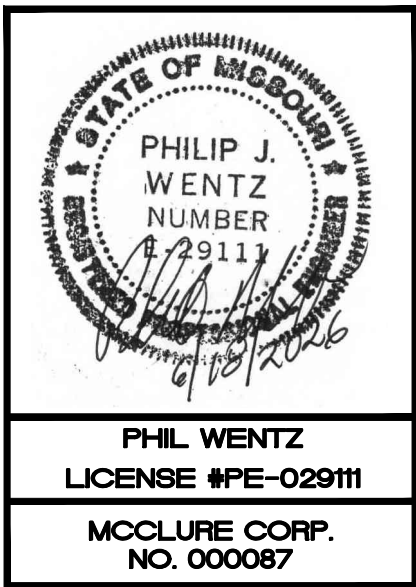


REPLACE HVAC SYSTEM - TROOP G CRIME LAB BUILDING MISSOURI STATE HIGHWAY PATROL WILLOW SPRINGS, MISSOURI

SITE LOCATION MAP



MCCLURE ENGINEERING
1000 Clark Avenue Saint Louis, Missouri 63102
T 314-645-6232 F 314-645-4128 www.McClureeng.com

SHEET INDEX:

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M0.0	MECHANICAL SYMBOL, ABBREVIATIONS, AND DETAILS
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OWNER: STATE OF MISSOURI
MICHAEL L. KEHOE, GOVERNOR

DEPARTMENT OF PUBLIC SAFETY
MISSOURI STATE HIGHWAY PATROL

PROJECT MANAGEMENT: OFFICE OF ADMINISTRATION
DIVISION OF FACILITIES MANAGEMENT,
DESIGN AND CONSTRUCTION

DESIGNER: MCCLURE ENGINEERING

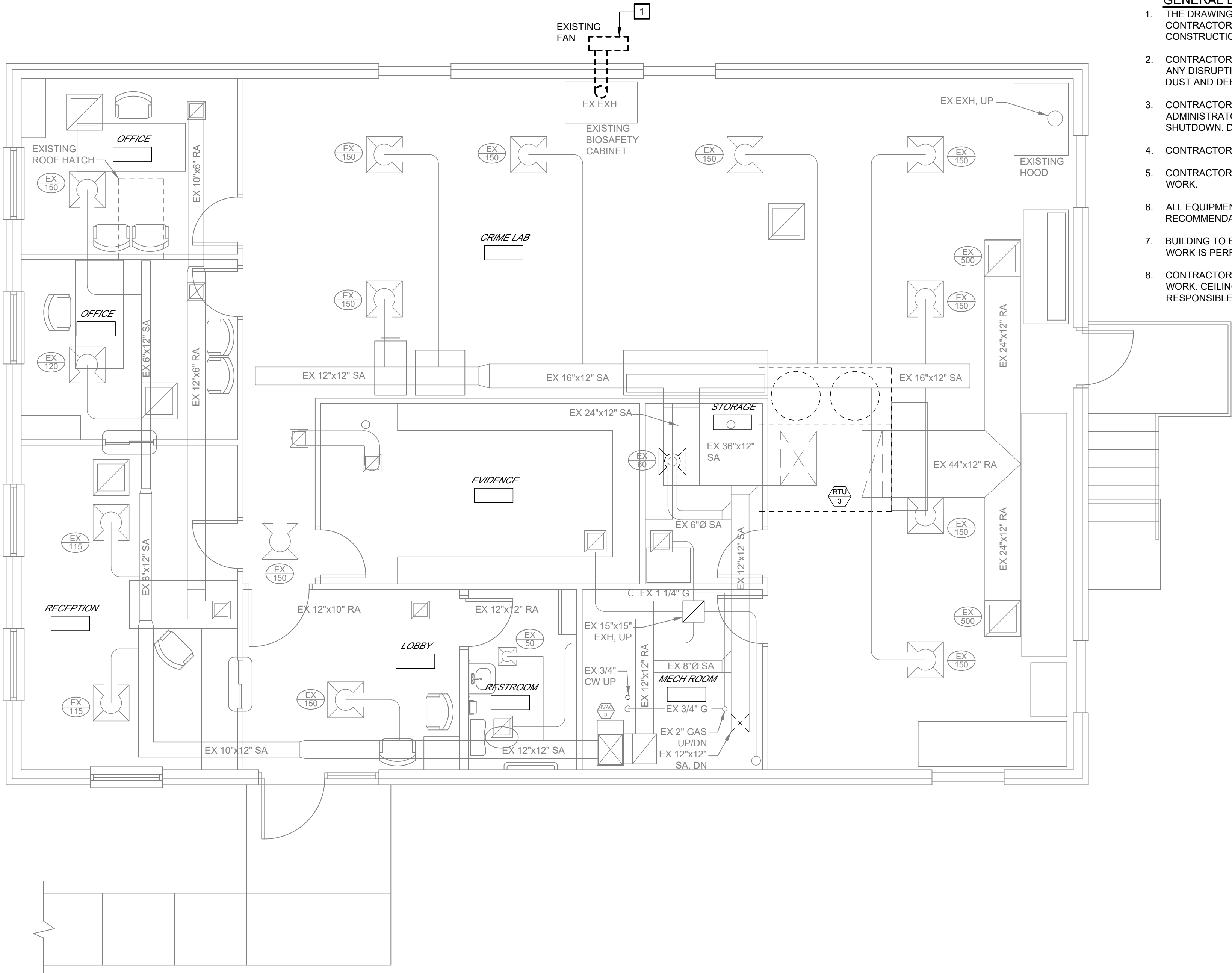
PROJECT NUMBER: R2417-01

SITE NUMBER: 6008
FACILITY NUMBER: 8136008004

ISSUED FOR BID JUNE 18, 2026

SHEET NUMBER:
CS0.1
JUNE 18, 2026
SHEET 1 OF 14

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FIRST FLOOR MECHANICAL DEMOLITION PLAN
SCALE: 1/4" = 1'0"

GENERAL DEMOLITION NOTES:

- THE DRAWINGS WERE PREPARED UTILIZING EXISTING DRAWINGS AND FIELD OBSERVATION. CONTRACTOR SHALL FIELD VERIFY ALL EXISTING CONDITIONS PRIOR TO STARTING WORK. NOTIFY CONSTRUCTION MANAGER IMMEDIATELY OF ANY DISCREPANCIES.
- CONTRACTOR SHALL TAKE EXTREME CARE HANDLING MATERIAL DEBRIS IN AN EFFORT TO AVOID ANY DISRUPTIONS OF ONGOING BUILDING OPERATIONS. PROJECT SHALL BE CLEANED FREE OF DUST AND DEBRIS AT THE END OF THE WORK DAY.
- CONTRACTOR SHALL COORDINATE ANY SHUTDOWN OF UTILITIES WITH THE CONSTRUCTION ADMINISTRATOR. NOTICE FOR SHUTDOWN SHALL BE GIVEN AT LEAST ONE WEEK PRIOR TO SHUTDOWN. DISRUPTIONS OF UTILITIES SHALL BE LIMITED TO FIVE DAYS.
- CONTRACTOR SHALL CHECK-IN EACH DAY WITH THE OWNER'S REP.
- CONTRACTOR SHALL COORDINATE THEIR WORK WITH ALL OTHER TRADES PRIOR TO BEGINNING WORK.
- ALL EQUIPMENT AND MATERIAL SHALL BE INSTALLED ACCORDING TO THE MANUFACTURERS RECOMMENDATIONS AND ALL APPLICABLE CODES.
- BUILDING TO BE OCCUPIED DURING CONSTRUCTION. BARRIERS WILL NEED TO BE IN PLACES AS WORK IS PERFORMED.
- CONTRACTOR IS RESPONSIBLE FOR REMOVING EXISTING CEILING AS REQUIRED TO COMPLETE WORK. CEILING TO BE REINSTALLED AFTER WORK IS COMPLETE IN THE AREA. CONTRACTOR IS RESPONSIBLE FOR REPLACING ANY TILES DAMAGED DURING CONSTRUCTION.

KEYED NOTES

- 1** BID ALTERNATE #1: DEMOLISH EXISTING EXHAUST FAN, FLEXIBLE DUCT (BACK TO PVC ASSEMBLY) AND WALL MOUNTING BRACKET ON EXTERIOR WALL OF BUILDING.

