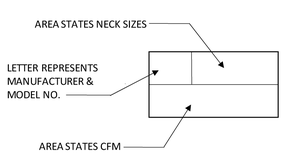
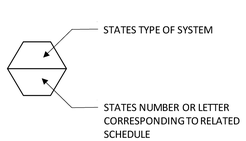
MECHANICAL SYMBOL LIST

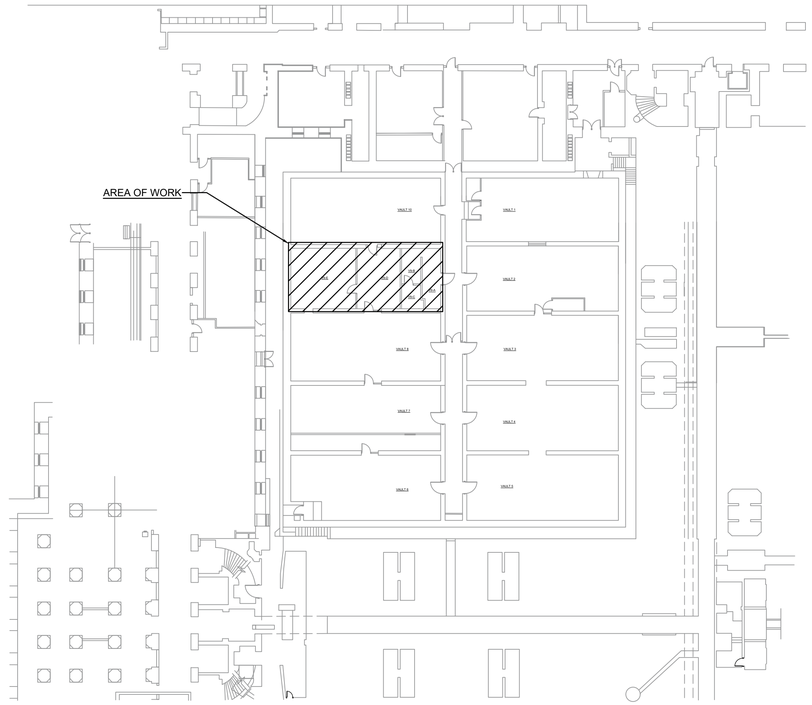
SYMBOL	DESCRIPTION
D	DUCT DROP
R	DUCT RISE
M	MOTOR OPERATED DAMPER
	SUPPLY AIR DEVICE. ARROWS INDICATE DIRECTION OF AIRFLOW
	MANUAL VOLUME DAMPER - M.V.D.
	CONICAL TEE
	BRANCH DUCT WITH 45 CLINCH COLLAR CONNECTION TO MAIN TRUNK DUCT
	RECTANGULAR TURN W/ TURNING VANES
T	THERMOSTAT
SA	SUPPLY AIR
CRAC	COMPUTER ROOM AIR CONDITIONING UNIT
CFM	CUBIC FEET PER MINUTE
RA	RETURN AIR
AFF	ABOVE FINISHED FLOOR
CHS	CHILLED WATER SUPPLY
CHR	CHILLED WATER RETURN
HWS	HEATING WATER SUPPLY
HWR	HEATING WATER RETURN
CD	CLEARWATER DRAIN
M1	PLAN NOTE REFERENCE SYMBOL
	REMOVE FROM EXISTING
	CONNECT TO EXISITNG
	CHECK VALVE
	BALANCING VALVE
	UNION
T	THERMOMETER
P	PRESSURE GUAGE WITH SNUBBER
	SHUTOFF VALVE
	STRAINER
	PIPING FLOW DIRECTION
	PIPE UP
	PIPE DOWN
	PIPE CAP
	BOTTOM CONNECTION
	LINE BREAK



AIR DEVICE DESIGNATION



MECHANICAL EQUIPMENT DESIGNATION



KEYPLAN

NO SCALE

MECHANICAL DRAWING LIST

No.	Sheet No.	Sheet Title
1	M001	MECHANICAL COVER SHEET
2	M101	DEMO AND NEW WORK MECHANICAL
3	M201	SPECIFICATIONS, SCHEDULES AND DETAILS
4		
5		
6		
7		
8		
9		
10		

CONSTRUCTION SET 03-19-2026

SRBR No: 25111A

ENGINEER :

SRBR

MEP Consulting Engineers since 1959

757 Frederick Road Suite 300 - Catonsville, Maryland 21228

Phone: 410.869.7282 Fax: 410.869-7362

Web: www.SRBRengineers.com

CLIENT :

US TREASURY

PENNSYLVANIA AVE

WASHINGTON, DC

PROJECT :

US TREASURY VAULT #9 AC UNIT REPLACEMENT

"Professional Certification. I hereby certify that these documents were prepared or approved by me, and that I am a duly licensed professional engineer under the laws of the state of Washington DC *License No.* PE905594 *Expiration Date:* 8-31-2026 *."*

SHEET TITLE :

MECHANICAL COVER SHEET

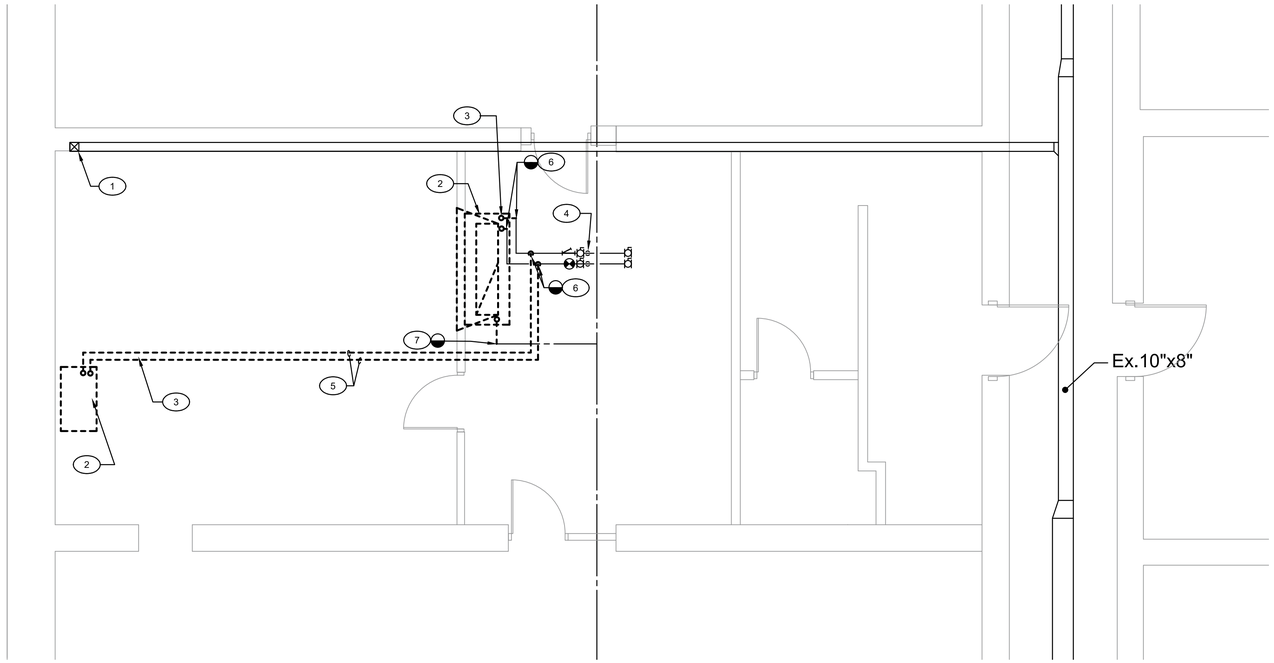
REVISION :

