US Army Corps
of Engineers ®
LITTLE ROCK, DISTRICT

F-35: SPECIAL ACCESS PROGRAM FACILITY
EBBING AIR NATIONAL GUARD BASE (ANGB), FORT SMITH, ARKANSAS



SOLICITATION NO.: W9127S25RA001
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US Army Corps
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US ARMY CORPS OF ENGINEERS
LITTLE ROCK DISTRICT
LITTLE ROCK, ARKANSAS

BURNS AND McDONNELL
9400 WARD PARKWAY,
KANSAS CITY, MO 64114
16543B

F-35: SPECIAL ACCESS PROGRAM FACILITY
EBBING AIR NATIONAL GUARD BASE (ANGB), FORT SMITH, ARKANSAS

COVER SHEET VOLUME 2

SHEET ID
G-003

READY-TO-ADVERTISE (RTA) SUBMITTAL

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1	AMW003 - REVISED INDEX FOR AMENDMENT 03	JAN 2026
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3	AMW001 - REVISED INDEX FOR AMENDMENT 01	FEB 2026

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US ARMY CORPS OF ENGINEERS
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SHEET INDEX VOLUME 2

SHEET ID
G-004.3

READY-TO-ADVERTISE (RTA) SUBMITTAL

FIRE ALARM GENERAL NOTES

1. PROVIDE AN ADDRESSABLE COMBINED FIRE ALARM / MASS NOTIFICATION SYSTEM WITH INWS CONNECTION.
2. PROVIDE A FULLY COORDINATED SYSTEM. REVIEW COORDINATION CONFLICTS WITH ARCHITECT AND ENGINEER PRIOR TO PROCUREMENT AND INSTALLATION. CORRECT ANY DEFICIENCIES, INCONSISTENCIES, OR POORLY COORDINATED INSTALLATIONS AT NO ADDITIONAL COST.
3. THE FIRE ALARM DRAWINGS ARE SCHEMATIC IN NATURE AND DO NOT SHOW A FINAL QUANTITY OF DEVICES. DETERMINE THE FINAL QUANTITY AND LOCATION OF ALL DEVICES IN ACCORDANCE WITH THE SPECIFICATIONS, CONTRACT DRAWINGS, AND MANUFACTURER'S WRITTEN RECOMMENDATIONS TO BE COMPLIANT WITH ALL APPLICABLE CODES AND STANDARDS. PROVIDE ADDITIONAL DEVICES WHEN REQUIRED FOR A FULLY FUNCTIONING FIRE ALARM SYSTEM AS REQUIRED BY NFPA 72, UFC 3-600-01, UFC 4-021-01.
4. CONCEAL ALL CONDUITS IN WALLS OR ABOVE CEILINGS UNLESS OTHERWISE INDICATED. SEE ALSO ELECTRICAL SECTION FOR ADDITIONAL CONDUIT INSTALLATION REQUIREMENTS/EXCEPTIONS IN THE SECURED SPACES. EXCEPTION: CONDUIT IS ALLOWED TO BE SURFACE MOUNTED ON WALLS AND CEILINGS IN UNFINISHED AREAS (SUCH AS MECHANICAL ROOM, ELECTRICAL ROOM). WHERE A CONDUIT SUPPLIES A DEVICE NOT MOUNTED DIRECTLY ON THE WALL OR CEILING, ROUTE THE CONDUIT AS A SINGLE PENDENT DROP TO EACH DEVICE FROM THE CEILING SURFACE ABOVE.
5. ALL EXPOSED FIRE ALARM JUNCTION BOXES, COVERS AND CONDUITS IN UNFINISHED AREAS ARE TO BE PROVIDED PRE-FINISHED RED FROM THE FACTORY. PAINT EXPOSED CONDUIT AND JUNCTION BOXES IN FINISHED AREAS TO MATCH ADJACENT SURFACES. LABEL JUNCTION BOXES INSIDE COVER "FIRE ALARM".
6. PROVIDE CONDUIT IN ACCORDANCE WITH THE REQUIREMENTS OF THE ELECTRICAL SPECIFICATIONS, UNLESS OTHERWISE NOTED. SUPPORT CONDUIT IN ACCORDANCE WITH THE NEC SUCH AS MAXIMUM 10 FT SUPPORT INTERVALS AND 3 FT FROM A TERMINATION. TENSION ONLY HANGERS (SUCH AS BATWINGS) ARE NOT PERMITTED. FLEXIBLE CONDUIT IS ONLY PERMITTED WHEN CONNECTING TO THE FOLLOWING DEVICES AND APPLIANCES: DEVICES LOCATED ON FIRE SUPPRESSION EQUIPMENT SUCH AS FLOW/PRESSURE SWITCHES, AND TAMPER SWITCHES, DEVICES AND APPLIANCES LOCATED IN REMOVABLE CEILING TILES, OR WHERE SPECIFICALLY NOTED.
7. PROVIDE CONDUCTOR SIZING NOT LESS THAN 18 AWG FOR SLC. PROVIDE CONDUCTOR SIZING NOT LESS THAN 16 AWG FOR NAC, SPEAKER CIRCUITS, AND IDC, PER UFC 3-600-01. CONSISTENTLY COLOR COORDINATE ALL CONDUCTORS THROUGH THE SYSTEM IN RELATION TO DEVICES THEY FEED SUCH AS SLC - BLACK/RED, STROBE - YELLOW/BLUE. PROVIDE ADDRESSABLE SLC CIRCUITS WITH SHIELDED CONDUCTORS, WHERE THE SHIELDING IS GROUNDED AT ONE END. PROVIDE ALL CIRCUITS WITH LABELING AT THE POINT OF TERMINATION SUCH AS SLC 1, NAC 8, IDC 4.
8. RUN CONDUCTORS FROM DEVICE TO DEVICE WITHOUT SPLICES. WIRE NUTS ARE PROHIBITED. UTILIZE TERMINAL STRIPS WHERE CONDUCTORS CANNOT BE DIRECTLY TERMINATED AT THE DEVICE SUCH AS PIGTAILS OFF A SMOKE DETECTOR.
9. DO NOT USE FIRE ALARM EQUIPMENT PANELS AS RACEWAY FOR ROUTING POWER WIRING OR LOW VOLTAGE WIRING. ONLY ROUTE WIRING TERMINATING WITHIN THE PANEL INTO THE PANEL. PROVIDE 1/4 INCH SEPARATION BETWEEN POWER-LIMITED FIRE ALARM CIRCUITS AND POWER CIRCUITS.
10. MOUNTING DEVICES IN THE FACU/ACU/FAC, INCLUDING ANY SUBPANELS, SUCH AS AMP AND NAC, WHICH ARE NOT UL LISTED OR FM APPROVED AS PART OF THE UNIT IS PROHIBITED.
11. PROVIDE SURGE SUPPRESSORS TO PROTECT ALL POWER SUPPLY CIRCUITS TO THE FACU/ACU/FAC, INCLUDING ANY SUBPANELS SUCH AS AMP, NAC, AND ALL FIRE ALARM CIRCUITS LEAVING OR ENTERING THE BUILDING. DEVICES AND APPLIANCES MOUNTED DIRECTLY ON THE EXTERIOR OF THE BUILDING SUCH AS WALL MOUNTED EXTERIOR SPEAKERS DO NOT REQUIRE SUPPRESSORS. MOUNT SURGE SUPPRESSORS IN A SEPARATE ENCLOSURE.
12. INSTALL FIRE ALARM BATTERIES IN THE ENCLOSURE OF THE DEVICE/UNIT IT SUPPORTS SUCH AS FACU/ACU/FAC ENCLOSURE OR IN AN INDEPENDENT DEDICATED ENCLOSURE.
13. SEE GJ SHEETS FOR SECURE AREA PERIMETERS AND REQUIREMENTS. REFER TO K1/GJ504 FOR THE FIRE ALARM SECURE AREA PENETRATION DETAIL. CONSTRUCTION FOR SECURE AREAS, SECURE AREA MATERIALS, AND COMPONENTS MUST COMPLY WITH UFC 4-010-05 AND IC TECH SPECS FOR ICD/ICS 705 AND FULLY MEET AND PASS ALL ACCREDITATIONS. COORDINATE WITH CONTRACTING OFFICE DURING CONSTRUCTION OF SECURE AREAS.

AUDIBLE DESIGN CRITERIA

1. PROVIDE AUDIBLE NOTIFICATION APPLIANCES TO ACCOMPLISH THE FOLLOWING DESIGN CRITERIA WITH ALL DOORS AND WINDOWS CLOSED. WHERE THIS DESIGN CRITERIA IS NOT ACCOMPLISHED DURING ACCEPTANCE TESTING, PROVIDE ADDITIONAL DEVICES TO MEET THE MINIMUM DESIGN CRITERIA WITHOUT EXCEEDING THE LIMITATIONS OF THE FACU/ACU/FAC, NAC, OR AMP. (INCLUSIVE OF PRESCRIBED SAFETY FACTORS).
2. PROVIDE A QUANTITY OF SPEAKERS IN EACH ROOM/AREA TO ACHIEVE THE REQUIRED SOUND POWER AND INTELLIGIBILITY OUTLINED IN THESE CONTRACT DOCUMENTS. NOTE: DEPENDING ON THE QUALITY OF SPEAKER USED, SEVERAL SPEAKERS TAPPED AT A LOWER SETTING MAY BE REQUIRED TO ACHIEVE THE PRESCRIPTIVE CIS SCORE.
3. PROVIDE A MINIMUM SOUND POWER OF 70 DBA AND 15 DBA OVER THE AVERAGE AMBIENT SOUND LEVEL OR 5 DBA ABOVE THE MAXIMUM SOUND LEVEL HAVING A DURATION OF AT LEAST 60 SECONDS, WHICHEVER IS GREATER, AT THE MOST REMOTE LOCATION WITHIN THE ROOM/AREA MEASURED AT 5 FT AFF. MEASURE THE SOUND POWER OFF THE TEMPORAL THREE TONE PATTERN.
4. THE FOLLOWING CRITERIA WILL BE USED FOR REVIEW AND APPROVAL OF SHOP DRAWINGS:
   A. REDUCE THE SOUND POWER BY 6 DB EACH TIME THE DISTANCE BETWEEN THE APPLIANCE AND THE LISTENER IS DOUBLED. STARTING DISTANCE IS PER MANUFACTURER'S DATASHEET, TYPICALLY 10 FT.
   B. REDUCE THE SOUND POWER IN ACCORDANCE WITH THE MANUFACTURER'S DATASHEET FOR SOUND POWER DISTRIBUTION NOT PERPENDICULAR TO THE FACE OF THE APPLIANCE. REFER TO MANUFACTURER'S TYPICAL SOUND OUTPUT DISTRIBUTION DIAGRAM.
   C. IN LIEU OF THE MANUFACTURER'S PUBLISHED DB LOSS, ASSUME A MINIMUM 15 DB LOSS THROUGH A STANDARD CLOSED DOOR.
5. PROVIDE EXTERIOR SPEAKERS MEETING A MINIMUM SOUND POWER OF 70 DBA AND 15 DBA OVER THE AVERAGE AMBIENT SOUND LEVEL, AND A CIS OF 0.8 WITHIN THE AREA INDICATED MEASURED AT 5 FT ABOVE GRADE. MEASURE THE SOUND POWER OFF THE TEMPORAL THREE TONE PATTERN. THE AVERAGE AMBIENT SOUND LEVEL IS THE ROOT MEAN SQUARE, A-WEIGHTED, SOUND PRESSURE LEVEL MEASURED OVER THE DURATION THE BUILDING IS NORMALLY OCCUPIED.
6. MEET THE FOLLOWING INTELLIGIBILITY CRITERIA:
   A. ACHIEVE A CIS SCORE OF 0.8 IN EACH ROOM MEASURED AT 5 FT AFF.
   B. A LESSER CIS IS PERMITTED IN ROOMS OF THE BUILDING WITH EXCESSIVE SOUND REFLECTIONS, SUCH AS ROOMS WITH HARD SURFACES (METAL, TILE, OR CONCRETE), WHERE THE OCCUPANT CAN WALK NO MORE THAN 33 FT WITHIN THE SAME ROOM TO A LOCATION THAT ACHIEVES THE MINIMUM CIS (0.8).
   C. A LESSER CIS IS PERMITTED IN NORMALLY UNOCCUPIED ROOMS OF THE BUILDING, WHERE THE OCCUPANT CAN WALK NO MORE THAN 50 FT TO A LOCATION WITHIN THE SAME ROOM THAT ACHIEVES THE MINIMUM CIS (0.8). NORMALLY UNOCCUPIED ROOMS ARE CONSIDERED TO BE STORAGE ROOMS, MECHANICAL / ELECTRICAL ROOMS, COMMUNICATION CLOSETS, AND FIRE PROTECTION ROOMS.
7. PREVENT FEEDBACK DURING ACU OR LOC MICROPHONE USAGE BY GAIN CONTROL, STRATEGIC SPACING OF SPEAKERS AND/OR PROGRAMMABLE SPEAKER CIRCUITS TO THE IMMEDIATE AREA OF THE ROOM WITH THE MICROPHONE THAT CAUSES FEEDBACK. THE AREA WITHIN ROOMS WITH MICROPHONES UNDER ALL CIRCUMSTANCES BUT MICROPHONE USAGE SHALL MEET THE AUDIBILITY AND INTELLIGIBILITY REQUIREMENTS.

VISIBLE DESIGN CRITERIA

1. PROVIDE VISIBLE NOTIFICATION APPLIANCES TO ACHIEVE THE COVERAGE INDICATED.
2. SPACE STROBES IN ACCORDANCE WITH THE CRITERIA OUTLINED IN NFPA 72, UNLESS OTHERWISE NOTED.
3. WHERE SPEAKERS AND STROBES ARE LOCATED IN THE SAME AREA THEY MAY BE COMBINED INTO A SINGLE UNIT.

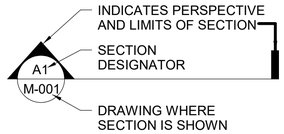
MNS PRIORITIZATION

1. ACU INPUT TAKES PRIORITY OVER ALL INPUTS.
2. LOC INPUTS TAKE PRIORITY OVER BASE GENERATED INPUTS.
3. MNS / INWS INPUT TAKES PRIORITY OVER FIRE ALARM INPUT.

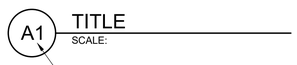
ABBREVIATIONS

AFF	ABOVE FINISHED FLOOR
AWG	AMERICAN WIRE GAUGE
CIS	COMMON INTELLIGIBILITY SCALE
DB	DECIBEL
DBA	DECIBEL A-WEIGHTED
FDC	FIRE DEPARTMENT CONNECTION
FM	FM GLOBAL
IDC	INITIATING DEVICE CIRCUIT
INWS	INSTALLATION NOTIFICATION AND WARNING SYSTEM
MNS	MASS NOTIFICATION SYSTEM
NAC	NOTIFICATION APPLIANCE CIRCUIT
NEC	NATIONAL ELECTRICAL CODE
NFPA	NATIONAL FIRE PROTECTION ASSOCIATION
NEMA	NATIONAL ELECTRICAL MANUFACTURERS ASSOCIATION
SLC	SIGNALING LINE CIRCUIT
SSM	SITE SECURITY MANAGER
UL	UNDERWRITERS LABORATORY
WP	WEATHERPROOF (NEMA 250, TYPE 3R)

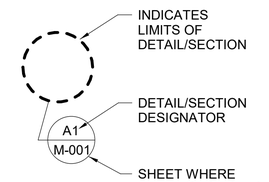
SECTION CUT SYMBOL



DETAIL/SECTION TITLE



DETAIL / ENLARGED CALLOUT SYMBOL



FIRE ALARM / MNS SYSTEM LEGEND

FACU/ACU/FAC	COMBINATION FIRE ALARM CONTROL UNIT, AUTONOMOUS CONTROL UNIT, AND FIRE ALARM COMMUNICATOR
INWS	INSTALLATION NOTIFICATION AND WARNING SYSTEM PANEL
NAC	NOTIFICATION CIRCUIT POWER BOOSTER, EXTENDER PANEL
AMP	AMPLIFIER
BATT	SECONDARY POWER SUPPLY (BATTERY)
SS	SURGE SUPPRESSOR (PROVIDED BY DIVISION 26) (TRANSIENT VOLTAGE SURGE SUPPRESSOR)
FAA	FIRE ALARM ANNUNCIATOR
LOC	LOCAL OPERATING CONSOLE
MIC	REMOTE VOICE EVACUATION MICROPHONE
F	MANUAL FIRE ALARM PULL STATION
VS	VALVE SUPERVISORY SWITCH (PROVIDED BY DIVISION 21)
WF	WATER FLOW DETECTOR / SWITCH (PROVIDED BY DIVISION 21)
RL	NON-ADDRESSABLE OUTPUT RELAY
ET	EMERGENCY TEXTUAL VISIBLE DISPLAY
S (S)	IN-DUCT PHOTOELECTRIC SMOKE DETECTOR S = SUPPLY
S (P)	SMOKE DETECTOR P = PHOTOELECTRIC
	HORN / STROBE COMBINATION
S	SPEAKER
	SPEAKER / STROBE COMBINATION
	CEILING MOUNTED STROBE
AOM	ADDRESSABLE OUTPUT CONTROL MODULE
AIM	ADDRESSABLE INPUT MONITOR MODULE
	REMOTE INDICATOR
	ANTENNA
	GROUND
	JUNCTION BOX

CHRISTOPHER STEPHEN CARL
LICENSED PROFESSIONAL ENGINEER
26409
STATE OF MINNESOTA

US Army Corps of Engineers ®

MARK	DESCRIPTION	DATE
0	READY-TO-ADVERTISE (RTA) SUBMITTAL	JUL 2025

DESIGNED BY: H. WILEMAN
DRAWN BY: J. HEIN
CHECKED BY: C. CARL
SUBMITTED BY: B. STREEBIN
SIZE: ANSI D
ISSUE DATE: JUL 2025
SOLICITATION NO.: W912T5-25-RA001
CONTRACT NO.: W912T5-24-C-0007
FILE NAME: 165438_F_R22.rvt

US ARMY CORPS OF ENGINEERS
LITTLE ROCK DISTRICT
LITTLE ROCK, ARKANSAS

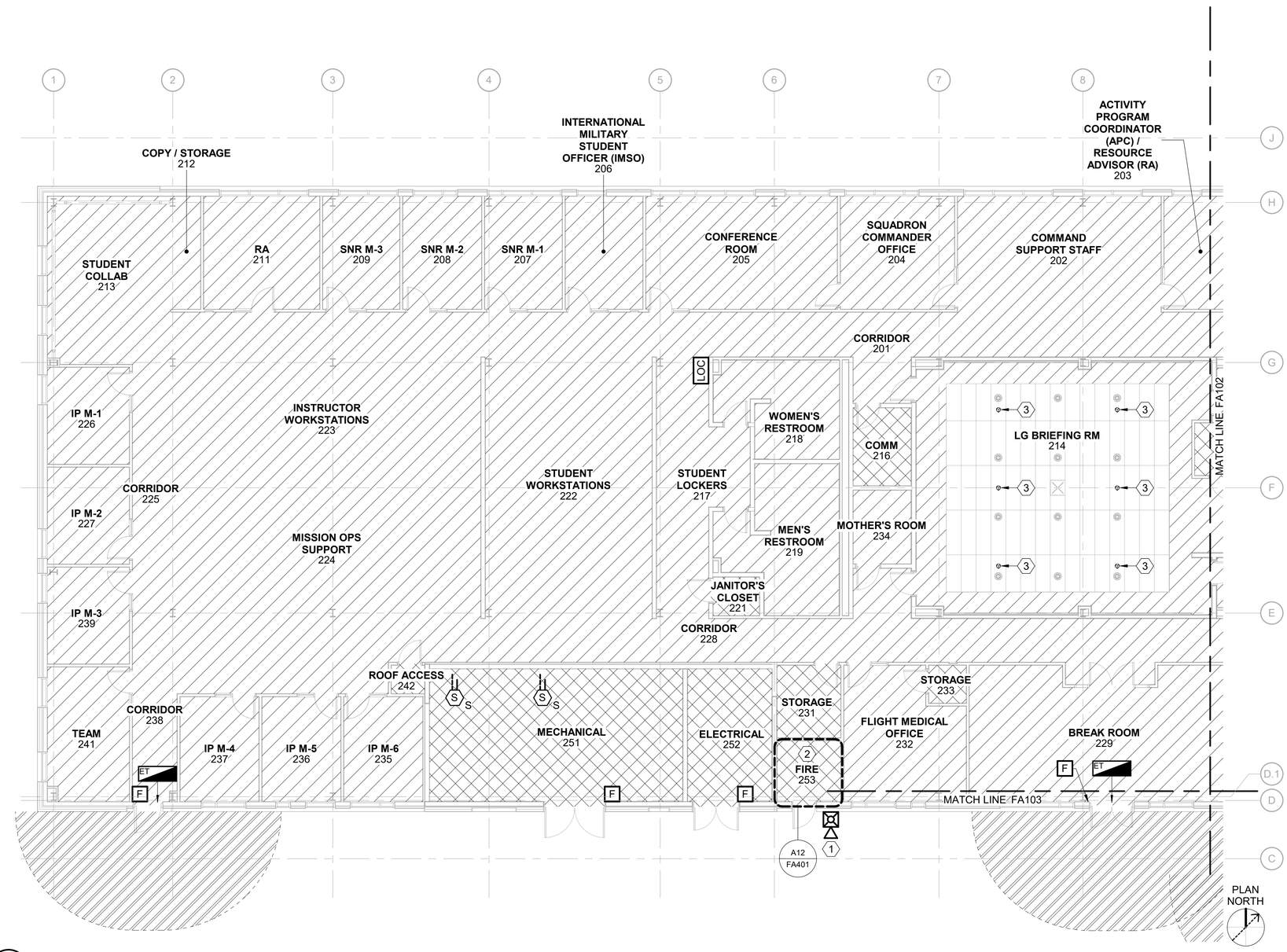
BURNS AND McDONNELL
9400 WARD PARKWAY,
KANSAS CITY, MO 64114
165438

F-35, SPECIAL ACCESS PROGRAM FACILITY
EBBING AIR NATIONAL GUARD BASE (ANGB), FORT SMITH, ARKANSAS

FIRE ALARM NOTES, LEGEND AND ABBREVIATIONS

SHEET ID
FA001

READY-TO-ADVERTISE (RTA) SUBMITTAL



A2 FIRE ALARM FLOOR PLAN - AREA A

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

GENERAL SHEET NOTES

1. REFER TO FA001 FOR GENERAL NOTES, DESIGN CRITERIA, ABBREVIATIONS AND SYMBOLS.
2. WALL MOUNTED NOTIFICATION APPLIANCES ARE PERMITTED IN UNFINISHED AREAS WITH CONGESTED CEILINGS SUCH AS A PUMP ROOM OR MECHANICAL ROOM.

SHEET KEYNOTES

1. WP HORN/STROBE OVER FDC.
2. ROUTE ANTENNA CABLES TO ANTENNA ON TOWER VIA UNDERGROUND CONDUIT PROVIDED IN ROOM 127. SEE ES116 FOR MORE INFORMATION.
3. PLACE SPEAKER/STROBES CENTERED IN CEILING TILES. COORDINATE PLACEMENT WITH ALL OTHER CEILING MOUNTED DEVICES. ADDITIONAL SPEAKERS MAY BE REQUIRED IN THE UPPER CEILING TO MEET THE OVERALL PERFORMANCE CRITERIA.

LEGEND

PROVIDE CEILING OR WALL MOUNTED SPEAKERS AS REQUIRED TO ACHIEVE DESIGN CRITERIA.

PROVIDE CEILING MOUNTED SPEAKERS AND CLEAR STROBES AS REQUIRED TO ACHIEVE DESIGN CRITERIA.

PROVIDE WEATHERPROOF WALL MOUNTED SPEAKERS, AS REQUIRED TO ACHIEVE DESIGN CRITERIA.

US Army Corps of Engineers ®

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US ARMY CORPS OF ENGINEERS
LITTLE ROCK DISTRICT
LITTLE ROCK, ARKANSAS

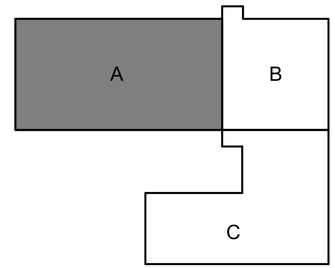
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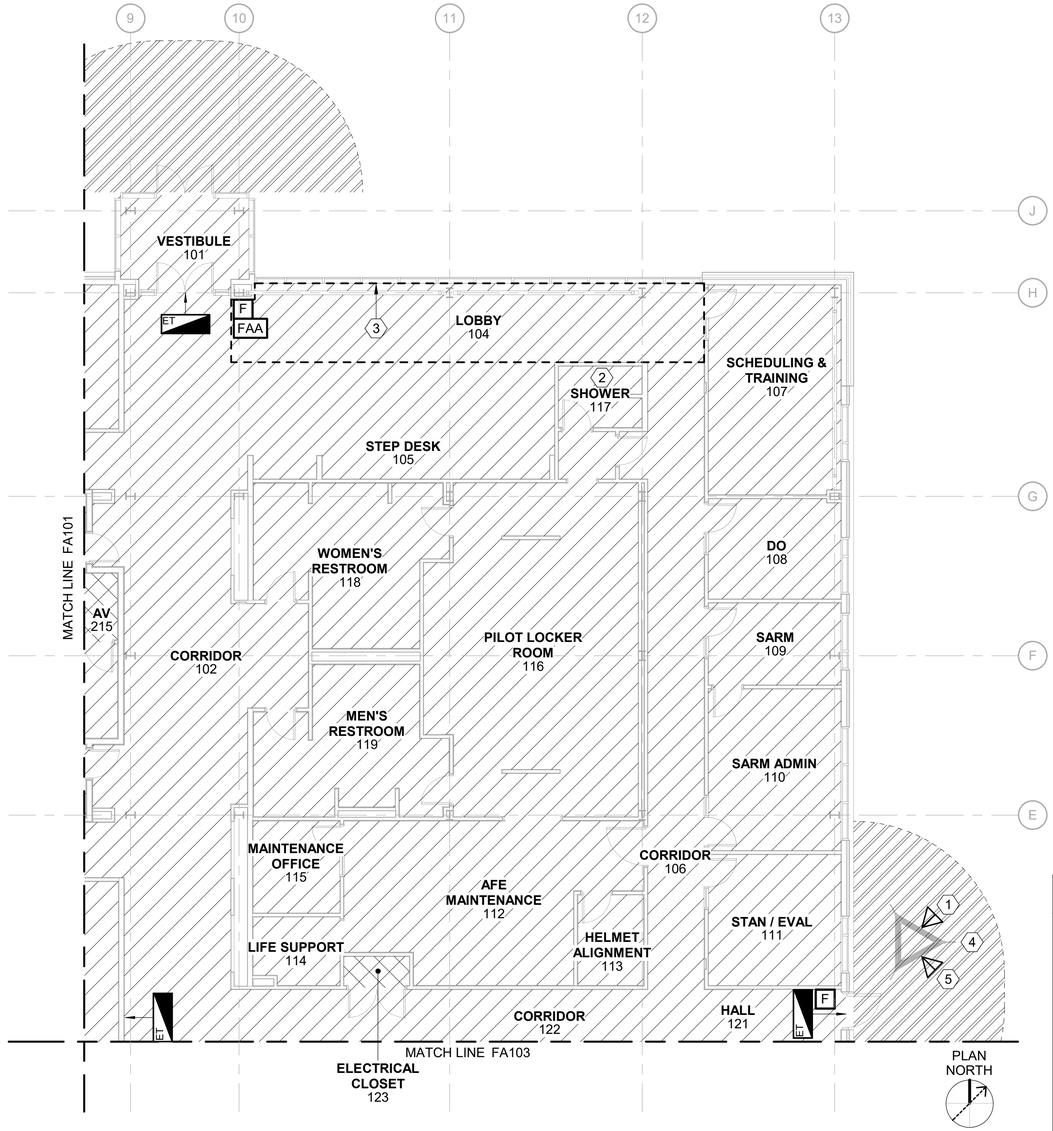
FIRE ALARM FLOOR PLAN - AREA A

KEY PLAN



SHEET ID
FA101

READY-TO-ADVERTISE (RTA) SUBMITTAL



A7 FIRE ALARM FLOOR PLAN - AREA B

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

0 4' 8' 16'

GENERAL SHEET NOTES

1. REFER TO FA001 FOR GENERAL NOTES, DESIGN CRITERIA, ABBREVIATIONS AND SYMBOLS.
2. WALL MOUNTED NOTIFICATION APPLIANCES ARE PERMITTED IN UNFINISHED AREAS WITH CONGESTED CEILINGS SUCH AS A MECHANICAL ROOM.

SHEET KEYNOTES

1. ANTENNA FOR MONACO FIRE ALARM SIGNAL TRANSMISSION. ANTENNA FINAL LOCATION SHALL BE APPROVED BY THE SSM.
2. PROVIDE WEATHERPROOF DEVICES IN THIS ROOM.
3. PROVIDE SPEAKER/STROBES THIS AREA ONLY WHERE PROVIDED IN ROOM 104/105.
4. ROUTE ANTENNA CABLES FROM ROOM 253 TO ANTENNA ON TOWER VIA UNDERGROUND CONDUIT PROVIDED IN ROOM 127. SEE ES116 FOR MORE INFORMATION.
5. ANTENNA FOR INWS. ANTENNA FINAL LOCATION SHALL BE APPROVED BY THE SSM.

LEGEND

PROVIDE CEILING OR WALL MOUNTED SPEAKERS AS REQUIRED TO ACHIEVE DESIGN CRITERIA.

PROVIDE CEILING MOUNTED SPEAKERS AND CLEAR STROBES AS REQUIRED TO ACHIEVE DESIGN CRITERIA.

PROVIDE WEATHERPROOF WALL MOUNTED SPEAKERS, AS REQUIRED TO ACHIEVE DESIGN CRITERIA.

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US ARMY CORPS OF ENGINEERS
LITTLE ROCK DISTRICT
LITTLE ROCK, ARKANSAS

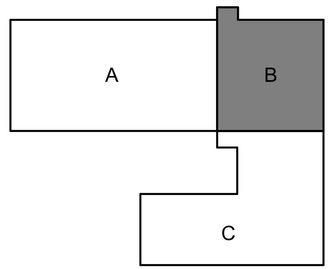
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F-35 SPECIAL ACCESS PROGRAM FACILITY
EBBING AIR NATIONAL GUARD BASE (ANGB), FORT SMITH, ARKANSAS

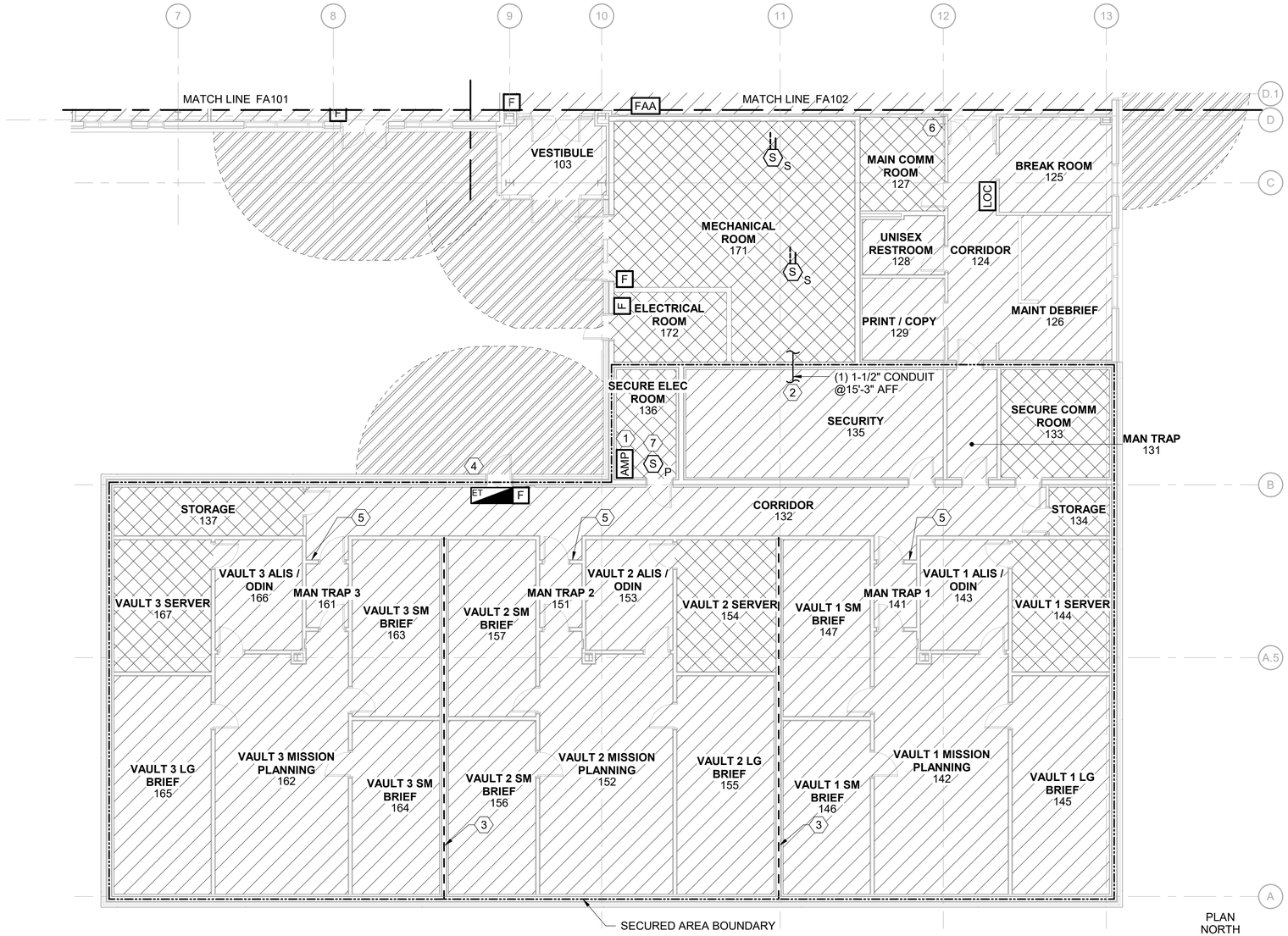
FIRE ALARM FLOOR PLAN - AREA B

KEY PLAN



SHEET ID
FA102

READY-TO-ADVERTISE (RTA) SUBMITTAL



A4 FIRE ALARM FLOOR PLAN - AREA C
SCALE: 1/8" = 1'-0"

GENERAL SHEET NOTES

1. REFER TO FA001 FOR GENERAL NOTES, DESIGN CRITERIA, ABBREVIATIONS AND SYMBOLS.
2. WALL MOUNTED NOTIFICATION APPLIANCES ARE PERMITTED IN UNFINISHED AREAS WITH CONGESTED CEILINGS SUCH AS A MECHANICAL ROOM.

SHEET KEYNOTES

1. PROVIDE DEDICATED AMPLIFIER TO SERVE SPEAKERS IN THE SECURED AREA ONLY.
2. LIMIT PENETRATION THROUGH SECURED BOUNDARY TO THIS CONDUIT/LOCATION ONLY. SEE GJ601 FOR PENETRATION SCHEDULE. PROVIDE FILTER IN ACCORDANCE WITH SPEC 13 49 20.00 10 ON ALL CIRCUITS THROUGH THIS WALL.
3. EXCEPT AS NOTED, NO FIRE ALARM PENETRATIONS PERMITTED IN THIS WALL.
4. SPEAKER CIRCUIT SHALL NOT PENETRATE TEMPEST BOUNDARY. REFER TO DETAIL L7/A-523 AND A1/A-352 FOR MORE INFORMATION. CONDUIT MUST RUN UNDER GROUND FROM AMPLIFIER IN NON-SECURED SPACE AND TRANSITION TO VERTICAL AND FOLLOW AIR GAP TO FINAL LOCATION. COORDINATE ROUTING OF UNDERGROUND CONDUIT TO ROOM 253. SEE EL103 FOR MORE INFORMATION. WIRING MUST BE RATED FOR WET LOCATIONS WITH SURGE ARRESTORS. COORDINATE INSTALL PROCESS WITH FOOTING AND EXTERIOR WALL INSTALLER.
5. EACH VAULT SHALL BE SERVED FROM A SINGLE FIRE ALARM CONDUIT. SEE GJ504 DETAIL K11 FOR ACOUSTICAL PENETRATION DETAIL.
6. ROUTE ANTENNA CABLE FROM ROOM 253 TO ANTENNA ON TOWER VIA UNDERGROUND CONDUIT PROVIDED IN ROOM 127. SEE ES116 FOR MORE INFORMATION.
7. PROVIDE SMOKE DETECTION ABOVE AMP PANEL.

LEGEND

PROVIDE CEILING OR WALL MOUNTED SPEAKERS AS REQUIRED TO ACHIEVE DESIGN CRITERIA.

PROVIDE CEILING MOUNTED SPEAKERS AND CLEAR STROBES AS REQUIRED TO ACHIEVE DESIGN CRITERIA.

PROVIDE WEATHERPROOF WALL MOUNTED SPEAKERS, AS REQUIRED TO ACHIEVE DESIGN CRITERIA.

US Army Corps of Engineers ®

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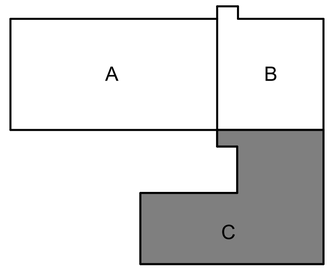
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SUBMITTED BY: B. STREEBIN
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165438

US ARMY CORPS OF ENGINEERS
LITTLE ROCK DISTRICT
LITTLE ROCK, ARKANSAS

BURNS AND McDONNELL
9400 WARD PARKWAY,
KANSAS CITY, MO 64114
165438

CHRISTOPHER STEPHEN CAHILL
LICENSED PROFESSIONAL ENGINEER
26409
STATE OF MINNESOTA

KEY PLAN



F-35, SPECIAL ACCESS PROGRAM FACILITY
EBBING AIR NATIONAL GUARD BASE (ANGB), FORT SMITH, ARKANSAS

FIRE ALARM FLOOR PLAN - AREA C

SHEET ID
FA103

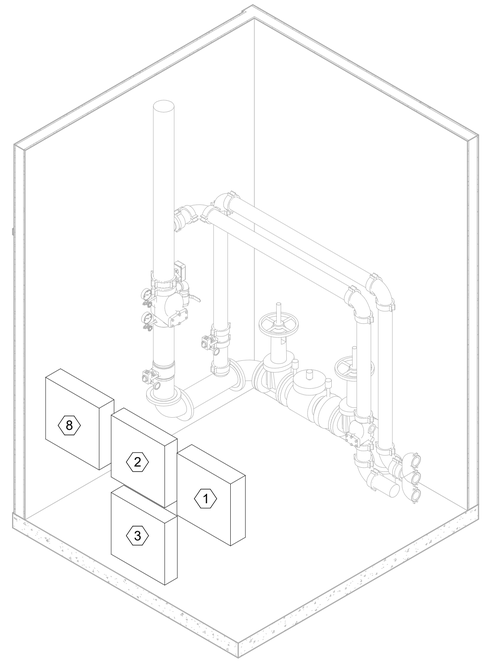
READY-TO-ADVERTISE (RTA) SUBMITTAL

GENERAL SHEET NOTES

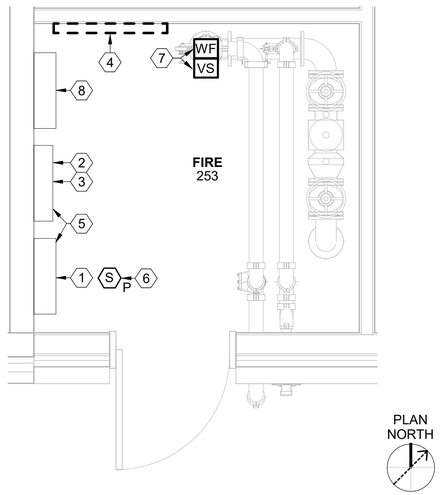
1. REFER TO FX001 FOR GENERAL NOTES, DESIGN CRITERIA, ABBREVIATIONS AND SYMBOLS.

SHEET KEYNOTES

1. FACU/ACU/FAC PANEL.
2. NAC PANEL.
3. AMP PANEL.
4. RESERVED SPACE FOR ADDITIONAL PANELS AS NEEDED.
5. QUANTITY AND LOCATION OF PANELS BY CONTRACTOR'S DESIGN TO MEET DESIGN CRITERIA.
6. PROVIDE SMOKE DETECTION ABOVE FACU/ACU PANEL.
7. MONITOR SPRINKLER SYSTEM WATER FLOW AND TAMPER SWITCHES. REFER TO FIRE SUPPRESSION CONTRACTOR'S DRAWINGS FOR LOCATION OF DEVICES.
8. INWS PANEL.



