOCK/SAFETY MONITORED BY BMS
COS	CHANGE OF STATE

ALARM LEVELS	EXAMPLES
1	EQUIPMENT FAILURE (NOTIFY SECURITY / MAINTENANCE PERSONNEL)
2	OUT OF RANGE (NOTIFY MAINTENANCE PERSONNEL)
3	GENERAL MAINTENANCE (NO PAGING NECESSARY)

SHEET IS PLOTTED TO SCALE IF ADJACENT LINE MEASURES 1 INCH

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STATE OFFICE BUILDING

JEFFERSON STATE
OFFICE BUILDING
205 JEFFERSON STREET
JEFFERSON CITY, MO 65101

PROJECT # O1911-01
SITE # 1001
ASSET # 3101001057

REVISION:
DATE:
REVISION:
DATE:
REVISION:
DATE:
ISSUE DATE:

CAD DWG FILE: M5.4-075107.001
DRAWN BY: AM
CHECKED BY: EP
DESIGNED BY: JW

SHEET TITLE:
AIR
FLOW
DIAGRAM

SHEET NUMBER:
M5.5

119 OF 244 SHEETS

DATE : August 31, 2023

STATE OF MISSOURI
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CAD DWG FILE: M5.6-M5.7 - 075107.001
DRAWN BY: DC
CHECKED BY: EP
DESIGNED BY: JW

SHEET TITLE:
FLAT PHASING DIAGRAM

SHEET NUMBER:
M5.6

120 OF 244 SHEETS

DATE : August 31, 2023

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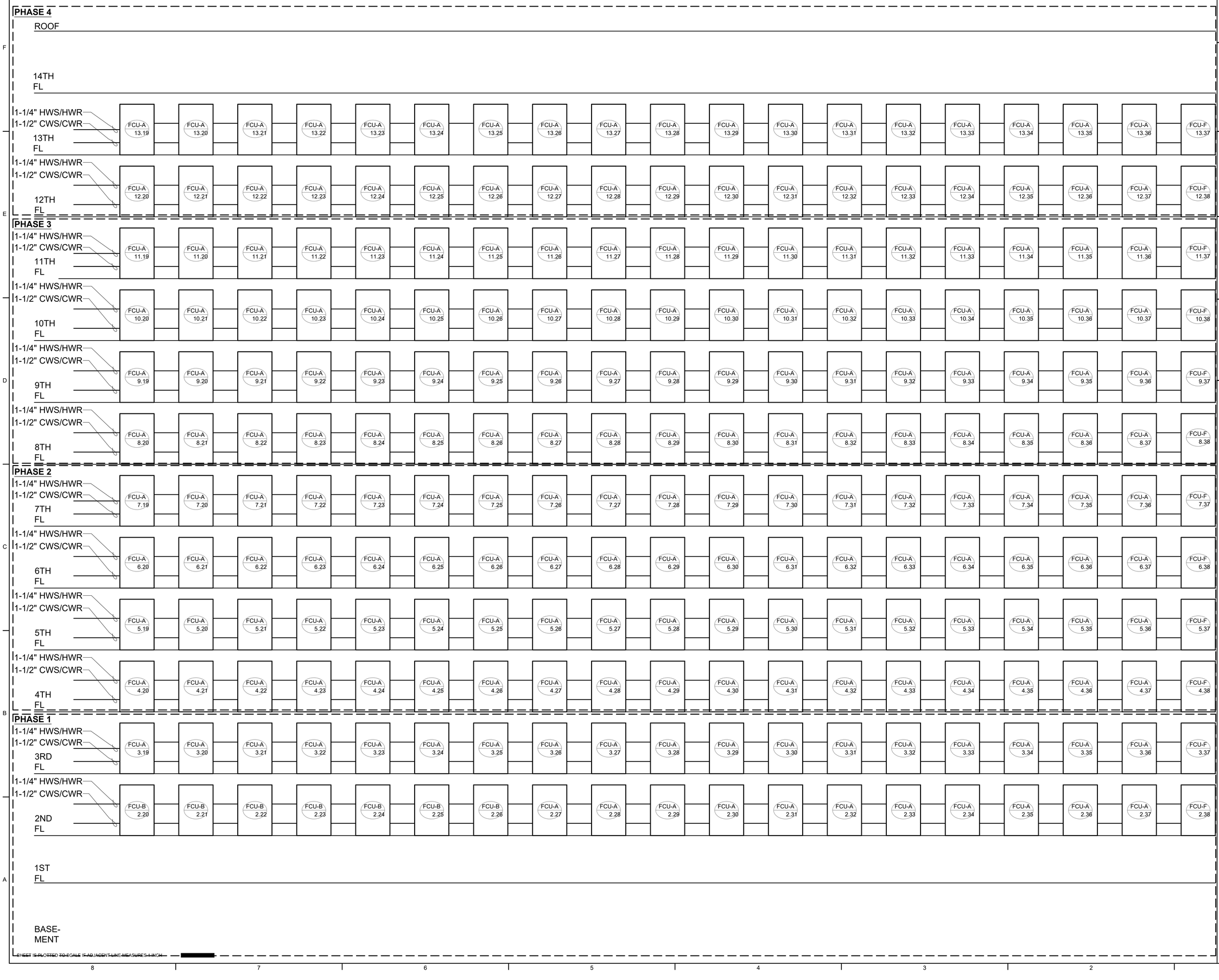

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DRAWN BY: DC
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DESIGNED BY: JW

SHEET TITLE:
FLAT PHASING DIAGRAM

SHEET NUMBER:
M5.7

121 OF 244 SHEETS

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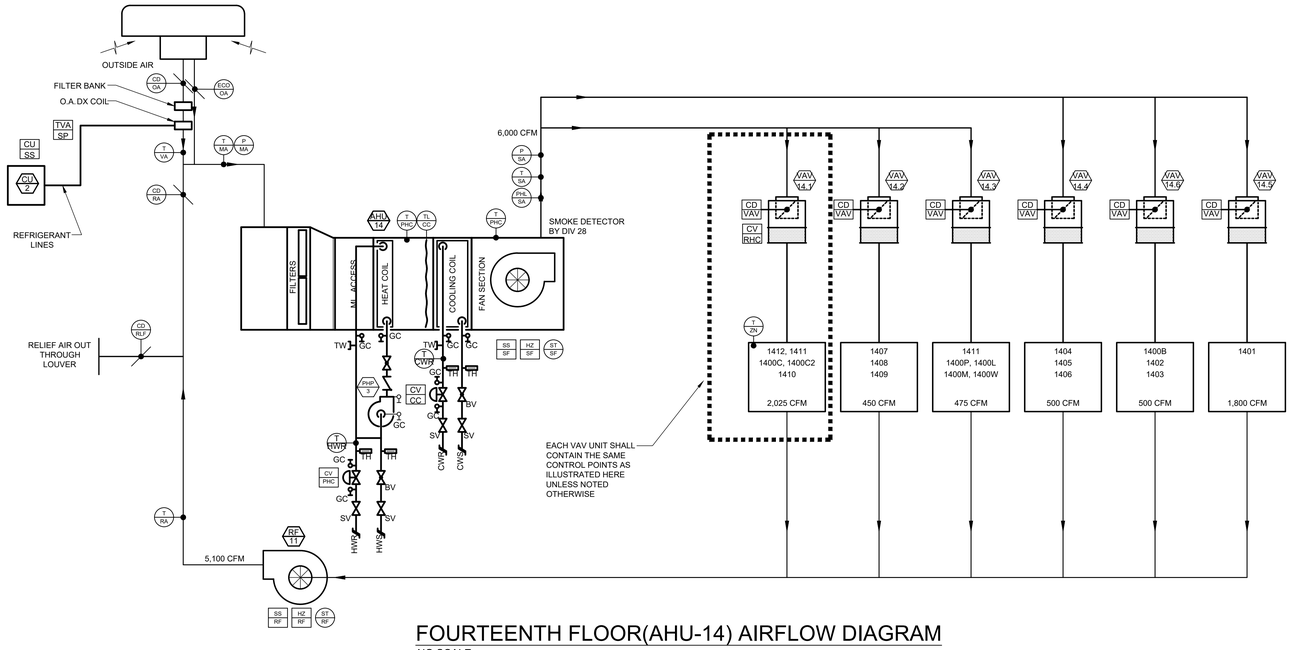

FOURTEENTH FLOOR(AHU-14) AIRFLOW DIAGRAM

NO SCALE

SHEET IS PLOTTED TO SCALE IF ADJACENT LINE MEASURES 1 INCH

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PROJECT # O1911-01
SITE # 1001
ASSET # 3101001057

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DATE:
ISSUE DATE:

CAD DWG FILE:M5.2-075107.001
DRAWN BY: AM
CHECKED BY: EP
DESIGNED BY: JW

SHEET TITLE:

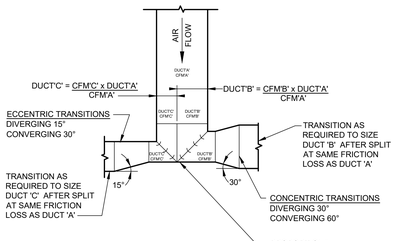
FOURTEENTH FLOOR (AHU-14) AIR FLOW DIAGRAM

SHEET NUMBER:

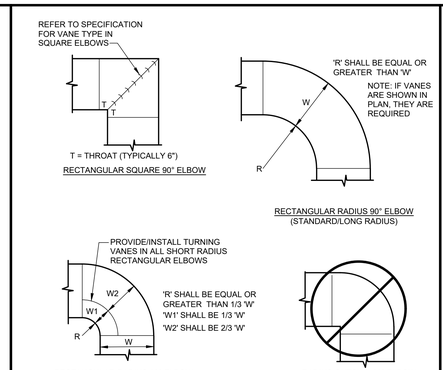
M5.8

122 OF 244 SHEETS

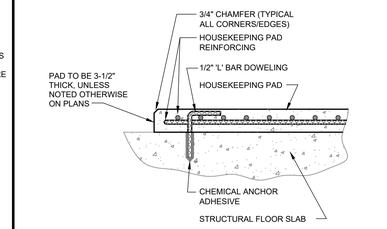
DATE : August 31, 2023



DETAIL: M-0006A	DUCTWORK PROPORTIONAL FITTING & TRANSITIONS
SCALE: NONE	

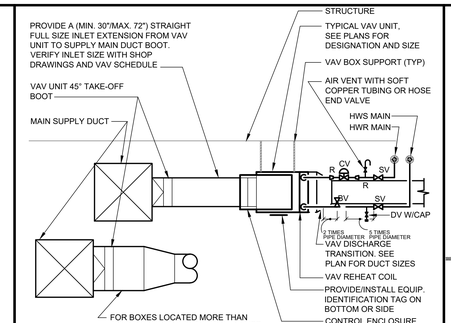


DETAIL: M-0006B	DUCTWORK BRANCH RECTANGULAR 90° ELBOWS
SCALE: NONE	



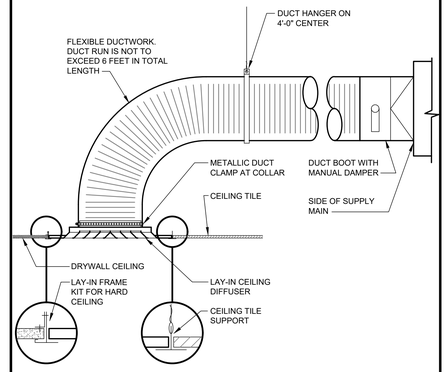
NOTES:
1. FOR F_p, SEE SPECIFICATIONS FOR VALUE. FOR DOWELING ARRANGEMENT IN CONCRETE, REFER TO ASHRAE 'A PRACTICAL GUIDE TO SEISMIC RESTRAINT' (LATEST EDITION)
2. CONCRETE PAD LENGTH BY WIDTH IS TO BE AT LEAST 3" LARGER IN EACH DIRECTION OF EQUIPMENT, 6" WIDER THAN ANCHOR POINTS, OR AS REQUIRED BY MANUFACTURER'S ANCHOR BOLT DISTANCE TO EDGE OF PAD, WHICHEVER IS GREATER.

DETAIL: M-0007A	CONCRETE HOUSEKEEPING PAD
SCALE: NONE	

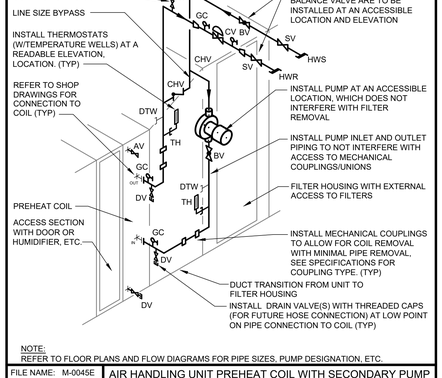


NOTES:
1. VAV BOX AND HEATING WATER PIPING IS TO BE INSTALLED TO ALLOW FOR 36" CLEARANCE IN FRONT OF CONTROL ENCLOSURE.
2. DROP RUNOUTS FROM HEATING WATER MAINS OFF THE BOTTOM OF THE PIPES.
3. BOTTOM OF BOX IS TO BE INSTALLED WITHIN 24" OF FINISHED CEILING, WHEN POSSIBLE.

DETAIL: M-0010A	VAV BOX WITH REHEAT COIL (WITH RECTANGULAR SUPPLY MAIN)
SCALE: NONE	



DETAIL: M-0009A	LAY-IN DIFFUSER/GRILLE INSTALLATION
SCALE: NONE	



DETAIL: M-0009C	FLEXIBLE DUCT (RETURN AIR) SOUND TRAP INSTALLATION
SCALE: NONE	

NOTE:
1. SEE MANUFACTURER'S INSTALLATION GUIDE FOR WALL OPENING SIZE AND ACCESSORIES FOR A UL LISTED INSTALLATION
2. REFER TO SCHEDULE FOR DAMPER STYLE.

DETAIL: M-0013B	FIRE DAMPER INSULATION DETAIL (TYPE B)
SCALE: NONE	

DETAIL: M-0017	LIMITED CEILING HEIGHT DIFFUSER/GRILLE WITH PLENUM BOX INSTALLATION
SCALE: NONE	

NOTE:
1. THE FILTER AND PLENUM MAY SIT DIRECTLY ON THE PAD PROVIDED THE TOP OF THE FILTER SECTION IS EQUAL TO OR GREATER THAN THE TOP OF THE UNIT.
2. DUCT TRANSITION (FROM UNIT TO FILTER HOUSING), FILTER HOUSING, AND PLENUM BOX ARE TO BE EXTERNALLY INSULATED WITH RIGID BOARD INSULATION UNLESS NOTED OTHERWISE. REFER TO SPECIFICATIONS FOR RIGID BOARD TYPE AND THICKNESS.

DETAIL: M-0020	AHU FILTER HOUSING AND PLENUM (FILTER HOUSING TALLER THAN UNIT OPENING)
SCALE: NONE	

NOTES:
1. PIPING MAY APPROACH THE COIL FROM THE ENTERING OR LEAVING AIR SIDE.
2. COILS WITH 2-WAY VALVES TO BE SIMILAR.
3. COILS TO BE FLANGED TO THE DUCT SYSTEM TO ALLOW VERTICAL OR HORIZONTAL REMOVAL. COILS, CASING, HEADERS, AND U-BENDS ARE TO BE EXTERNALLY INSULATED.
4. DROP RUNOUTS FROM HEATING WATER MAINS OFF THE BOTTOM OF THE PIPES WHEN PRACTICAL.
5. TRANSITION DUCT TO COIL SIZE WITH ANGLES NOT GREATER THAN 30° FOR CONVERGING FLOW AND 20° FOR DIVERGING FLOW.
6. INSULATE COIL HEADER AND RETURN BENDS. REFER TO SPECIFICATIONS.

DETAIL: M-0016	DUCT MOUNTED REHEAT COIL PIPING CONNECTION
SCALE: NONE	

DETAIL: M-0021A	DRAW THROUGH AHU CONDENSATE DRAIN
SCALE: NONE	

NOTE: SEE SPECIFICATION FOR APPLICABLE PIPE SIZES AND SERVICES

DETAIL: M-0022A	PIPE HANGER SUPPORT WITH INSERT
SCALE: NONE	

NOTES:
1. FOR F_p, SEE SPECIFICATIONS FOR VALUE. FOR DOWELING ARRANGEMENT IN CONCRETE, REFER TO ASHRAE 'A PRACTICAL GUIDE TO SEISMIC RESTRAINT' (LATEST EDITION)
2. CONCRETE PAD LENGTH BY WIDTH IS TO BE AT LEAST 3" LARGER IN EACH DIRECTION OF EQUIPMENT, 6" WIDER THAN ANCHOR POINTS, OR AS REQUIRED BY MANUFACTURER'S ANCHOR BOLT DISTANCE TO EDGE OF PAD, WHICHEVER IS GREATER.
3. EXTENSION OF EXISTING PAD SHALL BE DOWELED 12" ON CENTER WITH #4 REBAR WITH 6" EMBED AND CHEMICAL ANCHOR ADHESIVE.

DETAIL: M-0007B	EXISTING CONCRETE HOUSEKEEPING PAD EXTENSION
SCALE: NONE	

DETAIL: FL-01A	HEAT EXCHANGER PIPING (SHELL & TUBE/PLATE & FRAME - WATER SIDE)
SCALE: NONE	

DETAIL: FL-07	HEAT EXCHANGER (STEAM SOURCE)
SCALE: NONE	

NOTE:
REFER TO FLOOR PLANS AND FLOW DIAGRAMS FOR PIPE SIZES, PUMP DESIGNATION, ETC.

FILE NAME: M-0045E	AIR HANDLING UNIT PREHEAT COIL WITH SECONDARY PUMP INSTALLATION SCHEMATIC (SINGLE COIL)
SCALE: NONE	

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DESIGNED BY: JW

SHEET TITLE:
MECHANICAL DETAILS

SHEET NUMBER:
M6.0

123 OF 244 SHEETS

DATE : August 31, 2023

AIR HANDLING UNIT SCHEDULE

UNIT DESIG.	LOCATION	SERVICE	MANUFACTURER & MODEL NO.	AIRFLOW (CFM)	MIN. O.A. FLOW (CFM)	UNIT TYPE	FILTER SECTION	PRE-HEAT COIL	ACCESS		COOLING COIL	ACCESS		RE-HEAT COIL	ACCESS		SUPPLY FAN DATA										NOTES
									DOOR WIDTH (IN.)	DOOR ORIENTATION		DOOR WIDTH (IN.)	DOOR ORIENTATION		DOOR WIDTH (IN.)	DOOR ORIENTATION	WHEEL DIAMETER	WHEEL TYPE	FAN CLASS	ESP (IN. W.C.)	TSP (IN. W.C)	RPM	BHP	NUMBER OF FANS	MOTOR DATA			
																									HP PER FAN	VOLTS/PH	UNIT CONTROL	
AHU-B	BASEMENT	BASEMENT, 1ST FLOOR	TRANE PSCA	17,000	3,050	HDT		SEE COIL	24	RH	SEE COIL	24	RH	SEE COIL			20	AF	II	3	4	2400	19	4	10	460/3	VFD (BY DIV 26)	1,7,8
								SCHEDULE			SCHEDULE			SCHEDULE														
AHU-1	CAFETERIA	CAFETERIA	TRANE UCCA	5,700	0	VDT		N/A	-	LH	SEE COIL	32	LH	N/A			20	AF	II	2.5	3	1150	5.2	1	7.5	460/3	VFD (BY DIV 26)	3,4,5,6
											SCHEDULE																	
AHU-3	3RD FLOOR	2ND AND	TRANE PSCA	11,500	0	HDT		N/A	N/A		SEE COIL	20	RH	N/A			24	AF	II	2.5	4.9	1980	14.5	1	15	460/3	VFD (BY DIV 26)	1,2,3,8
		3RD FLOORS									SCHEDULE																	
AHU-5	5TH FLOOR	4TH AND	TRANE PSCA	11,500	0	HDT		N/A	N/A		SEE COIL	20	RH	N/A			24	AF	II	2.5	4.9	1980	14.5	1	15	460/3	VFD (BY DIV 26)	1,2,3,8
		5TH FLOORS									SCHEDULE																	
AHU-7	7TH FLOOR	6TH AND	TRANE PSCA	11,500	0	HDT		N/A	N/A		SEE COIL	20	RH	N/A			24	AF	II	2.25	4.9	1980	14.5	1	15	460/3	VFD (BY DIV 26)	1,2,3,8
		7TH FLOORS									SCHEDULE																	
AHU-9	9TH FLOOR	8TH AND	TRANE PSCA	11,500	0	HDT		N/A	N/A		SEE COIL	20	RH	N/A			24	AF	II	2.5	4.9	1980	14.5	1	15	460/3	VFD (BY DIV 26)	1,2,3,8
		9TH FLOORS									SCHEDULE																	
AHU-11	11TH FLOOR	10TH AND	TRANE PSCA	11,500	0	HDT		N/A	N/A		SEE COIL	20	RH	N/A			24	AF	II	2.5	4.9	1980	14.5	1	15	460/3	VFD (BY DIV 26)	1,2,3,8
		11TH FLOOR									SCHEDULE																	
AHU-13	13TH FLOOR	12TH AND	TRANE PSCA	11,500	0	HDT		N/A	N/A		SEE COIL	20	RH	N/A			24	AF	II	2.5	4.9	1980	14.5	1	15	460/3	VFD (BY DIV 26)	1,2,3,8
		13TH FLOOR									SCHEDULE																	
AHU-14	PENTHOUSE	14TH FLOOR	TRANE PSCA	6,000	0	HDT	PF: 2" MERV 8	SEE COIL	18	RH	SEE COIL	15	RH	N/A			20	AF	II	2	3.9	1980	6.9	1	7.5	460/3	VFD (BY DIV 26)	1,3
							FF: 12" MERV 13	SCHEDULE			SCHEDULE																	
DOAS-1	BASEMENT	DEDICATED	TRANE PSCA	25,700	25,700	HDT		SEE COIL	24	LH	SEE COIL	24	LH	SEE COIL	24	LH	20	AF	II	3.25	4.5	2237	7.1	4	10	460/3	VFD (BY DIV 26)	1,7,8
		OUTSIDE AIR						SCHEDULE			SCHEDULE			SCHEDULE														

UNIT TYPE
HDT - HORIZONTAL DRAW THRU
VDT - VERTICAL DRAW THRU
HBT - HORIZONTAL BLOW THRU
MZ - MULTI-ZONE
VBT - VERTICAL BLOW THRU

WHEEL TYPE:
AF - AIRFOIL
BI - BACK INCLINE
FC - FORWARD CURVE
MXF - MIXED FLOW

ORIENTATION
RH - RIGHT HAND
LH - LEFT HAND
(ORIENTATION BASED ON LOOKING INTO AIRFLOW - UPSTREAM)

NOTES:
1. 6" INTEGRAL BASE RAIL
2. MAX DIMENSION 67.5" H, 80" W, 102" L
3. KNOCK DOWN CONSTRUCTION
4. 2" BASE RAIL
5. MAX DIMENSION 80" H, 71" W, 36.25" L
6. 32" FAN ACCESS DOOR
7. FAN ISOLATION BLANK OFF PLATE
8. 20" FAN ACCESS DOOR

AIR HANDLING UNIT COIL SCHEDULE

UNIT DESIG.	PREHEAT COIL DATA										COOLING COIL DATA										HEATING COIL DATA										NOTES
	AIRFLOW (CFM)	MIN. ROWS	MAX FPI	MIN. AREA (SQ. FT.)	EAT (DB, °F)	LAT (DB, °F)	EWT (°F)	MAX. FLOW (GPM)	MAX. APD (IN. W.C.)	MAX. WPD (FT.)	AIRFLOW (CFM)	MIN. ROWS	MAX. FPI	MIN. AREA (SQ. FT.)	EAT (DB/WB, °F)	LAT (DB/WB, °F)	EWT (°F)	LWT (°F)	MAX. FLOW (GPM)	MAX. APD (IN. W.C.)	MAX. WPD (FT.)	AIRFLOW (CFM)	MIN. ROWS	MAX. FPI	MIN. AREA (SQ. FT.)	EAT (DB, °F)	LAT (DB, °F)	EWT (°F)	MAX. FLOW (GPM)	MAX. APD (IN. W.C.)	MAX. WPD (FT.)	
AHU-B	17,000	1	8	42.6	55	70	140	27.7	0.06	3'	17,000	6	10	43.5	75/64	55/54	45	59	67.5	0.32	7										1,2
AHU-1	5,700	N/A									5,700	6	9	12.2	74/64	55/54.7	47.5	59.5	37.5	0.62	5	5,700	1	8	12.2	55	85	140	12.5	0.2	4	1,2
AHU-3	11,500	N/A									11,500	6	10	23.8	72.8/64.5	54.8/54.7	47.5	59.5	41.7	0.56	6	N/A									1,2
AHU-5	11,500	N/A									11,500	6	10	23.8	72.8/64.5	54.8/54.7	47.5	59.5	41.7	0.56	6	N/A									1,2
AHU-7	11,500	N/A									11,500	6	10	23.8	72.8/64.5	54.8/54.7	47.5	59.5	41.7	0.56	6	N/A									1,2
AHU-9	11,500	N/A									11,500	6	10	23.8	72.8/64.5	54.8/54.7	47.5	59.5	41.7	0.56	6	N/A									1,2
AHU-11	11,500	N/A									11,500	6	10	23.8	72.8/64.5	54.8/54.7	47.5	59.5	41.7	0.56	6	N/A									1,2
AHU-13	11,500	N/A									11,500	6	10	23.8	72.8/64.5	54.8/54.7	47.5	59.5	41.7	0.56	6	N/A									1,2
AHU-14	6,000	1	8	16.0	50	65	140	5.0	0.1	5	6,000	6	10	16.0	78/65	55/54.9	47.5	59.5	34.5	0.5	5	N/A									1,2
DOAS-1	25,700	4	7	63.0	0	75	120	153.0	0.17	7.3	25,700	8	9	63.0	98/76	54/54	45	59	274.0	0.6	11	25,700	2	8	63.0	55	75	140	28.3	0.12	5	1,2
	DOAS-1 PREHEAT COIL IN SERIES ENERGY RECOVERY MODE																					DOAS-1 HEAT RECOVERY COIL										
DOAS-1	25700	4	7	63	98/76	83/72	70.8	74	0.19	3												25700	4	7	63	54	68	82.1	74	0.19	2.5	

NOTES:
1. S.S. DRAIN PAN AND COOLING COIL CASING
2. CONTRACTOR TO INSTALL FIELD MOUNTED UV LIGHT, AND DOOR SWITCH DOWNSTREAM OF COOLING COIL

DUCT SILENCER SCHEDULE

UNIT DESIG.	SERVES	MANUFACTURER & MODEL NO.	AIRFLOW (CFM)	MAX PD	DYNAMIC INSERTION LOSS RATING								NOTES
					63 HZ	125 HZ	250 HZ	500 HZ	1K HZ	2K HZ	4K HZ	8K HZ	
DS-2	STACK AIR HANDLERS (AHU-3,5,7,9,11,13)	PRICE RH36/UA 32 X 22	5600	.04"	5	7	9	14	11	9	8	7	1,2
DS-3N	STACK AIR HANDLERS (AHU-3,5,7,9,11,13)	PRICE RH36/UA 32 X 22	3500	0.02	5	7	9	14	11	9	8	7	1,2
DS-3S	STACK AIR HANDLERS (AHU-3,5,7,9,11,13)	PRICE RH36/UA 30 X 20	3000	.03"	5	6	9	14	11	9	7	7	1,2

NOTES:
1. INSTALL SILENCER IN FORWARD FLOW CONFIGURATION
2. DIL RATINGS BASED ON SCHEDULED AIRFLOWS

HOOD SCHEDULE

UNIT DESIG.	LOCATION	SERVICE	MANUFACTURER & MODEL NO.	AIRFLOW (CFM)	MAX S.P ("W.C.)	UNIT TYPE	ESP (INCH)	DIMENSIONS (INCH)	NOTES
H-1	1ST FLOOR	KITCHEN	GREENHECK	4,050	0.55	TYPE 1	0.75	216 LONG X 54 WIDE X 24 HIGH	1,2,3,4

NOTES:
1. GREASE FILTER
2. UL 300 FIRE SUPPRESSION
3. 4030 SS WHERE EXPOSED
4. SCOPE IN ALTERNATE 2

DRY COOLER SCHEDULE

UNIT DESIG.	LOCATION	SERVICE	MANUFACTURER & MODEL NO.	TYPE	EWT (°F)	LWT (°F)	FLOW (GPM)	AMBIENT DB (°F)	MOTOR DATA					OPERATING WEIGHT (LBS)	NOTES
									QTY	HP	VOLTS / PH	UNIT CONTROL	DISC. INCLUDED		
DC-1	LOWER ROOF	CHILLED WATER	EVAPCO EAW-VD91	V-BANK	64	58	130	45	3	4.3	480/3	0-10V	Y	3,740	1,2,3

NOTES:
1. ECM MOTORS, SINGLE POINT POWER CONNECTION
2. STAINLESS STEEL COIL
3. 35% PROPELYENE GLYCOL

SHEET IS PLOTTED TO SCALE IF ADJACENT LINE MEASURES 1 INCH

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DIVISION OF FACILITIES MANAGEMENT,
DESIGN AND CONSTRUCTION

RENOVATE MECHANICAL/ ELECTRICAL/LIFE-SAFETY/ STATE OFFICE BUILDING

JEFFERSON STATE OFFICE BUILDING
205 JEFFERSON STREET
JEFFERSON CITY, MO 65101

PROJECT # O1911-01
SITE # 1001
ASSET # 3101001057

REVISION:
DATE:
REVISION:
DATE:
REVISION:
DATE:
ISSUE DATE:

CAD DWG FILE: M6.0-075107.001
DRAWN BY: AM
CHECKED BY: EP
DESIGNED BY: JW

SHEET TITLE:
MECHANICAL SCHEDULES

SHEET NUMBER:
M6.1

124 OF 244 SHEETS

DATE : August 31, 2023

FAN SCHEDULE

UNIT DESIG.	LOCATION	SERVICE	MANUFACTURER & MODEL NO.	FAN TYPE	AIRFLOW (CFM)	FSP (IN. W.C.)	RPM	WHEEL DIAM. (IN.)	FAN DISCHARGE	MOTOR BHP	MOTOR HP	MOTOR RPM	MOTOR VOLTS/PH	UNIT CONTROL	ACCESSORIES	NOTES
EF-1	ROOF	KITCHEN HOOD H-1	GREENHECK USF-22	UTILITY FAN	4,050	1.30	921	22.0	UBD	2.35	3	1750	460/3	VFD	3,5,6,8,9	A,B,E
EF-2	KITCHEN	KITCHEN - DISHWASHER H-2	GREENHECK SQ-120-VG	IN-LINE CENTRIFUGAL	350	0.75	1460	11.0	HM	0.25	1/2	1750	115/1	ECM (MANUAL)	2,6	E
EF-3	ROOF	TOILET EXHAUST	GREENHECK USF-12-B1	ROOF EXHAUSTER	3,600	2.00			DBD	2.9	5	1750	460/3	VFD	2,3,5,6,7	A
EF-4	ROOF	TOILET EXHAUST	GREENHECK USF-12-B1	ROOF EXHAUSTER	3,600	2.00			DBD	2.9	5	1750	460/3	VFD	2,3,5,6,7	A,D
EF-5	ROOF	TOILET EXHAUST	GREENHECK G-060-VG	ROOF EXHAUSTER	100	0.40	1533		DBD	0.02	1/15	1750	115/1	ECM (MANUAL) RIB	2,3,5	A
SPF-1	4TH FLOOR MECH ROOM	STAIRWELL PRESSURIZATION	GREENHECK AX-72	AXIAL FAN	7,500	1.50	1750	28.0	HM	4.5	5	1750	460/3	STARTER	2,5,6	C
SPF-2	8TH FLOOR MECH ROOM	STAIRWELL PRESSURIZATION	GREENHECK AX-72	AXIAL FAN	7,500	1.50	1750	28.0	HM	4.5	5	1750	460/3	STARTER	2,5,6	C
RF-1	BASEMENT	BASEMENT / 1ST FLOOR	GREENHECK USF-36-B4	UTILITY FAN	17,000	1.25	690	36.0	UBD	6.4	7 1/2	1750	460/3	VFD	5,6	A
RF-2	CAFETERIA	TRANSFER TO KITCHEN	GREENHECK AX-63	AXIAL FAN	7,800	1.25	1650		HM	2.9	3	1750	460/3	VFD	5,6	A
RF-11	PENTHOUSE	14TH FLOOR	GREENHECK USF-120	IN-LINE CENTRIFUGAL	6,000	1.25	1650	20.0	HM	2.1	3	1750	460/3	VFD	5,6	A
RLF-2	MECH CLOSET	SECOND FLOOR	GREENHECK BSQ-180	IN-LINE CENTRIFUGAL	5,300	0.75	1450	18.5	HM	2.2	3	1750	460/3	VFD	5,6	A
RLF-3	MECH CLOSET	THIRD FLOOR	GREENHECK BSQ-180	IN-LINE CENTRIFUGAL	5,300	0.75	1450	18.5	HM	2.2	3	1750	460/3	VFD	5,6	A
RLF-4	MECH CLOSET	FOURTH FLOOR	GREENHECK BSQ-180	IN-LINE CENTRIFUGAL	5,300	0.75	1450	18.5	HM	2.2	3	1750	460/3	VFD	5,6	A
RLF-5	MECH CLOSET	FIFTH FLOOR	GREENHECK BSQ-180	IN-LINE CENTRIFUGAL	5,300	0.75	1450	18.5	HM	2.2	3	1750	460/3	VFD	5,6	A
RLF-6	MECH CLOSET	SIXTH FLOOR	GREENHECK BSQ-180	IN-LINE CENTRIFUGAL	5,300	0.75	1450	18.5	HM	2.2	3	1750	460/3	VFD	5,6	A
RLF-7	MECH CLOSET	SEVENTH FLOOR	GREENHECK BSQ-180	IN-LINE CENTRIFUGAL	5,300	0.75	1450	18.5	HM	2.2	3	1750	460/3	VFD	5,6	A
RLF-8	MECH CLOSET	EIGTH FLOOR	GREENHECK BSQ-180	IN-LINE CENTRIFUGAL	5,300	0.75	1450	18.5	HM	2.2	3	1750	460/3	VFD	5,6	A
RLF-9	MECH CLOSET	NINTH FLOOR	GREENHECK BSQ-180	IN-LINE CENTRIFUGAL	5,300	0.75	1450	18.5	HM	2.2	3	1750	460/3	VFD	5,6	A
RLF-10	MECH CLOSET	TENTH FLOOR	GREENHECK BSQ-180	IN-LINE CENTRIFUGAL	5,300	0.75	1450	18.5	HM	2.2	3	1750	460/3	VFD	5,6	A
RLF-11	MECH CLOSET	ELEVENTH FLOOR	GREENHECK BSQ-180	IN-LINE CENTRIFUGAL	5,300	0.75	1450	18.5	HM	2.2	3	1750	460/3	VFD	5,6	A
RLF-12	MECH CLOSET	TWELTH FLOOR	GREENHECK BSQ-180	IN-LINE CENTRIFUGAL	5,300	0.75	1450	18.5	HM	2.2	3	1750	460/3	VFD	5,6	A
RLF-13	MECH CLOSET	THIRTEENTH FLOOR	GREENHECK BSQ-180	IN-LINE CENTRIFUGAL	5,300	0.75	1450	18.5	HM	2.2	3	1750	460/3	VFD	5,6	A

FAN TYPE:
CENTRIFUGAL
IN-LINE CENTRIFUGAL
ROOF EXHAUSTER
UTILITY FAN
PROPELLER FAN
MIXED FLOW IN-LINE
AXIAL FAN

FAN DISCHARGE:
THD - TOP HORIZONTAL DISCHARGE
BHD - BOTTOM HORIZONTAL DISCHARGE
TAU - TOP ANGULAR DISCHARGE
BH - BOTTOM ANGULAR DISCHARGE
UBD - UP BLAST DISCHARGE
DBD - DOWN BLAST DISCHARGE
HM - HORIZONTAL MOUNT

ACCESSORIES:
1. GRAVITY BACKDRAFT DAMPER
2. MOTORIZED DAMPER
3. ROOF CURB
4. ACOUSTIC ROOF CURB
5. FACTORY MOUNTED DISCONNECT
6. 2" SPRING VIBRATION ISOLATORS
7. WEATHER HOOD
8. WELDED SCROLL
9. PERMATECTOR RESIN FAN COATING