DATE : 03-19-2026

SRBR NO. : 25111

DRAWING NO. :

M001



VAULT 9 PLAN - MECHANICAL DEMOLITION

SCALE: 1/4" = 1'-0"

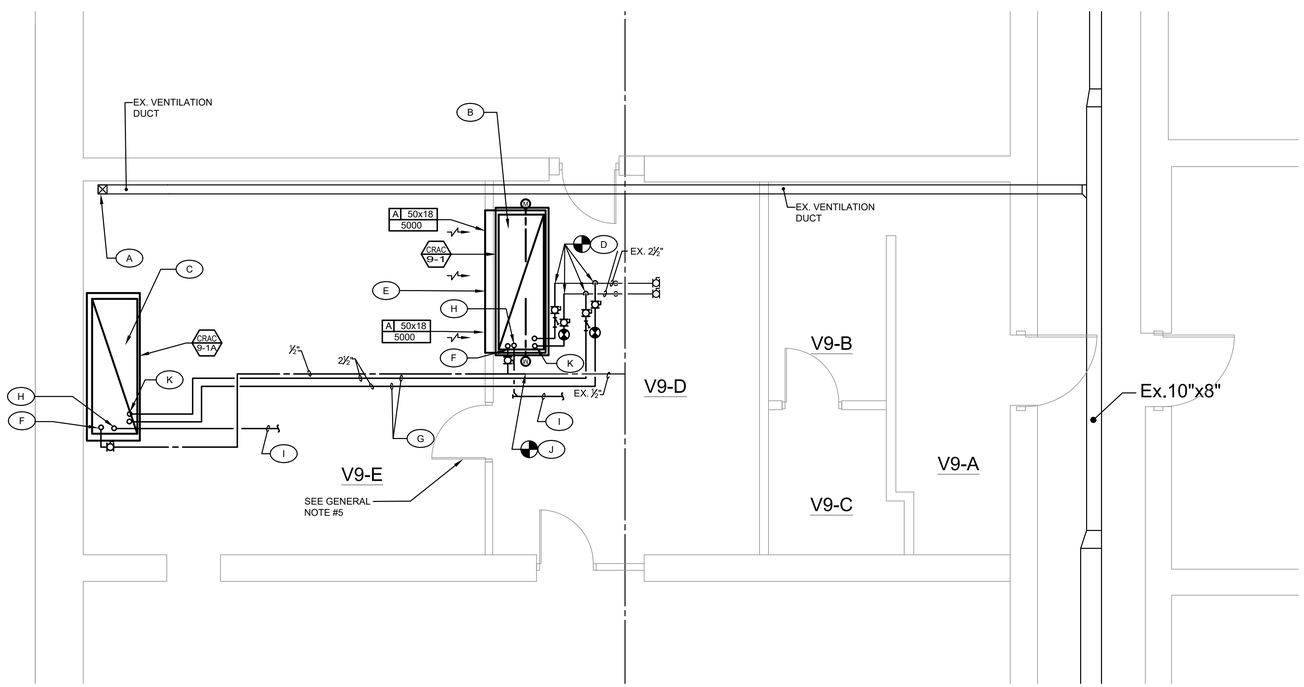
0 1' 2' 4' 8'

DEMOLITION PLAN NOTES

1. EXISTING AIR DEVICE TO REMAIN. REMOVE AND CLEAN DEVICE
2. EXISTING COMPUTER ROOM AC UNIT TO BE REMOVED ENTIRELY INCLUDING POWER, PIPING CONTROLS, DUCT, FLOOR STAND, ETC.
3. CUT EXISTING CHILLED WATER SUPPLY AND RETURN LINES BACK TO POINT INDICTED AND REMOVE PIPING
4. EXISTING CHILLED WATER SUPPLY AND RETURN LINE UP FROM LEVEL BELOW
5. EXISTING CHILLED WATER LINES BELOW THE FLOOR TO BE DEMOLISHED
6. CUT EXISTING CHILLED WATER LINES AT POINT INDICATED AND REMOVE BACK TO AC UNIT
7. CUT DOMESTIC COLD WATER LINE AT POINT INDICATED AND REMOVE BACK TO AC UNIT

GENERAL NOTES

1. CONTRACTOR TO PERFORM A PRE-BALANCE TEST OF BOTH CHILLED WATER AND SUPPLY AIRFLOW FOR THE ROOM. DOCUMENT THE READINGS IN A REPORT
2. WORK SHALL BE SCHEDULED WITH THE OCCUPANTS OF THE ROOM 2 WEEKS IN ADVANCE.
3. UNIT CONTROLS SHALL BE INTEGRATED INTO EXISTING BUILDING MANAGEMENT SYSTEM. UNIT SHALL BE SET UP TO MAINTAIN A SPACE TEMPERATURE OF 72 DEGREES AND 50% RELATIVE HUMIDITY.
4. CONTRACTOR TO FIELD VERIFY ALL EXISTING CONDITIONS, PIPE ARRANGEMENTS, SIZES, LOCATION, ETC. BEFORE BIDDING THE WORK
5. THE EXISTING DOOR AND FRAME BETWEEN ROOMS V9D AND V9E MUST BE TEMPORARILY REMOVED TO MAKE WAY FOR THE NEW UNIT TO BE BROUGHT INTO THE ROOM V9E. CONTRACTOR SHALL INCLUDE THIS WORK IN THEIR BID AND SHALL FOLLOW ALL REQUIRED SECURITY MEASURES AS DIRECTED BY THE US TREASURY.