STATE OF MISSOURI
MICHAEL L. KEHOE,
GOVERNOR



PHIL WENTZ
MO Engineering Registration No. PE-029111
MO COA: 000087

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DEPARTMENT OF
PUBLIC SAFETY
MISSOURI STATE
HIGHWAY PATROL

REPLACE HVAC TROOP G
CRIME LAB BUILDING

1226 W. BUSINESS US-60/63
WILLOW SPRINGS, MO 65793

PROJECT # R2417-01
SITE# 6008
FACILITY# 8136008004

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

ISSUE DATE: 6/18/2025

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DESIGNED BY: EMP

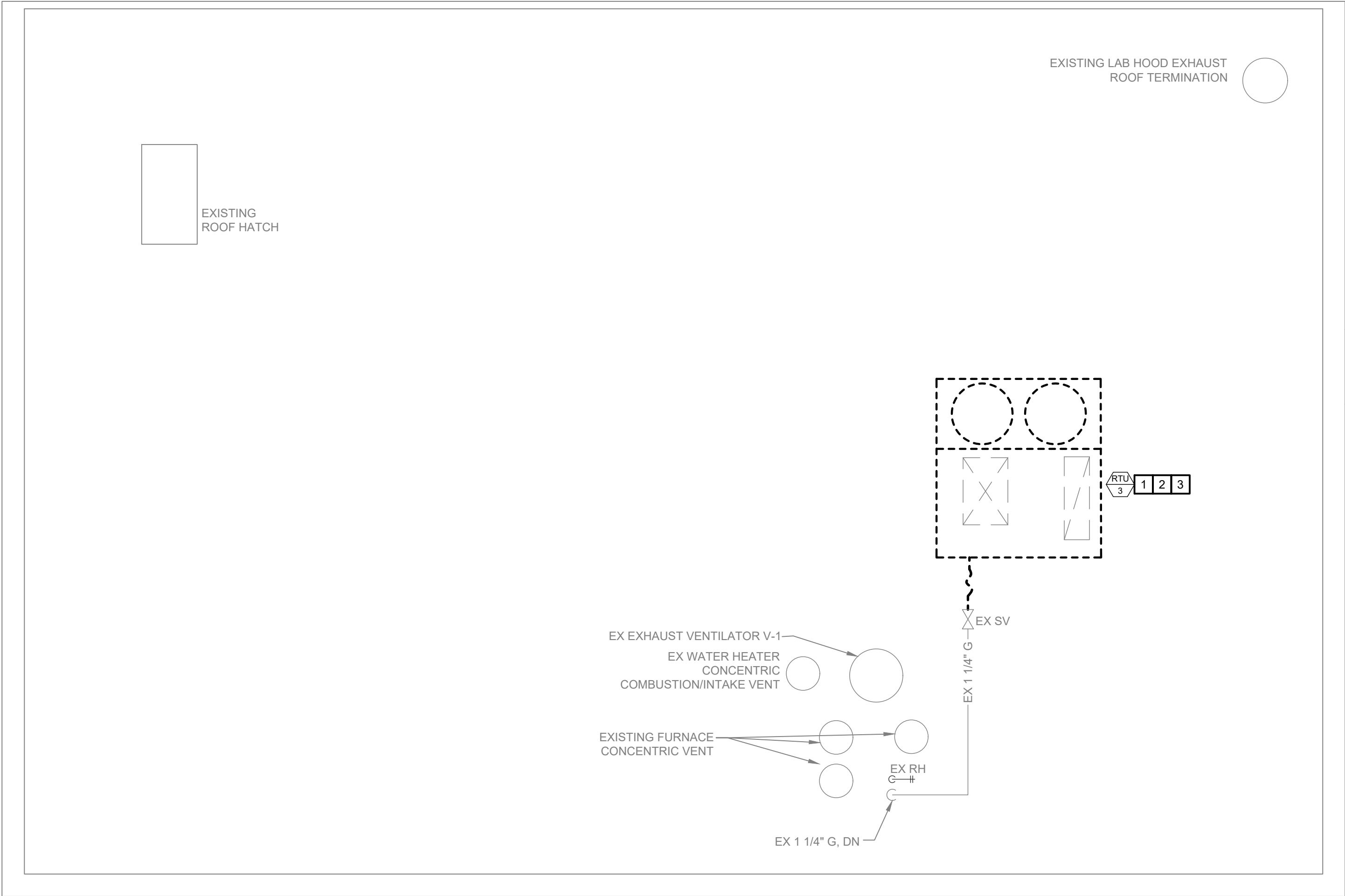
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**FIRST FLOOR
MECHANICAL
DEMOLITION PLAN**

SHEET NUMBER:

MD3.0

3 OF 14 SHEETS
06/18/2026

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ROOF MECHANICAL DEMOLITION PLAN
SCALE: 1/4" = 1'0"
0 1' 2' 4' 1/4"=1'

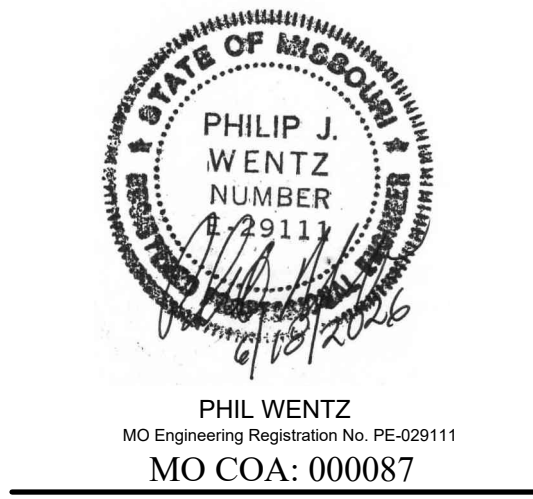
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KEYED NOTES

- 1 EXISTING RTU TO BE DEMOLISHED IN ITS ENTIRETY. EXISTING ROOF CURBS TO REMAIN FOR NEW RTU'S. EXISTING ROOF DECK TO BE PATCHED AS REQUIRED. EXISTING ROOF MEMBRANE TO BE PATCHED AND SEALED WATER TIGHT TO MATCH EXISTING CONDITIONS.
- 2 DEMOLISH EXISTING DRAIN PIPING IN ITS ENTIRETY.
- 3 DEMOLISH EXISTING NATURAL GAS PIPING AND ACCESSORIES BACK TO EXISTING SERVICE VALVE. NEW PIPING TO BE INSTALLED DURING NEW WORK. REFER TO NEW WORK FOR MORE INFORMATION.

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DRAWN BY: CRO
CHECKED BY: EMP
DESIGNED BY: EMP

SHEET TITLE:
**ROOF
MECHANICAL
DEMOLITION PLAN**

SHEET NUMBER:
MD3.1

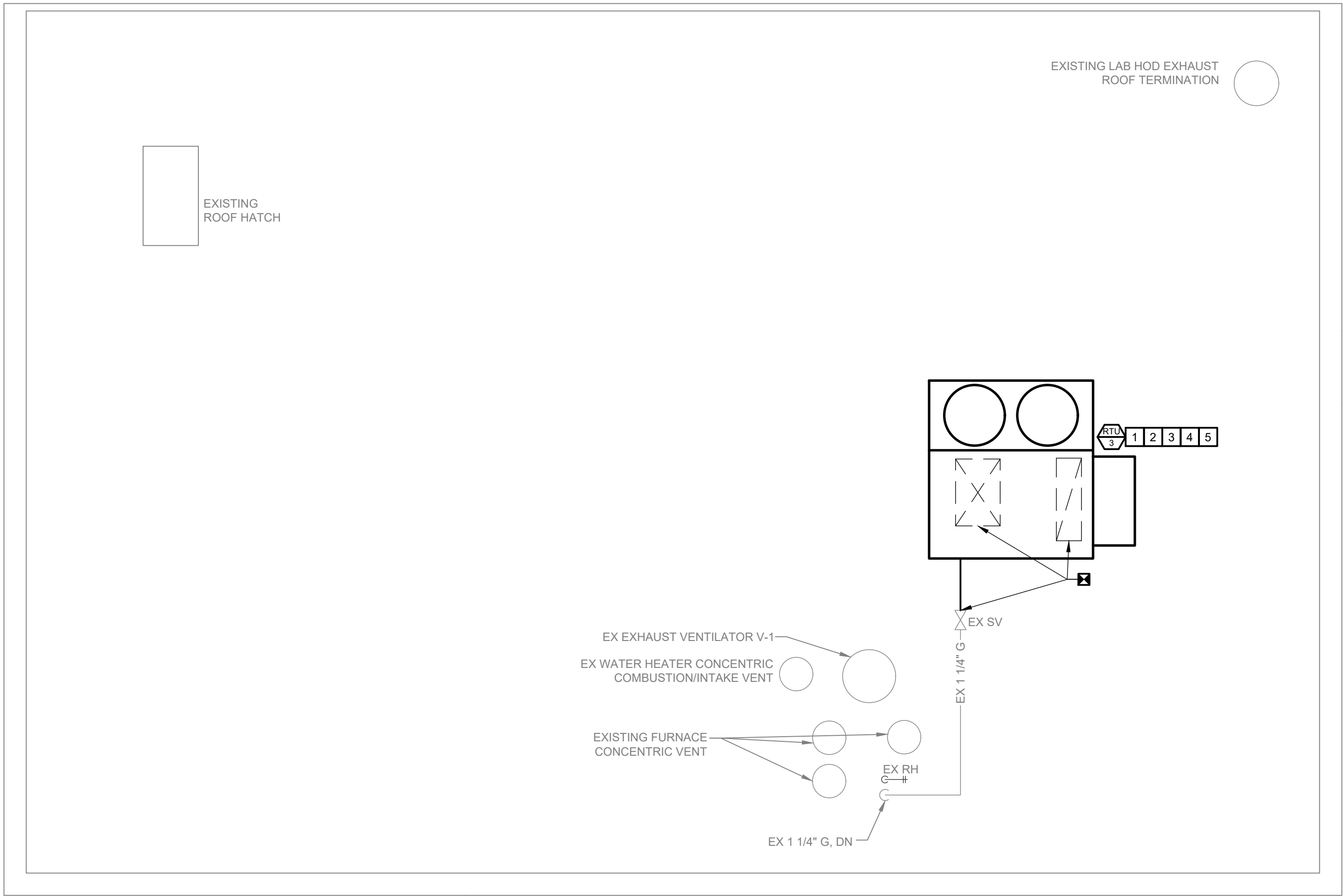
4 OF 14 SHEETS
06/18/2026

5 OF 14 SHEETS
06/18/2026

1 BID ALTERNATE #1: INSTALL NEW EXHAUST FAN ON EXTERIOR WALL. ROUTE NEW 8"Ø RIGID DUCT DOWN AND CONNECT TO EXISTING PVC ASSEMBLY.