NOTES:
A. ALL FANS WITH VFD DRIVES SHALL HAVE INVERTER DUTY MOTORS, OTHERWISE A PREMIUM EFFICIENCY MOTOR SHALL BE PROVIDED REFER TO MOTOR SPECIFICATIONS FOR MORE DETAIL.
B. FAN SHALL BE UL 762 RATED FOR GREASE LADEN EXHAUST. PROVIDE WITH APPROPRIATE ACCESSORIES.
C. FAN CONTROLS SHALL BE LISTED UL 864 SMOKE CONTROL
D. COUNTERCLOCK WISE ROTATION
E. FAN IN ALTERNATE #2 SCOPE

PUMP SCHEDULE

UNIT DESIG.	LOCATION	DESCRIPTION: SERVICE	MANUFACTURER & MODEL NO.	TYPE	PUMP DATA: FLOW (GPM)	PUMP DATA: HEAD (FT.)	MOTOR DATA: BHP	MOTOR DATA: HP	MOTOR DATA: RPM	MOTOR DATA: VOLTS/PH	UNIT CONTROL	IMPELLER DIA. (IN.)	NOTES
CWP-1	BASEMENT	CHILLED WATER	BELL AND GOSSETT E-1510 3EB	END-SUCTION	520	88	14.8	20	1800	460/3	VFD	11	1,2
CWP-2	BASEMENT	CHILLED WATER	BELL AND GOSSETT E-1510 3EB	END-SUCTION	520	88	14.8	20	1,800	460/3	VFD	11	1,2
HWP-1	BASEMENT	HEATING WATER	BELL AND GOSSETT E-1510 2.5 BB	END SUCTION	300	75	7.33	10	1,800	460/3	VFD	9.5	1,2
HWP-2	BASEMENT	HEATING WATER	BELL AND GOSSETT E-1510 2.5 BB	END SUCTION	300	75	7.33	10	1,800	460/3	VFD	8.75	1,2
PHP-1	BASEMENT	AHU-B FREEZE PROTECTION	BELL AND GOSSETT E-90	INLINE	27	10	0.2	1/4	1,800	115/1	RIB		
PHP-2	BASEMENT	DOAS FREEZE PROTECTION	BELL AND GOSSETT E-90	IN-LINE	60	10	0.2	1/3	1,800	115/1	RIB		
PHP-3	14TH FLOOR	AHU-14 FREEZE PROTECTION	BELL AND GOSSETT ECOCIRC 20-18	INLINE	6	8	0.2	1/10	1,800	115/1	RIB		
PHX-1	BASEMENT	CHILLED WATER HX	BELL AND GOSSETT ECOCIRC SL 70-145	INLINE	10	50	0.9	2	3,600	208/1	ECM	4	
PHX-2	BASEMENT	HX-5	BELL AND GOSSETT E-80 2.5x2.5x7B	INLINE	130	30	1.4	2	1,800	480/3	VFD	4	
DCP-1	BASEMENT	DRY COOLER	BELL AND GOSSETT E1510 2BD	END SUCTION	130	50	2.93	5	1,800	480/3	VFD	7.375	1,2

NOTES:
1. SELF FLUSHING SEAL
2. HEAVY DUTY BASEPLATE

FAN COIL UNIT SCHEDULE

UNIT DESIG.	LOCATION	SERVICE	MANUFACTURER & MODEL NO.	TOTAL COUNT	AIRFLOW (CFM)	UNIT CONFIGURATION	TYPE	COOLING COIL: TOTAL CAPACITY (BTUH)	COOLING COIL: SENS CAPACITY (BTUH)	COOLING COIL: EAT DB/WB (°F)	COOLING COIL: EWT (°F)	COOLING COIL: MAX. FLOW (GPM)	COOLING COIL: MAX WPD (FT.)	HEATING COIL: TOTAL CAPACITY (BTUH) [KW]	HEATING COIL: EAT (°F)	HEATING COIL: EWT (°F)	HEATING COIL: MAX. FLOW (GPM)	HEATING COIL: MAX WPD (FT.)	FAN DATA: ESP (IN.)	FAN DATA: MOTOR POWER (WATTS)	FAN DATA: VOLTS/PH	ELECTRICAL: FLA	ELECTRICAL: MCA	RETURN INLET LOCATION	SUPPLY DISCHARGE LOCATION	PIPING CONNECTION	FILTER	NOTES
FCU-A	FLOORS 2-13	FLOORS 2-13	TRANE FCAB040	419	300	VERTICAL CONCEALED	4-PIPE	6.0	5.0	75/62.5	47.5	1.25	5	6	68	140	0.3	5	.2	64	277/1	2	2.75	FRONT	TOP DUCTED	SEE PLANS	YES	1,3,4,5
FCU-B	FLOOR 2	FLOOR 2	TRANE FCCB040	16	300	HORIZONTAL CONCEALED	4-PIPE	6.0	5.0	75/62.5	47.5	1.25	5	6	68	140	0.3	5	.2	64	277/1	2	2.75	BACK DUCTED	FRONT DUCTED	SEE PLANS	YES	1,2,3,4,5
FCU-C	FLOOR 1	MAIL RM 139	TRANE FCDB080	2	650	HORIZONTAL EXPOSED	2-PIPE	15.1	13.7	75/62.5	47.5	2.51	5						-	154	115/1	3.1	3.88	BOTTOM	FRONT	SEE PLANS	YES	3,4,5
FCU-D	BASEMENT	FACILITIES	TRANE FCDB030	1	200	HORIZONTAL CONCEALED	2-PIPE	6.0	5.0	75/62.5	47.5	1.25	5	6	68	140	0.3	5	.2	64	277/1	2	2.75	BACK DUCTED	FRONT DUCTED	SEE PLANS	YES	
FCU-E	2ND FLOOR	DOCK	TRANE FCBB030	2	200	VERTICAL EXPOSED	2-PIPE	3.3	3.2	75/62.5	47.5	0.6	5	[5 KW]	68	-	-	-	.2	40	277/1			FRONT	TOP	SEE PLANS	YES	
FCU-F	FLOOR 2-13	DATA ROOM	TRANE FCAB060	12	450	VERTICAL CONCEALED	2-PIPE	10.0	9.0	75/62.5	47.5	1.25	5						.3	64	277/1	2	2.75	FRONT	TOP DUCTED	SEE PLANS	YES	
FCU-G	FLOOR 2	CONFERENCE 202	TRANE FCCB040	1	300	VERTICAL EXPOSED	4-PIPE	6.0	5.0	75/62.5	47.5	1.25	5	6	68	140	0.3	5	.2	64	277/1	2	2.75	FRONT	TOP DUCTED	SEE PLANS	YES	1,3,4,5

NOTES:
1. PROVIDE DUCT FLANGES FOR RETURN.
2. PROVIDE DUCT FLANGES FOR SUPPLY.
3. PROVIDE FACTORY MOUNTED DISCONNECT.
4. ECM MOTOR
5. DDC CONTROLLER

SPLIT SYSTEM UNIT SCHEDULE

INDOOR UNIT: UNIT DESIGNATION	SERVICE	MODEL NO.	SUPPLY CFM	ESP	RATED COOLING CAP (MBH)	ENTERING AIR (°F) dB / wB	HEATING CAP. (MBH)	ENTERING AIR (°F) dB / wB	OUTDOOR UNIT: UNIT DESIGNATION	MODEL NO.	COMPRESSOR DATA: QTY.	COMPRESSOR DATA: TYPE	COMPRESSOR DATA: REFRIGERANT TYPE	AMBIENT (dB): LOW °F	AMBIENT (dB): HIGH °F	EFF. SEER	SINGLE POINT POWER: VOLT	PHASE	HZ	MCA	MOCP	NOTES
CU-1	1412 PUBLIC SAFETY DATA ROOM	TRANE TPKA0A0121IA00A	385	-	12	80/67	15	70	HP-1	TRANE TRUYA0121KA70NA	1	SCROLL	R-410a	5	95	18	208	1	60	11	28	1,2
CU-2	140	TRANE NTXWPH06	305		6	80/67	12	70	HP-2	TRANE NTXSPH06B112	1	SCROLL	R-410a	5	95	19	208	1	60	10	15	2,3
CU-3	137	TRANE NTXWPH12B	385	-	12	80/67	15	70	HP-3	TRANE NTXSPH12B112	1	SCROLL	R-410a	5	95	18	208	1	60	10	15	2,3

NOTES:
1 LOW AMBIENT KIT
2 CONDENSATE PUMP
3 BID ALTERNATE #6

FILTER HOUSING SCHEDULE

UNIT DESIG.	SERVES	MANUFACTURER & MODEL NO.	AIRFLOW (CFM)	PRE FILTERS: NO.	PRE FILTERS: SIZE (IN.)	PRE FILTERS: DEPTH (IN.)	PRE FILTERS: MERV	PRE FILTERS: MAX CLEAN APD (IN. W.G.)	PRE FILTERS: MODEL NUMBER	FINAL FILTERS: NO.	FINAL FILTERS: SIZE (IN.)	FINAL FILTERS: DEPTH (IN.)	FINAL FILTERS: MERV	FINAL FILTERS: MAX CLEAN APD (IN. W.G.)	FINAL FILTERS: MODEL NUMBER	NOMINAL HOUSING SIZE	NOTES
FH-AHUB	AHU-B	GLIDEPACK MULTITRACK 25	17,000	12	24 x 24	2	8	0.3	FARR 30/30	12	24 x 24	12	13	0.27	DURAVIL ES2	93.5" x 75.75"	1,2
FH-D1	DOAS-1	GLIDEPACK MULTITRACK 25	24,000	15	24 X 24	2	8	0.3	FARR 30/30	12	24 X 24	15	13	0.27	DURAVIL ES2	117.5" x 75.75"	1,2
FH-AHU1	AHU-1	BLC 07FB	5,700	3 (F) 3 (H)	24 x 24, 12 X 12	2	8	0.3	FARR 30/30	3 (F) 3 (H)	24 x 24, 12 X 12	4	13	0.27	DURAVIL ES2	70"X38"	1,2
FH-AHU3	AHU-3	GLIDEPACK MULTITRACK 25	10,500	8	24 X 24	2	8	0.3	FARR 30/30	8	24 X 24	12	13	0.27	DURAVIL ES2	93.5" x 51.5"	1,2
FH-AHU-5	AHU-5	GLIDEPACK MULTITRACK 25	10,500	8	24 X 24	2	8	0.3	FARR 30/30	8	24 X 24	12	13	0.27	DURAVIL ES2	93.5" x 51.5"	1,2
FH-AHU7	AHU-7	GLIDEPACK MULTITRACK 25	10,500	8	24 X 24	2	8	0.3	FARR 30/30	8	24 X 24	12	13	0.27	DURAVIL ES2	93.5" x 51.5"	1,2
FH-AHU9	AHU-9	GLIDEPACK MULTITRACK 25	10,500	8	24 X 24	2	8	0.3	FARR 30/30	8	24 X 24	12	13	0.27	DURAVIL ES2	93.5" x 51.5"	1,2
FH-AHU11	AHU-11	GLIDEPACK MULTITRACK 25	10,500	8	24 X 24	2	8	0.3	FARR 30/30	8	24 X 24	12	13	0.27	DURAVIL ES2	93.5" x 51.5"	1,2
FH-SAHU13	AHU-13	GLIDEPACK MULTITRACK 25	10,500	8	24 X 24	2	8	0.3	FARR 30/30	8	24 X 24	12	13	0.27	DURAVIL ES2	93.5" x 51.5"	1,2

NOTES:
1. AIR PRESSURE DROP BASED ON NOMINAL 500 FPM CATALOGUE DATA
2. PROVIDE PRE FILTER AND FINAL FILTER MAGNEHELIC GAUGES

TERMINAL REHEAT COIL SCHEDULE

UNIT DESIG.	AREA SERVED	HEATING COIL DATA: DESIGN AIRFLOW (CFM)	MIN. CAPACITY (MBH)	EAT (°F)	LAT (°F)	EWT (°F)	MAX. FLOW (GPM)	MAX. WPD (FT.)	APD @ MAX AIRFLOW (IN. W.C.)	SIZE W X H (IN.)	MIN. ROWS	MAX FPI	NOTES
RHC - 2N	NORTH EVEN STACK FLOORS	3,500	40	65	75	140	2.0	4	0.11	44" X 18"	1	7	1,2
RHC - 2S	SOUTH EVEN STACK FLOORS	2,500	27	65	75	140	1.5	4	0.12	30" X 18"	1	7	1,2
RHC - 3N	NORTH ODD STACK FLOORS	3,500	38	65	75	140	2.0	4	0.12	32" X 24"	1	7	1,3
RHC - 3S	SOUTH ODD STACK FLOORS	3,500	28	65	75	140	1.5	4	0.1	32" X 18"	1	7	1,3

NOTES:
1. .020" THICK 5/8" DIAMETER TUBE
2. COILS SERVING FLOORS 2,4,6,8,10,12
3. COILS SERVING FLOORS 3,5,7,9,11,13

SHEET IS PLOTTED TO SCALE IF ADJACENT LINE MEASURES 1 INCH

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ARCHER-ELGIN
engineering ■ surveying ■ architecture
Corporate Authority:
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OFFICE OF ADMINISTRATION
DIVISION OF FACILITIES
MANAGEMENT,
DESIGN AND CONSTRUCTION

RENOVATE MECHANICAL/
ELECTRICAL/LIFE-SAFETY/
STATE OFFICE BUILDING

JEFFERSON STATE
OFFICE BUILDING
205 JEFFERSON STREET
JEFFERSON CITY, MO 65101

PROJECT # O1911-01
SITE # 1001
ASSET # 3101001057

REVISION:
DATE:
REVISION:
DATE:
REVISION:
DATE:
ISSUE DATE:

CAD DWG FILE: M6.0-075107.001
DRAWN BY: AM
CHECKED BY: EP
DESIGNED BY: JW

SHEET TITLE:
MECHANICAL
SCHEDULES

SHEET NUMBER:
M6.2

125 OF 244 SHEETS

DATE : August 31, 2023

VARIABLE AIR VOLUME UNIT SCHEDULE

UNIT DESIG.	AHU NO.	Room	MANUFACTURER & MODEL NO.	INLET SIZE (IN.)	DESIGN FLOW CONDITIONS				HEATING COIL DATA							NOTES
					COOLING	HEATING	Minimum	MAX. APD (IN. W.C.)	HEATING FLOW (CFM)	EAT (°F)	LAT (°F)	EWT (°F)	MAX. FLOW (GPM)	MAX. WPD (FT.)	MIN. ROWS	
					MAX. FLOW (CFM)	MAX. FLOW (CFM)	Max Flow (CFM)									
VAV B.1	AHU-B	B1,B2,B3	PRICE SDV	6	175	100	75	0.4	100	55	81.8	140	0.5	5	1	1,2
VAV B.2	AHU-B	B4,B5,B6	PRICE SDV	6	225	125	100	0.4	125	55	78.6	140	0.5	5	1	1,2
VAV B.3	AHU-B	B8	PRICE SDV	6	250	125	100	0.4	125	55	78.6	140	0.5	5	1	1,2
VAV B.4	AHU-B	B10	PRICE SDV	8	550	250	225	0.4	250	55	75	140	0.6	5	1	1,2
VAV B.5	AHU-B	B7	PRICE SDV	10	900	375	275	0.4	375	55	75	140	2.4	5	1	1,2
VAV B.6	AHU-B	B9	PRICE SDV	4	75	50	50	0.4	50	55	92.7	140	0.5	5	1	1,2
VAV B.7	AHU-B	B11-B15	PRICE SDV	8	550	275	225	0.4	275	55	75	140	0.7	5	1	1,2
VAV 1.1	AHU-B	140	PRICE SDV	14	1,950	800	600	0.4	800	55	75	140	2	5	1	1,2
VAV 1.2	AHU-B	128, 127, 137, 136	PRICE SDV	6	125	120	120	0.4	120	55	79.2	140	0.5	5	1	1,2
VAV 1.3	AHU-B	135	PRICE SDV	14	2,200	1800	1650	0.4	1800	55	75.2	140	2.3	5	2	1,2
VAV 1.4	AHU-B	133	PRICE SDV	10	550	400	300	0.4	400	55	75	140	1.2	5	2	1,2
VAV 1.5	AHU-B	134	PRICE SDV	14	1,700	1500	1200	0.4	1500	55	75	140	2.2	5	2	1,2
VAV 1.6	AHU-B	138	PRICE SDV	6	225	100	75	0.4	100	55	81.8	140	0.4	5	1	1,2
VAV 1.7	AHU-B	129	PRICE SDV	6	350	150	125	0.4	195	55	76.2	140	0.4	5	1	1,2
VAV 1.8	AHU-B	130	PRICE SDV	4	75	50	50	0.4	50	55	92.7	140	0.4	5	2	1,2
VAV 1.9	AHU-B	140	PRICE SDV	12	975	400	300	0.4	400	55	75.5	140	0.8	5	2	1,2
VAV 1.10	AHU-B	101-103	PRICE SDV	6	300	250	150	0.4	250	55	75	140	1.2	5	1	1,2
VAV 1.11	AHU-B	104-107	PRICE SDV	8	400	300	200	0.4	300	55	75	140	0.9	5	2	1,2
VAV 1.12	AHU-B	140	PRICE SDV	10	975	400	300	0.4	400	55	75	140	1.2	5	1	1,2
VAV 1.13	AHU-B	108-111	PRICE SDV	8	400	300	200	0.4	300	55	75	140	0.9	5	2	1,2
VAV 1.14	AHU-B	112, 113	PRICE SDV	6	200	150	100	0.4	150	55	76.2	140	0.4	5	1	1,2
VAV 1.15	AHU-B	114-117	PRICE SDV	8	400	300	200	0.4	300	55	75	140	0.9	5	1	1,2
VAV 1.16	AHU-B	118	PRICE SDV	4	100	75	50	0.4	75	55	86.2	140	0.4	5	1	1,2
VAV 1.17	AHU-B	140	PRICE SDV	10	1,000	400	300	0.4	400	55	75	140	1.2	5	1	1,2
VAV 1.18	AHU-B	138	PRICE SDV	6	200	100	75	0.4	100	55	81.8	140	0.4	5	1	1,2
VAV 1.19	AHU-B	119-121	PRICE SDV	6	300	225	75	0.4	225	55	75	140	0.8	5	1	1,2
VAV 1.20	AHU-B	122	PRICE SDV	6	300	125	100	0.4	125	55	78.6	140	0.4	5	2	1,2
VAV 1.21	AHU-B	123	PRICE SDV	8	700	450	225	0.4	450	55	78	140	0.8	5	2	1,2
VAV 2N	AHU-3	Open Office	PRICE SRDV	36 X 12	3,500	2500	1200	0.1	2500	70	70	-	-	-	-	1,2,3
VAV 2S	AHU-3	Open Office	PRICE SRDV	30 X 18	2,500	1500	1400	0.1	1500	70	70	-	-	-	-	1,2,3
VAV 2.1	AHU-3	202 Conf.	PRICE SDV	6	250	100	75	0.4	100	70	70	-	-	-	-	1,2
VAV 2.2	AHU-3	208, 210, 211	PRICE SDV	6	275	150	75	0.4	150	70	70	-	-	-	-	1,2
VAV 2.3	AHU-3	212 - 214	PRICE SDV	6	225	150	95	0.4	150	70	70	-	-	-	-	1,2
VAV 2.4	AHU-3	215	PRICE SDV	4	75	50	25	0.4	25	70	70	-	-	-	-	1,2
VAV 2.5	AHU-3	220 Conf.	PRICE SDV	6	400	225	200	0.4	225	70	70	-	-	-	-	1,2
VAV 3N	AHU-3	Open Office	PRICE SRDV	30 X 20	3,500	2500	1200	0.1	2500	70	70	-	-	-	-	1,2,3
VAV 3S	AHU-3	Open Office	PRICE SRDV	30 X 18	2,500	1500	1400	0.1	1500	70	70	-	-	-	-	1,2,3
VAV 3.1	AHU-3	311	PRICE SDV	6	300	150	75	0.4	175	70	70	-	-	-	-	1,2
VAV 3.2	AHU-3	311	PRICE SDV	6	300	150	75	0.4	175	70	70	-	-	-	-	1,2
VAV 3.3	AHU-3	3.3	PRICE SDV	6	300	150	75	0.4	175	70	70	-	-	-	-	1,2
VAV 4N	AHU-5	Open Office	PRICE SRDV	36 X 12	3,500	2500	1200	0.1	2500	70	70	-	-	-	-	1,2,3
VAV 4S	AHU-5	Open Office	PRICE SRDV	30 X 18	2,500	1500	1400	0.1	1500	70	70	-	-	-	-	1,2,3
VAV 4.1	AHU-5	400 Open Reception	PRICE SDV	6	300	150	100	0.4	150	70	70	-	-	-	-	1,2
VAV 4.2	AHU-5	414, 417, 418	PRICE SDV	6	300	80	75	0.4	80	70	70	-	-	-	-	1,2
VAV 4.3	AHU-5	419, 420	PRICE SDV	6	250	60	55	0.4	60	70	70	-	-	-	-	1,2
VAV 4.4	AHU-5	416A Conf.	PRICE SDV	6	300	125	90	0.4	125	70	70	-	-	-	-	1,2
VAV 4.5	AHU-5	421, 422	PRICE SDV	6	250	55	50	0.4	130	70	70	-	-	-	-	1,2
VAV 4.6	AHU-5	416B Conf.	PRICE SDV	6	250	125	90	0.4	125	70	70	-	-	-	-	1,2
VAV 4.7	AHU-5	404 Conf.	PRICE SDV	6	280	125	100	0.4	125	70	70	-	-	-	-	1,2
VAV 5N	AHU-5	Open Office	PRICE SRDV	30 X 20	3,500	2500	1200	0.1	2500	70	70	-	-	-	-	1,2,3
VAV 5S	AHU-5	Open Office	PRICE SRDV	30 X 18	2,500	1500	1400	0.1	1500	70	70	-	-	-	-	1,2,3
VAV 5.1	AHU-5	509 Conf.	PRICE SDV	6	345	175	125	0.4	175	70	70	-	-	-	-	1,2
VAV 5.2	AHU-5	512, 513	PRICE SDV	6	200	100	100	0.4	100	70	70	-	-	-	-	1,2
VAV 5.3	AHU-5	510 Open Off.	PRICE SDV	6	375	150	100	0.4	150	70	70	-	-	-	-	1,2
VAV 5.4	AHU-5	514-516	PRICE SDV	6	325	225	150	0.4	225	70	70	-	-	-	-	1,2
VAV 5.5	AHU-5	511 Conf.	PRICE SDV	6	300	150	125	0.4	125	70	70	-	-	-	-	1,2
VAV 5.6	AHU-5	509 Conf.	PRICE SDV	6	230	125	100	0.4	125	70	70	-	-	-	-	1,2

NOTES:

1. SEE SPECIFICATION FOR ROOM TEMPERATURE SENSOR TYPE.
2. MAXIMUM AIR PRESSURE DROP IS FOR THE ENTIRE ASSEMBLY.
3. SLIDE IN RETROFIT STYLE VAV BOX

VARIABLE AIR VOLUME UNIT SCHEDULE

UNIT DESIG.	AHU NO.	Room	MANUFACTURER & MODEL NO.	INLET SIZE (IN.)	DESIGN FLOW CONDITIONS				HEATING COIL DATA							NOTES
					COOLING	HEATING	Minimum	MAX. APD (IN. W.C.)	HEATING FLOW (CFM)	EAT (°F)	LAT (°F)	EWT (°F)	MAX. FLOW (GPM)	MAX. WPD (FT.)	MIN. ROWS	
					MAX. FLOW (CFM)	MAX. FLOW (CFM)	Max Flow (CFM)									
VAV 6N	AHU-7	Open Office	PRICE SRDV	36 X 12	3,500	2500	1200	0.1	2500	70	70	-	-	-	-	1,2,3
VAV 6S	AHU-7	Open Office	PRICE SRDV	30 X 18	2,500	1500	1400	0.1	1500	70	70	-	-	-	-	1,2,3
VAV 6.1	AHU-7	602, 603	PRICE SDV	6	125	85	50	0.4	85	70	70	-	-	-	-	1,2
VAV 6.2	AHU-7	610, 612,613	PRICE SDV	6	250	125	100	0.4	125	70	70	-	-	-	-	1,2
VAV 6.3	AHU-7	614 CONF	PRICE SDV	6	200	175	60	0.4	175	70	70	-	-	-	-	1,2
VAV 6.4	AHU-7	615, 616	PRICE SDV	6	200	100	80	0.4	80	70	70	-	-	-	-	1,2
VAV 6.5A	AHU-7	617 Conf.	PRICE SDV	6	300	150	100	0.4	150	70	70	-	-	-	-	1,2
VAV 6.5B	AHU-7	617 Conf.	PRICE SDV	6	300	150	100	0.4	150	70	70	-	-	-	-	1,2
VAV 6.6	AHU-7	623 Conf.	PRICE SDV	6	300	125	100	0.4	125	70	70	-	-	-	-	1,2
VAV 6.7	AHU-7	618	PRICE SDV	6	100	50	40	0.4	50	70	70	-	-	-	-	1,2
VAV 7N	AHU-7	Open Office	PRICE SRDV	30 X 20	3,500	2500	1200	0.1	2500	70	70	-	-	-	-	1,2,3
VAV 7S	AHU-7	Open Office	PRICE SRDV	30 X 18	2,500	1500	1400	0.1	1500	70	70	-	-	-	-	1,2,3
VAV 7.1	AHU-7	709 Conf.	PRICE SDV	6	225	100	75	0.4	100	70	70	-	-	-	-	1,2
VAV 7.2	AHU-7	713, 714	PRICE SDV	6	190	100	70	0.4	100	70	70	-	-	-	-	1,2
VAV 7.3	AHU-7	712	PRICE SDV	6	175	85	50	0.4	85	70	70	-	-	-	-	1,2
VAV 7.4	AHU-7	710, 711	PRICE SDV	6	190	100	70	0.4	100	70	70	-	-	-	-	1,2
VAV 8N	AHU-9	Open Office	PRICE SRDV	36 X 12	3,500	2500	1200	0.1	2500	70	70	-	-	-	-	1,2,3
VAV 8S	AHU-9	Open Office	PRICE SRDV	30 X 18	2,500	1500	1400	0.1	1500	70	70	-	-	-	-	1,2,3
VAV 8.1	AHU-9	821-823	PRICE SDV	6	350	180	75	0.4	180	70	70	-	-	-	-	1,2
VAV 8.2	AHU-9	820	PRICE SDV	6	150	65	25	0.4	65	70	70	-	-	-	-	1,2
VAV 8.3	AHU-9	818, 819	PRICE SDV	6	250	100	50	0.4	100	70	70	-	-	-	-	1,2
VAV 8.4	AHU-9	813	PRICE SDV	6	450	200	155	0.4	200	70	70	-	-	-	-	1,2
VAV 8.5	AHU-9	812, 817	PRICE SDV	6	225	100	50	0.4	100	70	70	-	-	-	-	1,2
VAV 8.6	AHU-9	811, 816	PRICE SDV	6	225	100	50	0.4	100	70	70	-	-	-	-	1,2
VAV 9N	AHU-9	Open Office	PRICE SRDV	30 X 20	3,500	2500	1200	0.1	2500	70	70	-	-	-	-	1,2,3
VAV 9S	AHU-9	Open Office	PRICE SRDV	30 X 18	2,500	1500	1400	0.1	1500	70	70	-	-	-	-	1,2,3
VAV 9.1	AHU-9	912	PRICE SDV	6	250	150	100	0.4	150	70	70	-	-	-	-	1,2
VAV 9.2	AHU-9	908	PRICE SDV	6	150	75	50	0.4	50	70	70	-	-	-	-	1,2
VAV 9.3	AHU-9	907 Conf.	PRICE SDV	6	400	250	150	0.4	250	70	70	-	-	-	-	1,2
VAV 9.4	AHU-9	911 Conf.	PRICE SDV	6	200	125	75	0.4	125	70	70	-	-	-	-	1,2
VAV 9.5	AHU-9	910 Conf.	PRICE SDV	6	225	125	75	0.4	125	70	70	-	-	-	-	1,2
VAV 9.6	AHU-9	910 Conf.	PRICE SDV	6	225	125	75	0.4	125	70	70	-	-	-	-	1,2
VAV 10N	AHU-11	Open Office	PRICE SRDV	36 X 12	3,500	2500	1200	0.1	2500	70	70	-	-	-	-	1,2,3
VAV 10S	AHU-11	Open Office	PRICE SRDV	30 X 18	2,500	1500	1400	0.1	1500	70	70	-	-	-	-	1,2,3
VAV 10.1	AHU-11	1022	PRICE SDV	6	200	100	75	0.4	250	70	70	-	-	-	-	1,2
VAV 10.2	AHU-11	10,181,019	PRICE SDV	6	200	150	100	0.4	150	70	70	-	-	-	-	1,2
VAV 10.3	AHU-11	1017	PRICE SDV	6	160	80	70	0.4	80	70	70	-	-	-	-	1,2
VAV 10.4	AHU-11	1015, 1016	PRICE SDV	6	225	125	100	0.4	125	70	70	-	-	-	-	1,2
VAV 10.5	AHU-11	1012	PRICE SDV	6	370	250	200	0.4	250	70	70	-	-	-	-	1,2
VAV 10.6	AHU-11	1002	PRICE SDV	6	175	100	75	0.4	75	70	70	-	-	-	-	1,2
VAV 10.7	AHU-11	1022	PRICE SDV	6	200	100	75	0.4	75	70	70	-	-	-	-	1,2
VAV 11N	AHU-11	Open Office	PRICE SRDV	30 X 20	3,500	2500	1200	0.1	2500	70	70	-	-	-	-	1,2,3
VAV 11S	AHU-11	Open Office	PRICE SRDV	30 X 18	2,500	1500	1400	0.1	1500	70	70	-	-	-	-	1,2,3
VAV 11.1	AHU-11	1109 Conf.	PRICE SDV	6	350	175	150	0.4	175	70	70	-	-	-	-	1,2
VAV 12N	AHU-11	Open Office	PRICE SRDV	36 X 12	3,500	2500	1200	0.1	2500	70	70	-	-	-	-	1,2,3
VAV 12S	AHU-11	Open Office	PRICE SRDV	30 X 18	2,500	1500	1400	0.1	1500	70	70	-	-	-	-	1,2,3
VAV 12.1	AHU-13	1218, 1219	PRICE SDV	6	275	125	50	0.4	125	70	70	-	-	-	-	1,2
VAV 12.2	AHU-13	1216	PRICE SDV	6	225	100	50	0.4	100	70	70	-	-	-	-	1,2
VAV 12.3	AHU-13	1215	PRICE SDV	6	125	75	50	0.4	75	70	70	-	-	-	-	1,2
VAV 12.4	AHU-13	1212	PRICE SDV	6	450	225	150	0.4	250	70	70	-	-	-	-	1,2
VAV 12.5	AHU-13	1224	PRICE SDV	6	275	125	50	0.4	125	70	70	-	-	-	-	1,2
VAV 12.6	AHU-13	1223	PRICE SDV	6	225	100	75	0.4	100	70	70	-	-	-	-	1,2
VAV 12.7	AHU-13	1211, 1222	PRICE SDV	6	425	200	150	0.4	200	70	70	-	-	-	-	1,2
VAV 12.8	AHU-13	1203	PRICE SDV	4	200	100	75	0.4	100	70	70	-	-	-	-	1,2
VAV 13N	AHU-13	Open Office	PRICE SRDV	30 X 20	3,500	2500	1200	0.1	2500	70	70	-	-	-	-	1,2,3
VAV 13S	AHU-13	Open Office	PRICE SRDV	30 X 18	2,500	1500	1400	0.1	1500	70	70	-	-	-	-	1,2,3
VAV 13.1	AHU-13	1319 , 1320	PRICE SDV	6	200	100	50	0.4	100	70	70	-	-	-	-	1,2
VAV 13.2	AHU-13	1316, 1317 1318	PRICE SDV	6	325	225	75	0.4	225	70	70	-	-	-	-	1,2
VAV 13.3	AHU-13	1311	PRICE SDV	6	435	175	125	0.4	175	70	70	-	-	-	-	1,2
VAV 13.4	AHU-13	1311	PRICE SDV	6	435	175	125	0.4	175	70	70	-	-	-	-	1,2
VAV 13.5	AHU-13	1311	PRICE SDV	6	435	175	125	0.4	175	70	70	-	-	-	-	1,2
VAV 13.6	AHU-13	1312 Reception	PRICE SDV	6	125	75	50	0.4	175	70	70	-	-	-	-	1,2
VAV 14.1	AHU-14	1410, 1411, 1412	PRICE SDV	14	2,175	1200	800	0.3	1200	55	84	140	3	4	2	1,2
VAV 14.2	AHU-14	1407, 1408, 1409	PRICE SDV	6	450	300	180	0.3	300	55	84	140	1.1	4	2	1,2
VAV 14.3	AHU-14	1410, 1411, 1400W, 1400M, 1400L	PRICE SDV	6	475	250	200	0.4	250	55	84	140	0.8	4	2	1,2
VAV 14.4	AHU-14	1404 -1406	PRICE SDV	6	500	275	200	0.4	500	55	84	140	1	4	2	1,2
VAV 14.5	AHU-14	1401	PRICE SDV	12	1,800	1100	725	0.45	1100	55	84	140	4.5	4	2	1,2
VAV 14.6	AHU-14	1402, 1403 1400B	PRICE SDV	6	500	275	200	0.4	275	55	84	140	1	4	2	1,2
VAV S.1	DOAS	MECH RM	PRICE SDV	16	3,500											2
VAV S.2	DOAS	KITCHEN	PRICE SDV	24X16	5,000							-	-	-	-	2
VAV S.5	DOAS	MECH RM	PRICE SDV	16	2,700											2
VAV S.6	DOAS	MECH RM	PRICE SDV	16	2,700											2
VAV S.7	DOAS	MECH RM	PRICE SDV	16	2,700											2
VAV S.8	DOAS	MECH RM	PRICE SDV	16	2,700											2
VAV S.9	DOAS	MECH RM	PRICE SDV	16	3,000											2
VAV S.10	DOAS	MECH RM	PRICE SDV	16	2,700											2

NOTES:

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3. SLIDE IN RETROFIT STYLE VAV BOX

SHEET IS PLOTTED TO SCALE IF ADJACENT LINE MEASURES 1 INCH

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DESIGN AND CONSTRUCTION

RENOVATE MECHANICAL/
ELECTRICAL/LIFE-SAFETY/
STATE OFFICE BUILDING

JEFFERSON STATE
OFFICE BUILDING
205 JEFFERSON STREET
JEFFERSON CITY, MO 65101

PROJECT # O1911-01
SITE # 1001
ASSET # 3101001057

REVISION:
DATE:
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ISSUE DATE:

CAD DWG FILE: M6.0-075107.001
DRAWN BY: AM
CHECKED BY: EP
DESIGNED BY: JW

SHEET TITLE:
MECHANICAL
SCHEDULES

SHEET NUMBER:
M6.3

126 OF 244 SHEETS

DATE : August 31, 2023

CONDENSING UNIT SCHEDULE

UNIT DESIG.	LOCATION	SERVICE	MANUFACTURER & MODEL NO.	AMBIENT DB (°F)	MIN. COOLING CAPACITY (MBH)	COMPRESSOR DATA			ELECTRICAL DATA					WEIGHT (LBS.)	NOTES
						QTY.	TYPE	REFRIGERANT TYPE	VOLTS/PH	FLA/RLA	MCA	MOP	DISC INCLUDED		
CU-2	ROOF	S-11	TRANE TTA0724DAA	95	72.0	2	SCROLL	R-410A	480/3	11.4	14	15	N	307	1

NOTES:
1. UNIT TO BE SUPPLIED WITH HAIL GUARDS.