F12 FIRE ALARM RISER ISOMETRIC
SCALE:NTS



A12 FIRE ALARM ENLARGED FLOOR PLAN
SCALE: 1/2" = 1'-0"

0 1' 2' 4'
SCALE IN FEET

US Army Corps of Engineers ®

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US ARMY CORPS OF ENGINEERS
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F-35: SPECIAL ACCESS PROGRAM FACILITY
EBBING AIR NATIONAL GUARD BASE (ANGB), FORT SMITH, ARKANSAS

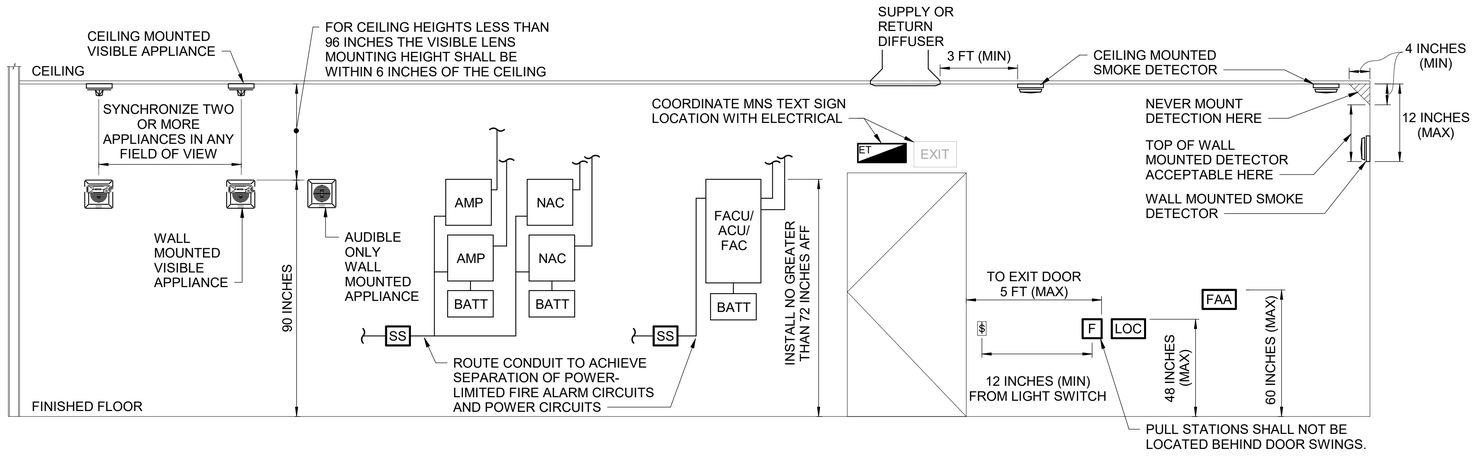
FIRE ALARM ENLARGED PLANS

SHEET ID
FA401

READY-TO-ADVERTISE (RTA) SUBMITTAL

GENERAL SHEET NOTES

1. REFER TO FA001 FOR GENERAL NOTES, DESIGN CRITERIA, ABBREVIATIONS AND SYMBOLS.



A3 TYPICAL MOUNTING DETAIL
SCALE:NTS

US Army Corps of Engineers ®

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F-35, SPECIAL ACCESS PROGRAM FACILITY
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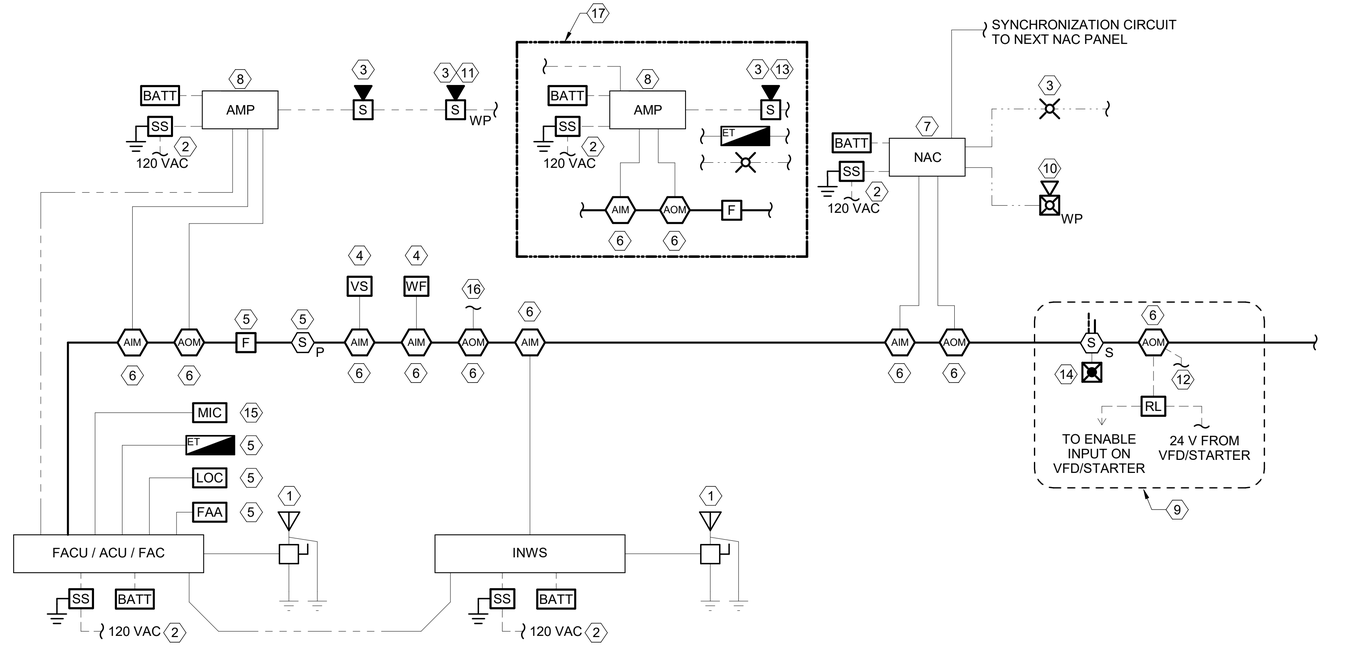
FIRE ALARM DETAILS

SHEET ID
FA501

READY-TO-ADVERTISE (RTA) SUBMITTAL

FIRE ALARM CONTROL UNIT (FACU) FUNCTIONAL MATRIX

	ANNUNCIATION AT LOCAL PANEL			NOTIFICATION											AUXILIARY FUNCTION			
ALARM SIGNALS	AUDIO-VISIBLE FIRE ALARM INDICATION BY DEVICE	AUDIO-VISIBLE TROUBLE INDICATION BY DEVICE	AUDIO-VISIBLE SUPERVISORY INDICATION BY DEVICE	MANUAL PULL STATION ALARM SIGNAL TO FIRE DEPARTMENT BY DEVICE ADDRESS	SMOKE DETECTION ALARM SIGNAL TO FIRE DEPARTMENT BY DEVICE ADDRESS	FIRE SUPPRESSION ACTIVATION ALARM SIGNAL TO FIRE DEPARTMENT BY DEVICE ADDRESS	COMMON TROUBLE SIGNAL TO FIRE DEPARTMENT BY DEVICE ADDRESS	COMMON SUPERVISORY SIGNAL TO FIRE DEPARTMENT BY DEVICE ADDRESS	INITIATE MASS NOTIFICATION SYSTEM MESSAGE	FIRE ALARM AUDIBLE NOTIFICATION	FIRE ALARM AND MASS NOTIFICATION VISIBLE NOTIFICATION	SILENCE GENERAL FIRE ALARM ANNOUNCEMENT	MASS NOTIFICATION ANNOUNCEMENT AND LED TEXT DISPLAY	INITIATE WEATHERPROOF HORN/STROBE ABOVE FDC	SHUT-DOWN ASSOCIATED AIR HANDLING EQUIPMENT	BROADCAST LIVE MESSAGE	TURN ON EGRESS LIGHTING	BROADCAST INWS MESSAGE
MANUAL FIRE ALARM STATIONS	X			X						X	X						X	
SMOKE DETECTOR OVER FACU, AMPS AND NAC PANELS	X				X					X	X						X	
FLOW SWITCHES - WET-PIPE SYSTEM	X					X				X	X			X			X	
TROUBLE SIGNALS																		
AC POWER FAILURE		X					X											
LOW BATTERY		X					X											
OPEN CIRCUIT FAULT		X					X											
GROUND FAULT		X					X											
NOTIFICATION APPLIANCE CIRCUIT SHORT		X					X											
COMPONENT COMMON TROUBLE		X					X											
SUPERVISORY SIGNALS																		
COMPONENT COMMON SUPERVISORY			X					X										
ACTIVATION OF ACU OR LOC MICROPHONE																X		
MASS NOTIFICATION SYSTEM INPUT (DURING FIRE ALARM)			X					X	X		X	X	X					
MASS NOTIFICATION SYSTEM INPUT (DURING NON-FIRE ALARM)									X		X		X					
IN-DUCT SMOKE DETECTORS			X					X							X			
GENERAL VALVE SUPERVISORY			X					X										
INWS ACTIVATION											X							X



A1 FIRE ALARM ONE-LINE DIAGRAM
SCALE:NTS

LEGEND

- SIGNALING LINE CIRCUIT (CLASS B)
- INITIATING DEVICE CIRCUITS (CLASS B)
- VISIBLE NOTIFICATION APPLIANCE CIRCUIT (CLASS B)
- AUDIBLE NOTIFICATION APPLIANCE CIRCUIT (CLASS B)
- POWER CIRCUIT

MASS NOTIFICATION MESSAGES

1. TEST
(HI / LO PRE TONE)
"MAY I HAVE YOUR ATTENTION PLEASE;
THIS IS THE COMMAND POST WITH A TEST OF THE EBBING AIR NATIONAL GUARD BASE MASS NOTIFICATION SYSTEM. REPEAT, THIS IS ONLY A TEST.

2. FPCON C "CHARLIE"
(HI / LO PRE TONE)
"ATTENTION, ATTENTION, EBBING AIR NATIONAL GUARD BASE IS IN FORCE PROTECTION CONDITION CHARLIE. ALL PERSONNEL IMMEDIATELY IMPLEMENT FPCON CHARLIE ACTION."

3. FPCON "DELTA"
(HI / LO PRE TONE)
"ATTENTION, ATTENTION, EBBING AIR NATIONAL GUARDBASE IS IN FORCE PROTECTION CONDITION DELTA. ALLPERSONNEL IMMEDIATELY IMPLEMENT FPCON DELTAACTION."

4. TORNADO WARNING
(HI / LO PRE TONE)
"YOUR ATTENTION, PLEASE. A TORNADO WARNING HAS BEEN ISSUED FOR EBBING AIR NATIONAL GUARD BASE. SEEK SHELTER IN YOUR DESIGNATED SHELTER-IN-PLACE AREA WITHIN THIS FACILITY. TUNE INTO BASE OR LOCAL MEDIA NETWORKS FOR THE LATEST UPDATES."

5. FIRE MESSAGE
(TEMPORAL 3 PRE TONE)
"ATTENTION A FIRE EMERGENCY HAS BEEN REPORTED, PLEASE EVACUATE THE BUILDING."

6. BOMB THREAT
(HI / LO PRE TONE)
"MAY I HAVE YOUR ATTENTION PLEASE; A BOMB THREAT ALERT HAS BEEN ISSUED FOR THIS BUILDING. ALL PERSONNEL ARE TO EVACUATE IMMEDIATELY USING THE NEAREST EXIT. FURTHER INSTRUCTIONS WILL BE ISSUED OUTSIDE THE BUILDING BY EMERGENCY RESPONSE TEAMS.

7. HOSTILE PERSON/ACTIVE SHOOTER
(HI / LO PRE TONE)
"LOCK DOWN - LOCK DOWN - LOCK DOWN, A HOSTILE INTRUDER HAS BEEN SITED WITHIN, OR AROUND, THE BUILDING, INITIATE LOCK DOWN PROCEDURES AT THIS TIME, LOOK DOWN - LOCK DOWN – LOCK DOWN."

8. ALL CLEAR
(HI / LO PRE TONE)
"MAY I HAVE YOUR ATTENTION PLEASE; ALL CLEAR, THE EMERGENCY HAS ENDED."

GENERAL SHEET NOTES

1. REFER TO FA001 FOR GENERAL NOTES, DESIGN CRITERIA, ABBREVIATIONS AND SYMBOLS.
2. THE FIRE ALARM RISER SHOWS THE INTENT OF THE FIRE ALARM INFRASTRUCTURE. NOT ALL DEVICES ARE SHOWN. PROVIDE THE QUANTITY OF DEVICES AS REQUIRED TO COMPLY WITH NFPA 72, UFC 3-600-01, UFC 4-021-01 AND CONTRACT DOCUMENTS.
3. EACH FLOW AND TAMPER SWITCH SHALL REPORT BACK TO THE FIRE ALARM CONTROL PANEL WITH A SEPARATE ADDRESS. GROUPED SWITCHES ON ONE ADDRESS ARE NOT ACCEPTABLE.

SHEET KEYNOTES

1. MOUNT RADIO TRANSCEIVER ANTENNA PER MANUFACTURERS RECOMMENDATION. PROVIDE #6 BARE COPPER TO 3/4" X 10'-0" COPPER CLAD GROUND ROD AND TO BUILDING COUNTERPOISE, AND LIGHTNING ARRESTOR KIT.
2. 120VAC PROVIDED BY DIVISION 26.
3. QUANTITY AND LOCATION BY CONTRACTOR'S DESIGN TO MEET DESIGN CRITERIA.
4. REFER TO FIRE SUPPRESSION DRAWINGS FOR QUANTITY AND / OR LOCATIONS OF DEVICE(S).
5. REFER TO FIRE ALARM PLANS FOR QUANTITY AND / OR LOCATIONS OF DEVICE(S).
6. PROVIDE ADDRESSABLE INPUT AND / OR OUTPUT MODULE(S) AS REQUIRED TO ACHIEVE THE FUNCTIONALITY INDICATED IN THE FIRE ALARM MATRIX.
7. PROVIDE ADDITIONAL NAC BOOSTER PANELS AS REQUIRED PER CONTRACTOR'S DESIGN. WHERE ADDITIONAL BOOSTER PANELS ARE REQUIRED LOCATE AS INDICATED ON PLAN.
8. PROVIDE ADDITIONAL AMPLIFIERS AS REQUIRED PER CONTRACTOR'S DESIGN. WHERE ADDITIONAL AMPLIFIERS ARE REQUIRED LOCATE AS INDICATED ON PLAN.
9. PROVIDE SUPPLY DUCT SMOKE DETECTORS FOR DIRECT SHUT DOWN FOR THE FOLLOWING UNITS: AHU-101, AHU-102, DOAS-101, DOAS-102. REFERENCE MECHANICAL DRAWINGS FOR EXACT LOCATION.
10. EXTERIOR WP HORN STROBE OVER FDC.
11. EXTERIOR WP FIRE ALARM / MASS NOTIFICATION SPEAKERS.
12. 24 VDC FROM FACU OR NAC PANEL.
13. CONNECT SPEAKERS IN THE SECURED AREA TO THE DEDICATED AMPLIFIER IN THE SECURED AREA.
14. PROVIDE INDICATING LIGHT AND SIGN NEAR HVAC UNIT MODULE ON SMOKE DETECTION WHERE INDICATING LIGHT ON THE SMOKE DETECTOR IS NOT VISIBLE FROM FLOOR.
15. PROVIDE MICROPHONE AS PART OF LOC.
16. INTERFACE FIRE ALARM SYSTEM WITH LIGHTING CONTROL LOCAL ROOM CONTROLLERS IN ROOMS THAT CONTAIN EMERGENCY LIGHTING. REFER TO EL102-EL105 FOR EGRESS LIGHTING LOCATIONS. REFER TO A1/EL603 FOR TYPICAL ROOM CONTROLLER WITH EMERGENCY DRIVING WIRING DIAGRAM.
17. DEVICES AND CIRCUITS IN SECURED AREA. SEE FA103 FOR ROUTING LIMITATIONS AND INFORMATION.

CHRISTOPHER STEPHEN CAHILL
LICENSED PROFESSIONAL ENGINEER
26409
STATE OF MINNESOTA

US Army Corps of Engineers ®

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16543B

F-35 SPECIAL ACCESS PROGRAM FACILITY
EBBING AIR NATIONAL GUARD BASE (ANGB), FORT SMITH, ARKANSAS

FIRE ALARM ONE-LINE DIAGRAM AND FIRE ALARM MATRIX

SHEET ID
FA601

READY-TO-ADVERTISE (RTA) SUBMITTAL

FIRE SUPPRESSION GENERAL NOTES

1. PROVIDE ALL NECESSARY COMPONENTS FOR A WET-PIPE SYSTEM THROUGHOUT THE BUILDING. AT A MINIMUM PROVIDE COMPONENTS AS INDICATED ON THESE DRAWINGS. PROVIDE ADDITIONAL COMPONENTS AND MODIFICATIONS AS REQUIRED TO PROVIDE A FULLY FUNCTIONING FIRE SUPPRESSION SYSTEM IN ACCORDANCE WITH UFC 3-600-01 AND NFPA 13.
2. PROVIDE A FULLY COORDINATED SYSTEM. REVIEW COORDINATION CONFLICTS WITH ARCHITECT AND ENGINEER PRIOR TO PIPING FABRICATION AND INSTALLATION. CORRECT ANY DEFICIENCIES, INCONSISTENCIES, OR POORLY COORDINATED INSTALLATIONS AT NO ADDITIONAL COST.
3. FINAL DESIGN REQUIREMENTS (DEVICE QUANTITY, SIZE, AND LOCATIONS) ARE THE SOLE RESPONSIBILITY OF THE FIRE SUPPRESSION CONTRACTOR. DRAWINGS INDICATE MINIMUM REQUIREMENTS; VERIFY AND COORDINATE FINAL DESIGN REQUIREMENTS WITH THESE CONSTRUCTION DOCUMENTS, SPECIFICATIONS, REFERENCE DOCUMENTS, APPLICABLE CODES, AND FACILITY USER REQUIREMENTS.
4. ALL DRAIN PENETRATIONS THROUGH EXTERIOR WALL SHALL BE NO GREATER THAN 2'-0" ABOVE FINISHED GRADE.
5. PROVIDE FIRE PROTECTION HANGERS PER NFPA 13 WITH THE FOLLOWING LIMITATIONS:
   - A. THE TOTAL VERTICAL DEAD LOAD APPLIED TO A SINGLE STRUCTURAL FRAMING MEMBER BY ONE OR MORE HANGERS MUST NOT EXCEED THE FOLLOWING FOR THE APPROVED ATTACHMENT LOCATION:
     - a. TOP OR BOTTOM CONNECTION TO A WIDE FLANGE: 1,000 LBS
     - b. TOP OR BOTTOM CONNECTION ONTO A JOIST: 500 LBS
     - c. ANCHORS INTO THE DECK: NOT PERMITTED
     - d. ALL OTHER CONNECTIONS MUST BE APPROVED BY THE ENGINEER, UNLESS OTHERWISE NOTED.
   - B. DEAD LOAD IS THE WEIGHT OF THE WATER-FILLED PIPE.
   - C. PROVIDE ADDITIONAL HANGERS OR TRAPEZE HANGERS TO DISTRIBUTE THE LOAD BETWEEN MULTIPLE STRUCTURAL FRAMING MEMBERS WHERE THE MAXIMUM VERTICAL LOAD IS EXCEEDED.
   - D. SEE STRUCTURAL PLANS FOR OTHER REQUIREMENTS.
6. 7. ALL VALVES INCLUDING CONTROL AND TRIM VALVES SHALL BE WITHIN 6'-0" AFF UNO.
7. SEE GJ SHEETS FOR SECURE AREA PERIMETERS AND REQUIREMENTS. REFER TO A12/GJ503 AND F1/GJ504 FOR FIRE SUPPRESSION SECURE AREA PENETRATION DETAILS. CONSTRUCTION FOR SECURE AREAS, SECURE AREA MATERIALS, AND COMPONENTS MUST COMPLY WITH UFC 4-010-05 AND IC TECH SPECS FOR ICD/ICS 705 AND FULLY MEET AND PASS ALL ACCREDITATIONS. COORDINATE WITH CONTRACTING OFFICE DURING CONSTRUCTION OF SECURE AREAS.
8. THERE ARE SEVERAL ROOMS WITH CLOUD CEILINGS. SEE REFLECTED CEILING PLANS FOR LOCATIONS AND DETAILS. PROVIDE SPRINKLERS ABOVE AND BELOW THE CLOUDS AS NECESSARY IN ACCORDANCE WITH NFPA 13.

FIRE SUPPRESSION DESIGN CRITERIA

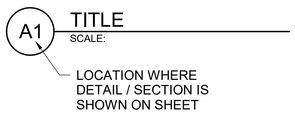
1. SERVE THE FIRE SUPPRESSION SYSTEM FROM THE EXISTING DOMESTIC SYSTEM. PERFORM A HYDRANT FLOW TEST, AND INCORPORATE THIS TEST INTO THE HYDRAULIC CALCULATIONS. HYDRANT FLOW TESTING SHALL BE IN ACCORDANCE WITH NFPA 291, AND THE RESULTS OF THE TESTING SHALL BE SUBMITTED AS INDICATED IN NFPA 291 FIGURE 4.11.2.

FOR INFORMATION ONLY: FLOW TEST 1

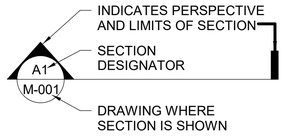
DATE	12/12/2023
STATIC	60 PSI
RESIDUAL	58 PSI
FLOW	1,060 GPM

2. ALL COMPONENTS AND ASSEMBLIES USED IN THIS FIRE PROTECTION SYSTEM MUST BE SPECIFICALLY UL LISTED OR FM APPROVED FOR THEIR INTENDED USE.

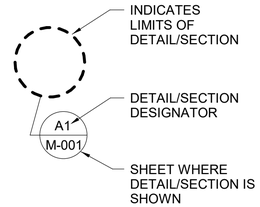
DETAIL/SECTION TITLE



SECTION CUT SYMBOL



DETAIL / ENLARGED CALLOUT SYMBOL



FIRE SUPPRESSION SYSTEM

WET SYSTEM

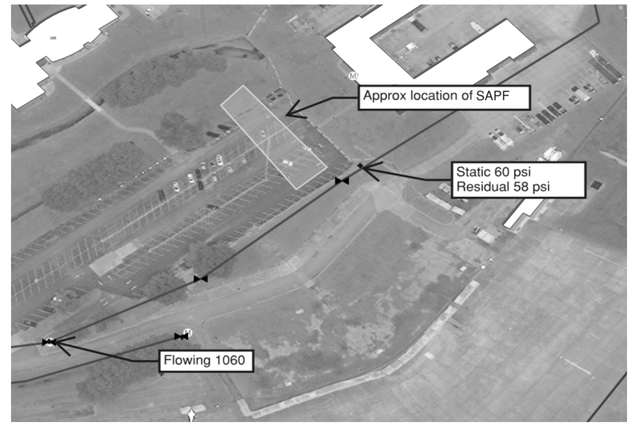
PIPING SYMBOLS

- DRAIN PIPING
- SYSTEM PIPING
- ELBOW UP OR DOWN

FIRE SUPPRESSION ABBREVIATIONS

AWG	AMERICAN WIRE GAUGE
FDC	FIRE DEPARTMENT CONNECTION
FM	FM GLOBAL
NC	NORMALLY CLOSED
NFPA	NATIONAL FIRE PROTECTION ASSOCIATION
(S)	ELECTRICALLY SUPERVISED
SQ FT	SQUARE FOOT
UFC	UNIFIED FACILITIES CRITERIA
UL	UNDERWRITERS LABORATORY
UNO	UNLESS NOTED OTHERWISE

FLOW TEST MAP



K15 FLOW TEST MAP
SCALE:NTS

FIRE SUPPRESSION LEGEND

- PRESSURE RELIEF VALVE
- OUTSIDE SCREW AND YOKE VALVE (OS&Y)
- VALVE
- INDICATING BUTTERFLY VALVE
- DOUBLE CHECK BACKFLOW PREVENTER
- CHECK VALVE
- FLOW SWITCH
- FLOW TEST HEADER
- PRESSURE GAUGE
- THRUST BLOCK
- FIRE DEPARTMENT CONNECTION (FDC) 5 INCH STORZ TYPE
- RISER LOCATION
- FLANGED CONNECTION
- SIGHT GLASS
- AUTOMATIC DRAIN VALVE
- AUTOMATIC AIR RELEASE VALVE

FIRE PROTECTION SPRINKLER SYSTEM DESIGN CRITERIA

MARK	HAZARD CLASSIFICATION	SYSTEM TYPE	DENSITY GPM/SQ FT	REMOTE AREA SQ FT	MAXIMUM AREA PER SPRINKLER SQ FT	HOSE DEMAND GPM	SPRINKLER CHARACTERISTICS				ADDITIONAL CODE REFERENCE	NOTES
							TEMP RATING (°F)	TYPE / FINISH (CEILINGS)	TYPE / FINISH (EXPOSED)	MINIMUM K-FACTOR		
	LIGHT HAZARD	WET	0.10	1500	225	250	ORDINARY	QUICK RESPONSE CHROME RECESSED PENDENT	QUICK RESPONSE BRASS UPRIGHT	5.6	UFC 3-600-01	
	ORDINARY HAZARD	WET	0.20	2500	130	250	ORDINARY	QUICK RESPONSE CHROME RECESSED PENDENT	QUICK RESPONSE BRASS UPRIGHT	8.0	UFC 3-600-01	1

NOTE 1: PROVIDE 200 °F RATED SPRINKLERS IN MECHANICAL, ELECTRICAL, AND COMMUNICATION ROOMS.

CHRISTOPHER STEPHEN CAHILL
LICENSED PROFESSIONAL ENGINEER
26409
STATE OF MINNESOTA

US Army Corps of Engineers ®

MARK	DESCRIPTION	DATE
0	READY-TO-ADVERTISE (RTA) SUBMITTAL	JUL 2025

ISSUE DATE: JUL 2025
SOLICITATION NO.: W912S2SRAA001
CONTRACT NO.: W912S24T0007
DESIGNED BY: H. WILEMAN
DRAWN BY: J. HEIN
CHECKED BY: C. CAHILL
SUBMITTED BY: B. STREEBIN
SIZE: ANSI D
FILE NAME: 165438_F_R22.rvt

US ARMY CORPS OF ENGINEERS
LITTLE ROCK DISTRICT
LITTLE ROCK, ARKANSAS

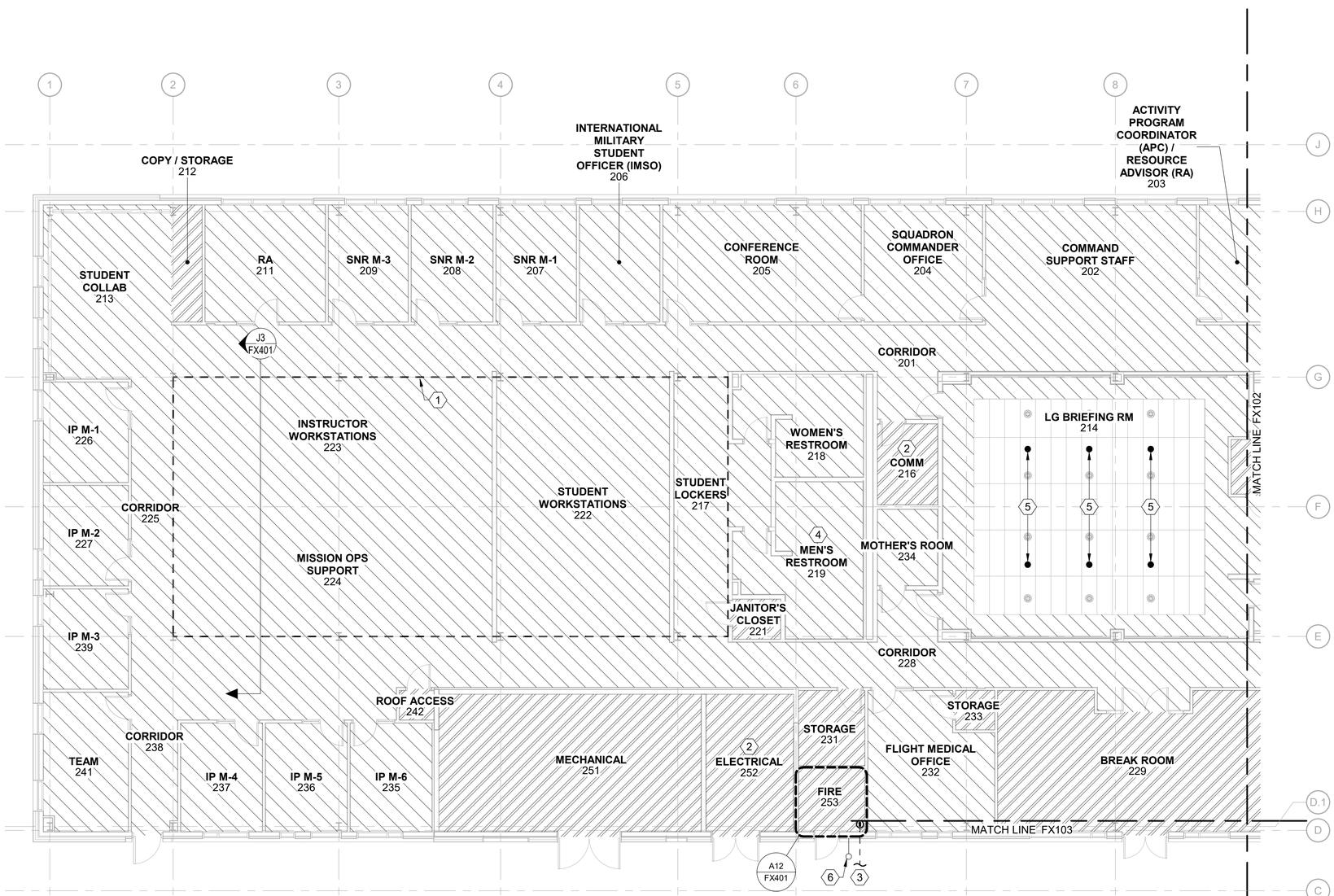
BURNS AND McDONNELL
9400 WARD PARKWAY,
KANSAS CITY, MO 64114
165438

F-35, SPECIAL ACCESS PROGRAM FACILITY
EBBING AIR NATIONAL GUARD BASE (ANGB), FORT SMITH, ARKANSAS

FIRE SUPPRESSION NOTES, LEGEND AND ABBREVIATIONS

SHEET ID
FX001

READY-TO-ADVERTISE (RTA) SUBMITTAL



A2 FIRE SUPPRESSION FLOOR PLAN - AREA A

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

GENERAL SHEET NOTES

1. REFER TO FX001 FOR GENERAL NOTES, DESIGN CRITERIA, ABBREVIATIONS AND SYMBOLS.

SHEET KEYNOTES

1. SPRINKLERS THIS AREA CONCEALED, CUSTOM COLOR SHERWIN WILLIAMS 9090 CARAIBE, CENTERED IN TILE. MATCH FINAL COLOR WITH ADJACENT CEILINGS.
2. DO NOT INSTALL PIPING OVER RACK/EQUIPMENT. PROVIDE SPRINKLER HEAD GUARDS.
3. SEE CIVIL DRAWINGS FOR CONTINUATION.
4. RISE UP TO CLEARSTORY ABOVE BATHROOMS SO PIPING IS CONCEALED FROM VIEW.
5. PLACE SPRINKLERS AT THE QUARTER POINT CENTERED WITH THE SPEAKERS IN THE CLOUD CEILING.
6. FIRE DEPARTMENT CONNECTION (FDC) 5 INCH STORZ TYPE

LEGEND

LIGHT HAZARD

ORDINARY HAZARD

US Army Corps of Engineers ®

MARK	DESCRIPTION	DATE
0	READY-TO-ADVERTISE (RTA) SUBMITTAL	JUL 2025

DESIGNED BY: H. WILEMAN
DRAWN BY: J. HEIN
CHECKED BY: C. HALL
SUBMITTED BY: B. STREEBIN
SIZE: ANSI D
ISSUE DATE: JUL 2025
SOLICITATION NO.: W912S2SRA001
CONTRACT NO.: W912S2421C0007
FILE NAME: 165438_F_R22.rvt

US ARMY CORPS OF ENGINEERS
LITTLE ROCK DISTRICT
LITTLE ROCK, ARKANSAS

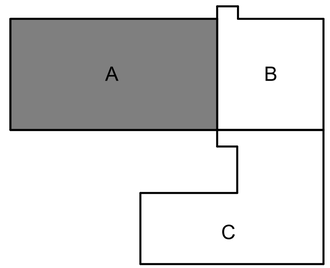
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9400 WARD PARKWAY,
KANSAS CITY, MO 64114
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CHRISTOPHER STEPHEN CARL
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26409
STATE OF MINNESOTA

F-35, SPECIAL ACCESS PROGRAM FACILITY
EBBING AIR NATIONAL GUARD BASE (ANGB), FORT SMITH, ARKANSAS

FIRE SUPPRESSION FLOOR PLAN - AREA A

KEY PLAN



SHEET ID

FX101

READY-TO-ADVERTISE (RTA) SUBMITTAL

GENERAL SHEET NOTES

1. REFER TO FX001 FOR GENERAL NOTES, DESIGN CRITERIA, ABBREVIATIONS AND SYMBOLS.

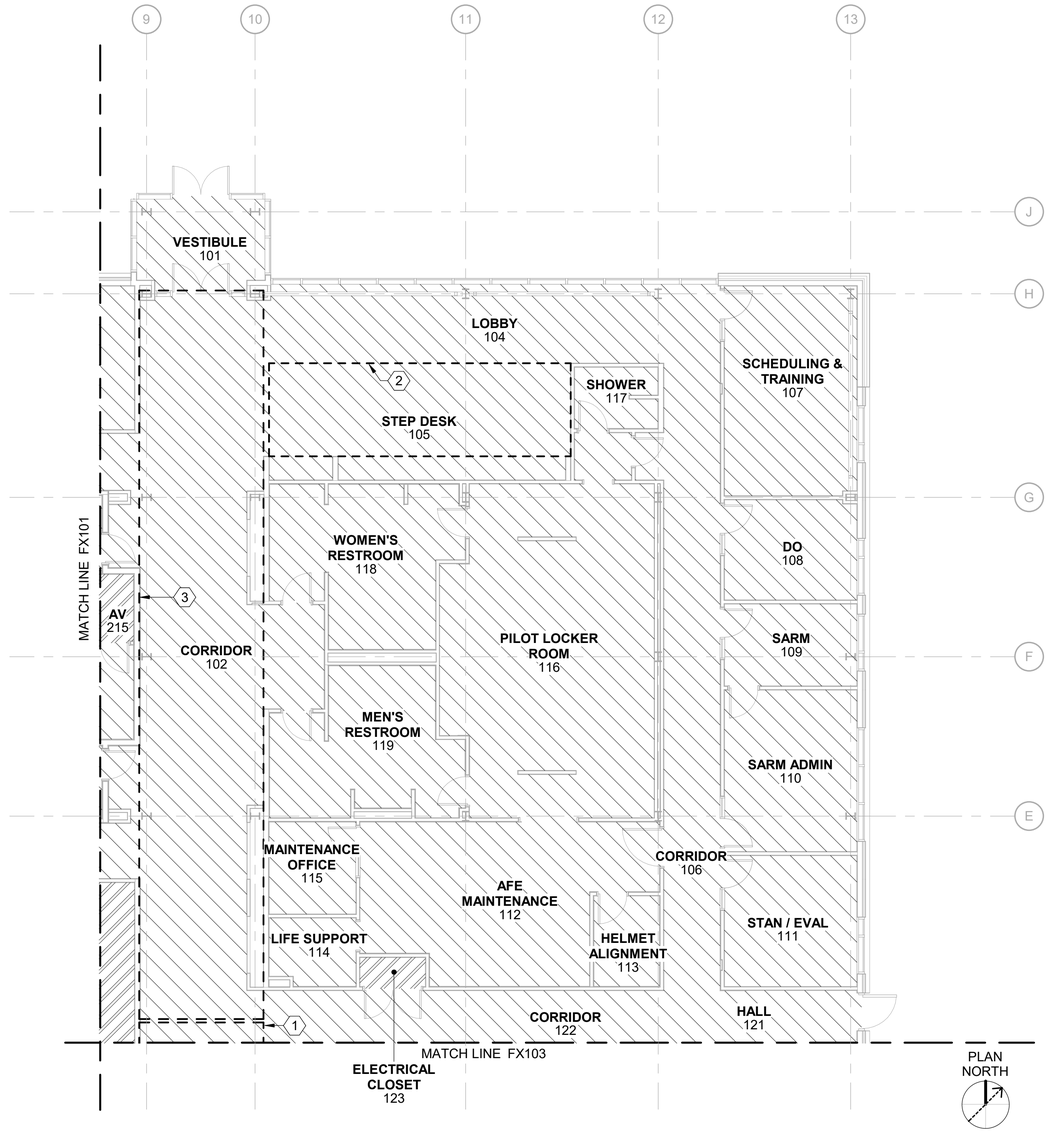
SHEET KEYNOTES

1. ROUTE SPRINKLER PIPE TO FLOOR PLAN AREAS B AND C THROUGH SOFFIT LOCATED ROUGHLY IN THIS LOCATION. SEE A4/FX401 FOR SOFFIT EXTENTS.
2. SPRINKLERS THIS AREA CONCEALED, CUSTOM COLOR SHERWIN WILLIAMS 9684 AZURE TIDE (PA-4), CENTERED IN LINE WITH THE LIGHTS. MATCH FINAL COLOR WITH ADJACENT CEILINGS.
3. SPRINKLERS THIS AREA CONCEALED, CUSTOM COLOR SHERWIN WILLIAMS 9090 CARAIBE, CENTERED IN TILE. MATCH FINAL COLOR WITH ADJACENT CEILINGS.

LEGEND

LIGHT HAZARD

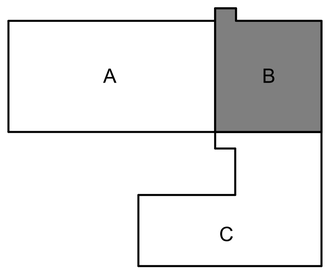
ORDINARY HAZARD



A7 FIRE SUPPRESSION FLOOR PLAN - AREA B

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

KEY PLAN



US Army Corps of Engineers ®

MARK	DESCRIPTION	DATE
0	READY-TO-ADVERTISE (RTA) SUBMITTAL	JUL 2025

DESIGNED BY: H. WILEMAN
DRAWN BY: J. HEIN
CHECKED BY: C. CAHILL
SUBMITTED BY: B. STREEBIN
SIZE: ANSI D
ISSUE DATE: JUL 2025
SOLICITATION NO.: W9127S25RA001
CONTRACT NO.: W9127S24C0007
FILE NAME: 165438_F_R22.rvt

US ARMY CORPS OF ENGINEERS
LITTLE ROCK DISTRICT
LITTLE ROCK, ARKANSAS

BURNS AND McDONNELL
9400 WARD PARKWAY,
KANSAS CITY, MO 64114
165438

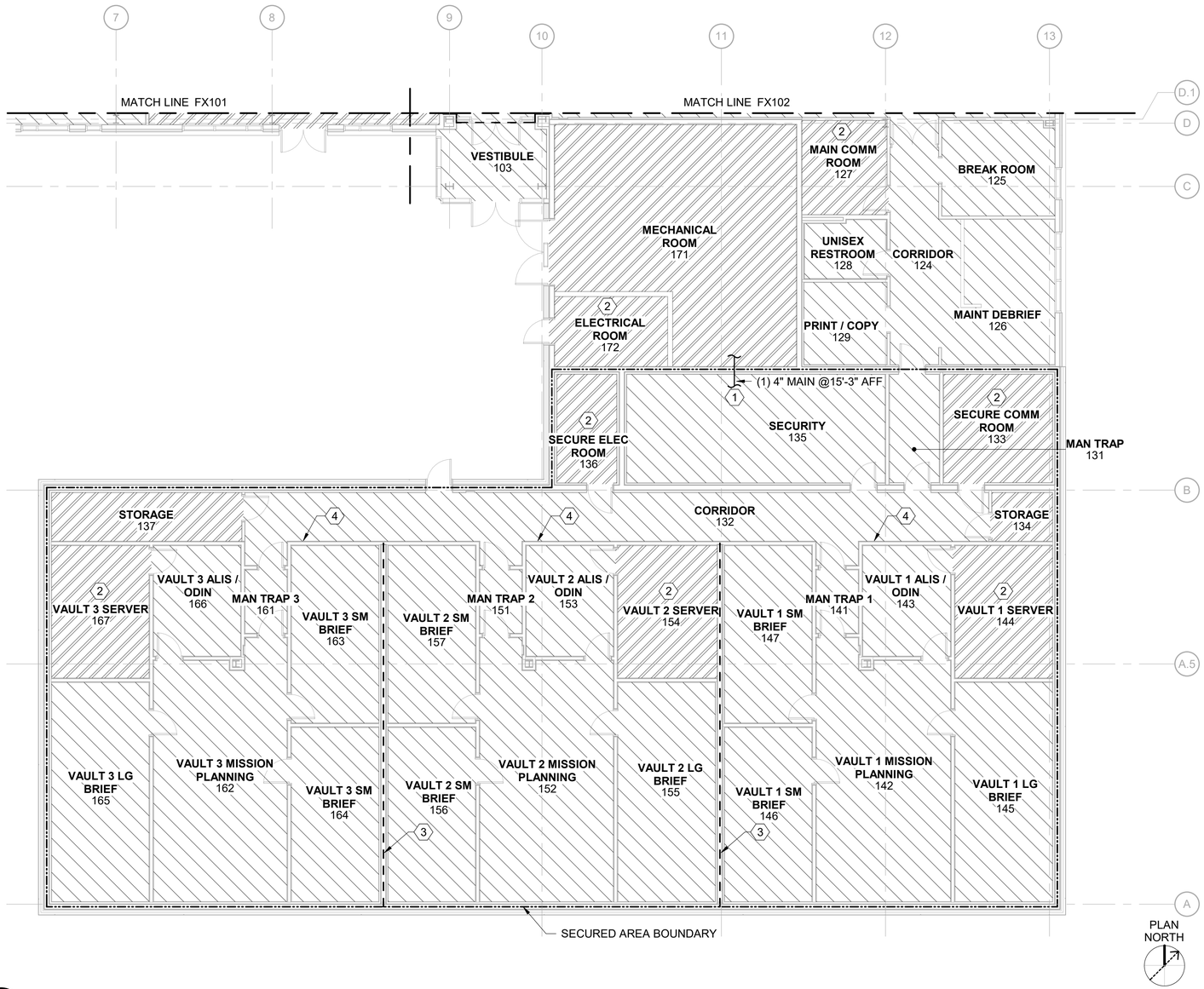
CHRISTOPHER STEPHEN CAHILL
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STATE OF MINNESOTA

F-35 SPECIAL ACCESS PROGRAM FACILITY
EBBING AIR NATIONAL GUARD BASE (ANGB), FORT SMITH, ARKANSAS

FIRE SUPPRESSION FLOOR PLAN - AREA B

SHEET ID
FX102

READY-TO-ADVERTISE (RTA) SUBMITTAL



A4 FIRE SUPPRESSION FLOOR PLAN - AREA C

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

GENERAL SHEET NOTES

1. REFER TO FX001 FOR GENERAL NOTES, DESIGN CRITERIA, ABBREVIATIONS AND SYMBOLS.

SHEET KEYNOTES

1. LIMIT PENETRATION THROUGH SECURED BOUNDARY TO THIS PIPE/LOCATION ONLY. SEE GJ601 FOR PENETRATION SCHEDULE.
2. DO NOT INSTALL PIPING OVER RACK/EQUIPMENT. PROVIDE SPRINKLER HEAD GUARDS.
3. EXCEPT AS NOTED, NO FIRE SUPPRESSION PENETRATIONS PERMITTED IN THIS WALL.
4. EACH VAULT SHALL BE SERVED FROM A SINGLE FIRE SUPPRESSION MAIN.