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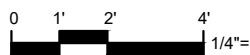


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ROOF MECHANICAL NEW WORK PLAN

SCALE: 1/4" = 1'0"



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KEYED NOTES

- 1

CONTRACTOR TO VERIFY EXISTING CURB DIMENSIONS AND PREPARE EXISTING CURB FOR NEW ADAPTER AND ROOF TOP UNIT.
- 2

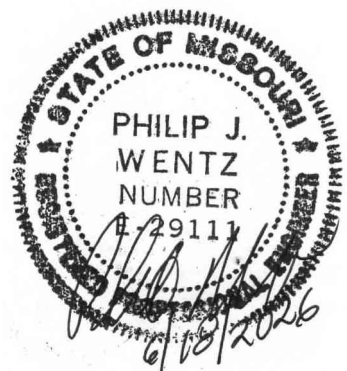
INSTALL NEW GAS PIPING AND SPECIALTIES AS SHOWN. REFER TO M5.1 FOR ADDITIONAL NATURAL GAS PIPING DETAILS.
- 3

CONTRACTOR TO PAINT ALL NEW AND EXISTING NATURAL GAS PIPING YELLOW.
- 4

ROUTE CONDENSATE DRAINS FROM ROOFTOP UNITS OVER TO EXISTING ROOF SCUPPERS.
- 5

EXISTING ROOF DECK TO BE PATCHED AS REQUIRED. EXISTING ROOF MEMBRANE TO BE PATCHED AND SEALED WATER TIGHT TO MATCH EXISTING CONDITIONS. FLASHING TO BE ADDED TO THE NEW ROOF CURB ADAPTOR AS REQUIRED.

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PROJECT # R2417-01
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FACILITY# 8136008004

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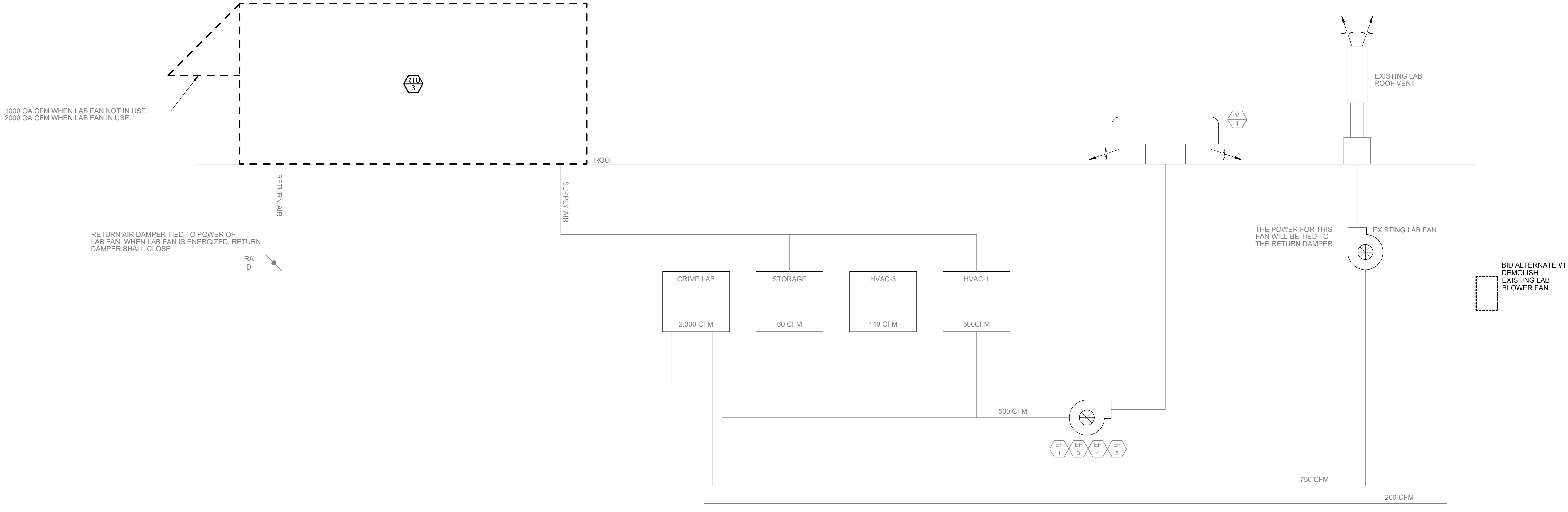
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ROOF
MECHANICAL NEW
WORK PLAN

SHEET NUMBER:

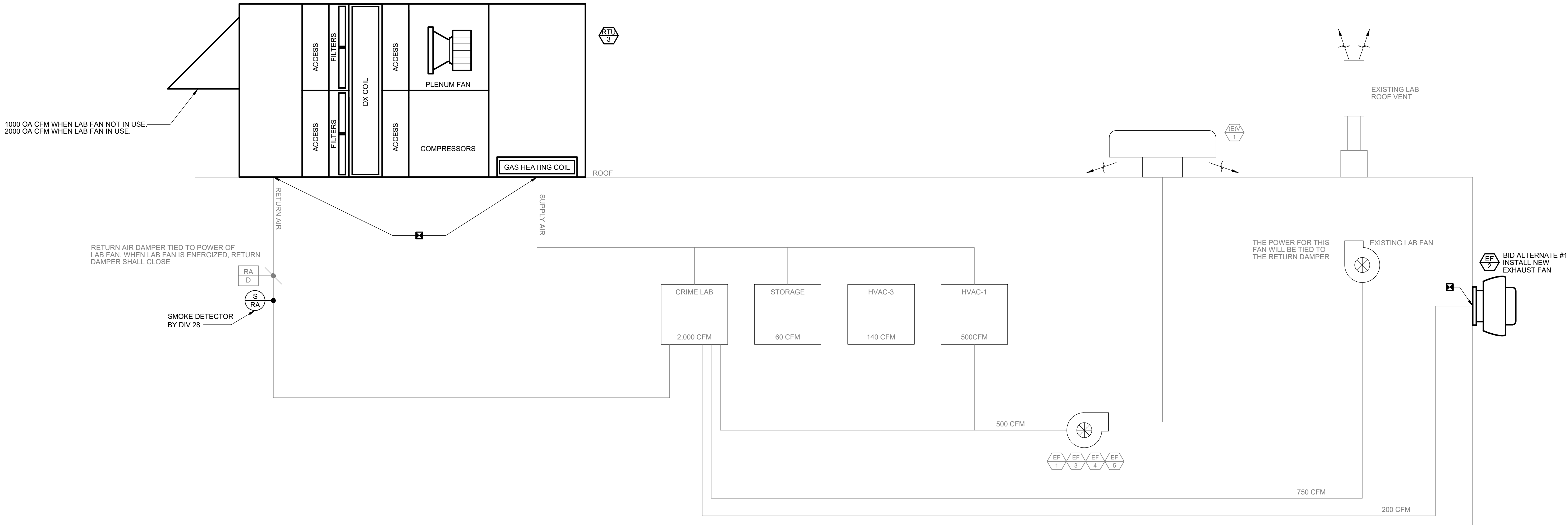
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6 OF 14 SHEETS
06/18/2026

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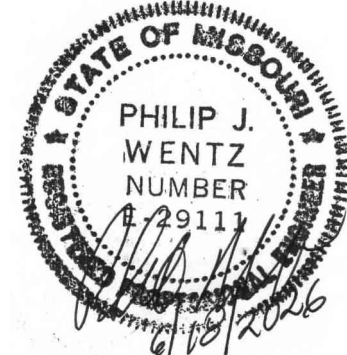


RTU-3 AIR FLOW DEMOLITION DIAGRAM
NOT TO SCALE



RTU-3 AIR FLOW NEW WORK DIAGRAM
NOT TO SCALE

STATE OF MISSOURI
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GOVERNOR



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SHEET TITLE:
RTU-3 AIR FLOW
DIAGRAMS

SHEET NUMBER:

M5.0

7 OF 14 SHEETS
06/18/2026

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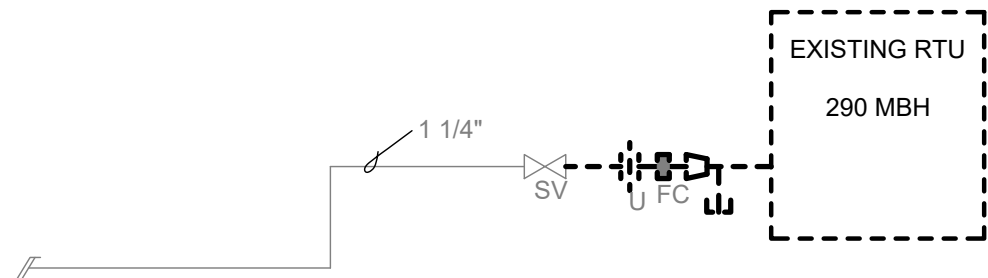
SHEET TITLE:

NATURAL GAS FLOW
DIAGRAM, POINTS
LIST, & SEQUENCE

SHEET NUMBER:

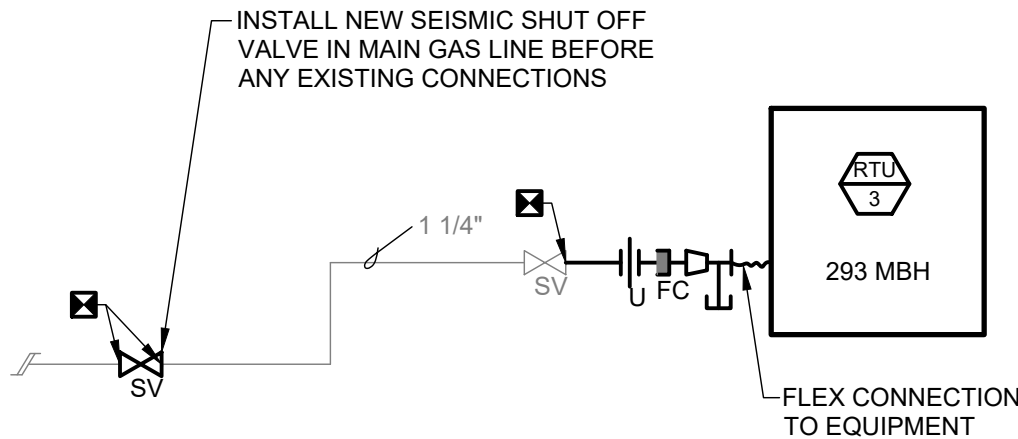
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8 OF 14 SHEETS
06/18/2026



NATURAL GAS FLOW DIAGRAM - DEMOLITION

NOT TO SCALE



NATURAL GAS FLOW DIAGRAM - NEW WORK

NOT TO SCALE

CONTRACTOR TO PAINT
ALL NEW AND EXISTING
NATURAL GAS PIPING
YELLOW.