BLOWER COIL UNIT SCHEDULE

UNIT DESIG.	LOCATION	SERVICE	MANUFACTURER & MODEL NO.	TOTAL COUNT	AIRFLOW (CFM)	UNIT CONFIGURATION	COOLING COIL						ELECTRIC HEAT			FAN DATA			ELECTRICAL		RETURN INLET LOCATION	SUPPLY DISCHARGE LOCATION	PIPING CONNECTION	FILTER	NOTES
							TOTAL CAPACITY (BTUH)	SENS CAPACITY (BTUH)	EAT DB/WB (°F)	EWT (°F)	MAX. FLOW (GPM)	MAX WPD (FT.)	TOTAL CAPACITY KW	EAT (°F)	LAT (°F)	ESP (IN.)	MOTOR POWER (HP)	VOLTS/PH	MCA	MOCP					
BCU-A	BASEMENT	ELEC SERVICE	TRANE BCHE120	1	4,500	HORIZONTAL CONCEALED	198	183	87 / 65	47.5	33	16				.4	5	480/3	9.75	15	FRONT	TOP DUCTED	SEE PLANS	2" MERV 8	1,3,4,5
BCU-B	2ND FLOOR	DOCK SUPPORT	TRANE BCHE036	1	1,050	HORIZONTAL CONCEALED	25	23	75 / 62.5	47.5	5	5	5	68	83	.3	3/4	277/1	27.2	30	BACK DUCTED	FRONT DUCTED	SEE PLANS	2" MERV 8	1,2,3,4,5

NOTES:
1. PROVIDE DUCT FLANGES FOR RETURN.
2. PROVIDE DUCT FLANGES FOR SUPPLY.
3. PROVIDE FACTORY MOUNTED DISCONNECT.
4. ECM MOTOR
5. DDC CONTROLLER

TERMINAL REHEAT COIL SCHEDULE

UNIT DESIG.	AREA SERVED	HEATING COIL DATA										NOTES
		DESIGN AIRFLOW (CFM)	MIN. CAPACITY (MBH)	EAT (°F)	LAT (°F)	EWT (°F)	MAX. FLOW (GPM)	MAX. WPD (FT.)	APD @ MAX AIRFLOW (IN. W.C.)	SIZE W'X H (IN.)	MIN. ROWS	MAX FPI	
RHC - 2N	NORTH EVEN STACK FLOORS	3,500	40	65	75	140	2.0	4	0.11	44" X 18"	1	7	1,2
RHC - 2S	SOUTH EVEN STACK FLOORS	2,500	27	65	75	140	1.5	4	0.12	30" X 18"	1	7	1,2
RHC - 3N	NORTH ODD STACK FLOORS	3,500	38	65	75	140	2.0	4	0.12	32" X 24"	1	7	1,3
RHC - 3S	SOUTH ODD STACK FLOORS	3,500	28	65	75	140	1.5	4	0.1	32" X 18"	1	7	1,3

NOTES:
1. .020" THICK 5/8" DIAMETER TUBE
2. COILS SERVING FLOORS 2,4,6,8,10,12
3. COILS SERVING FLOORS 3,5,7,9,11,13

AIR DEVICE SCHEDULE

UNIT DESIG.	SERVICE	MANUFACTURER & MODEL NO.	TYPE	THROW	NO. OF SLOTS	NECK SIZE (IN.)	FACE SIZE (IN.)	FINISH	NOTES
A1	SUPPLY	TITUS TDC	LOUVER	SEE PLANS	NA	12"	24"x24"	TBD BY ARCH	3
A2	SUPPLY	TITUS TDC	LOUVER	SEE PLANS	NA	10"	24"x24"	TBD BY ARCH	3
A3	SUPPLY	TITUS TDC	LOUVER	SEE PLANS	NA	8"	24"x24"	TBD BY ARCH	3
A4	SUPPLY	TITUS TDC	LOUVER	SEE PLANS	NA	6"	24"x24"	TBD BY ARCH	3
B1	SUPPLY	TITUS TBD-10	SLOT	SEE PLANS	2 @ 1"	6" ø	24" x 6"	TBD BY ARCH	3
C1	SUPPLY	TITUS 1700	SIDEWALL	SEE PLANS	NA	16"x36"	18"x38"	TBD BY ARCH	
C2	SUPPLY	TITUS 1700	SIDEWALL	SEE PLANS	NA	14"x10"	16"x12"	TBD BY ARCH	
C3	SUPPLY	TITUS 1700	SIDEWALL	SEE PLANS	NA	16"x8"	18"x12"	TBD BY ARCH	
C4	SUPPLY	TITUS 1700	SIDEWALL	SEE PLANS	NA	12"x6"	14"x8"	TBD BY ARCH	
C5	SUPPLY	TITUS 1700	SIDEWALL	SEE PLANS	NA	6"x4"	8"x6"	TBD BY ARCH	
D1	EXHAUST	TITUS TDC	LOUVER	NA	NA	6"x6"	12"x12"	TBD BY ARCH	1,3
D2	EXHAUST	TITUS TDC	LOUVER	NA	NA	21"x21"	24"x24"	TBD BY ARCH	1,3
F1	RETURN	TITUS TDC	LOUVER	NA	NA	18"X18"	24"X24"	TBD BY ARCH	3
F2	RETURN	TITUS TDC	LOUVER	NA	NA	15"x15".	24"X24"	TBD BY ARCH	3
F3	RETURN	TITUS TDC	LOUVER	NA	NA	12" DIA.	24"X24"	TBD BY ARCH	3
F4	RETURN	TITUS TBR-80	SLOT	SEE PLANS	2 -1"	-	24"x6"	TBD BY ARCH	3
F5	RETURN	TITUS 350RL	SIDEWALL	SEE PLANS	NA	12"x8"	14"x10"	TBD BY ARCH	

NOTES:
1. DIFFUSER SHALL BE ALUMINUM
2. PROVIDE BORDER FOR DRYWALL INSTALLATION
3. PROVIDE BORDER FOR LAY-IN INSTALLATION
4. GRILLE SHALL BE STAINLESS STEEL

STEAM TRAP SCHEDULE

UNIT DESIG.	LOCATION	SERVICE	MANUFACTURER MODEL NO.	SIZE (IN.)	TYPE	CONDENSATE (LBS./HR)	MAX. ALLOWABLE PRESSURE (PSIG)	OPERATING PRESSURE (PSIG)	DIFFERENTIAL PRESSURE (PSIG)	NOTES
T-1	HOT WATER PLANT	HEATING WATER	ARMSTRONG 30-A8	2	FT	10000	15	10	10	
T-2	HOT WATER PLANT	HEATING WATER	ARMSTRONG 30-A8	2	FT	10000	15	10	10	
T-3	HOT WATER PLANT	HEATING WATER	ARMSTRONG 30-A8	2	FT	12000	15	10	10	
T-4	HOT WATER PLANT	HEATING WATER	ARMSTRONG 30-A8	2	FT	12000	15	10	10	

TRAP TYPE
FT - FLOAT & THERMOSTATIC
IB - INVERTED BUCKET
TD - THERMOSTATIC
TH - THERMODYNAMIC

NOTES:

UV LIGHT SCHEDULE

UNIT DESIGNATION	LOCATION	SERVICE	MANUFACTURER & MODEL NO.	BULB QTY AND LENGTH	VOLTS/PH	NOTES
UV-A	BASEMENT	S-1	STERIL-AIRE SE61, SE50	(4) 61, (4) 50	277/1	1
UV-B	BASEMENT	DOAS	STERIL-AIRE SE61	(8) 61	277/1	1
UV-C	STACK AHU'S	S5, S-6, S-7, S-8, S-9, S-10	STERIL AIRE SE42	(8) 42"	277/1	1

NOTES:
1 PROVIDE FACTORY MODULAR RACK MOUNTING KIT AND POWER SUPPLY

HEAT EXCHANGER SCHEDULE

UNIT DESIG.	LOCATION	SERVICE	MANUFACTURER & MODEL NO.	TYPE	(SOURCE)						(SERVICE)				MINIMUM TRANSFER SURFACE AREA (SQ. FT.)	NOTES
					EWT (°F)	LWT (°F)	FLOW (GPM)	STEAM SUPPLY (PSIG)	STEAM CAPACITY (LBS/HR)	MAX. PD (FT.)	EWT (°F)	LWT (°F)	FLOW (GPM)	MAX. PD (FT.)		
HX-1	BASEMENT	BUILDING HEATING WATER	BELL AND GOSSETT SU-107-2	SHELL AND TUBE	-	-	-	10	4,648	N/A	110	140	300	6.0	103.1	
HX-2	BASEMENT	BUILDING HEATING WATER	BELL AND GOSSETT SU-107-2	SHELL AND TUBE	-	-	-	10	4,648	N/A	110	140	300	6.0	103.1	
HX-3	BASEMENT	1-14 FLOOR CHILLED WATER	BELL AND GOSSETT GPX	PLATE AND FRAME	45	57	355	-	-	18	58	48	400	23.0	1277	1
HX-4	BASEMENT	1-14 FLOOR CHILLED WATER	BELL AND GOSSETT GPX	PLATE AND FRAME	45	57	355	-	-	18	58	48	400	23.0	1277	1
HX-5	BASEMENT	DRY COOLER	BELL AND GOSSETT GPX	PLATE AND FRAME	58	64	130	-	-	18	67	61	130	23.0	1277	1

NOTES:
1. PROVIDE EXTENDED RAIL FOR SERVICE

FLOW METERS

FLOW DIAGRAM PLAN ID	SYSTEM	SIZE (IN)	FLUID TEMP (F)	MAX FLOW (GPM)	EXPECTED FLOW (GPM)	BI-DIRECTIONAL	ENERGY METER	TEMP SENSOR	PIPE MATERIAL	POWER (V)	MANUFACTURER/ MODEL NO.	REMARKS
FL-CW1	TERCIARY CHILLED WATER	8	45	800	400	NO	YES	INSERTION	CARBON STEEL	24	DYNASONICS TFX 5000	1,2,3
FL-CW2	CHILLED WATER FROM ECC	8	45	1200	600	NO	YES	INSERTION	CARBON STEEL	24	DYNASONICS TFX 5000	1,2,3
FL-HW	BUILDING HEATING WATER	4	180	500	300	NO	YES	INSERTION	CARBON STEEL	24	DYNASONICS TFX 5000	1,2,3

NOTES:
1. 24V FOR ALL FLOW METERS.
2. METERS ARE BACNET IP AND REQUIRE AN ETHERNET CONNECTION
3. METER PROVIDED BY AND INSTALLED BY TEMPERATURE CONTROLS CONTRACTOR, METER, DISPLAY, AND INSERTION WELLS (WHERE REQUIRED) LOCATION TO BE COORDINATED WITH MECHANICAL PRIOR TO PIPE FABRICATION.

GLYCOL MAKE UP UNIT

UNIT DESIG.	LOCATION	SERVICE	MANUFACTURER & MODEL NO.	TYPE	PUMP DATA			MOTOR DATA				NOTES
					FLOW (GPM)	HEAD (FT.)	BHP	HP	RPM	VOLTS/PH	UNIT CONTROL	
GMU-1	BASEMENT	DRY COOLER	BELL AND GOSSETT GMU-30	END-SUCTION	10	68	0.3	1/2	3600	115/1	STARTER	1

NOTES:
1. 55 GALLON TANK, STRAINER, PRESSURE GAUGES, EXPANSION TANK, LOW WATER CUTOFF

COMPUTER ROOM AIR CONDITIONING UNIT SCHEDULE

EXISTING UNIT DESIG.	LOCATION	SERVICE	MAUFACTURER & MODEL NO.	TOTAL AIRFLOW (CFM)	AHU TYPE	HUMIDIFIER	COOLING COIL DATA							DX COOLING COIL			REHEAT	FAN DATA				INDOOR UNIT ELECTRICAL DATA				UNIT	OUTDOOR CONDENSER ELECTRICAL DATA				NOTES
						CAPACITY (LB/HR)	TOTAL (BTUH)	SENSIBLE (BTUH)	DESIGN TEMP (F)	DESIGN RH (%)	EWT (F)	GPM	WPD (FT)	TOTAL (BTUH)	SENSIBLE (BTUH)	DESIGN TEMP (F)	MIN. CAP. (KW)	FAN DISCHARGE	FAN TYPE	ESP (IN. W.C.)	HP	NUMBER OF FANS	FLA	VOLTS/PH	MCA	OCP	SCCR kA	FLA	VOLTS/PH	MCA	OCP	
CRAHU-1	LL COMPUTER ROOM	LL COMPUTER ROOM	LIEBERT PXD18D21C80859	2,800	DOWNFLOW	7.7	68	60	75	45	45	15.7	7.8	63	57	75	12	BOTTOM- SIDE DISCHARGE RAISED FLOOR	PLENUM		1.5		30.5	480/3	36.8	40	65	1.4	480/3	1.8	15	1,2,3,4

GENERAL NOTES:
1. ECM SUPPLY FAN
2. LOW AMBIENT (-20F)
3. FLOOR STAND
4. CU-1 ON LOWER ROOF TO SUPPORT CRAHU-1

KEYED NOTES:

SHEET IS PLOTTED TO SCALE IF ADJACENT LINE MEASURES 1 INCH

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OFFICE OF ADMINISTRATION
DIVISION OF FACILITIES MANAGEMENT,
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MECHANICAL SCHEDULES

SHEET NUMBER:
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127 OF 244 SHEETS

DATE : August 31, 2023

CONTROL VALVE SCHEDULE

UNIT DESIGNATION	LOCATION	SERVICE	WATER DATA		STEAM DATA		ΔP (PSI)	PIPE SIZE (IN.)	VALVE						MANUFACTURER MODEL NO.	NOTES
			FLOW (GPM)	MIN. CLOSEOFF ΔP (PSI)	FLOW (LBS/HR)	ENT. PRESS. (PSIG)			SIZE (IN.)	C_V	VALVE TYPE	CONTROL SIGNAL	ACTUATOR TYPE	POWER SUPPLY		
CV-1C	BASEMENT	HX-3 SOURCE SIDE	355	175			3.6	6.00	4.00	186.00	BALL	MODULATING	NSR	24 VAC	B6400S-186	
CV-2C	BASEMENT	HX-4 SOURCE SIDE	355	175			3.6	6.00	4.00	186.00	BALL	MODULATING	NSR	24 VAC	B6400S-186	
CV-1C	BASEMENT	HX-3 LOAD SIDE	355	175			3.6	6.00	4.00	186.00	BALL	MODULATING	NSR	24 VAC	B6400S-186	
CV-2C	BASEMENT	HX-4 LOAD SIDE	355	175			3.6	6.00	4.00	186.00	BALL	MODULATING	NSR	24 VAC	B6400S-186	
CV-3	BASEMENT	HX-5	130	200			0.2	3.00	3.00	302.00	BUTTERFLY	TWO-POSITION	NSR	24 VAC	F680HD	
CV-3A	BASEMENT	HX-5	130	200			0.2	3.00	3.00	302.00	BUTTERFLY	TWO-POSITION	NSR	24 VAC	F680HD	
CV-4	BASEMENT	HX-5	130	200			0.2	3.00	3.00	302.00	BUTTERFLY	TWO-POSITION	NSR	24 VAC	F680HD	
CV-4A	BASEMENT	HX-5	130	200			0.2	3.00	3.00	302.00	BUTTERFLY	TWO-POSITION	NSR	24 VAC	F680HD	
CV-1	BASEMENT	HX-1	300	200				4.00	4.00		BUTTERFLY	TWO-POSITION	NSR	24 VAC	F6100HD	
CV-2	BASEMENT	HX-2	300	200				4.00	4.00		BUTTERFLY	TWO-POSITION	NSR	24 VAC	F6100HD	
ST-1	BASEMENT	HX-1			4648	10.0	4.0	2.00	2.00	140.00	BALL	MODULATING	NSR	24 VAC		1
ST-2	BASEMENT	HX-2			4648	10.0	4.0	2.00	2.00	140.00	BALL	MODULATING	NSR	24 VAC		1
PHC-DOAS	BASEMENT	DOAS-1	74	200			2.4	2.00	1.25	48.00	BALL	MODULATING	NO	24 VAC	B232VS	
CC-DOAS	BASEMENT	DOAS-1	274	200			1.7	4.00	2.50	210.00	BALL	MODULATING	NSR	24 VAC	B265	
RHC-DOAS	BASEMENT	DOAS-1	29	200			2.3	2.00	1.00	19.00	BALL	MODULATING	NSR	24 VAC	B224	
PHC-AHU-B	BASEMENT	AHU-B	28	200			2.2	2.00	1.00	19.00	BALL	MODULATING	NO	24 VAC	B224	
CC-AHU-B	BASEMENT	AHU-B	67.5	200			2.2	4.00	2.00	46.00	BALL	MODULATING	NSR	24 VAC	B249	
CC-AHU-1	KITCHEN	AHU-1	37.5	200			2.4	2.00	1.00	24.00	BALL	MODULATING	NSR	24 VAC	B2100VB-024	2
RHC-AHU-1	KITCHEN	AHU-1	12.5	200			2.9	2.00	0.75	7.40	BALL	MODULATING	NSR	24 VAC	B218	2
CC-AHU-3	3RD FLOOR	AHU-3	41.7	200			1.9	2.00	1.00	30.00	BALL	MODULATING	NSR	24 VAC	B225	
RHC-2N	2ND FLOOR	AHU-3	2	200			2.8	0.75	0.50	1.20	BALL	MODULATING	NSR	24 VAC	B210	
RHC-2S	2ND FLOOR	AHU-3	1.5	200			1.6	0.75	0.50	1.20	BALL	MODULATING	NSR	24 VAC	B210	
RHC-3N	3RD FLOOR	AHU-3	2	200			2.8	0.75	0.50	1.20	BALL	MODULATING	NSR	24 VAC	B210	
RHC-3S	3RD FLOOR	AHU-3	1.5	200			1.6	0.75	0.50	1.20	BALL	MODULATING	NSR	24 VAC	B210	
CC-AHU-5	5TH FLOOR	AHU-5	41.7	200			1.9	2.00	1.00	30.00	BALL	MODULATING	NSR	24 VAC	B225	
RHC-4N	4TH FLOOR	AHU-5	2	200			2.8	0.75	0.50	1.20	BALL	MODULATING	NSR	24 VAC	B210	
RHC-4S	4TH FLOOR	AHU-5	1.5	200			1.6	0.75	0.50	1.20	BALL	MODULATING	NSR	24 VAC	B210	
RHC-5N	5TH FLOOR	AHU-5	2	200			2.8	0.75	0.50	1.20	BALL	MODULATING	NSR	24 VAC	B210	
RHC-5S	5TH FLOOR	AHU-5	1.5	200			1.6	0.75	0.50	1.20	BALL	MODULATING	NSR	24 VAC	B210	
CC-AHU-7	7TH FLOOR	AHU-7	41.7	200			1.9	2.00	1.00	30.00	BALL	MODULATING	NSR	24 VAC	B225	
RHC-6N	6TH FLOOR	AHU-7	2	200			2.8	0.75	0.50	1.20	BALL	MODULATING	NSR	24 VAC	B210	
RHC-6S	6TH FLOOR	AHU-7	1.5	200			1.6	0.75	0.50	1.20	BALL	MODULATING	NSR	24 VAC	B210	
RHC-7N	7TH FLOOR	AHU-7	2	200			2.8	0.75	0.50	1.20	BALL	MODULATING	NSR	24 VAC	B210	
RHC-7S	7TH FLOOR	AHU-7	1.5	200			1.6	0.75	0.50	1.20	BALL	MODULATING	NSR	24 VAC	B210	
CC-AHU-9	7TH FLOOR	AHU-7	41.7	200			1.9	2.00	1.00	30.00	BALL	MODULATING	NSR	24 VAC	B225	
RHC-8N	8TH FLOOR	AHU-7	2	200			2.8	0.75	0.50	1.20	BALL	MODULATING	NSR	24 VAC	B210	
RHC-8S	8TH FLOOR	AHU-7	1.5	200			1.6	0.75	0.50	1.20	BALL	MODULATING	NSR	24 VAC	B210	
RHC-9N	9TH FLOOR	AHU-7	2	200			2.8	0.75	0.50	1.20	BALL	MODULATING	NSR	24 VAC	B210	
RHC-9S	9TH FLOOR	AHU-7	1.5	200			1.6	0.75	0.50	1.20	BALL	MODULATING	NSR	24 VAC	B210	
CC-AHU-11	11TH FLOOR	AHU-11	41.7	200			1.9	2.00	1.00	30.00	BALL	MODULATING	NSR	24 VAC	B225	
RHC-10N	10TH FLOOR	AHU-11	2	200			2.8	0.75	0.50	1.20	BALL	MODULATING	NSR	24 VAC	B210	
RHC-10S	10TH FLOOR	AHU-11	1.5	200			1.6	0.75	0.50	1.20	BALL	MODULATING	NSR	24 VAC	B210	
RHC-11N	11TH FLOOR	AHU-11	2	200			2.8	0.75	0.50	1.20	BALL	MODULATING	NSR	24 VAC	B210	
RHC-11S	11TH FLOOR	AHU-11	1.5	200			1.6	0.75	0.50	1.20	BALL	MODULATING	NSR	24 VAC	B210	
CC-AHU-13	13TH FLOOR	AHU-13	41.7	200			1.9	2.00	1.00	30.00	BALL	MODULATING	NSR	24 VAC	B225	
RHC-12N	12TH FLOOR	AHU-13	2	200			2.8	0.75	0.50	1.20	BALL	MODULATING	NSR	24 VAC	B210	
RHC-12S	12TH FLOOR	AHU-13	1.5	200			1.6	0.75	0.50	1.20	BALL	MODULATING	NSR	24 VAC	B210	
RHC-13N	13TH FLOOR	AHU-13	2	200			2.8	0.75	0.50	1.20	BALL	MODULATING	NSR	24 VAC	B210	
RHC-13S	13TH FLOOR	AHU-13	1.5	200			1.6	0.75	0.50	1.20	BALL	MODULATING	NSR	24 VAC	B210	
PHC-AHU-14	14TH FLOOR	AHU-14	5.5	200			3.4	1.00	0.50	3.00	BALL	MODULATING	NO	24 VAC	B212	
CC-AHU-14	14TH FLOOR	AHU-14	34	200			2.0	2.00	0.75	24.00	BALL	MODULATING	NSR	24 VAC	B221	
CC-FCU-A		FCU-A	1.25	40			1.6	0.63	0.50	1.00	BALL	MODULATING	NSR	24 VAC	B2050VS-1	
HC-FCU-A		FCU-A	0.3	40			2.3	0.63	0.50	0.20	BALL	MODULATING	NSR	24 VAC	Z2050	
CC-FCU-B		FCU-B	1.25	40			1.6	0.63	0.50	1.00	BALL	MODULATING	NSR	24 VAC	B2050VS-1	
HC-FCU-B		FCU-B	0.3	40			2.3	0.63	0.50	0.20	BALL	MODULATING	NSR	24 VAC	Z2050	
CC-FCU-C		FCU-C	2.5	40			2.2	0.63	0.50	1.70	BALL	MODULATING	NSR	24 VAC	Z2050	
CC-FCU-D		FCU-D	1.25	40			1.6	0.63	0.50	1.00	BALL	MODULATING	NSR	24 VAC	Z2050	
CC-FCU-E		FCU-E	0.6	40			2.3	0.63	0.50	0.40	BALL	MODULATING	NSR	24 VAC	Z2050	
CC-FCU-F		FCU-F	1.25	40			1.6	0.63	0.50	1.00	BALL	MODULATING	NSR	24 VAC	Z2050	
CC-FCU-G		FCU-G	1.25	40			1.6	0.63	0.50	1.00	BALL	MODULATING	NSR	24 VAC	Z2050	
HC-FCU-G		FCU-G	0.3	40			2.3	0.63	0.50	0.20	BALL	MODULATING	NSR	24 VAC	Z2050	
CC-BCU-A		BCU-A	33	40			3.0	2.00	1.00	19.00	BALL	MODULATING	NSR	24 VAC	B224	
CC-BCU-B		BCU-B	5	40			2.3	1.00	0.75	3.30	BALL	MODULATING	NSR	24 VAC	Z2075	

NOTES:

1. EXTENDED RISER FOR STEAM APPLICATION
2. ALT #2

ACTUATOR TYPE

NO - SPRING RETURN OPEN
NC - SPRING RETURN CLOSED
NSR - NON SPRING RETURN

SHEET IS PLOTTED TO SCALE IF ADJACENT LINE MEASURES 1 INCH

STATE OF MISSOURI
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A-2016017179
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RENOVATE MECHANICAL/
ELECTRICAL/LIFE-SAFETY/
STATE OFFICE BUILDING

JEFFERSON STATE
OFFICE BUILDING
205 JEFFERSON STREET
JEFFERSON CITY, MO 65101

PROJECT # O1911-01
SITE # 1001
ASSET # 3101001057

REVISION:
DATE:
REVISION:
DATE:
REVISION:
DATE:
ISSUE DATE:

CAD DWG FILE: M6.0-075107.001
DRAWN BY: AM
CHECKED BY: EP
DESIGNED BY: JW

SHEET TITLE:
MECHANICAL
SCHEDULES

SHEET NUMBER:
M6.5

128 OF 244 SHEETS

DATE : August 31, 2023

CONTROL DAMPER SCHEDULE

UNIT DESIGNATION	LOCATION	SERVICE	MANUFACTURER & MODEL NO.	NOMINAL SIZE (W X H) (IN.)	AIRFLOW (CFM)	TYPE	BLADE TYPE	BLADE ORIENTATION	MOUNTING	ACTUATOR			POWER (24V/120V)	NOTES
										MANUFACTURER	TYPE	ACTION		
CD-OA	BASEMENT	DOAS O.A. DUCT	RUSKIN CD-40	64 X 34	24,000	PARALLEL	AIRFOIL	HORIZONTAL	HORIZONTAL	RUSKIN	TWO-POSITION	NC	24V	
CD-ECO	BASEMENT AHU-B AIR HANDLER	AHU-B AIR HANDLER ECONOMIZER DUCT	RUSKIN CD-40	42 X 36	17,000	PARALLEL	AIRFOIL	HORIZONTAL	HORIZONTAL	RUSKIN	PROPORTIONAL	NC	24V	
CD-RLF	BASEMENT AHU-B AIR HANDLER	AHU-B AIR HANDLER RELIEF DUCT	RUSKIN CD-40	42 X 36	17,000	PARALLEL	AIRFOIL	HORIZONTAL	HORIZONTAL	RUSKIN	PROPORTIONAL	NC	24V	
CD-RTN	BASEMENT AHU-B AIR HANDLER	AHU-B AIR HANDLER RETURN DUCT	RUSKIN CD-40	38 X 38	17,000	PARALLEL	AIRFOIL	HORIZONTAL	HORIZONTAL	RUSKIN	PROPORTIONAL	NONE	24V	
CD-MA	KITCHEN AHU-1	AHU-1 KITCHEN MAKE UP AIR	RUSKIN CD-40	42 x 14	3,300	PARALLEL	AIRFOIL	VERTICAL	VERTICAL	RUSKIN	PROPORTIONAL	NONE	24V	
CD-RTN	KITCHEN AHU-1	AHU-1 KITCHEN MAKE UP AIR	RUSKIN CD-40	36 X 24	3,300	PARALLEL	AIRFOIL	VERTICAL	VERTICAL	RUSKIN	PROPORTIONAL	NONE	24V	
CD-RLF	KITCHEN AHU-1	AHU-1 KITCHEN MAKE UP AIR	RUSKIN CD-40	36 X 24	4,000	PARALLEL	AIRFOIL	HORIZONTAL	VERTICAL	RUSKIN	PROPORTIONAL	NONE	24V	
CD-RA1	STACK AIR HANDLER RETURN AIR DUCT	AHU-3,5,6,7,9,11,13	RUSKIN CD-40	26 X 26	5,250	PARALLEL	AIRFOIL	HORIZONTAL	HORIZONTAL	RUSKIN	PROPORTIONAL	NONE	24V	
CD-RA2	STACK AIR HANDLER RETURN AIR DUCT	AHU-3,5,6,7,9,11,13	RUSKIN CD-40	26 X 26	5,250	PARALLEL	AIRFOIL	HORIZONTAL	VERTICAL	RUSKIN	PROPORTIONAL	NONE	24V	
CD-ECO	STACK AIR HANDLER ECONOMIZER AIR DUCT	AHU-3,5,6,7,9,11,13	RUSKIN CD-40	46 X 22	10,500	PARALLEL	AIRFOIL	HORIZONTAL	VERTICAL	RUSKIN	PROPORTIONAL	NC	24V	
CD-RLF	STACK RELIEF FAN (2-13)	RLF-2, RLF-3, RLF-4, ROF-5, RLF-6, RLF-7, RLF-7, RLF-8, RLF-9, RLF-10, RLF-11, RLF-12, RLF-13	RUSKIN CD-40	24X24	5,250	PARALLEL	AIRFOIL	HORIZONTAL	HORIZONTAL	RUSKIN	2 POSITION	NC	24V	
CD-ECO	PENTHOUSE AHU-14 AIR HANDLER	AHU-14 AIR HANDLER ECONOMIZER	RUSKIN CD-40	36 X 18	6,000	PARALLEL	AIRFOIL	HORIZONTAL	HORIZONTAL	RUSKIN	PROPORTIONAL	NC	24V	
CD-O.A.	PENTHOUSE AHU-14 AIR HANDLER	AHU-14 AIR HANDLER VENTILATION AIR	RUSKIN CD-40	14X10	1,000	PARALLEL	AIRFOIL	HORIZONTAL	HORIZONTAL	RUSKIN	PROPORTIONAL	NC	24V	
CD-RLF	PENTHOUSE AHU-14 AIR HANDLER	AHU-14 AIR HANDLER RELIEF DUCT	RUSKIN CD-40	30 X 20	6,000	PARALLEL	AIRFOIL	HORIZONTAL	HORIZONTAL	RUSKIN	PROPORTIONAL	NC	24V	
CD-RTN	PENTHOUSE AHU-14 AIR HANDLER	AHU-14 AIR HANDLER RETURN DUCT	RUSKIN CD-40	36 X 18	6,800	PARALLEL	AIRFOIL	HORIZONTAL	HORIZONTAL	RUSKIN	PROPORTIONAL	NONE	24V	

NOTES

BLADE TYPE
AIRFOIL
NON-AIRFOIL

DAMPER TYPE
PARALLEL
OPPOSED

ACTUATOR TYPE
PROPORTIONAL
TWO-POSITION

ACTION
NO - NORMALLY OPEN
NC - NORMALLY CLOSED
NONE

LOUVER SCHEDULE

UNIT DESIGNATION	LOCATION	SERVICE	MANUFACTURER & MODEL NO.	NOMINAL SIZE (W X H) (IN.)	AIRFLOW (CFM)	MOUNTING	NOTES
LV-1	STACK RELIEF LOUVER (FLOORS 2-13)	STACK RELIEF FAN	GREENHECK ESD-635	30 X 36	5,300	VERTICAL	1,2
LV-2	STACK RELIEF LOUVER (FLOORS 2-13)	EF-2	GREENHECK ESD-635	10 X 10	800	VERTICAL	1,2

NOTES

1. KYNAR FINISH COLOR TO BE SELECTED BY ARCHICTECT FROM MANUFACTURERS STANDARD COLORS.
2. BIRDSCREEN

STATE OF MISSOURI
MICHAEL L. PARSON, GOVERNOR

PHILIP J. WENTZ NUMBER E-29111 STATE OF MISSOURI REGISTERED PROFESSIONAL ENGINEER

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205 JEFFERSON STREET
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PROJECT # O1911-01
SITE # 1001
ASSET # 3101001057

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CAD DWG FILE: M6.0-075107.001
DRAWN BY: AM
CHECKED BY: EP
DESIGNED BY: JW

SHEET TITLE:
MECHANICAL SCHEDULES

SHEET NUMBER:
M6.6

129 OF 244 SHEETS

DATE : August 31, 2023

SHEET IS PLOTTED TO SCALE IF ADJACENT LINE MEASURES 1 INCH

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PLUMBING

AD	AREA DRAIN
AP	ACCESS PANEL
AW	ACID WASTE
AV	ACID VENT
BV	BALANCE VALVE
CB	CATCH BASIN
CFS	CUBIC FEET PER SECOND
CO	CLEANOUT
CUSP	CUSPIDORS
CHV	CHECK VALVE
CW	COLD WATER
DF	DRINKING FOUNTAIN
DN	DOWN
DS	DOWNSPOUT
DV	DRAIN VALVE
DWH	DOMESTIC WATER HEATER
ET	EXPANSION TANK
EWC	ELECTRIC WATER COOLER
EX	EXISTING PIPING OR EQUIPMENT
F	FLANGE CONNECTION
FCO	FLOOR CLEANOUT
FD	FLOOR DRAIN
GA	GAUGE
GC	GAUGE COCK
HB	HOSE BIBB
HW	HOT WATER
HWC	HOT WATER CIRCULATING
ICW	ICE COLD WATER
IDW	INDIRECT WASTE
INV	INVERT
L	LAVATORY
LV	LOOP VENT
MH	MANHOLE
MSB	MOP SERVICE BASIN
NP	NON-POTABLE COLD WATER
NPH	NON-POTABLE HOT WATER
OD	OVER FLOW DRAIN
ODS	OVER FLOW DRAIN SYSTEM
PR	PRESSURE REGULATOR
PRV	PRESSURE REDUCING VALVE
RD	ROOF DRAIN
RI	ROUGH-IN (ONLY)
RI & C	ROUGH-IN AND CONNECT
RPBF	REDUCE PRESSURE BACKFLOW PREVENTER
S	SOIL
SAN	SANITARY SEWER
SBD	SHOWER BASINS AND DRAIN
SCW	SOFT COLD WATER
SD	SHOWER DRAIN
SH	SHOWER HEAD
SS	SERVICE SINK
SSD	SUBSOIL DRAIN
ST	STORM SEWER
SV	SERVICE VALVE
TD	TRENCH DRAIN
TH	THERMOMETER
TT	TEST TEE
U	UNION
UR	URINAL
V	VENT
VTR	VENT THROUGH ROOF
W	WASTE
WC	WATER CLOSET
WCO	WALL CLEANOUT
WF	WASH FOUNTAIN
WH	WALL HYDRANT
WM	WATER MAIN
YCO	YARD CLEANOUT
YD	YARD DRAIN

SAN — SAN	SANITARY SEWER (SOIL, WASTE) BELOW GRADE
SAN — SAN	SANITARY SEWER (SOIL, WASTE) ABOVE GRADE
ST — ST	STORM SEWER BELOW GRADE
ST — ST	STORM SEWER ABOVE GRADE
	SLOPE IN DIRECTION OF ARROW (SEE PLANS FOR % OF SLOPE)
V	VENT
SSD — SSD	SUBSOIL DRAIN
CW	COLD WATER
ICW — ICW	ICE COLD WATER
SCW — SCW	SOFT COLD WATER
HW	HOT WATER
HWC	HOT WATER CIRCULATING
WM — WM	WATER MAIN (OUTSIDE OF BUILDING)
RV TPV	TEMPERATURE & PRESSURE RELIEF VALVE
UP	PIPE LINE, TURN UP
DN	PIPE LINE, TURN DOWN
BV	BALANCE VALVE
CHV	CHECK VALVE
DV	DRAIN VALVE
GA DV GC	GAUGE AND GAUGE COCK
PR	PRESSURE REGULATOR
PRV	PRESSURE REDUCING VALVE
RPBP	REDUCED PRESSURE BACKFLOW PREVENTER
SV	SERVICE VALVE
TH	THERMOMETER
U	UNION
	CONNECT TO EXISTING EQUIPMENT, SYMBOL
1	PLUMBING RISER DESIGNATION
2	DOWNSPOUT DESIGNATION
3	KEYED NOTE DESIGNATION

MECHANICAL AND PLUMBING EQUIPMENT COMPONENTS EARTHQUAKE LOAD RESISTANCE

Seismic Design Category: B
Seismic Site Class: C
Occupancy Category: II

Listing of Equipment and System Components	Anchorage to Floors, Roofs, etc.		Sway Bracing		Location of Professionally Sealed Anchorage and Sway Bracing Details		EXEMPTIONS	COMMENTS / NOTES
	Not Provided for Project	Provided for Project	Not Provided for Project	Provided for Project	On Const. Documents: Drawing No. or Spec. Section	SUBSEQUENT SUBMITTAL: Separate Permit & Plans		
FIRE PROTECTION, DETECTION & ALARM EQUIPMENT & SYSTEM COMPONENTS; IP = 1.5								
Fire Sprinkler Piping	X			X		X		
Steel / Copper Piping		X		X		X		
(Limited Deformability Piping Systems) Threaded and Grooved Steel and Copper Piping Suspended From Structure								
Steel / Copper Piping		X		X		X		
(Low Deformability Piping Systems) Cast Iron and Nonductile Plastic Piping Systems or Any System Joined with Cast Iron Fittings								
HAZARDOUS EQUIPMENT & SYSTEM COMPONENTS; IP = 1.5								
Kitchen Grease Hood		X		X		X		
Kitchen Exhaust Fan		X	X			X		
High Deformability Piping Systems or Limited Deformability Piping Systems								
OTHER GENERAL EQUIPMENT & SYSTEM COMPONENTS; IP = 1.0								
Roof Mounted:								
Intake / Relief Air Hoods	X		X				1	
Exhaust Fans	X		X				1	
Floor Mounted:								
Pumps	X		X				1	
AHU	X		X				1	
Fan Coil Unit	X		X				1	
Piping Suspended From Structure:								
Steel / Copper / Cast Iron / PVC	X		X				1	
Ductwork Suspended From Structure:								
Ductwork	X		X				1	
Equipment Supported By A Suspended Ceiling:								
Air Devices < 20 lbs	X		X				1	*
Equipment Suspended From Structure:								
Air Devices ≥ 20 lbs. < 56 lbs	X		X				1	1.2
Air Devices ≥ 56 lbs.	X		X				1	1.3
In-line components	X		X				1	
FCU, VAV, FTU	X		X				1	
Duct Mounted Reheat Coils/Control Dampers	X		X				1	
Transfer/Exhaust Fans	X		X				1	
Wall mounted equipment:								
CCU, UV, UH, etc.	X		X				1	
Fire dampers, louvers	X		X				1	
* Additional Items	X		X				1	

* applies to equipment and devices directly attached to structure

GENERAL NOTES:

A. It is the basic intent of this Code Block to declare whether or not anchorage and sway bracing is being provided on the project. If so, to declare whether or not the details are shown on the plans or will be shown on a subsequent submission. If seismic restraint of a component is not required by code this should be stated in comments. If seismic restraint, which is not required by code, is being provided due to owner/designer requirements this should also be stated in the comments.