LEGEND

LIGHT HAZARD

ORDINARY HAZARD

US Army Corps of Engineers ®

MARK	DESCRIPTION	DATE
0	READY-TO-ADVERTISE (RTA) SUBMITTAL	JUL 2025

DESIGNED BY: H. WILEMAN
DRAWN BY: J. HEIN
CHECKED BY: C. CAHILL
SUBMITTED BY: B. STREEBIN
SIZE: ANSI D
ISSUE DATE: JUL 2025
SOLICITATION NO.: W9127S25RA001
CONTRACT NO.: W9127S24T0007
FILE NAME: 165438_F_R22.rvt

US ARMY CORPS OF ENGINEERS
LITTLE ROCK DISTRICT
LITTLE ROCK, ARKANSAS

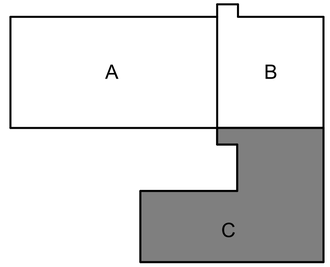
BURNS AND McDONNELL
9400 WARD PARKWAY,
KANSAS CITY, MO 64114
165438

CHRISTOPHER STEPHEN CAHILL
LICENSED PROFESSIONAL ENGINEER
26409
STATE OF MINNESOTA

F-35 SPECIAL ACCESS PROGRAM FACILITY
EBBING AIR NATIONAL GUARD BASE (ANGB), FORT SMITH, ARKANSAS

FIRE SUPPRESSION FLOOR PLAN - AREA C

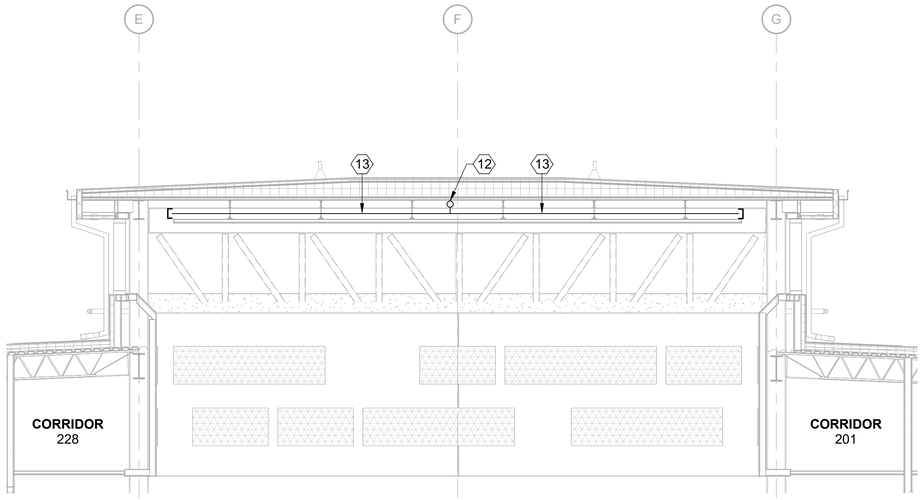
KEY PLAN



SHEET ID

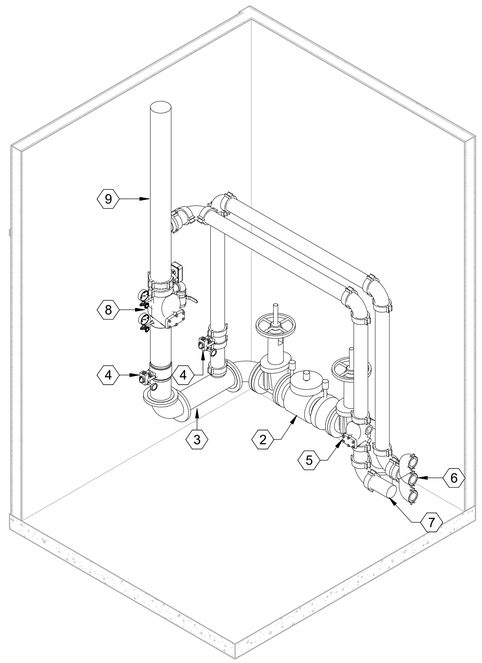
FX103

READY-TO-ADVERTISE (RTA) SUBMITTAL



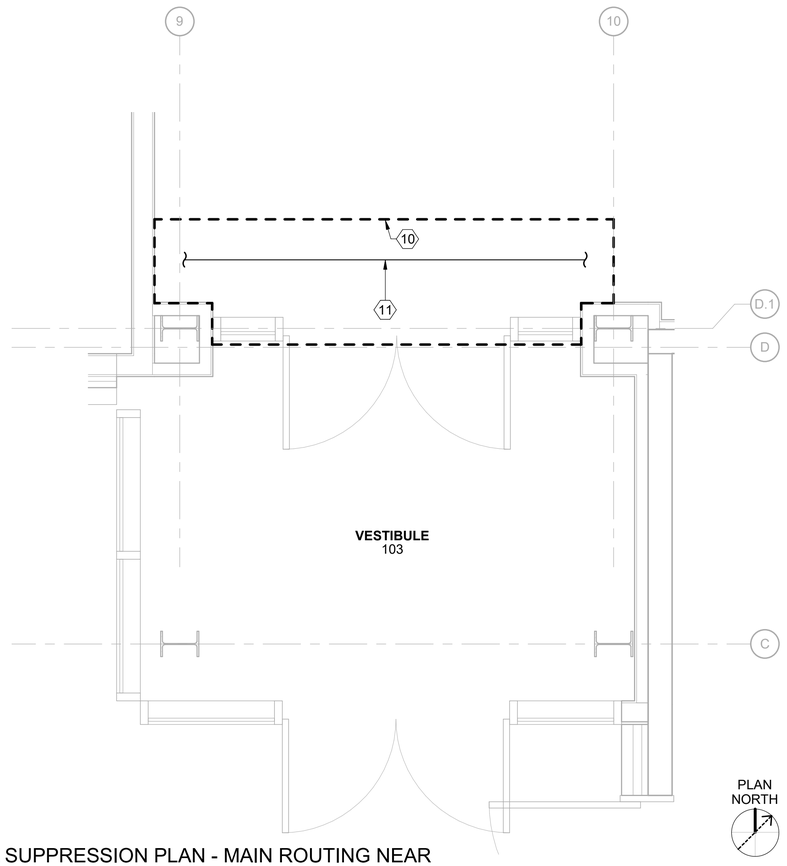
J3 FIRE SUPPRESSION SECTION - CLEARSTORY ROOF

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



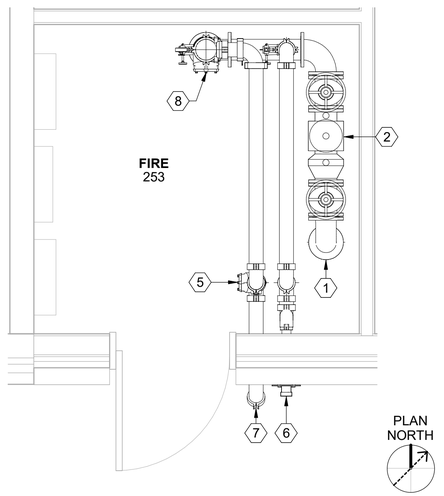
F12 FIRE SUPPRESSION RISER ISOMETRIC

SCALE:NTS



A3 FIRE SUPPRESSION PLAN - MAIN ROUTING NEAR VESTIBULE 103

SCALE: 1/2" = 1'-0"



A12 FIRE SUPPRESSION ENLARGED FLOOR PLAN

SCALE: 1/2" = 1'-0"

GENERAL SHEET NOTES

1. REFER TO FX001 FOR GENERAL NOTES, DESIGN CRITERIA, ABBREVIATIONS AND SYMBOLS.
2. DETAIL A12/FX401 CONFIGURATION HAS BEEN PREPARED AS A REPRESENTATION OF THE PHYSICAL AND FUNCTIONAL CHARACTERISTICS OF THE FIRE SUPPRESSION SYSTEM FOR THE PURPOSES OF CREATING RECORD DRAWINGS. THIS DESIGN CONFIGURATION IS PROVIDED FOR INFORMATIONAL PURPOSES ONLY AND SHALL NOT BE USED AS REPLACEMENT FOR, OR ALTERNATIVE TO, RECORD DRAWINGS USED FOR CONSTRUCTION.

SHEET KEYNOTES

1. FLANGED LEAD IN.
2. DOUBLE CHECK BACKFLOW PREVENTER.
3. AUXILLARY DRAIN VALVE.
4. BUTTERFLY VALVE.
5. CHECK VALVE.
6. FLOW TEST HEADER.
7. FIRE DEPARTMENT CONNECTION (FDC) - SINGLE 5 INCH STORZ TYPE.
8. WET PIPE RISER CHECK VALVE.
9. WET PIPE SYSTEM RISER.
10. ROUTE SPRINKLER PIPE TO FLOOR PLAN AREAS B AND C THROUGH SOFFIT LOCATED ROUGHLY IN THIS LOCATION.
11. WET-PIPE SPRINKLER MAIN.
12. ANTICIPATED FIRE SPRINKLER MAIN ABOVE MAIN TRUSSES.
13. ROUTE BRANCHLINE PIPING THROUGH BAR JOISTS ABOVE FINISHED CEILING.

US Army Corps of Engineers ®

MARK	DESCRIPTION	DATE
0	READY-TO-ADVERTISE (RTA) SUBMITTAL	JUL 2025

DESIGNED BY: H. WILEMAN
DRAWN BY: J. HEIN
CHECKED BY: C. CAMILL
SUBMITTED BY: B. STREEBIN
SIZE: ANSI D
ISSUE DATE: JUL 2025
SOLICITATION NO.: W9127S25RA001
CONTRACT NO.: W9127S24T0007
FILE NAME: 165438_F_R22.rvt

US ARMY CORPS OF ENGINEERS
LITTLE ROCK DISTRICT
LITTLE ROCK, ARKANSAS

BURNS AND McDONNELL
9400 WARD PARKWAY,
KANSAS CITY, MO 64114
165438

CHRISTOPHER STEPHEN CAMILL
LICENSED PROFESSIONAL ENGINEER
26409
STATE OF MINNESOTA

F-35: SPECIAL ACCESS PROGRAM FACILITY
EBBING AIR NATIONAL GUARD BASE (ANGB), FORT SMITH, ARKANSAS

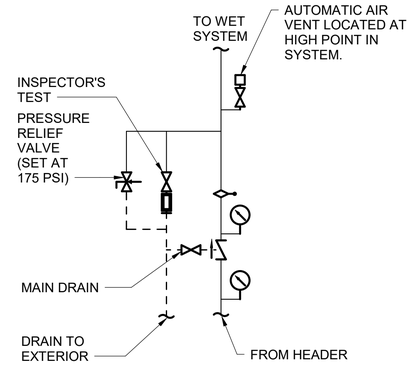
FIRE SUPPRESSION ENLARGED PLANS

SHEET ID
FX401

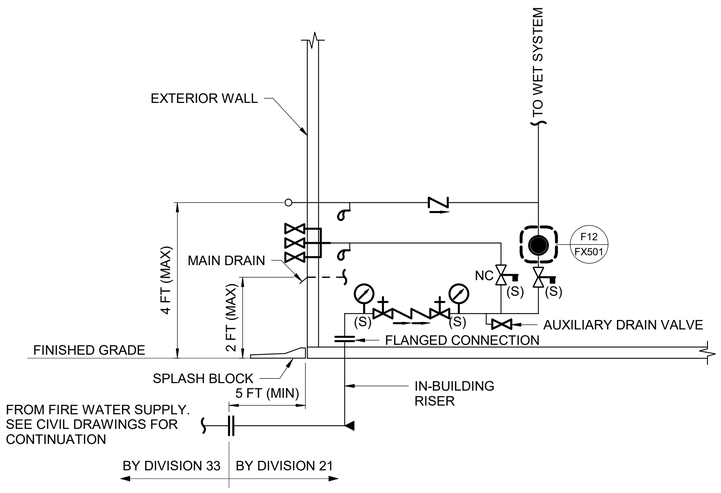
READY-TO-ADVERTISE (RTA) SUBMITTAL

GENERAL SHEET NOTES

1. REFER TO FX001 FOR GENERAL NOTES, DESIGN CRITERIA, ABBREVIATIONS AND SYMBOLS.



F12 WET RISER DETAIL
SCALE:NTS



A10 FIRE SUPPRESSION RISER DIAGRAM
SCALE:NTS

US Army Corps of Engineers ®

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0	READY-TO-ADVERTISE (RTA) SUBMITTAL	JUL 2025

DESIGNED BY: H. WILEMAN
DRAWN BY: J. HEIN
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SIZE: ANSI D
ISSUE DATE: JUL 2025
SOLICITATION NO.: W912QR25RA001
CONTRACT NO.: W912QR24D0007
FILE NAME: 165438_F_R22.rvt

US ARMY CORPS OF ENGINEERS
LITTLE ROCK DISTRICT
LITTLE ROCK, ARKANSAS

BURNS AND McDONNELL
9400 WARD PARKWAY,
KANSAS CITY, MO 64114
165438

CHRISTOPHER STEPHEN CAMILL
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STATE OF MINNESOTA

F-35, SPECIAL ACCESS PROGRAM FACILITY
EBBING AIR NATIONAL GUARD BASE (ANGB), FORT SMITH, ARKANSAS

FIRE SUPPRESSION DETAILS

SHEET ID
FX501

READY-TO-ADVERTISE (RTA) SUBMITTAL

PIPE ACCESSORIES SYMBOLS

	GATE VALVE
OS&Y	OUTSIDE SCREW & YOKE VALVE
	BUTTERFLY VALVE
	CHECK VALVE
	2-WAY VALVE
	3-WAY VALVE
	BALL VALVE
	BALANCING VALVE / CIRCUIT SETTER
	RELIEF, SAFETY OR THERMAL RELIEF VALVE
M	MOTORIZED CONTROL VALVE
	HOSE GATE DRAIN VALVE
	GLOBE VALVE
	PLUG VALVE
SRC	SPRING RETURN CLOSED BALL VALVE
	ANGLE VALVE
	SELF CONTAINED PRESSURE REDUCING (REGULATING) VALVE
AV	AUTOMATIC AIR VENT ASSEMBLY
MV	MANUAL AIR VENT ASSEMBLY - SEE SPECIFICATIONS FOR APPROPRIATE VALVE TYPE
	FLEX CONNECTION
	PUMP
	THERMOMETER
BFP	BACKFLOW PREVENTION ASSEMBLY
	SUCTION DIFFUSER
	PRESSURE GAUGE
	Y-TYPE STRAINER
	REMOVABLE CAP
	REMOVABLE PLUG
	REDUCER (CONCENTRIC)
	UNION
	BLIND FLANGE
	TEST CONNECTION
M	METER
FM	FLOW METER
S	STRAINER
IF	INSULATING FLANGE
	PIPE WITH HEAT TRACE
	FLOW ARROW
	PIPE GUIDE
	PIPE ANCHOR

PIPE LINE DESIGNATIONS

V	VENT
S	STORM (ABOVE GRADE)
S	STORM (BELOW GRADE)
OD	STORM OVERFLOW
DCW	DOMESTIC COLD WATER
DHW	DOMESTIC HOT WATER
DHWR	DOMESTIC HOT WATER RECIRCULATION
SS	SANITARY SEWER (ABOVE GRADE)
SS	SANITARY SEWER (BELOW GRADE)
COND	CONDENSATE DRAIN
CA	COMPRESSED AIR
NG	NATURAL GAS
CO	CLEANOUT IN RISER
WCO	CLEANOUT IN WALL
FCO	CLEANOUT IN FLOOR

PLUMBING FIXTURE LEGEND

WC-1	WATER CLOSET
WC-2	WATER CLOSET - ACCESSIBLE
UR-1	URINAL
UR-2	URINAL, ACCESSIBLE
LAV-1	LAVATORY, COUNTER MOUNTED
LAV-2	LAVATORY, WALL MOUNTED
JS-1	JANITOR SINK
MB-1	MOP BASIN
SH-1	SHOWER
SK-1	KITCHEN SINK
SK-2	SINK
SK-3	UNDER MOUNT SINK
EWC-1	DUAL ELECTRIC WATER COOLER
EEWS-1	EMERGENCY EYEWASH / SHOWER
4" FD-A	SIZE - FLOOR DRAIN
HB-1	HOSE BIBB
WH-1	WALL HYDRANT

RISER DIAGRAM LEGEND

CO	CLEANOUT (CO) IN RISER
FCO	CLEANOUT (FCO) IN FLOOR
	VENT THRU ROOF (VTR)
	FLOOR OR WALL PENETRATION
	PLUMBING FIXTURE TRAP
	FLOOR DRAIN / EQUIPMENT DRAIN
WHA-A	WATER HAMMER ARRESTOR
WCO	WALL CLEANOUT (WCO)
UP / DN	ISOMETRIC DIRECTION ARROW

PIPE SYMBOLS

	PIPE ELBOW
	PIPE DOWN
	PIPE UP
	PIPE CONTINUATION
	P-TRAP

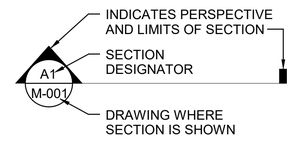
PLUMBING ABBREVIATIONS

AC	AIR COCK
AFF	ABOVE FINISHED FLOOR
AG	AIR GAP
ARV	AIR RELEASE VALVE
BF	BLIND FLANGE
BOP	BOTTOM OF PIPE
BW	BUTT WELD
CH OP	CHAIN WHEEL OPERATOR
CONC	CONCENTRIC
CORP STOP	CORPORATION STOP
CPVC	CHLORINATED POLYVINYL CHLORIDE
D	DRAIN
DI	DUCTILE IRON
DN	DOWN
DWH	DOMESTIC WATER HEATER
ELL	ELBOW
EXIST	EXISTING
FCA	FLANGED COUPLING ADAPTER
FD	FLOOR DRAIN
FE	FLANGED END
FF	FLAT FACED
FI	FLOW INDICATOR
FLGD	FLANGED
FM	FLOW METER
FOB	FLAT ON BOTTOM
FOT	FLAT ON TOP
FOV	FLOAT OPERATED VALVE
FRP	FIBERGLASS REINFORCED PIPE
FW	FIELD WELD
HD	HUB DRAIN
I.E.	INVERT ELEVATION
IF	INSULATED FLANGE
LC	LOCK CLOSED
LO	LOCK OPEN
LR	LONG RADIUS
NPSH	NET POSITIVE SUCTION HEAD
NRS	NON-RISING STEM
NWL	NORMAL WATER LEVEL
PSIA	POUNDS PER SQUARE INCH ABSOLUTE
PSIG	POUNDS PER SQUARE INCH GAUGE
PVC	POLYVINYL CHLORIDE
RED	REDUCER-REDUCING
RS	RISING STEM
SCH	SCHEDULE
SCRD	SCREWED
SR	SHORT RADIUS
TD	TRENCH DRAIN
TOC	TOP OF CONCRETE
TOG	TOP OF GRATING
TOP	TOP OF PIPE
TOS	TOP OF STEEL
TP	TRAP PRIMER
VTR	VENT THROUGH ROOF

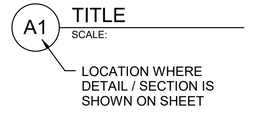
GENERAL NOTES:

1. UNLESS NOTED OTHERWISE, THE CIVIL AND MECHANICAL INTERFACE POINT IS 5 FEET OUTSIDE OF THE BUILDING WALL.
2. COORDINATE ALL PIPE SLEEVE REQUIREMENTS WITH FOUNDATION SUBCONTRACTOR.
3. COORDINATE MECHANICAL ROOM FLOOR DRAINS WITH ACTUAL EQUIPMENT LOCATIONS AND DRAINAGE REQUIREMENTS.
4. LEGEND IS GENERAL IN NATURE AND NOT ALL ITEMS SHOWN MAY BE USED ON THIS PROJECT.
5. PER 2021 IPC 704.1, INSTALL SANITARY PIPING 2 1/2"Ø OR LESS WITH 1/4" PER FT (2%) SLOPE, PIPING 3"Ø TO 6"Ø WITH 1/8" PER FT (1%) SLOPE, & PIPING 8"Ø OR LARGER WITH 1/16" PER FT (0.5%) SLOPE DOWNWARD IN DIRECTION OF FLOW. INSTALL VENT PIPING 2"Ø OR LESS WITH 1/4" PER FT (2%) SLOPE & PIPING 2 1/2"Ø OR LARGER WITH 1/8" PER FT (1%) SLOPE DOWNWARD TOWARD FIXTURE OR STACK.
6. ALL FIXTURES SHALL HAVE A P-TRAP INSTALLED.
7. PROVIDE ALL MATERIALS, VALVES, HANGERS, ETC. AND EQUIPMENT AND PERFORM ALL LABOR REQUIRED TO INSTALL COMPLETE AND OPERABLE PLUMBING SYSTEMS AS INDICATED ON THE DRAWINGS, AS SPECIFIED AND AS REQUIRED BY CODE.
8. INSTALL ALL PLUMBING FIXTURES, EQUIPMENT AND APPURTENANCES IN ACCORDANCE WITH MANUFACTURER'S RECOMMENDATIONS, CONTRACT DOCUMENTS, AND APPLICABLE CODES AND REGULATIONS.
9. COORDINATE CONSTRUCTION OF ALL PLUMBING WORK WITH STRUCTURAL, CIVIL, ELECTRICAL WORK ETC., SHOWN ON OTHER CONTRACT DOCUMENT DRAWINGS.
10. MAINTAIN A MINIMUM OF 6' - 8 CLEARANCE TO UNDERSIDE OF PIPES, CONDUITS, ETC., THROUGHOUT ACCESS ROUTES AND IN MECHANICAL ROOMS.
11. LOCATE ALL PLUMBING EQUIPMENT FOR UNOBSTRUCTED ACCESS TO UNIT ACCESS PANELS, CONTROLS, AND VALVING.
12. VERIFY DIMENSIONS AND CONNECTION SIZE WITH FURNISHED EQUIPMENT.
13. ALL ELEVATIONS ARE ABOVE FINISHED FLOOR TO BOTTOM OF PIPE UNLESS NOTED OTHERWISE.
14. SEE GJ & TY SHEETS FOR SECURE AREA AND TEMPEST BOUNDARIES AND REQUIREMENTS OF PENETRATIONS THROUGH THESE BOUNDARIES. CONSTRUCTION FOR SECURE AREAS, SECURE AREA MATERIALS AND COMPONENTS MUST FULLY MEET AND PASS ALL ACCREDITATION. COORDINATE WITH CONTRACTING OFFICER DURING CONSTRUCTION OF SECURE AREAS.

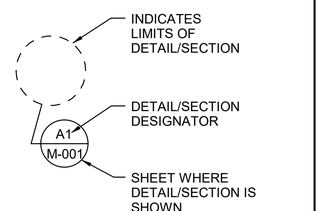
SECTION CUT SYMBOL



DETAIL/SECTION TITLE



DETAIL / ENLARGED CALLOUT SYMBOL





US Army Corps of Engineers ®

MARK	DESCRIPTION	DATE
0	READY-TO-ADVERTISE (RTA) SUBMITTAL	JUL 2025

DESIGNED BY: J. COLELLO
DRAWN BY: J. COLELLO
CHECKED BY: C. DAZE
ISSUE DATE: JUL 2025
SOLICITATION NO.: W912T525RA001
CONTRACT NO.: W912T524C0007
SUBMITTED BY: B. STREEBIN
FILE NAME:
SIZE: ANSI D

US ARMY CORPS OF ENGINEERS
LITTLE ROCK DISTRICT
LITTLE ROCK, ARKANSAS

BURNS AND McDONNELL
9400 WARD PARKWAY,
KANSAS CITY, MO 64114
165438

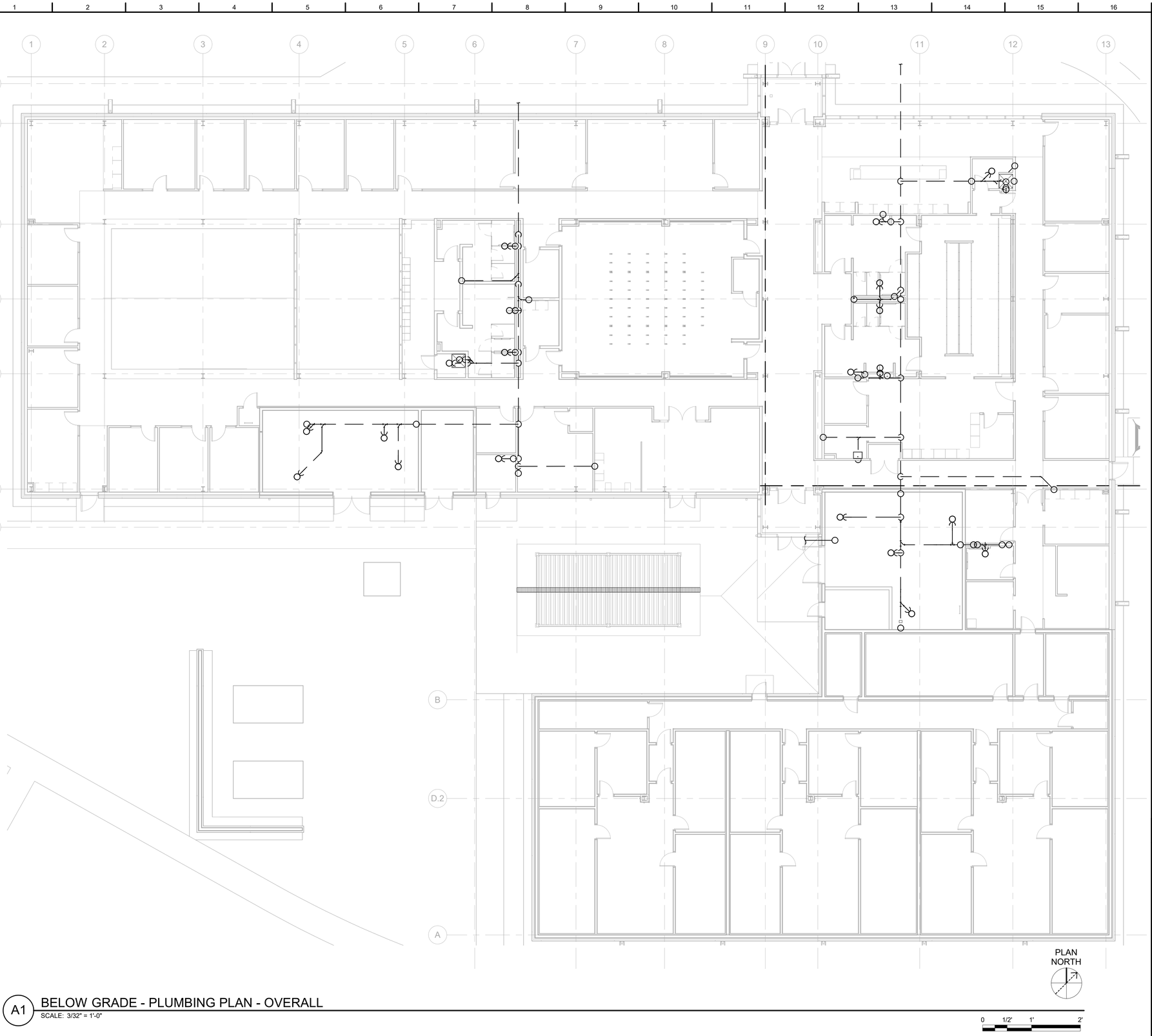
F-35: SPECIAL ACCESS PROGRAM FACILITY
EBBING AIR NATIONAL GUARD BASE (ANGB), FORT SMITH, ARKANSAS

PLUMBING NOTES, LEGEND, SYMBOLS AND ABBREVIATIONS

SHEET ID

P-001

READY-TO-ADVERTISE (RTA) SUBMITTAL



A1 BELOW GRADE - PLUMBING PLAN - OVERALL
SCALE: 3/32" = 1'-0"

GENERAL SHEET NOTES

1. SEE SHEET P-001 FOR GENERAL NOTES, LEGEND, SYMBOLS, AND ABBREVIATIONS.

US Army Corps of Engineers ®

MARK	DESCRIPTION	DATE
0	READY-TO-ADVERTISE (RTA) SUBMITTAL	JUL 2025

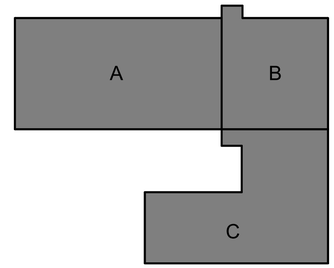
DESIGNED BY: J. COLELLO
DRAWN BY: J. COLELLO
CHECKED BY: C. DUNN
SUBMITTED BY: B. STREEBIN
SIZE: ANSI D
ISSUE DATE: JUL 2025
SOLICITATION NO.: W912T525RA001
CONTRACT NO.: W912T524F0007
FILE NAME:

US ARMY CORPS OF ENGINEERS
LITTLE ROCK DISTRICT
LITTLE ROCK, ARKANSAS

BURNS AND McDONNELL
9400 WARD PARKWAY,
KANSAS CITY, MO 64114
16543B

LICENSED PROFESSIONAL ENGINEER
BYRON EDWARD K. FONSECA
M 41419
MECHANICAL
STATE OF CALIFORNIA
07/23/2025

KEY PLAN

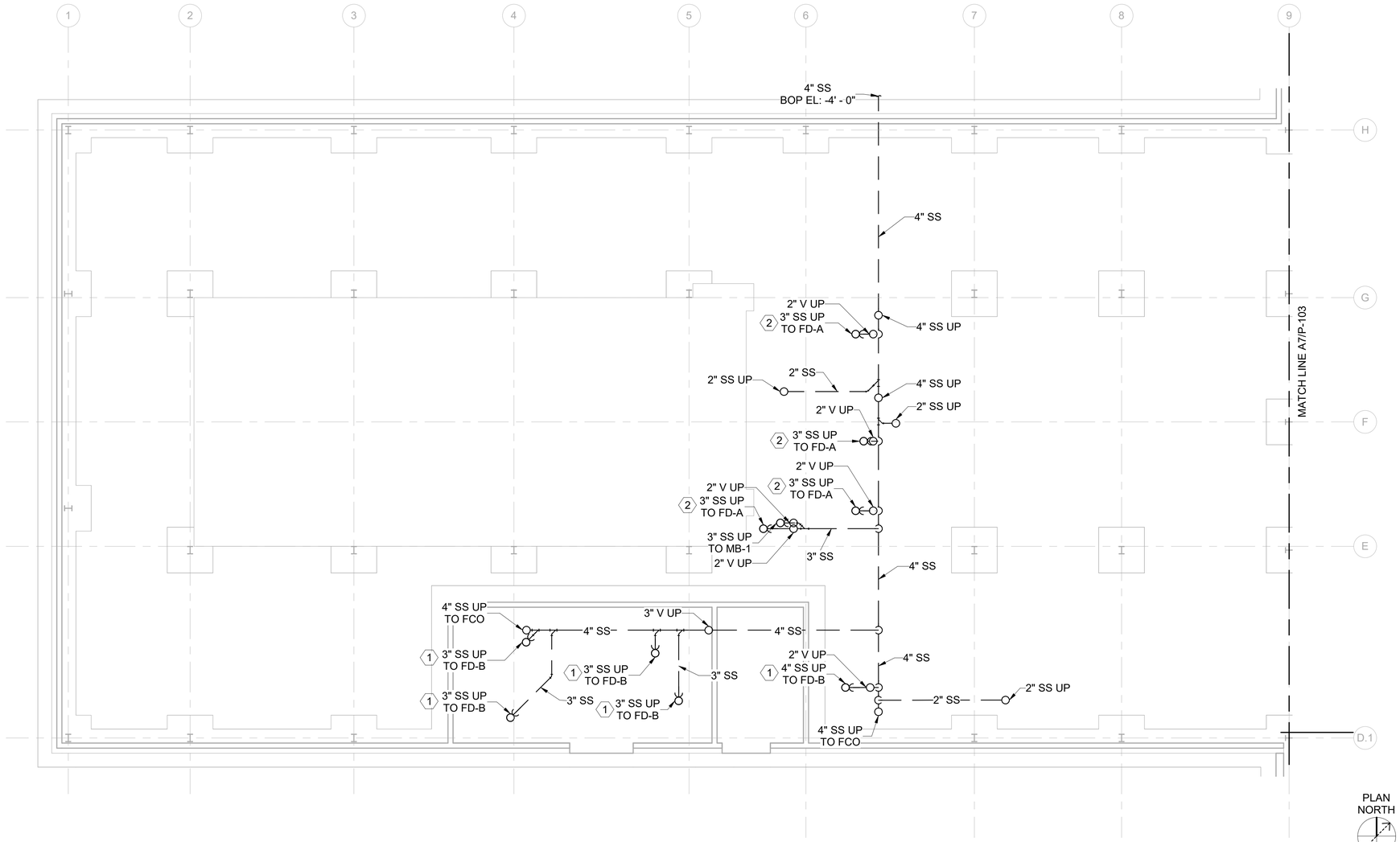


F-35 SPECIAL ACCESS PROGRAM FACILITY
EBBING AIR NATIONAL GUARD BASE (ANGB), FORT SMITH, ARKANSAS

BELOW GRADE - PLUMBING PLAN - OVERALL

SHEET ID
P-101

READY-TO-ADVERTISE (RTA) SUBMITTAL



A1 BELOW GRADE - PLUMBING PLAN - AREA A

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

GENERAL SHEET NOTES

1. SEE SHEET P-001 FOR GENERAL NOTES, LEGEND, SYMBOLS, AND ABBREVIATIONS.

SHEET KEYNOTES

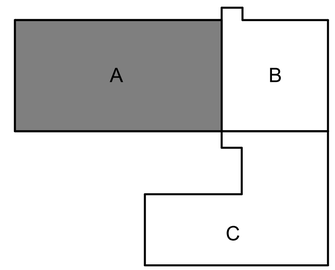
1. ROUTE TRAP PRIMER PIPING TO FLOOR DRAIN FROM ETP-102.
2. ROUTE TRAP PRIMER PIPING TO FLOOR DRAIN FROM ETP-103.

FIRST FLOOR - AREA A

NO	NAME
201	CORRIDOR
202	COMMAND SUPPORT STAFF
203	ACTIVITY PROGRAM COORDINATOR (APC) / RESOURCE ADVISOR (RA)
204	SQUADRON COMMANDER OFFICE
205	CONFERENCE ROOM
206	INTERNATIONAL MILITARY STUDENT OFFICER (IMSO)
207	SNR M-1
208	SNR M-2
209	SNR M-3
211	RA
212	COPY / STORAGE
213	STUDENT COLLAB
214	LG BRIEFING RM
215	AV
216	COMM
217	STUDENT LOCKERS
218	WOMEN'S RESTROOM
219	MEN'S RESTROOM
221	JANITOR'S CLOSET
222	STUDENT WORKSTATIONS
223	INSTRUCTOR WORKSTATIONS
224	MISSION OPS SUPPORT
225	CORRIDOR
226	IP M-1
227	IP M-2
228	CORRIDOR
229	BREAK ROOM
231	STORAGE
232	FLIGHT MEDICAL OFFICE
233	STORAGE
234	MOTHER'S ROOM
235	IP M-6
236	IP M-5
237	IP M-4
238	CORRIDOR
239	IP M-3
241	TEAM
251	MECHANICAL
252	ELECTRICAL
253	FIRE

LICENSED PROFESSIONAL ENGINEER
BYRON EDWARD K. FONSECA
M 41419
MECHANICAL
STATE OF CALIFORNIA
07/23/2025

KEY PLAN



US Army Corps of Engineers ®

MARK	DESCRIPTION	DATE
0	READY-TO-ADVERTISE (RTA) SUBMITTAL	JUL 2025

DESIGNED BY: J. COLELLO
DRAWN BY: J. COLELLO
CHECKED BY: C. DICKEY
SIZE: ANSI D
ISSUE DATE: JUL 2025
SOLICITATION NO.: W912T525RA001
CONTRACT NO.: W912T524F0007
SUBMITTED BY: B. STREEBIN
FILE NAME:

US ARMY CORPS OF ENGINEERS
LITTLE ROCK DISTRICT
LITTLE ROCK, ARKANSAS

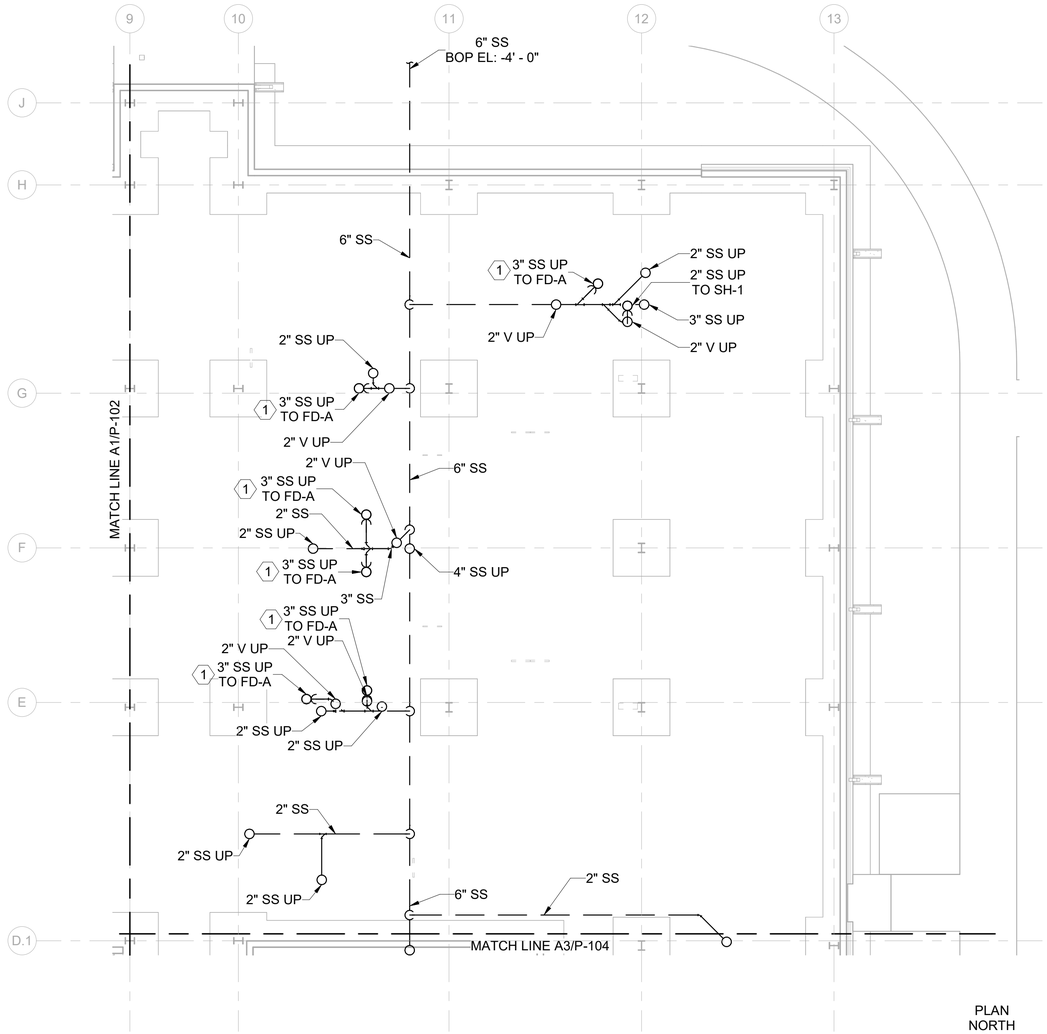
BURNS AND McDONNELL
9400 WARD PARKWAY,
KANSAS CITY, MO 64114
165438

F-35, SPECIAL ACCESS PROGRAM FACILITY
EBBING AIR NATIONAL GUARD BASE (ANGB), FORT SMITH, ARKANSAS

BELOW GRADE - PLUMBING PLAN - AREA A

SHEET ID
P-102

READY-TO-ADVERTISE (RTA) SUBMITTAL



A7 BELOW GRADE - PLUMBING PLAN - AREA B

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

GENERAL SHEET NOTES

1. SEE SHEET P-001 FOR GENERAL NOTES, LEGEND, SYMBOLS, AND ABBREVIATIONS.

SHEET KEYNOTES

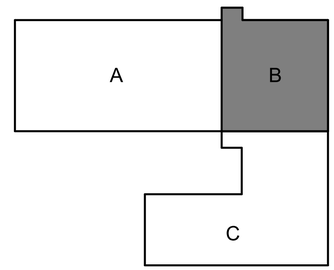
1. ROUTE TRAP PRIMER PIPING TO FLOOR DRAIN FROM ETP-104.

FIRST FLOOR - AREA B

NO	NAME
101	VESTIBULE
102	CORRIDOR
104	LOBBY
105	STEP DESK
106	CORRIDOR
107	SCHEDULING & TRAINING
108	DO
109	SARM
110	SARM ADMIN
111	STAN / EVAL
112	AFE MAINTENANCE
113	HELMET ALIGNMENT
114	LIFE SUPPORT
115	MAINTENANCE OFFICE
116	PILOT LOCKER ROOM
117	SHOWER
118	WOMEN'S RESTROOM
119	MEN'S RESTROOM
121	HALL
122	CORRIDOR
123	ELECTRICAL CLOSET

LICENSED PROFESSIONAL ENGINEER
BYRON EDWARD K. FONSECA
M 41419
MECHANICAL
STATE OF CALIFORNIA
07/23/2025

KEY PLAN



US Army Corps of Engineers ®

MARK	DESCRIPTION	DATE
0	READY-TO-ADVERTISE (RTA) SUBMITTAL	JUL 2025

DESIGNED BY: J. COLELLO
DRAWN BY: J. COLELLO
CHECKED BY: C. DAZE
SUBMITTED BY: B. STREEBIN
SIZE: ANSI D
ISSUE DATE: JUL 2025
SOLICITATION NO.: W912QR25RA001
CONTRACT NO.: W912QR24D0007
FILE NAME:

US ARMY CORPS OF ENGINEERS
LITTLE ROCK DISTRICT
LITTLE ROCK, ARKANSAS

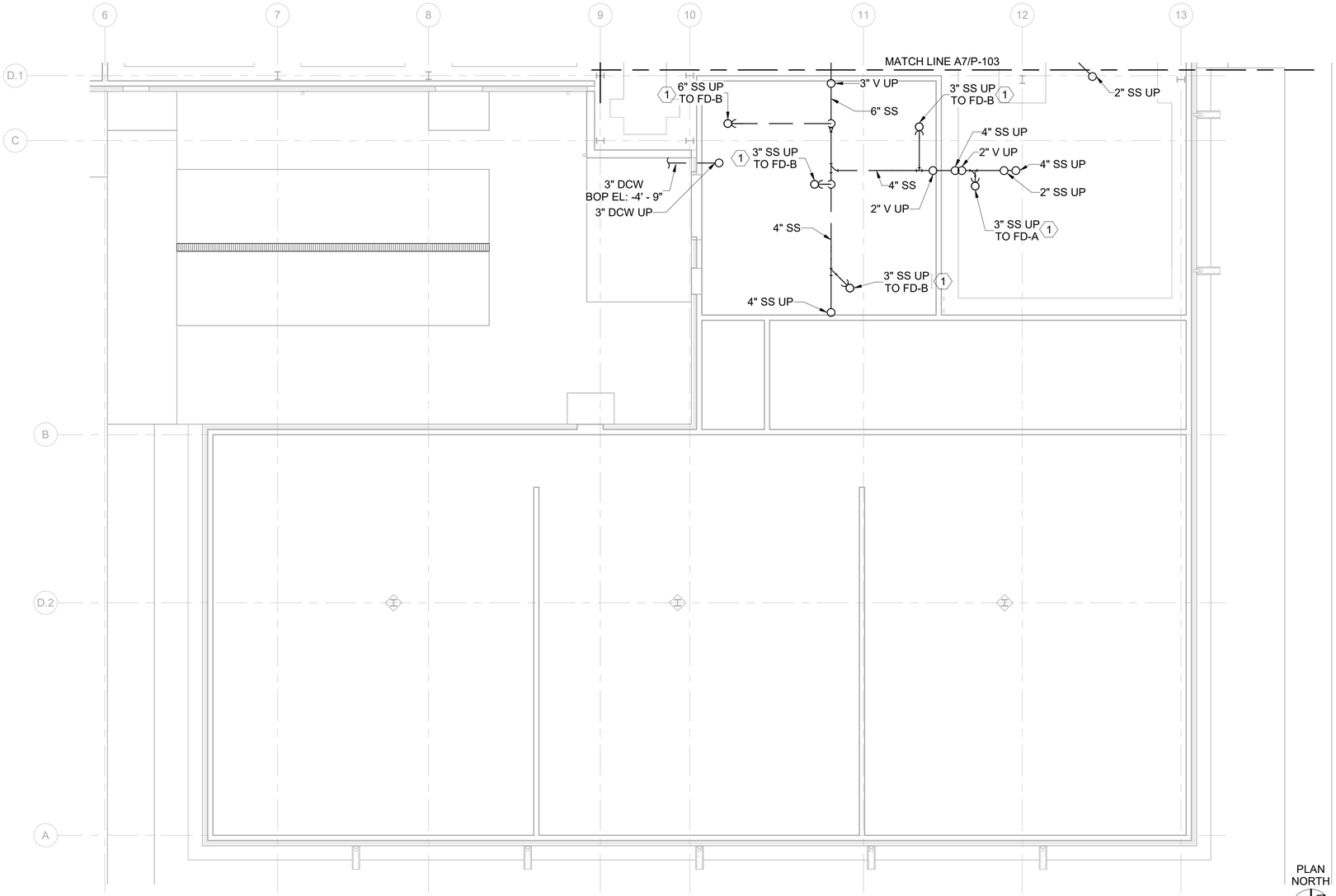
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9400 WARD PARKWAY,
KANSAS CITY, MO 64114
16438

F-35 SPECIAL ACCESS PROGRAM FACILITY
EBBING AIR NATIONAL GUARD BASE (ANGB), FORT SMITH, ARKANSAS

BELOW GRADE - PLUMBING PLAN - AREA B

SHEET ID
P-103

READY-TO-ADVERTISE (RTA) SUBMITTAL



A3 BELOW GRADE - PLUMBING PLAN - AREA C
SCALE: 1/8" = 1'-0"

GENERAL SHEET NOTES

1. SEE SHEET P-001 FOR GENERAL NOTES, LEGEND, SYMBOLS, AND ABBREVIATIONS.

SHEET KEYNOTES

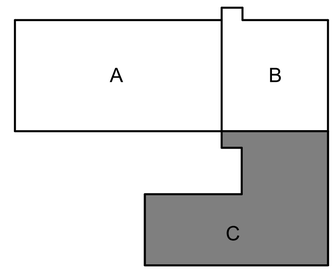
1. ROUTE TRAP PRIMER PIPING TO FLOOR DRAIN FROM ETP-101.