VAULT 9 PLAN - MECHANICAL NEW WORK

SCALE: 1/4" = 1'-0"

0 1' 2' 4' 8'

NEW WORK PLAN NOTES

- A — EXISTING AIR DEVICE TO REMAIN. BALANCE TO 75 CFM AIRFLOW
- B — NEW COMPUTER ROOM AC UNIT WITH RETURN AIR INTAKE ON TOP. INSTALL MOTOR OPERATED DAMPER ON RETURN OPENING INTERLOCKED TO CLOSE WHEN THE UNIT IS OFF. RETURN DUCT SHALL BE FULL SIZE OPENING OF THE UNIT. CONTRACTOR SHALL EXPAND WALL OPENING AS NEEDED. APPLY FIRE CAULK AROUND THE DUCT AT THE WALL PENETRATION.
- C — NEW COMPUTER ROOM AC UNIT WITH RETURN AIR INTAKE ON TOP.
- D — CONNECT NEW 2½" CHILLED WATER SUPPLY AND RETURN LINES TO EXISTING AT POINT INDICATED.
- E — NEW RETURN DUCT FROM THE TOP OF THE NEW AC UNIT TO THE FINISHED FACE OF THE WALL AS SHOWN. REUSE THE EXISTING WALL OPENING. THE EXISTING WALL OPENING WILL NEED TO BE MADE LARGER TO ACCEPT THE NEW RETURN DUCT.
- F — NEW ½" COLD WATER UP INTO BOTTOM OF AC UNIT.
- G — NEW 2½" CHILLED WATER LINES UNDER RAISED FLOOR
- H — 1" CONDENSATE DRAIN. CONNECT TO NEW AC UNIT.
- I — EXTEND CONDENSATE LINE OVER AND CONNECT TO EXISTING DRAIN LINES THAT RUN TO LEVEL BELOW
- J — CONNECT NEW COLD WATER LINE TO EXISTING, MATCH EXISTING LINE SIZE
- K — NEW 2½" CHILLED WATER LINE UP INTO BOTTOM OF AC UNIT AND CONNECT. NEW AC UNIT SHALL HAVE A FACTORY INSTALLED MODULATING 2-WAY CONTROL VALVE.

CONSTRUCTION SET 03-19-2026

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MEP Consulting Engineers since 1959

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Web: www.SRBRengineers.com

CLIENT :

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PENNSYLVANIA AVE
WASHINGTON, DC

PROJECT :

US TREASURY
VAULT #9 AC UNIT
REPLACEMENT

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SHEET TITLE :

DEMO & NEW WORK MECHANICAL

REVISION :

DATE : 03-19-2026

SRBR NO. : 25111

DRAWING NO. :

M101

CRAC UNIT SCHEDULE

Tag	Manufacturer and Model Number	Serves	Voltage	MCA	MOCP	Motor FLA	Motor HP	CFM	ESP	Cooling Coil									Unit Weight (lbs.)	Remarks
										EAT DB °F	EAT WB °F	EWT °F	LWT °F	GPM	Water PD	Gross Total BTU/h	Gross Sensible BTU/h	LDB °F		
CACU-9-1	Liebert CW084D	Vault-9	460-3	25.9	40	2x13	2x7	11,400	0.50	75	61	42	54	62.9	18	359,000	264,000	53.3	1420	Provide 9KW steam humidifer with controls and control valve, two-way modualting chilled water control valve, floor stand, (2) EC fan motors, variable speed.
CACU-9-1A	Liebert CW084D	Vault-9	460-3	25.9	40	2x13	2x7	11,400	0.50	75	61	42	54	62.9	18	359,000	264,000	53.3	1420	Provide 9KW steam humidifer with controls and control valve, two-way modualting chilled water control valve, floor stand, (2) EC fan motors, variable speed.

MECHANICAL SPECIFICATIONS

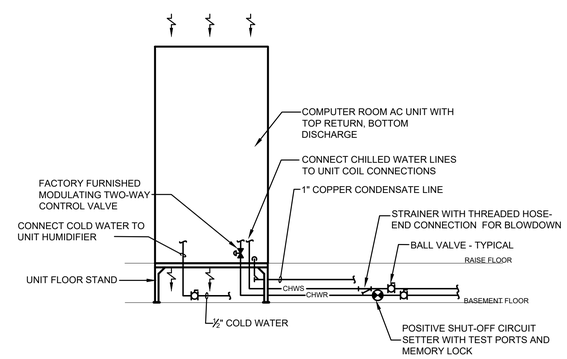
1. Furnish and install a complete and operational system in accordance with drawings and these specifications. Provide all materials whether specified or not for a complete and operational system that complies with all required codes and standards. All materials and equipment shall be installed in accordance with the manufacturer's instructions and all applicable codes and standards. Equipment shall be installed complete including power, controls, supports, etc. Equipment and associated controls shall be functionally tested in all operating modes. All equipment and materials shall be new unless otherwise indicated.
2. The contractor shall be responsible for visiting the site prior to bid and becoming familiar with all existing conditions that may affect his work. The contractor shall include in his bid any required labor and materials necessary to modify, remove or relocate existing work to allow for the new work to be installed. If the contactor believes the new work cannot be installed as shown in the drawings, he shall inform the project construction manager immediately. There shall be no additional compensation for failure to include coordination with existing conditions in the scope and cost.
3. All work shall be done in accordance with applicable building, mechanical, plumbing, electrical and energy codes and standards. These include, but are not limited to the latest International Building Code (IBC), International Mechanical Code (IMC), International Plumbing Code (IPC), International Fuel Gas Code (IFGC), National Fire Protection Association (NFPA), American Society of Refrigeration and Air Conditioning Engineers (ASHRAE), Sheet Metal and Air Conditioning Contractors National Association (SMACNA), National Electrical Code ASME CSD-1.
4. The contractor shall maintain a competent superintendent on site at all times who will oversee all work and ensure the construction is done in a safe, clean and professional manner. He shall ensure the work is done in accordance with the project specifications, all layout is correct and accurate and the quality of the workmanship meets or exceed industry standards. He shall also verify all manufacturer instructions are being followed for installation and setup.
5. The contractor shall submit equipment shop drawings for all major equipment and materials including, but not limited to Computer Room AC units, pipe, valves and insulation. Shop drawings shall indicate materials, dimensions, weights, performance data and warranty information. Equipment shall be as scheduled on the drawings. Alternate manufacturers may be considered provided they meet or exceed the scheduled performance data and are of equal or better quality. Alternate equipment must fit within the allotted space.
6. The contractor shall maintain a set of as-built documents on site at all times. The drawings shall maintain red-line markup of all deviations from the deign documents and include pertinent information such as critical dimensions and elevations.
7. All new equipment and materials shall be reviewed by the contractor before ordering to ensure the equipment will fit in the given space, is suitable for the location, arrangement of duct, piping, etc, and can be serviced once installed. All required service access space shall be maintained and room shall be provided to remove filters and manipulate valves and dampers. Verify equipment electrical characteristics meet the existing available power.
8. The new unit shall be labeled with a phenolic engraved plate that lists the unit ID number, Airflow, Quantity of motors, Motor HP, Motor Amperage, Voltage/Phase, quantity of filters and sizes, chilled water flow in gpm.
9. Computer Room AC units shall be started and tested by a certified representative of the manufacturer. All other equipment shall be started and tested by the installing contractor. The equipment shall be tested in all modes of operation. All operating set points shall be programmed in coordination with the building operating staff. Verify all peripheral components including, but not limited to, control valves, sensors, interlocks, etc operate as intended and specified. The contractor shall provide a one year parts and labor warranty starting from the date the project is accepted and considered substantially complete by the engineer. At the time the equipment is turned over to the owner, all units shall have clean filters.
10. All new air and hydronic systems shall be balanced by a third-party firm certified by AABC or NEBB. Test and balance all fans and the computer room AC unit. All airflows and water flows shall be set to within 10% of that prescribed on the drawings. Submit to the engineer of record a Test and Balance report at the completion of the project indicating information about each piece of equipment and each system. Provide equipment operating data, and individual supply outlet measurement.
11. Ductwork shall be constructed to SMACNA standards for low pressure duct (2" wc) and made with galvanized sheet steel, minimum 26 gage. Duct joints and fittings shall be sealed Class B. All joints and seems shall be taped or sealed using mastic material. The supply duct shall be externally wrapped with 1-1/2" thick fiberglass duct-wrap with foil face and integral vapor barrier.
12. Chilled water pipe and cold water pipe shall be type L copper with soldered fittings and joints. Pro-Press joints and fittings are also acceptable. Ball valve shall be of brass construction and full port with extended handles and a drain port placed on the unit side. Balance valves shall be brass construction and include test ports and memory stops. They shall be equal to "Xylem Circuit Setters". Chilled water pipe and cold water pipe shall be insulated with closed cell elastomeric preformed pipe insulation equal to "Armacell", ½" thick. All joints and plain ends shall be sealed with an appropriate sealant.
13. Condensate drain pipe shall be DWV or type L copper. Insulated with closed cell elastomeric preformed pipe insulation equal to "Armacell", ½" thick.
14. The CRAC unit floor stand shall be provided with the unit, by the manufacturer. The stand shall be constructed out of steel with reinforced, adjustable legs to the set the height needed. the stand shall support eh unit along the entire perimeter and shall have legs at each corner and evenly spaced along the long dimension. The legs shall have enlarged feet to spread the load.