B. Plans signed and sealed by a Missouri Professional Engineer along with a separate permit application need to be submitted to the County a minimum of two weeks prior to the planned installation to allow for plan review and distribution to the inspector. Additional time may be needed if such submissions are deficient.

C. All anchors and attachments to structure shall be seismically rated and listed.

COMMENTS/NOTES:

1. Shall be positively attached to the ceiling grid using four approved attachment devices.
2. Shall have two No. 12 gauge wires connecting opposite corners of the air device to the structure above.
3. Shall be independently supported from the structure above by approved hangers.

SEISMIC DESIGN REQUIREMENT EXEMPTIONS FOR MECHANICAL, ELECTRICAL, AND PLUMBING COMPONENTS	
	1) Seismic Design Category A, B.
1 - General Exemptions (ASCE 07-16 Chap 13.1.4)	2) Seismic Design Category C and the component importance factor IP = 1.0 provided that EITHER 1)The component is positively attached to the structure, or 2) The component weights 20 lbs. or less, or 5 lbs./ft or less for distributed systems. 3) Seismic Design Category D, E, or F that are positively attached to the structure and EITHER: 1) The component weights 400 lbs. or less, the center of mass is located 4 ft or less above the adjacent floor, flexible connections are provided between the component and associated ductwork, piping, and conduit, and the component IP = 1.0, OR 2) The component weights 20 lbs. or less, or 5 lbs./ft or less for distributed systems.
2 - Light Fixture, Sign and Ceiling Fan Exemptions (ASCE 07-16 Chap 13.6.1)	1) Not connected to ducts or piping, supported by chains or otherwise suspended from the structure, provided ALL of the following criteria A. through C. below are met: A. The design load for such items shall be equal to 1.4 times the operating weight acting down with a simultaneous horizontal load equal to 1.4 times the operating weight. The horizontal load shall be applied in the direction that results in the most critical loading for design. B. Seismic interaction effects shall be considered per Section 13.2.3 of ASCE 7-16. C. The connection to the structure shall allow a 360-degree range of motion in the horizontal plane.
3 - Distribution Systems: Conduit, Cable Tray, and Raceways Exemptions (ASCE 07-16 Chap 13.6.5.1)	1) Raceways with IP = 1.0 where flexible connections or other assemblies are provided between the cable tray or raceway and associated components to accommodate the relative displacement, where the cable tray or raceway is positively attached to the structure, and where ONE of items A. through D. below apply: A. Trapeze assemblies with 3/8 in. diameter rod hangers not exceeding 12 in. length and the total weight supported by any single trapeze is 100 lbs. or less. B. Trapeze assemblies with 1/2 in. diameter rod hangers not exceeding 12 in. in length and the total weight supported by any single trapeze is 200 lbs. or less. C. Trapeze assemblies with 1/2 in. diameter rod hangers not exceeding 24 in. in length and the total weight supported by any single trapeze is 100 lbs. or less. D. Individual rod hangers 3/8 in. or 1/2 in. diameter and each hanger is 12 in. or less in length and the total weight per any single rod is 50 lbs. or less. 2) Conduit less than 2.5 in. trade size.
4 - Duct System Exemptions (ASCE 07-16 Chap 13.6.6)	Ducts not part of hazardous exhaust systems or fire protection systems such as smoke control or evacuation systems when EITHER 1) or 2) below apply: 1) IP = 1.0 where flexible connections or other assemblies are provided to accommodate the relative displacement between the duct system and associated components, the duct system is positively attached to the structure, and where ONE of items A. through D. below apply: A. Trapeze assemblies with 3/8 in. diameter rod hangers not exceeding 12 in. length and the total weight supported by any single trapeze is less than 10 lbs./ft B. Trapeze assemblies with 1/2 in. diameter rod hangers not exceeding 12 in. in length and the total weight supported by any single trapeze is 200 lbs. or less. C. Trapeze assemblies with 1/2 in. diameter rod hangers not exceeding 24 in. in length and the total weight supported by any single trapeze is 100 lbs. or less. D. Individual rod hangers 3/8 in. or 1/2 in. diameter and each hanger is 12 in. or less in length and the total weight per any single rod is 50 lbs. or less. 2) Locations where provisions are made to avoid impact with other ducts or mechanical components or to protect the ducts in the event of such impact, the distribution system is positively attached to the structure, and HVACR ducts have a cross-sectional area of less that 6 sq. ft and weight 20 lbs./ft or less. 3) Components installed in line with duct systems with an operating weight of 75 lbs. or less (terminal units, dampers, louvers, and diffusers) that are independently braced or positively attached to the ductwork with mechanical fasteners on both sides.
5 - Piping and Tubing Distribution Systems (not including fire protection systems installed per NFPA 13) (ASCE 07-16 Chap 13.6.7.3)	Piping systems where flexible connections, expansion loops, or other assemblies are provided to accommodate the relative displacement between component and piping, where the piping system is positively attached to the structure and where ONE of items 1 through 7 below apply: 1) Trapeze assemblies are used to support piping whereby no single pipe exceeds the limits set forth in 5A, 5B, or 5C. below and the total weight of the piping supported by the trapeze assemblies is less that 10 lbs./ft 2) Trapeze assemblies with 3/8 in. diameter rod hangers not exceeding 12 in. length, do not support piping with IP > 1.0, and no single pipe exceeds the limits set forth in 5A, 5B, or 5C below, and the total weight supported by any single trapeze is 100 lbs. or less. 3) Trapeze assemblies with 1/2 in. diameter rod hangers not exceeding 12 in. length, do not support piping with IP > 1.0, and no single pipe exceeds the limits set forth in 5A, 5B, or 5C below, and the total weight supported by any single trapeze is 200 lbs. or less. 4) Trapeze assemblies with 1/2 in. diameter rod hangers not exceeding 24 in. length, do not support piping with IP > 1.0, and no single pipe exceeds the limits set forth in 5A, 5B, or 5C below, and the total weight supported by any single trapeze is 100 lbs. or less. 5) Piping that has an RP in ASCE 7-16 Table 13.6-1 of 4.5 or greater is either supported by rod hangers and provisions are made to avoid impact with other structural or non-structural components or to protect piping in the event of such impact, or pipes with IP = 1.0 are supported by individual rod hangers 3/8 in. or 1/2 in. in diameter; where each hanger is 12 in. or less and the total weight supported by any single hanger is 50 lbs. or less. Pipe size limitations in items 5A, 5B, and 5C below apply: 5A) Seismic Design Category C where IP > 1.0 nominal pipe size shall be 2 in. or less 5B) Seismic Design Category D, E, or F where IP > 1.0 nominal pipe size shall be 1 in. or less 5C) Seismic Design Category D, E, or F where IP = 1.0 nominal pipe size shall be 3 in. or less 6) Pneumatic tube systems supported with trapeze assemblies using 3/8 in. diameter rod hangers not exceeding 12 in. and the total weight supported by any single trapeze is 100 lbs. or less. 7) Pneumatic tube systems supported with trapeze assemblies using 3/8 in. or 1/2 in. diameter rod hangers not exceeding 12 in. and the total weight supported by any single rod is 50 lbs. or less.

SHEET IS PLOTTED TO SCALE IF ADJACENT LINE MEASURES 1 INCH

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SITE # 1001
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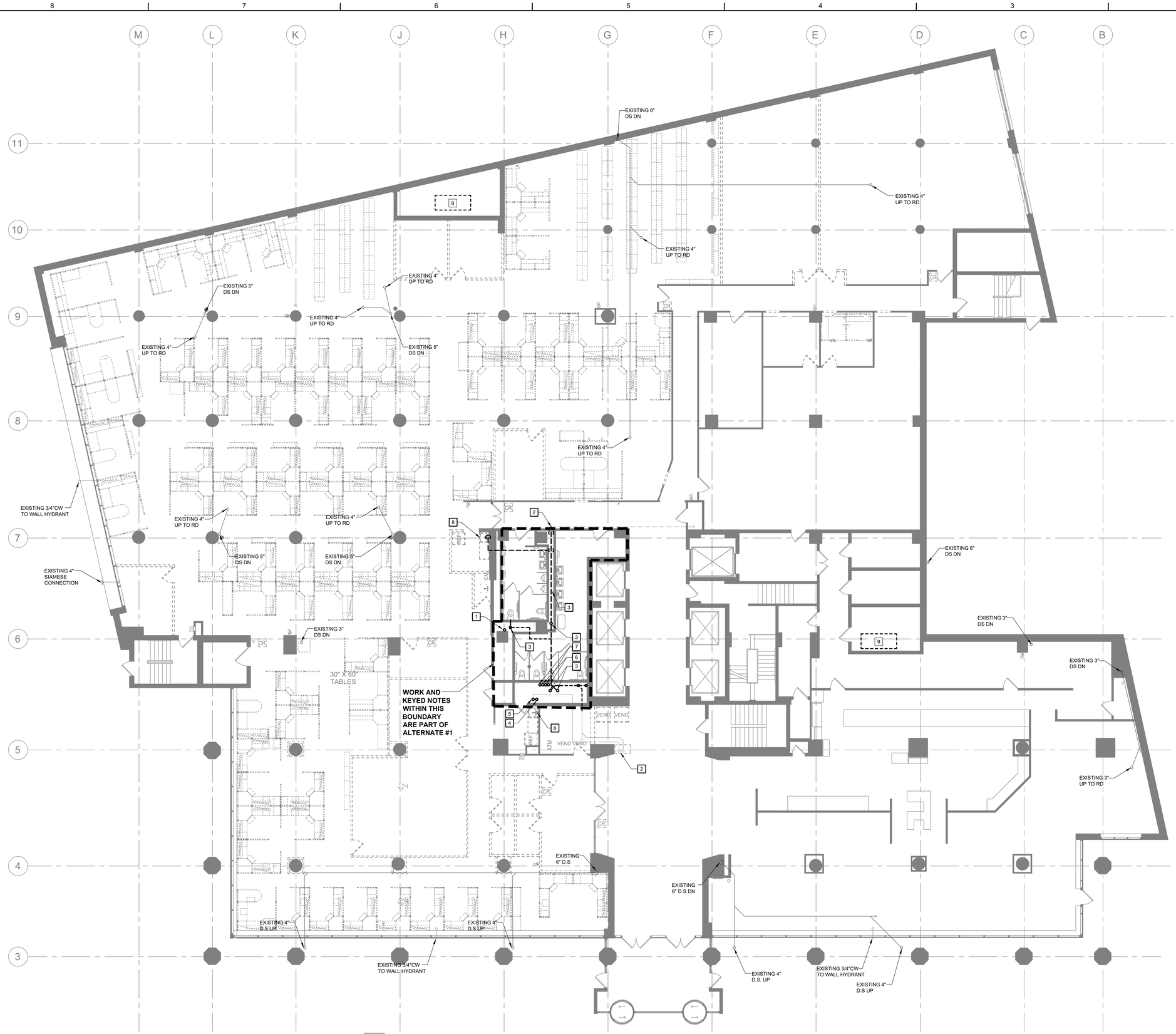
SHEET TITLE:
PLUMBING SYMBOLS AND ABBREVIATIONS

SHEET NUMBER:
P1.0

130 OF 244 SHEETS

DATE : August 31, 2023



FIRST FLOOR PLAN - PLUMBING- DEMOLITION

1/8" = 1'-0"

GENERAL NOTES

1. COORDINATE WITH MAINTENANCE PERSONAL LOCATION OF SHUT-OFF VALVES.
2. ALL WORK INSIDE DASHED LINE TO BE PART OF ALTERNATE #1

KEYED NOTES

1. DEMOLISH ALL EXISTING COLD WATER PIPING UP FROM BASEMENT AND HORIZONTAL PIPING TO EXISTING WATER CLOSET.
2. EXISTING COLD WATER PIPING AND SANITARY SERVING EXISTING DRINKING FOUNTAIN TO REMAIN.
3. DEMOLISH EXISTING HORIZONTAL SANITARY, VENT HOT AND COLD PIPING IN CHASE. EXISTING WASTE AND VENT STACKS TO REMAIN ACTIVE DURING CONSTRUCTION. CONTRACTOR TO COORDINATE SHUT DOWN FOR DEMOLITION OF STACKS AND INSTALLATION OF NEW STACKS WITH THE OWNER.
4. DEMOLISH EXISTING COLD WATER MAIN STACK SERVING FIRST THRU EIGHTH FLOORS. STACKS TO REMAIN ACTIVE DURING CONSTRUCTION. CONTRACTOR TO COORDINATE SHUT DOWN FOR DEMOLITION OF STACKS AND INSTALLATION OF NEW STACKS WITH THE OWNER.
5. DEMOLISH EXISTING COLD WATER MAIN STACK SERVING NINTH THRU FOURTEENTH FLOORS. STACKS TO REMAIN ACTIVE DURING CONSTRUCTION. CONTRACTOR TO COORDINATE SHUT DOWN FOR DEMOLITION OF STACKS AND INSTALLATION OF NEW STACKS WITH THE OWNER.
6. DEMOLISH EXISTING HOT WATER AND HOT WATER RE-CIRCULATING MAIN STACKS SERVING FIRST THRU EIGHTH FLOORS. STACKS TO REMAIN ACTIVE DURING CONSTRUCTION. CONTRACTOR TO COORDINATE SHUT DOWN FOR DEMOLITION OF STACKS AND INSTALLATION OF NEW STACKS WITH THE OWNER.
7. DEMOLISH EXISTING HOT WATER AND HOT WATER RE-CIRCULATING MAIN STACKS SERVING NINTH THRU FOURTEENTH FLOORS. STACKS TO REMAIN ACTIVE DURING CONSTRUCTION. CONTRACTOR TO COORDINATE SHUT DOWN FOR DEMOLITION OF STACKS AND INSTALLATION OF NEW STACKS WITH THE OWNER.
8. IN BASE BID DEMOLISH EXISTING BREAKROOM SINK FIXTURE AND ASSOCIATED PIPING. TAKE HOT AND COLD WATER, SANITARY AND VENT BACK TO MAIN AND CAP. PATCH WALL TO MATCH EXISTING CONDITIONS.
9. DEMOLISH CONDENSATE DRAIN PIPING FROM FANCOIL TO DRAIN OUTLET.

SHEET IS PLOTTED TO SCALE IF ADJACENT LINE MEASURES 1 INCH

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JEFFERSON STATE OFFICE BUILDING
205 JEFFERSON STREET
JEFFERSON CITY, MO 65101

PROJECT # O1911-01
SITE # 1001
ASSET # 3101001057

REVISION:
DATE:
REVISION:
DATE:
REVISION:
DATE:
ISSUE DATE:

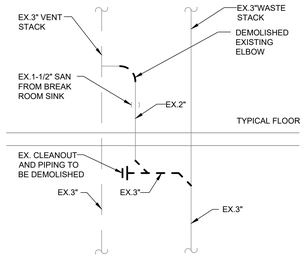
CAD DWG FILE:PD3.10-075107.001
DRAWN BY: AM
CHECKED BY: EP
DESIGNED BY: JW

SHEET TITLE:
FIRST FLOOR PLAN
-PLUMBING
-DEMOLITION

SHEET NUMBER:
PD3.1

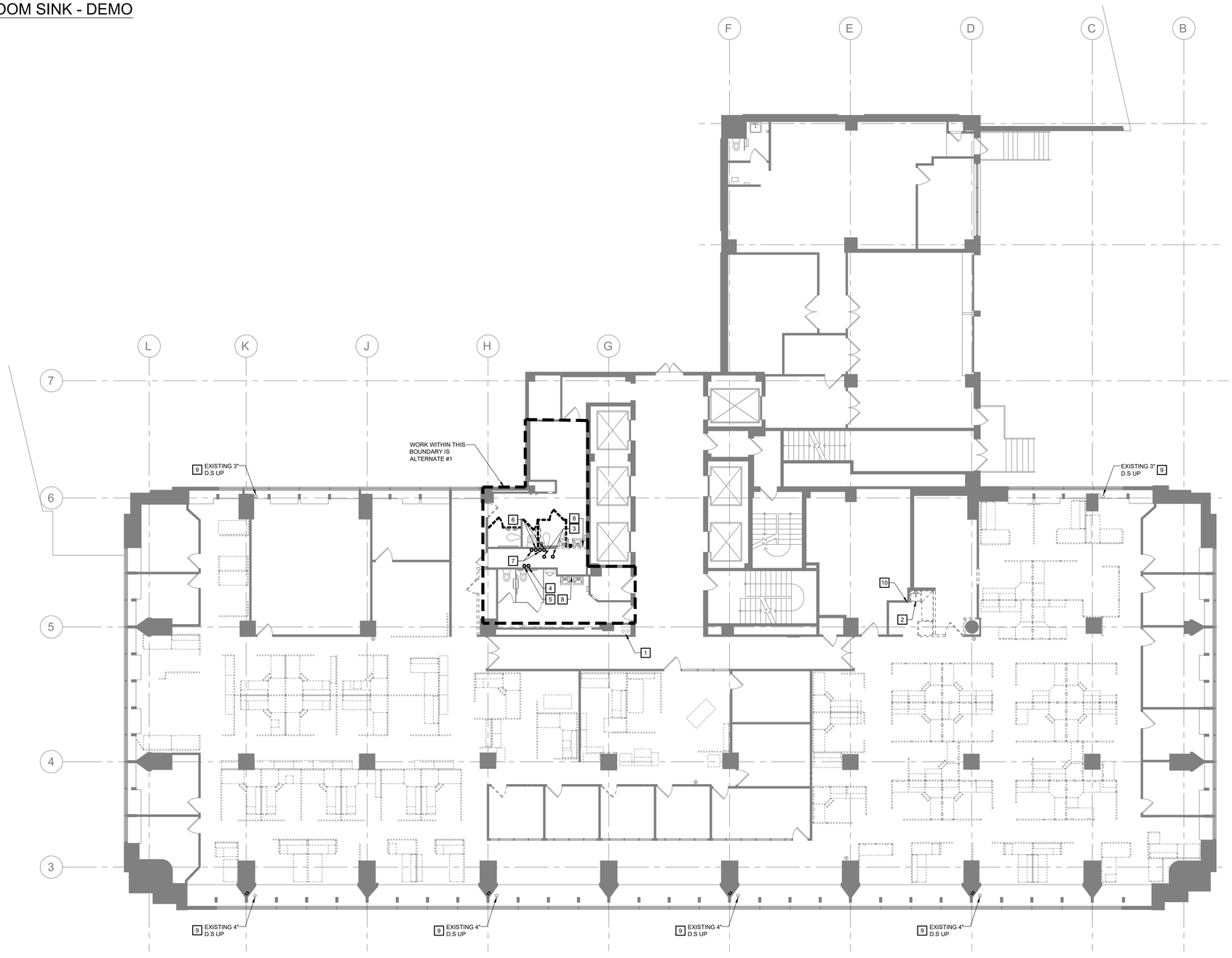
131 OF 244 SHEETS

DATE : August 31, 2023



TYPICAL BREAKROOM SINK - DEMO

NOT TO SCALE



SECOND AND THIRD FLOOR PLAN - PLUMBING - DEMOLITION

1/8" = 1'-0"

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GENERAL NOTES

1. COORDINATE WITH MAINTENANCE PERSONAL LOCATION OF SHUT-OFF VALVES.
2. ALL WORK INSIDE DASHED LINE TO BE PART OF ALTERNATE #1

KEYED NOTES

1. EXISTING ELECTRIC WATER COOLER WITH BOTTLE FILLER, SANITARY AND DOMESTIC CONNECTIONS ON THIRD FLOOR TO REMAIN. DEMOLISH EXISTING ELECTRIC WATER COOLER ON 2ND FLOOR AND PREPARE SANITARY AND DOMESTIC WATER PIPING FOR NEW CONNECTIONS.
2. DEMOLISH EXISTING SINK FIXTURE ALONG WITH P-TRAP, STOPS AND RISERS. DEMOLISH PIPING BACK TO WALL AND PREPARE FOR NEW CONNECTIONS FOR NEW SINK FIXTURE.
3. DEMOLISH EXISTING HORIZONTAL SANITARY, VENT AND DOMESTIC PIPING IN CHASE. EXISTING WASTE AND VENT STACKS TO REMAIN ACTIVE DURING CONSTRUCTION. CONTRACTOR TO COORDINATE SHUT DOWN FOR DEMOLITION OF STACKS AND INSTALLATION OF NEW STACKS WITH THE OWNER.
4. DEMOLISH EXISTING COLD WATER MAIN STACK SERVING FIRST THRU EIGHTH FLOORS. STACKS TO REMAIN ACTIVE DURING CONSTRUCTION. CONTRACTOR TO COORDINATE SHUT DOWN FOR DEMOLITION OF STACKS AND INSTALLATION OF NEW STACKS WITH THE OWNER.
5. DEMOLISH EXISTING COLD WATER MAIN STACK SERVING NINTH THRU FOURTEENTH FLOORS. STACKS TO REMAIN ACTIVE DURING CONSTRUCTION. CONTRACTOR TO COORDINATE TIMING OF SHUT DOWN FOR NEW CONNECTIONS WITH BUILDING OWNER
6. DEMOLISH EXISTING HOT WATER AND HOT WATER RE-CIRCULATING MAIN STACKS SERVING FIRST THRU EIGHTH FLOORS. STACKS TO REMAIN ACTIVE DURING CONSTRUCTION. CONTRACTOR TO COORDINATE SHUT DOWN FOR DEMOLITION OF STACKS AND INSTALLATION OF NEW STACKS WITH THE OWNER.
7. DEMOLISH EXISTING HOT WATER AND HOT WATER RE-CIRCULATING MAIN STACKS SERVING NINTH THRU FOURTEENTH FLOORS. STACKS TO REMAIN ACTIVE DURING CONSTRUCTION. CONTRACTOR TO COORDINATE SHUT DOWN FOR DEMOLITION OF STACKS AND INSTALLATION OF NEW STACKS WITH THE OWNER.
8. DEMOLISH AND REMOVE A SECTION OF WALL TO ACCESS THE BACK SIDE OF CHASE FOR DEMOLITION AND NEW WORK.
9. EXISTING D.S. STACK TO REMAIN.
10. CUT INTO EXISTING SANITARY LINE FROM BREAKROOM SINK. REMOVE CLEANOUT AND HORIZONTAL PIPE UP TO MAIN STACK. REFER TO SHEET P3.2 FOR NEW WORK. REFER TO TYPICAL BREAKROOM SINK DEMO PLAN ON THIS SHEET - PD3.2.

SHEET IS PLOTTED TO SCALE IF ADJACENT LINE MEASURES 1 INCH

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JEFFERSON CITY, MO 65101

PROJECT # O1911-01
SITE # 1001
ASSET # 3101001057

REVISION:
DATE:
REVISION:
DATE:
REVISION:
DATE:
ISSUE DATE:

CAD DWG FILE:PD3.2-075107.001
DRAWN BY: AM
CHECKED BY: EP
DESIGNED BY: JW

SHEET TITLE:

SECOND AND THIRD FLOOR PLAN-PLUMBING -DEMOLITION

SHEET NUMBER:

PD3.2

132 OF 244 SHEETS

DATE : August 31, 2023

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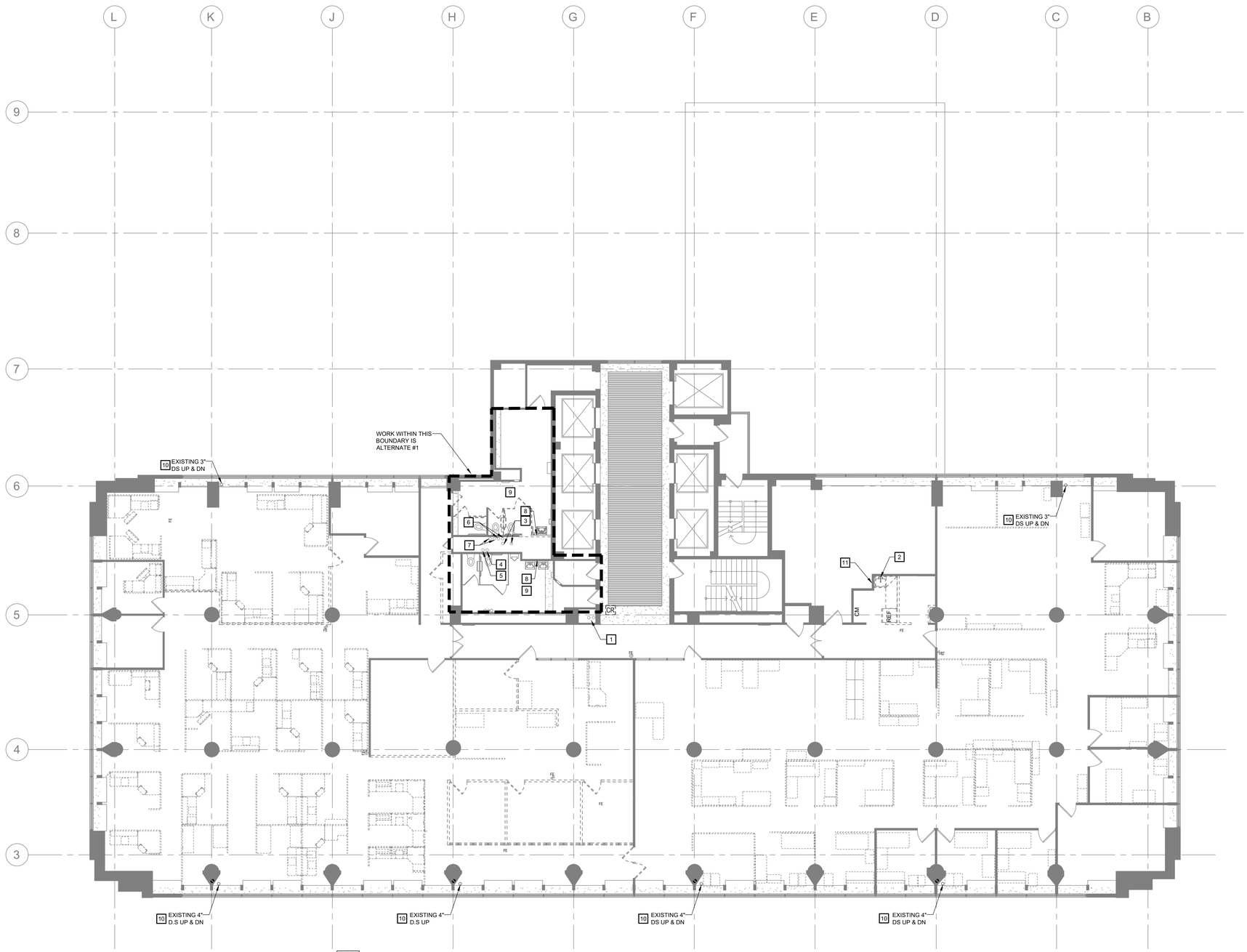

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TYPICAL FOURTH - SEVENTH FLOOR PLAN - PLUMBING- DEMOLITION

1/8" = 1'-0"

SHEET IS PLOTTED TO SCALE IF ADJACENT LINE MEASURES 1 INCH

GENERAL NOTES

1. COORDINATE WITH MAINTENANCE PERSONAL LOCATION OF SHUT-OFF VALVES.
2. ALL WORK INSIDE DASHED LINE TO BE PART OF ALTERNATE #1

KEYED NOTES

1. EXISTING ELECTRIC WATER COOLER WITH BOTTLE FILLER, SANITARY AND DOMESTIC CONNECTIONS TO REMAIN ON 4TH, 5TH. 6TH AND 7TH FLOORS.
2. DEMOLISH EXISTING SINK FIXTURE ALONG WITH P-TRAP. STOPS AND RISERS. DEMOLISH PIPING BACK TO WALL AND PREPARE FOR NEW CONNECTIONS FOR NEW SINK FIXTURE.
3. DEMOLISH EXISTING HORIZONTAL SANITARY, VENT AND DOMESTIC PIPING IN CHASE. EXISTING WASTE AND VENT STACKS TO REMAIN ACTIVE DURING CONSTRUCTION. CONTRACTOR TO COORDINATE SHUT DOWN FOR DEMOLITION OF STACKS AND INSTALLATION OF NEW STACKS WITH THE OWNER.
4. DEMOLISH EXISTING COLD WATER MAIN STACK SERVING FIXTURES ON FIRST THRU EIGHTH FLOORS. STACKS TO REMAIN ACTIVE DURING CONSTRUCTION. CONTRACTOR TO COORDINATE SHUT DOWN FOR DEMOLITION OF STACKS AND INSTALLATION OF NEW STACKS WITH THE OWNER.
5. DEMOLISH EXISTING COLD WATER MAIN STACK SERVING FIXTURES ON NINTH THRU FOURTEENTH FLOORS. STACKS TO REMAIN ACTIVE DURING CONSTRUCTION. CONTRACTOR TO COORDINATE SHUT DOWN FOR DEMOLITION OF STACKS AND INSTALLATION OF NEW STACKS WITH THE OWNER.
6. DEMOLISH EXISTING HOT WATER AND HOT WATER RE-CIRCULATING MAIN STACKS SERVING FIXTURES ON FIRST THRU EIGHTH FLOORS. STACKS TO REMAIN ACTIVE DURING CONSTRUCTION. CONTRACTOR TO COORDINATE SHUT DOWN FOR DEMOLITION OF STACKS AND INSTALLATION OF NEW STACKS WITH THE OWNER.
7. DEMOLISH EXISTING HOT WATER AND HOT WATER RE-CIRCULATING MAIN STACKS SERVING FIXTURES ON NINTH THRU FOURTEENTH FLOORS. STACKS TO REMAIN ACTIVE DURING CONSTRUCTION. CONTRACTOR TO COORDINATE SHUT DOWN FOR DEMOLITION OF STACKS AND INSTALLATION OF NEW STACKS WITH THE OWNER.
8. DEMOLISH AND REMOVE A SECTION OF WALL TO ACCESS THE BACK SIDE OF CHASE FOR DEMOLITION AND NEW WORK.
9. DEMOLISH WATER CLOSETS, URINALS, LAVATORIES, AND FLOOR DRAINS WITHIN RESTROOMS. SEE NEW PLANS FOR EXISTING OPENINGS TO BE REUSED. PATCH ALL OTHER OPENINGS TO MATCH EXISTING CONDITIONS.
10. EXISTING D.S. STACK TO REMAIN.
11. CUT INTO EXISTING SANITARY LINE FROM BREAKROOM SINK. REMOVE CLEANOUT AND HORIZONTAL PIPE UP TO MAIN STACK. REFER TO SHEET P3.2 FOR NEW WORK. REFER TO TYPICAL BREAKROOM SINK DEMO PLAN ON THIS SHEET - PD3.2.

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PROJECT # O1911-01
SITE # 1001
ASSET # 3101001057

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DATE:
REVISION:
DATE:
ISSUE DATE:

CAD DWG FILE:PD3.3-075107.001
DRAWN BY: AM
CHECKED BY: EP
DESIGNED BY: JW

SHEET TITLE:
FOURTH-SEVENTH FLOOR PLAN-PLUMBING -DEMOLITION

SHEET NUMBER:
PD3.3

133 OF 244 SHEETS

DATE : August 31, 2023

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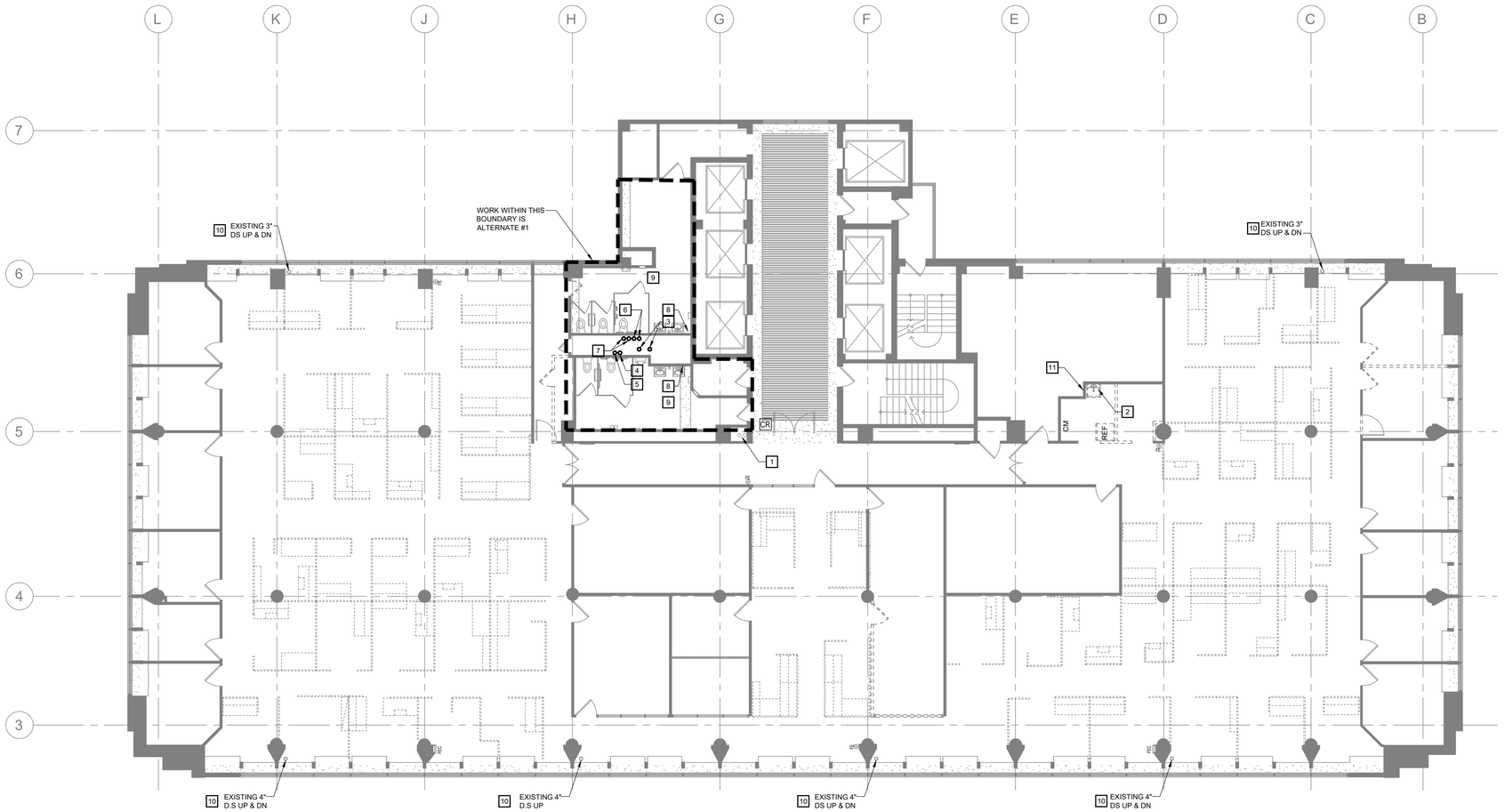
GENERAL NOTES

1. COORDINATE WITH MAINTENANCE PERSONAL LOCATION OF SHUT-OFF VALVES.
2. ALL WORK INSIDE DASHED LINE TO BE PART OF ALTERNATE #1

KEYED NOTES

1. EXISTING ELECTRIC WATER COOLER ON 8TH FLOOR TO REMAIN. REMOVE EXISTING ELECTRIC WATER COOLER, P-TRAP, AND SUPPLIES ON FLOORS 9TH THRU 11TH. PREPARE SANITARY AND DOMESTIC TAPS FOR NEW CONNECTIONS. DEMOLISH 12TH FLOOR ELECTRIC WATER COOLER FIXTURE AND DEMOLISH ITS SANITARY AND COLD WATER TAPS BACK TO A POINT BEHIND WALL AND CAP. PATCH WALL TO MATCH EXISTING CONDITIONS.
2. DEMOLISH EXISTING SINK FIXTURE ALONG WITH P-TRAP, STOPS AND RISERS. DEMOLISH PIPING BACK TO WALL AND PREPARE FOR NEW CONNECTIONS FOR NEW SINK FIXTURE.
3. DEMOLISH EXISTING HORIZONTAL SANITARY, VENT AND DOMESTIC PIPING IN CHASE. EXISTING WASTE AND VENT STACKS TO REMAIN ACTIVE DURING CONSTRUCTION. CONTRACTOR TO COORDINATE SHUT DOWN FOR DEMOLITION OF STACKS AND INSTALLATION OF NEW STACKS WITH THE OWNER.
4. DEMOLISH EXISTING COLD WATER MAIN STACK SERVING FIRST THRU EIGHTH FLOORS. STACKS TO REMAIN ACTIVE DURING CONSTRUCTION. CONTRACTOR TO COORDINATE SHUT DOWN FOR DEMOLITION OF STACKS AND INSTALLATION OF NEW STACKS WITH THE OWNER.
5. DEMOLISH EXISTING COLD WATER MAIN STACK SERVING NINTH THRU FOURTEENTH FLOORS. STACKS TO REMAIN ACTIVE DURING CONSTRUCTION. CONTRACTOR TO COORDINATE SHUT DOWN FOR DEMOLITION OF STACKS AND INSTALLATION OF NEW STACKS WITH THE OWNER.
6. DEMOLISH EXISTING HOT WATER AND HOT WATER RE-CIRCULATING MAIN STACKS SERVING FIRST THRU EIGHTH FLOORS. STACKS TO REMAIN ACTIVE DURING CONSTRUCTION. CONTRACTOR TO COORDINATE SHUT DOWN FOR DEMOLITION OF STACKS AND INSTALLATION OF NEW STACKS WITH THE OWNER.
7. DEMOLISH EXISTING HOT WATER AND HOT WATER RE-CIRCULATING MAIN STACKS SERVING NINTH THRU FOURTEENTH FLOORS. STACKS TO REMAIN ACTIVE DURING CONSTRUCTION. CONTRACTOR TO COORDINATE SHUT DOWN FOR DEMOLITION OF STACKS AND INSTALLATION OF NEW STACKS WITH THE OWNER.
8. DEMOLISH AND REMOVE A SECTION OF WALL TO ACCESS THE BACK SIDE OF CHASE FOR DEMOLITION AND NEW WORK.
9. DEMOLISH WATER CLOSETS, URINALS, LAVATORIES, AND FLOOR DRAINS WITHIN RESTROOMS. SEE NEW PLANS FOR EXISTING OPENINGS TO BE REUSED. PATCH ALL OTHER OPENINGS TO MATCH EXISTING CONDITIONS.
10. EXISTING D.S. STACK TO REMAIN.
11. CUT INTO EXISTING SANITARY LINE FROM BREAKROOM SINK. REMOVE CLEANOUT AND HORIZONTAL PIPE UP TO MAIN STACK. REFER TO SHEET P3.2 FOR NEW WORK. REFER TO TYPICAL BREAKROOM SINK DEMO PLAN ON THIS SHEET - PD3.2.