RTU POINTS LIST									
POINT DESCRIPTION				STARTUP TREND		SERVICE TREND		FIELD DEVICE DESCRIPTION	NOTES
TYPE	NAME	DESCRIPTION	UNITS	FREQ	ARCHIVE	FREQ	ARCHIVE	INSTRUMENT TYPE	
AHU UNIT LEVEL CONTROL POINTS - WRITTEN TO PKG. CONTROLLER									
AV	DAT-SP	DISCHARGE AIR TEMPERATURE SETPOINT	°F,1	1 MIN.	30 MIN	15 MIN.	1 WEEK	BACNET INTERFACE TO CONTROLLED DEVICE	REFERENCE ZONE PRESSURE
AV	DAP-SP	DISCHARGE AIR PRESSURE SETPOINT	IN. W.C.,1	1 MIN.	30 MIN	15 MIN.	1 WEEK	BACNET INTERFACE TO CONTROLLED DEVICE	
AV	OA-T	OUTSIDE AIR TEMPERATURE REFERENCE	°F,1	-	-	-	-	BACNET INTERFACE TO CONTROLLED DEVICE	
BV	UNOC-CLG	UNOCCUPIED COOLING MODE	OFF / ON	1 MIN.	30 MIN	15 MIN.	1 WEEK	BACNET INTERFACE TO CONTROLLED DEVICE	OCC/UNOCC/BYP/STBY/AUTO
BV	UNOC-HTG	UNOCCUPIED HEATING MODE	OFF / ON	1 MIN.	30 MIN	15 MIN.	1 WEEK	BACNET INTERFACE TO CONTROLLED DEVICE	
MV	OCC-R	OCCUPANCY REQUEUST	N/A	1 MIN.	30 MIN	15 MIN.	1 WEEK	BACNET INTERFACE TO CONTROLLED DEVICE	
HW	RA-S	RETURN AIR SMOKE DETECTOR	N/A	1 MIN.	30 MIN	15 MIN.	1 WEEK	HARDWIRED POINT TO CONTROLLED DEVICE	
AHU UNIT LEVEL CONTROL POINTS - READ FROM PKG. CONTROLLER									
AV	DA-T	DISCHARGE AIR TEMPERATURE	°F,1	1 MIN.	30 MIN	15 MIN.	1 WEEK	BACNET INTERFACE TO CONTROLLED DEVICE	REFERENCE ZONE PRESSURE
AV	RA-T	RETURN AIR TEMPERATURE	°F,1	1 MIN.	30 MIN	15 MIN.	1 WEEK	BACNET INTERFACE TO CONTROLLED DEVICE	
AV	DA-DP	DISCHARGE AIR DIFFERENTIAL PRESSURE	IN. W.C.,1	1 MIN.	30 MIN	15 MIN.	1 WEEK	BACNET INTERFACE TO CONTROLLED DEVICE	
AV	OAD-C	ECONOMIZER AIR DAMPER POSITION	%,0	1 MIN.	30 MIN	15 MIN.	1 WEEK	BACNET INTERFACE TO CONTROLLED DEVICE	
AV	RAD-C	RETURN AIR DAMPER POSITION	%,0	1 MIN.	30 MIN	15 MIN.	1 WEEK	BACNET INTERFACE TO CONTROLLED DEVICE	
AV	CF-SPD	CONDENSER FAN SPEED	%,0	1 MIN.	30 MIN	15 MIN.	1 WEEK	BACNET INTERFACE TO CONTROLLED DEVICE	
AV	SF-SPD	SUPPLY FAN SPEED	%,0	1 MIN.	30 MIN	15 MIN.	1 WEEK	BACNET INTERFACE TO CONTROLLED DEVICE	
AV	CLG-C	COOLING CAPACITY	%,0	1 MIN.	30 MIN	15 MIN.	1 WEEK	BACNET INTERFACE TO CONTROLLED DEVICE	
AV	HTG-C	HEATING OUTPUT COMMAND	%,0	1 MIN.	30 MIN	15 MIN.	1 WEEK	BACNET INTERFACE TO CONTROLLED DEVICE	
AV	AL-ST	DIAGNOSTIC ALARM	N/A	-	-	-	-	BACNET INTERFACE TO CONTROLLED DEVICE	MAP ALL ALARMS TO BAS
BI BO BV AI AO AV HW COS BINARY INPUT BINARY OUTPUT BINARY VIRTUAL POINT ANALOG INPUT ANALOG OUTPUT ANALOG VIRTUAL POINT HARD WIRED INTERLOCK/SAFETY CHANGE OF STATE GENERAL NOTES 1. FOR ANALOG POINTS, UNITS COLUMN HAS TWO COMPONENTS: FIRST VALUE INDICATES ENGINEERING UNITS FOR POINT, SECOND VALUE IS NUMBER OF DECIMAL PLACES TO DISPLAY. 2. FOR BINARY POINTS, UNITS COLUMN LISTS "OFF" AND "ON" STATE LABELS FOR POINT.									

RTU-3 SEQUENCE OF OPERATION:

Constant Volume with High Outside Air Content

Note: All setpoints are adjustable unless specified otherwise

Occupied Operation:

Fan: Fan runs continuously, at constant volume or can run to a duct static pressure for filter loading

Cooling Mode: Cooling is enabled by space temperature. If the space temperature rises above the occupied cooling setpoint by greater than 2F, then the unit will enter the cooling mode and will follow the following sequence. Discharge air temperature may be reset on space temperature if desired.

Occupied cooling setpoint = 74F

If Space Temperature >= 75 Discharge Temp = 55F Supply Air Temperature
If Space Temperature = 74F, Discharge Temp = 57.5F Supply Air Temperature
If Space Temperature = 73F, Discharge Temp = 60F Supply Air Temperature

Heating Mode: Heating is enabled by space temperature. If the space temperature falls below the occupied heating setpoint by greater than 2F, then the unit will enter the heating mode and will follow the following sequence. Discharge air temperature may be reset on space temperature if desired.

Occupied heating setpoint = 68F

If Space Temperature >=69 Discharge Temp = 65F Supply Air Temperature
If Space Temperature = 68F, Discharge Temp = 75F Supply Air Temperature
If Space Temperature = 67F, Discharge Temp = 85F Supply Air Temperature

Dehumidification Cooling Mode: When Space Humidity is above the humidity setpoint (50%) and the Space Temperature is above the occupied cooling setpoint the unit enter dehumidification cooling mode. The compressors will energize and modulate to maintain a 45F suction temperature. The hot gas reheat valve will modulate to maintain a discharge air temperature equal to the cooling supply air setpoint (55F or reset as described above). The coil suction temperature will be reset based on space humidity (e.g., 50% RH = 45F coil & 45% RH = 50F coil).

Dehumidification Heating Mode: When Space Humidity is above the humidity setpoint (50%) and the Space Temperature is below the occupied heating setpoint the unit enter dehumidification heating mode. The compressors will energize and modulate to maintain a 45F suction temperature. The hot gas reheat valve will modulate to maintain a discharge air temperature equal to the heating supply air setpoint (95F or reset as described above). The coil suction temperature will be reset based on space humidity (e.g., 50% RH = 45F coil & 45% RH = 50F coil).

Economizer: When the outdoor air temperature is between the cooling and heating setpoints (74-68) and the OADP is below 54F (Adj) the unit will open the economizer damper 100%. The fan will run but no heating or cooling coils will be energized.

Ventilation Exhaust Control: The unit will have control points tied to the 720 CFM lab fume hood exhaust fan. When the lab fume hood is energized, the unit will open outside air damper to 100% and close the Return air damper to 0%. The lab fume exhaust fan will be enabled by occupants.

UNOCCUPIED MODE: The unit will close the outside air damper and run off of space control to a relaxed setpoint determined by the setback values

PHILIP J. WENTZ
 NUMBER
 PE-029111
 EXPIRATION DATE
 12/31/2016

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 MO Engineering Registration No. PE-029111
 MO COA #: 000087

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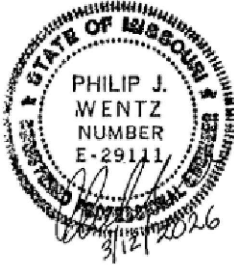
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OF 14 SHEETS

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MO COA: 000087

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ISSUE DATE: 6/18/2026

DRAWN BY: JP
CHECKED BY: RJ
DESIGNED BY: RJ

SHEET TITLE:
**ELECTRICAL SYMBOL
ABBREVIATIONS,
SCHEDULES, &
DETAILS**

SHEET NUMBER:

E0.0

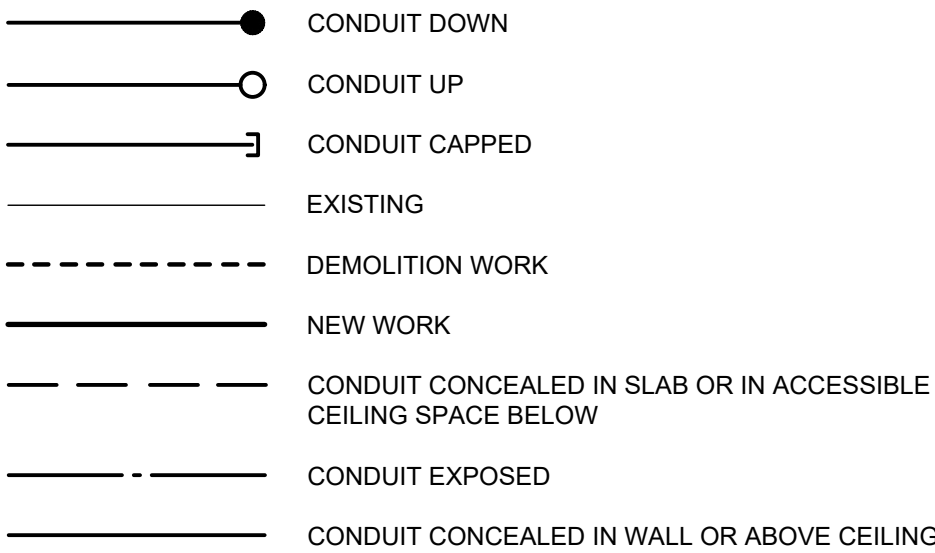
10 OF 14 SHEETS
06/18/2026

ELECTRICAL SYMBOLS

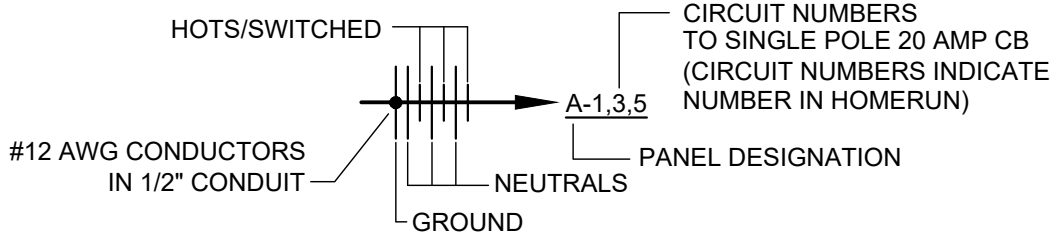
ABBREVIATIONS

AFF ABOVE FINISHED FLOOR
AFG ABOVE FINISHED GRADE
AL ALUMINUM
ARC ALUMINUM RIGID CONDUIT
AUX AUXILIARY
BOF BOTTOM OF FIXTURE
C CONDUIT
CB CIRCUIT BREAKER
CKT CIRCUIT
COF CENTER OF FIXTURE
EC ELECTRICAL CONTRACTOR
EMT ELECTRICAL METALLIC TUBING
EWC ELECTRIC WATER COOLER
GRC GALVANIZED RIGID CONDUIT
G GROUND FAULT CIRCUIT INTERRUPTER
GRD GROUND
IMC INTERMEDIATE METAL CONDUIT
MCB MAIN CIRCUIT BREAKER
MLO MAIN LUG ONLY
NC NORMALLY CLOSED
NF NON FUSED
NL UNSWITCHED NIGHT LIGHT
NO NORMALLY OPEN
NTS NOT TO SCALE
PVC PVC CONDUIT
TOF TOP OF FIXTURE
U USB PORT
UCR UNDER CABINET REFRIGERATOR
UNO UNLESS NOTED OTHERWISE
WP WEATHERPROOF COVER
WPI WEATHERPROOF IN-USE COVER

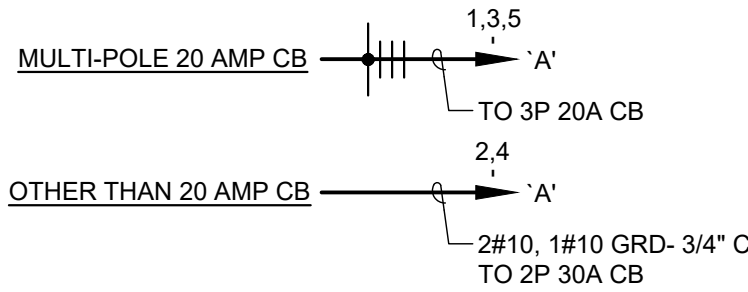
WIRING SYMBOLS



BRANCH CIRCUITING LEGEND



NOTE:
HASH MARKS INDICATE #12 AWG CONDUCTORS ONLY SEE FLOOR PLANS FOR
OTHER FEEDER CONDUCTORS AND CONDUIT SIZES



20A BRANCH CIRCUIT HOMERUNS SHALL BE SIZED AS FOLLOWS:
120V: 0-100 FEET SHALL BE #12AWG WIRE MINIMUM
101-200 FEET SHALL BE #10AWG WIRE MINIMUM
IN EXCESS OF 200 FEET SHALL BE #8AWG WIRE MINIMUM

277V: 0-250 FEET SHALL BE #12AWG WIRE MINIMUM
IN EXCESS OF 250 FEET SHALL BE #10AWG WIRE MINIMUM

RECEPTACLES

DUPLEX CONVENIENCE OUTLET, RECESSED
WALL MOUNTED +18" AFF, 'UNO' ON FLOOR PLANS

POWER EQUIPMENT

PANELBOARD
DISCONNECT SWITCH

FIRE ALARM

DUCT MOUNTED SMOKE DETECTOR (R = RETURN / S = SUPPLY)

CONTROL MODULE (PROVIDE RELAY IF CONTACT RATING IS EXCEEDED)

DUPLEX RECEPTACLE
TYPE OF RECEPTACLE
BRANCH CIRCUIT NUMBER
PANEL DESIGNATION AS REQUIRED
EMERGENCY BRANCH CIRCUITING
EC = CRITICAL BRANCH
EL = LIFE SAFETY BRANCH
EQ = EQUIPMENT BRANCH
WR (PNL)
+44" AFF

DISCONNECT SWITCH
WEATHER PROOF
OF POLES
AMPERAGE RATING
FUSE SIZE (NF-NON FUSIBLE)
WP
3P
60A
45AF

PROJECT NAME/NO.: Troop G Crime Lab HVAC Renovation									
PANELBOARD: A									
VOLTAGE: 240 /120V									
MAIN: 225 A MLO									
SHORT CIRCUIT: 20 K AIC									
LOCATION: MECH ROOM 108									
LOAD	POLES	CKT BKR	CKT	Ph	CKT	CKT BKR	POLES	LOAD	
LIGHTS	1	20	1	A	2	20	1	LIGHTS	
LIGHTS	1	20	3	B	4	20	1	LIGHTS & VENT STATION	
LIGHTS	1	20	5	A	6	20	1	LIGHTS	
LIGHTS	1	20	7	B	8	20	1	LIGHTS	
EXTERIOR LIGHTS	1	20	9	A	10	20	1	EXTERIOR LIGHTS	
RECEPTACLES	1	20	11	B	12	20	1	DF	
RECEPTACLES & EXHAUST FAN	1	20	13	A	14	20	1	RECETACLES	
RECEPTACLES	1	20	15	B	16	20	1	RECETACLES	
RECEPTACLES	1	20	17	A	18	20	1	DF	
RECEPTACLES & EXHAUST FAN	1	20	19	B	20	20	1	RECETACLES	
LIGHTS	1	20	21	A	22	20	1	PHONE	
OVERHEAD DOOR	1	20	23	B	24	20	1	SPARE	
SPARE	1	20	25	A	26	20	1	SPARE	
SPARE	1	20	27	B	28	20		SPARE	
SPACE			29	A	30			SPACE	

PROJECT NAME/NO.: Troop G Crime Lab HVAC Renovation									
PANELBOARD: M									
VOLTAGE: 240 /120V									
MAIN: 400 A MCB									
SHORT CIRCUIT: 20 K AIC									
LOCATION: MECH ROOM 108									
LOAD	POLES	CKT BKR	CKT	Ph	CKT	CKT BKR	POLES	LOAD	
FU1	1	20	1	A	2	20	1	FU3	
FU2	1	20	3	B	4	20	1	FU4	
CU1	2	30	5	A	6	50	2	CU2	
			7	B	8				
CU3	2	30	9	A	10	90	2	RTU-3	
			11	B	12				
DH1 (GFI BREAKER)	1	15	13	A	14	30	1	DH2 (GFI BREAKER)	
PANEL A	2	125	15	B	16	125	2	PANEL B	
			17	A	18				
			19	B	20	20	1	SPARE	
			21	A	22	20	1	SPARE	
RTU-4 RECEPTACLE	1	20	23	B	24	20	1	SPARE	
SPARE	1	20	25	A	26			SPACE	
SPACE			27	B	28			SPACE	
SPACE			29	A	30			SPACE	

KEYED NOTES

1 CONTRACTOR TO REPLACE EXISTING 80A/2P BREAKER WITH 90A/2P BREAKER AS SHOWN. MATCH
EXISTING BREAKER TYPE. SEE NEW WORK PLANS FOR FURTHER INFORMATION.

MECHANICAL-ELECTRICAL INTERFACE

MECHANICAL-ELECTRICAL INTERFACE																								
EQUIPMENT		MOTOR DATA		BRANCH CIRCUIT DATA		SOURCE DATA			UNIT CONTROLS							EQUIPMENT DISCONNECT				REMARKS				
EQUIP. ID	DESCRIPTION	HP / (kW) / (MCA) ⁰	VOLTAGE / PHASE	FEEDER SIZE	SOURCE:	OCP		TYPE ²	OCP		NEMA RATING	F	I	C	EQUIP. ID	SWITCH SIZE	POLE	OCP SIZE	NEMA RATING	F	I	C		
						TYPE ¹ / POLES	SWITCH/FUSE SIZE or CB TRIP (A)		TYPE ¹	SWITCH/FUSE or CB TRIP														
RTU-3	ROOF TOP UNIT	63	MCA	240 / 1	2#1, 1#8 GRD-2"C	M	CB / 2	90	PWCP	NA	NA	NA	M	M	E	RTU-3	NA	NA	NA	NA	M	M	E	FACTORY MOUNTED DISCONNECT SWITCH FACTORY MOUNTED, FIELD WIRED CONVENIENCE RECEPTACLE
EF-2	EXHAUST FAN (SIDE-MOUNTED)	0.03	HP	120 / 1	2#12, 1#12 GRD-3/4"C	SEE PLAN	CB / 1	20	MAN	NA	NA	NA	N	N	E	EF-2	NA	NA	NA	NA	M	M	E	ALTERNATE #1: FACTORY MOUNTED DISCONNECT EXISTING SWITCH