Table 1: Summary Calculation Used to Determine Outdoor Air Ventilation Rates - Mechanically Ventilated

Reference - 2021 IMC

US TREASURY - VAULT 9

Zone Identification				2018 International Mechanical Code Compliance											
Room No.	Room Name	Occupancy Category	Area (sf)	People Outdoor Air Rate (cfm/ person)	Area Outdoor Air Rate (cfm/sf)	Occupant Load rate per Table 403.3 (#/1000sf)	Number of Occupants (#)	Breathing Zone Outdoor Air Flow Vbz (CFM)	*Table 403.3.1.2* Zone Air Distribution Effectiveness Ez	Zone Outdoor Air Flow Voz (CFM)	Zone Primary Air Flow Vpz (CFM)	Primary Outdoor Air Fraction Zp=Voz/ Vpz	Actual Primary Outdoor Air Fraction	Actual Zone Outdoor Air Flow Rate (CFM)	Meets Standard?
B-501	Vaul-1	Office	462	5.00	0.06	5.00	3	43	1	43	75	0.57	1.00	75	Y



COMPUTER ROOM AC UNIT PIPING DETAIL

NO SCALE

CONSTRUCTION SET 03-19-2026

SRBR No: 25111A

ENGINEER :

SRBR

MEP Consulting Engineers since 1959

757 Frederick Road, Suite 300 - Catonsville, Maryland 21228

Phone: 410.869.7282 Fax: 410.869-7362

Web: www.SRBRengineers.com

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PENNSYLVANIA AVE

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PROJECT :

US TREASURY

VAULT #9 AC UNIT

REPLACEMENT

"Professional Certification. I hereby certify that these documents were prepared or approved by me, and that I am a duly licensed professional engineer under the laws of the state of Washington DC *License No.* PE905594 *Expiration Date:* 8-31-2026 *."*

SHEET TITLE :

SPECIFICATIONS SCHEDULES & DETAILS

REVISION :

DATE : 03-19-2026

SRBR NO. : 25111

DRAWING NO. :

M201

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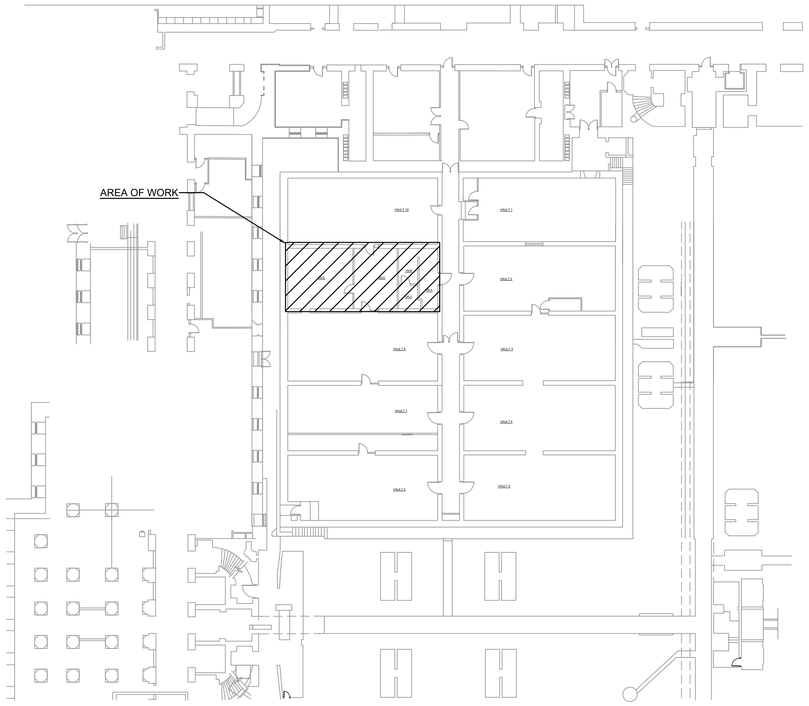

KEYPLAN

NO SCALE

GENERAL REQUIREMENTS

1. REFER TO THE SPECIFICATIONS FOR ADDITIONAL REQUIREMENTS OF THIS PROJECT.
2. US DEPARTMENT OF TREASURY - PROJECT MANAGER (PM) TO REVIEW AND APPROVE THE WORK. SUPPLEMENTAL DOCUMENTS OR INSTRUCTIONS BY THE (PM) TO BE PART OF THE SCOPE OF WORK.

SPECIAL CONDITIONS

A. DEMOLITION COORDINATION:

1. NOTIFY THE (PM) OF ANY WORK THAT MAY DISRUPT OTHER AREAS OUTSIDE OF THE WORK AREA.

B. WIRING REQUIREMENTS:

1. WIRING METHOD SHALL BE AS REQUIRED PER CODE FOR BUILDING CONSTRUCTION TYPE AND EACH SPACE FUNCTION.
2. PROVIDE QUANTITY OF CONDUCTORS REQUIRED TO INCLUDE EQUIPMENT GROUNDING PER CODE. WIRING SHOWN ON PLAN FOR POWER AND SWITCH CONTROL CLARITY ONLY.
3. PROVIDE DEDICATED NEUTRAL CONDUCTOR FOR ALL RECEPTACLE AND LIGHTING CIRCUITS. NEUTRALS CAN BE SHARED FOR 20 AMP CIRCUITS ONLY IF OVERSIZED.
4. CONDUCTOR AWG SIZE SHALL BE AS REQUIRED BY CODE AND ADJUSTED FOR VOLTAGE DROP.