TYPICAL EIGHTH - TWELFTH FLOOR PLAN - PLUMBING- DEMOLITION

1/8" = 1'-0"

SHEET IS PLOTTED TO SCALE IF ADJACENT LINE MEASURES 1 INCH

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PROJECT # O1911-01
SITE # 1001
ASSET # 3101001057

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ISSUE DATE:

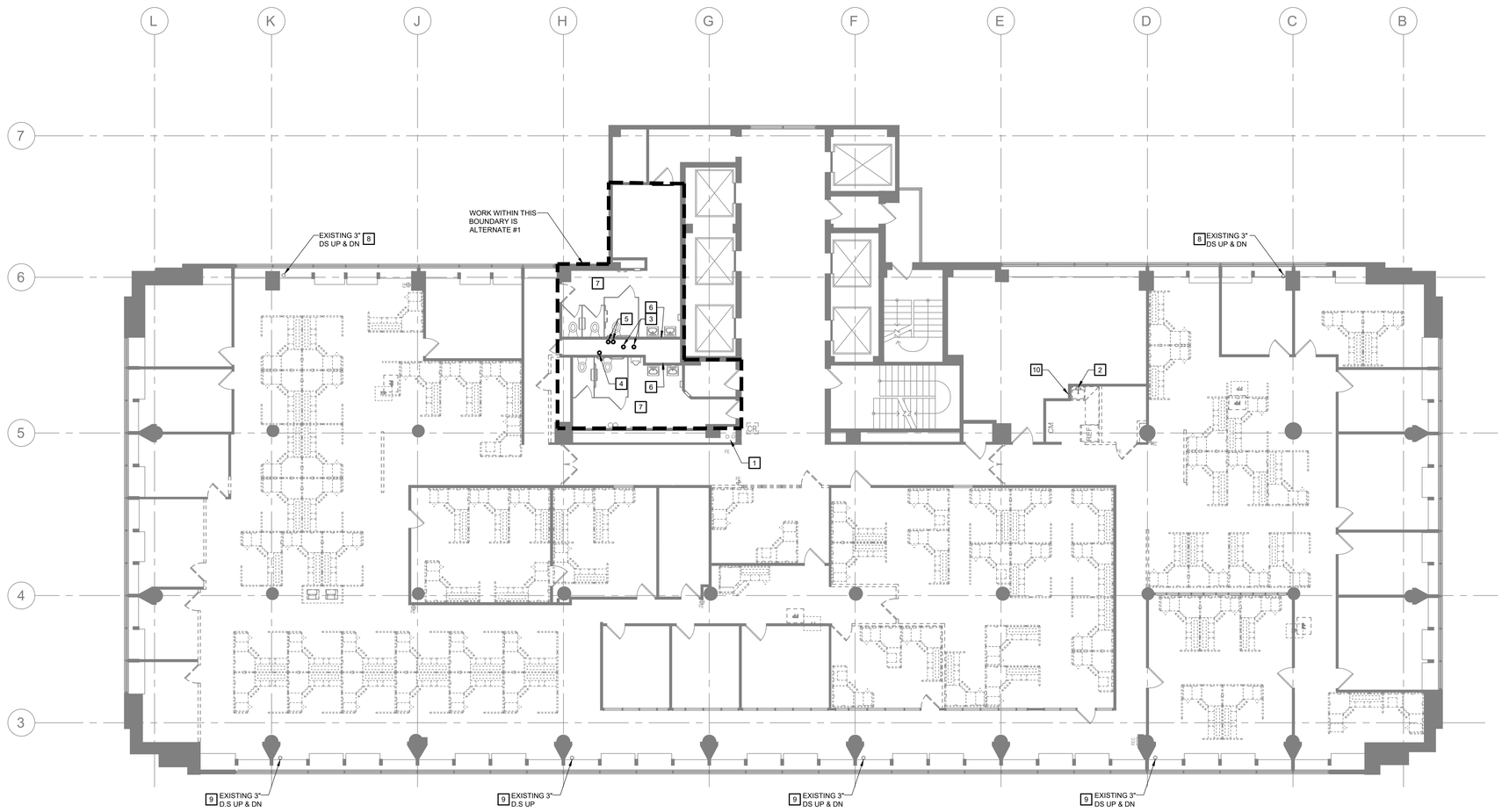
CAD DWG FILE: PD3.4-075107.001
DRAWN BY: AM
CHECKED BY: EP
DESIGNED BY: JW

SHEET TITLE:
EIGHTH-TWELFTH FLOOR PLAN-PLUMBING -DEMOLITION

SHEET NUMBER:
PD3.4

134 OF 244 SHEETS

DATE : August 31, 2023



GENERAL NOTES

1. COORDINATE WITH MAINTENANCE PERSONAL LOCATION OF SHUT-OFF VALVES.
2. ALL WORK INSIDE DASHED LINE TO BE PART OF ALTERNATE #1

KEYED NOTES

1. DEMOLISH DRINKING FOUNTAIN. DEMOLISH SANITARY AND COLD WATER TAPS BACK TO A POINT BEHIND THE WALL AND CAP. PATCH WALL TO MATCH EXISTING CONDITIONS
2. DEMOLISH EXISTING SINK FIXTURE ALONG WITH P-TRAP, STOPS AND RISERS. DEMOLISH PIPING BACK TO WALL AND PREPARE FOR NEW CONNECTIONS FOR NEW SINK FIXTURE.
3. DEMOLISH EXISTING HORIZONTAL SANITARY AND VENT PIPING IN CHASE. DEMOLISH WASTE AND VENT STACKS. STACKS TO REMAIN ACTIVE DURING CONSTRUCTION. CONTRACTOR TO COORDINATE SHUT DOWN FOR DEMOLITION OF STACKS AND INSTALLATION OF NEW STACKS WITH THE OWNER.
4. DEMOLISH EXISTING HORIZONTAL COLD WATER PIPING AND MAIN STACK SERVING FIXTURES ON NINTH THRU FOURTEENTH FLOORS. STACKS TO REMAIN ACTIVE DURING CONSTRUCTION. CONTRACTOR TO COORDINATE SHUT DOWN FOR DEMOLITION OF STACKS AND INSTALLATION OF NEW STACKS WITH THE OWNER.
5. DEMOLISH EXISTING HORIZONTAL HOT WATER RE-CIRCULATING PIPING AND MAIN STACKS SERVING FIXTURES ON NINTH THRU FOURTEENTH FLOORS. STACKS TO REMAIN ACTIVE DURING CONSTRUCTION. CONTRACTOR TO COORDINATE SHUT DOWN FOR DEMOLITION OF STACKS AND INSTALLATION OF NEW STACKS WITH THE OWNER.
6. DEMOLISH AND REMOVE SECTION OF WALL TO ACCESS THE BACK SIDE OF CHASE FOR DEMOLITION AND NEW WORK.
7. DEMOLISH WATER CLOSETS, URINALS, LAVATORIES, AND FLOOR DRAINS WITHIN RESTROOMS. SEE NEW PLANS FOR EXISTING OPENINGS TO BE REUSED. PATCH ALL OTHER OPENINGS TO MATCH EXISTING CONDITIONS.
8. CUT EXISTING 3" D.S. BELOW ROOF LINE WITH ENOUGH SPACE AND PREPARE FOR RECONNECTION OF STORM PIPE IN NEW WORK. REFER TO P3.3. DEMOLISH VERTICAL PIPE DOWN TO JUST A POINT THRU FLOOR AND PREPARE TO RECONNECT INTO MECHANICAL FCU CONDENSATE DISCHARGE. REFER TO MECHANICAL DRAWINGS FOR NEW WORK.
9. EXISTING D.S. UP AND DOWN TO REMAIN.
10. CUT INTO EXISTING SANITARY LINE FROM BREAKROOM SINK. REMOVE CLEANOUT AND HORIZONTAL PIPE UP TO MAIN STACK. REFER TO SHEET P3.2 FOR NEW WORK. REFER TO TYPICAL BREAKROOM SINK DEMO PLAN ON THIS SHEET - PD3.2.

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THIRTEENTH FLOOR PLAN - PLUMBING- DEMOLITION

1/8" = 1'-0"

SHEET IS PLOTTED TO SCALE IF ADJACENT LINE MEASURES 1 INCH

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MICHAEL L. PARSON, GOVERNOR

STATE OF MISSOURI
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JEFFERSON CITY, MO 65101

PROJECT # O1911-01
SITE # 1001
ASSET # 3101001057

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ISSUE DATE:

CAD DWG FILE: PD3.13-075107.001
DRAWN BY: AM
CHECKED BY: EP
DESIGNED BY: JW

SHEET TITLE:
THIRTEETH FLOOR PLAN-PLUMBING -DEMOLITION

SHEET NUMBER:
PD3.5

135 OF 244 SHEETS

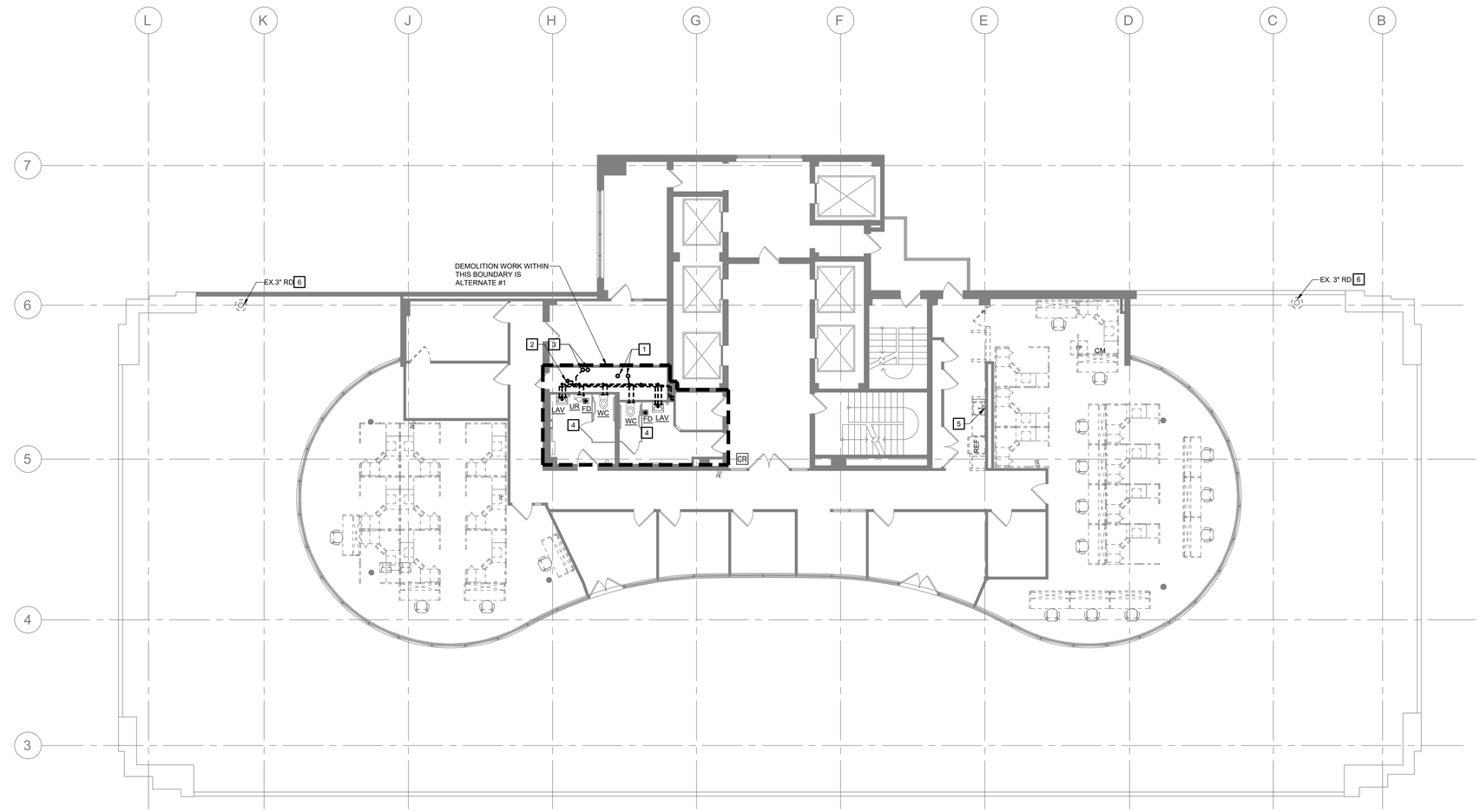
DATE : August 31, 2023

GENERAL NOTES

1. COORDINATE WITH MAINTENANCE PERSONAL LOCATION OF SHUT-OFF VALVES.
2. ALL WORK INSIDE DASHED LINE TO BE PART OF ALTERNATE #1

KEYED NOTES

1. DEMOLISH EXISTING HORIZONTAL SANITARY, VENT AND DOMESTIC PIPING IN CHASE. EXISTING WASTE AND VENT STACKS TO REMAIN ACTIVE DURING CONSTRUCTION. CONTRACTOR TO COORDINATE SHUT DOWN FOR DEMOLITION OF STACKS AND INSTALLATION OF NEW STACKS WITH THE OWNER.
2. DEMOLISH EXISTING COLD WATER MAIN STACK SERVING FOURTEENTH FLOOR. STACK TO REMAIN ACTIVE DURING CONSTRUCTION. CONTRACTOR TO COORDINATE SHUT DOWN FOR DEMOLITION OF STACKS AND INSTALLATION OF NEW STACKS WITH THE OWNER.
3. DEMOLISH EXISTING HOT WATER AND HOT WATER RE-CIRCULATING MAIN STACKS SERVING FOURTEENTH FLOOR. STACKS TO REMAIN ACTIVE DURING CONSTRUCTION. CONTRACTOR TO COORDINATE SHUT DOWN FOR DEMOLITION OF STACKS AND INSTALLATION OF NEW STACKS WITH THE OWNER.
4. DEMOLISH WATER CLOSETS, URINALS, LAVATORIES, AND FLOOR DRAINS WITHIN RESTROOMS. SEE NEW PLANS FOR EXISTING OPENINGS TO BE REUSED. PATCH ALL OTHER OPENINGS TO MATCH EXISTING CONDITIONS.
5. DEMOLISH EXISTING SINK FIXTURE AND ASSOCIATED PIPING. DEMOLISH EXISTING DOMESTIC WATER AND VENT UP TO HORIZONTAL MAINS ABOVE THE CEILING AND PREPARE FOR NEW CONNECTION. DEMOLISH SANITARY PIPING BACK TO MAIN AND CAP. PATCH EXISTING OPENINGS TO MATCH EXISTING CONDITIONS.
6. EXISTING 3" ROOF DRAIN TO REMAIN.



FOURTEENTH FLOOR PLAN - PLUMBING - DEMOLITION
1/8" = 1'-0"

SHEET IS PLOTTED TO SCALE IF ADJACENT LINE MEASURES 1 INCH

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PROJECT # O1911-01
SITE # 1001
ASSET # 3101001057

REVISION:
DATE:
REVISION:
DATE:
REVISION:
DATE:
ISSUE DATE:

CAD DWG FILE:PD3.14-075107.001
DRAWN BY: AM
CHECKED BY: EP
DESIGNED BY: JW

SHEET TITLE:
FOURTEENTH FLOOR PLAN -PLUMBING -DEMOLITION

SHEET NUMBER:
PD3.6

136 OF 244 SHEETS

DATE : August 31, 2023

BASEMENT FLOOR PLAN - PLUMBING

3/32" = 1'-0"

N

SHEET IS PLOTTED TO SCALE IF ADJACENT LINE MEASURES 1 INCH

KEYED NOTES

1. DEMOLISH SECTION OF PIPING AS SHOWN ON PLAN. ROUTE NEW PIPING FROM BOOSTER PUMP AND TIE INTO EXISTING.
2. INSTALL NEW BOOSTER PUMP DWBP-1 ON EXISTING CONCRETE PAD. REFER TO SCHEMATIC DIAGRAM ON P5.0 FOR MORE INFORMATION.
3. INSTALL NEW 4" D.S. PIPING. TIE PIPING INTO EXISTING MAIN.
4. SAW CUT FLOOR AND INSTALL NEW 4" DS BELOW SLAB AND RECONNECT INTO EXISTING 6" STORM.
5. RECONNECT EXISTING 3" D.S. TO EXISTING PIPE BELOW GRADE.
6. NEW 1-1/4" CW, 1/2" HW AND HWC UP TO PLUMBING CHASE ABOVE. INSTALL SHUT OFF VALVES IN VERTICAL PIPE.
7. CONNECT NEW 4"STORM MAIN FROM ABOVE INTO EXISTING STORM PIPING LOCATED APPROX. 11" AFF. EXISTING DOWNSPOUT REPURPOSED AS CONDENSATE PIPING AND CONNECTED TO SANITARY PIPING.

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PROJECT # O1911-01
SITE # 1001
ASSET # 3101001057

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ISSUE DATE:

CAD DWG FILE: P3.0-075107.001
DRAWN BY: AM
CHECKED BY: EP
DESIGNED BY: JW

SHEET TITLE:
BASEMENT FLOOR PLAN -PLUMBING

SHEET NUMBER:
P3.0

137 OF 244 SHEETS

DATE : August 31, 2023

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GENERAL NOTES

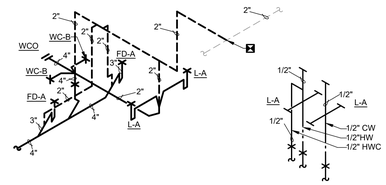
1. REFER TO P4.0 FOR ALTERNATE #1 WORK

KEYED NOTES

1. INSTALL NEW BREAKROOM SINK S-A AND RECONNECT INTO EXISTING VENT.
2. INSTALL NEW 2" SANITARY AND 1/2" HOT AND COLD PIPING DOWN THROUGH FLOOR. RECONNECT INTO EXISTING LINES IN MEZZANINE CEILING SPACE.
3. PROVIDE AND INSTALL A WATER OUTLET BOX FOR EACH REFRIGERATOR. ROUTE 1/2"CW LINE FROM BREAKROOM SINK. BRANCH 3/8" CW LINE TO EACH OUTLET BOX.
4. INSTALL NEW 4" SANITARY PIPE FOR TOILETS AND 2" SANITARY FOR LAVS. ROUTE TO VERITCAL PIPE AND WCO THEN DROP BELOW FLOOR. ROUTE IN CEILING SPACE OF FLOOR BELOW. REFER TO P3.0 FOR CONTINUATION.
5. NEW 1-1/4" CW UP FROM BELOW AND SERVING TOILETS AND LAVS. 1/2" HW AND HWC FROM BELOW SERVING LAVS.
6. EXISTING PLUMBING CHASE PIPING TO REMAIN.
7. NEW PIPING ROUTED IN CEILING SPACE OF BASEMENT BELOW.

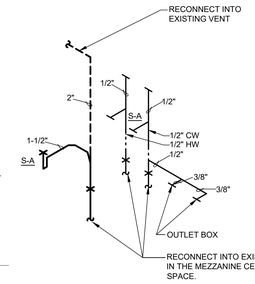
ALTERNATE #5
MAILROOM, CONFERENCE, OFFICE, & WORKSTATIONS

ALTERNATE #5
CAFE FRONT OF HOUSE RENOVATION



FIRST FLOOR ADA RESTROOMS 100R1&2

NOT TO SCALE



FIRST FLOOR BREAKROOM 101 SINK

NOT TO SCALE

FIRST FLOOR PLAN - PLUMBING

1/8" = 1'-0"

SHEET IS PLOTTED TO SCALE IF ADJACENT LINE MEASURES 1 INCH

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PROJECT # O1911-01
SITE # 1001
ASSET # 3101001057

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CAD DWG FILE:P3.1-075107.001
DRAWN BY: AM
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DESIGNED BY: JW

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SHEET NUMBER:
P3.1

138 OF 244 SHEETS

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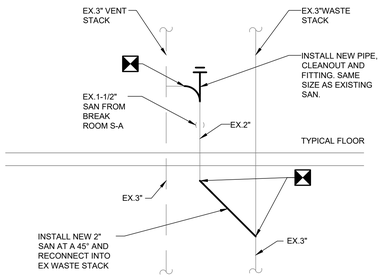

TYPICAL BREAKROOM SINK - NEW

NOT TO SCALE

SECOND-TWELFTH FLOOR PLAN - PLUMBING

1/8" = 1'-0"

N

SHEET IS PLOTTED TO SCALE IF ADJACENT LINE MEASURES 1 INCH

GENERAL NOTES

1. REFER TO P4.0 AND P4.1 FOR ALTERNATE #1 WORK

KEYED NOTES

1. INSTALL NEW KITCHEN SINK. RECONNECT TO EXISTING SANITARY WASTE, VENT, COLD AND HOT WATER PIPING.
2. REPLACE EXISTING ELECTRIC WATER COOLER WITH BI-LEVEL ELECTRIC WATER COOLER WITH BOTTLE FILLER EWC-A ON FLOORS 2, 9, 10, 11, 12, 13, AND 14.
3. EXISTING PLUMBING CHASE PIPING TO REMAIN.
4. INSTALL NEW PIPING ON SINK DISCHARGE AT A 45° SLOPE AND RECONNECT INTO MAIN STACK. INSTALL NEW CLEANOUT IN TOP OF VERTICAL PIPE IN FLOOR ABOVE. REFER TO TYPICAL BREAKROOM SINK DETAIL ON THIS SHEET P3.2. REFER TO PD3.2 FOR DEMOLITION WORK.

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PROJECT # O1911-01
SITE # 1001
ASSET # 3101001057

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CAD DWG FILE:P3.2-075107.001
DRAWN BY: AM
CHECKED BY: EP
DESIGNED BY: JW

SHEET TITLE:

SECOND THRU TWELFTH FLOOR PLAN-PLUMBING

SHEET NUMBER:

P3.2

139 OF 244 SHEETS

DATE : August 31, 2023

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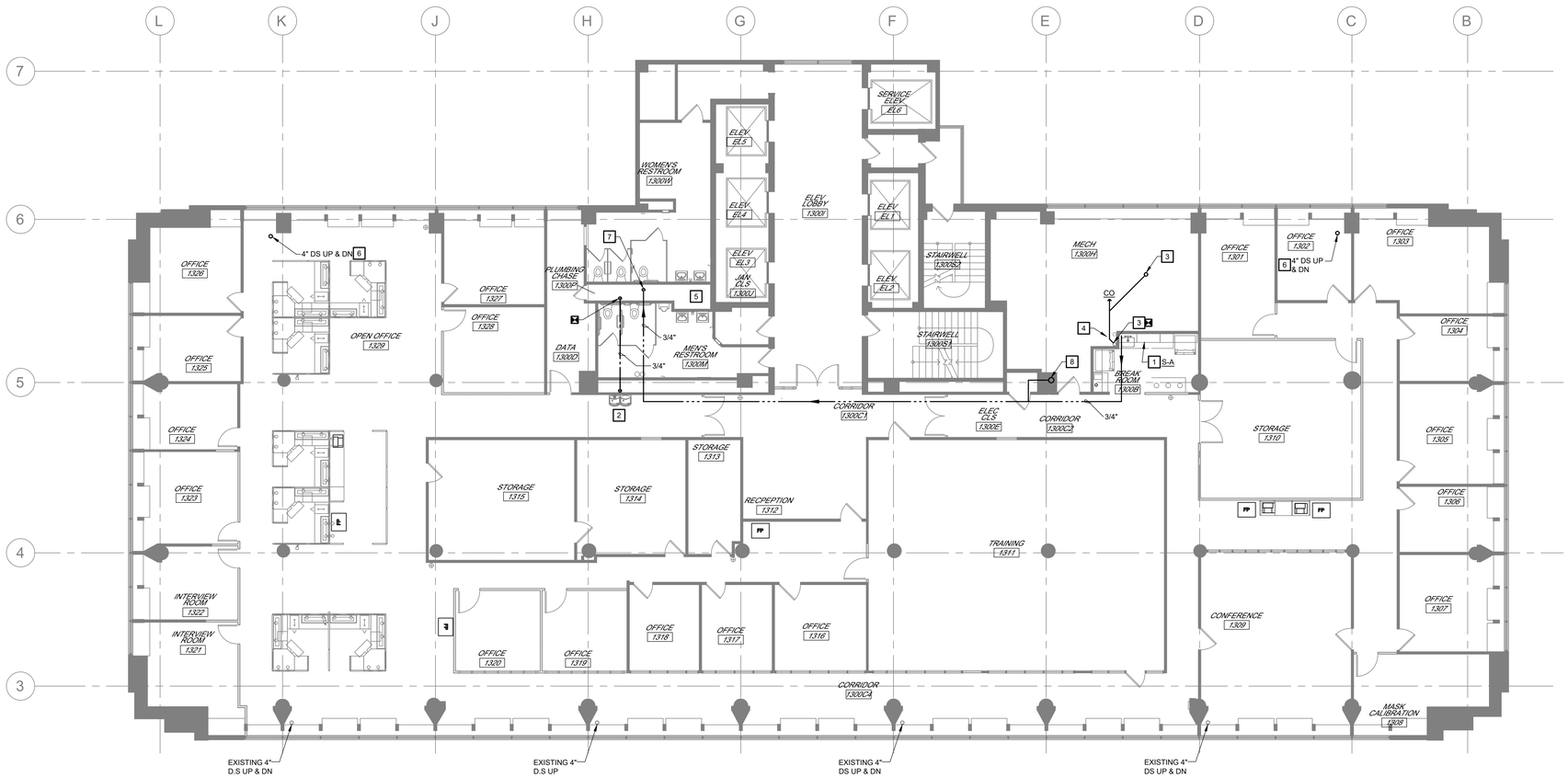

THIRTEENTH FLOOR PLAN - PLUMBING

1/8" = 1'-0"

N

SHEET IS PLOTTED TO SCALE IF ADJACENT LINE MEASURES 1 INCH

GENERAL NOTES

1. REFER TO P4.1 FOR ALTERNATE #1 WORK

KEYED NOTES - BASE BID

1. INSTALL NEW KITCHEN SINK. RECONNECT TO EXISTING SANITARY WASTE, VENT, COLD, AND HOT WATER PIPING.PROVIDE 1/2" VALVE AND CAP CONNECTION ON COLD WATER AT SINK TO ALLOW FOR FUTURE WATER SUPPLY.
2. RELOCATE NEW ELECTRIC WATER COOLER WITH BOTTLE FILLER TO NEW LOCATION SHOWN. CONTRACTOR TO EXTEND 3/4" DCW FROM PLUMBING CHASE TO NEW LOCATION SHOWN. CONNECT NEW SANITARY AND VENT PIPING TO EXISTING PIPING IN CHASE.
3. 2" SANITARY FROM ABOVE. ROUTE TO EXISTING SANITARY STACK.
4. CUT INTO EXISTING SANITARY LINE FROM BREAKROOM SINK. REMOVE CLEANOUT AND HORIZONTAL PIPE UP TO MAIN STACK. INSTALL NEW PIPING ON SINK DISCHARGE AT A 45° SLOPE AND RECONNECT INTO MAIN STACK. INSTALL NEW CLEANOUT IN TOP OF VERTICAL PIPE IN FLOOR ABOVE. REFER TO TYPICAL BREAKROOM SINK PLANS ON P3.2 SHEET.
5. EXISTING PLUMBING CHASE PIPING TO REMAIN.
6. RECONNECT INTO EXISTING 3" D.S. JUST BELOW ROOF LINE AND TRANSITION TO THE NEW 4" STORM MAIN.
7. ROUTE TO HWC LINE IN PLUMBING CHASE.
8. 3/4" HWC UP TO FOURTEENTH FLOOR.

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ASSET # 3101001057

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DRAWN BY: AM
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DESIGNED BY: JW

SHEET TITLE:
THIRTEENTH FLOOR PLAN -PLUMBING

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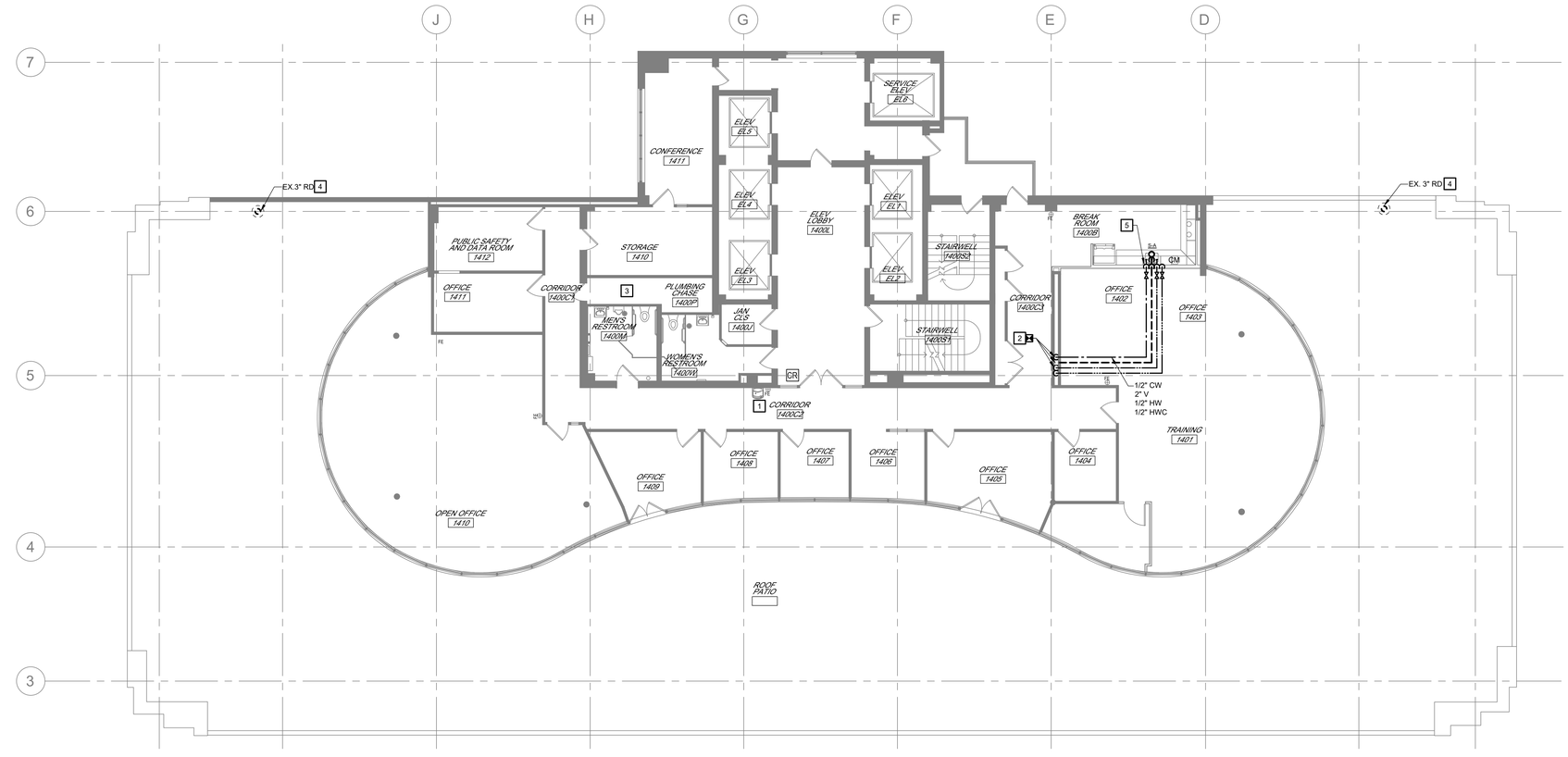

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FOURTEENTH FLOOR PLAN - PLUMBING

1/8" = 1'-0"

GENERAL NOTES

1. REFER TO P4.1 FOR ALTERNATE #1 WORK

KEYED NOTES - BASE BID

1. REPLACE EXISTING ELECTRIC WATER COOLER WITH BI-LEVEL ELECTRIC WATER COOLER WITH BOTTLE FILLER (EWC-A).
2. CONNECT INTO EXISTING 1/2" HOT AND COLD WATER AND 2" VENT ABOVE CEILING. ROUTE NEW 1/2" HOT AND COLD WATER AND 2" VENT TO NEW BREAK ROOM SINK.
3. EXISTING PLUMBING CHASE PIPING TO REMAIN.
4. EXISTING 3" ROOF DRAIN TO REMAIN.
5. INSTALL 2" SANITARY, 1/2" COLD HOT AND HOT WATER RETURN DOWN. 2" WASTE/VENT DOWN. PROVIDE 1/2" VALVE AND CAP CONNECTION ON COLD WATER AT SINK TO ALLOW FOR FUTURE WATER SUPPLY.