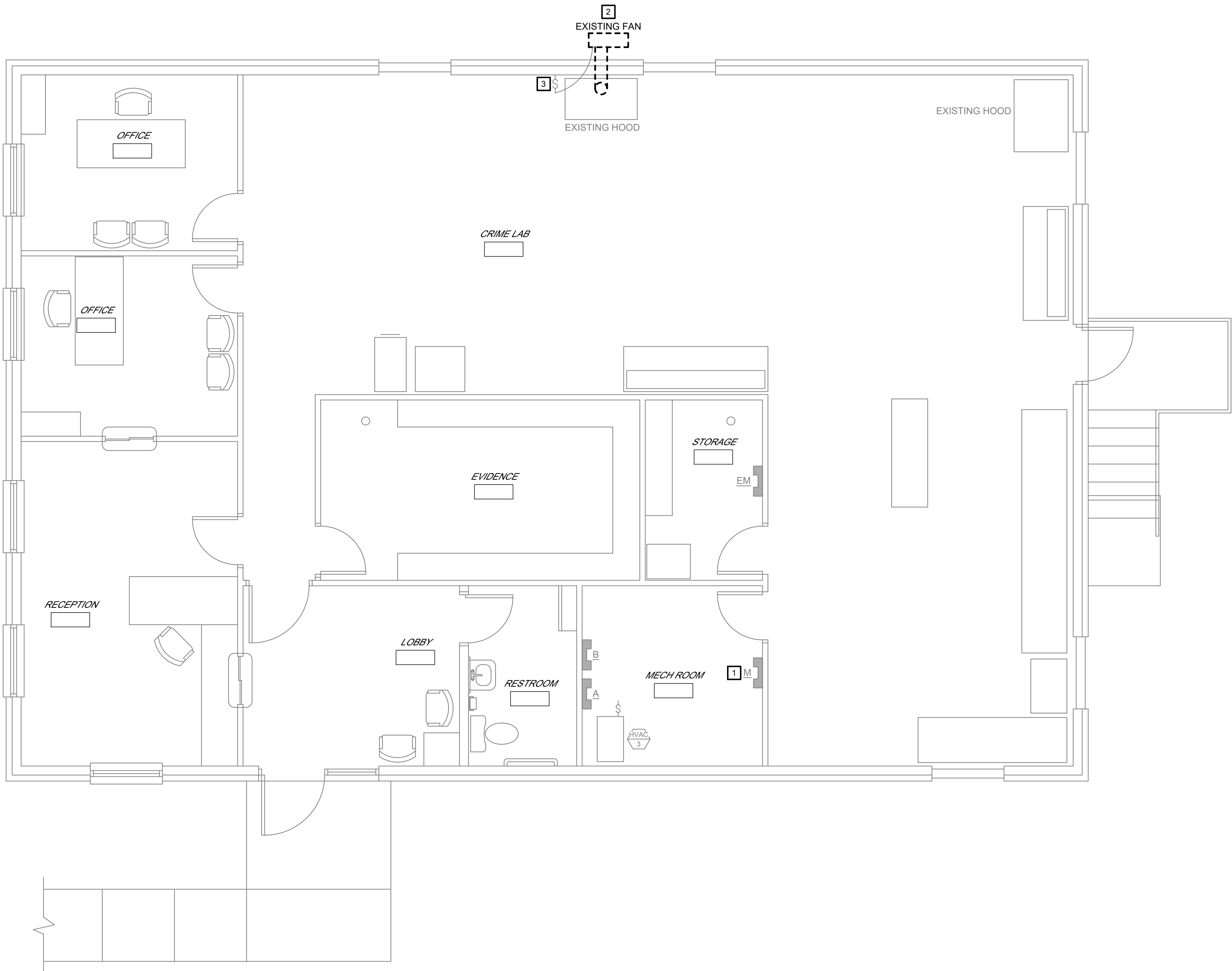
HP / (kW)⁰:
HORSEPOWER IS SHOWN UNLESS KILOWATTS (KW)
OR MINIMUM CIRCUIT AMPACITY (MCA) IS CALLED OUT

TYPE¹:
FS FUSED SWITCH
CB CIRCUIT BREAKER
NA NOT APPLICABLE

TYPE²:
COMB COMBINATION MAGNETIC STARTER / DISCONNECT SWITCH OR CIRCUIT BREAKER
MAG MAGNETIC STARTER
MAN MANUAL MOTOR STARTER
PWCP PRE-WIRED CONTROL PANEL
VFD - 4KHZVARIABLE FREQUENCY DRIVE - MAXIMUM CARRIER FREQUENCY OF 4KHZ
VFD - 12KHZVARIABLE FREQUENCY DRIVE - MAXIMUM CARRIER FREQUENCY OF 12KHZ
TOG TOGGLE SWITCH (HORSEPOWER RATEI
TST THERMOSTAT
RIB RELAY IN A BOX
2S1W 2-SPEED 1-WINDING MAGNETIC STARTER
2S2W 2-SPEED 2-WINDING MAGNETIC STARTER
NA NOT APPLICABLE

F I C³: (FURNISHED, INSTALLED, CONNECTED)
M MECHANICAL, PLUMBING, FIRE PROTECTION CONTRACTOR, OR FACTORY
E ELECTRICAL CONTRACTOR
N NOT APPLICABLE

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FIRST FLOOR ELECTRICAL DEMOLITION PLAN
SCALE: 1/4" = 1'0"

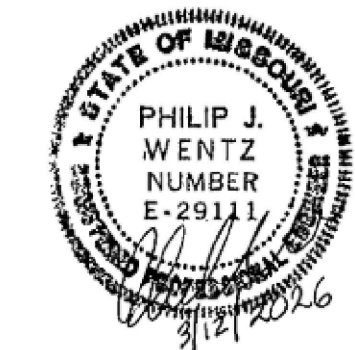
GENERAL DEMOLITION NOTES

- ALL SYMBOLS SHOWN DASHED ARE EXISTING ELECTRICAL DEVICES TO BE REMOVED OR AS NOTED. ALL SYMBOLS SHOWN SOLID LIGHT LINE ARE EXISTING ELECTRICAL DEVICES TO REMAIN. EXISTING ELECTRICAL DEVICES WHICH ARE TO REMAIN SHALL BE EXTENDED TO BE FLUSH WITH NEW FINISH ON EXISTING WALLS WHERE REQUIRED.
- ALL EXISTING ELECTRICAL DEVICES IN A WALL THAT IS TO BE REMOVED; ELECTRICAL CONTRACTOR SHALL DISCONNECT POWER, CUT OFF CONDUCTORS AND CAP CONDUIT IN FLOOR OR CEILING AS REQUIRED. DEVICES ARE TO BE REMOVED ALONG WITH WALL BY GENERAL CONTRACTOR UNLESS OTHERWISE NOTED.
- ALL EXISTING ELECTRICAL DEVICES TO BE REMOVED FROM WALLS WHICH ARE TO REMAIN; ELECTRICAL CONTRACTOR SHALL DISCONNECT POWER, REMOVE CONDUCTORS, REMOVE DEVICE AND PROVIDE BLANK COVERPLATES AS REQUIRED. UNLESS OTHERWISE NOTED.
- FOR A PORTION OF A CIRCUIT WHICH IS REMOVED OR ABANDONED, RE-ESTABLISH CIRCUIT CONTINUITY FOR THE PORTION OF THE CIRCUIT WHICH IS TO REMAIN.
- ALL EXISTING CONDUITS, RACEWAYS AND WIRING ROUTED IN EXISTING WALLS AND CEILING SPACES (WHICH ARE TO BE DEMOLISHED) WHICH SERVE OTHER AREAS SHALL BE REROUTED AS REQUIRED.
- PROVIDE AND INSTALL SUPPORTS FOR EXISTING CABLES AND CONDUITS ABOVE CEILING THAT ARE CURRENTLY UNSUPPORTED IN ALL AREAS WHERE CEILING IS BEING REMOVED.

KEYED NOTES

- DISCONNECT AND TURN OVER TO OWNER THE EXISTING 80A, 2-POLE BREAKER FEEDING THE EXISTING RTU-1. NEW SPACE SHALL REMAIN FOR NEW BREAKER INSTALLATION IN PANEL M. SEE NEW WORK PLANS FOR FURTHER INFORMATION.
- ALTERNATE #1:** DEMOLISH AND REMOVE EXISTING EXHAUST FAN. PROTECT WIRING IN PLACE FOR RECONNECTION TO NEW FAN. SEE SHEET E3.0 FOR FURTHER INFORMATION.
- ALTERNATE #1:** EXISTING SWITCH TO BE DISCONNECTED DURING DEMOLITION OF EXHAUST FAN, AND REUSED IN NEW WORK. PROTECT WIRING IN PLACE FOR RECONNECTION TO NEW FAN. SEE SHEET E3.0 FOR FURTHER INFORMATION.