FIRST FLOOR - AREA C

NUMBER	NAME
103	VESTIBULE
124	CORRIDOR
125	BREAK ROOM
126	MAINT DEBRIEF
127	MAIN COMM ROOM
128	UNISEX RESTROOM
129	PRINT / COPY
131	MAN TRAP
132	CORRIDOR
133	SECURE COMM ROOM
134	STORAGE
135	SECURITY
136	SECURE ELEC ROOM
137	STORAGE
141	MAN TRAP 1
142	VAULT 1 MISSION PLANNING
143	VAULT 1 ALIS / ODIN
144	VAULT 1 SERVER
145	VAULT 1 LG BRIEF
146	VAULT 1 SM BRIEF
147	VAULT 1 SM BRIEF
151	MAN TRAP 2
152	VAULT 2 MISSION PLANNING
153	VAULT 2 ALIS / ODIN
154	VAULT 2 SERVER
155	VAULT 2 LG BRIEF
156	VAULT 2 SM BRIEF
157	VAULT 2 SM BRIEF
161	MAN TRAP 3
162	VAULT 3 MISSION PLANNING
163	VAULT 3 SM BRIEF
164	VAULT 3 SM BRIEF
165	VAULT 3 LG BRIEF
166	VAULT 3 ALIS / ODIN
167	VAULT 3 SERVER
171	MECHANICAL ROOM
172	ELECTRICAL ROOM

LICENSED PROFESSIONAL ENGINEER
BYRON EDWARD K. FONSECA
M 41419
MECHANICAL
STATE OF CALIFORNIA
07/23/2025

KEY PLAN



US Army Corps of Engineers ®

MARK	DESCRIPTION	DATE
0	READY-TO-ADVERTISE (RTA) SUBMITTAL	JUL 2025

DESIGNED BY: J. COLELLO
DRAWN BY: J. COLELLO
CHECKED BY: C. DIAZ
SUBMITTED BY: B. STREEBIN
SIZE: ANSI D
ISSUE DATE: JUL 2025
SOLICITATION NO.: W912QR25RA001
CONTRACT NO.: W912QR24C0007
FILE NAME:

US ARMY CORPS OF ENGINEERS
LITTLE ROCK DISTRICT
LITTLE ROCK, ARKANSAS

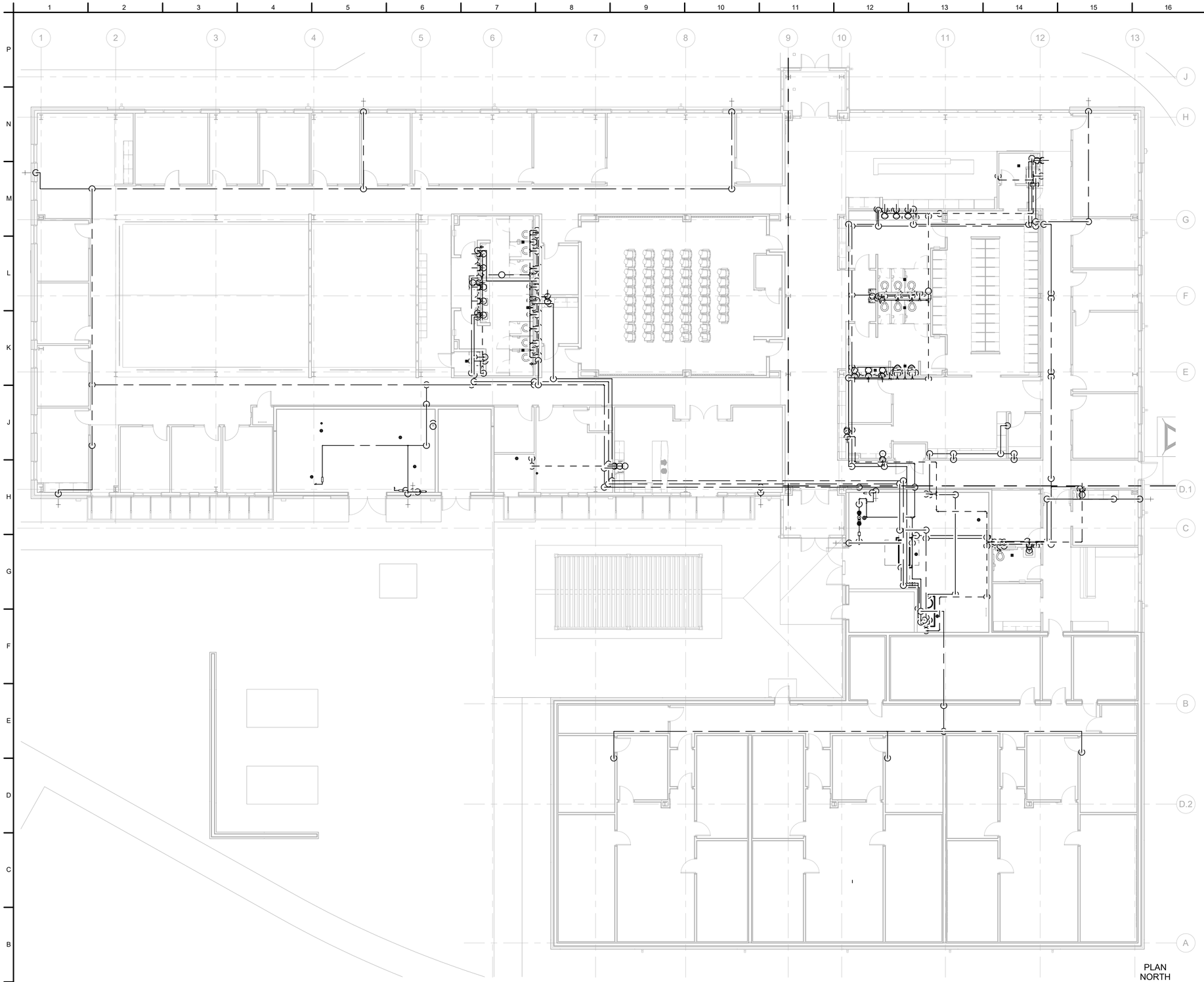
BURNS AND McDONNELL
9400 WARD PARKWAY,
KANSAS CITY, MO 64114
165438

F-35: SPECIAL ACCESS PROGRAM FACILITY
EBBING AIR NATIONAL GUARD BASE (ANGB), FORT SMITH, ARKANSAS

BELOW GRADE - PLUMBING PLAN - AREA C

SHEET ID
P-104

READY-TO-ADVERTISE (RTA) SUBMITTAL



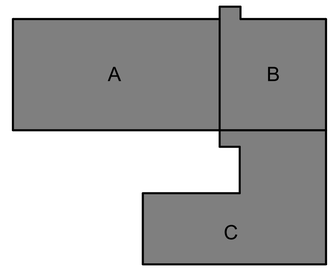
A1 FIRST FLOOR - PLUMBING PLAN - OVERALL
SCALE: 3/32" = 1'-0"

GENERAL SHEET NOTES

1. SEE SHEET P-001 FOR GENERAL NOTES, LEGEND, SYMBOLS, AND ABBREVIATIONS.

LICENSED PROFESSIONAL ENGINEER
BYRON EDWARD K. YONSECA
M 41419
MECHANICAL
STATE OF CALIFORNIA
07/23/2025

KEY PLAN



US Army Corps of Engineers ®

MARK	DESCRIPTION	DATE
0	READY-TO-ADVERTISE (RTA) SUBMITTAL	JUL 2025

DESIGNED BY: J.COLELLO
DRAWN BY: J.COLELLO
CHECKED BY: C. DEKAZE
SUBMITTED BY: B. STREEBIN
ISSUE DATE: JUL 2025
SOLICITATION NO.: W912T525RA001
CONTRACT NO.: W912T524C0007
SIZE: ANSI D
FILE NAME:

US ARMY CORPS OF ENGINEERS
LITTLE ROCK DISTRICT
LITTLE ROCK, ARKANSAS

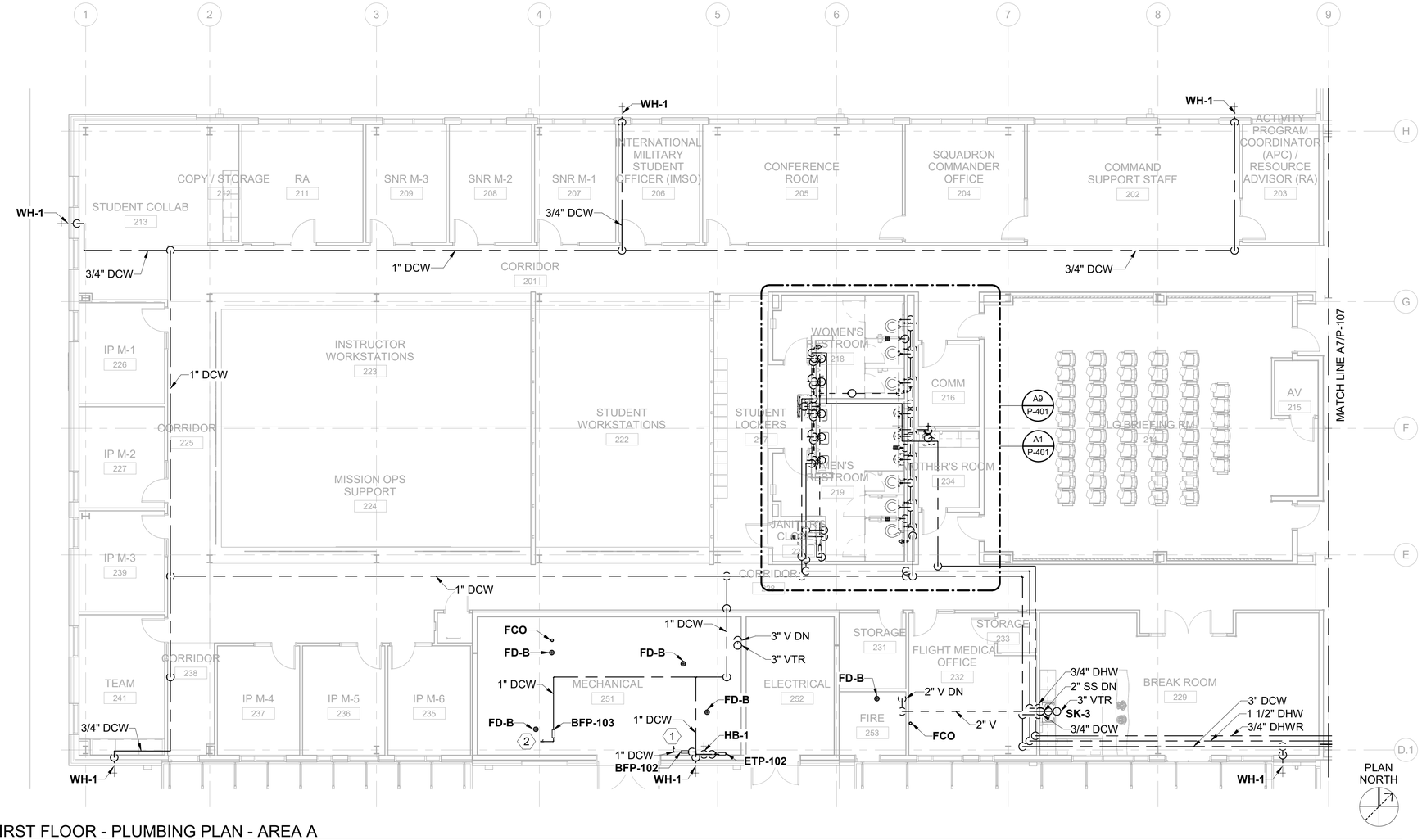
BURNS AND McDONNELL
9400 WARD PARKWAY,
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165438

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EBBING AIR NATIONAL GUARD BASE (ANGB), FORT SMITH, ARKANSAS

FIRST FLOOR - PLUMBING PLAN - OVERALL

SHEET ID
P-105

READY-TO-ADVERTISE (RTA) SUBMITTAL



A1 FIRST FLOOR - PLUMBING PLAN - AREA A

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

GENERAL SHEET NOTES

1. SEE SHEET P-001 FOR GENERAL NOTES, LEGEND, SYMBOLS, AND ABBREVIATIONS.

SHEET KEYNOTES

1. HEATING HOT WATER DCW MAKEUP CONNECTION. REFER TO MECHANICAL DRAWINGS FOR ADDITIONAL INFORMATION.
2. CHILLED WATER DCW MAKEUP CONNECTION. REFER TO MECHANICAL DRAWINGS FOR ADDITIONAL INFORMATION.

FIRST FLOOR - AREA A

NO	NAME
201	CORRIDOR
202	COMMAND SUPPORT STAFF
203	ACTIVITY PROGRAM COORDINATOR (APC) / RESOURCE ADVISOR (RA)
204	SQUADRON COMMANDER OFFICE
205	CONFERENCE ROOM
206	INTERNATIONAL MILITARY STUDENT OFFICER (IMSO)
207	SNR M-1
208	SNR M-2
209	SNR M-3
211	RA
212	COPY / STORAGE
213	STUDENT COLLAB
214	LG BRIEFING RM
215	AV
216	COMM
217	STUDENT LOCKERS
218	WOMEN'S RESTROOM
219	MEN'S RESTROOM
221	JANITOR'S CLOSET
222	STUDENT WORKSTATIONS
223	INSTRUCTOR WORKSTATIONS
224	MISSION OPS SUPPORT
225	CORRIDOR
226	IP M-1
227	IP M-2
228	CORRIDOR
229	BREAK ROOM
231	STORAGE
232	FLIGHT MEDICAL OFFICE
233	STORAGE
234	MOTHER'S ROOM
235	IP M-6
236	IP M-5
237	IP M-4
238	CORRIDOR
239	IP M-3
241	TEAM
251	MECHANICAL
252	ELECTRICAL
253	FIRE

US Army Corps of Engineers ®

MARK	DESCRIPTION	DATE
0	READY-TO-ADVERTISE (RTA) SUBMITTAL	JUL 2025

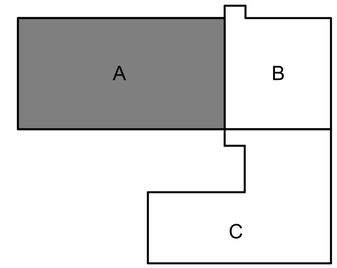
DESIGNED BY: J.COLELLO
DRAWN BY: J.COLELLO
CHECKED BY: C. DICKEY
ISSUE DATE: JUL 2025
SOLICITATION NO.: W912T5-25-RA001
CONTRACT NO.: W912T5-24-C-0007
SUBMITTED BY: B. STREEBIN
SIZE: ANSI D
FILE NAME:

US ARMY CORPS OF ENGINEERS
LITTLE ROCK DISTRICT
LITTLE ROCK, ARKANSAS

BURNS AND McDONNELL
9400 WARD PARKWAY,
KANSAS CITY, MO 64114
16543B

LICENSED PROFESSIONAL ENGINEER
BYRON EDWARD K. YONSCH
M 41419
MECHANICAL
STATE OF CALIFORNIA
07/23/2025

KEY PLAN



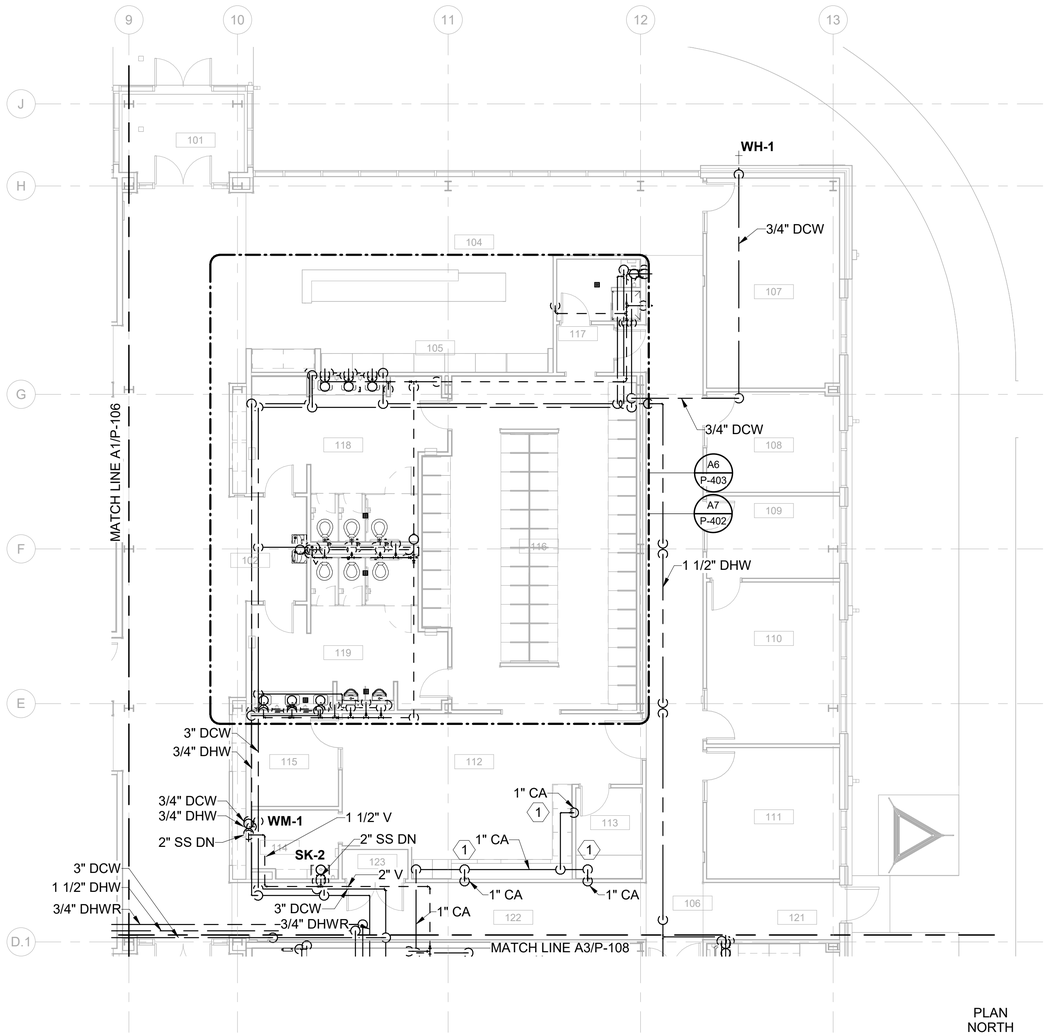
F-35: SPECIAL ACCESS PROGRAM FACILITY
EBBING AIR NATIONAL GUARD BASE (ANGB), FORT SMITH, ARKANSAS

FIRST FLOOR - PLUMBING PLAN - AREA A

SHEET ID

P-106

READY-TO-ADVERTISE (RTA) SUBMITTAL



PLAN NORTH

A7 FIRST FLOOR - PLUMBING PLAN - AREA B

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

0 4' 8' 16'

GENERAL SHEET NOTES

1. SEE SHEET P-001 FOR GENERAL NOTES, LEGEND, SYMBOLS, AND ABBREVIATIONS.

SHEET KEYNOTES

1. SEE DETAIL J1/P-501 FOR COMPRESSED AIR CONNECTION INFORMATION.

FIRST FLOOR - AREA B

NO	NAME
101	VESTIBULE
102	CORRIDOR
104	LOBBY
105	STEP DESK
106	CORRIDOR
107	SCHEDULING & TRAINING
108	DO
109	SARM
110	SARM ADMIN
111	STAN / EVAL
112	AFE MAINTENANCE
113	HELMET ALIGNMENT
114	LIFE SUPPORT
115	MAINTENANCE OFFICE
116	PILOT LOCKER ROOM
117	SHOWER
118	WOMEN'S RESTROOM
119	MEN'S RESTROOM
121	HALL
122	CORRIDOR
123	ELECTRICAL CLOSET

US Army Corps of Engineers ®

MARK	DESCRIPTION	DATE
0	READY-TO-ADVERTISE (RTA) SUBMITTAL	JUL 2025

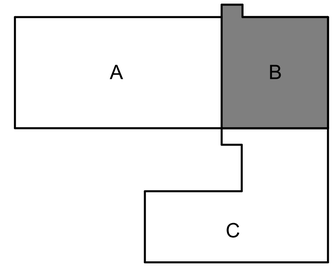
DESIGNED BY: J. COLELLO
DRAWN BY: J. COLELLO
CHECKED BY: C. DAZE
SUBMITTED BY: B. STREEBIN
SIZE: ANSI D
ISSUE DATE: JUL 2025
SOLICITATION NO.: W912QR25RA001
CONTRACT NO.: W912QR24D0007
FILE NAME:

US ARMY CORPS OF ENGINEERS
LITTLE ROCK DISTRICT
LITTLE ROCK, ARKANSAS

BURNS AND McDONNELL
9400 WARD PARKWAY,
KANSAS CITY, MO 64114
16538

LICENSED PROFESSIONAL ENGINEER
BYRON EDWARD K. KONSCHAK
M 41419
MECHANICAL
STATE OF CALIFORNIA
07/23/2025

KEY PLAN

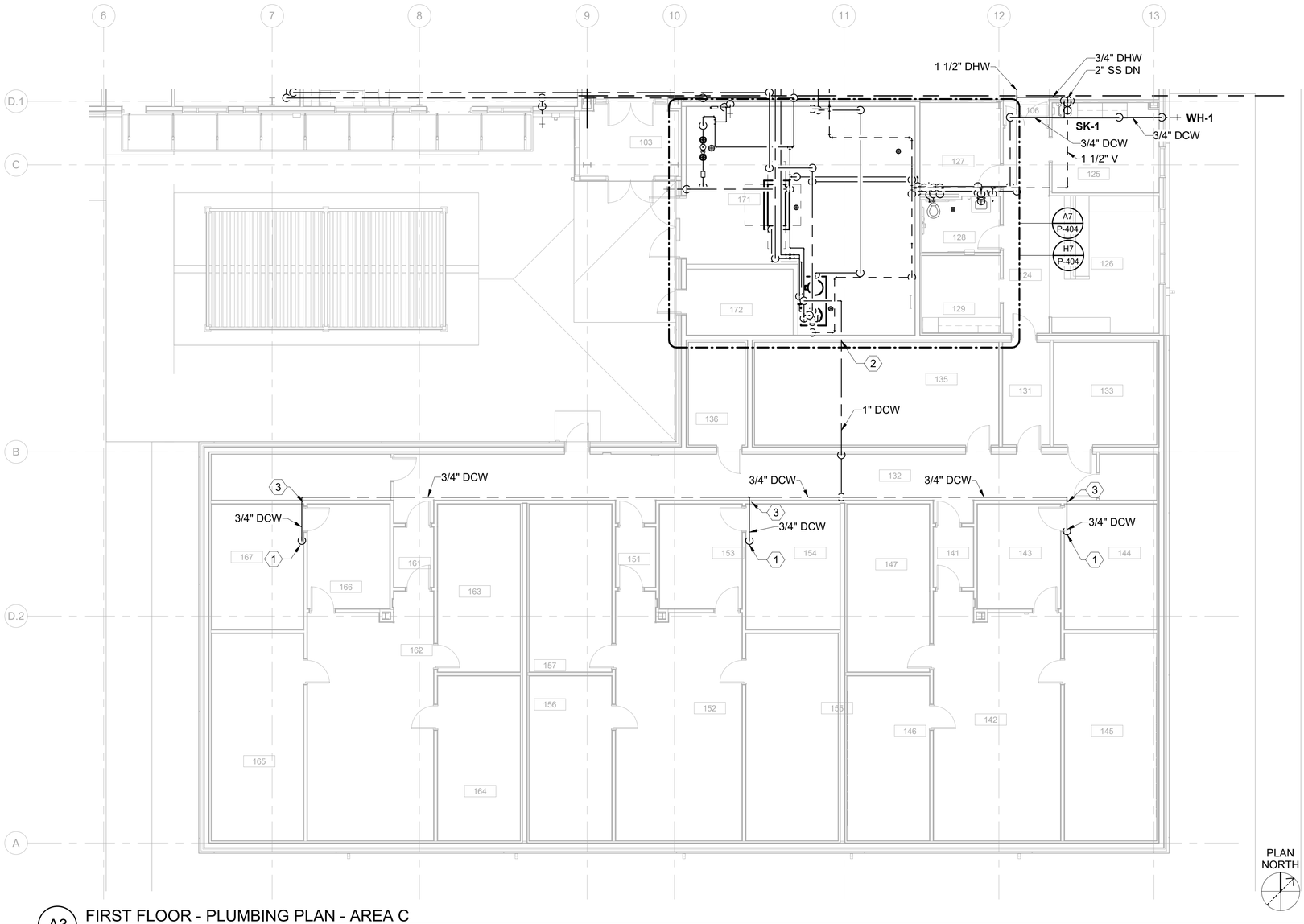


F-35 SPECIAL ACCESS PROGRAM FACILITY
EBBING AIR NATIONAL GUARD BASE (ANGB), FORT SMITH, ARKANSAS

FIRST FLOOR - PLUMBING PLAN - AREA B

SHEET ID
P-107

READY-TO-ADVERTISE (RTA) SUBMITTAL



A3 FIRST FLOOR - PLUMBING PLAN - AREA C

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

PLAN NORTH

0 4' 8' 16'

GENERAL SHEET NOTES

1. SEE SHEET P-001 FOR GENERAL NOTES, LEGEND, SYMBOLS, AND ABBREVIATIONS.

SHEET KEYNOTES

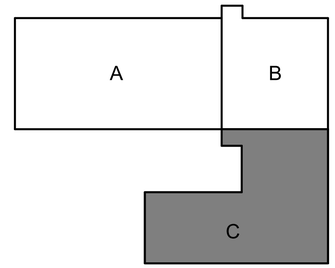
1. 3/4" DCW CONNECTION TO HUMIDIFIER.
2. SECURE AND TEMPEST BOUNDARY PIPE PENETRATIONS. PROVIDE SECURE PENETRATIONS PER GJ SHEET SERIES DETAILS.
3. PIPE PENETRATION THROUGH AN STC50 RATED WALL. SEE ARCHITECTURE DETAILS FOR PENETRATION PACKING AND SEALING REQUIREMENTS.

FIRST FLOOR - AREA C

NUMBER	NAME
103	VESTIBULE
124	CORRIDOR
125	BREAK ROOM
126	MAINT DEBRIEF
127	MAIN COMM ROOM
128	UNISEX RESTROOM
129	PRINT / COPY
131	MAN TRAP
132	CORRIDOR
133	SECURE COMM ROOM
134	STORAGE
135	SECURITY
136	SECURE ELEC ROOM
137	STORAGE
141	MAN TRAP 1
142	VAULT 1 MISSION PLANNING
143	VAULT 1 ALIS / ODIN
144	VAULT 1 SERVER
145	VAULT 1 LG BRIEF
146	VAULT 1 SM BRIEF
147	VAULT 1 SM BRIEF
151	MAN TRAP 2
152	VAULT 2 MISSION PLANNING
153	VAULT 2 ALIS / ODIN
154	VAULT 2 SERVER
155	VAULT 2 LG BRIEF
156	VAULT 2 SM BRIEF
157	VAULT 2 SM BRIEF
161	MAN TRAP 3
162	VAULT 3 MISSION PLANNING
163	VAULT 3 SM BRIEF
164	VAULT 3 SM BRIEF
165	VAULT 3 LG BRIEF
166	VAULT 3 ALIS / ODIN
167	VAULT 3 SERVER
171	MECHANICAL ROOM
172	ELECTRICAL ROOM

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M 41419
MECHANICAL
STATE OF CALIFORNIA
07/23/2025

KEY PLAN



US Army Corps of Engineers ®

MARK	DESCRIPTION	DATE
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DESIGNED BY: J. COLELLO
DRAWN BY: J. COLELLO
CHECKED BY: C. DUNN
SUBMITTED BY: B. STREEBIN
ISSUE DATE: JUL 2025
SOLICITATION NO.: W912QR25RA001
CONTRACT NO.: W912QR24C0007
SIZE: ANSI D
FILE NAME:

US ARMY CORPS OF ENGINEERS
LITTLE ROCK DISTRICT
LITTLE ROCK, ARKANSAS

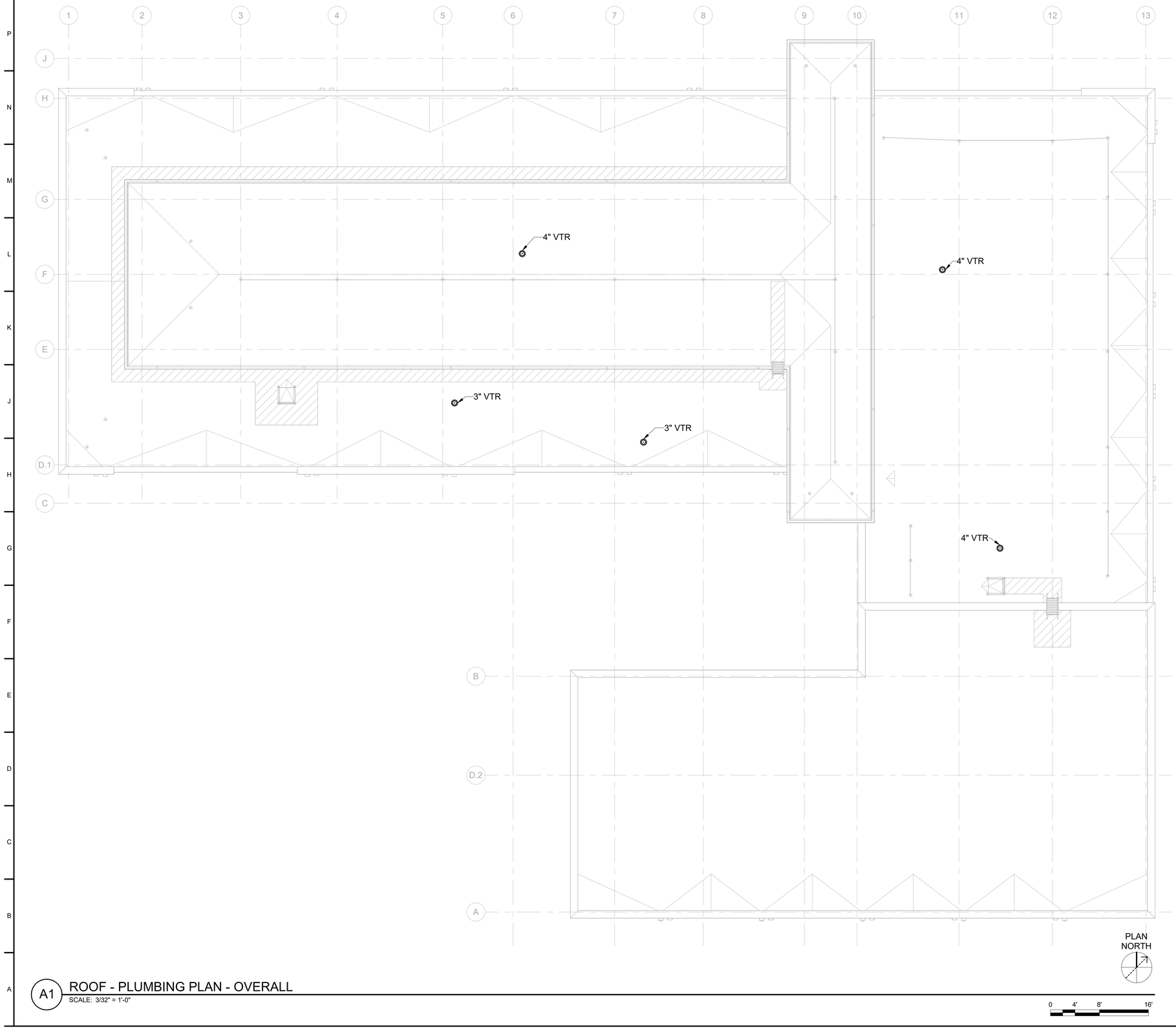
BURNS AND McDONNELL
9400 WARD PARKWAY,
KANSAS CITY, MO 64114
165438

F-35 SPECIAL ACCESS PROGRAM FACILITY
EBBING AIR NATIONAL GUARD BASE (ANGB), FORT SMITH, ARKANSAS

FIRST FLOOR - PLUMBING PLAN - AREA C

SHEET ID
P-108

READY-TO-ADVERTISE (RTA) SUBMITTAL



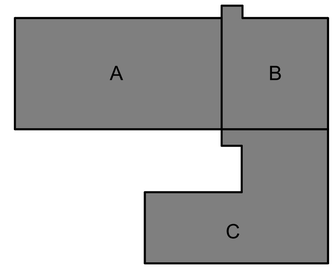
A1 ROOF - PLUMBING PLAN - OVERALL
SCALE: 3/32" = 1'-0"

GENERAL SHEET NOTES

1. SEE SHEET P-001 FOR GENERAL NOTES, LEGEND, SYMBOLS, AND ABBREVIATIONS.

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MECHANICAL
STATE OF CALIFORNIA
07/23/2025

KEY PLAN



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0	READY-TO-ADVERTISE (RTA) SUBMITTAL	JUL 2025

DESIGNED BY: J. COLELLO
DRAWN BY: J. COLELLO
CHECKED BY: C. DICKEY
SUBMITTED BY: B. STREEBIN
SIZE: ANSI D
ISSUE DATE: JUL 2025
SOLICITATION NO.: W912QR25RA001
CONTRACT NO.: W912QR24F0007
FILE NAME:

US ARMY CORPS OF ENGINEERS
LITTLE ROCK DISTRICT
LITTLE ROCK, ARKANSAS

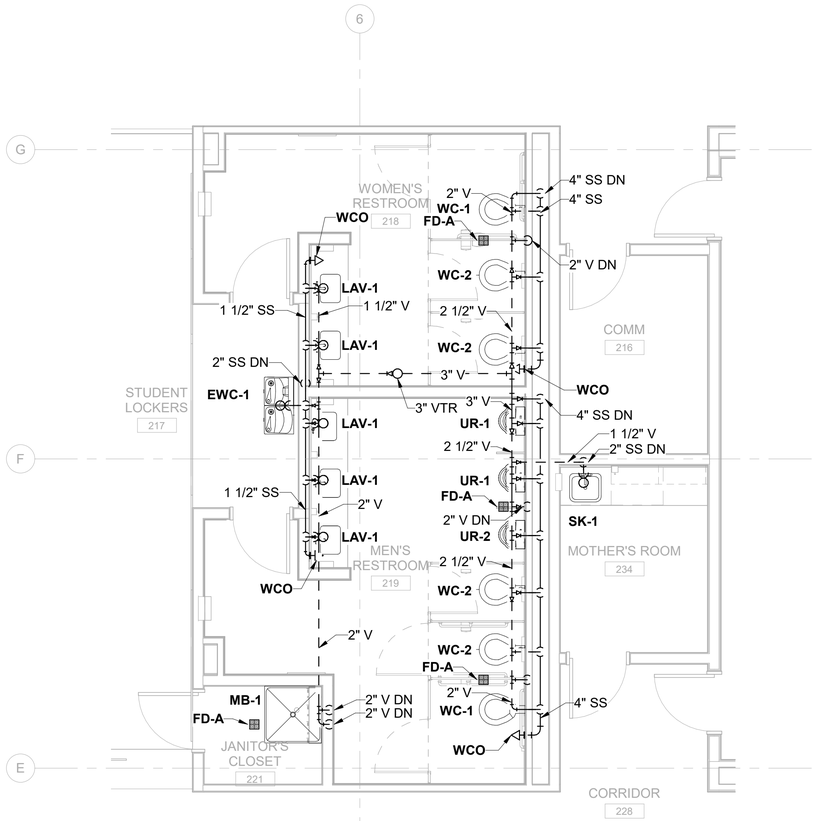
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KANSAS CITY, MO 64114
16543B

F-35 SPECIAL ACCESS PROGRAM FACILITY
EBBING AIR NATIONAL GUARD BASE (ANGB), FORT SMITH, ARKANSAS

ROOF - PLUMBING PLAN - OVERALL

SHEET ID
P-109

READY-TO-ADVERTISE (RTA) SUBMITTAL

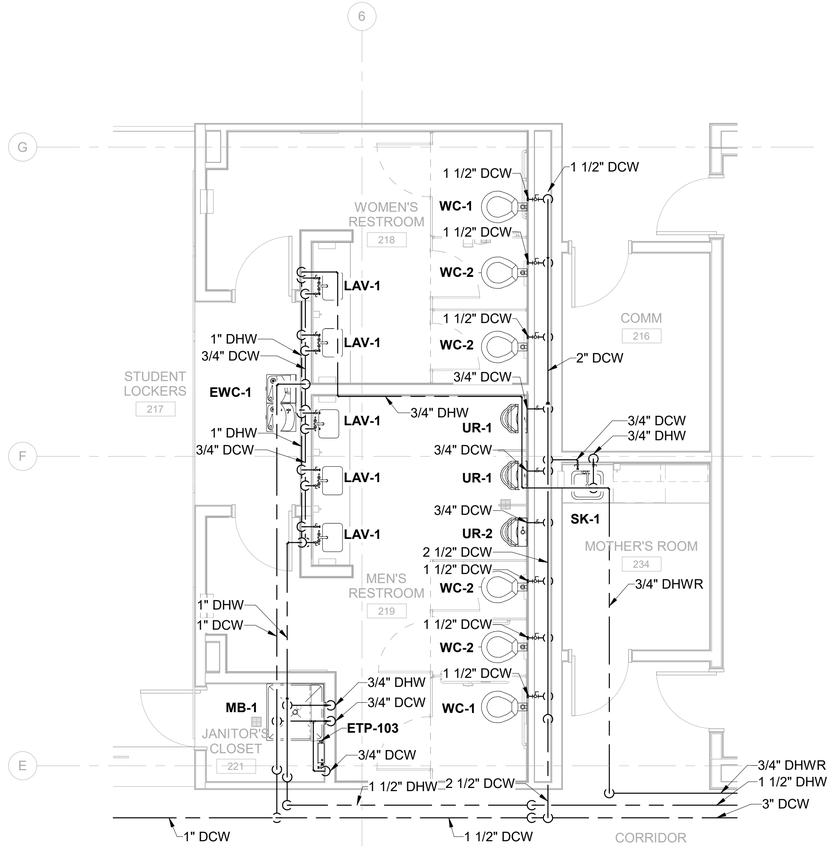


PLAN NORTH

A1 PLUMBING ENLARGED PLAN - WEST RESTROOM - SANITARY

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

0 2' 4' 8'



PLAN NORTH

A9 PLUMBING ENLARGED PLAN - WEST RESTROOM - DOMESTIC WATER

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

0 2' 4' 8'

GENERAL SHEET NOTES

1. SEE SHEET P-001 FOR GENERAL NOTES, LEGEND, SYMBOLS, AND ABBREVIATIONS.

US Army Corps of Engineers ®

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DESIGNED BY: J. COLELLO
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CONTRACT NO.: W912PS24D0007
SUBMITTED BY: B. STREEBIN
SIZE: ANSI D
FILE NAME:

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LITTLE ROCK DISTRICT
LITTLE ROCK, ARKANSAS

BURNS AND McDONNELL
9400 WARD PARKWAY,
KANSAS CITY, MO 64114
165438

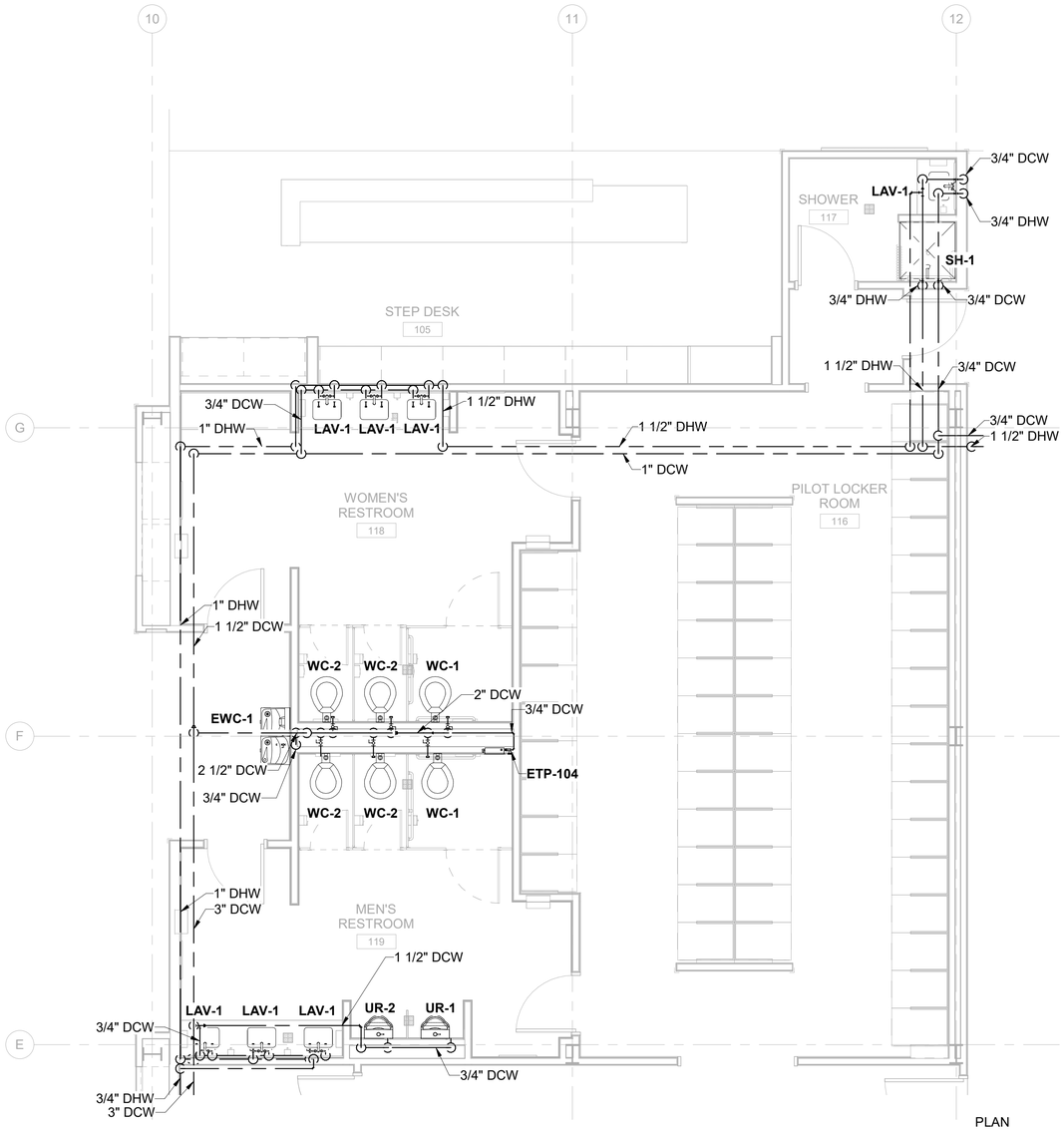
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MECHANICAL
STATE OF CALIFORNIA
07/23/2025

F-35: SPECIAL ACCESS PROGRAM FACILITY
EBBING AIR NATIONAL GUARD BASE (ANGB), FORT SMITH, ARKANSAS

PLUMBING ENLARGED PLANS

SHEET ID
P-401

READY-TO-ADVERTISE (RTA) SUBMITTAL



A7 PLUMBING ENLARGED PLAN - EAST RESTROOM - DOMESTIC WATER

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

0 2' 4' 8'

GENERAL SHEET NOTES

1. SEE SHEET P-001 FOR GENERAL NOTES, LEGEND, SYMBOLS, AND ABBREVIATIONS.

US Army Corps of Engineers ®

MARK	DESCRIPTION	DATE
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DRAWN BY: J. COLELLO
CHECKED BY: C. DICKEY
SUBMITTED BY: B. STREEBIN
SIZE: ANSI D
ISSUE DATE: JUL 2025
SOLICITATION NO.: W912QR25RA001
CONTRACT NO.: W912QR24D0007
FILE NAME:

US ARMY CORPS OF ENGINEERS
LITTLE ROCK DISTRICT
LITTLE ROCK, ARKANSAS

BURNS AND McDONNELL
9400 WARD PARKWAY,
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16543B