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CAD DWG FILE:P3.14-075107.001
DRAWN BY: AM
CHECKED BY: EP
DESIGNED BY: JW

SHEET TITLE:
FOURTEENTH FLOOR PLAN -PLUMBING

SHEET NUMBER:
P3.4

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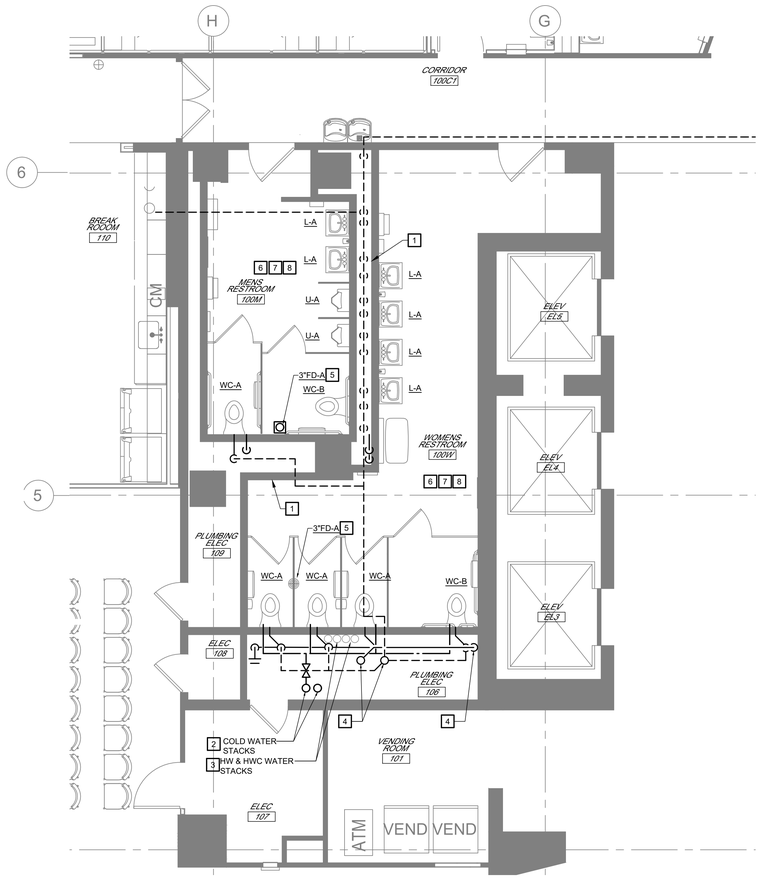
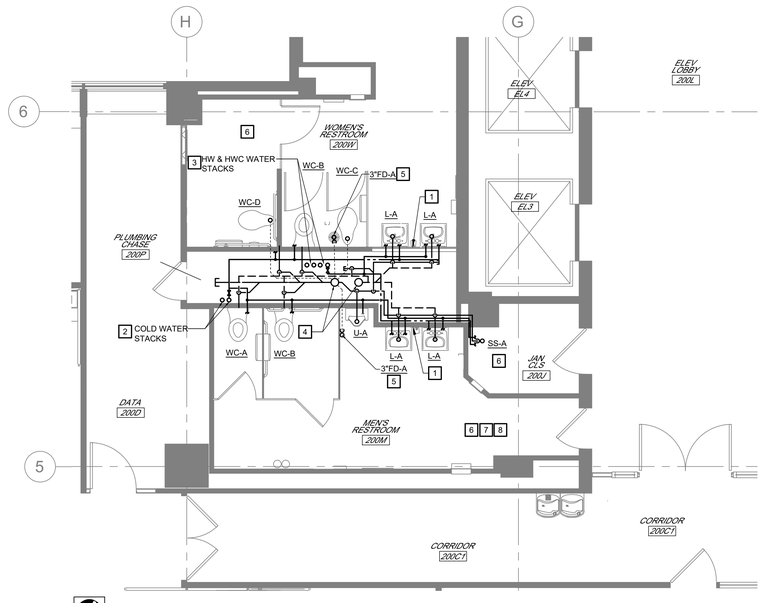
DATE : August 31, 2023



FIRST FLOOR PLAN - PLUMBING ALTERNATE #1

N 1/4" = 1'-0"

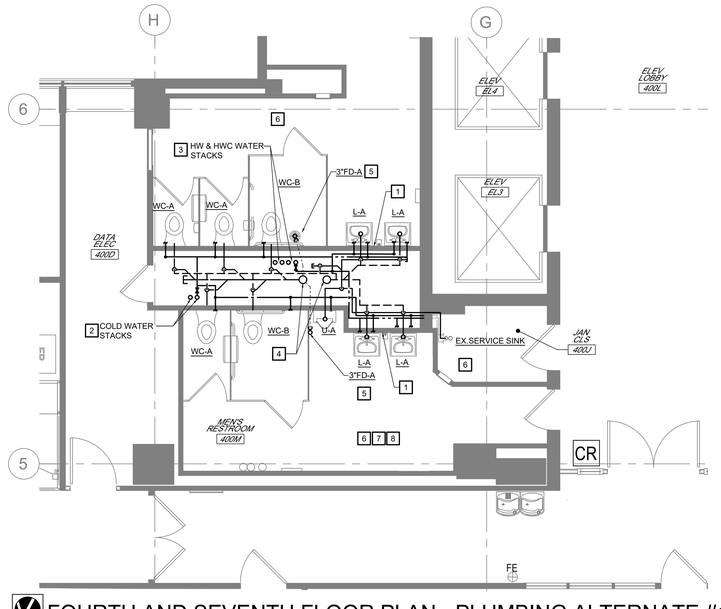


SECOND AND THIRD FLOOR PLAN - PLUMBING ALTERNATE #1

N 1/4" = 1'-0"

KEYED NOTES - ALTERNATE

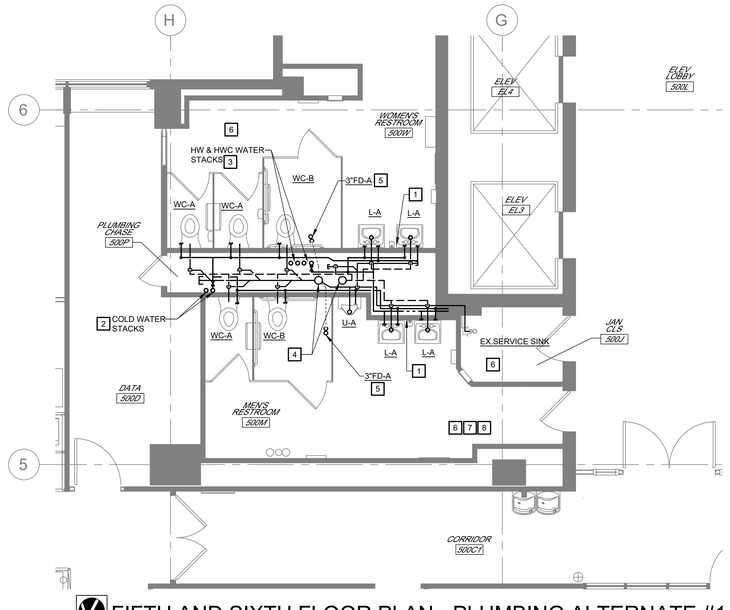
1. CUT INTO EXISTING WALL TO GAIN ACCESS TO PIPING IN CHASE FOR NEW INSTALLATION. REPLACE WALL ONCE WORK IS COMPLETED. PATCH TO MATCH EXISTING CONDITIONS. INSTALL NEW LAVATORIES ON FINISHED WALL.
2. INSTALL NEW COLD WATER MAIN RISERS. REUSING EXISTING OPENINGS IN FLOOR. ONE RISER SERVING FLOORS B-8, SECOND RISER SERVING FLOORS 9-14. FIRE STOP AROUND NEW PIPING AND EXISTING OPENING. CONTRACTOR TO COORDINATE TIMING OF SHUT DOWN TO MAKE NEW CONNECTIONS WITH BUILDING OWNER.
3. INSTALL NEW HOT WATER AND HOT WATER RE-CIRCULATING MAIN RISERS. REUSING EXISTING OPENINGS IN FLOOR. ONE HW AND HWC RISER SERVING FLOORS B-8. SECOND RISER SERVING FLOORS 9-14. FIRE STOP AROUND NEW PIPING AND EXISTING OPENING. CONTRACTOR TO COORDINATE TIMING OF SHUT DOWN TO MAKE NEW CONNECTIONS WITH BUILDING OWNER.
4. INSTALL NEW SANITARY AND VENT MAIN STACKS. HOLE SAW NEW OPENINGS IN FLOOR. FIRE STOP AROUND NEW PIPING AND OPENING. CONTRACTOR TO COORDINATE TIMING OF SHUT DOWN TO MAKE NEW CONNECTIONS WITH BUILDING OWNER.
5. EXISTING FLOOR DRAIN COVER TO REMAIN IN FLOOR AT CURRENT LOCATION. INSTALL NEW P-TRAP AND ASSOCIATED HORIZONTAL SANITARY PIPING IN CEILING SPACE OF FLOOR BELOW TO THE NEW SANITARY STACK IN CHASE.
6. REPLACE WATER CLOSETS, URINALS, LAVATORIES, AND FLOOR DRAINS AND P-TRAPS WITHIN RESTROOMS. REFER TO SPECIFICATIONS AND SCHEDULE FOR FIXTURE TYPES.
7. FOR SANITARY AND VENT PIPE SIZES REFER TO P7.0 SANITARY AND VENT RISER - ALTERNATE.
8. FOR DOMESTIC WATER PIPE SIZES REFER TO P7.0 DOMESTIC WATER RISER - ALTERNATE.



FOURTH AND SEVENTH FLOOR PLAN - PLUMBING ALTERNATE #1

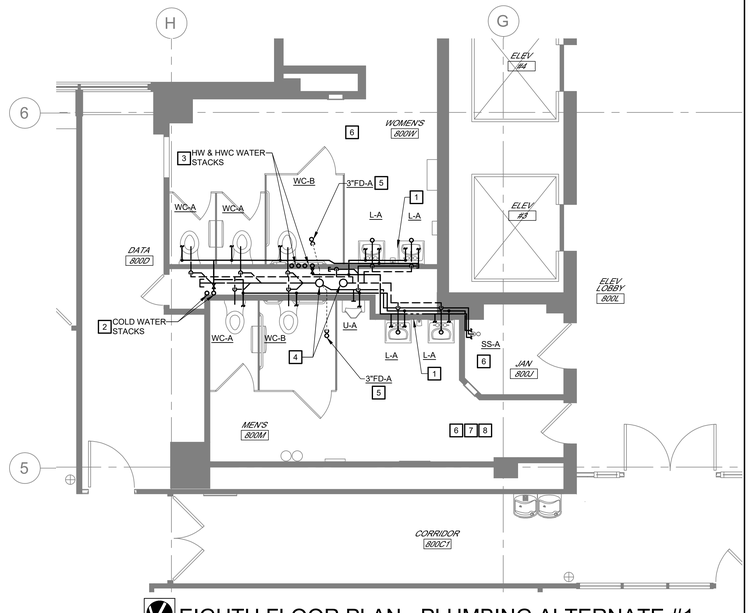
N 1/4" = 1'-0"

SHEETS PLOTTED TO SCALE IF ADJACENT LINE MEASURES 1 INCH



FIFTH AND SIXTH FLOOR PLAN - PLUMBING ALTERNATE #1

N 1/4" = 1'-0"



EIGHTH FLOOR PLAN - PLUMBING ALTERNATE #1

N 1/4" = 1'-0"

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JEFFERSON STATE OFFICE BUILDING
205 JEFFERSON STREET
JEFFERSON CITY, MO 65101

PROJECT # O1911-01
SITE # 1001
ASSET # 3101001057

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SHEET NUMBER:
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DATE : August 31, 2023

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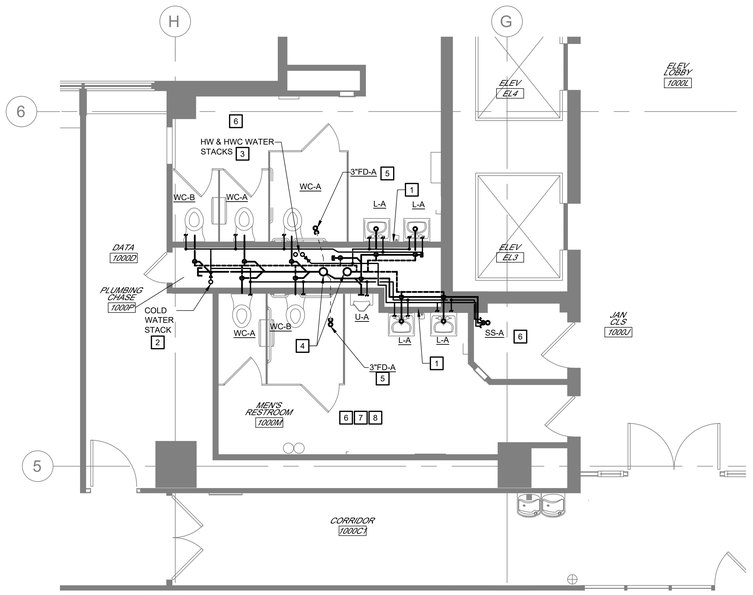

TENTH FLOOR PLAN - PLUMBING ALTERNATE #1

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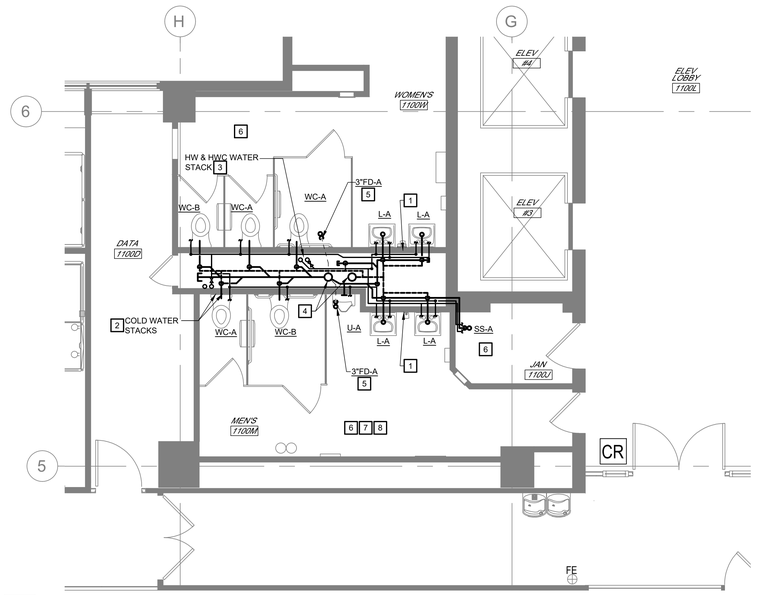
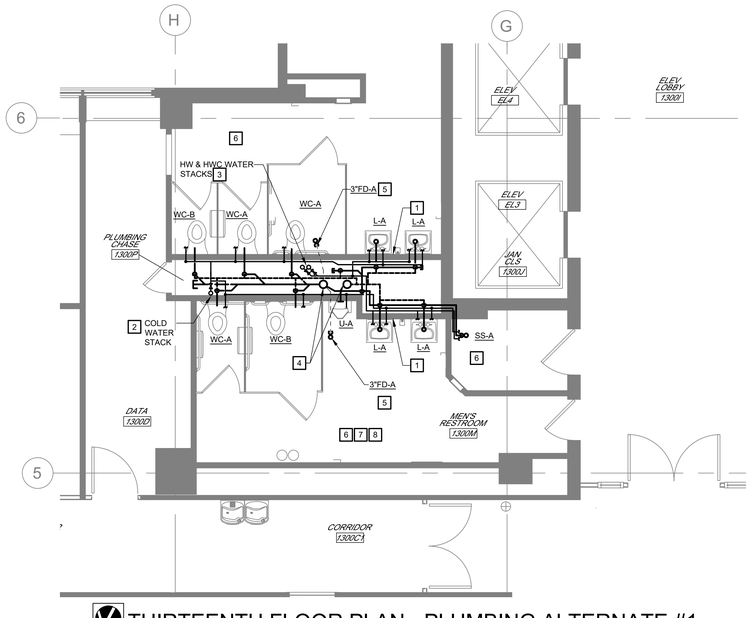


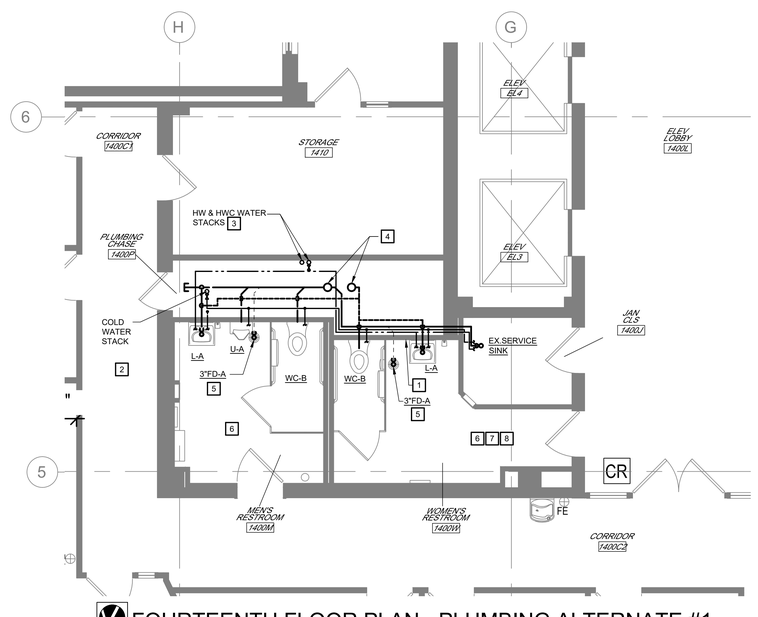
NINTH, ELEVENTH AND TWELFTH FLOOR PLAN - PLUMBING ALTERNATE #1

N 1/4" = 1'-0"



THIRTEENTH FLOOR PLAN - PLUMBING ALTERNATE #1

N 1/4" = 1'-0"



FOURTEENTH FLOOR PLAN - PLUMBING ALTERNATE #1

N 1/4" = 1'-0"

KEYED NOTES - ALTERNATE

1. CUT INTO EXISTING WALL TO GAIN ACCESS TO PIPING IN CHASE FOR NEW INSTALLATION. REPLACE WALL ONCE WORK IS COMPLETED. PATCH TO MATCH EXISTING CONDITIONS. INSTALL NEW LAVATORIES ON FINISHED WALL.
2. INSTALL NEW COLD WATER MAIN RISER REUSING EXISTING OPENINGS IN FLOOR. RISER SERVING FLOORS 9-14. FIRE STOP AROUND NEW PIPING AND EXISTING OPENING. CONTRACTOR TO COORDINATE TIMING OF SHUT DOWN TO MAKE NEW CONNECTIONS WITH BUILDING OWNER.
3. INSTALL NEW HOT WATER AND HOT WATER RE-CIRCULATING MAIN RISERS. REUSING EXISTING OPENINGS IN FLOOR. HW AND HWC RISER SERVING FLOORS 9-14. FIRE STOP AROUND NEW PIPING AND EXISTING OPENING. CONTRACTOR TO COORDINATE TIMING OF SHUT DOWN TO MAKE NEW CONNECTIONS WITH BUILDING OWNER.
4. INSTALL NEW SANITARY AND VENT MAIN STACKS. HOLE SAW NEW OPENINGS IN FLOOR. FIRE STOP AROUND NEW PIPING AND OPENING. CONTRACTOR TO COORDINATE TIMING OF SHUT DOWN TO MAKE NEW CONNECTIONS WITH BUILDING OWNER.
5. EXISTING FLOOR DRAIN COVER TO REMAIN IN FLOOR AT CURRENT LOCATION. INSTALL NEW P-TRAP AND ASSOCIATED HORIZONTAL SANITARY PIPING IN CEILING SPACE OF FLOOR BELOW TO THE NEW SANITARY STACK IN CHASE.
6. REPLACE ALL EXISTING PLUMBING FIXTURES WITH NEW FIXTURES IN THIS SPACE. REFER TO SPECIFICATIONS FOR FIXTURE TYPES.
7. FOR SANITARY AND VENT PIPE SIZES REFER TO P7.0 SANITARY AND VENT RISER - ALTERNATE.
8. FOR DOMESTIC WATER PIPE SIZES REFER TO P7.0 DOMESTIC WATER RISER - ALTERNATE.

SHEET IS PLOTTED TO SCALE IF ADJACENT LINE MEASURES 1 INCH

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DOMESTIC WATER BOOSTER PUMP POINST LIST

POINT DESCRIPTION					STARTUP TREND		SERVICE TREND		FIELD DEVICE DESCRIPTION
TYPE	NAME	DESCRIPTION	SEMANTIC TAGS	UNITS	FREQ	ARCHIVE	FREQ	ARCHIVE	INSTRUMENT TYPE
BV	PMP1-STA	PUMP 1 STATUS	DWBP	OFF / ON	1 MIN.	30 MIN	15 MIN.	1 WEEK	BACNET INTERFACE TO CONTROLLED DEVICE
BV	PMP1-ALM	PUMP 1 SPEED	DWBP	HZ.0	1 MIN.	30 MIN	15 MIN.	1 WEEK	BACNET INTERFACE TO CONTROLLED DEVICE
BV	PMP2-STA	PUMP 2 STATUS	DWBP	OFF / ON	1 MIN.	30 MIN	15 MIN.	1 WEEK	BACNET INTERFACE TO CONTROLLED DEVICE
BV	PMP2-ALM	PUMP 2 SPEED	DWBP	HZ.0	1 MIN.	30 MIN	15 MIN.	1 WEEK	BACNET INTERFACE TO CONTROLLED DEVICE
BV	PMP3-STA	PUMP 3 STATUS	DWBP	OFF / ON	1 MIN.	30 MIN	15 MIN.	1 WEEK	BACNET INTERFACE TO CONTROLLED DEVICE
BV	PMP3-ALM	PUMP 3 SPEED	DWBP	HZ.0	1 MIN.	30 MIN	15 MIN.	1 WEEK	BACNET INTERFACE TO CONTROLLED DEVICE
AV	DWBP-DP	SKID DISCHARGE PRSSURE	DWBP	PSI	1 MIN.	30 MIN	15 MIN.	1 WEEK	BACNET INTERFACE TO CONTROLLED DEVICE
AV	DWBP-SP	SKID SUCTION PRSSURE	DWBP	PSI	1 MIN.	30 MIN	15 MIN.	1 WEEK	BACNET INTERFACE TO CONTROLLED DEVICE
BI	DWBP-ALM	GENERAL BOOSTER SKID ALARM	DWBP	OFF / ON	1 MIN.	30 MIN	15 MIN.	1 WEEK	DRY CONTACT/ RELAY
BO	DWB-EN	DOMESTIC WATER BOOSTER ENABLE	DWBP	OFF / ON	1 MIN	30 MIN	15 MIN	1 WEEK	DRY CONTACT/ RELAY

BI BINARY INPUT
BO BINARY OUTPUT
BV BINARY VIRTUAL POINT
AI ANALOG INPUT
AO ANALOG OUTPUT
AV ANALOG VIRTUAL POINT
HW HARD WIRED INTERLOCK/SAFETY
COS CHANGE OF STATE

PLUMBING FIXTURE SCHEDULE

FIXTURE DESIG.	FIXTURE DESCRIPTION													ACCESSORIES				ROUGH-IN SIZE				
	WATER CLOSET		URINAL TYPE (GPF)	FLUSH VALVE TYPE	LAVATORY TYPE	SINK TYPE	FAUCET			SHOWER	ELECTRIC WATER COOLER		ADA (YES/NO)	GARBAGE DISPOSAL	CARRIER (YES/NO)	INSULATION KIT & OFFSET TAILPIECE	TRAP SIZE	DRAIN (IN)	VENT (IN)	COLD WATER (IN)	HOT WATER (IN)	REMARKS
	TYPE	GPF					TYPE	GPM	MOUNT	GPM	TYPE	MOUNT										
WC-A	WH	1.6	-	AB	-	-	-	-	-	-	-	-	NO	-	YES	-	-	4	2	1	-	
WC-B	WH	1.6	-	AB	-	-	-	-	-	-	-	-	YES	-	YES	-	-	4	2	1	-	1
WC-C	SFM	1.6		AB																		
WC-D	AFM	1.6		AB																		
UR-A	-	-	1	AB	-	-	-	-	-	-	-	-	YES	-	YES	-	-	4	2	1	-	1
L-A	-	-	-	-	WH	-	MDH	0.5	4"	-	-	-	YES	-	NO	YES	1 1/2	2	2	1/2	1/2	
S-A	-	-	-	-	-	SCC	MSH	2.2	S	-	-	-	YES	-	NO	NO	2	2	2	1/2	1/2	
SS-A	-	-	-	-	-	SS	WMA	2.5	WALL	-	-	-	-	-	-	-	3	3	3	3/4	3/4	
EWC-A	-	-	-	-	-	-	-	-	-	-	BLF	SW	YES	-	NO	-	1 1/4	2	2	3/8	-	
FD-A	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	3	3	2	-	-	
FS-A	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	3	3	2	-	-	
FCO	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	SEE PLANS	-	-	-	
WCO	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	SEE PLANS	-	-	-	

WATER CLOSET TYPE
WH - WALL HUNG
SFM - STANDARD FLOOR MOUNT
AFM - ADA FLOOR MOUNT
C - CHILDREN'S USAGE
B - BARIATRIC

URINAL TYPE
1.0 - 1.0 GPF
0.5 - 0.5 GPF
0.125 - 0.125 GPF

FLUSH VALVE TYPE
AB - AUTOMATIC, BATTERY POWERED
AH - AUTOMATIC, HARD WIRED
MD - MANUAL DUAL FLUSH
M - MANUAL

GENERAL NOTES
1. REFER TO SPECIFICATIONS FOR FIXTURE COMPONETS
2. REFER TO SPECIFICATIONS FOR FIXTURES NOT SCHEDULED
3. SEE ARCHITECTURAL PLANS AND SPECS FOR MOUNTING HEIGHTS

SINK TYPE
SCC - SINGLE COMPARTMENT COUNTERTOP
SCU - SINGLE COMPARTMENT UNDERMOUNT
SCI - SINGLE COMPARTMENT, INTEGRAL
SCWH - SINGLE COMPARTMENT, WALL HUNG
DC - DOUBLE COMPARTMENT, COUNTERTOP
DCU - DOUBLE COMPARTMENT, UNDERMOUNT
TCU - TRIPLE COMPARTMENT, UNDERMOUNT
SS - SERVICE SINK
MSB - MOP SINK BASIN

LAVATORY TYPE
CT - COUNTERTOP
WH - WALL HUNG
UCC - UNDERCOUNTER, CHINA
UCS - UNDERCOUNTER, STAINLESS STEEL
WC - WALL HUNG, WHEEL CHAIR

FAUCET TYPE
SAB - SENSOR ACTIVATED, HARD WIRE WITH BATTERY BACK
SAH - SENSOR ACTIVATED, HARD WIRED
MSH - MANUAL, SINGLE HANDLE
MDH - MANUAL, DUAL HANDLE
US - UTILITY SINK FAUCET
WMA - WALL MOUNTED ADJUSTABLE FAUCET

FAUCET MOUNT
S - SINGLE HOLE
4" - 4" SPREAD
8" - 8" WIDE SPREAD
12" - 12" WIDE SPREAD
WALL- WALL

ELECTRIC WATER COOLER TYPE
S - SINGLE LEVEL
BLF - BI-LEVEL WITH BOTTLE FILLING STATION
SBF - SINGLE-LEVEL WITH BOTTLE FILLING STATION

ELECTRIC WATER COOLER MOUNT
R - FULLY RECESSED
SR - SEMI-RECESSED
SW - SURFACE WALL MOUNT
F - FLOOR MOUNT

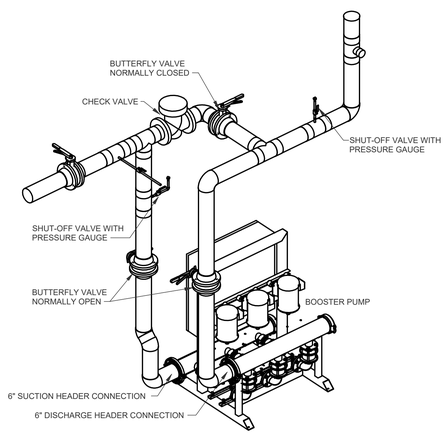
REMARKS
1. FLUSH VALVES SHALL BE CONFIGURED RIGHT OR LEFT MOUNT DEPENDING ON THE ACCESSIBLE SIDE OF THE WATER CLOSET.
2. INCLUDES REMOVABLE SEDIMENT BUCKET.
3. MOUNT 6' AFF.

DOMESTIC WATER PRESSURE BOOSTER SYSTEM

EQUIP.	SERVICE	MODEL	NO. OF PUMPS	GPM EA / TOTAL	SUCTION [PSI]	BOOST [PSI]	SET [PSI]	MOTOR DATA AND VALUES RPM	HP	ELECTRICAL FEED VOLTAGE	PHASE	FULL LOAD	MAX. SCCR	REMARKS
DWBP-1	Floors 8-14 DCW	QUANTUMFLO GENIUS TRIPLEX	3	31.5 / 93	57	67	115	3,450	3	460	3	13.2	100KAIC	1, 2, 3, 4, 5, 6, 7, 8, 9, 10,11

1. NET BOOST PRESSURE IS CALCULATED BY SYSTEM SET PRESSURE MINUS SUCTION PRESSURE LESS SYSTEM LOSSES OF 5 PSI
2. SYSTEM SUBMITTALS SHALL INCLUDE CERTIFICATE NUMBER FOR NSF61 CERTIFICATION, UL508A AND QCZJ 3RD PARTY COMPLIANCE.
3. SYSTEM CONTROLS MUST COMPLY WITH AND PROVIDE FOR EITHER CONTROL LOGIC OR REMOTE SENSOR IN ACCORDANCE WITH ANSI/ASHRAE/IES STANDARD 90.1 ENERGY STANDARD
4. PROVIDE 5-YEAR WARRANTY ON COMPLETE SYSTEM AND INCLUDE WARRANTY CERTIFICATE WITH DETAILS IN SUBMITTALS
5. SYSTEM SHALL BE PRE-SET TO SYSTEM SITE CONDITIONS BY SIMULATING SUCTION PRESSURE. HYDROSTATIC-ONLY TESTING IS NOT ACCEPTABLE.
6. THE INDUSTRIAL CONTROLLER SHALL BE IN COMPLIANCE WITH CURRENT NEC, SECTION 409.110 HAVING A MAXIMUM 100K AVAILABLE FAULT CURRENT.
7. SCCR RATINGS MUST BE INCLUSIVE OF ALL COMPONENTS WITHIN THE ENCLOSURE WITHOUT THE NEED TO PROVIDE ADDITIONAL UPSTREAM PROTECTION.
8. EQUAL SYSTEMS MUST SHOW MATHEMATICAL ANALYSIS PROVING THAT THE ALTERNATE SUPPLIER MEETS OR EXCEEDS THE KW CAPACITY LISTED.

9. INCLUDES: 350VA TRANSFORMER, 2-POLE CCP & (2) 3A FUSES, 44 GALLON SHOCK SUPRESSOR TANK & VALVING
10. SINGLE POINT POWER
11. PROVIDE WITH ALL STAINLESS STEEL: 4" STAINLESS STEEL HEADERS, SUPPORTS AND SKID/FRAME.