STATE OF MISSOURI
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HIGHWAY PATROL

REPLACE HVAC TROOP G
CRIME LAB BUILDING

1226 W. BUSINESS US-60/63
WILLOW SPRINGS, MO 65793

PROJECT # R2417-01
SITE# 6008
FACILITY# 8136008004

REVISION: _____
DATE: _____
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DATE: _____

ISSUE DATE: 6/18/2026

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CHECKED BY: RJ
DESIGNED BY: RJ

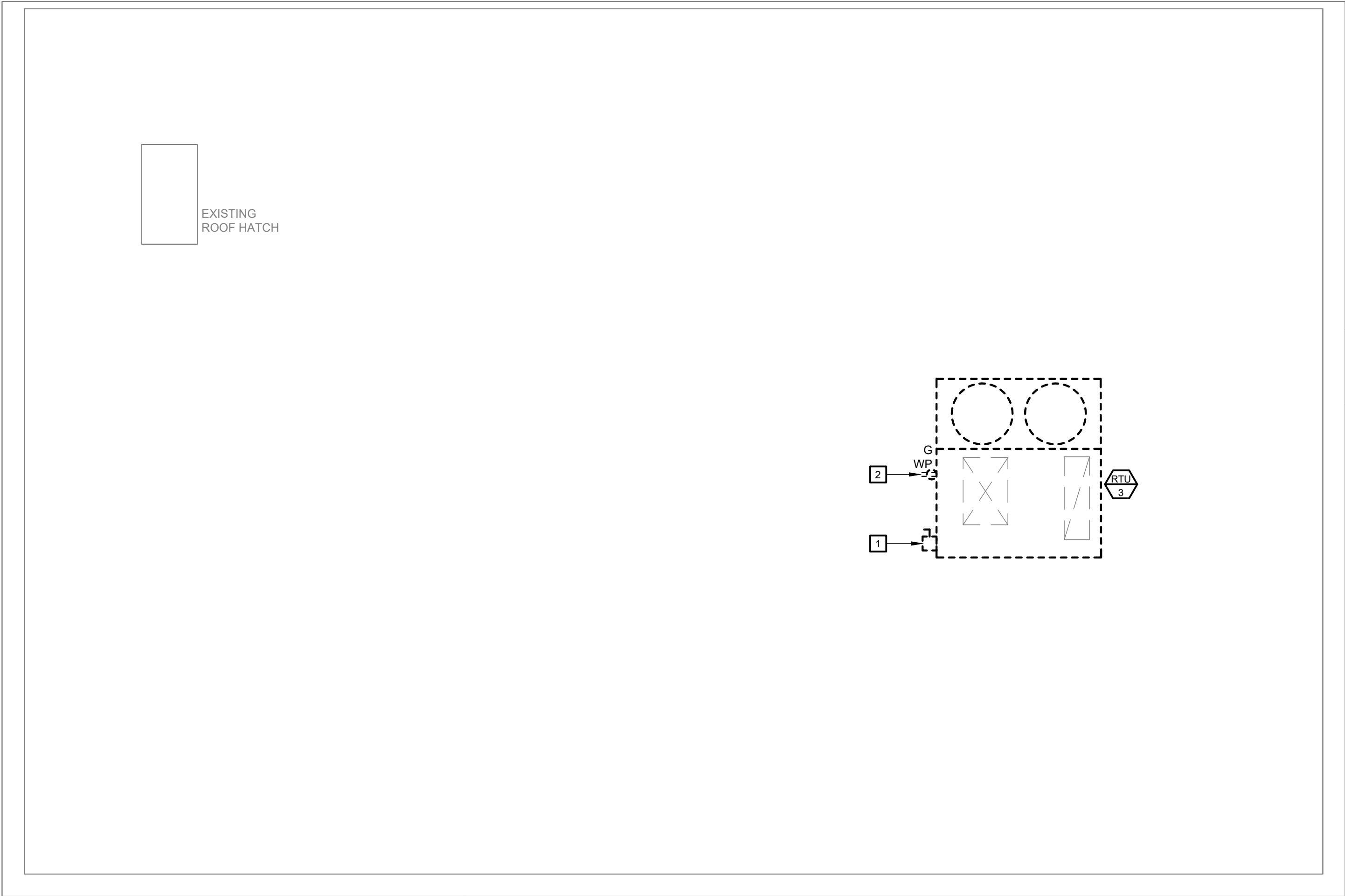
SHEET TITLE:
**FIRST FLOOR
ELECTRICAL
DEMOLITION PLAN**

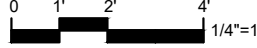
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06/18/2026

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N
 **ROOF ELECTRICAL DEMOLITION PLAN**
SCALE: 1/4" = 1'0"
 1/4"=1'

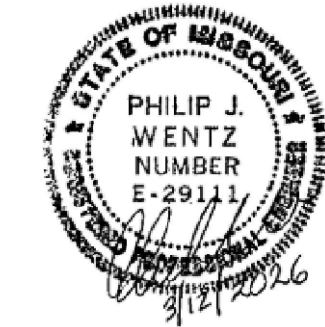
GENERAL DEMOLITION NOTES

1. ALL SYMBOLS SHOWN DASHED ARE EXISTING ELECTRICAL DEVICES TO BE REMOVED OR AS NOTED. ALL SYMBOLS SHOWN SOLID LIGHT LINE ARE EXISTING ELECTRICAL DEVICES TO REMAIN. EXISTING ELECTRICAL DEVICES WHICH ARE TO REMAIN SHALL BE EXTENDED TO BE FLUSH WITH NEW FINISH ON EXISTING WALLS WHERE REQUIRED.
2. ALL EXISTING ELECTRICAL DEVICES IN A WALL THAT IS TO BE REMOVED; ELECTRICAL CONTRACTOR SHALL DISCONNECT POWER, CUT OFF CONDUCTORS AND CAP CONDUIT IN FLOOR OR CEILING AS REQUIRED. DEVICES ARE TO BE REMOVED ALONG WITH WALL BY GENERAL CONTRACTOR UNLESS OTHERWISE NOTED.
3. ALL EXISTING ELECTRICAL DEVICES TO BE REMOVED FROM WALLS WHICH ARE TO REMAIN; ELECTRICAL CONTRACTOR SHALL DISCONNECT POWER, REMOVE CONDUCTORS, REMOVE DEVICE AND PROVIDE BLANK COVERPLATES AS REQUIRED. UNLESS OTHERWISE NOTED.
4. FOR A PORTION OF A CIRCUIT WHICH IS REMOVED OR ABANDONED, RE-ESTABLISH CIRCUIT CONTINUITY FOR THE PORTION OF THE CIRCUIT WHICH IS TO REMAIN.
5. ALL EXISTING CONDUITS, RACEWAYS AND WIRING ROUTED IN EXISTING WALLS AND CEILING SPACES (WHICH ARE TO BE DEMOLISHED) WHICH SERVE OTHER AREAS SHALL BE REROUTED AS REQUIRED.
6. PROVIDE AND INSTALL SUPPORTS FOR EXISTING CABLES AND CONDUITS ABOVE CEILING THAT ARE CURRENTLY UNSUPPORTED IN ALL AREAS WHERE CEILING IS BEING REMOVED.

KEYED NOTES

- 1 DEMOLISH AND REMOVE EXISTING ELECTRICAL CONTROLS, WIRES, AND FEEDERS FROM EXISTING RTU-3 BACK TO SOURCE IN PANEL M IN MECHANICAL ROOM. SEE FIRST FLOOR PLAN FOR LOCATION. CONTRACTOR TO FIELD VERIFY EXISTING CONDUIT PATHWAY PRIOR TO BEGINNING WORK.
- 2 DISCONNECT AND REMOVE EXISTING RECEPTACLE. EXISTING CIRCUIT SHALL BE PROTECTED IN PLACE AND REUSED IN NEW WORK. SEE NEW WORK PLANS ON SHEET E3.1 FOR MORE INFORMATION.

STATE OF MISSOURI
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DESIGNED BY: RJ

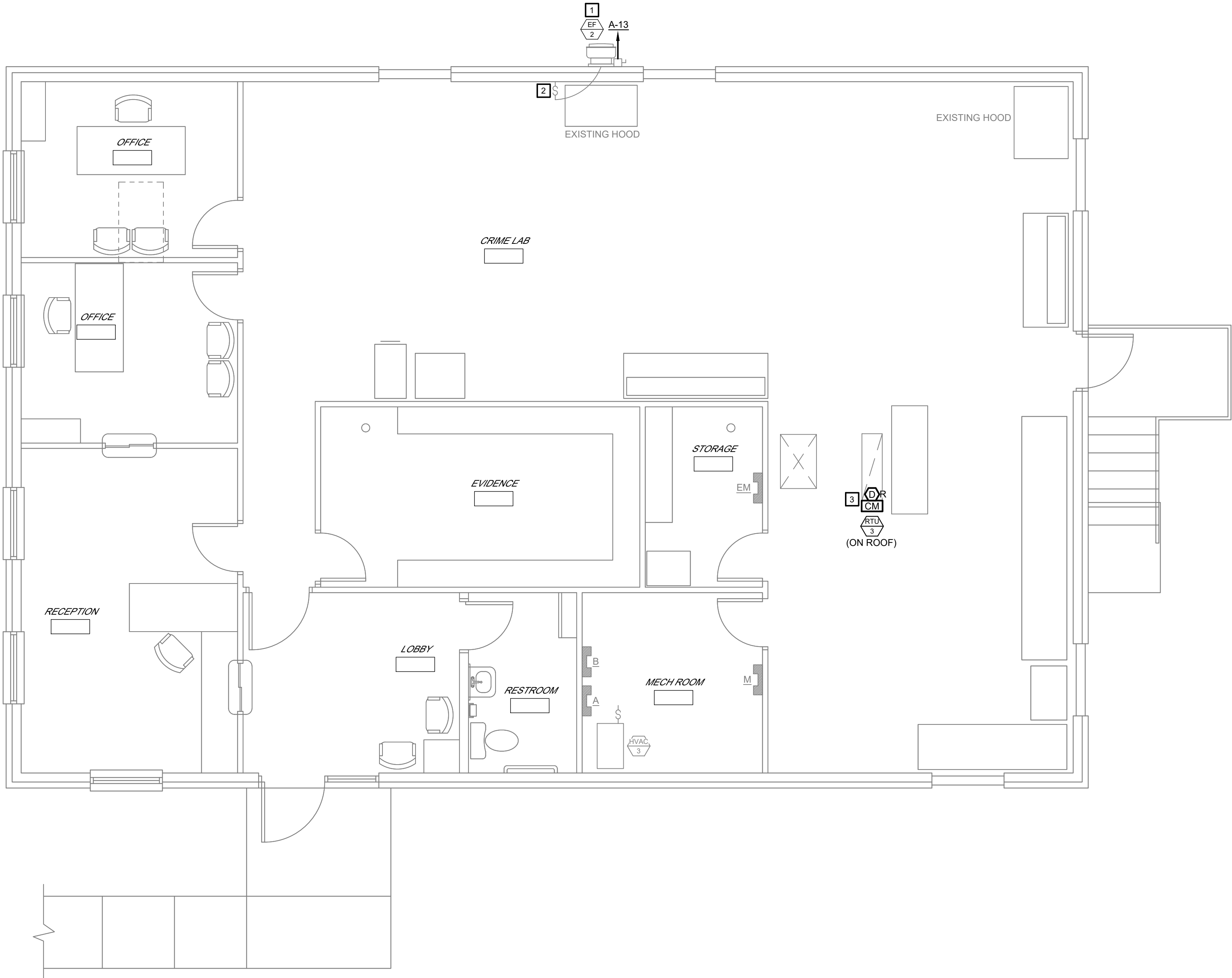
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**ROOF
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DEMOLITION PLAN**