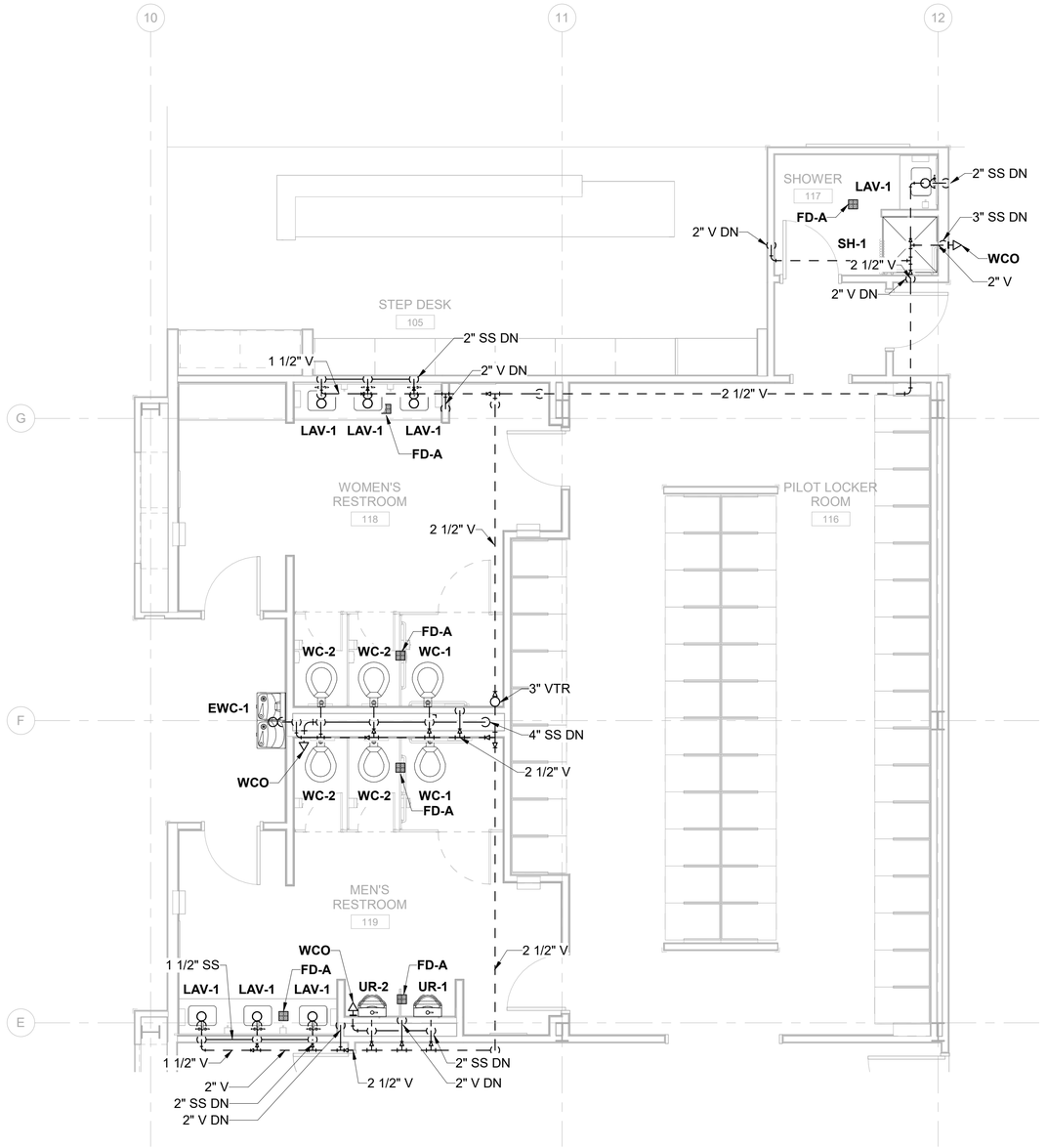
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STATE OF CALIFORNIA
07/23/2025

F-35 SPECIAL ACCESS PROGRAM FACILITY
EBBING AIR NATIONAL GUARD BASE (ANGB), FORT SMITH, ARKANSAS

PLUMBING ENLARGED PLANS

SHEET ID
P-402

READY-TO-ADVERTISE (RTA) SUBMITTAL



PLAN NORTH

A6 PLUMBING ENLARGED PLAN - EAST RESTROOM - SANITARY

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

0 2' 4' 8'

GENERAL SHEET NOTES

1. SEE SHEET P-001 FOR GENERAL NOTES, LEGEND, SYMBOLS, AND ABBREVIATIONS.

US Army Corps of Engineers ®

MARK	DESCRIPTION	DATE
0	READY-TO-ADVERTISE (RTA) SUBMITTAL	JUL 2025

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CHECKED BY: C. DAZE
SUBMITTED BY: B. STREEBIN
SIZE: ANSI D
ISSUE DATE: JUL 2025
SOLICITATION NO.: W912725RA001
CONTRACT NO.: W912725A4F0007
FILE NAME:

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LITTLE ROCK, ARKANSAS

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16543B

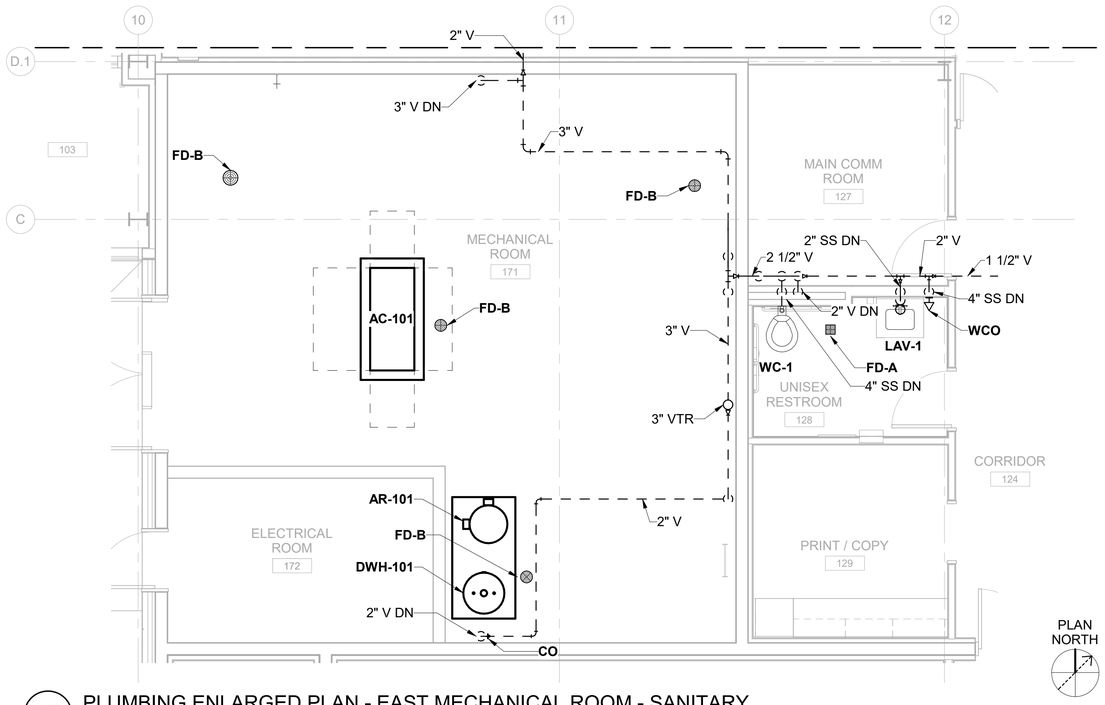
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F-35 SPECIAL ACCESS PROGRAM FACILITY
EBBING AIR NATIONAL GUARD BASE (ANGB), FORT SMITH, ARKANSAS

PLUMBING ENLARGED PLANS

SHEET ID
P-403

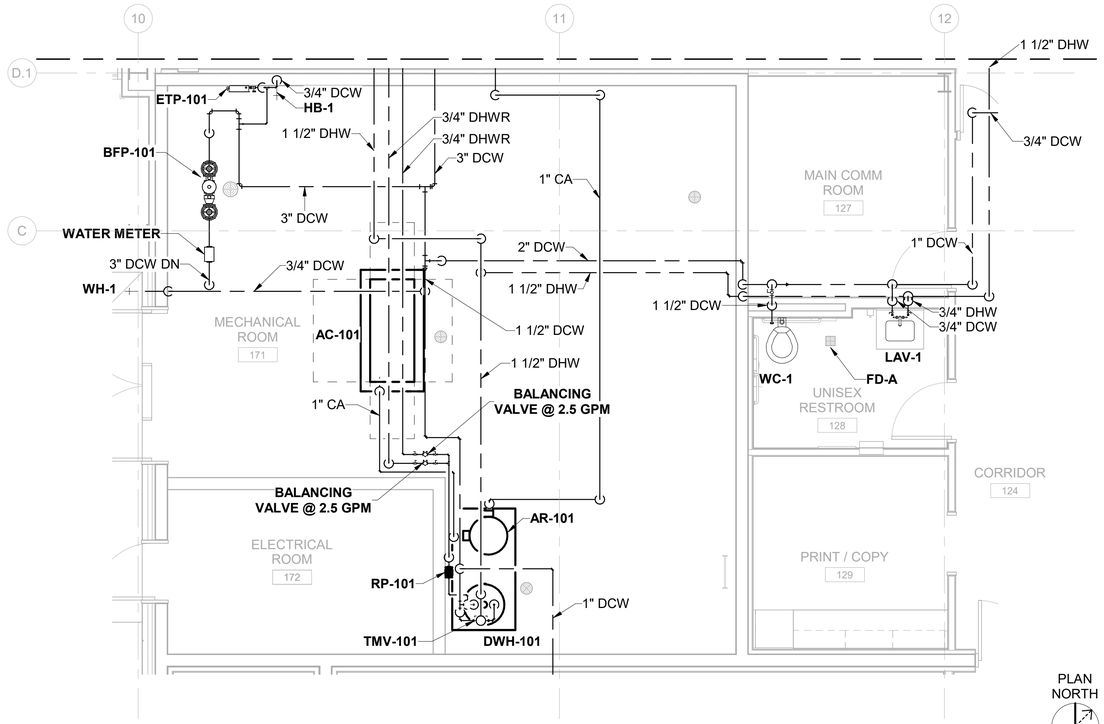
READY-TO-ADVERTISE (RTA) SUBMITTAL



H7 PLUMBING ENLARGED PLAN - EAST MECHANICAL ROOM - SANITARY

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

0 2' 4' 8'



A7 PLUMBING ENLARGED PLAN - EAST MECHANICAL ROOM - DOMESTIC WATER & COMPRESSED AIR

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

0 2' 4' 8'

GENERAL SHEET NOTES

1. SEE SHEET P-001 FOR GENERAL NOTES, LEGEND, SYMBOLS, AND ABBREVIATIONS.

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M 41419
MECHANICAL
STATE OF CALIFORNIA
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LITTLE ROCK DISTRICT
LITTLE ROCK, ARKANSAS

BURNS AND McDONNELL
9400 WARD PARKWAY,
KANSAS CITY, MO 64114
165438

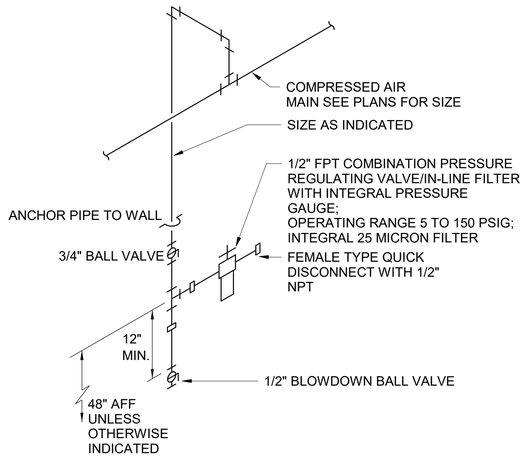
F-35: SPECIAL ACCESS PROGRAM FACILITY
EBBING AIR NATIONAL GUARD BASE (ANGB), FORT SMITH, ARKANSAS

PLUMBING ENLARGED PLANS

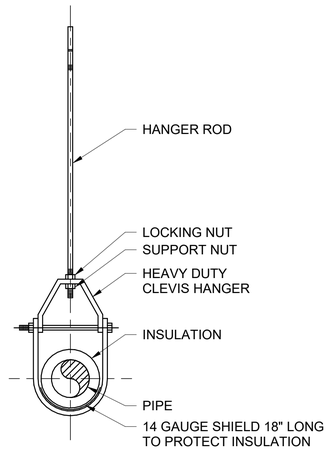
SHEET ID

P-404

READY-TO-ADVERTISE (RTA) SUBMITTAL



J1 COMPRESSED AIR DROP - SINGLE WITH BLOWDOWN VALVE
SCALE: NTS



J7 CLEVIS HANGER
SCALE: NTS

MAXIMUM HORIZONTAL PIPE HANGER AND SUPPORT SPACING

NOMINAL PIPE OR TUBE DIA	STANDARD WEIGHT STEEL PIPE		COPPER TUBE	
	WATER SERVICE	VAPOR SERVICE	WATER SERVICE	VAPOR SERVICE
IN.	FT.	FT.	FT.	FT.
1/4	7	8	5	5
3/8	7	8	5	6
1/2	7	8	5	6
3/4	7	9	5	7
1	7	9	6	8
1 1/4	7	9	7	9
1 1/2	9	12	8	10
2	10	13	8	11
2 1/2	11	14	9	13
3	12	15	10	14
3 1/2	13	16	11	15
4	14	17	12	16
5	16	19	13	18
6	17	21	14	20
8	19	24	16	23
10	20	26	18	25
12	23	30	19	28
14	25	32		
16	27	35		
18	28	37		
20	30	39		
24	32	42		
30	33	44		

NOTES:

1. FOR SPACING SUPPORTS INCORPORATING TYPE 40 SHIELDS, SEE TABLE 5, MSS SP-69.
2. DOES NOT APPLY WHERE SPAN CALCULATIONS ARE MADE OR WHERE THERE ARE CONCENTRATED LOADS BETWEEN SUPPORTS SUC AS FLANGES, VALVES, SPECIALTIES, TEC, OR CHANGES IN DIRECTION REQUIRING ADDITIONAL SUPPORTS.
3. FIRE PROTECTION PIPING: FOLLOW REQUIREMENTS OF THE NATIONAL FIRE PROTECTION ASSOCIATION.
4. CAST IRON AND DUCTILE IRON PIPE: MIN. OF ONE (1) HANGER PER PIPE SECTION CLOSE TO JOINT ON THE BARREL. ALSO AT CHANGE OF DIRECTION AND BRANCH CONNECTIONS.
   CAST IRON PRESSURE PIPE: 12 FT. MAX. SPACING.
   CAST IRON SOIL PIPE: 10 FT. MAX. SPACING.
5. PLASTIC AND FIBERGLASS REINFORCED PIPE: FOLLOW PIPE MANUFACTURER'S RECOMMENDATIONS FOR SPACING AND SERVICE CONDITIONS.
6. EXTRACTED FROM MSS SP-69, 1983, WITH PERMISSION OF THE PUBLISHER, THE MANUFACTURERS STANDARDIZATION SOCIETY.
7. THIS TABLE PROVIDED FOR REFERENCE ONLY. PROVIDE HANGER AND SUPPORT SPACING IN ACCORDANCE WITH MSS SP-58, SP-69 AND SPECIFICATIONS.

J13 PIPE SUPPORT SPACING
SCALE: NTS

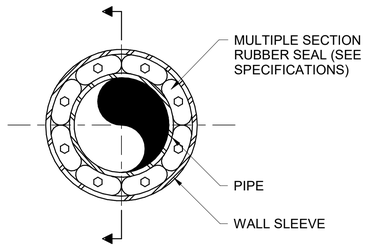
MIN. ROD DIAMETER FOR SINGLE ROD HANGERS

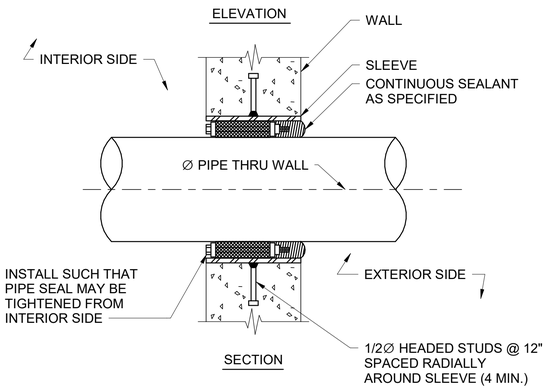
NOMINAL PIPE OR TUBING DIA	NOMINAL ROD DIAMETER	
	A	B
IN.	IN.	IN.
1/4 THROUGH 2	3/8	3/8
2 1/2 , 3, 3 1/2	1/2	1/2
4, 5	5/8	1/2
6	3/4	5/8
8, 10, 12	7/8	3/4
14	1	7/8
16, 18	1	
20, 24	1 1/4	

NOTES:

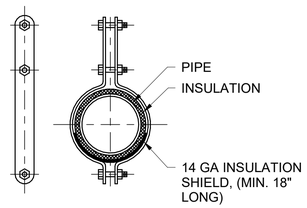
1. COLUMN A FOR USE WITH STD. WT. STEEL PIPE, CAST IRON PRESS. PIPE, CAST IRON SOIL PIPE AND GLASS PIPE.
2. COLUMN B FOR USE WITH COPPER TUBE, PLASTIC PIPE AND FIBERGLASS REINFORCED PIPE.
3. EXTRACTED FROM MSS SP-69, 1983, WITH PERMISSION OF THE PUBLISHER, THE MANUFACTURERS STANDARDIZATION SOCIETY.
4. THIS TABLE PROVIDED FOR REFERENCE ONLY. PROVIDE HANGER RODS IN ACCORDANCE WITH MSS SP-58, SP-69 AND SPECIFICATIONS.

A1 ROD DIAMETERS FOR PIPE SUPPORTS
SCALE: NTS

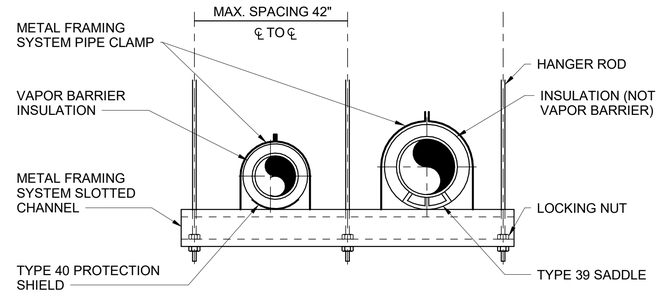




A7 HYDROSTATIC SEAL
SCALE: NTS



F13 PIPE SUPPORT - DOUBLE BOLT CLAMP
SCALE: NTS



NOTES:

1. DETAIL APPLICABLE FOR COLD FLUID PIPING 6 INCH IPS AND SMALLER AND HOT FLUID PIPING 3 INCH IPS AND SMALLER.

A13 PIPE HANGER - METAL FRAMING CHANNEL
SCALE: NTS

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STATE OF CALIFORNIA
07/23/2025

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0	READY-TO-ADVERTISE (RTA) SUBMITTAL	JUL 2025

ISSUE DATE: JUL 2025
SOLICITATION NO.: W912725RA001
CONTRACT NO.: W912725A7001
DESIGNED BY: J. COLELLO
DRAWN BY: J. COLELLO
CHECKED BY: CAZ
SUBMITTED BY: B. STREEBIN
SIZE: ANSI D
FILE NAME:

US ARMY CORPS OF ENGINEERS
LITTLE ROCK DISTRICT
LITTLE ROCK, ARKANSAS

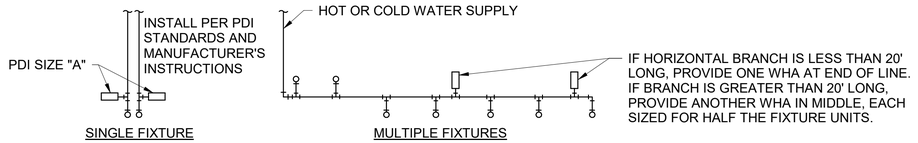
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KANSAS CITY, MO 64114
165438

F-35 SPECIAL ACCESS PROGRAM FACILITY
EBBING AIR NATIONAL GUARD BASE (ANGB), FORT SMITH, ARKANSAS

PLUMBING DETAILS

SHEET ID
P-501

READY-TO-ADVERTISE (RTA) SUBMITTAL



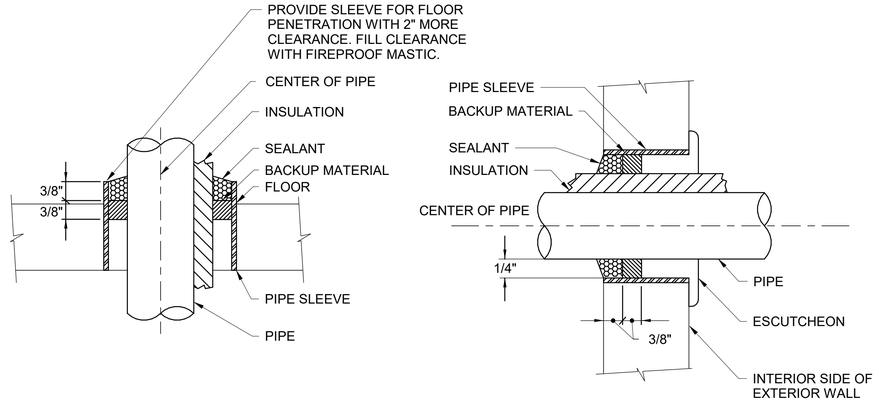
PDI SIZE	PIPE SIZE	FIXTURE UNIT LOAD
A	1/2"	1-11
B	3/4"	12-32
C	1"	33-60
D	1-1/4"	61-113
E	1-1/2"	114-154
F	2"	154-330

FIXTURE UNIT TABULATION		
FIXTURE	COLD	HOT
VALVE WATER CLOSET	10	--
URINAL	4	--
SINK	1.5	1.5
LAVATORY	0.75	0.75
JANITOR'S SINK	2.25	2.25
SHOWER	1.5	1.5
DISHWASHER	1.125	1.125

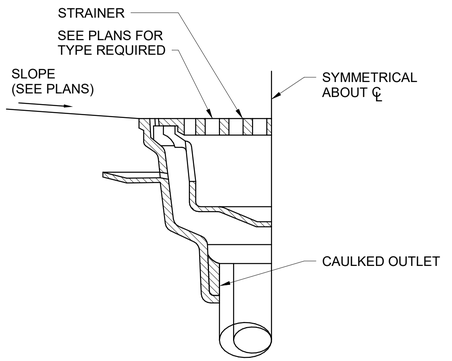
NOTE:

1. PROVIDE WATER HAMMER ARRESTERS. INSTALL IN HORIZONTAL OR VERTICAL POSITION, BUT NEVER UPSIDE DOWN. INSTALL IN LINE WITH WATER FLOW DIRECTION IF POSSIBLE. SIZE THE UNITS AS SHOWN ON THE DRAWINGS AND/OR PER THE TABLES SHOWN.

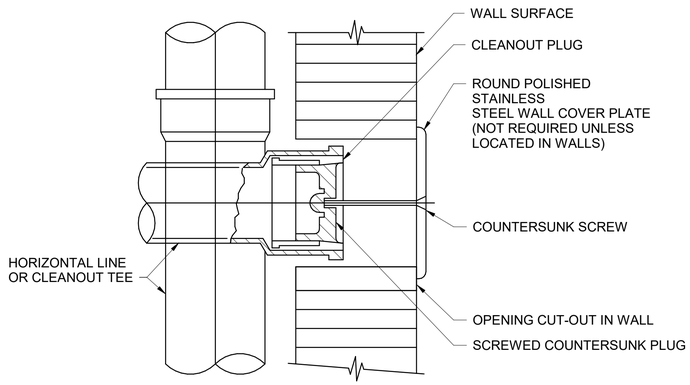
K2 WATER HAMMER ARRESTORS
SCALE: NTS



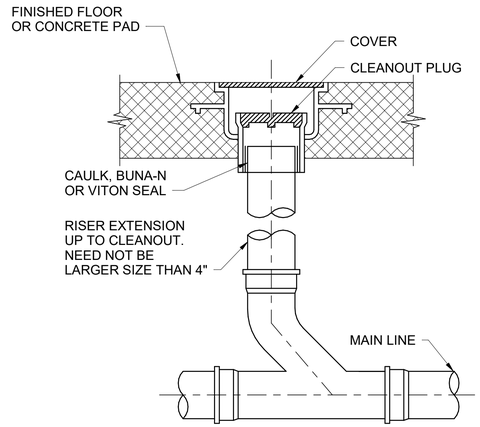
K12 PIPE PENETRATIONS
SCALE: NTS



E2 FLOOR DRAIN IN GROUND FLOOR
SCALE: NTS



E13 WALL CLEANOUT
SCALE: NTS



A14 FLOOR CLEANOUT
SCALE: NTS

LICENSED PROFESSIONAL ENGINEER
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MECHANICAL
STATE OF CALIFORNIA
07/23/2025

US Army Corps of Engineers ®

MARK	DESCRIPTION	DATE
0	READY-TO-ADVERTISE (RTA) SUBMITTAL	JUL 2025

ISSUE DATE: JUL 2025
SOLICITATION NO.: W912725RA001
CONTRACT NO.: W912725A40007

DESIGNED BY: J. COLELLO
DRAWN BY: J. COLELLO
CHECKED BY: C. DAZE
SUBMITTED BY: B. STREEBIN
SIZE: ANSI D
FILE NAME:

US ARMY CORPS OF ENGINEERS
LITTLE ROCK DISTRICT
LITTLE ROCK, ARKANSAS

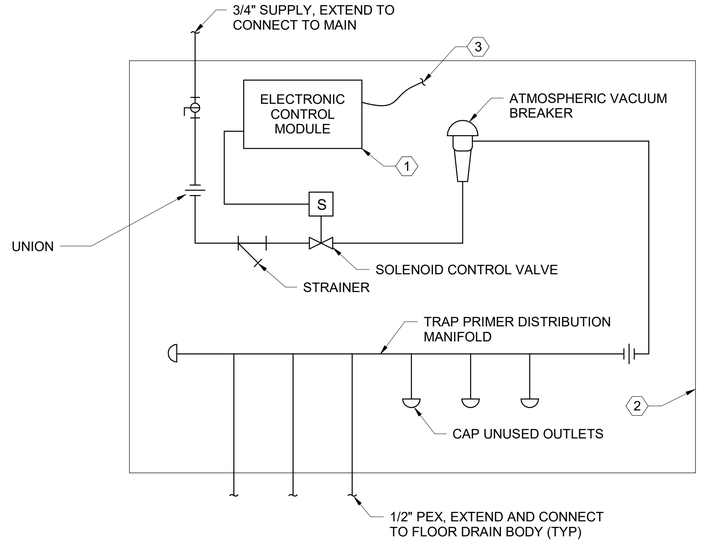
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F-35 SPECIAL ACCESS PROGRAM FACILITY
EBBING AIR NATIONAL GUARD BASE (ANGB), FORT SMITH, ARKANSAS

PLUMBING DETAILS

SHEET ID
P-502

READY-TO-ADVERTISE (RTA) SUBMITTAL



NOTES:

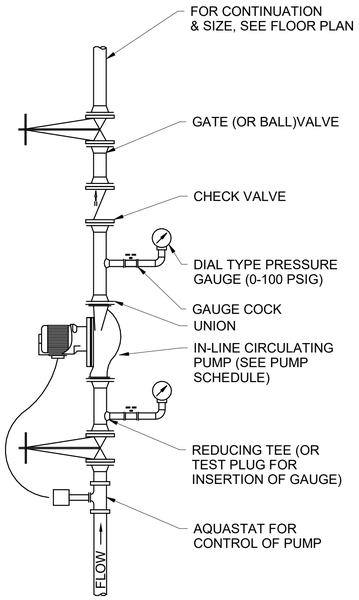
1. INSTALL TRAP PRIMER ASSEMBLY A MINIMUM OF 12" ABOVE FLOOR RIM ELEVATION OF HIGHEST DRAIN CONNECTED.
2. EACH OUTLET SHALL BE CONNECTED ONLY TO ONE FLOOR DRAIN OR FLOOR SINK.
3. TRAP PRIMER DISTRIBUTION PIPING SHALL BE BUBBLE TIGHT AND SEALED.

KEYED NOTES:

1. PROGRAM CONTROL MODULE TO OPEN SOLENOID CONTROL VALVE AT MANUFACTURER'S RECOMMENDED FREQUENCY AND DURATION.
2. GALVANIZED WALL BOX AND COVER PROVIDED BY TRAP PRIMER MANUFACTURER.
3. POWER CONNECTION, PROVIDED BY DIV 26.

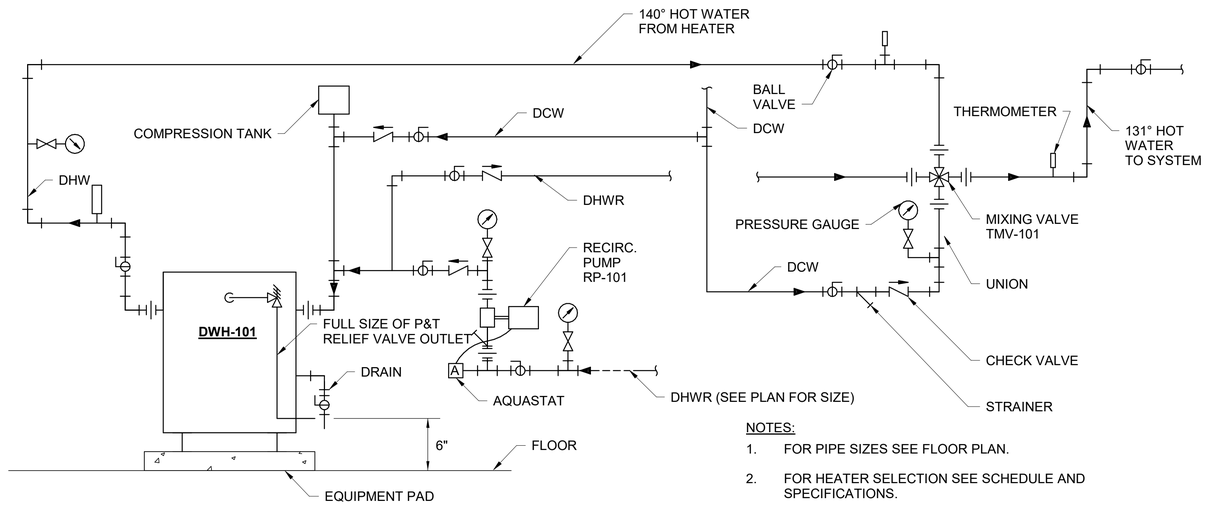
J9 ELECTRONIC TRAP PRIMER

SCALE: NTS



A3 DOMESTIC WATER CIRCULATING PUMP

SCALE: NTS



NOTES:

1. FOR PIPE SIZES SEE FLOOR PLAN.
2. FOR HEATER SELECTION SEE SCHEDULE AND SPECIFICATIONS.
3. HOT WATER PIPED TO NORMALLY CLOSED PORT OF MIXING VALVE.
4. VALVE TO OPEN TO COLD WATER FLOW ON THERMOSTAT FAILURE.

A8 DOMESTIC WATER HEATER WITH MIXING VALVE

SCALE: NTS

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DESIGNED BY: J. COLELLO
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CONTRACT NO.: W912QR24D0007
SIZE: ANSI D
FILE NAME:

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LITTLE ROCK, ARKANSAS

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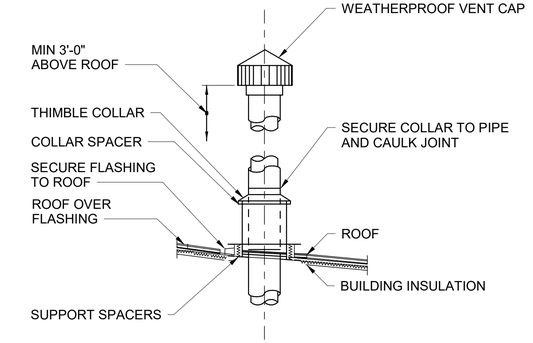
F-35 SPECIAL ACCESS PROGRAM FACILITY
EBBING AIR NATIONAL GUARD BASE (ANGB), FORT SMITH, ARKANSAS

PLUMBING DETAILS

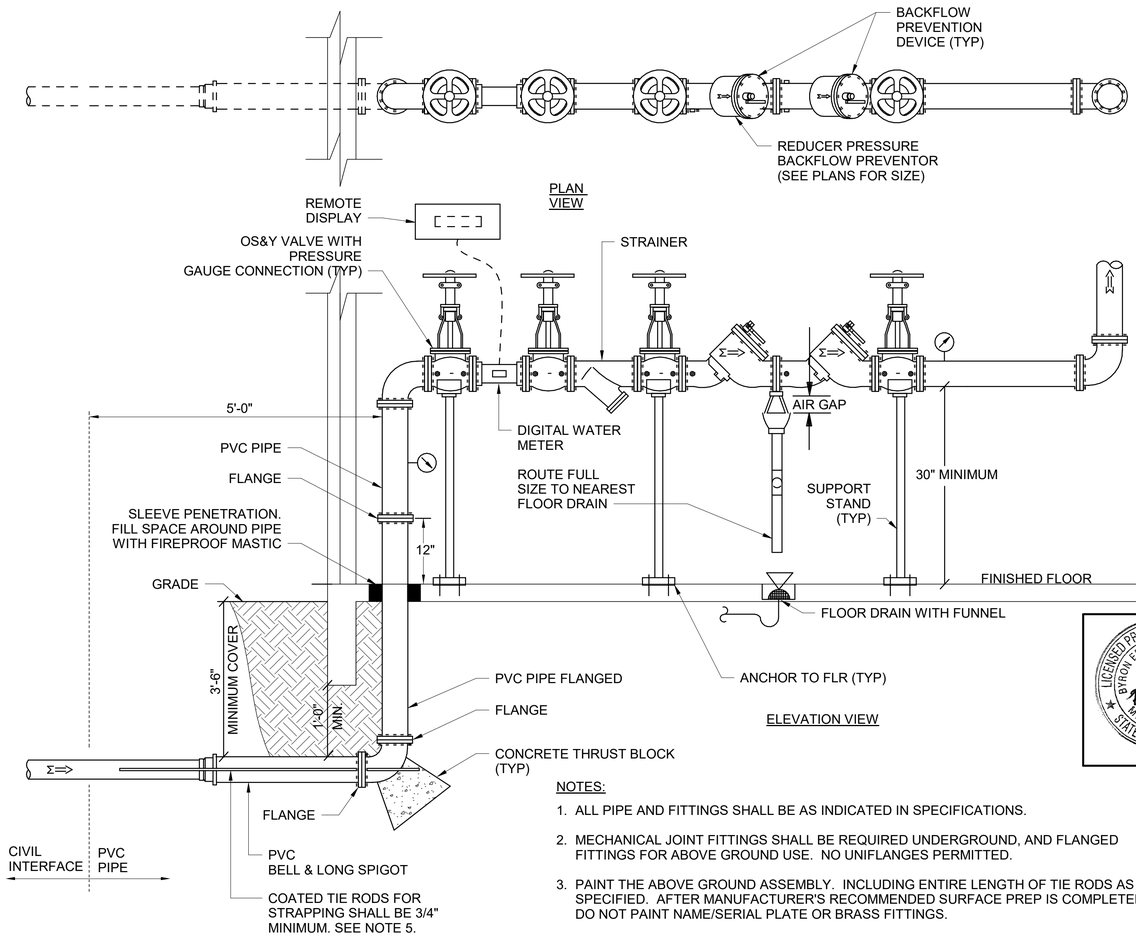
SHEET ID

P-503

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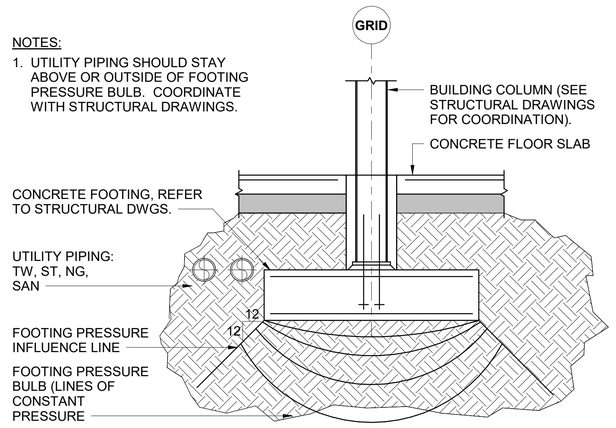
L15 VENT FLASHING - METAL ROOF
SCALE: NTS



NOTES:

1. ALL PIPE AND FITTINGS SHALL BE AS INDICATED IN SPECIFICATIONS.
2. MECHANICAL JOINT FITTINGS SHALL BE REQUIRED UNDERGROUND, AND FLANGED FITTINGS FOR ABOVE GROUND USE. NO UNIFLANGES PERMITTED.
3. PAINT THE ABOVE GROUND ASSEMBLY. INCLUDING ENTIRE LENGTH OF TIE RODS AS SPECIFIED. AFTER MANUFACTURER'S RECOMMENDED SURFACE PREP IS COMPLETED. DO NOT PAINT NAME/SERIAL PLATE OR BRASS FITTINGS.
4. FULL FACED NEOPRENE GASKETS SHALL BE REQUIRED ON ALL FLANGED FITTINGS.
5. TIE RODS AND NUTS TO BE EQUAL IN DIAMETER TO FLANGE BOLTS AND NUTS.
6. INSTALL STRAIGHT PIPE LENGTH AS REQUIRED BEFORE AND AFTER THE METER BY THE METER MANUFACTURER.

A9 BACKFLOW PREVENTER
SCALE: NTS



NOTES:

1. UTILITY PIPING SHOULD STAY ABOVE OR OUTSIDE OF FOOTING PRESSURE BULB. COORDINATE WITH STRUCTURAL DRAWINGS.

A2 PIPE INSTALLATION IN FOUNDATION
SCALE: NTS

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F-35 SPECIAL ACCESS PROGRAM FACILITY
EBBING AIR NATIONAL GUARD BASE (ANGB), FORT SMITH, ARKANSAS

PLUMBING DETAILS

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READY-TO-ADVERTISE (RTA) SUBMITTAL

PLUMBING FIXTURE SCHEDULE

TAG	DESCRIPTION	FIXTURE		FITTING		TRAP	CARRIER	REMARKS	MOUNTING HEIGHT	CONNECTION SIZE (IN)			
		TYPE	SIZE (W X H X D)	TYPE	SUPPLY SIZE					DCW	DHW	VENT	WASTE
EWC-1	WATER COOLER - DUAL - WALL W/ BOTTLE FILLER	BI-LEVEL, WALL HUNG W-BOTTLE FILLING STATION, BARRIER-FREE UNIT	36" X 41" X 19"	LEAD-FREE BUBBLER WITH FRONT, EASY TOUCH CONTROLS	3/8" OD	1-1/4"	NA	STAINLESS STEEL	ORIFICE HT. 40" AFF & ACCESSIBLE ORIFICE HT. 34" AFF	1/2"	NA	1-1/2"	1-1/2"
HB-1	HOSE BIBB	INTERIOR HOSE BIBB	NA	BRASS W/ANTI-SIPHON VACUUM BREAKER, WHEEL HANDLE AND HOSE CONNECTION	NA	NA	NA	WALL MOUNTED WITH POLISHED CHROME FINISH	36" AFF	3/4"	NA	NA	NA
LAV-1	LAVATORY	UNDERCOUNTER MOUNTED INTEGRAL SOLID SURFACE	19" DIA.	4" CENTERSET 0.5 GPM FAUCET, HANDS FREE OPERATION, 24V HARDWIRE TRANSFORMER AND SENSOR, BELOW DECK MECHANICAL MIXING VALVE, AND PERFORATED GRID STRAINER	1/2"	1-1/2" W/ CO PLUG	NA	PROVIDE WITH OVERFLOW. INSULATE WATER AND WASTE PIPES AS NEEDED TO MEET ADA REQUIREMENTS.	HT. SET BY COUNTERTOP ACCESSIBLE	1/2"	1/2"	1-1/2"	1-1/2"
MB-1	CORNER MOP BASIN	PRECAST TERRAZO, MOLDED MARBLE CHIPS AND PORTLAND CEMENT BASIN WITH DROPPED THRESHOLD AND SS SPLASH PANELS	36" X 36" X 12"	WALL-MOUNTED FAUCET, 8" CENTERS, VACCUUM BREAKER SPOUT, PAIL HOOK WALL BRACE, AND 3/4" MALE THREAD HOSE CONNECTION, 36" HOSE, AND SS WALL HOOK	3/4"	3"	NA	INTEGRAL DRAIN WITH REMOVABLE STRAINER AND 3" BOTTOM OUTLET	FAUCET: 36" AFF & BASIN - FLOOR MOUNTED	3/4"	3/4"	2"	3"
SH-1	SHOWER	ADA SOLID SURFACE SHOWER BASE	36" X 36"	PRESSURE BALANCING MIXING VALVE W/INTEGRAL SERVICE STOPS, ADJUSTABLE STOP SCREW, 1.5 GPM SHOWER HEAD, ARM, FLANGE, AND ESCUTCHEON	1/2"	2"	NA	PROVIDE CAST IRON DRAIN WITH TWO PIECE BODY, INTEGRAL CLAMPING COLLAR, AND STAINLESS STEEL DRAIN STRAINER PLATE	HEAD: 75" AFF & CONTROL VALVE 48" AFF	1/2"	1/2"	1-1/2"	2"
SK-1	SINGLE COMPARTMENT SINK	SINGLE BOWL, TYPE 304 18 GA SS, UNDERCOUNTER MOUNTED, WITH SOUND DEADENING	18" X 20" X 6"	SINGLE HOLE FAUCET, 8" SWIVEL SPOUT, SINGLE METAL LEVER HANDLE, AND 1.5 GPM AERATOR	1/2"	1-1/2" W/ CO PLUG	NA	PROVIDE SS BASKET STRAINER	HT. SET BY COUNTER TOP	1/2"	1/2"	1-1/2"	2"
SK-2	UTILITY SINK	SINGLE COMPARTMENT 16 GA TYPE 304 SS, SS LEGS W/ADJUSTABLE FEET	18" X 18" X 14"	8" ON CENTERS FAUCET, 8" SWIVEL SPOUT, TWO LEVER HANDLE, AND 2.2 GPM AERATOR	3/4"	2" W/ CO PLUG	NA	PROVIDE WITH SS GRID STRAINER	FLOOR MOUNTED	3/4"	3/4"	2"	3"
SK-3	DOUBLE BOWL SINK	DOUBLE BOWL, TYPE 304 18 GA SS, INTEGRAL MOUNTING RIM WITH SOUND DEADENING	30" X 18 1/2" X 6"	SINGLE HOLE FAUCET, 8" SWIVEL SPOUT, SINGLE METAL LEVER HANDLE, AND 1.5 GPM AERATOR	1/2"	1-1/2" W/ CO PLUG	NA	PROVIDE SS BASKET STRAINER	HT. SET BY COUNTER TOP	1/2"	1/2"	1-1/2"	2"
UR-1	URINAL	0.125 GPF, BACK OUTLET, WHITE VITREOUS CHINA	3/4" SPUD	SENSOR OPERATED FLUSHOMETER, HARDWIRED WITH OVERRIDE BUTTON	3/4"	INTEGRAL	WALL CARRIER	PROVIDE REMOVEABLE STRAINER	RIM 24" AFF	3/4"	NA	1-1/2"	2"
UR-2	ADA URINAL	0.125 GPF, BACK OUTLET, WHITE VITREOUS CHINA	3/4" SPUD	SENSOR OPERATED FLUSHOMETER, HARDWIRED WITH OVERRIDE BUTTON	3/4"	INTEGRAL	WALL CARRIER	PROVIDE REMOVEABLE STRAINER	RIM 17" AFF	3/4"	NA	1-1/2"	2"
WC-1	ADA WATER CLOSET	1.28 GPF, ELONGATED BOWL, WALL MOUNT BACK DISCHARGE WHITE VITREOUS CHINA	1 1/2" SPUD	SENSOR OPERATED FLUSHOMETER - HARDWIRED WITH OVERRIDE BUTTON	1"	INTEGRAL	WATER CLOSET CARRIER	PROVIDE SOLID PLASTIC, OPEN FRONT SEAT (LESS COVER)	RIM 17" AFF	1"	NA	2"	4"
WC-2	WATER CLOSET	1.28 GPF, ELONGATED BOWL, WALL MOUNT BACK DISCHARGE WHITE VITREOUS CHINA	1 1/2" SPUD	SENSOR OPERATED FLUSHOMETER - HARDWIRED WITH OVERRIDE BUTTON	1"	INTEGRAL	WATER CLOSET CARRIER	PROVIDE SOLID PLASTIC, OPEN FRONT SEAT (LESS COVER)	RIM 15" AFF	1"	NA	2"	4"
WH-1	WALL HYDRANT	NON-FREEZE EXTERIOR WALL HYDRANT	NA	BRASS AUTOMATIC DRAINING, FREEZELESS, WITH ANTI-SIPHON VACUUM BREAKER, TEE KEY HANDLE, AND HOSE CONNECTION	NA	NA	NA	WALL MOUNTED W/BRASS FINISH BOX AND DOOR	24" AFF	3/4"	NA	NA	NA
WM-1	WASHING MACHINE OUTLET BOX	RECESSED MOUNTING, PAINTED STEEL BOX AND FACE PLATE	4 X 5 X 3	SEPARATE HOT AND COLD WATER VALVED FITTINGS WITH WATTER HAMMER ARRESTORS. PROVIDE WITH 2" STANDPIPE AND P-TRAP FOR DIRECT WASTE CONNECTION TO DRAINAGE PIPING	3/4"	2"	NA	NONE	40" AFF	3/4"	3/4"	1-1/2"	2"

DRAIN SCHEDULE

TAG	TYPE	DESCRIPTION	STRAINER	CONNECTION SIZE	NOTES
FD-A	FLOOR DRAIN - SQUARE	CAST IRON, TWO PIECE BODY, INTEGRAL CLAMPING COLLAR, TRAP PRIMER CONNECTION	5" SQUARE, ADJUSTABLE, NICKEL-BRONZE	SEE PLANS FOR SIZE	1,2,3
FD-B	FLOOR DRAIN - HEAVY DUTY	CAST IRON, TWO PIECE BODY, INTEGRAL CLAMPING COLLAR, TRAP PRIMER CONNECTION	9"⌀ CAST IRON TRACTOR GRATE, HEAVY DUTY	SEE PLANS FOR SIZE	1,2,3

NOTES:
1. SIZE AS INDICATED BY CONNECTED PIPE SIZE.
2. NEOPRENE GASKETED PUSH-ON OUTLET.
3. PROVIDE TRAP PRIMER CONNECTION AND CONNECT TO ELECTRONIC TRAP PRIMER MANIFOLD AS SHOWN ON FLOOR PLANS.