DOMESTIC BOOSTER PUMP
NOT TO SCALE

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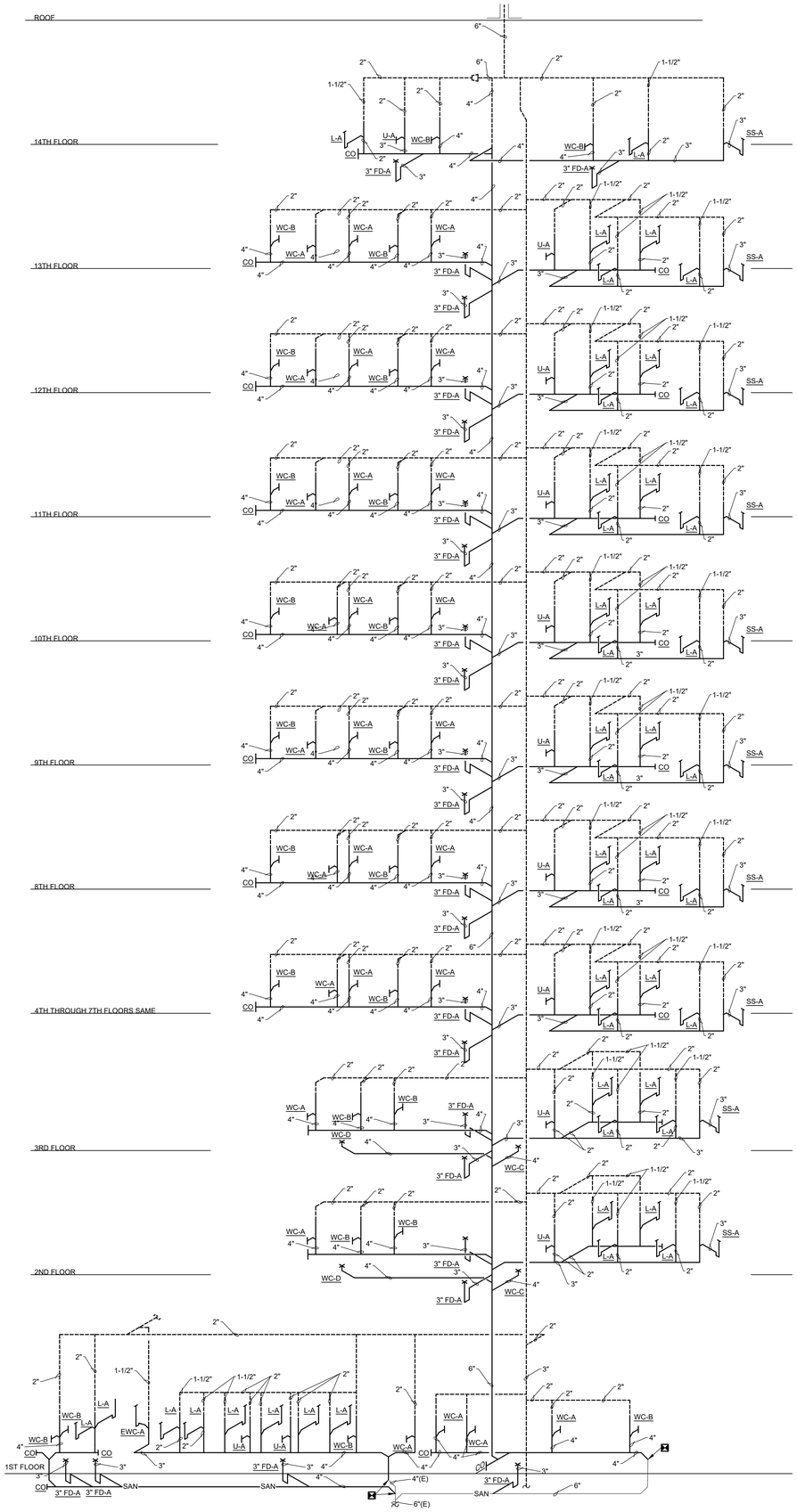

SANITARY AND VENT RISER - ALTERNATE

NO SCALE

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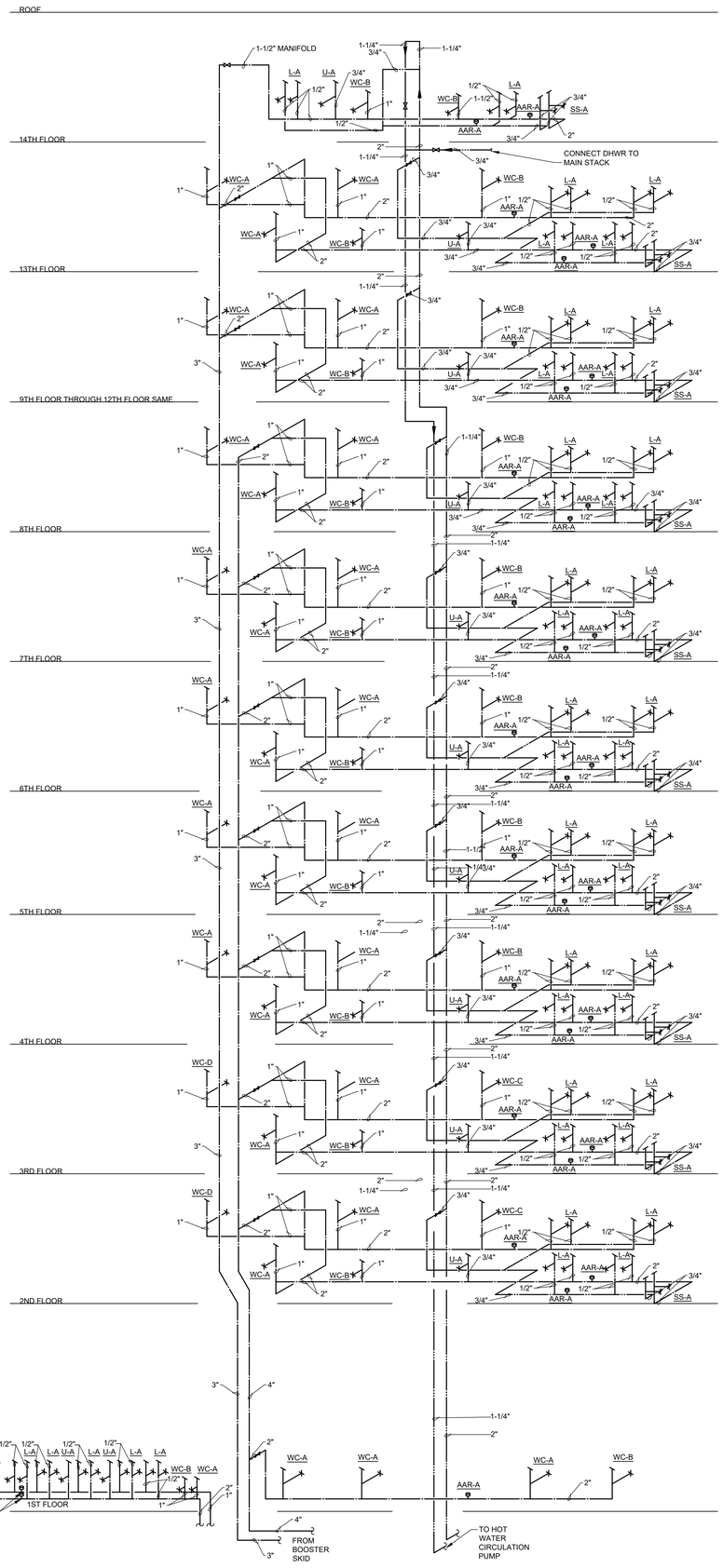
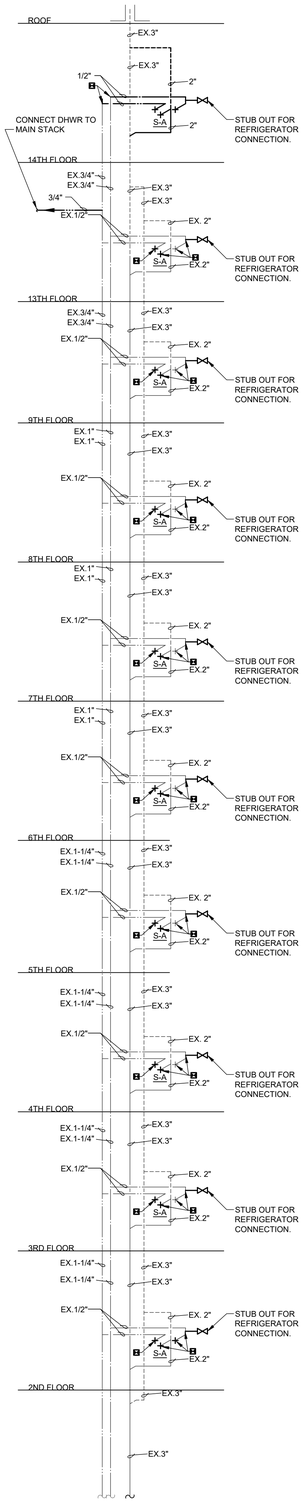


DOMESTIC WATER RISER - ALTERNATE

NO SCALE



BREAKROOM SINK RISER

NO SCALE

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FIRE PROTECTION

F	F	FIRE LINE	DPV		DRY PIPE VALVE
SPR	SPR	SPRINKLER MAIN	FEC		FIRE EXTINGUISHER CABINET
SIV		SUPERVISED INDICATING VALVE	FVC		FIRE VALVE CABINET
WFI		WATER FLOW INDICATOR	FHC		FIRE HOSE CABINET
DRY	DRY	DRY SPRINKLER PIPE	FHR		FIRE HOSE RACK
URH		UPRIGHT HEAD	WG		WATER GONG
PH		PENDENT HEAD	FH		FIRE HYDRANT
CH		CONCEALED HEAD	SC		SIAMESE CONNECTION
SWH		SIDEWALL HEAD			

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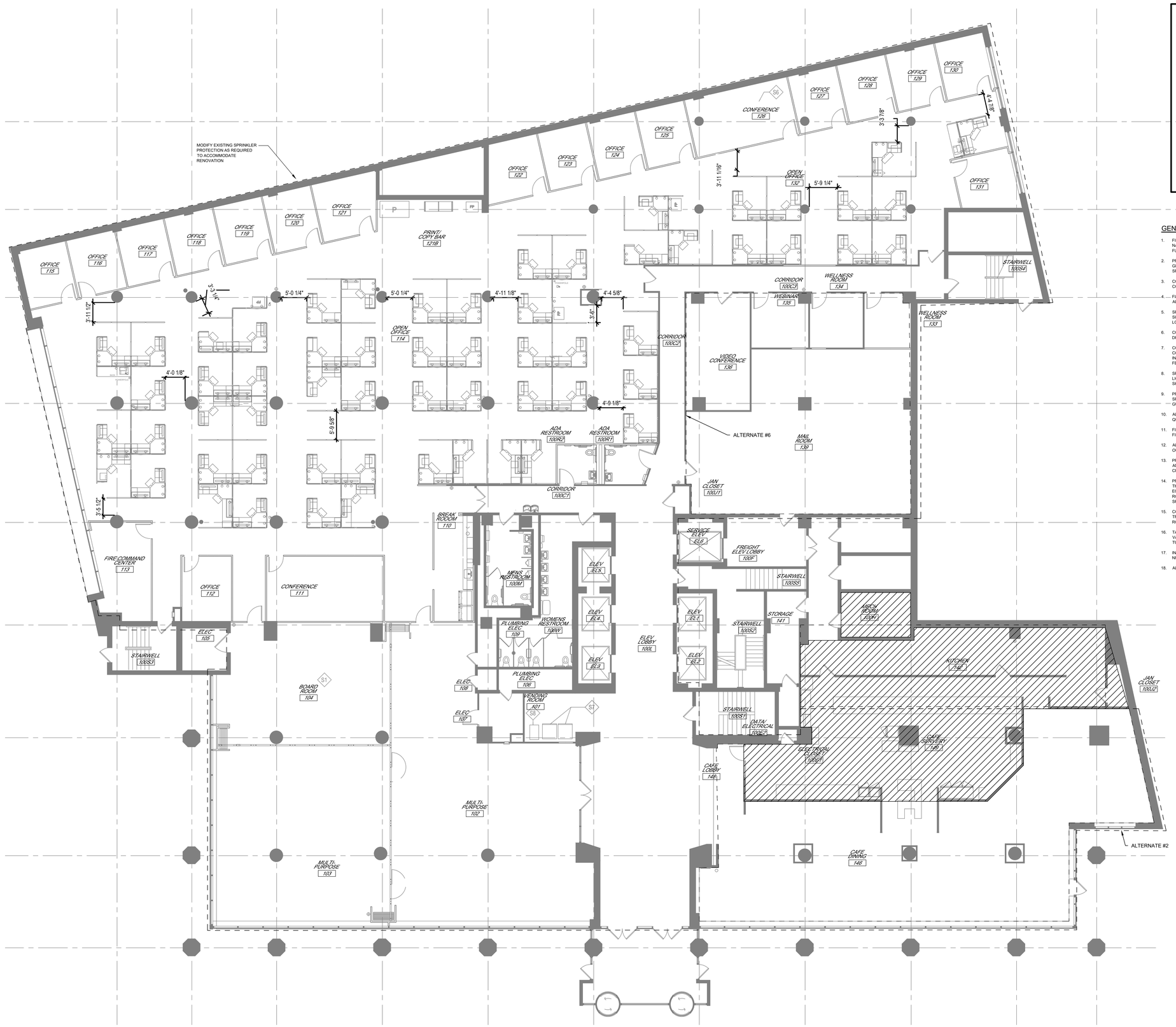

FIRE SPRINKLER LEGEND

- AREA TO BE PROTECTED AS LIGHT HAZARD.
- AREA TO BE PROTECTED AS ORDINARY HAZARD GROUP 1.
- AREA TO BE PROTECTED AS ORDINARY HAZARD GROUP 2.
- INDICATES BOUNDARY OF FIRE PROTECTION ZONE.

GENERAL NOTES

1. FIRE PROTECTION SYSTEM TO COMPLY WITH NFPA STANDARDS AND ALL NATIONAL AND LOCAL CODES/ORDINANCES/AMENDMENTS. BUILDING SHALL BE FULLY SPRINKLERED.
2. PROVIDE NFPA LIGHT HAZARD COVERAGE WITH A DESIGN DENSITY OF 0.10 GPM/SQ.FT. OVER 1500 SQ.F.T UNLESS NOTED OTHERWISE. REFER TO SPECIFICATION ARTICLE 210016 FOR ALL DESIGN DENSITIES BY SPACE TYPE.
3. CONTRACTOR SHALL PROVIDE HYDRAULIC CALCULATIONS PROVING SYSTEM COMPLIANCE BASED UPON NFPA 13.
4. FINAL INSPECTION AND APPROVAL BY LOCAL FIRE MARSHAL AND ARCHITECT/ENGINEER.
5. SPRINKLER SHOP DRAWINGS, HYDRAULIC CALCULATIONS AND MATERIAL SUBMITTALS SHALL BE SUBMITTED TO THE OWNER, ARCHITECT/ENGINEER AND LOCAL FIRE MARSHAL AND SHALL BE APPROVED PRIOR TO ANY INSTALLATION.
6. CONTRACTOR SHALL PROVIDE OWNER AND ENGINEER/ARCHITECT WITH AS-BUILT DRAWINGS AFTER PROJECT COMPLETION.
7. CONTRACTOR SHALL ENSURE NEW PIPING IS ROUTED AND SIZED PROPERLY. CONTRACTOR SHALL PROVIDE ANY ADDITIONAL OFFSETS REQUIRED FOR PROPER INSTALLATION AND COORDINATION WITH OTHER TRADES, ARCHITECTURAL FEATURES AND/OR STRUCTURE.
8. SPRINKLER HEADS ARE TO BE COORDINATED WITH ALL DIFFUSERS, SPEAKERS, LIGHTING FIXTURES AND CEILING SYSTEMS. SPACING OF SPRINKLER HEADS SHALL BE IN ACCORDANCE WITH NFPA 13 AND THE LISTING OF THE SPRINKLER.
9. PROVIDE SPRINKLERS UNDER ALL EXPOSED DUCTWORK OVER 48" WIDE AND SPACE HEADS AROUND ALL OBSTRUCTIONS IN ACCORDANCE WITH NFPA 13 GUIDELINES.
10. ALL SPRINKLER HEADS SHALL BE CENTERED IN ACOUSTICAL CEILING TILES (@ QUARTER POINTS IN 2'X4' TILES & MID POINTS OF 2'X2').
11. FIRE STOP ALL PENETRATIONS OF SMOKE/FIRE WALLS, CEILINGS, AND FLOORS. FIRE STOP ASSEMBLIES SHALL MEET ASTM E-814.
12. ALL DRAIN PIPING SHALL BE GALVANIZED PIPE AND FITTINGS, BOTH INSIDE AND OUTSIDE OF THE PIPE AND FITTINGS.
13. PROVIDE A PERMANENTLY ATTACHED NAME TAG ATTACHED TO THE RISER AND/OR SPRINKLER ZONE CONNECTION STATING THE REQUIRED DESIGN CRITERIA FOR EACH HYDRAULICALLY DESIGNED SYSTEM.
14. PROVIDE SPRINKLER GUARDS ON ALL HEADS IN ALL AREAS IN ACCORDANCE WITH THE SPECIFICATION. AREAS INCLUDE BUT NOT LIMITED TO: MECHANICAL EQUIPMENT ROOMS, JANITOR'S CLOSETS AND OTHER STORAGE ROOMS, DATA ROOMS, ELECTRICAL ROOMS AND CORRIDOR'S WITHOUT CEILINGS WHERE SPRINKLERS ARE INSTALLED LESS THAN 8'-0" A.F.F.
15. COORDINATE PIPING WITH ALL ELECTRICAL EQUIPMENT (PANELS, TRANSFORMERS, ETC.) PRIOR TO ANY INSTALLATION. CONTRACTOR SHALL NOT ROUTE ANY PIPING OVER ELECTRICAL PANELS UNDER ANY CIRCUMSTANCES.
16. TAMPER SWITCHES AND FLOW SWITCHES SHALL BE INSTALLED AT ALL CONTROL VALVES. ALL CONTROL VALVES SHALL ALSO BE LOCKED. CONTRACTOR SHALL TURN OVER KEYS TO OWNER'S REPRESENTATIVE AT END OF PROJECT.
17. INSTALL DRAIN VALVES AND PLUGS FOR ALL TRAPPED SECTIONS OF PIPE PER NFPA 13.
18. ALL SPRINKLER ZONE VALVE LOCATIONS SHALL BE IDENTIFIED PER NFPA.

FIRST FLOOR PLAN - FIRE PROTECTION

1/8" = 1'-0"

N

SHEET IS PLOTTED TO SCALE IF ADJACENT LINE MEASURES 1 INCH

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RENOVATE MECHANICAL/ ELECTRICAL/LIFE-SAFETY/ STATE OFFICE BUILDING

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JEFFERSON CITY, MO 65101

PROJECT # O1911-01
SITE # 1001
ASSET # 3101001057

REVISION:
DATE:
REVISION:
DATE:
REVISION:
DATE:
ISSUE DATE:

CAD DWG FILE:FP3.1-075107.001
DRAWN BY: AM
CHECKED BY: EP
DESIGNED BY: JW

SHEET TITLE:
FIRST FLOOR PLAN -FIRE PROTECTION

SHEET NUMBER:
FP3.1

147 OF 244 SHEETS

DATE : August 31, 2023

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SECOND FLOOR PLAN - FIRE PROTECTION

1/8" = 1'-0"

FIRE SPRINKLER LEGEND

- AREA TO BE PROTECTED AS LIGHT HAZARD.
- AREA TO BE PROTECTED AS ORDINARY HAZARD GROUP 1.
- AREA TO BE PROTECTED AS ORDINARY HAZARD GROUP 2.
- INDICATES BOUNDARY OF FIRE PROTECTION ZONE.

GENERAL NOTES

1. FIRE PROTECTION SYSTEM TO COMPLY WITH NFPA STANDARDS AND ALL NATIONAL AND LOCAL CODES/ORDINANCES/AMENDMENTS. BUILDING SHALL BE FULLY SPRINKLERED.
2. PROVIDE NFPA LIGHT HAZARD COVERAGE WITH A DESIGN DENSITY OF 0.10 GPM/SQ.FT. OVER 1500 SQ.F.T UNLESS NOTED OTHERWISE. REFER TO SPECIFICATION ARTICLE 210016 FOR ALL DESIGN DENSITIES BY SPACE TYPE.
3. CONTRACTOR SHALL PROVIDE HYDRAULIC CALCULATIONS PROVING SYSTEM COMPLIANCE BASED UPON NFPA 13.
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SHEET IS PLOTTED TO SCALE IF ADJACENT LINE MEASURES 1 INCH

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JEFFERSON CITY, MO 65101

PROJECT # O1911-01
SITE # 1001
ASSET # 3101001057

REVISION:
DATE:
REVISION:
DATE:
REVISION:
DATE:
ISSUE DATE:

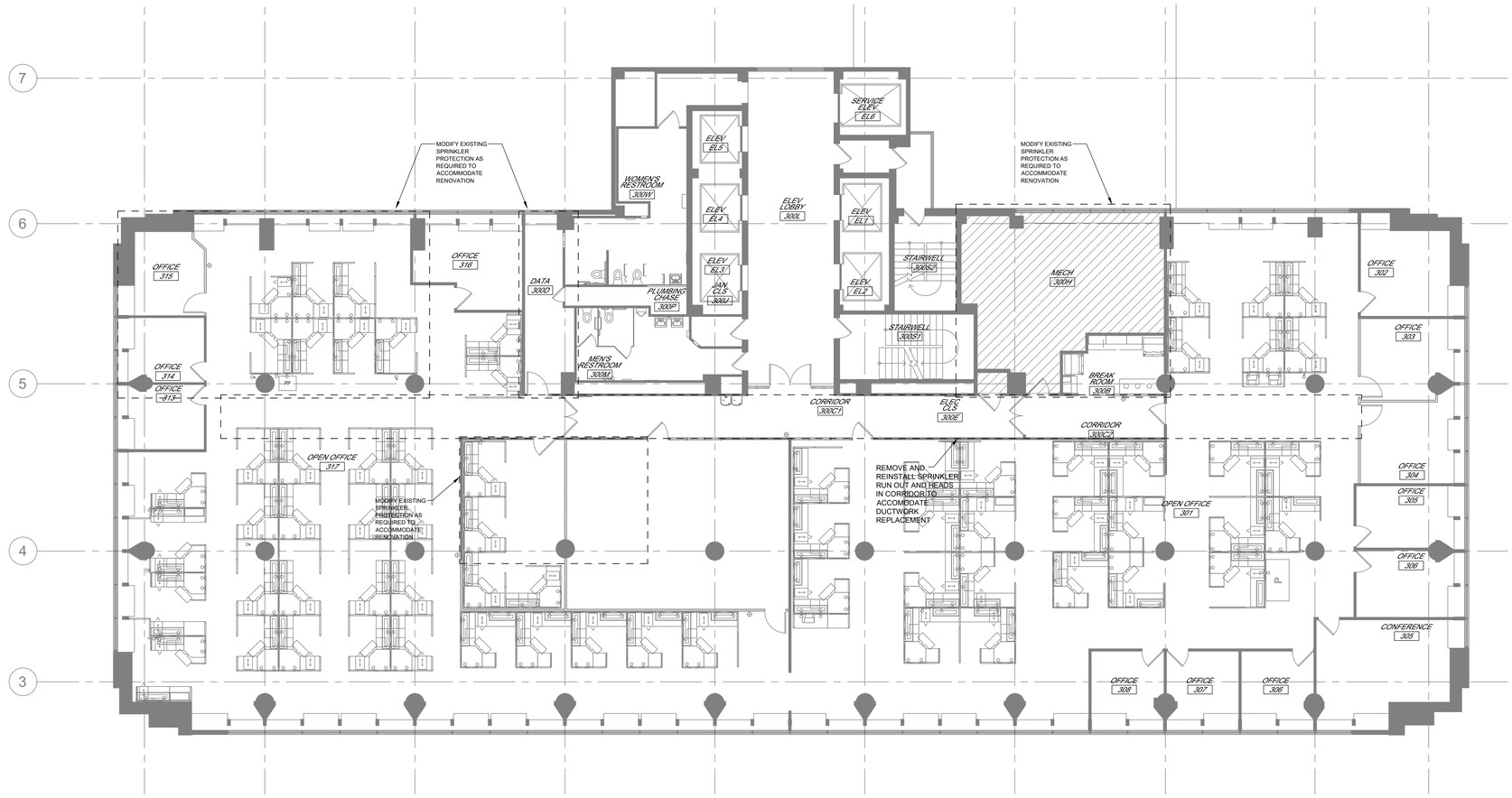
CAD DWG FILE:FP3.2-075107.001
DRAWN BY: AM
CHECKED BY: EP
DESIGNED BY: JW

SHEET TITLE:
SECOND FLOOR PLAN -FIRE PROTECTION

SHEET NUMBER:
FP3.2

148 OF 244 SHEETS

DATE : August 31, 2023



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THIRD FLOOR PLAN - FIRE PROTECTION

1/8" = 1'-0"

SHEET IS PLOTTED TO SCALE IF ADJACENT LINE MEASURES 1 INCH

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205 JEFFERSON STREET
JEFFERSON CITY, MO 65101

PROJECT # O1911-01
SITE # 1001
ASSET # 3101001057

REVISION:
DATE:
REVISION:
DATE:
REVISION:
DATE:
ISSUE DATE:

CAD DWG FILE: FP3.3-075107.001
DRAWN BY: AM
CHECKED BY: EP
DESIGNED BY: JW

SHEET TITLE:
THIRD FLOOR PLAN -FIRE PROTECTION

SHEET NUMBER:
FP3.3

149 OF 244 SHEETS

DATE : August 31, 2023

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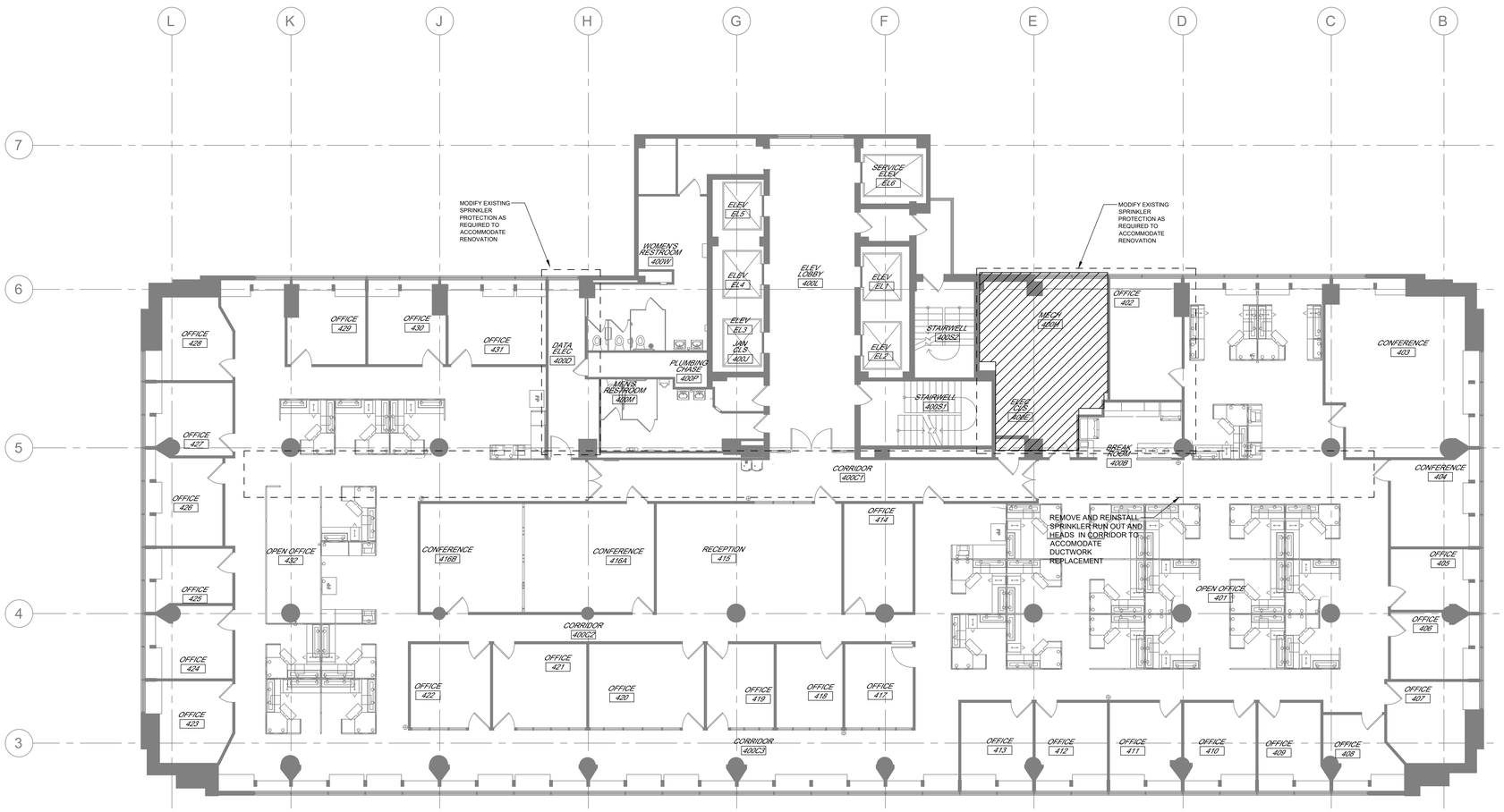

FOURTH FLOOR PLAN - FIRE PROTECTION

1/8" = 1'-0"

SHEET IS PLOTTED TO SCALE IF ADJACENT LINE MEASURES 1 INCH

FIRE SPRINKLER LEGEND

- AREA TO BE PROTECTED AS LIGHT HAZARD.
- AREA TO BE PROTECTED AS ORDINARY HAZARD GROUP 1.
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STATE OF MISSOURI
MICHAEL L. PARSON, GOVERNOR

PHILIP J. WENTZ NUMBER E-29111 REGISTERED PROFESSIONAL ENGINEER STATE OF MISSOURI

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PROJECT # O1911-01
SITE # 1001
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CAD DWG FILE: FP3.4-075107.001
DRAWN BY: AM
CHECKED BY: EP
DESIGNED BY: JW

SHEET TITLE:
FOURTH FLOOR PLAN -FIRE PROTECTION

SHEET NUMBER:
FP3.4

150 OF 244 SHEETS

DATE : August 31, 2023

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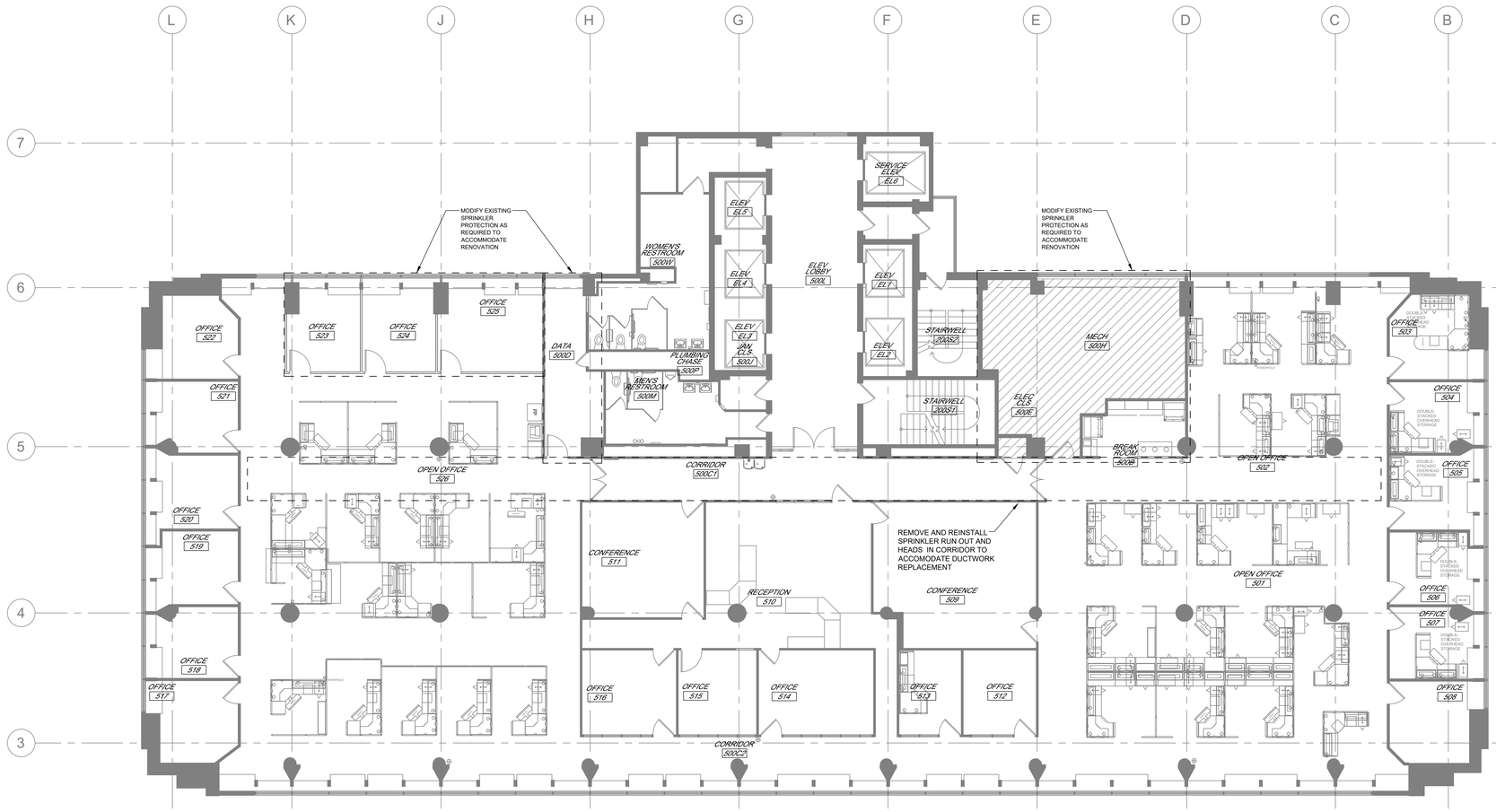

FIFTH FLOOR PLAN - FIRE PROTECTION

1/8" = 1'-0"

SHEET IS PLOTTED TO SCALE IF ADJACENT LINE MEASURES 1 INCH

FIRE SPRINKLER LEGEND

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8. SPRINKLER HEADS ARE TO BE COORDINATED WITH ALL DIFFUSERS, SPEAKERS, LIGHTING FIXTURES AND CEILING SYSTEMS. SPACING OF SPRINKLER HEADS SHALL BE IN ACCORDANCE WITH NFPA 13 AND THE LISTING OF THE SPRINKLER.
9. PROVIDE SPRINKLERS UNDER ALL EXPOSED DUCTWORK OVER 48" WIDE AND SPACE HEADS AROUND ALL OBSTRUCTIONS IN ACCORDANCE WITH NFPA 13 GUIDELINES.
10. ALL SPRINKLER HEADS SHALL BE CENTERED IN ACOUSTICAL CEILING TILES (@ QUARTER POINTS IN 2'X4' TILES & MID POINTS OF 2'X2').
11. FIRE STOP ALL PENETRATIONS OF SMOKE/FIRE WALLS, CEILINGS, AND FLOORS. FIRE STOP ASSEMBLIES SHALL MEET ASTM E-814.
12. ALL DRAIN PIPING SHALL BE GALVANIZED PIPE AND FITTINGS, BOTH INSIDE AND OUTSIDE OF THE PIPE AND FITTINGS.
13. PROVIDE A PERMANENTLY ATTACHED NAME TAG ATTACHED TO THE RISER AND/OR SPRINKLER ZONE CONNECTION STATING THE REQUIRED DESIGN CRITERIA FOR EACH HYDRAULICALLY DESIGNED SYSTEM.
14. PROVIDE SPRINKLER GUARDS ON ALL HEADS IN ALL AREAS IN ACCORDANCE WITH THE SPECIFICATION. AREAS INCLUDE BUT NOT LIMITED TO: MECHANICAL EQUIPMENT ROOMS, JANITOR'S CLOSETS AND OTHER STORAGE ROOMS, DATA ROOMS, ELECTRICAL ROOMS AND CORRIDOR'S WITHOUT CEILINGS WHERE SPRINKLERS ARE INSTALLED LESS THAN 8'-0" A.F.F.
15. COORDINATE PIPING WITH ALL ELECTRICAL EQUIPMENT (PANELS, TRANSFORMERS, ETC.) PRIOR TO ANY INSTALLATION. CONTRACTOR SHALL NOT ROUTE ANY PIPING OVER ELECTRICAL PANELS UNDER ANY CIRCUMSTANCES.
16. TAMPER SWITCHES AND FLOW SWITCHES SHALL BE INSTALLED AT ALL CONTROL VALVES. ALL CONTROL VALVES SHALL ALSO BE LOCKED. CONTRACTOR SHALL TURN OVER KEYS TO OWNER'S REPRESENTATIVE AT END OF PROJECT.
17. INSTALL DRAIN VALVES AND PLUGS FOR ALL TRAPPED SECTIONS OF PIPE PER NFPA 13.
18. ALL SPRINKLER ZONE VALVE LOCATIONS SHALL BE IDENTIFIED PER NFPA.

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JEFFERSON STATE
OFFICE BUILDING
205 JEFFERSON STREET
JEFFERSON CITY, MO 65101

PROJECT # O1911-01
SITE # 1001
ASSET # 3101001057

REVISION:
DATE:
REVISION:
DATE:
REVISION:
DATE:
ISSUE DATE:

CAD DWG FILE:FP3.5-075107.001
DRAWN BY: AM
CHECKED BY: EP
DESIGNED BY: JW

SHEET TITLE:
FIFTH FLOOR PLAN -FIRE PROTECTION

SHEET NUMBER:
FP3.5

151 OF 244 SHEETS

DATE : August 31, 2023

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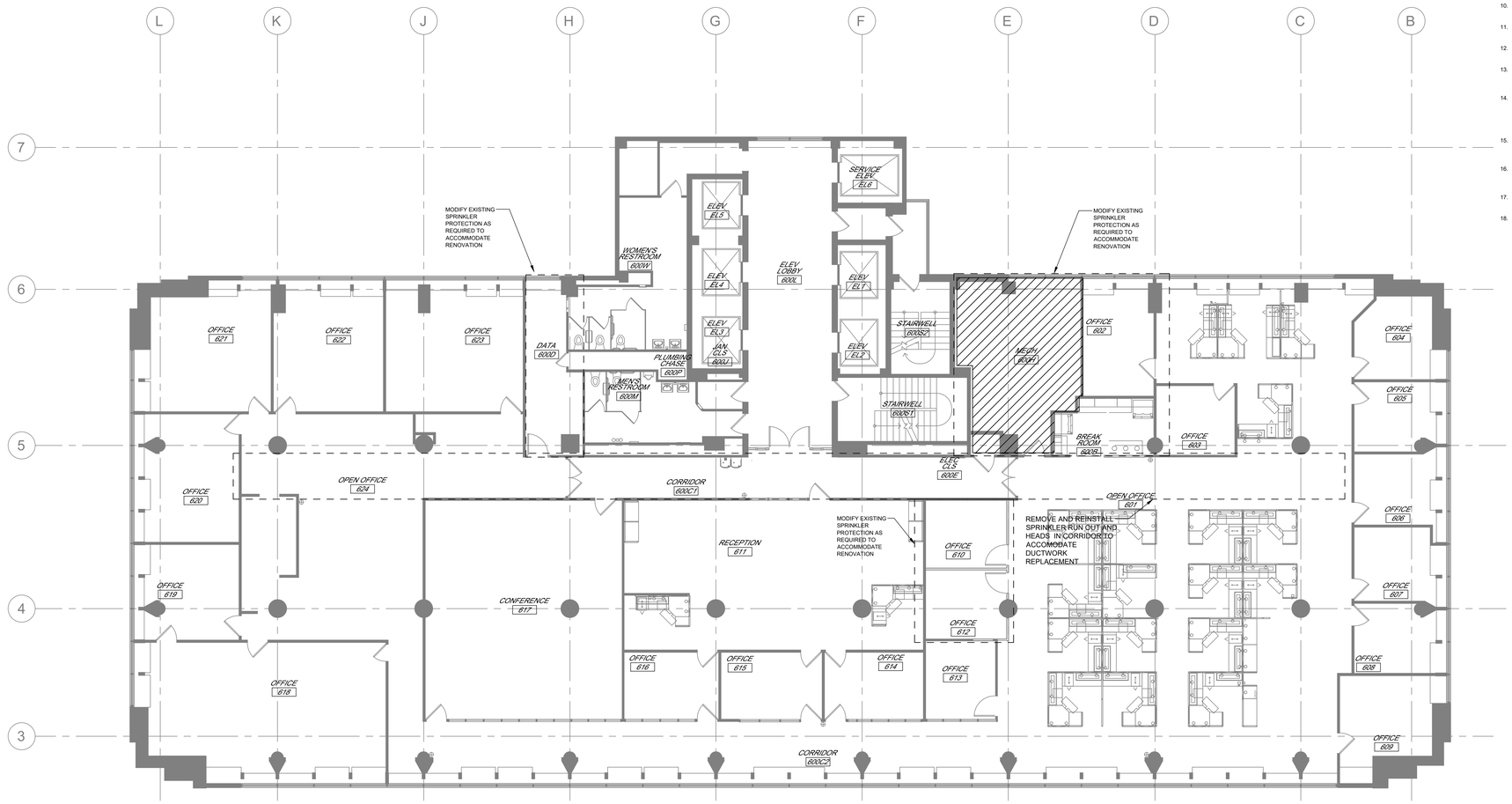

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SIXTH FLOOR PLAN - FIRE PROTECTION

1/8" = 1'-0"

SHEET IS PLOTTED TO SCALE IF ADJACENT LINE MEASURES 1 INCH

FIRE SPRINKLER LEGEND

- AREA TO BE PROTECTED AS LIGHT HAZARD.
- AREA TO BE PROTECTED AS ORDINARY HAZARD GROUP 1.
- AREA TO BE PROTECTED AS ORDINARY HAZARD GROUP 2.
- INDICATES BOUNDARY OF FIRE PROTECTION ZONE.