SHEET NUMBER:

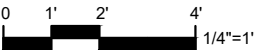
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12 OF 14 SHEETS
06/18/2026

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FIRST FLOOR ELECTRICAL NEW WORK PLAN
SCALE: 1/4" = 1'0"



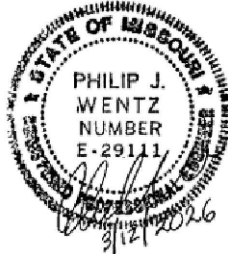
GENERAL NOTES

1. REFER TO SYMBOL LEGEND ON SHEET E0.0 FOR MORE INFORMATION.
2. TYPE MC CABLE IS PERMITTED FOR WIRING FROM LOCAL DISTRIBUTION JUNCTION BOXES TO DEVICES OR EQUIPMENT IN NEARBY WALLS OR CEILING SPACE. THE LOCAL DISTRIBUTION JUNCTION BOXES SHOULD BE LOCATED WITHIN 20 FEET OF THE DEVICE OR EQUIPMENT SERVED. CONDUIT AND WIRING SHALL BE USED FOR BRANCH CIRCUITING BETWEEN THE LOCAL DISTRIBUTION JUNCTION BOXES AND FOR THE "HOMERUNS" FROM THE PANELS. TYPE MC CABLE IS PERMITTED TO ROUTE FROM RECEPTACLE TO RECEPTACLE THROUGH WALLS AND THROUGH THE CEILING SPACE FOR THE FINAL PORTION OF BRANCH CIRCUIT WIRING BETWEEN RECEPTACLES IN ADJACENT WALLS OF THE SAME ROOM OR AREA. TYPE MC CABLE SHALL NOT BE INSTALLED WHERE EXPOSED OR IN CMU WALLS.
3. ELECTRICAL PANELBOARD DIRECTORIES SHALL BE LABELED WITH FINAL ROOM NUMBERS.
4. ALL RECEPTACLE COVERPLATES TO BE LABELED PER SPECIFICATION SECTION 26.05.34.
5. SEE MECHANICAL-ELECTRICAL INTERFACE SCHEDULE ON SHEET E0.0 FOR EQUIPMENT FEEDER, UNIT CONTROL, AND DISCONNECT INFORMATION.
6. FIRE SEAL ALL PENETRATIONS OF FIRE RATED ASSEMBLIES. SEAL ALL ROOF AND EXTERIOR WALL PENETRATIONS WEATHER TIGHT.

KEYED NOTES

1. **ALTERNATE #1:**
PROVIDE POWER CONNECTION TO NEW EXHAUST FAN 'EF-2' VIA EXISTING 120V CIRCUIT FROM PREVIOUSLY DEMOLISHED EXHAUST FAN. CONTRACTOR SHALL VERIFY EXISTING IS ADEQUATE FOR REUSE, AND REPLACE AS NECESSARY WHILE UTILIZING THE EXISTING ELECTRICAL EQUIPMENT TO THE GREATEST EXTENT AS POSSIBLE. SEE MECHANICAL-ELECTRICAL INTERFACE AND PANEL SCHEDULES FOR FURTHER INFORMATION.
2. **ALTERNATE #1:**
REUSE EXISTING SWITCH TO CONTROL NEW EXHAUST FAN 'EF-2'. PROVIDE RECONNECTION TO NEW EQUIPMENT UTILIZING EXISTING WIRING.
3. **ALTERNATE #1:**
PROVIDE DUCT MOUNTED SMOKE DETECTOR IN RETURN SIDE DUCT OF EQUIPMENT. COORDINATE INSTALLATION WITH MECHANICAL CONTRACTOR PRIOR TO INSTALLATION. PROVIDE ALL REQUIRED CONDUIT AND CABLING FOR CONNECTION TO EXISTING BUILDING FIRE ALARM SYSTEM.

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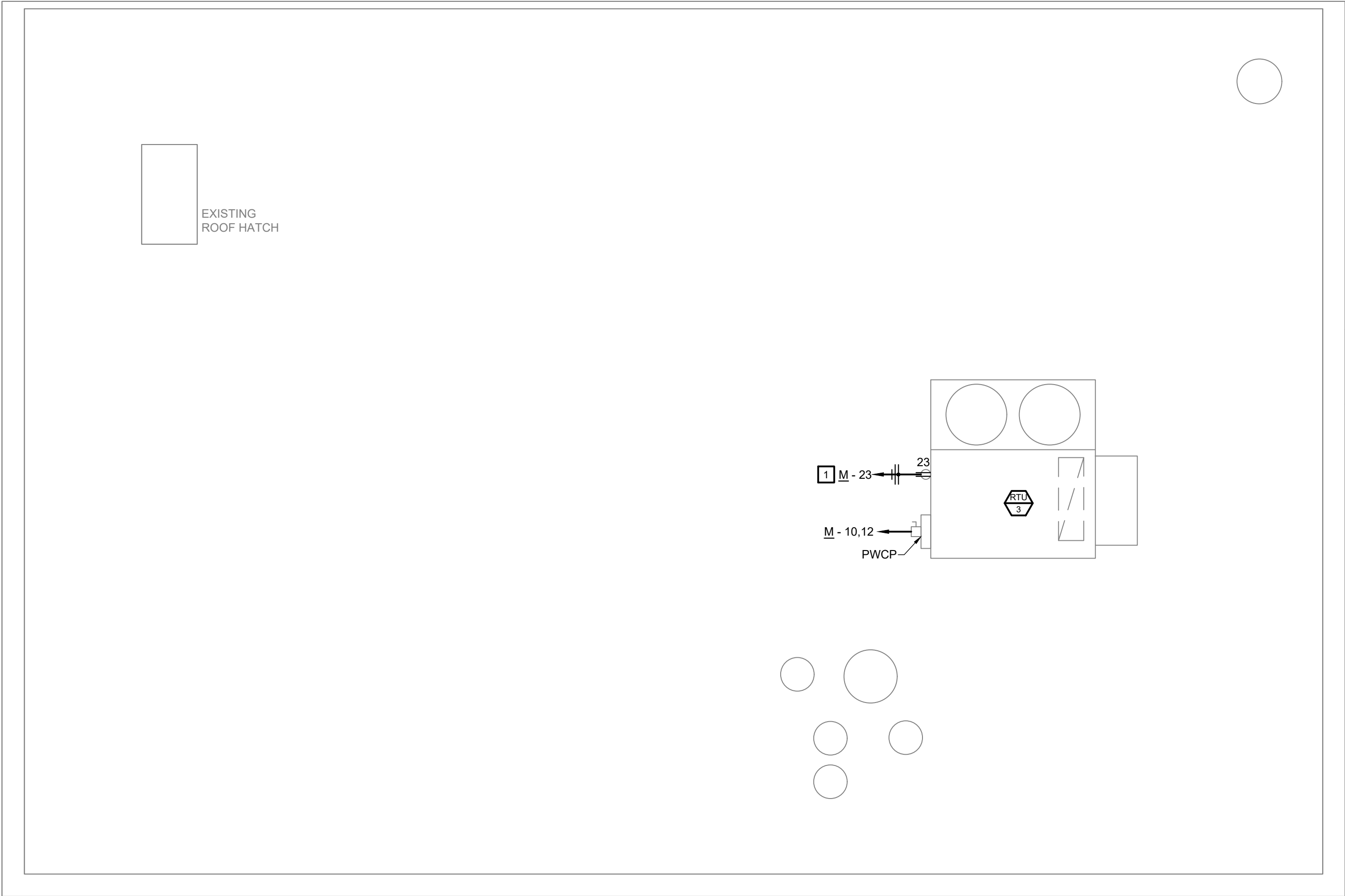
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DESIGNED BY: RJ

SHEET TITLE:
**FIRST FLOOR
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NEW WORK PLAN**

SHEET NUMBER:
E3.0
13 OF 14 SHEETS
06/18/2026

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ROOF ELECTRICAL NEW WORK PLAN
SCALE: 1/4" = 1'0"

GENERAL NOTES

1. SEE MECHANICAL-ELECTRICAL INTERFACE SCHEDULE ON SHEET E0.0 FOR EQUIPMENT FEEDER, UNIT CONTROL, AND DISCONNECT INFORMATION.
2. ALL EXTERIOR CONDUITS TO BE RIGID CONDUIT.
3. DO NOT ROUTE CONDUIT ON ROOF.
4. ALL RECEPTACLE COVERPLATES TO BE LABELED PER SPECIFICATION SECTION 26 05 34.
5. FIRE SEAL ALL PENETRATIONS OF FIRE RATED ASSEMBLIES. SEAL ALL ROOF AND EXTERIOR WALLPENETRATIONS WEATHER TIGHT.

KEYED NOTES

1. CONTRACTOR SHALL UTILIZE EXISTING CONVENIENCE RECPETACLE CIRCUIT TO RE-FEED NEW DEVICE.

STATE OF MISSOURI
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PHILIP J. WENTZ
NUMBER E-29111
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**ROOF
ELECTRICAL
NEW WORK PLAN**

SHEET NUMBER:
E3.1
14 OF 14 SHEETS
06/18/2026