ELECTRONIC TRAP PRIMER SCHEDULE (ETP)

TAG	LOCATION	TYPE	PIPE SIZE (IN)	DRAIN QUANTITY	ELECTRICAL		NOTES
					VOLTS	PHASE	
ETP-101	MECH - 171	ELECTRONIC	3/4	5	120	1	
ETP-102	MECH - 251	ELECTRONIC	3/4	5	120	1	
ETP-103	JAN - 221	ELECTRONIC	3/4	4	120	1	
ETP-104	MENS RR - 119	ELECTRONIC	3/4	6	120	1	1

NOTES:
1. RECESSED UNIT WITH ACCESS COVER.

WATER HAMMER ARRESTOR SCHEDULE (WHA)

TAG	PIPE SIZE	W.S.F.U.	MATERIAL
WHA-A	1/2"	1 TO 11	STAINLESS STEEL
WHA-B	3/4"	12 TO 32	STAINLESS STEEL
WHA-C	1"	33 TO 60	STAINLESS STEEL
WHA-D	1-1/4"	61 TO 113	STAINLESS STEEL

WATER HEATER SCHEDULE (DWH)

TAG	LOCATION	TYPE	INPUT (KW)	PRESSURE RATING (PSIG)	STORAGE CAPACITY (GAL)	RECOVERY (GAL/HR)	EWT (DEG. F)	HOT WATER TEMPERATURE SETTING (DEG. F)	ELECTRICAL		WEIGHT (LBS)	NOTES
									VOLTS	PHASE		
DWH-101	MECH - 171	STORAGE	12	150	120	50	40	140	208	1	620	1

NOTES:
1. PROVIDE MANUFACTURER'S SINGLE POINT POWER DISCONNECTION. DISCONNECT PROVIDED BY DIVISION 26.
2. PROVIDE ASME RATED 6.4 GALLON EXPANSION TANK WITH MINIMUM ACCEPTANCE VOLUME OF 3.2 GALLONS.

RECIRCULATION PUMP SCHEDULE (RP)

TAG	LOCATION	TYPE	SYSTEM	CAPACITY (GPM)	HEAD (FT)	DISCHARGE SIZE (IN)	MOTOR			ELECTRICAL		NOTES
							TYPE	HP	RPM	VOLTS	PHASE	
RP-101	MECH - 171	IN-LINE CENTRIFUGAL	DHW	5	18	3/4	TEFC	1/8	3600	120	1	1

NOTES:
1. PROVIDE WITH DISCONNECT SWITCH.

THERMOSTATIC MIXING VALVE SCHEDULE (TMV)

TAG	LOCATION	INLET DCW		INLET DHW		INLET DHWR		OUTLET WATER			SYSTEM FLOW RATE (GPM @ 10 PSIG DROP)	NOTES
		CONNECTION SIZE (IN)	TEMP. (DEG. F)	CONNECTION SIZE (IN)	TEMP. (DEG. F)	CONNECTION SIZE (IN)	TEMP. (DEG. F)	CONNECTION SIZE (IN)	TEMP. (DEG. F)	MIN. FLOW (GPM)		
TMV-101	MECH - 171	1 1/4	40	1 1/4	140	1 1/4	121	1 1/2	131	5	52	1,2

NOTES:
1. MIXING VALVE SHALL BE THERMOSTATIC CONTROL TYPE.
2. MOUNT MIXING VALVE IN SURFACE MOUNTED CABINET WITH STEEL ENAMEL FINISH.

CLEANOUT SCHEDULE

TAG	DESCRIPTION	TYPE	COVER	NOTES
CO	CLEANOUT PLUG	BRASS, W/ COUNTERSUNK SQUARE LUG ON FACE FOR REMOVAL	N/A	1
FCO	STANDARD DUTY FLOOR CLEANOUT	CAST IRON, THREADED BRASS COUNTERSUNK PLUG AND ADJUSTABLE HOUSING	SCORIATED NICKEL BRONZE TOP	1
WCO	WALL CLEANOUT	CAST IRON, THREADED BRASS COUNTERSUNK PLUG AND ADJUSTABLE HOUSING	STAINLESS STEEL ACCESS COVER	<varies>

NOTES:
1. SIZE AS REQUIRED PER CODE.

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0	READY-TO-ADVERTISE (RTA) SUBMITTAL	JUL 2025

DESIGNED BY: J. COLELLO
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SIZE: ANSI D
ISSUE DATE: JUL 2025
SOLICITATION NO.: W912QR25RA001
CONTRACT NO.: W912QR24F0007
FILE NAME:

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LITTLE ROCK, ARKANSAS

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F-35 SPECIAL ACCESS PROGRAM FACILITY
EBBING AIR NATIONAL GUARD BASE (ANGB), FORT SMITH, ARKANSAS

PLUMBING SCHEDULES

SHEET ID
P-601

READY-TO-ADVERTISE (RTA) SUBMITTAL

AIR COMPRESSOR SCHEDULE (AC)

TAG	SYSTEM SERVED	DESCRIPTION	CAPACITY (SCFM)	PRESSURE (PSIG)	MOTOR		ELECTRICAL		WEIGHT (LBS)	NOTES
					HP	TYPE	VOLTS	PHASE		
AC-101	COMPRESSED AIR	OIL FREE SCROLL WITH INTEGRATED DRYER	45	125	20	TEFC	460	3	1344	1,2,3

NOTES:
1. PROVIDE SINGLE POINT CONNECTION AND MANUFACTURER'S STARTER/DISCONNECT PER DIVISION 26.
2. PROVIDE COALESCING FILTER, AUTOMATIC ELECTRONIC TIMER, AND MANUAL CONDENSATE DRAIN VALVE.
3. PROVIDE PACKAGE UNIT WITH INTEGRAL INLET FILTER, AFTERCOOLER, REFRIGERATED AIR DRYER, STARTER AND REGULATION SYSTEM, AND CONTROL SYSTEM.

COMPRESSED AIR RECEIVER SCHEDULE (AR)

TAG	EQUIPMENT SERVED	ORIENTATION	MATERIAL	CAPACITY (GAL)	DESIGN PRESSURE (PSIG)	DIMENSIONS		WEIGHT (LBS)	NOTES
						DIAMETER (IN)	HEIGHT (IN)		
AR-101	AC-101	VERTICAL	STEEL	120	150	24	79	312	1

NOTES:
1. AIR RECEIVER SHALL BE ASME SECTION VIII, DIVISION 1 RATED.

BACKFLOW PREVENTER SCHEDULE (BFP)

TAG	TYPE	LOCATION	SYSTEM	SIZE (IN)	DESIGN FLOW (GPM)	PRESSURE LOSS AT DESIGN FLOW RATE (PSIG)	NOTES
BFP-101	RPZ	MECH - 171	DCW	3"	81	10	1
BFP-102	DUAL CHECK VALVE	MECH - 193	BOILER FEED	1"	5	10	2,3
BFP-103	DOUBLE CHECK VALVE	MECH - 193	CHILLED WATER	1"	5	10	

NOTES:
1. PROVIDE WITH AIR GAP FITTING AND 4" PIPING DRAIN FROM BACKFLOW PREVENTER TO FLOOR DRAIN.
2 PROVIDE WITH AIR GAP FITTING AND 2" PIPING DRAIN FROM BACKFLOW PREVENTER TO FLOOR DRAIN.
3. BACKFLOW PREVENTER TO HAVE ATMOSPHERIC VENT COMPLYING WITH ASSE 1012.

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F-35 SPECIAL ACCESS PROGRAM FACILITY
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PLUMBING SCHEDULES

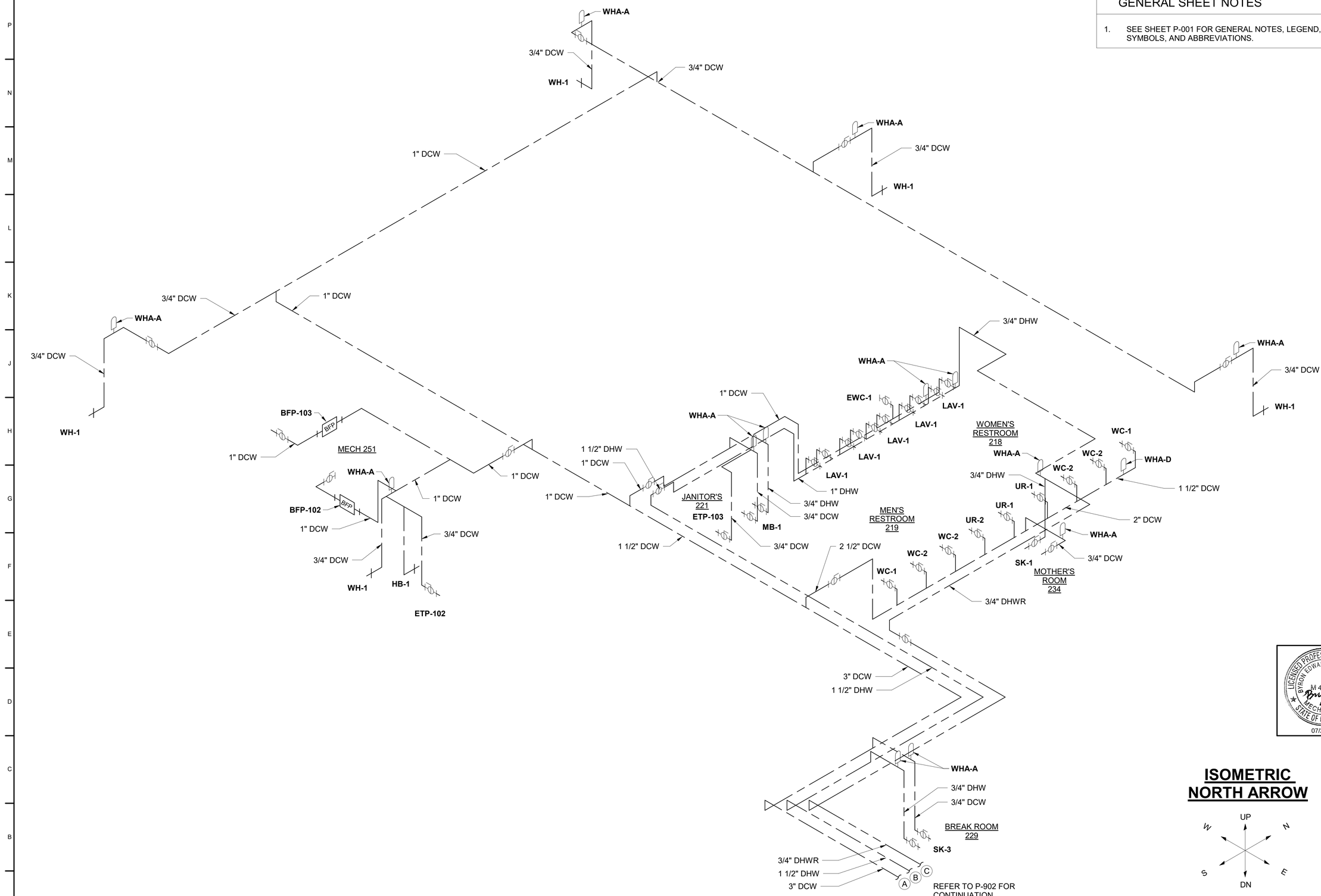
SHEET ID

P-602

READY-TO-ADVERTISE (RTA) SUBMITTAL

GENERAL SHEET NOTES

1. SEE SHEET P-001 FOR GENERAL NOTES, LEGEND, SYMBOLS, AND ABBREVIATIONS.



ISOMETRIC NORTH ARROW

A1 DOMESTIC WATER RISER - WEST
SCALE: NTS

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FILE NAME:

US ARMY CORPS OF ENGINEERS
LITTLE ROCK DISTRICT
LITTLE ROCK, ARKANSAS

BURNS AND McDONNELL
9400 WARD PARKWAY,
KANSAS CITY, MO 64114
16538

F-35 SPECIAL ACCESS PROGRAM FACILITY
EBBING AIR NATIONAL GUARD BASE (ANGB), FORT SMITH, ARKANSAS

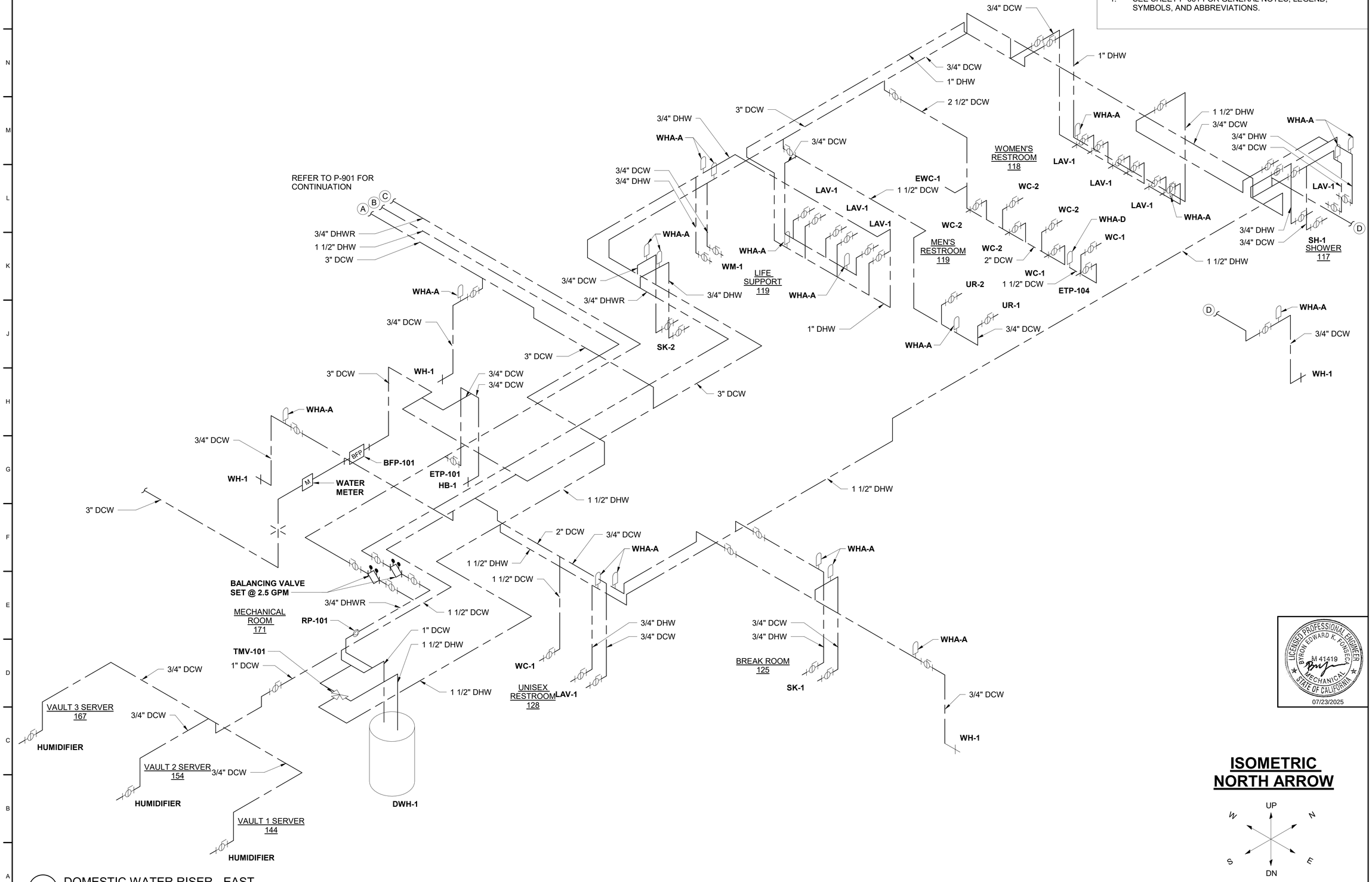
DOMESTIC WATER RISER

SHEET ID
P-901

READY-TO-ADVERTISE (RTA) SUBMITTAL

GENERAL SHEET NOTES

1. SEE SHEET P-001 FOR GENERAL NOTES, LEGEND, SYMBOLS, AND ABBREVIATIONS.



A1 DOMESTIC WATER RISER - EAST
SCALE: NTS

ISOMETRIC NORTH ARROW

LICENSED PROFESSIONAL ENGINEER
BYRON EDWARD K. FONSECA
M 41419
MECHANICAL
STATE OF CALIFORNIA
07/23/2025

US Army Corps of Engineers ®

MARK	DESCRIPTION	DATE
0	READY-TO-ADVERTISE (RTA) SUBMITTAL	JUL 2025

DESIGNED BY: J. COLELLO
DRAWN BY: J. COLELLO
CHECKED BY: C. DAZE
SUBMITTED BY: B. STREEBIN
SIZE: ANSI D
ISSUE DATE: JUL 2025
SOLICITATION NO.: W912QR25RA001
CONTRACT NO.: W912QR24C0007
FILE NAME:

US ARMY CORPS OF ENGINEERS
LITTLE ROCK DISTRICT
LITTLE ROCK, ARKANSAS

BURNS AND McDONNELL
9400 WARD PARKWAY,
KANSAS CITY, MO 64114
165438

F-35 SPECIAL ACCESS PROGRAM FACILITY
EBBING AIR NATIONAL GUARD BASE (ANGB), FORT SMITH, ARKANSAS

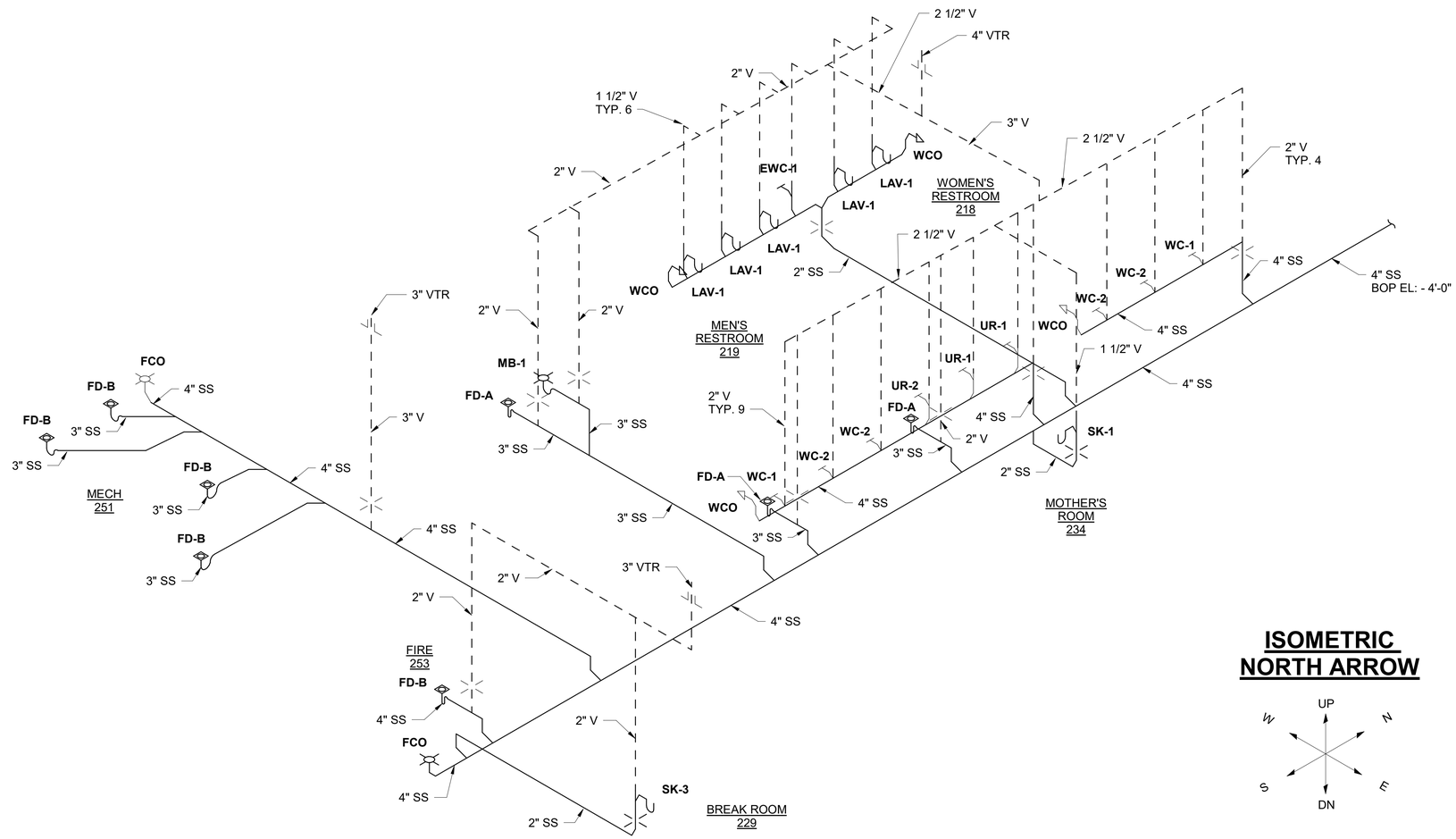
DOMESTIC WATER RISER

SHEET ID
P-902

READY-TO-ADVERTISE (RTA) SUBMITTAL

GENERAL SHEET NOTES

1. SEE SHEET P-001 FOR GENERAL NOTES, LEGEND, SYMBOLS, AND ABBREVIATIONS.



A1 WASTE & VENT RISER DIAGRAM - WEST
SCALE: NTS

ISOMETRIC NORTH ARROW

US Army Corps of Engineers ®

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CHECKED BY: C. DAZE
SUBMITTED BY: B. STREEBIN
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ISSUE DATE: JUL 2025
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CONTRACT NO.: W912725A40007
FILE NAME:

US ARMY CORPS OF ENGINEERS
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LITTLE ROCK, ARKANSAS

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9400 WARD PARKWAY,
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LICENSED PROFESSIONAL ENGINEER
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07/23/2025

F-35: SPECIAL ACCESS PROGRAM FACILITY
EBBING AIR NATIONAL GUARD BASE (ANGB), FORT SMITH, ARKANSAS

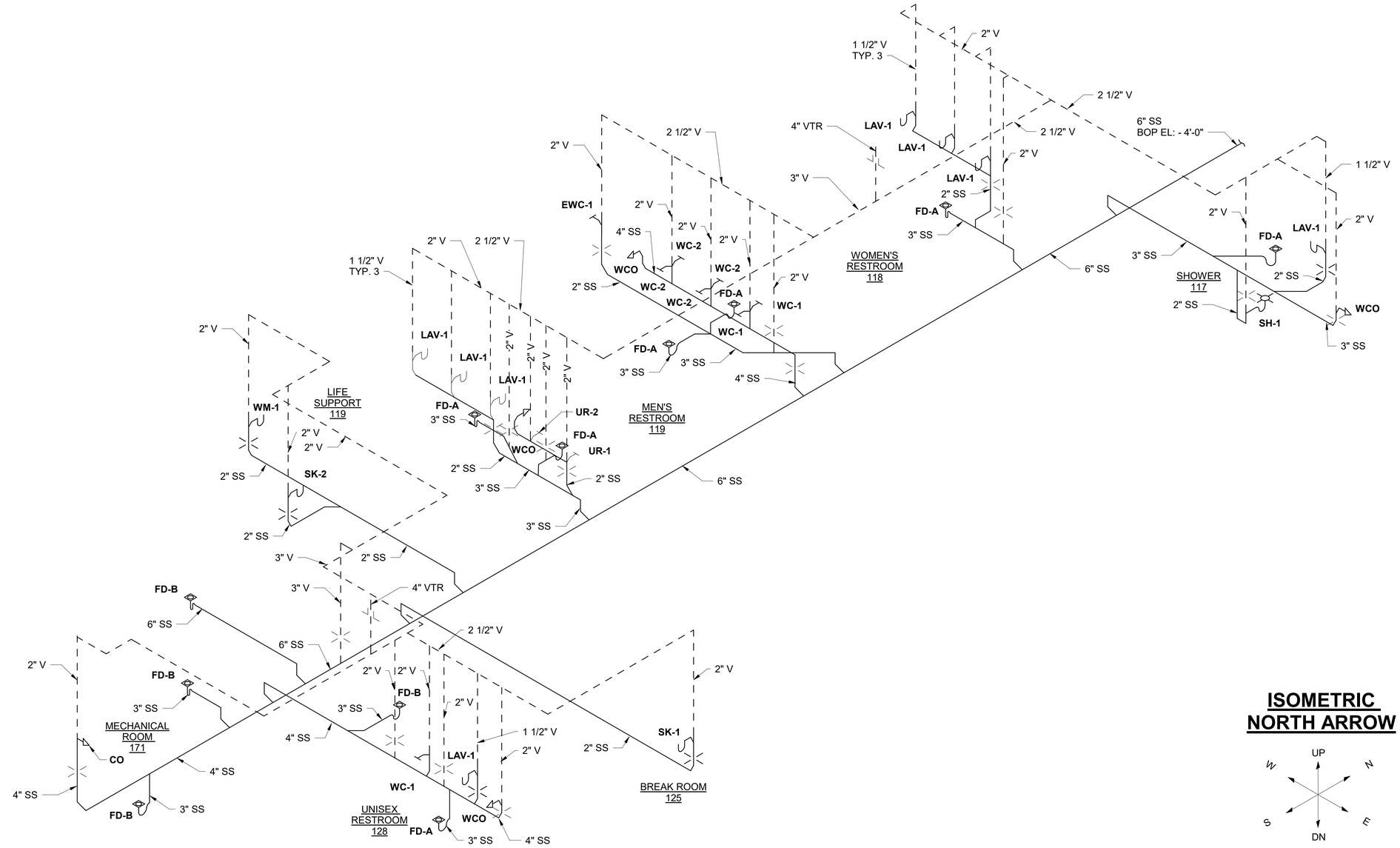
WASTE & VENT RISER

SHEET ID
P-903

READY-TO-ADVERTISE (RTA) SUBMITTAL

GENERAL SHEET NOTES

1. SEE SHEET P-001 FOR GENERAL NOTES, LEGEND, SYMBOLS, AND ABBREVIATIONS.



ISOMETRIC NORTH ARROW

A1 WASTE & VENT RISER DIAGRAM - EAST
SCALE: NTS

US Army Corps of Engineers ®

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SUBMITTED BY: B. STREEBIN
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CONTRACT NO.: W912725C0007
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LITTLE ROCK, ARKANSAS

BURNS AND McDONNELL
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KANSAS CITY, MO 64114
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LICENSED PROFESSIONAL ENGINEER
BYRON EDWARD K. FONSECA
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STATE OF CALIFORNIA
07/23/2025

F-35: SPECIAL ACCESS PROGRAM FACILITY
EBBING AIR NATIONAL GUARD BASE (ANGB), FORT SMITH, ARKANSAS

WASTE & VENT RISER

SHEET ID
P-904

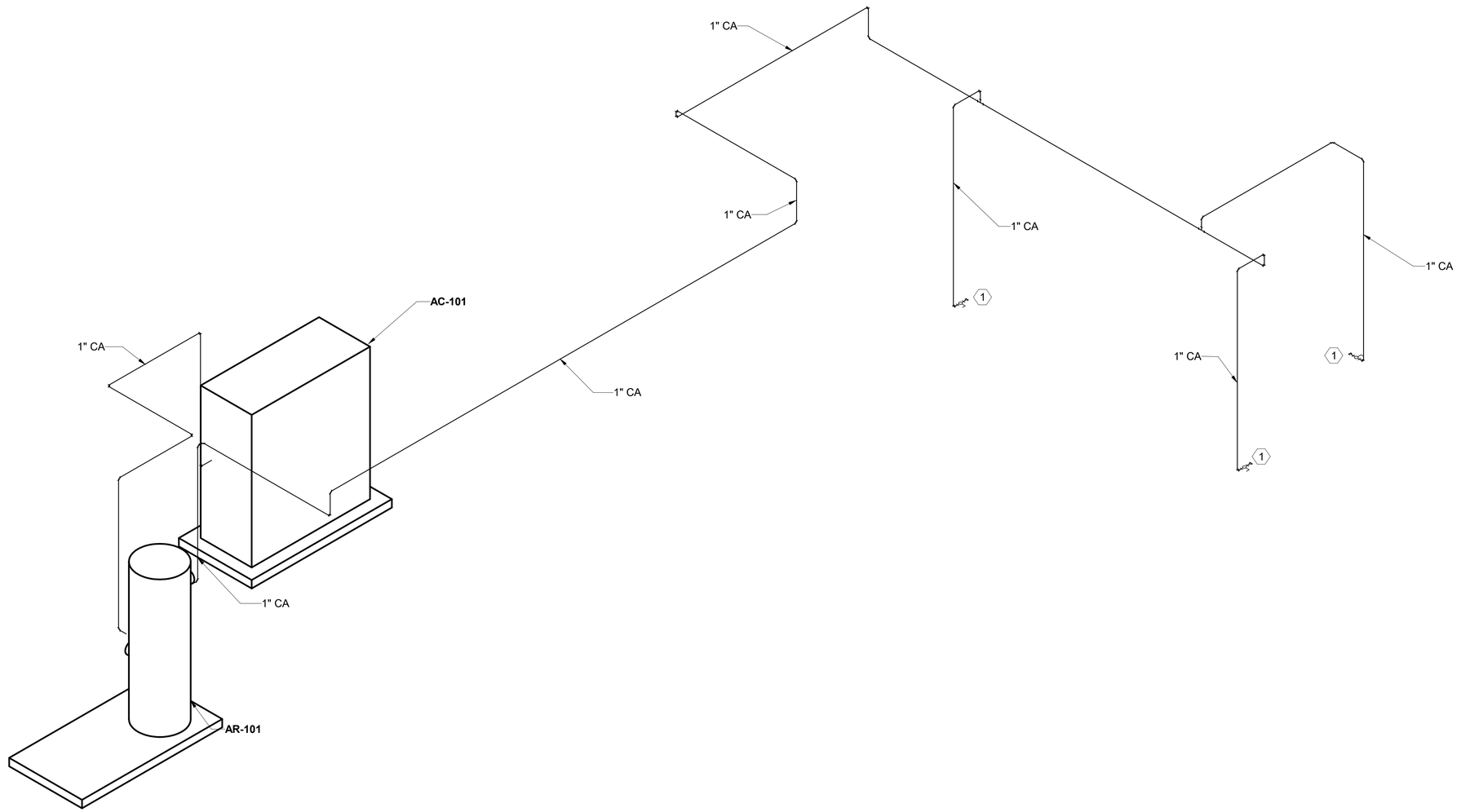
READY-TO-ADVERTISE (RTA) SUBMITTAL

GENERAL SHEET NOTES

1. SEE SHEET P-001 FOR GENERAL NOTES, LEGEND, SYMBOLS, AND ABBREVIATIONS.

SHEET KEYNOTES

1. SEE DETAIL J1/P-501 FOR COMPRESSED AIR CONNECTION INFORMATION.



A1 COMPRESSED AIR RISER
SCALE: NTS

US Army Corps of Engineers ®

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DESIGNED BY: J. COLELLO
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CHECKED BY: C. BLAZEK
ISSUE DATE: JUL 2025
SOLICITATION NO.: W912PS25RA001
CONTRACT NO.: W912PS24F0007
SUBMITTED BY: B. STREEBIN
SIZE: ANSI D
FILE NAME:

US ARMY CORPS OF ENGINEERS
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LITTLE ROCK, ARKANSAS

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07/23/2025

F-35: SPECIAL ACCESS PROGRAM FACILITY
EBBING AIR NATIONAL GUARD BASE (ANGB), FORT SMITH, ARKANSAS

COMPRESSED AIR RISER

SHEET ID
P-905

READY-TO-ADVERTISE (RTA) SUBMITTAL

HVAC LEGEND

M	CONTROL DAMPER, MOTOR OPERATED
	MANUAL BALANCE DAMPER
BD	BACKDRAFT DAMPER
AD / AD	ACCESS DOOR (AD) ACCESS PANEL (AP)
S / AD	DAMPERS FIRE (F) - SMOKE (S) - FIRE SMOKE (F/S) -
AD	SECURITY BARS
	FLEXIBLE DUCT CONNECTION
	RECTANGULAR ELBOW WITH TURNING VANES
	RECTANGULAR TEE WITH TURNING VANES
	RECTANGULAR RADIUS ELBOW
	ROUND & RECTANGULAR DUCT TAKEOFF
R	RISE IN RESPECT TO AIR-FLOW
D	DROP IN RESPECT TO AIR-FLOW
	SQUARE OR RECTANGULAR TO ROUND TRANSITION
	SUPPLY AIR OR OUTSIDE AIR RECTANGULAR DUCT SECTION
	RETURN AIR RECTANGULAR DUCT SECTION
	EXHAUST AIR RECTANGULAR DUCT SECTION
	SUPPLY AIR OR OUTSIDE AIR ROUND DUCT SECTION
	RETURN AIR ROUND DUCT SECTION
	EXHAUST AIR ROUND DUCT SECTION
	ROUND FLEXIBLE DUCT (5'-0" MAX LENGTH)
	SQUARE OR RECTANGULAR SUPPLY DIFFUSER
	RETURN AIR DIFFUSER
	EXHAUST AIR DIFFUSER
T	THERMOSTAT
H	HUMIDISTAT
CO2	CARBON DIOXIDE SENSOR
CO	CARBON MONOXIDE SENSOR
M	MOTOR
OCC	OCCUPANCY SENSOR
ESS	EMERGENCY SHUT-OFF SWITCH
FCP	FAN CONTROL PANEL
S	STATIC PRESSURE SENSOR
DP	DIFFERENTIAL PRESSURE SENSOR
	LINEAR SLOT DIFFUSER
VAV-	VARIABLE AIR VOLUME TERMINAL BOX
(3'-0")	FINNED TUBE RADIATION. LENGTH OF ELEMENT SHOWN IN PARENTHESIS
	AIRFLOW ARROW

PIPE ACCESSORIES SYMBOLS

	GATE VALVE
OS&Y	OUTSIDE SCREW & YOKE VALVE
	BUTTERFLY VALVE
	CHECK VALVE
	2-WAY VALVE
	3-WAY VALVE
	BALL VALVE
	BALANCING VALVE / CIRCUIT SETTER
	RELIEF, SAFETY OR THERMAL RELIEF VALVE
M	MOTORIZED CONTROL VALVE
	HOSE GATE DRAIN VALVE
	GLOBE VALVE
	PLUG VALVE
SRC	SPRING RETURN CLOSED BALL VALVE
	ANGLE VALVE
	SELF CONTAINED PRESSURE REDUCING (REGULATING) VALVE
AV	AUTOMATIC AIR VENT ASSEMBLY
MV	MANUAL AIR VENT ASSEMBLY - SEE SPECIFICATIONS FOR APPROPRIATE VALVE TYPE
	FLEX CONNECTION
	PUMP
	THERMOMETER
BFP	BACKFLOW PREVENTION ASSEMBLY
	SUCTION DIFFUSER
	PRESSURE GAUGE
	Y-TYPE STRAINER
	REMOVABLE CAP
	REMOVABLE PLUG
	REDUCER (CONCENTRIC)
	UNION
	BLIND FLANGE
	TEST CONNECTION
M	METER
FM	FLOW METER
S	STRAINER
IF	INSULATING FLANGE
	PIPE WITH HEAT TRACE
	FLOW ARROW
	PIPE GUIDE
	PIPE ANCHOR

PIPE SYMBOLS

	PIPE ELBOW
	PIPE DOWN
	PIPE UP
	PIPE CONTINUATION

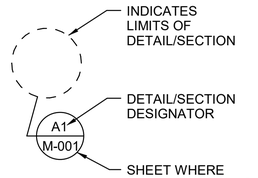
MECHANICAL ABBREVIATIONS

12"Ø	ROUND DUCT DIMENSION
24x12	RECTANGULAR DUCT DIMENSION (INCHES)
ACU	AIR CONDITIONING UNIT
AD	ACCESS DOOR
AFF	ABOVE FINISHED FLOOR
AFMA	AIR FLOW MEASURING ARRAY STATION
AHU	AIR HANDLING UNIT
AS	AIR SEPARATOR
ASD	ADJUSTABLE SPEED DRIVE
BFP	BACKFLOW PREVENTER
BHP	BRAKE HORSEPOWER
BOD	BOTTOM OF DUCT
BOP	BOTTOM OF PIPE
CH	CHILLER
CHWP	CHILLED WATER PUMP
CL	CENTER LINE OF PIPE ELEVATION
CRAC	COMPUTER ROOM AIR CONDITIONER
CU	CONDENSING UNIT
CUH	CABINET UNIT HEATER
DB	DRY BULB
DH	DEHUMIDIFIER
DIV	DIVISION
DN	DOWN
DSS	DUCTLESS SPLIT SYSTEM
EA	EXHAUST AIR
EAT	ENTERING AIR TEMPERATURE
ECM	ELECTRONICALLY COMMUTATED MOTOR
EF	EXHAUST FAN
EFF	EFFICIENCY
EL	ELEVATION
ELL	ELBOW
EMCS	ENERGY MANAGEMENT CONTROL SYSTEM
ESP	EXTERNAL STATIC PRESSURE
ET	EXPANSION TANK
EWT	ENTERING WATER TEMPERATURE
EXIST	EXISTING
FCU	FAN COIL UNIT
FD	FLOOR DRAIN
FE	FLUE EXHAUST
FF	FLAT FACED
FLA	FULL LOAD AMPS
FOB	FLAT ON BOTTOM
FOT	FLAT ON TOP
FPI	FINS PER INCH
FPVAV	FAN POWERED VARIABLE AIR VOLUME
FSC	FAN SPEED CONTROLLER
HP	HEAT PUMP
HUM	HUMIDIFIER
HWB	HEATING HOT WATER BOILER
HWP	HEATING HOT WATER PUMP
HX	HEAT EXCHANGER
I.E.	INVERT ELEVATION
IFB	INTEGRAL FACE AND BYPASS
L	LOUVER
LAT	LEAVING AIR TEMPERATURE
LWT	LEAVING WATER TEMPERATURE
MA	MIXED AIR
MAT	MIXED AIR TEMPERATURE
MAU	MAKEUP AIR UNIT
MCA	MINIMUM CIRCUIT AMPACITY
MFR	MANUFACTURER
MOCP	MAXIMUM OVERCURRENT PROTECTION
N.C.	NORMALLY CLOSED (FAIL POSITION)
N.O.	NORMALLY OPEN (FAIL POSITION)
N/A	NOT APPLICABLE
NO.	NUMBER
OA	OUTSIDE AIR
OB	OPPOSED BLADE
ODP	OPEN DRIP PROOF
PB	PARALLEL BLADE
PRESS	PRESSURE
PRV	PRESSURE REDUCING VALVE
QTY	QUANTITY
RA	RETURN AIR
RE	RELIEF AIR
RF	RETURN FAN
RH	RELATIVE HUMIDITY
RLF	RELIEF FAN
SA	SUPPLY AIR
SCH	SCHEDULE
SCR	SPRING RETURN CLOSED
SP	STATIC PRESSURE SENSOR
ST	STEAM TRAP
STM	STEAM
SW	SOCKET WELD
TA	TRANSFER AIR
TEFC	TOTALLY ENCLOSED FAN COOLED
TEMP	TEMPERATURE
TENV	TOTALLY ENCLOSED, NOT VENTILATED
TOA	TREATED OUTSIDE AIR
TOD	TOP OF DUCT
TOS	TOP OF STEEL
UH	UNIT HEATER
V	VENT
VAV	VARIABLE AIR VOLUME
VFD	VARIABLE FREQUENCY DRIVE
WB	WET BULB
WE	WELD END
WN	WELD NECK
°	DEGREE

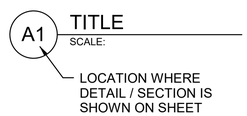
PIPELINE ABBREVIATIONS

BLWDN	BLOWDOWN
CD	CONDENSATE DRAIN
CHWR	CHILLED WATER RETURN
CHWS	CHILLED WATER SUPPLY
D	DRAIN
HWR	HOT WATER RETURN
HWS	HOT WATER SUPPLY

DETAIL / ENLARGED CALLOUT SYMBOL



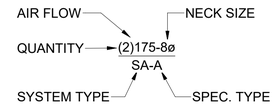
DETAIL/SECTION TITLE



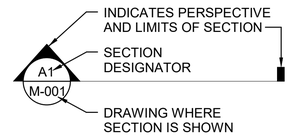
GENERAL NOTES:

1. LEGEND IS GENERAL IN NATURE AND MAY INDICATE MORE INFORMATION THAN IS APPLICABLE TO PROJECT. SEE PLANS FOR SPECIFIC SYMBOLS AND ABBREVIATIONS.
2. PROVIDE ALL MATERIALS, VALVES, HANGERS, ETC. AND EQUIPMENT AND PERFORM ALL LABOR REQUIRED TO INSTALL COMPLETE AND OPERABLE MECHANICAL SYSTEMS AS INDICATED ON THE DRAWINGS, AS SPECIFIED, AND AS REQUIRED BY CODE.
3. INSTALL ALL MECHANICAL EQUIPMENT AND APPURTENANCES IN ACCORDANCE WITH MANUFACTURERS RECOMMENDATIONS, CONTRACT DOCUMENTS, AND APPLICABLE CODES AND REGULATIONS.
4. COORDINATE CONSTRUCTION OF ALL MECHANICAL WORK WITH STRUCTURAL, CIVIL, ELECTRICAL WORK, ETC., SHOWN ON OTHER CONTRACT DOCUMENT DRAWINGS.
5. UNLESS OTHERWISE INDICATED MAINTAIN A MINIMUM OF 6'-8" CLEARANCE TO UNDERSIDE OF PIPES, CONDUITS, ETC., THROUGHOUT ACCESS ROUTES AND IN MECHANICAL ROOMS.
6. LOCATE ALL MECHANICAL EQUIPMENT FOR UNOBSTRUCTED ACCESS TO UNIT ACCESS PANELS, CONTROLS, AND VALVING.
7. VERIFY DIMENSIONS AND CONNECTION SIZE WITH FURNISHED EQUIPMENT.
8. ALL ELEVATIONS ARE ABOVE FINISHED FLOOR TO BOTTOM OF DUCT, PIPE, OR PIPE INSULATION UNLESS NOTED OTHERWISE.
9. ALL DUCTWORK DIMENSIONS REFER TO INSIDE CLEAR AREA.
10. DUCT STATIC PRESSURE CLASSIFICATION: SEE DUCT LEAKAGE/TEST SCHEDULE ON SHEET M-604 FOR DUCT CONSTRUCTION CLASSIFICATION AND TESTING REQUIREMENTS.
11. LOCATE TRANSFER AIR DUCTS AND OPENINGS 24" ABOVE HIGHEST CEILING ELEVATION UNLESS OTHERWISE NOTED.
12. COORDINATE ALL WALL AND ROOF PENETRATIONS WITH STRUCTURAL AND ARCHITECTURAL PLANS.
13. INSTALL TEMPERATURE CONTROLS AT 48" ABOVE FINISHED FLOOR AND COORDINATE WITH OTHER DEVICES LOCATED ON WALLS. COORDINATE WITH ARCHITECTURAL WALL FINISHES.
14. PROVIDE STRUCTURAL EQUIPMENT PADS IN ACCORDANCE WITH STRUCTURAL DRAWINGS AND SPECIFICATIONS.
15. CONTRACTOR SHALL AIR BALANCE ALL GRILLES TO CFM'S SHOWN ON PLANS.
16. MOUNT ALL OVERHEAD MECHANICAL EQUIPMENT AND FIXTURES WEIGHING 31 POUNDS OR MORE TO SUPPORTS THAT SHALL RESIST FORCES OF 0.5 TIMES THE EQUIPMENT WEIGHT IN ANY HORIZONTAL DIRECTION AND 1.5 TIMES THE EQUIPMENT WEIGHT IN THE DOWNWARD DIRECTION.
17. SEE GJ & TY SHEETS FOR SECURE AREA AND TEMPEST BOUNDARIES AND REQUIREMENTS OF PENETRATIONS THROUGH THESE BOUNDARIES. CONSTRUCTION FOR SECURE AREAS, SECURE AREA MATERIALS AND COMPONENTS MUST FULLY MEET AND PASS ALL ACCREDITATION. COORDINATE WITH CONTRACTING OFFICER DURING CONSTRUCTION OF SECURE AREAS.
18. DRAWINGS ARE DIAGRAMMATIC IN CHARACTER AND DO NOT NECESSARILY INDICATE EVERY REQUIRED PIPE OR DUCT OFFSET, TRANSITION, ETC. ITEMS NOT SPECIFICALLY MENTIONED IN THE SPECIFICATION OR NOTED ON THE DRAWINGS, BUT WHICH ARE NECESSARY TO MAKE A COMPLETE WORKING INSTALLATION, SHALL BE INCLUDED.
19. CONFER, COOPERATE, AND COORDINATE CONSTRUCTION OF ALL MECHANICAL WORK WITH STRUCTURAL, ARCHITECTURAL, CIVIL, ELECTRICAL WORK, ETC., SHOWN ON OTHER CONTRACT DOCUMENT DRAWINGS. COORDINATE ALL DUCTWORK AND/OR PIPING WITH ALL OTHER WORK TO AVOID CONFLICTS. PROVIDE DUCT OFFSETS AND TRANSITIONS AS REQUIRED. INSTALL ALL DUCTWORK AND PIPING TO BEST SUIT FIELD CONDITIONS.
20. BEFORE ANY WORK IS PURCHASED OR INSTALLED, VERIFY DIMENSIONS AND DETERMINE THAT EQUIPMENT SHALL PROPERLY FIT THE SPACE, THAT REQUIRED CLEARANCES AND UNOBSTRUCTED ACCESS TO UNIT ACCESS PANELS CAN BE MAINTAINED AND THAT EQUIPMENT CAN BE LOCATED WITHOUT INTERFERENCES BETWEEN SYSTEMS, WITH STRUCTURAL ELEMENTS, OR WITH THE WORK OF OTHER TRADES.
21. INSTALL SO THAT ALL VALVES, DAMPERS, AND CONTROL COMPONENTS CAN BE EASILY ACCESSED AND SERVICED BY ADEQUATE CLEARANCE, INSTALLATION OF ACCESS DOORS, UNIONS IN PIPING, OR OTHER METHODS.
22. ALL EQUIPMENT SUPPORTS, FOUNDATIONS, PADS, WALL OPENINGS OR PENETRATIONS SHALL BE VERIFIED WITH ACTUAL PURCHASED EQUIPMENT FOR SIZE AND FIT. THE EQUIPMENT SIZES INDICATED ON THE DRAWINGS WERE SELECTED FOR ENGINEERING DESIGN AND SPACE ALLOCATION PURPOSES. THE ACTUAL SIZE MAY VARY DEPENDING ON THE PURCHASED EQUIPMENT TO BE INSTALLED.
23. OCCUPANCY SENSORS ARE PROVIDED BY DIVISION 26. WIRE OCCUPANCY SENSOR BACK TO CORRESPONDING VAV BOX AS SCHEDULED FOR VENTILATION CONTROL.
24. SLOPE ALL AIR CONDITIONING CONDENSATE DRAIN AT A MINIMUM OF 1/8" PER FOOT TOWARDS THE OUTLET WITH EXCEPTION OF VERTICAL DISCHARGE PIPING FROM CONDENSATE PUMPS.CONDENSATE DRAINS SHALL TERMINATE OVER FLOOR DRAINS PROVIDING AN AIR GAP.