C. SCIF:

1. ALL WORK WITH-IN THE SPACE TO CONFORM TO SCIF AREA REQUIREMENTS.
2. ALL WIRING IN SPACE TO BE INSTALLED IN CONDUIT. CONDUIT AND DEVICES AT SCIF PERIMETER ALLS TO BE SURFACE MOUNTED.
3. ALL CONDUIT PENETRATIONS TO BE GROUNDED AT POINT OF PENETRATION OR DI-ELECTRIC COUPLINGS USED.
4. PROVIDE SCIF EMI POWER FILTER FOR CRAC UNIT FEEDERS AT SCIF INTERIOR WALL NEAR THE POINT OF PENETRATION.

ELECTRICAL DRAWING LIST

No.	Sheet No.	Sheet Title
1	E001	ELECTRICAL COVER SHEET
2	E101	VAULT 9 PLAN - ELECTRICAL
3	E102	VAULT ELECTRIC ROOM
4	E201	ELECTRICAL SCHEDULES AND SPECIFICATIONS

ELECTRICAL SYMBOL LIST

SYMBOL	DESCRIPTION
J, J	JUNCTION OR PULL BOX - CEILING, WALL MOUNTED. SIZE PER N.E.C. UNLESS NOTED OTHERWISE.
	CONTROL EQUIPMENT
	WIRING CONCEALED ABOVE CEILING OR IN WALL (INSULATED CONDUCTOR CONFIGURATION AS REQUIRED AND GROUND PER CODE) (5).
	WIRING BELOW GRADE OR BELOW FINISHED SLAB (INSULATED CONDUCTOR CONFIGURATION AS REQUIRED AND GROUND PER CODE) (5).
,	ELECTRICAL PANEL: 120/208 VOLT - SURFACE, RECESSED MOUNTED
,	ELECTRICAL PANEL: 277/480 VOLT - SURFACE, RECESSED MOUNTED
1	PLAN NOTE - REFER TO NOTES ON DRAWING.
	EQUIPMENT CONNECTION NOTE - SEE SCHEDULE.
	EQUIPMENT CONNECTION - PROVIDE LOCAL DISCONNECT AT UNIT W/FUSE PROTECTED WHERE REQUIRED (SEE EQUIPMENT PLANS AND SCHEDULES TO INCLUDE DOCUMENTS FOR EQUIPMENT PROVIDED UNDER OTHER DIVISIONS FOR CONNECTION REQUIREMENTS)
	FSS WITHIN SITE OF EQUIPMENT (FUSE SIZE AS REQUIRED BY SUPPLIER)
	GFCI DUPLEX RECEPTACLE, NEMA 5-20R (1)
(E)	EXISTING TO REMAIN

SYMBOL NOTES

(1) PROVIDE GFCI OUTLET FOR EACH LOCATION INDICATED AND WHERE REQUIRED BY CODE. USE OF FEED THRU NEUTRAL/PROTECTION IS NOT ACCEPTABLE.

CIRCUIT CONNECTION LEGEND

[P3] ← INDICATES CIRCUIT SOURCE PANEL (TYPICAL FOR ROOM/SPACE)

2,3 ← INDICATES CIRCUITS TO BE CONNECTED (ADJACENT TO DEVICE)

ABBREVIATIONS

A	AMP,AMPERE (RATING AS INDICATED)
AFF	ABOVE FINISHED FLOOR (TO CENTERLINE UNO)
C, CDT	CONDUIT
C/B	CIRCUIT BREAKER
CFSS	COMBINATION FUSED STARTER SWITCH
ECB	ENCLOSED CIRCUIT BREAKER
G, GND	EQUIPMENT GROUND
FSS	FUSED SAFETY SWITCH
MCB	MAIN CIRCUIT BREAKER
MLO	MAIN LUGS ONLY
NEC	NATIONAL ELECTRICAL CODE (LATEST EDITION UNO)
NFSS	NON-FUSED SAFETY SWITCH
P	POLE
PC	PC/COMMUNICATION OUTLET
UNO	UNLESS NOTED OTHERWISE
V	VOLTAGE (RATING AS INDICATED)

DEMOLITION LEGEND

DESIGNATION	DESCRIPTION
(N)	NEW EQUIPMENT
(E)	EXISTING EQUIPMENT TO REMAIN
(R)	EXISTING EQUIPMENT RELOCATED
(X)	EXISTING EQUIPMENT TO BE REMOVED
(X/R)	EXISTING EQUIPMENT TO BE REMOVED AND RELOCATED

CONSTRUCTION SET 03-19-2026

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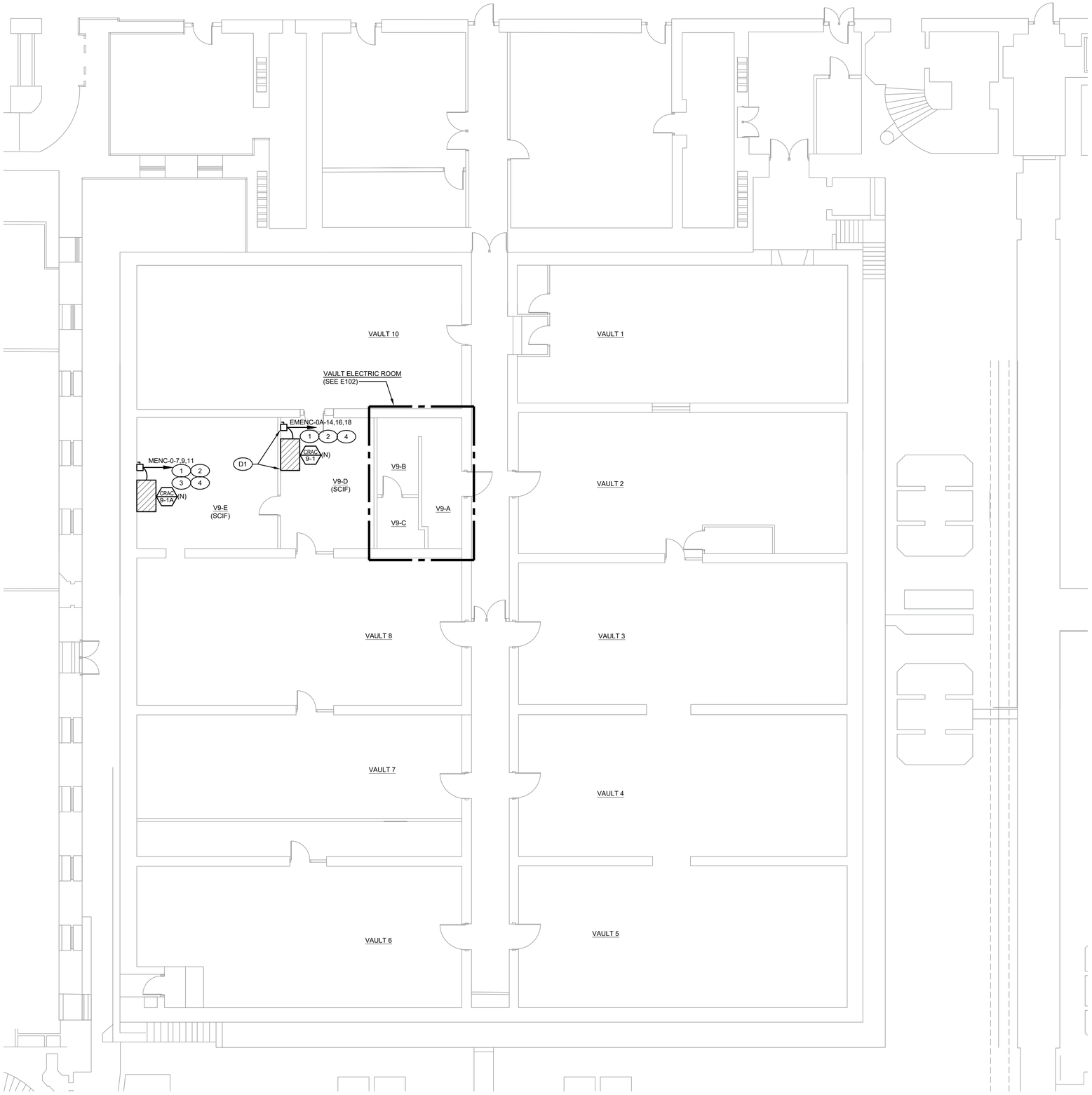
SHEET TITLE :
ELECTRICAL COVER SHEET