GENERAL NOTES

1. FIRE PROTECTION SYSTEM TO COMPLY WITH NFPA STANDARDS AND ALL NATIONAL AND LOCAL CODES/ORDINANCES/AMENDMENTS. BUILDING SHALL BE FULLY SPRINKLERED.
2. PROVIDE NFPA LIGHT HAZARD COVERAGE WITH A DESIGN DENSITY OF 0.10 GPM/SQ.FT. OVER 1500 SQ.F.T UNLESS NOTED OTHERWISE. REFER TO SPECIFICATION ARTICLE 210016 FOR ALL DESIGN DENSITIES BY SPACE TYPE.
3. CONTRACTOR SHALL PROVIDE HYDRAULIC CALCULATIONS PROVING SYSTEM COMPLIANCE BASED UPON NFPA 13.
4. FINAL INSPECTION AND APPROVAL BY LOCAL FIRE MARSHAL AND ARCHITECT/ENGINEER.
5. SPRINKLER SHOP DRAWINGS, HYDRAULIC CALCULATIONS AND MATERIAL SUBMITTALS SHALL BE SUBMITTED TO THE OWNER, ARCHITECT/ENGINEER AND LOCAL FIRE MARSHAL AND SHALL BE APPROVED PRIOR TO ANY INSTALLATION.
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PROJECT # O1911-01
SITE # 1001
ASSET # 3101001057

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CAD DWG FILE: FP3.6-075107.001
DRAWN BY: AM
CHECKED BY: EP
DESIGNED BY: JW

SHEET TITLE:
SIXTH FLOOR PLAN -FIRE PROTECTION

SHEET NUMBER:
FP3.6

152 OF 244 SHEETS

DATE : August 31, 2023

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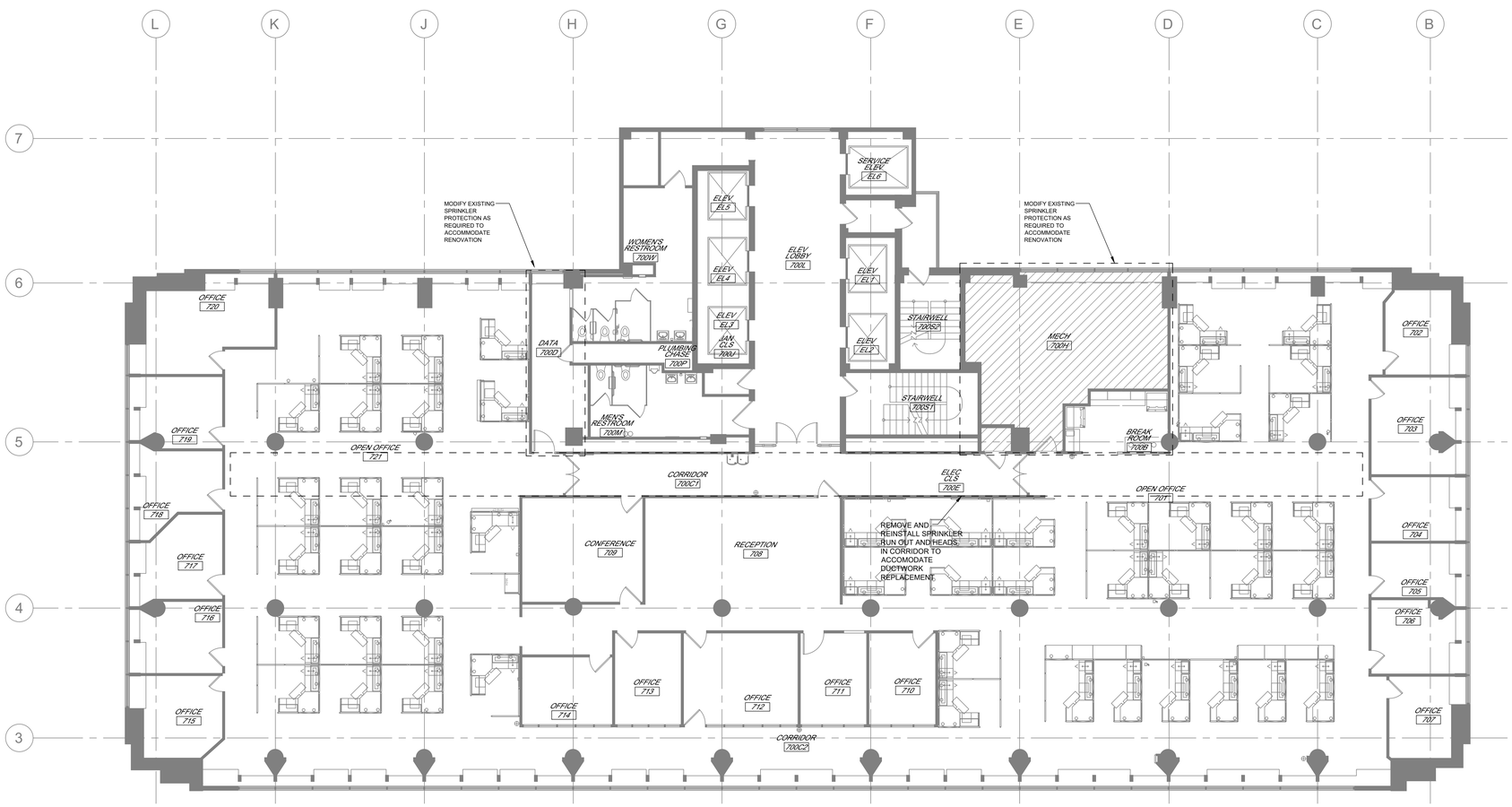

SEVENTH FLOOR PLAN - FIRE PROTECTION

1/8" = 1'-0"

SHEET IS PLOTTED TO SCALE IF ADJACENT LINE MEASURES 1 INCH

FIRE SPRINKLER LEGEND

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- AREA TO BE PROTECTED AS ORDINARY HAZARD GROUP 1.
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RENOVATE MECHANICAL/ ELECTRICAL/LIFE-SAFETY/ STATE OFFICE BUILDING

JEFFERSON STATE OFFICE BUILDING
205 JEFFERSON STREET
JEFFERSON CITY, MO 65101

PROJECT # O1911-01
SITE # 1001
ASSET # 3101001057

REVISION:
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DATE:
ISSUE DATE:

CAD DWG FILE:FP3.6-075107.001
DRAWN BY: AM
CHECKED BY: EP
DESIGNED BY: JW

SHEET TITLE:
SEVENTH FLOOR PLAN -FIRE PROTECTION

SHEET NUMBER:
FP3.7

153 OF 244 SHEETS

DATE : August 31, 2023

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EIGHTH FLOOR PLAN - FIRE PROTECTION

1/8" = 1'-0"

SHEET IS PLOTTED TO SCALE IF ADJACENT LINE MEASURES 1 INCH

FIRE SPRINKLER LEGEND

- AREA TO BE PROTECTED AS LIGHT HAZARD.
- AREA TO BE PROTECTED AS ORDINARY HAZARD GROUP 1.
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DRAWN BY: AM
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DESIGNED BY: JW

SHEET TITLE:
EIGHTH
FLOOR PLAB
-FIRE PROTECTION

SHEET NUMBER:
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154 OF 244 SHEETS

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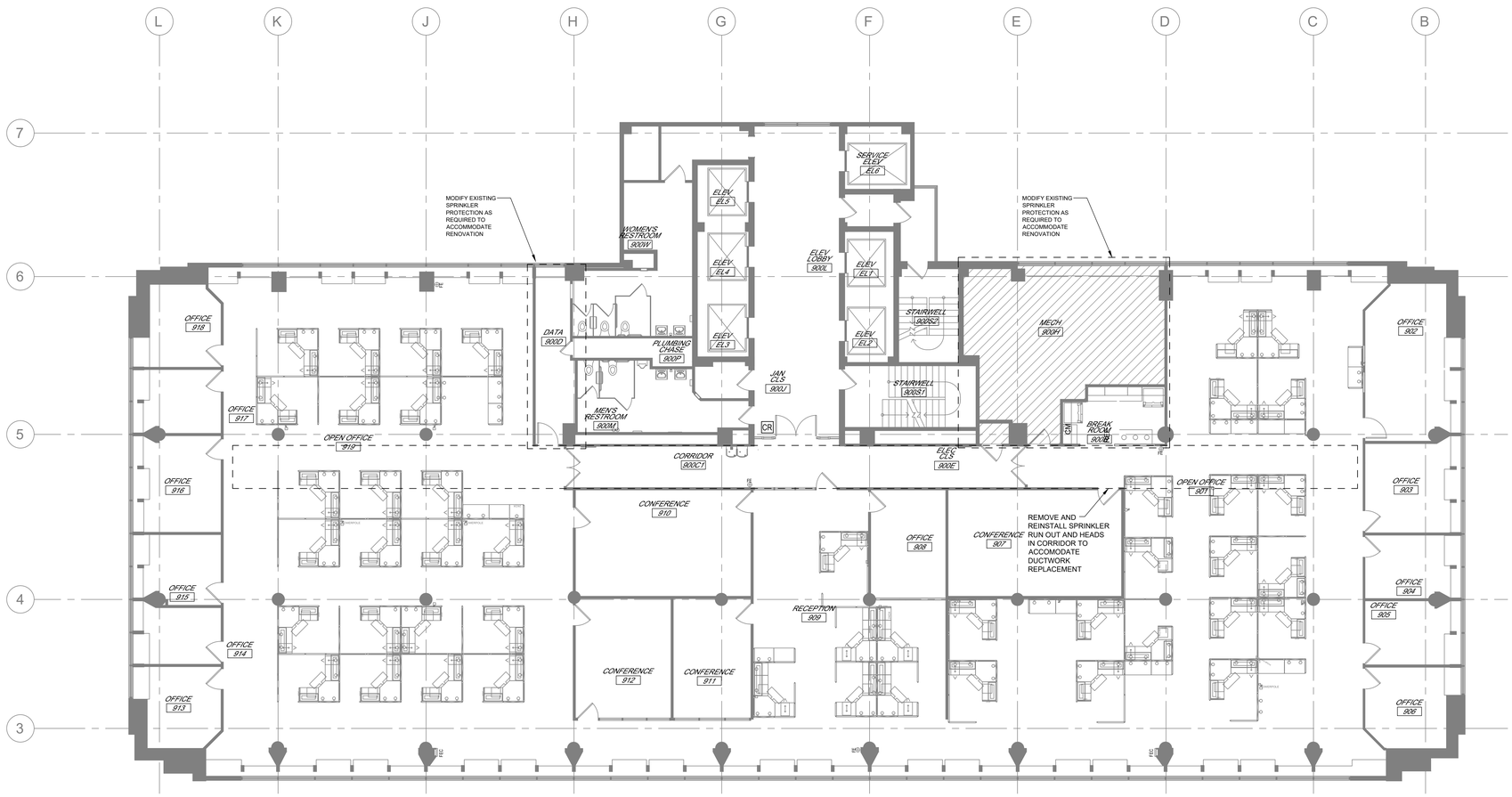

NINTH FLOOR PLAN - FIRE PROTECTION

1/8" = 1'-0"

N

FIRE SPRINKLER LEGEND

- AREA TO BE PROTECTED AS LIGHT HAZARD.
- AREA TO BE PROTECTED AS ORDINARY HAZARD GROUP 1.
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16. TAMPER SWITCHES AND FLOW SWITCHES SHALL BE INSTALLED AT ALL CONTROL VALVES. ALL CONTROL VALVES SHALL ALSO BE LOCKED. CONTRACTOR SHALL TURN OVER KEYS TO OWNER'S REPRESENTATIVE AT END OF PROJECT.
17. INSTALL DRAIN VALVES AND PLUGS FOR ALL TRAPPED SECTIONS OF PIPE PER NFPA 13.
18. ALL SPRINKLER ZONE VALVE LOCATIONS SHALL BE IDENTIFIED PER NFPA.

SHEET IS PLOTTED TO SCALE IF ADJACENT LINE MEASURES 1 INCH

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RENOVATE MECHANICAL/ ELECTRICAL/LIFE-SAFETY/ STATE OFFICE BUILDING

JEFFERSON STATE
OFFICE BUILDING
205 JEFFERSON STREET
JEFFERSON CITY, MO 65101

PROJECT # O1911-01
SITE # 1001
ASSET # 3101001057

REVISION:
DATE:
REVISION:
DATE:
REVISION:
DATE:
ISSUE DATE:

CAD DWG FILE:FP3.9-075107.001
DRAWN BY: AM
CHECKED BY: EP
DESIGNED BY: JW

SHEET TITLE:
NINTH
FLOOR PLAN
-FIRE PROTECTION

SHEET NUMBER:
FP3.9

155 OF 244 SHEETS

DATE : August 31, 2023

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TENTH FLOOR PLAN - FIRE PROTECTION

1/8" = 1'-0"

0 2' 4' 6' 8'
1/8"=1'

FIRE SPRINKLER LEGEND

- AREA TO BE PROTECTED AS LIGHT HAZARD.
- AREA TO BE PROTECTED AS ORDINARY HAZARD GROUP 1.
- AREA TO BE PROTECTED AS ORDINARY HAZARD GROUP 2.
- INDICATES BOUNDARY OF FIRE PROTECTION ZONE.

GENERAL NOTES

1. FIRE PROTECTION SYSTEM TO COMPLY WITH NFPA STANDARDS AND ALL NATIONAL AND LOCAL CODES/ORDINANCES/AMENDMENTS. BUILDING SHALL BE FULLY SPRINKLERED.
2. PROVIDE NFPA LIGHT HAZARD COVERAGE WITH A DESIGN DENSITY OF 0.10 GPM/SQ.FT. OVER 1500 SQ.F.T UNLESS NOTED OTHERWISE. REFER TO SPECIFICATION ARTICLE 210016 FOR ALL DESIGN DENSITIES BY SPACE TYPE.
3. CONTRACTOR SHALL PROVIDE HYDRAULIC CALCULATIONS PROVING SYSTEM COMPLIANCE BASED UPON NFPA 13.
4. FINAL INSPECTION AND APPROVAL BY LOCAL FIRE MARSHAL AND ARCHITECT/ENGINEER.
5. SPRINKLER SHOP DRAWINGS, HYDRAULIC CALCULATIONS AND MATERIAL SUBMITTALS SHALL BE SUBMITTED TO THE OWNER, ARCHITECT/ENGINEER AND LOCAL FIRE MARSHAL AND SHALL BE APPROVED PRIOR TO ANY INSTALLATION.
6. CONTRACTOR SHALL PROVIDE OWNER AND ENGINEER/ARCHITECT WITH AS-BUILT DRAWINGS AFTER PROJECT COMPLETION.
7. CONTRACTOR SHALL ENSURE NEW PIPING IS ROUTED AND SIZED PROPERLY. CONTRACTOR SHALL PROVIDE ANY ADDITIONAL OFFSETS REQUIRED FOR PROPER INSTALLATION AND COORDINATION WITH OTHER TRADES, ARCHITECTURAL FEATURES AND/OR STRUCTURE.
8. SPRINKLER HEADS ARE TO BE COORDINATED WITH ALL DIFFUSERS, SPEAKERS, LIGHTING FIXTURES AND CEILING SYSTEMS. SPACING OF SPRINKLER HEADS SHALL BE IN ACCORDANCE WITH NFPA 13 AND THE LISTING OF THE SPRINKLER.
9. PROVIDE SPRINKLERS UNDER ALL EXPOSED DUCTWORK OVER 48" WIDE AND SPACE HEADS AROUND ALL OBSTRUCTIONS IN ACCORDANCE WITH NFPA 13 GUIDELINES.
10. ALL SPRINKLER HEADS SHALL BE CENTERED IN ACOUSTICAL CEILING TILES (@ QUARTER POINTS IN 2'X4' TILES & MID POINTS OF 2'X2').
11. FIRE STOP ALL PENETRATIONS OF SMOKE/FIRE WALLS, CEILINGS, AND FLOORS. FIRE STOP ASSEMBLIES SHALL MEET ASTM E-814.
12. ALL DRAIN PIPING SHALL BE GALVANIZED PIPE AND FITTINGS, BOTH INSIDE AND OUTSIDE OF THE PIPE AND FITTINGS.
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MICHAEL L. PARSON, GOVERNOR

PHILIP J WENTZ
NUMBER E-29111
PROFESSIONAL ENGINEER
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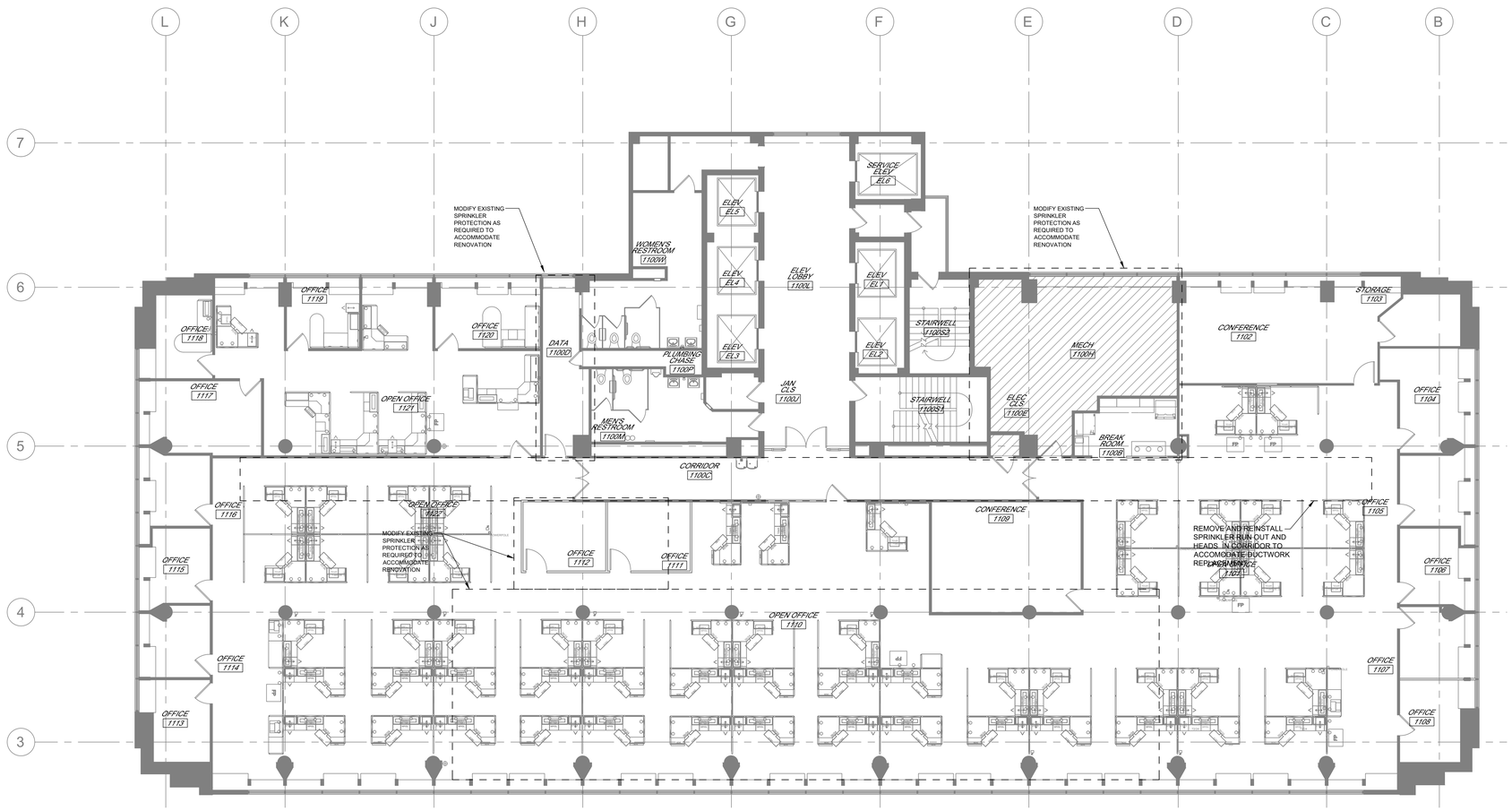
CAD DWG FILE:FP3.10-075107.001
DRAWN BY: AM
CHECKED BY: EP
DESIGNED BY: JW

SHEET TITLE:
TENTH FLOOR PLAN -FIRE PROTECTION

SHEET NUMBER:
FP3.10

156 OF 244 SHEETS

DATE : August 31, 2023



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ELEVENTH FLOOR PLAN - FIRE PROTECTION

1/8" = 1'-0"

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FIRE SPRINKLER LEGEND

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- AREA TO BE PROTECTED AS ORDINARY HAZARD GROUP 1.
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PROJECT # O1911-01
SITE # 1001
ASSET # 3101001057

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CAD DWG FILE: FP3.11-075107.001
DRAWN BY: AM
CHECKED BY: EP
DESIGNED BY: JW

SHEET TITLE:
ELEVENTH FLOOR PLAN -FIRE PROTECTION

SHEET NUMBER:
FP3.11

157 OF 244 SHEETS

DATE : August 31, 2023

FIRE SPRINKLER LEGEND

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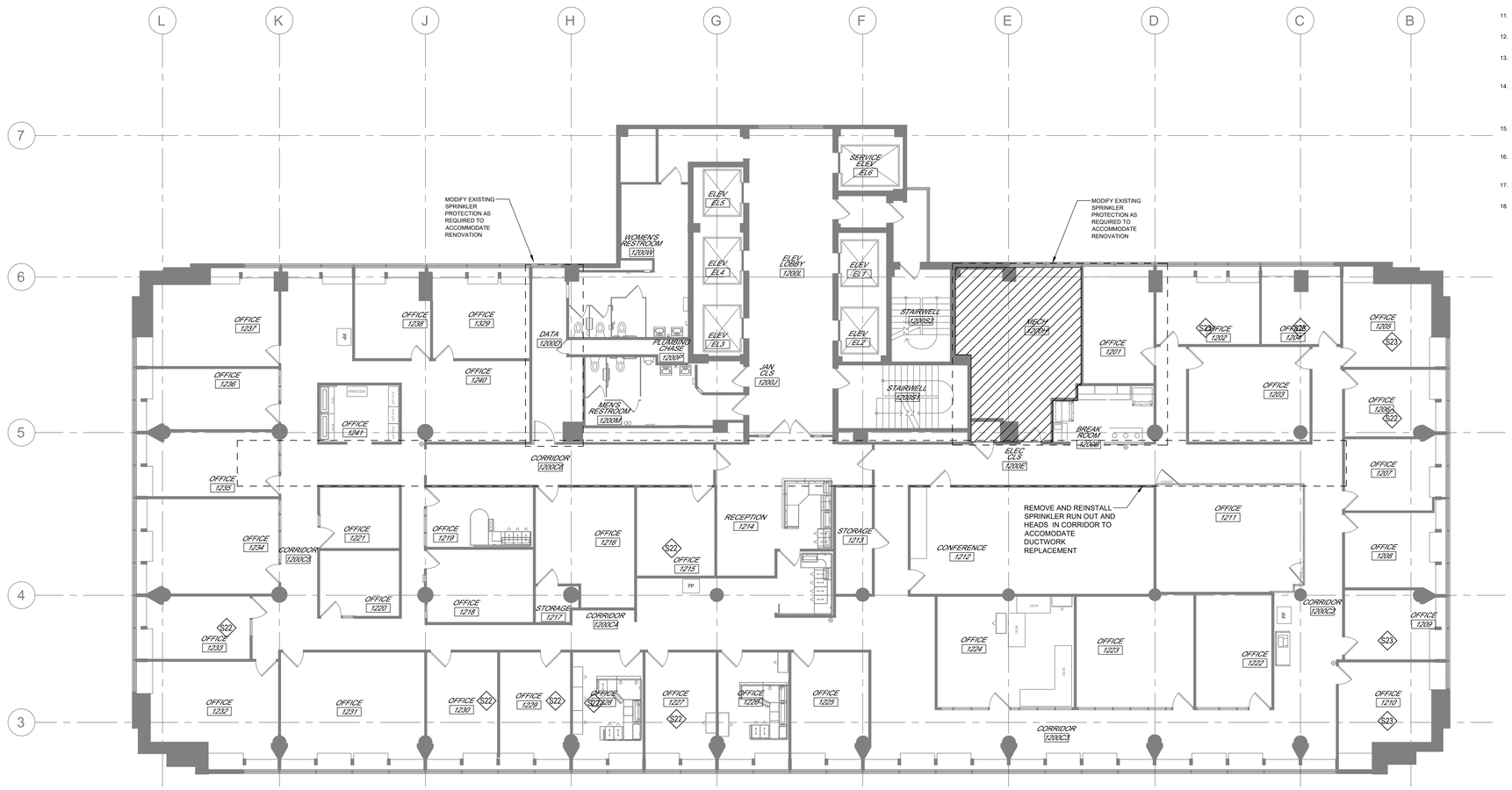

TWELFTH FLOOR PLAN - FIRE PROTECTION
1/8" = 1'-0"

SHEET IS PLOTTED TO SCALE IF ADJACENT LINE MEASURES 1 INCH

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DESIGNED BY: JW

SHEET TITLE:
TWELFTH FLOOR PLAN -FIRE PROTECTION

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158 OF 244 SHEETS

DATE : August 31, 2023

THIRTEENTH FLOOR PLAN - FIRE PROTECTION

1/8" = 1'-0"

N

SHEET IS PLOTTED TO SCALE IF ADJACENT LINE MEASURES 1 INCH

FIRE SPRINKLER LEGEND

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RENOVATE MECHANICAL/ ELECTRICAL/LIFE-SAFETY/ STATE OFFICE BUILDING

JEFFERSON STATE OFFICE BUILDING
205 JEFFERSON STREET
JEFFERSON CITY, MO 65101

PROJECT # O1911-01
SITE # 1001
ASSET # 3101001057

REVISION:
DATE:
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ISSUE DATE:

CAD DWG FILE:FP3.13-075107.001
DRAWN BY: AM
CHECKED BY: EP
DESIGNED BY: JW

SHEET TITLE:
THIRTEENTH FLOOR PLAN -FIRE PROTECTION

SHEET NUMBER:
FP3.13

159 OF 244 SHEETS

DATE : August 31, 2023

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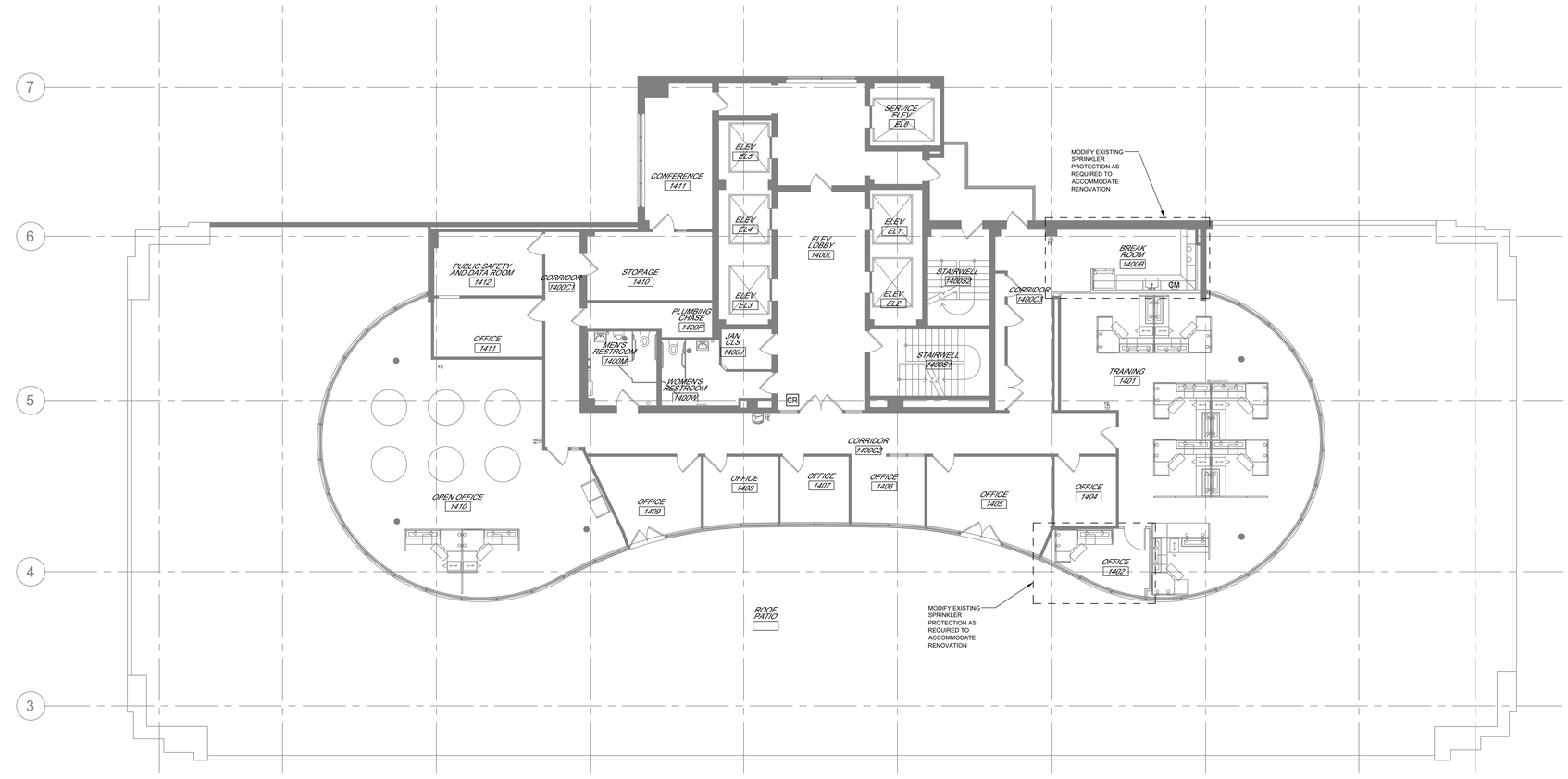

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FOURTEENTH FLOOR PLAN - FIRE PROTECTION

1/8" = 1'-0"

SHEET IS PLOTTED TO SCALE IF ADJACENT LINE MEASURES 1 INCH

FIRE SPRINKLER LEGEND

- AREA TO BE PROTECTED AS LIGHT HAZARD.
- AREA TO BE PROTECTED AS ORDINARY HAZARD GROUP 1.
- AREA TO BE PROTECTED AS ORDINARY HAZARD GROUP 2.
- INDICATES BOUNDARY OF FIRE PROTECTION ZONE.

GENERAL NOTES

1. FIRE PROTECTION SYSTEM TO COMPLY WITH NFPA STANDARDS AND ALL NATIONAL AND LOCAL CODES/ORDINANCES/AMENDMENTS. BUILDING SHALL BE FULLY SPRINKLERED.
2. PROVIDE NFPA LIGHT HAZARD COVERAGE WITH A DESIGN DENSITY OF 0.10 GPM/SQ.FT. OVER 1500 SQ.F.T UNLESS NOTED OTHERWISE. REFER TO SPECIFICATION ARTICLE 210016 FOR ALL DESIGN DENSITIES BY SPACE TYPE.
3. CONTRACTOR SHALL PROVIDE HYDRAULIC CALCULATIONS PROVING SYSTEM COMPLIANCE BASED UPON NFPA 13.
4. FINAL INSPECTION AND APPROVAL BY LOCAL FIRE MARSHAL AND ARCHITECT/ENGINEER.
5. SPRINKLER SHOP DRAWINGS, HYDRAULIC CALCULATIONS AND MATERIAL SUBMITTALS SHALL BE SUBMITTED TO THE OWNER, ARCHITECT/ENGINEER AND LOCAL FIRE MARSHAL AND SHALL BE APPROVED PRIOR TO ANY INSTALLATION.
6. CONTRACTOR SHALL PROVIDE OWNER AND ENGINEER/ARCHITECT WITH AS-BUILT DRAWINGS AFTER PROJECT COMPLETION.
7. CONTRACTOR SHALL ENSURE NEW PIPING IS ROUTED AND SIZED PROPERLY. CONTRACTOR SHALL PROVIDE ANY ADDITIONAL OFFSETS REQUIRED FOR PROPER INSTALLATION AND COORDINATION WITH OTHER TRADES, ARCHITECTURAL FEATURES AND/OR STRUCTURE.
8. SPRINKLER HEADS ARE TO BE COORDINATED WITH ALL DIFFUSERS, SPEAKERS, LIGHTING FIXTURES AND CEILING SYSTEMS. SPACING OF SPRINKLER HEADS SHALL BE IN ACCORDANCE WITH NFPA 13 AND THE LISTING OF THE SPRINKLER.
9. PROVIDE SPRINKLERS UNDER ALL EXPOSED DUCTWORK OVER 48" WIDE AND SPACE HEADS AROUND ALL OBSTRUCTIONS IN ACCORDANCE WITH NFPA 13 GUIDELINES.
10. ALL SPRINKLER HEADS SHALL BE CENTERED IN ACOUSTICAL CEILING TILES (@ QUARTER POINTS IN 2'X4' TILES & MID POINTS OF 2'X2').
11. FIRE STOP ALL PENETRATIONS OF SMOKE/FIRE WALLS, CEILINGS, AND FLOORS. FIRE STOP ASSEMBLIES SHALL MEET ASTM E-814.
12. ALL DRAIN PIPING SHALL BE GALVANIZED PIPE AND FITTINGS, BOTH INSIDE AND OUTSIDE OF THE PIPE AND FITTINGS.
13. PROVIDE A PERMANENTLY ATTACHED NAME TAG ATTACHED TO THE RISER AND/OR SPRINKLER ZONE CONNECTION STATING THE REQUIRED DESIGN CRITERIA FOR EACH HYDRAULICALLY DESIGNED SYSTEM.
14. PROVIDE SPRINKLER GUARDS ON ALL HEADS IN ALL AREAS IN ACCORDANCE WITH THE SPECIFICATION. AREAS INCLUDE BUT NOT LIMITED TO: MECHANICAL EQUIPMENT ROOMS, JANITOR'S CLOSETS AND OTHER STORAGE ROOMS, DATA ROOMS, ELECTRICAL ROOMS AND CORRIDOR'S WITHOUT CEILINGS WHERE SPRINKLERS ARE INSTALLED LESS THAN 8'-0" A.F.F.
15. COORDINATE PIPING WITH ALL ELECTRICAL EQUIPMENT (PANELS, TRANSFORMERS, ETC.) PRIOR TO ANY INSTALLATION. CONTRACTOR SHALL NOT ROUTE ANY PIPING OVER ELECTRICAL PANELS UNDER ANY CIRCUMSTANCES.
16. TAMPER SWITCHES AND FLOW SWITCHES SHALL BE INSTALLED AT ALL CONTROL VALVES. ALL CONTROL VALVES SHALL ALSO BE LOCKED. CONTRACTOR SHALL TURN OVER KEYS TO OWNER'S REPRESENTATIVE AT END OF PROJECT.
17. INSTALL DRAIN VALVES AND PLUGS FOR ALL TRAPPED SECTIONS OF PIPE PER NFPA 13.
18. ALL SPRINKLER ZONE VALVE LOCATIONS SHALL BE IDENTIFIED PER NFPA.

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OFFICE OF ADMINISTRATION
DIVISION OF FACILITIES MANAGEMENT,
DESIGN AND CONSTRUCTION

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