AIR DISTRIBUTION DEVICE IDENTIFICATION



SECTION CUT SYMBOL



LICENSED PROFESSIONAL ENGINEER
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STATE OF CALIFORNIA
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US Army Corps of Engineers ®

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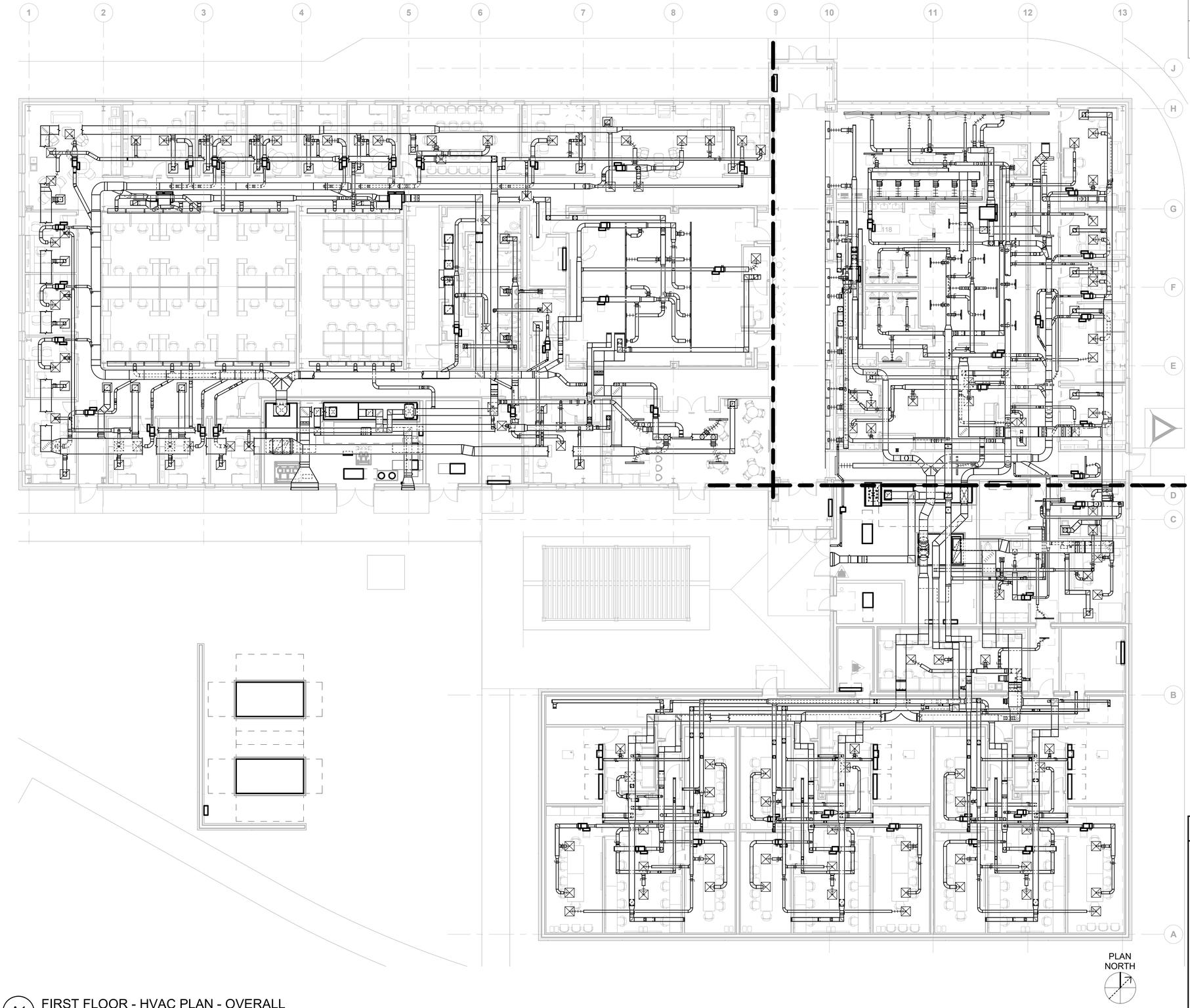
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F-35: SPECIAL ACCESS PROGRAM FACILITY
EBBING AIR NATIONAL GUARD BASE (ANGB), FORT SMITH, ARKANSAS

MECHANICAL NOTES, LEGEND, SYMBOLS AND ABBREVIATIONS

SHEET ID
M-001

READY-TO-ADVERTISE (RTA) SUBMITTAL



A1 FIRST FLOOR - HVAC PLAN - OVERALL
SCALE: 3/32" = 1'-0"

GENERAL SHEET NOTES

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LITTLE ROCK, ARKANSAS

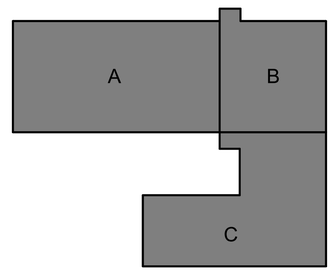
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07/23/2025

F-35: SPECIAL ACCESS PROGRAM FACILITY
EBBING AIR NATIONAL GUARD BASE (ANGB), FORT SMITH, ARKANSAS

FIRST FLOOR - HVAC PLAN - OVERALL

KEY PLAN



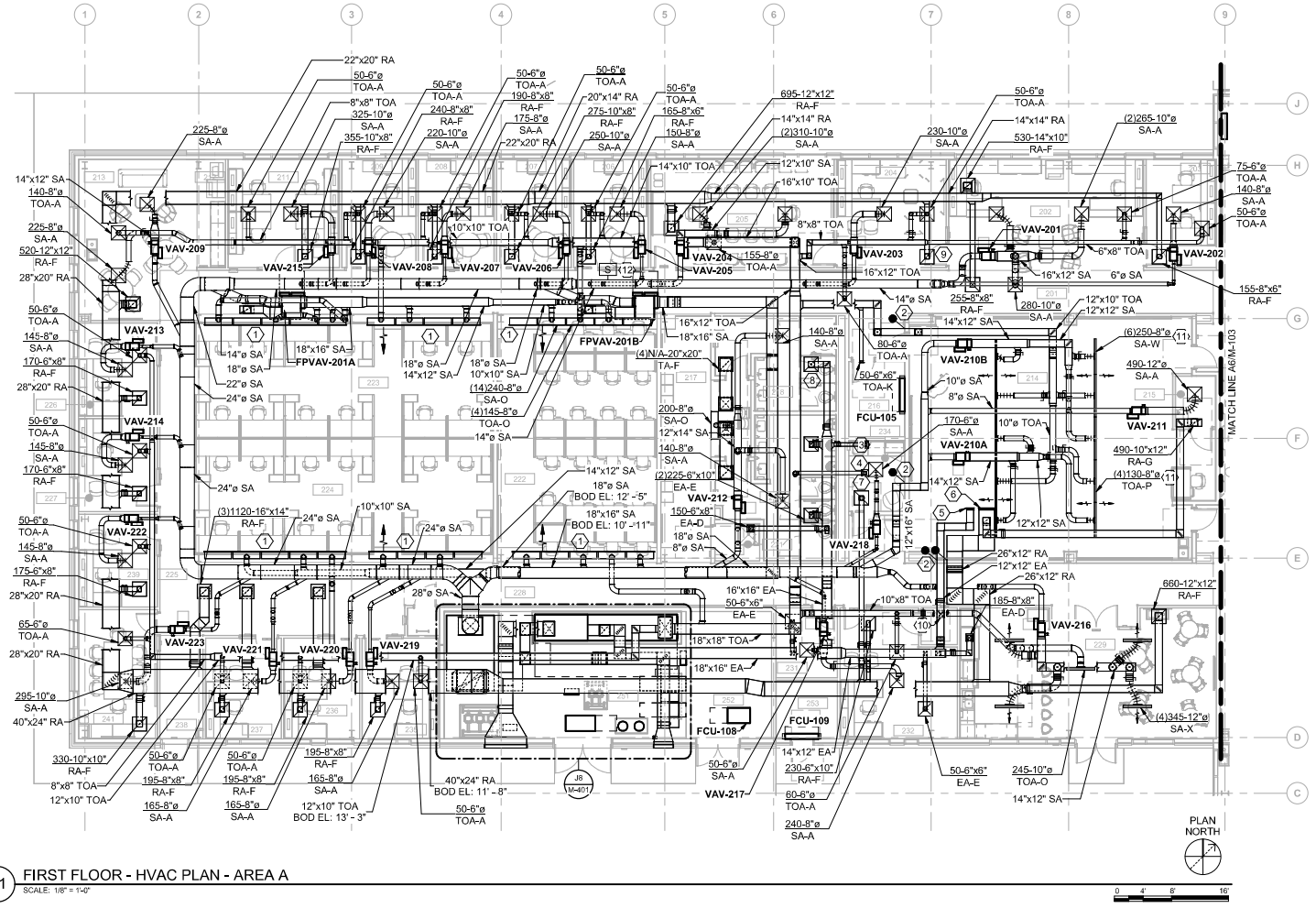
SHEET ID
M-101

READY-TO-ADVERTISE (RTA) SUBMITTAL

FIRST FLOOR - AREA A	
NO	NAME
201	CORRIDOR
202	COMMAND SUPPORT STAFF
203	ACTIVITY PROGRAM COORDINATOR (APC) / RESOURCE ADVISOR (RA)
204	SQUADRON COMMANDER OFFICE
205	CONFERENCE ROOM
206	INTERNATIONAL MILITARY STUDENT OFFICER (IMSO)
207	SNR M-1
208	SNR M-2
209	SNR M-3
211	RA
212	COPY / STORAGE
213	STUDENT COLLAB
214	LG BRIEFING RM

FIRST FLOOR - AREA A	
NO	NAME
215	AV
216	COMM
217	STUDENT LOCKERS
218	WOMEN'S RESTROOM
219	MEN'S RESTROOM
221	JANITOR'S CLOSET
222	STUDENT WORKSTATIONS
223	INSTRUCTOR WORKSTATIONS
224	MISSION OPS SUPPORT
225	CORRIDOR
226	IP M-1
227	IP M-2
228	CORRIDOR
229	BREAK ROOM

FIRST FLOOR - AREA A	
NO	NAME
232	FLIGHT MEDICAL OFFICE-1
234	MOTHER'S ROOM
235	IP M-6
236	IP M-5
237	IP M-4
238	CORRIDOR
239	IP M-3
241	TEAM
251	MECHANICAL
252	ELECTRICAL
253	FIRE



A1 FIRST FLOOR - HVAC PLAN - AREA A
SCALE: 1/8" = 1'-0"

GENERAL SHEET NOTES

1. SEE SHEET M-001 FOR GENERAL NOTES, LEGEND, SYMBOLS, AND ABBREVIATIONS.
2. SEE MECH PIPING PLANS FOR THERMOSTAT AND OTHER CONTROL DEVICE LOCATIONS.
3. DUCT SIZE TO VAV AND FVAV BOXES TO BE SAME AS NECK SIZE SHOWN IN VAV AND FVAV SCHEDULES ON SHEET M-603 UNLESS NOTED OTHERWISE.
4. DUCT SIZE TO DIFFUSERS, REGISTERS AND GRILLES TO BE SAME SIZE AS NECK SIZE SHOWN ON AIR DISTRIBUTION DEVICE TAG UNLESS NOTED OTHERWISE.

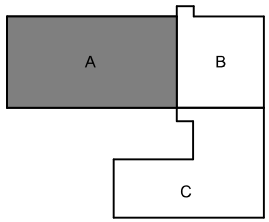
SHEET KEYNOTES

1. PROVIDE CONTINUOUS SLOT DIFFUSERS AS INDICATED. BLANK OFF UNUSED DIFFUSERS. COORDINATE DIFFUSER LOCATIONS WITH SOUND ATTENUATING PANELS. COORDINATE WITH ARCHITECTURE.
2. PROVIDE SECURITY BARS AND Z-BEND AT PENETRATION. SEE DETAILS A1 & G2/M-503 FOR REQUIREMENTS.
3. 60-6x6 EA-E
4. 50-6x6 TOA-A
5. 500-12x12 EA-A
6. 1500-24x18 RA-M
7. 170-8x6 RA-F
8. 380-10x10 EA-E
9. 255-8x8 RA-F
10. 50-6x6 EA-D BALANCING DAMPER IN VERTICAL DUCT.
11. LINEAR SLOT DIFFUSERS MOUNTED ON SLOPED CEILING. COORDINATE CEILING HEIGHT AND SLOPE WITH ARCHITECTURE.
12. INSTALL DUCT STATIC PRESSURE IN ROUND SUPPLY AIR DUCT TO SERVE AHU-102 SUPPLY FAN CONTROL.



02/09/2026

KEY PLAN



US Army Corps of Engineers ®

MARK	DESCRIPTION	DATE
1	AMM07 - REVISED DUCT PENETRATION DETAIL	FEB 2026
0	READY-TO-ADVERTISE (RTA) SUBMITTAL	JUL 2025

ISSUE DATE: JUL 2025
SOLICITATION NO.: W912QR24R0007
CONTRACT NO.: W912QR24C0007
DESIGNED BY: B. FONSECA
DRAWN BY: J. MEYER
CHECKED BY: C. DAZE
APPROVED BY: B. STREEBIN
SIZE: ANSI D
FILE NAME

US ARMY CORPS OF ENGINEERS
LITTLE ROCK DISTRICT
LITTLE ROCK, ARKANSAS

BURNS AND McDONNELL
9400 WARD PARKWAY
KANSAS CITY, MO 64114
16548

F-35, SPECIAL ACCESS PROGRAM FACILITY
EBBING AIR NATIONAL GUARD BASE (ANGB), FORT SMITH, ARKANSAS

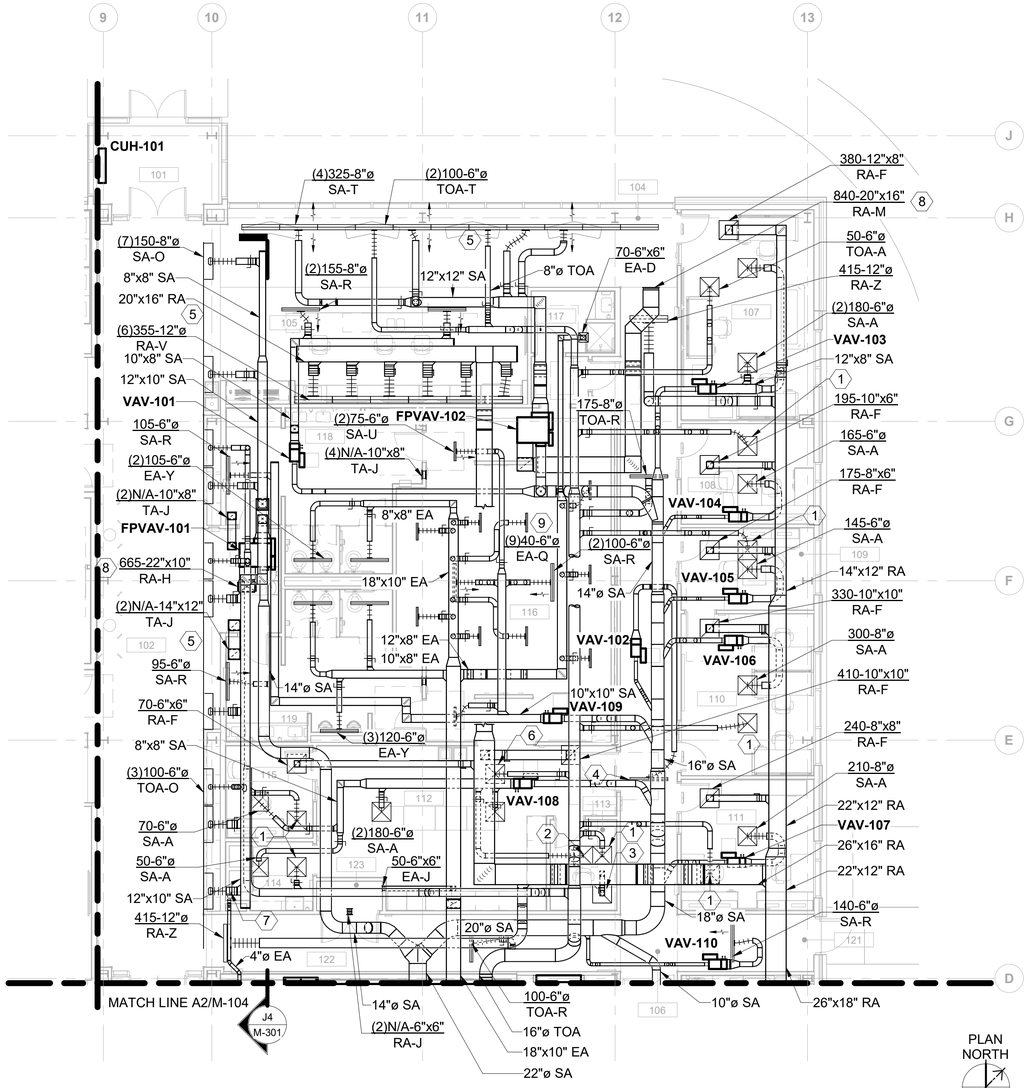
FIRST FLOOR - HVAC PLAN - AREA A

SHEET ID
M-102.1

READY-TO-ADVERTISE (RTA) SUBMITTAL

FIRST FLOOR - AREA B	
NO	NAME
101	VESTIBULE
102	CORRIDOR
104	LOBBY
105	STEP DESK
106	CORRIDOR
107	SCHEDULING & TRAINING
108	DO
109	SARM
110	SARM ADMIN
111	STAN / EVAL
112	AFE MAINTENANCE
113	HELMET ALIGNMENT

FIRST FLOOR - AREA B	
NO	NAME
114	LIFE SUPPORT
115	MAINTENANCE OFFICE
116	PILOT LOCKER ROOM
117	SHOWER
118	WOMEN'S RESTROOM
119	MEN'S RESTROOM
121	HALL
122	CORRIDOR
123	ELECTRICAL CLOSET



A6 FIRST FLOOR - HVAC PLAN - AREA B

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

0 4' 8' 16'

GENERAL SHEET NOTES

1. SEE SHEET M-001 FOR GENERAL NOTES, LEGEND, SYMBOLS, AND ABBREVIATIONS.
2. SEE MECH PIPING PLANS FOR THERMOSTAT AND OTHER CONTROL DEVICE LOCATIONS.
3. DUCT SIZE TO VAV AND FVAV BOXES TO BE SAME AS NECK SIZE SHOWN IN VAV AND FVAV SCHEDULES ON SHEET M-603 UNLESS NOTED OTHERWISE.
4. DUCT SIZE TO DIFFUSERS, REGISTERS AND GRILLES TO BE SAME SIZE AS NECK SIZE SHOWN ON AIR DISTRIBUTION DEVICE TAG UNLESS NOTHER OTHERWISE.

SHEET KEYNOTES

1. TOA-A, 50 CFM, 6"Ø.
2. SA-A, 50 CFM, 6"Ø.
3. RA-G, 50 CFM, 6x6.
4. SA-R, 130 CFM, 6Ø.
5. PROVIDE CONTINUOUS SLOT DIFFUSERS. BLANK OFF UNUSED DIFFUSERS, AS INDICATED.
6. TOA-A, 85 CFM, 6"Ø.
7. 4" DUCT ATTACHMENT TO DRYER. INSTALL SECONDARY LINT TRAP ON WALL BEHIND DRYER. INSTALL DUCTWORK TO DRYER IN ACCORDANCE WITH THE DRYER MANUFACTURER REQUIREMENTS. COORDINATE FINAL LOCATION WITH ARCHITECTURE.
8. RETURN AIR CFM SHOWN IS FOR FPVAV DURING PEAK HEATING CONDITION.
9. INSTALL LOCKER LINEAR EXHAUST DIFFUSERS IN SOFFIT ABOVE LOCKER SPACE. COORDINATE PLACEMENT WITH ARCHITECTURE.

US Army Corps of Engineers ®

MARK	DESCRIPTION	DATE
0	READY-TO-ADVERTISE (RTA) SUBMITTAL	JUL 2025

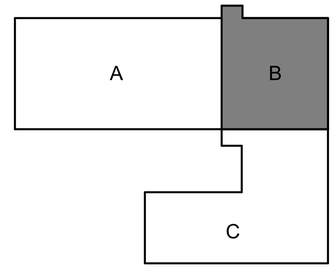
DESIGNED BY: B. FONSECA
DRAWN BY: J. SMITH
CHECKED BY: C. CAVE
ISSUE DATE: JUL 2025
SOLICITATION NO.: W912QR24A001
CONTRACT NO.: W912QR24C0007
SUBMITTED BY: B. STREEBIN
SIZE: ANSI D
FILE NAME:

US ARMY CORPS OF ENGINEERS
LITTLE ROCK DISTRICT
LITTLE ROCK, ARKANSAS

BURNS AND McDONNELL
9400 WARD PARKWAY,
KANSAS CITY, MO 64114
165438

LICENSED PROFESSIONAL ENGINEER
BYRON EDWARD K. FONSECA
M 41419
MECHANICAL
STATE OF CALIFORNIA
07/23/2025

KEY PLAN



F-35: SPECIAL ACCESS PROGRAM FACILITY
EBBING AIR NATIONAL GUARD BASE (ANGB), FORT SMITH, ARKANSAS

FIRST FLOOR - HVAC PLAN - AREA B

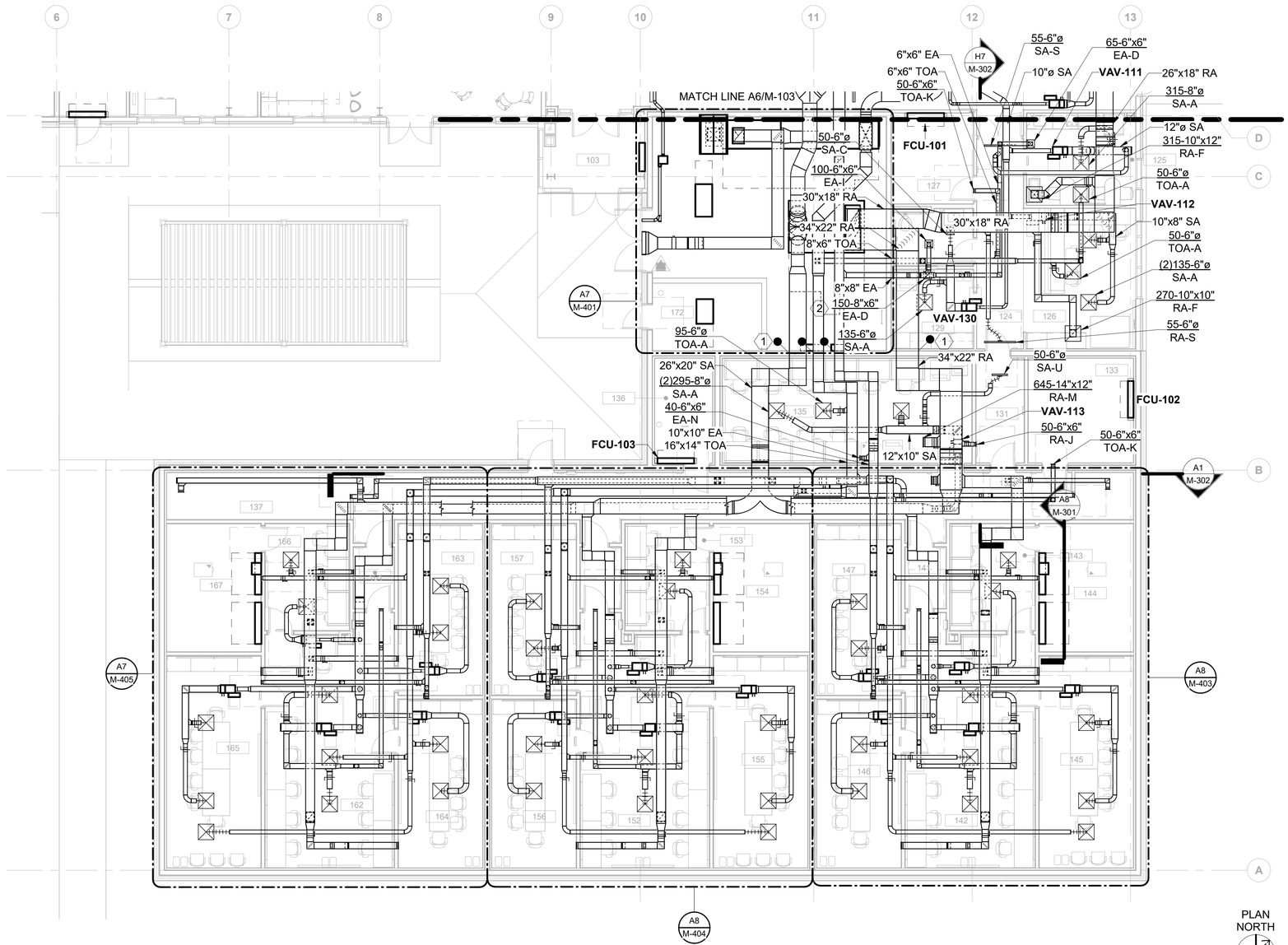
SHEET ID
M-103

READY-TO-ADVERTISE (RTA) SUBMITTAL

FIRST FLOOR - AREA C	
NO	NAME
103	VESTIBULE
124	CORRIDOR
125	BREAK ROOM
126	MAINT DEBRIEF
127	MAIN COMM ROOM
128	UNISEX RESTROOM
129	PRINT / COPY
131	MAN TRAP
132	CORRIDOR
133	SECURE COMM ROOM
134	STORAGE
135	SECURITY
136	SECURE ELEC ROOM

FIRST FLOOR - AREA C	
NO	NAME
137	STORAGE
141	MAN TRAP 1
142	VAULT 1 MISSION PLANNING
143	VAULT 1 ALIS / ODIN
144	VAULT 1 SERVER
145	VAULT 1 LG BRIEF
146	VAULT 1 SM BRIEF
147	VAULT 1 SM BRIEF
151	MAN TRAP 2
152	VAULT 2 MISSION PLANNING
153	VAULT 2 ALIS / ODIN
154	VAULT 2 SERVER
155	VAULT 2 LG BRIEF

FIRST FLOOR - AREA C	
NO	NAME
156	VAULT 2 SM BRIEF
157	VAULT 2 SM BRIEF
161	MAN TRAP 3
162	VAULT 3 MISSION PLANNING
164	VAULT 3 SM BRIEF
165	VAULT 3 LG BRIEF
166	VAULT 3 ALIS / ODIN
167	VAULT 3 SERVER
171	MECHANICAL ROOM
172	ELECTRICAL ROOM



PLAN NORTH

0 4' 8' 16'

A2 FIRST FLOOR - HVAC PLAN - AREA C

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

GENERAL SHEET NOTES

1. SEE SHEET M-001 FOR GENERAL NOTES, LEGEND, SYMBOLS, AND ABBREVIATIONS.
2. SEE MECH PIPING PLANS FOR THERMOSTAT AND OTHER CONTROL DEVICE LOCATIONS.
3. DUCT SIZE TO VAV AND FVAV BOXES TO BE SAME AS NECK SIZE SHOWN IN VAV AND FVAV SCHEDULES ON SHEET M-603 UNLESS NOTED OTHERWISE.
4. DUCT SIZE TO DIFFUSERS, REGISTERS AND GRILLES TO BE SAME SIZE AS NECK SIZE SHOWN ON AIR DISTRIBUTION DEVICE TAG UNLESS NOTHER OTHERWISE.

SHEET KEYNOTES

1. SECURE BOUNDARY AND TEMPEST DUCT PENETRATION. SEE GJ SHEETS FOR DUCT MAN BAR AND WAVEGUIDE REQUIREMENTS. SEE DETAIL G2/M-503 FOR Z-BEND REQUIREMENTS.
2. PROVIDE MANUAL BALANCING DAMPER IN VERTICAL BRANCH DUCT.

US Army Corps of Engineers ®

MARK	DESCRIPTION	DATE
0	READY-TO-ADVERTISE (RTA) SUBMITTAL	JUL 2025

DESIGNED BY: B. FONSECA
DRAWN BY: J. SMITH
CHECKED BY: C. DAZE
SUBMITTED BY: B. STREEBIN
SIZE: ANSI D
ISSUE DATE: JUL 2025
SOLICITATION NO.: W912T2S25RA001
CONTRACT NO.: W912T2S24F0007
FILE NAME:

US ARMY CORPS OF ENGINEERS
LITTLE ROCK DISTRICT
LITTLE ROCK, ARKANSAS

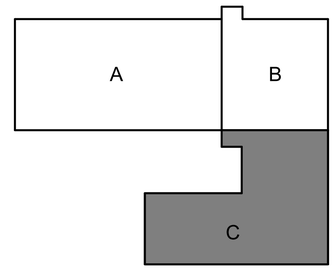
BURNS AND McDONNELL
9400 WARD PARKWAY,
KANSAS CITY, MO 64114
165438

LICENSED PROFESSIONAL ENGINEER
BYRON EDWARD K. FONSECA
M 41419
MECHANICAL
STATE OF CALIFORNIA
07/23/2025

F-35: SPECIAL ACCESS PROGRAM FACILITY
EBBING AIR NATIONAL GUARD BASE (ANGB), FORT SMITH, ARKANSAS

FIRST FLOOR - HVAC PLAN - AREA C

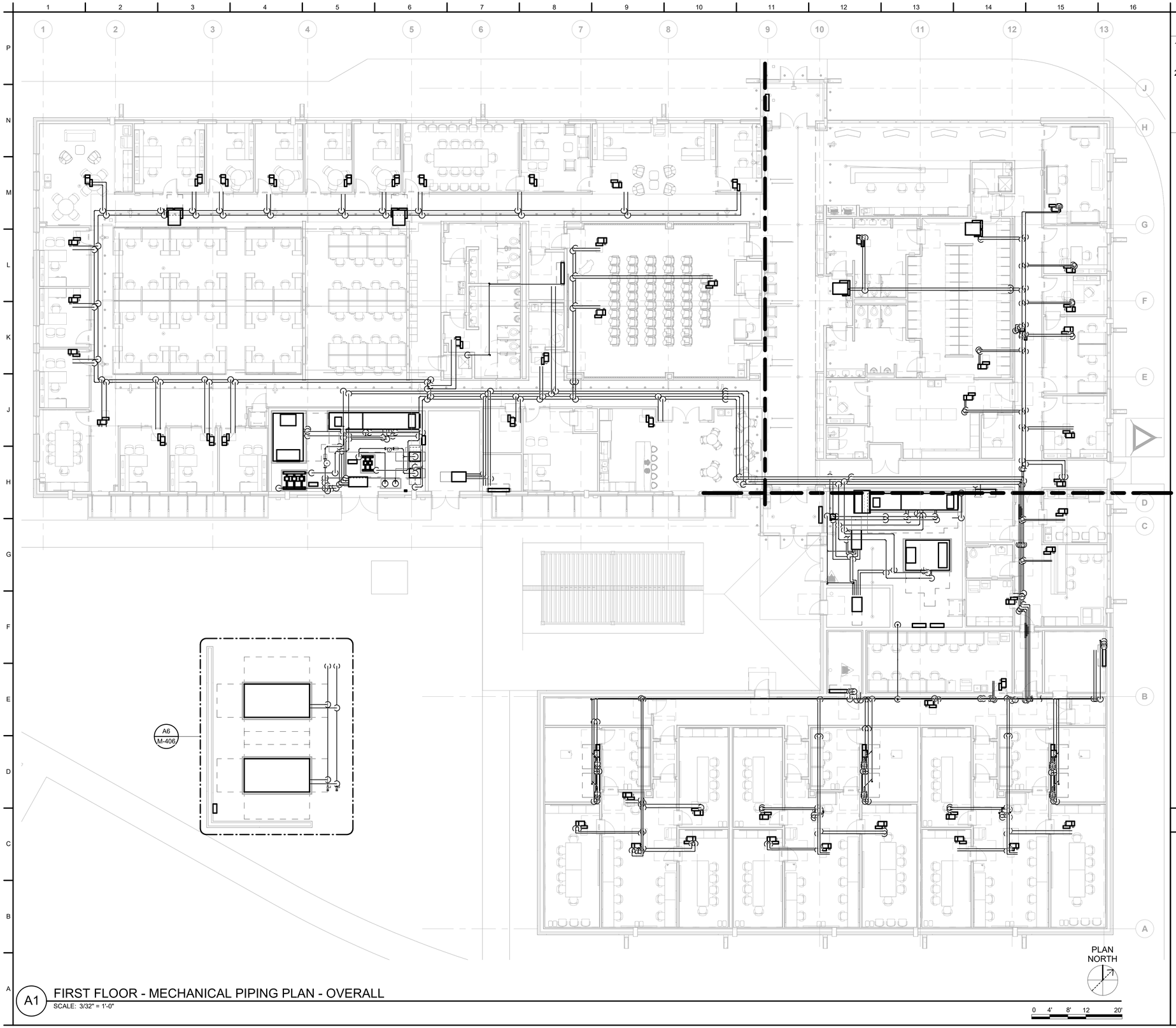
KEY PLAN



SHEET ID

M-104

READY-TO-ADVERTISE (RTA) SUBMITTAL



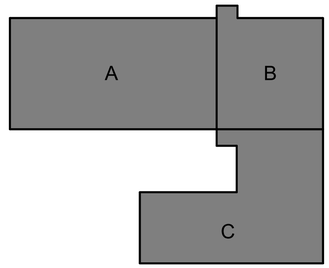
A1 FIRST FLOOR - MECHANICAL PIPING PLAN - OVERALL
SCALE: 3/32" = 1'-0"

GENERAL SHEET NOTES

1. SEE SHEET M-001 FOR GENERAL NOTES, LEGEND, SYMBOLS, AND ABBREVIATIONS.
2. ALL HWS/R BRANCH PIPING TO VAV BOXES TO BE 3/4" UNLESS NOTED OTHERWISE.

LICENSED PROFESSIONAL ENGINEER
BYRON EDWARD K. YONSECA
M 41419
MECHANICAL
STATE OF CALIFORNIA
07/23/2025

KEY PLAN



US Army Corps of Engineers ®

MARK	DESCRIPTION	DATE
0	READY-TO-ADVERTISE (RTA) SUBMITTAL	JUL 2025

DESIGNED BY: B. FONSECA
DRAWN BY: J. SMITH
CHECKED BY: C. DAZE
SUBMITTED BY: B. STREEBIN
SIZE: ANSI D
ISSUE DATE: JUL 2025
SOLICITATION NO.: W912T5-25-RA001
CONTRACT NO.: W912T5-24-F0007
FILE NAME:

US ARMY CORPS OF ENGINEERS
LITTLE ROCK DISTRICT
LITTLE ROCK, ARKANSAS

BURNS AND McDONNELL
9400 WARD PARKWAY,
KANSAS CITY, MO 64114
165438

F-35: SPECIAL ACCESS PROGRAM FACILITY
EBBING AIR NATIONAL GUARD BASE (ANGB), FORT SMITH, ARKANSAS

FIRST FLOOR - MECHANICAL PIPING PLAN - OVERALL

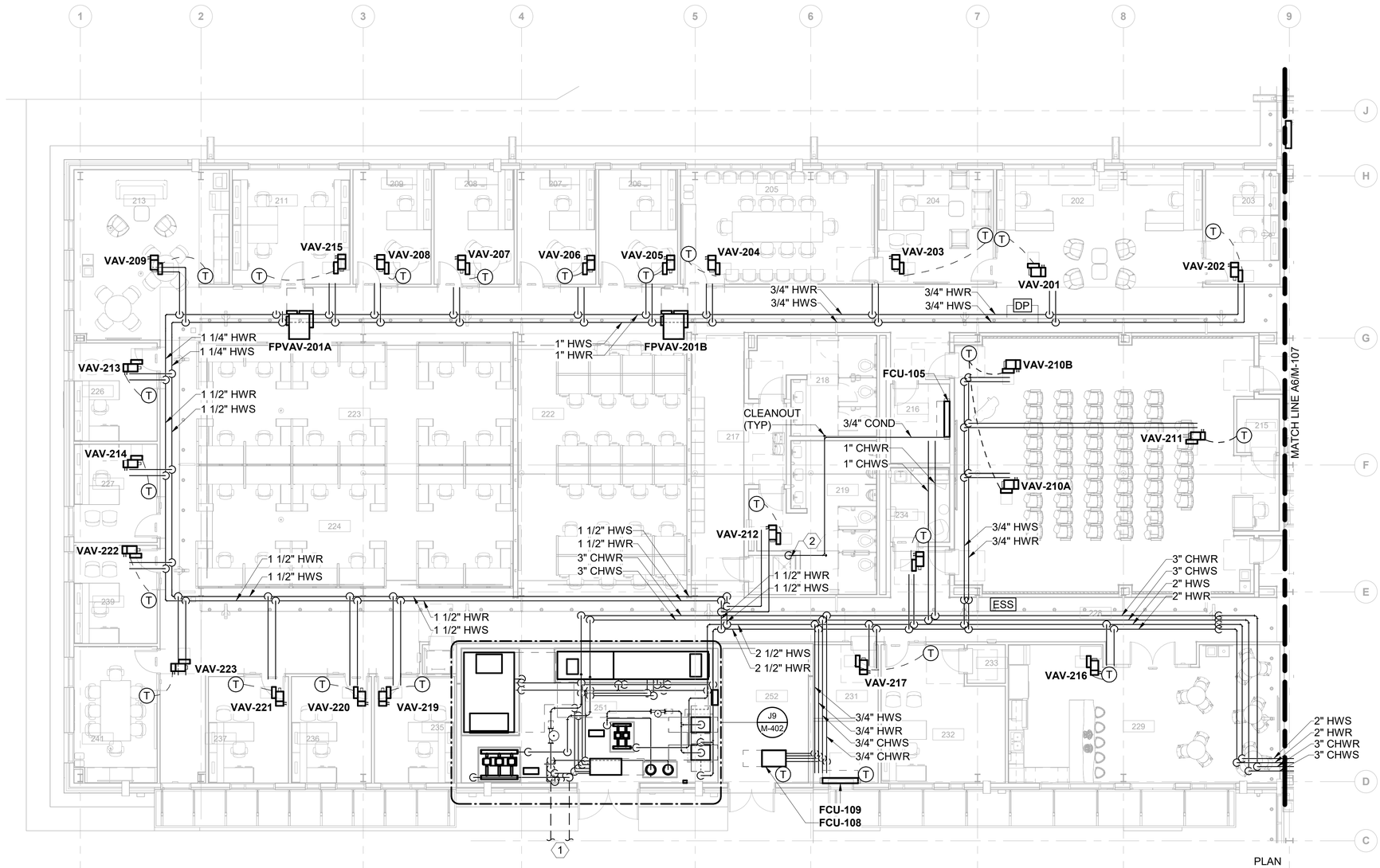
SHEET ID
M-105

READY-TO-ADVERTISE (RTA) SUBMITTAL

FIRST FLOOR - AREA A	
NO	NAME
201	CORRIDOR
202	COMMAND SUPPORT STAFF
203	ACTIVITY PROGRAM COORDINATOR (APC) / RESOURCE ADVISOR (RA)
204	SQUADRON COMMANDER OFFICE
205	CONFERENCE ROOM
206	INTERNATIONAL MILITARY STUDENT OFFICER (IMSO)
207	SNR M-1
208	SNR M-2
209	SNR M-3
211	RA
212	COPY / STORAGE
213	STUDENT COLLAB
214	LG BRIEFING RM

FIRST FLOOR - AREA A	
NO	NAME
215	AV
216	COMM
217	STUDENT LOCKERS
218	WOMEN'S RESTROOM
219	MEN'S RESTROOM
221	JANITOR'S CLOSET
222	STUDENT WORKSTATIONS
223	INSTRUCTOR WORKSTATIONS
224	MISSION OPS SUPPORT
225	CORRIDOR
226	IP M-1
227	IP M-2
228	CORRIDOR
229	BREAK ROOM

FIRST FLOOR - AREA A	
NO	NAME
232	FLIGHT MEDICAL OFFICE-1
234	MOTHER'S ROOM
235	IP M-6
236	IP M-5
237	IP M-4
238	CORRIDOR
239	IP M-3
241	TEAM
251	MECHANICAL
252	ELECTRICAL
253	FIRE



A1 FIRST FLOOR - MECHANICAL PIPING PLAN - AREA A

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

GENERAL SHEET NOTES

1. SEE SHEET M-001 FOR GENERAL NOTES, LEGEND, SYMBOLS, AND ABBREVIATIONS.
2. ALL HWS/R BRANCH PIPING TO VAV BOXES TO BE 3/4" UNLESS NOTED OTHERWISE.