REVISION :

DATE : 03-19-2026

SRBR NO. : 25111

DRAWING NO. :
E001



VAULT 9 PLAN - ELECTRICAL

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

0 2' 4' 8' 16'

GENERAL NOTES

1. COORDINATE DEMOLITION AND REPLACEMENT OF CRAC UNIT SEQUENCING WITH MECHANICAL WORK TO MAINTAIN COOLING AT ALL TIMES.

PLAN NOTES (DEMOLITION)

D1 DISCONNECT EXISTING CRAC UNIT AND ADJUST EXISTING DISCONNECT TO COORDINATE WITH NEW UNIT LOCATION OF REPLACEMENT AND WORK-IN CLEARANCE REQUIREMENTS OF THE UNIT AND DISCONNECT.

PLAN NOTES (NEW WORK)

1. MAINTAIN EXISTING POWER CIRCUITS. CONNECT NEW CRAC UNITS. PROVIDE FUSE SIZE PER EQUIPMENT NAME PLATE.
2. BEND #6 GROUND AT FEEDER CONDUIT POINT OF PENETRATION INTO 9 AND BOND TO TELECOM GROUND BUS BAR IN SPACE.
3. DIVERT FROM NORMAL POWER PANEL TO EMERGENCY POWER. WORK TO BE COMPLETED WITH ROOM (V9-A) ELECTRIC ROOM.
4. PROVIDE SCIF EMI FILTER SURFACE MOUNTED ON SECURE SIDE OF WALL AND NEAR FEEDER POINT OF PENETRATION.

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SHEET TITLE :
VAULT 9 PLAN
ELECTRICAL

REVISION :

DATE : 03-19-2026

SRBR NO. : 25111

DRAWING NO. :
E101

ELECTRICAL SPECIFICATIONS

SECTION 16A - ELECTRICAL WORK

1. GENERAL:

A. The GENERAL and SPECIAL CONDITIONS listed under Division 1 shall govern this work where applicable.

B. The contractor shall furnish all labor, materials, equipment and services necessary for the construction of the complete functioning electrical system.

C. All labor and materials, although not specifically mentioned, but necessary for the completion of the work and the successful operation of the electrical systems, shall be as if specifically indicated.

D. Materials and equipment installed as part of the permanent installation shall be new unless otherwise indicated or specified, and shall be approved by the Underwriter's Laboratories, inc., for installation in each particular case where standard's have been established.

E. The project includes work with_in a secure space. All wiring to be surface mounted at SCIF perimeter, above raised floors or below drop ceiling. Exposed locations shall be pre-approved the architect prior to rough-in. Exposed wiring at finished areas shall be installed in conduit or surface metal raceway per architects approval. Exposed surfaces shall be primed and finish painted as directed.

2. SCOPE:

A. The Contractor shall provide all labor and materials required to install a completed system of electrical work as indicated on the drawings and/or herein specified. Work includes but is not limited to the following:

1. Power feeders and safety switches.
2. Final connections of mechanical equipment, electrical motors.

3. REGULATIONS AND CODE REQUIREMENTS:

A. All work shall conform to the requirements of the latest editions of the following codes, regulations and specifications.

1. National Electrical Code (NFPA 70)
2. National Fire Protection Association (NFPA)
3. Underwriters Laboratories, Inc.
4. Building Code
5. Local and state requirements

4. SHOP DRAWINGS:

A. The Contractor shall submit shop drawings (electronically) and manufacturer's catalog cuts showing all details of all equipment to be furnished.

5. GUARANTEE:

A. In addition to the guarantee obligations herein before specified in other divisions, the Contractor shall guarantee the system installation free from all mechanical and electrical defects for the period of one year from date of final acceptance by the Owner.

6. DRAWINGS AND SPECIFICATIONS:

A. The drawings are intended to show the general arrangement of the outlets and equipment. Door swings shall checked for arrangement of switches which shall be, installed on the latch side. Contractor shall check structural plans, mechanical plans and specifications so that he may coordinate his work with these trades.

7. GROUNDING:

A. Grounding of all conduit, panelboards, boxes, cabinets and equipment shall conform to the requirements of the latest edition of the National Electric Code.

B. All branch circuits shall include a bonded raceway and conductor. Equipment ground per NFPA 70, article 250 in addition to tick marks indicated on wiring.

8. DISTRIBUTION EQUIPMENT:

A. Not Applicable.

9. EQUIPMENT CONNECTIONS AND MOTOR STARTERS:

A. All power wiring shall be installed and connected under this section, unless already provided by on the equipment.

10. CONDUCTORS:

A. All secondary conductors shall be copper, 98% conductivity covered with 600 volt standard type THW or THHN Insulation. AWG size shall be per NFPA 70 or larger where indicated on the plans.

B. All wiring shall be in strict accordance with the latest edition of the National Electrical Code.

C. All wire number 8 and larger shall be stranded.

D. A color coding system shall be used throughout the building network of feeders and circuits and used as a basis of balancing the load within 10%.

E. Neutral conductors for isolated ground circuits shall be dedicated or sized 1.73 times larger for shared neutral circuits.

F. Upon completion of branch circuit wiring, the Contractor shall check and adjust circuit breaker arrangements to assure system load balance is within +10% or -10% across all three phases.

11. WIRING METHODS:

A. Branch circuit and feeders rated shall be conductors ran in conduit.

B. Conduit and wire sizes shall be per NFPA 70 or larger as indicated on the plans.

C. Type MC Cable is acceptable for branch circuits, in concealed areas or utility rooms

12. OUTLET BOXES:

A. Outlet boxes in concealed locations shall be galvanized stamped steel of sizes required by the NEC.

B. Boxes in exposed locations shall be cast, with gasketed cover.

C. Provide covers for all boxes.

13. PULL-BOXES AND JUNCTION BOXES:

A. Pull-boxes shall be provided as shown or wherever required to facilitate pulling of wires and cables, or as junction points. All such boxes shall be installed in accessible locations.

B. All pull boxes with-In SCIF must be able to be secured/locked or visible seal attached to detect the box has been opened.

14. WIRING DEVICES:

A. 20 AMP rated receptacles shall be used for all dedicated 20 AMP circuit connections per NFPA 70 requirements.

15. LIGHTING FIXTURES:

A. Not Applicable.

SECTION 16B - DEMOLITION WORK

1. SCOPE:

A. Material and equipment made superfluous by reason of the new work shall become the property of the contractor and shall be removed from the site unless the equipment is specifically indicated to be retained by the Owner, in which case the contractor shall disconnect & remove the equipment and return to the Owner.

B. The contractor shall furnish all labor, material and equipment necessary to complete the demolition work.

C. The work shall include removal and relocation of existing equipment as shown on the drawings.

2. SITE VISIT:

A. Prior to preparing the bid, the contractors shall visit the site and familiarize themselves with all existing conditions. Make all necessary investigations as to locations of utilities and all other matters which can affect the work. No additional compensation will be made to the contractor as a result of failure to get familiar with the existing conditions under which the work must be performed.

3. OUTAGES:

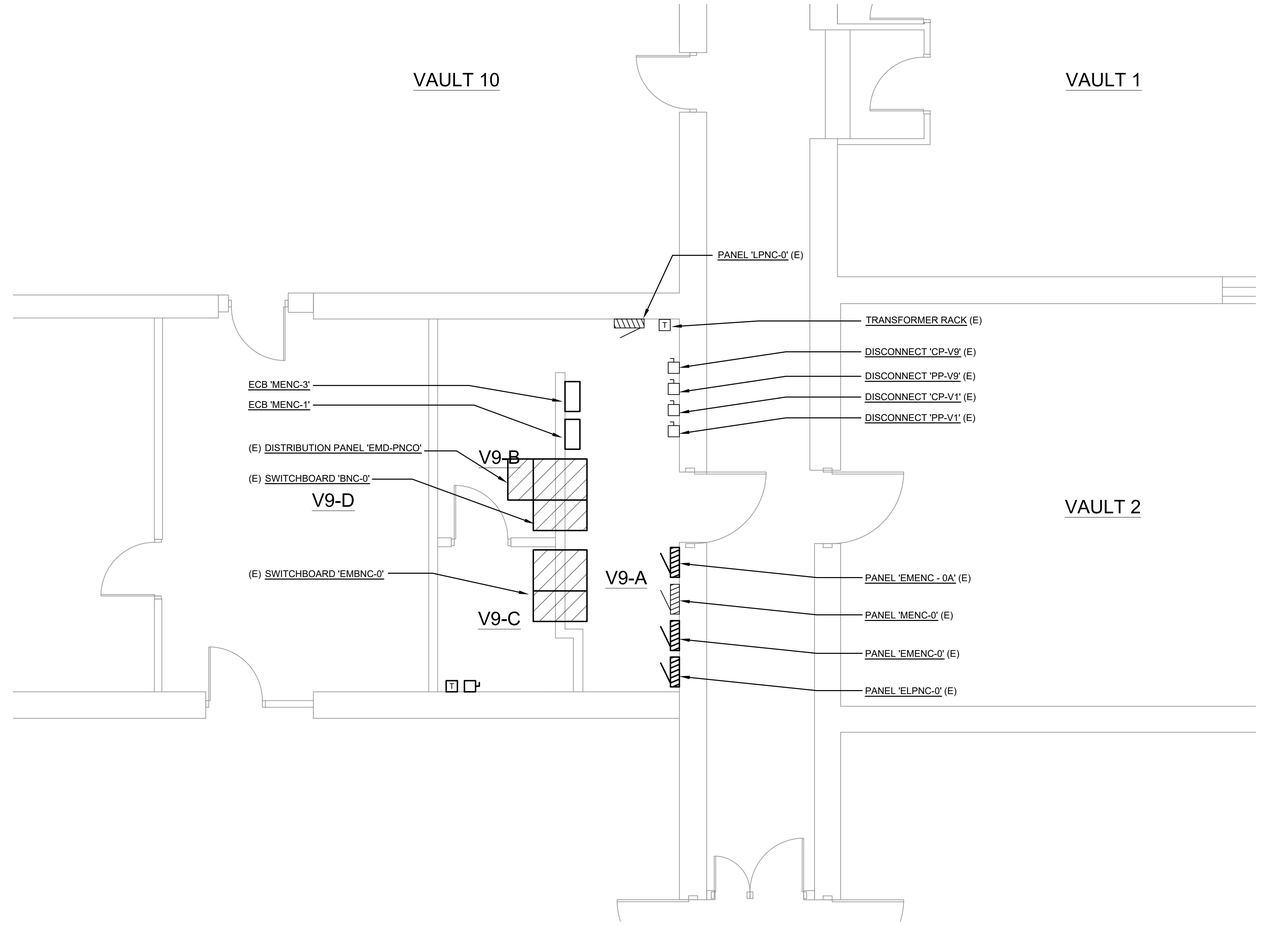
A. All electrical/telephone service work which will interfere with the normal use of occupied areas in any manner, shall be done at such times as shall be mutually agreed upon by the Contractor and the Owner.

B. Unless otherwise specified, outages any services, required for the performance of this contract and affecting areas other than the immediate work area shall be scheduled at least tHIRTY (30) days in advance. All such outages shall be performed on other than normal duty hours.

C. Outages during business hours must be approved by the treasury prior to commencement of the work.

4. CUTTING AND PATCHING:

A. Cutting and patching are not anticipated for this scope of work.



VAULT ELECTRIC ROOM

SCALE: 1/4" = 1'-0"

0 1' 2' 4' 8'

CONSTRUCTION SET 03-19-2026

SRBR No: 25111A

ENGINEER :

SRBR

MEP Consulting Engineers since 1959

757 Frederick Road Suite 300 - Catonsville, Maryland 21228

Phone: 410.869.7282 Fax: 410.869-7362

Web: www.SRBRengineers.com

CLIENT :

US TREASURY

PENNSYLVANIA AVE
WASHINGTON, DC

PROJECT :

US TREASURY
VAULT #9 AC UNIT
REPLACEMENT

"Professional Certification. I hereby certify that these documents were prepared or approved by me, and that I am a duly licensed professional engineer under the laws of the state of Washington DC *License No.* PE905594 *, Expiration Date:* 8-31-2026 *."*

SHEET TITLE :

VAULT ELECTRIC ROOM

REVISION :

DATE : 03-19-2026

SRBR NO. : 25111

DRAWING NO. :

E102

PANEL MENC-0 (E)

VOLTAGE: 277 / 480
PHASE, WIRE: 3 PH , 4 W

600 AMP MAIN C/B
FED FROM SWBNC-0

A.I.C.: (E)
MOUNTED: SURFACE

CKT	SERVING		C/B P	C/B TRIP	WIRE QTY	WIRE AWG	KVA	PH	KVA	WIRE QTY	WIRE AWG	C/B P	C/B TRIP	SERVING		CKT
1	CACU-V6	(E)	3	35			7.5	A	4.0			3	20	CRAC-V1	(E)	2
3							7.5	B	4.0							4
5							7.5	C	4.0							6
7	**SPARE**	**(E) (2)**	3	40				A	6.5			3	30	CACU-V 2	(E)	8
9								B	6.5							10
11								C	6.5							12
13	CACU-V8	(E)	3	30			6.5	A	12.0			3	60	CACU-V3	(E)	14
15							6.5	B	12.0							16
17							6.5	C	12.0							18
19	CACU-V6	(E)	3	20			4.0	A	12.0			3	60	CACU V5	(E)	20
21							4.0	B	12.0					(FUTURE)		22
23							4.0	C	12.0							24
25	SPARE	(E)	1	20			3.0	A	3.0			1	20	SPARE	(E)	26
27	SPARE	(E)	1	20			3.0	B	3.0			1	20	SPARE	(E)	28
29	SPARE	(E)	1	20			3.0	C	3.0			1	20	SPARE	(E)	30
31	SPARE	(E)	1	20			3.0	A	3.0			1	20	SPARE	(E)	32
33	SPARE	(E)	1	20			3.0	B	3.0			1	20	SPARE	(E)	34
35	SPARE	(E)	1	20			3.0	C	3.0			1	20	SPARE	(E)	36
37	BUSSED SPACE							A						**BUSSED SPACE**		38
39	BUSSED SPACE							B						**BUSSED SPACE**		40
41	BUSSED SPACE							C						BUSSED SPACE		42

TOTAL DEMAND KVA (PER PHASE): A: 50.3 B: 50.3 C: 50.3 DESIGN KVA: 151 DESIGN AMPS: 182

CONNECTED KVA 193.5

NOTES:

(1) ALL CIRCUIT BREAKERS ARE EXISITNG TO REMAIN UNO.
(2) DIVERT EXISITNG V9 CRAC UNIT CIRUIT TO EMERGENCY POWER PANEL. DESIGNATE AS SPARE

PANEL EMENC- 0A (E)

VOLTAGE: 277 / 480
PHASE, WIRE: 3 PH , 4 W

225 AMP MAIN C/B
FED FROM EMBNC-0

A.I.C.: 14k
MOUNTED: SURFACE

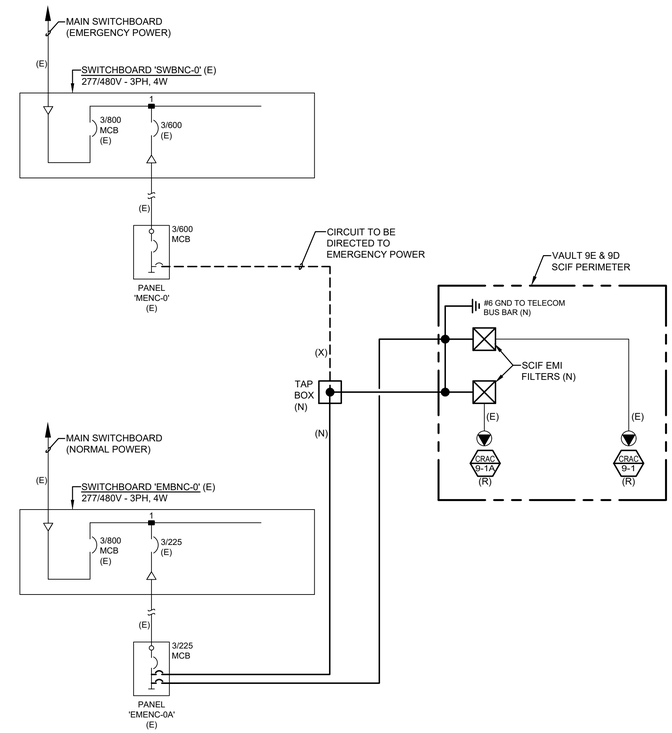
CKT	SERVING		C/B P	C/B TRIP	WIRE QTY	WIRE AWG	KVA	PH	KVA	WIRE QTY	WIRE AWG	C/B P	C/B TRIP	SERVING		CKT
1	CRAC-V5	(E)	3	60			12.5	A	12.5			3	60	CRAC-V5	(E)	2
3							12.5	B	12.5					(OFF)		4
5							12.5	C	12.5							6
7	CRAC-V3	(E)	3	30			6.5	A	12.5			3	60		(E)	8
9							6.5	B	12.5					CRAC-V3		10
11							6.5	C	12.5							12
13	BUSSED SPACE							A	7.1			3	50	**CRAC V 9-1**	(E)	14
15	BUSSED SPACE							B	7.1							16
17	BUSSED SPACE							C	7.1							18
19	BUSSED SPACE							A	7.1	3	8	**3**	**50**	**CRAC V 9 -1A**	**(3)**	20
21	BUSSED SPACE							B	7.1	1	10			GND		22
23	BUSSED SPACE							C	7.1							24
25	BUSSED SPACE							A						BUSSED SPACE		26
27	BUSSED SPACE							B						BUSSED SPACE		28
29	BUSSED SPACE							C						BUSSED SPACE		30

TOTAL DEMAND KVA (PER PHASE): A: 46.6 B: 46.6 C: 46.6 DESIGN KVA: 140 DESIGN AMPS: 168

CONNECTED KVA 174.6

NOTES:

(1) ALL CIRCUIT BREAKERS ARE EXISITNG TO REMAIN UNO.
(2) CONNECT NEW CIRCUIT TO EXISITNG BREAKER
(3) PROVIDE NEW CIRCUIT BREAKER AND DIVERT/EXTEND BRANCH CIRCUIT FROM NORMAL POWER PANEL AS INFIDACTED.



POWER DISTRIBUTION DIAGRAM

NO SCALE

CONSTRUCTION SET 03-19-2026

SRBR No: 25111A

ENGINEER :
SRBR
MEP Consulting Engineers since 1959
757 Frederick Road Suite 300 - Catonsville, Maryland 21228
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SHEET TITLE :
ELECTRICAL SCHEDULES AND SPECS

REVISION :
DATE : 03-19-2026
SRBR NO. : 25111
DRAWING NO. :
E201