SHEET KEYNOTES

1. PIPING TO / FROM CHILLERS BELOW GRADE TO MECHANICAL YARD. SEE CIVIL DRAWINGS FOR HYDRONIC PIPING INVERT, PROFILES, AND EXTERIOR ROUTING.
2. 3/4" COND DOWN TO JANITOR SINK.

US Army Corps of Engineers ®

MARK	DESCRIPTION	DATE
0	READY-TO-ADVERTISE (RTA) SUBMITTAL	JUL 2025

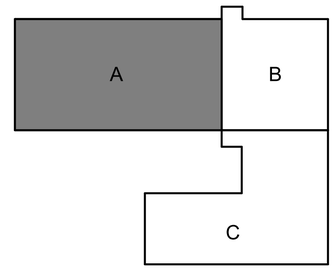
ISSUE DATE: JUL 2025
SOLICITATION NO.: W912T2S25RA001
CONTRACT NO.: W912T2S24F0007
DESIGNED BY: B. FONSECA
DRAWN BY: J. SMITH
CHECKED BY: C. DAVIS
SUBMITTED BY: B. STREEBIN
SIZE: ANSI D
FILE NAME:

US ARMY CORPS OF ENGINEERS
LITTLE ROCK DISTRICT
LITTLE ROCK, ARKANSAS

BURNS AND McDONNELL
9400 WARD PARKWAY,
KANSAS CITY, MO 64114
165438

LICENSED PROFESSIONAL ENGINEER
BYRON EDWARD K. FONSECA
M 41419
MECHANICAL
STATE OF CALIFORNIA
07/23/2025

KEY PLAN



F-35: SPECIAL ACCESS PROGRAM FACILITY
EBBING AIR NATIONAL GUARD BASE (ANGB), FORT SMITH, ARKANSAS

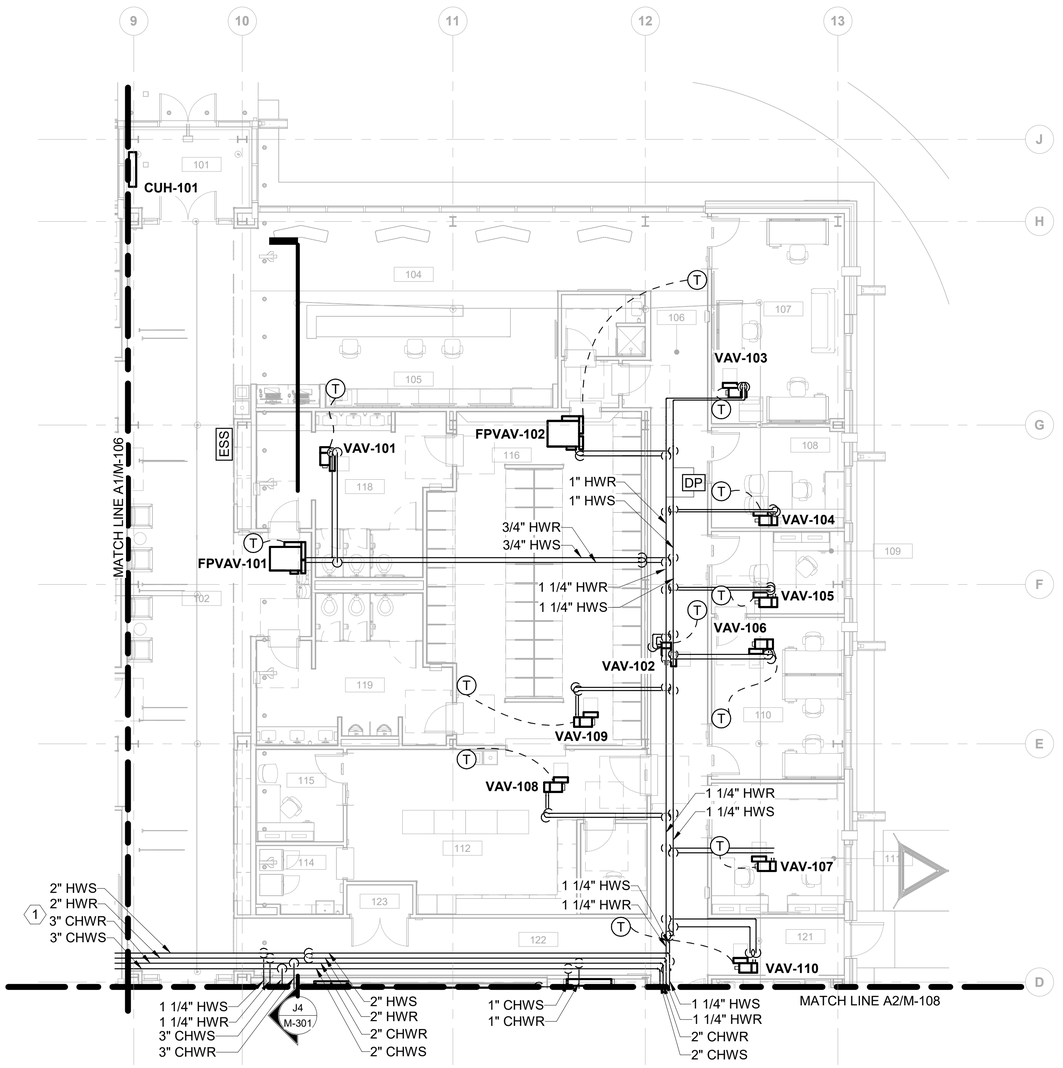
FIRST FLOOR - MECHANICAL PIPING PLAN - AREA A

SHEET ID
M-106

READY-TO-ADVERTISE (RTA) SUBMITTAL

FIRST FLOOR - AREA B	
NO	NAME
101	VESTIBULE
102	CORRIDOR
104	LOBBY
105	STEP DESK
106	CORRIDOR
107	SCHEDULING & TRAINING
108	DO
109	SARM
110	SARM ADMIN
111	STAN / EVAL
112	AFE MAINTENANCE
113	HELMET ALIGNMENT

FIRST FLOOR - AREA B	
NO	NAME
114	LIFE SUPPORT
115	MAINTENANCE OFFICE
116	PILOT LOCKER ROOM
117	SHOWER
118	WOMEN'S RESTROOM
119	MEN'S RESTROOM
121	HALL
122	CORRIDOR
123	ELECTRICAL CLOSET



A6 FIRST FLOOR - MECHANICAL PIPING PLAN - AREA B

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

0 4' 8' 16'

GENERAL SHEET NOTES

1. SEE SHEET M-001 FOR GENERAL NOTES, LEGEND, SYMBOLS, AND ABBREVIATIONS.
2. ALL HWS/R BRANCH PIPING TO VAV BOXES TO BE 3/4" UNLESS NOTED OTHERWISE.

SHEET KEYNOTES

1. CHWS/R AND HWS/R BOTTOM OF PIPE ELEVATION AT 13'-1" ABOVE FINISHED FLOOR WITHIN SOFFIT ABOVE 102-CORRIDOR. MOUNT CHWS/R AND HWS/R PIPING ON A SHARED TRAPEZE PIPE RACK. SOFFIT ABOVE 102-CORRIDOR IS SHARED BY ELECTRICAL, TELECOMMUNICATIONS, PLUMBING, AND FIRE UTILITIES. COORDINATE WITH OTHER DISCIPLINES ACCORDINGLY PRIOR TO INSTALLATION.

US Army Corps of Engineers ®

MARK	DESCRIPTION	DATE
0	READY-TO-ADVERTISE (RTA) SUBMITTAL	JUL 2025

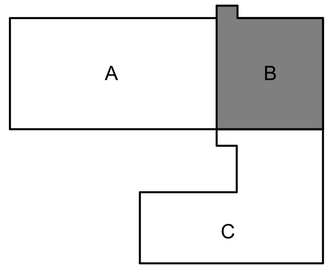
DESIGNED BY: B. FONSECA
DRAWN BY: J. SMITH
CHECKED BY: C. DAZE
SUBMITTED BY: B. STREEBIN
SIZE: ANSI D
ISSUE DATE: JUL 2025
SOLICITATION NO.: W912QR25RA001
CONTRACT NO.: W912QR24D0007
FILE NAME:

US ARMY CORPS OF ENGINEERS
LITTLE ROCK DISTRICT
LITTLE ROCK, ARKANSAS

BURNS AND McDONNELL
9400 WARD PARKWAY,
KANSAS CITY, MO 64114
165438

LICENSED PROFESSIONAL ENGINEER
BYRON EDWARD K. FONSECA
M 41419
MECHANICAL
STATE OF CALIFORNIA
07/23/2025

KEY PLAN



F-35: SPECIAL ACCESS PROGRAM FACILITY
EBBING AIR NATIONAL GUARD BASE (ANGB), FORT SMITH, ARKANSAS

FIRST FLOOR - MECHANICAL PIPING PLAN - AREA B

SHEET ID

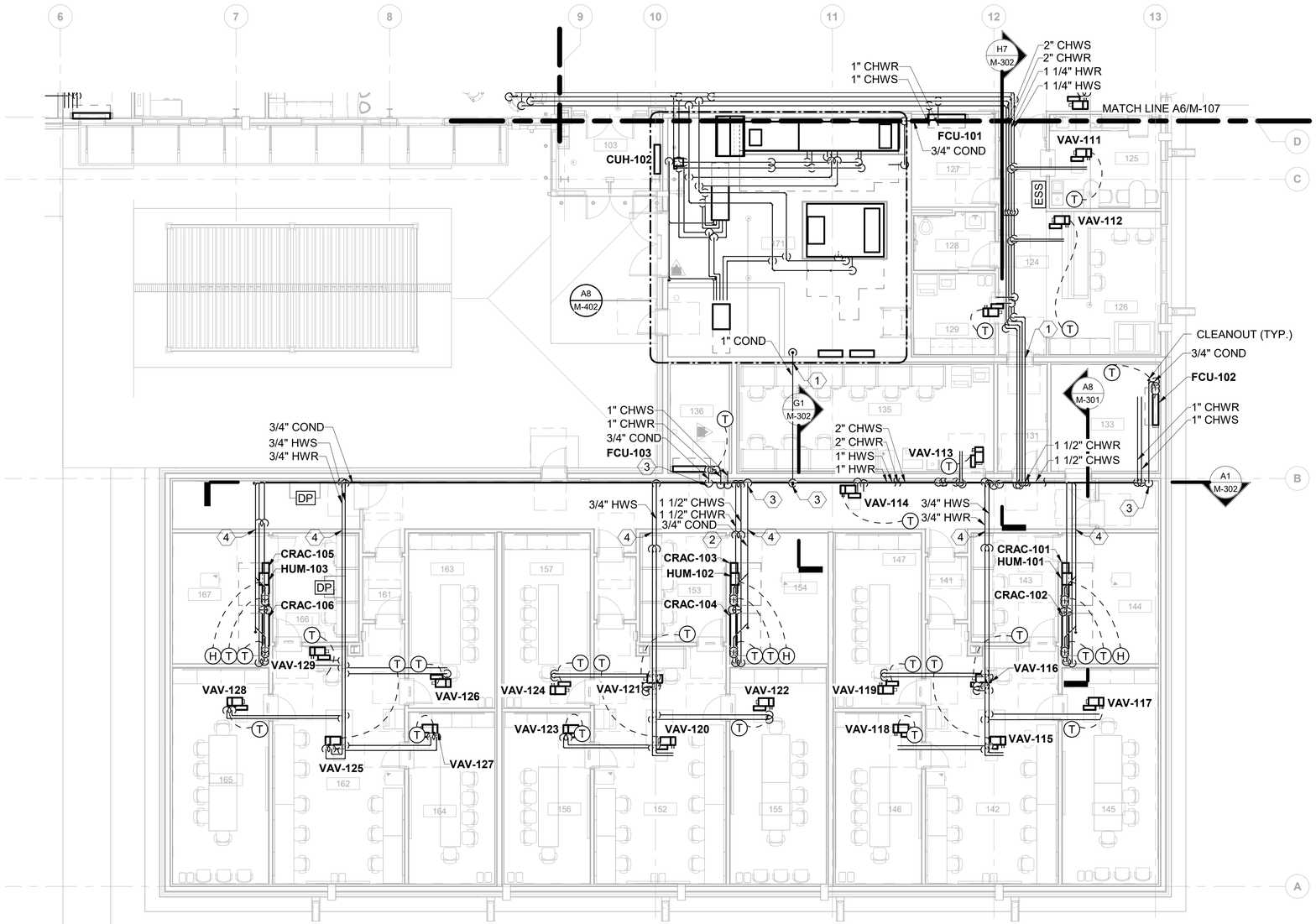
M-107

READY-TO-ADVERTISE (RTA) SUBMITTAL

FIRST FLOOR - AREA C	
NO	NAME
103	VESTIBULE
124	CORRIDOR
125	BREAK ROOM
126	MAINT DEBRIEF
127	MAIN COMM ROOM
128	UNISEX RESTROOM
129	PRINT / COPY
131	MAN TRAP
132	CORRIDOR
133	SECURE COMM ROOM
134	STORAGE
135	SECURITY
136	SECURE ELEC ROOM

FIRST FLOOR - AREA C	
NO	NAME
137	STORAGE
141	MAN TRAP 1
142	VAULT 1 MISSION PLANNING
143	VAULT 1 ALIS / ODIN
144	VAULT 1 SERVER
145	VAULT 1 LG BRIEF
146	VAULT 1 SM BRIEF
147	VAULT 1 SM BRIEF
151	MAN TRAP 2
152	VAULT 2 MISSION PLANNING
153	VAULT 2 ALIS / ODIN
154	VAULT 2 SERVER
155	VAULT 2 LG BRIEF

FIRST FLOOR - AREA C	
NO	NAME
156	VAULT 2 SM BRIEF
157	VAULT 2 SM BRIEF
161	MAN TRAP 3
162	VAULT 3 MISSION PLANNING
164	VAULT 3 SM BRIEF
165	VAULT 3 LG BRIEF
166	VAULT 3 ALIS / ODIN
167	VAULT 3 SERVER
171	MECHANICAL ROOM
172	ELECTRICAL ROOM



A2 FIRST FLOOR - MECHANICAL PIPING PLAN - AREA C

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

GENERAL SHEET NOTES

1. SEE SHEET M-001 FOR GENERAL NOTES, LEGEND, SYMBOLS, AND ABBREVIATIONS.
2. ALL HWS/R BRANCH PIPING TO VAV BOXES TO BE 3/4" UNLESS NOTED OTHERWISE.
3. SURFACE MOUNT ALL CONTROL DEVICES INSTALLED WITHIN THE SECURE AREA OR ON SECURE AREA BOUNDARY WALL, CONCEAL CONTROL WIRING WITHIN SURFACE MOUNTED CONDUIT, AND PAINT CONDUITS TO MATCH WALL FINISH. SEE GJ SERIES SHEETS FOR SECURE AREAS AND SEE ARCHITECTURAL SHEETS FOR WALLS FINISHES.

SHEET KEYNOTES

1. SECURE AND TEMPEST BOUNDARY PIPE PENETRATION. SEE GJ SERIES SHEETS FOR DETAILS AND REQUIREMENTS.
2. CHWS, CHWR, AND COND PIPE SIZES INTO VAULT SERVER 2 ARE TYPICAL FOR VAULT SERVERS 1 THRU 3. SEE SECTION A8/M-301 FOR PIPE ELEVATIONS, SIZES, AND CONNECTIONS INTO CRAC UNITS.
3. CLEANOUT ON VERTICAL AT 90° CHANGE OF FLOW DIRECTION.
4. PIPE PENETRATION THROUGH AN STC50 RATED WALL. SEE ARCHITECTURE DETAILS FOR PENETRATION PACKING AND SEALING REQUIREMENTS.

US Army Corps of Engineers ®

MARK	DESCRIPTION	DATE
0	READY-TO-ADVERTISE (RTA) SUBMITTAL	JUL 2025

DESIGNED BY: B. FONSECA
DRAWN BY: J. SMITH
CHECKED BY: C. DAZE
ISSUE DATE: JUL 2025
SOLICITATION NO.: W912TS25RA001
CONTRACT NO.: W912TS24F0007
SUBMITTED BY: B. STREEBIN
SIZE: ANSI D
FILE NAME:

US ARMY CORPS OF ENGINEERS
LITTLE ROCK DISTRICT
LITTLE ROCK, ARKANSAS

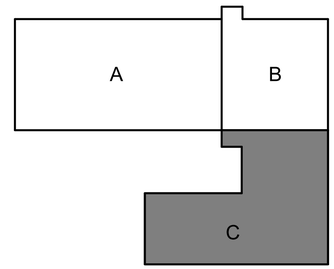
BURNS AND McDONNELL
9400 WARD PARKWAY,
KANSAS CITY, MO 64114
16538

LICENSED PROFESSIONAL ENGINEER
BYRON EDWARD K. FONSECA
M 41419
MECHANICAL
STATE OF CALIFORNIA
07/23/2025

F-35 SPECIAL ACCESS PROGRAM FACILITY
EBBING AIR NATIONAL GUARD BASE (ANGB), FORT SMITH, ARKANSAS

FIRST FLOOR - MECHANICAL PIPING PLAN - AREA C

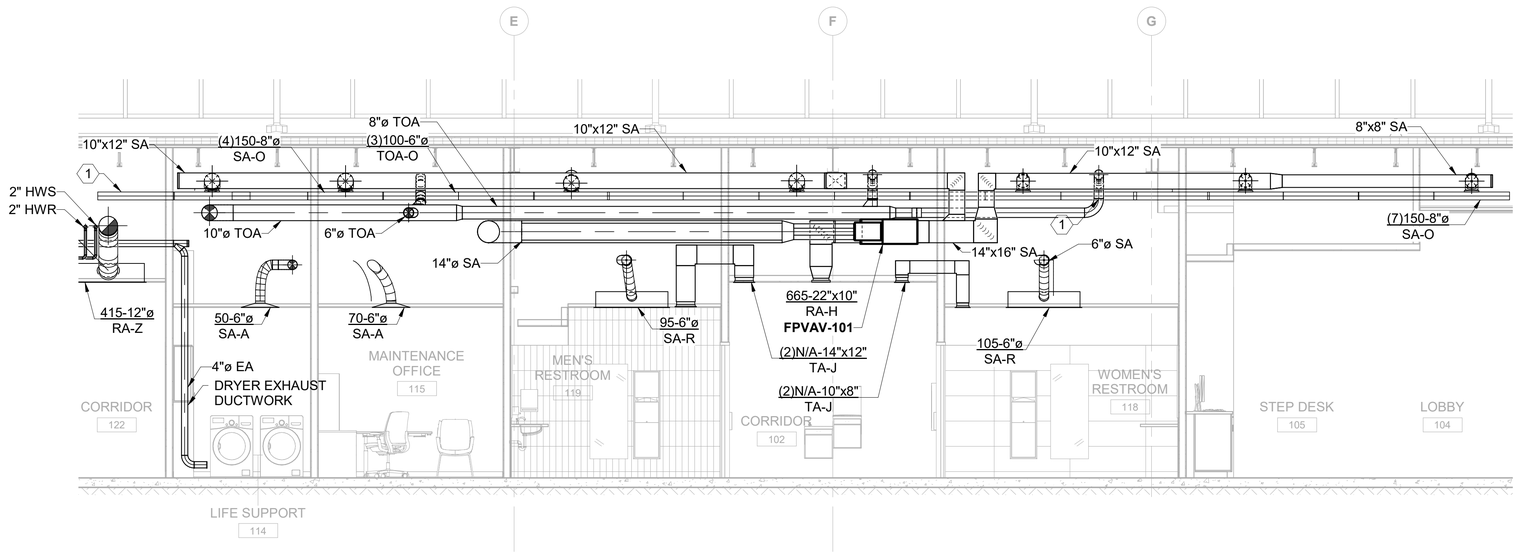
KEY PLAN



SHEET ID

M-108

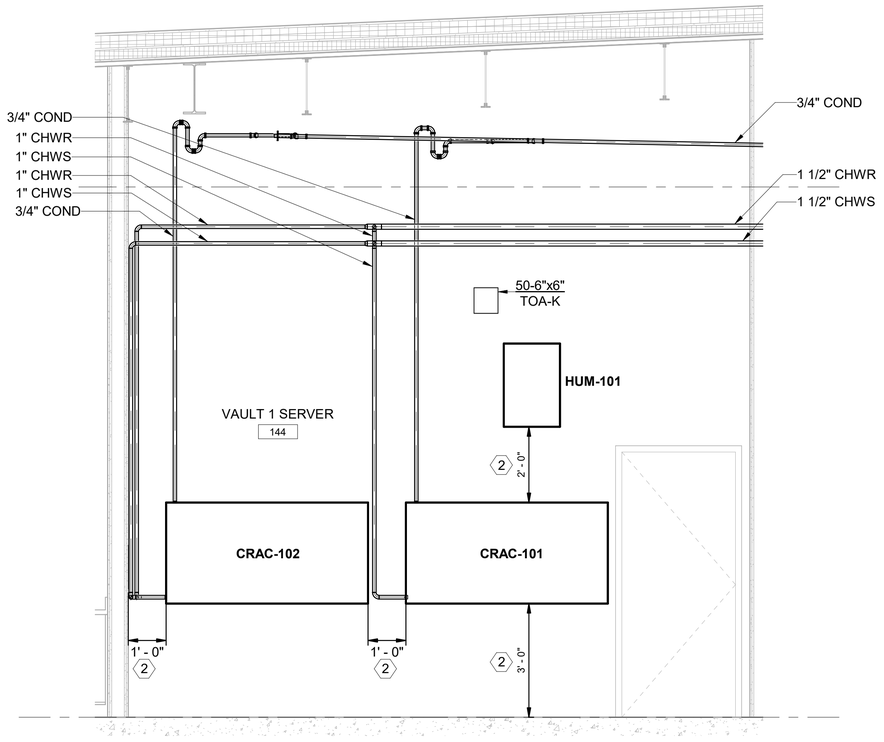
READY-TO-ADVERTISE (RTA) SUBMITTAL



J4 MECHANICAL SECTION - LOOKING WEST

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

0 2' 4' 8'



A8 MECHANICAL SECTION - TYPICAL ALIS/ODIN VAULT SERVER

SCALE: 1/2" = 1'-0"

0 1' 2' 4'

GENERAL SHEET NOTES

1. SEE SHEET M-001 FOR GENERAL NOTES, LEGEND, SYMBOLS, AND ABBREVIATIONS.

SHEET KEYNOTES

1. PROVIDE CONTINUOUS SLOT DIFFUSERS. BLANK OFF UNUSED DIFFUSERS.
2. DIMESNIONS SHOWN ARE MINIMUM CLEARANCE REQUIREMENTS.

US Army Corps of Engineers ®

MARK	DESCRIPTION	DATE
0	READY-TO-ADVERTISE (RTA) SUBMITTAL	JUL 2025

DESIGNED BY: B. FONSECA
DRAWN BY: J. SMITH
CHECKED BY: C. DICKEY
SUBMITTED BY: B. STREEBIN
ISSUE DATE: JUL 2025
SOLICITATION NO.: W912QR24A001
CONTRACT NO.: W912QR24F0007
DATE:
FILE NAME:
SIZE: ANSI D

US ARMY CORPS OF ENGINEERS
LITTLE ROCK DISTRICT
LITTLE ROCK, ARKANSAS

BURNS AND McDONNELL
9400 WARD PARKWAY,
KANSAS CITY, MO 64114
16543B

LICENSED PROFESSIONAL ENGINEER
BYRON EDWARD K. FONSECA
M 41419
MECHANICAL
STATE OF CALIFORNIA
07/23/2025

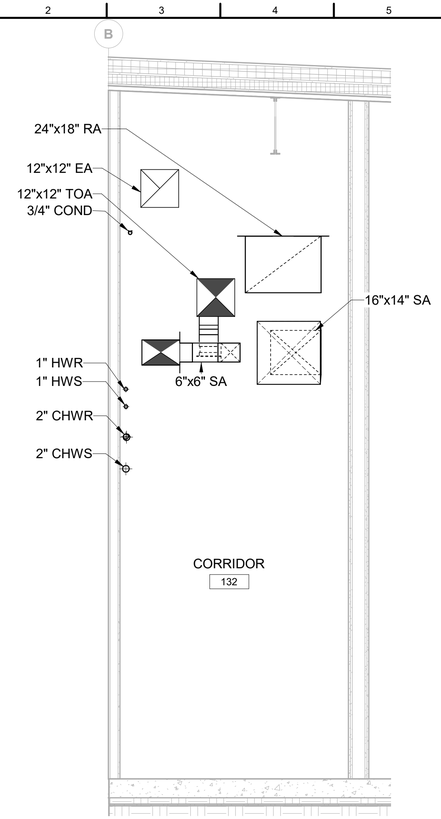
F-35: SPECIAL ACCESS PROGRAM FACILITY
EBBING AIR NATIONAL GUARD BASE (ANGB), FORT SMITH, ARKANSAS

MECHANICAL SECTIONS

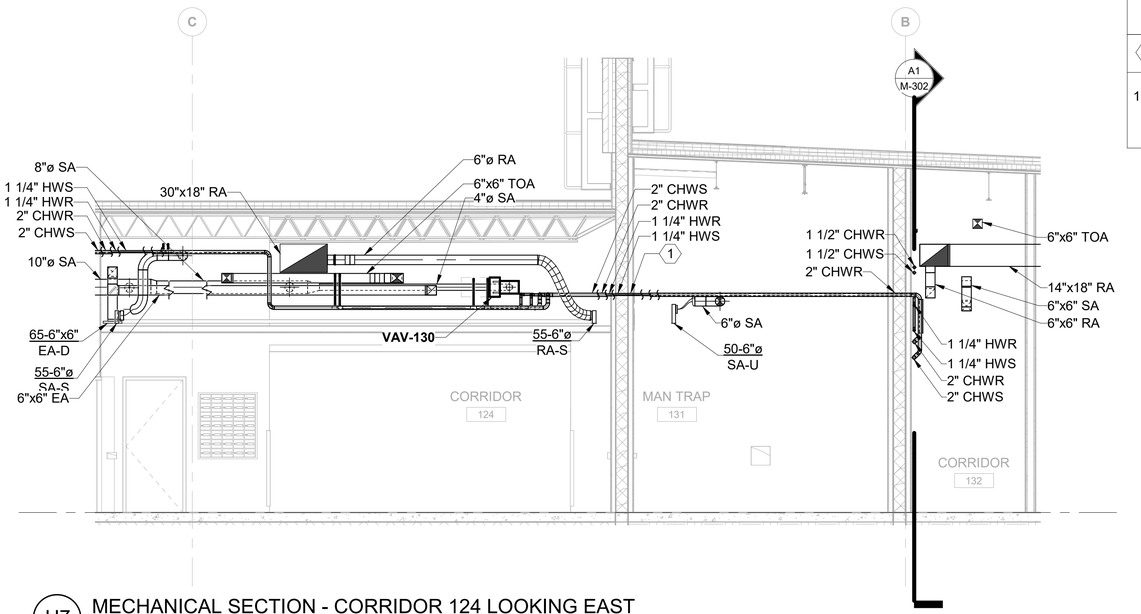
SHEET ID

M-301

READY-TO-ADVERTISE (RTA) SUBMITTAL



G1 MECHANICAL SECTION - CORRIDOR 133 LOOKING WEST
SCALE: 1/2" = 1'-0"



H7 MECHANICAL SECTION - CORRIDOR 124 LOOKING EAST
SCALE: 1/4" = 1'-0"

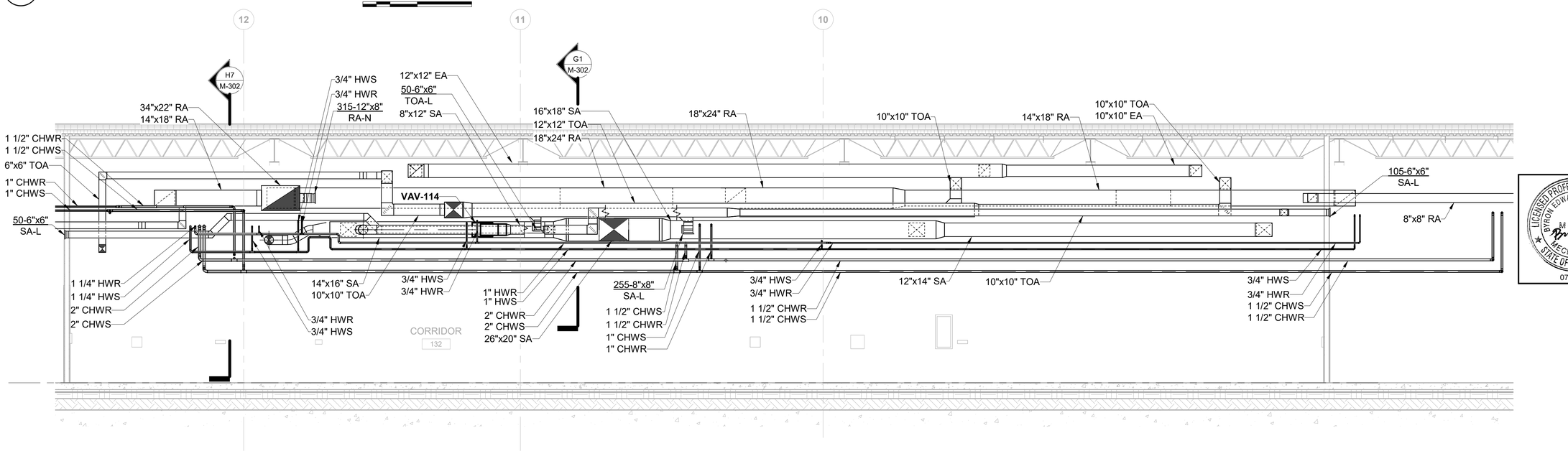
0 2' 4' 8'

GENERAL SHEET NOTES

1. SEE SHEET M-001 FOR GENERAL NOTES, LEGEND, SYMBOLS, AND ABBREVIATIONS.

SHEET KEYNOTES

1. SECURE AND TEMPEST BOUNDARY DUCT PENETRATION. PROVIDE SECURE PENETRATIONS PER M-508.



A1 MECHANICAL SECTION - CORRIDOR 133 LOOKING SOUTH
SCALE: 1/4" = 1'-0"

0 2' 4' 8'

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STATE OF CALIFORNIA
07/23/2025

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MARK	DESCRIPTION	DATE
0	READY-TO-ADVERTISE (RTA) SUBMITTAL	JUL 2025

DESIGNED BY: B. FONSECA
DRAWN BY: J. SMITH
CHECKED BY: C. DAZE
SUBMITTED BY: B. STREEBIN
SIZE: ANSI D
ISSUE DATE: JUL 2025
SOLICITATION NO.: W912TS25RA001
CONTRACT NO.: W912TS24F0007
FILE NAME:

US ARMY CORPS OF ENGINEERS
LITTLE ROCK DISTRICT
LITTLE ROCK, ARKANSAS

BURNS AND McDONNELL
9400 WARD PARKWAY,
KANSAS CITY, MO 64114
165438

F-35: SPECIAL ACCESS PROGRAM FACILITY
EBBING AIR NATIONAL GUARD BASE (ANGB), FORT SMITH, ARKANSAS

MECHANICAL SECTIONS

SHEET ID
M-302

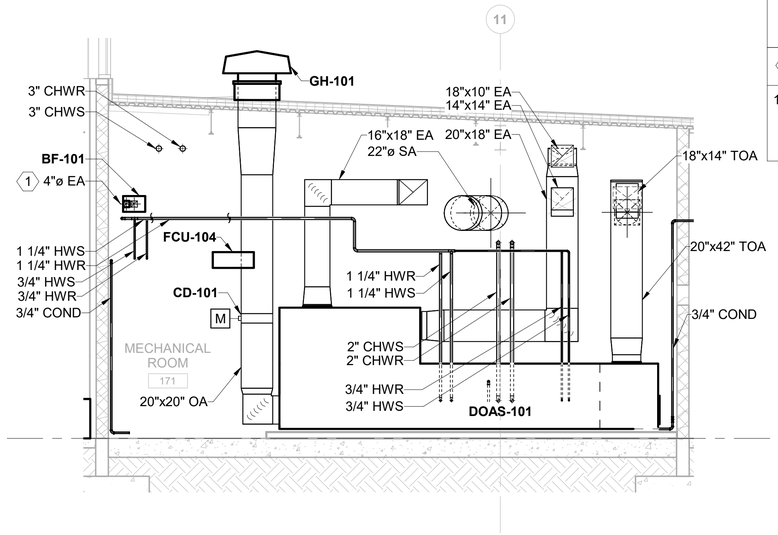
READY-TO-ADVERTISE (RTA) SUBMITTAL

GENERAL SHEET NOTES

1. SEE SHEET M-001 FOR GENERAL NOTES, LEGEND, SYMBOLS, AND ABBREVIATIONS.

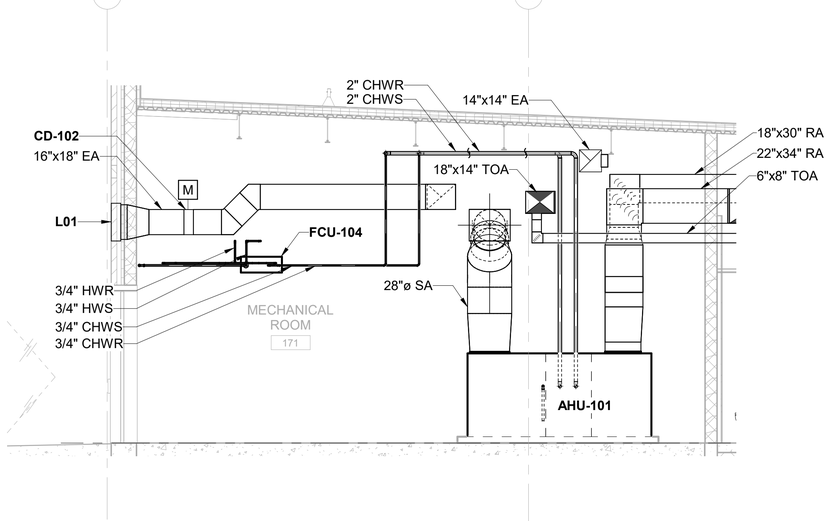
SHEET KEYNOTES

1. DRYER EXHAUST DUCTWORK.



J10 MECHANICAL SECTION - DOAS-101
SCALE: 1/4" = 1'-0"

0 2' 4' 8'



B10 MECHANICAL SECTION - AHU-101
SCALE: 1/4" = 1'-0"

0 2' 4' 8'

US Army Corps of Engineers ®

MARK	DESCRIPTION	DATE
0	READY-TO-ADVERTISE (RTA) SUBMITTAL	JUL 2025

DESIGNED BY: B. FONSECA
DRAWN BY: J. SMITH
CHECKED BY: C. DIXON
SUBMITTED BY: B. STREEBIN
ISSUE DATE: JUL 2025
SOLICITATION NO.: W912725RA001
CONTRACT NO.: W912725A40007
SIZE: ANSI D
FILE NAME:

US ARMY CORPS OF ENGINEERS
LITTLE ROCK DISTRICT
LITTLE ROCK, ARKANSAS

BURNS AND McDONNELL
9400 WARD PARKWAY,
KANSAS CITY, MO 64114
165438

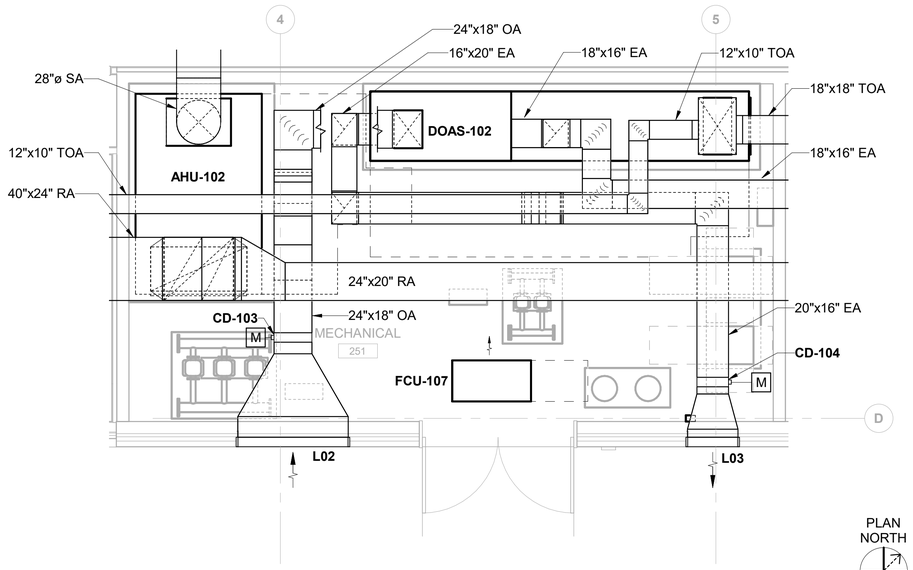
LICENSED PROFESSIONAL ENGINEER
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M 41419
MECHANICAL
STATE OF CALIFORNIA
07/23/2025

F-35: SPECIAL ACCESS PROGRAM FACILITY
EBBING AIR NATIONAL GUARD BASE (ANGB), FORT SMITH, ARKANSAS

MECHANICAL SECTIONS

SHEET ID
M-303

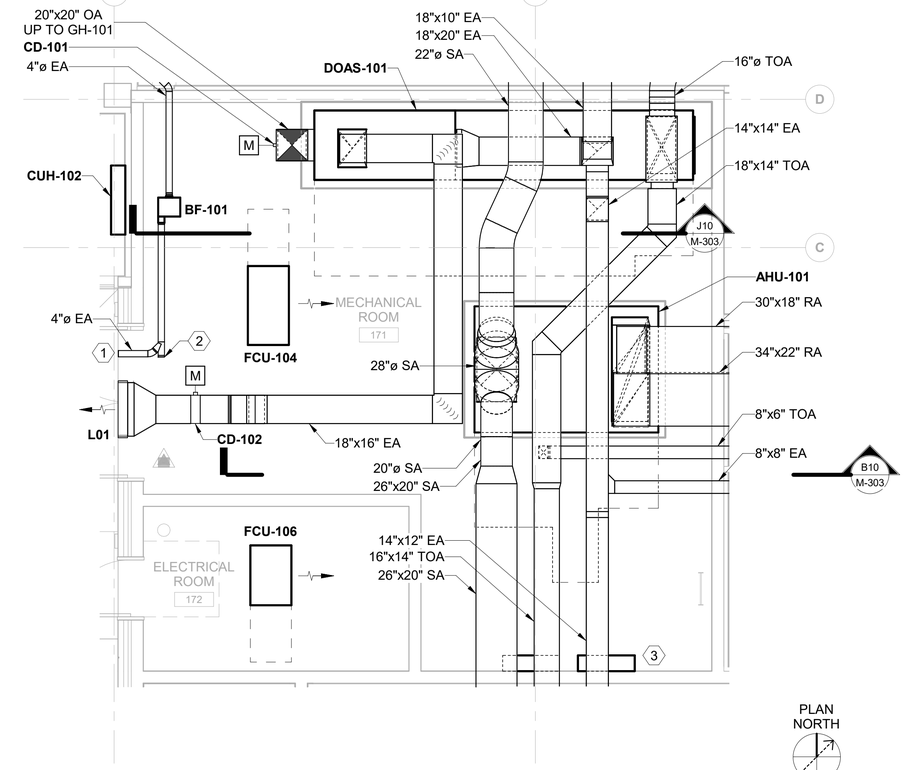
READY-TO-ADVERTISE (RTA) SUBMITTAL



J8 HVAC ENLARGED PLAN - AREA A - MECHANICAL ROOM 251

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

0 2' 4' 8'



A7 HVAC ENLARGED PLAN - AREA B - MECHANICAL ROOM 171

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

0 2' 4' 8'

GENERAL SHEET NOTES

1. SEE SHEET M-001 FOR GENERAL NOTES, LEGEND, SYMBOLS, AND ABBREVIATIONS.

SHEET KEYNOTES

1. DRYER EXHAUST WALL VENT. PROVIDE WITH BACKDRAFT DAMPER AND WITHOUT SCREEN.
2. INSTALL DRYER VENT CLEANOUT.
3. MAIN DDC PANELS.

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MARK	DESCRIPTION	DATE
0	READY-TO-ADVERTISE (RTA) SUBMITTAL	JUL 2025

ISSUE DATE: JUL 2025
SOLICITATION NO.: W912QR25RA001
CONTRACT NO.: W912QR24D0007

DESIGNED BY: B. FONSECA
DRAWN BY: J. SMITH
CHECKED BY: C. DIXIE
SUBMITTED BY: B. STREEBIN
SIZE: ANSI D
FILE NAME:

US ARMY CORPS OF ENGINEERS
LITTLE ROCK DISTRICT
LITTLE ROCK, ARKANSAS

BURNS AND McDONNELL
9400 WARD PARKWAY,
KANSAS CITY, MO 64114
165438

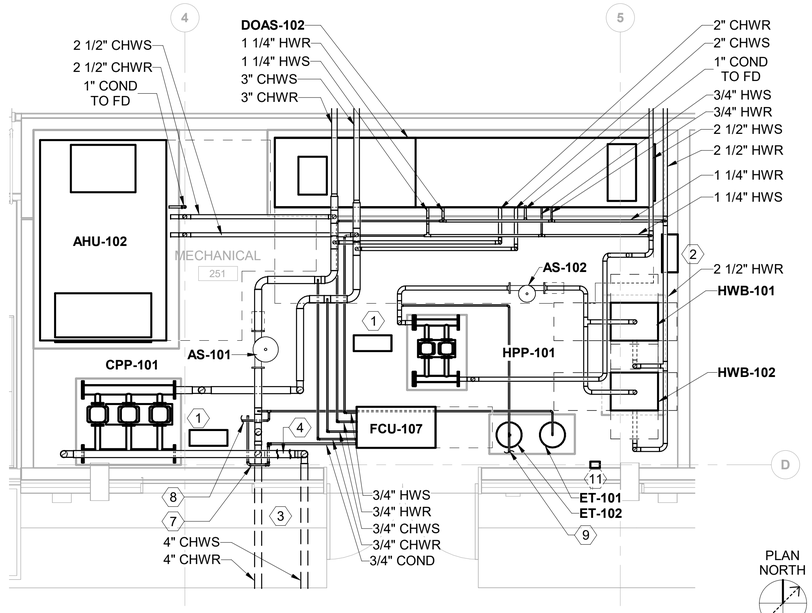
LICENSED PROFESSIONAL ENGINEER
BYRON EDWARD K. FONSECA
M 41419
MECHANICAL
STATE OF CALIFORNIA
07/23/2025

F-35: SPECIAL ACCESS PROGRAM FACILITY
EBBING AIR NATIONAL GUARD BASE (ANGB), FORT SMITH, ARKANSAS

MECHANICAL ENLARGED PLANS

SHEET ID
M-401

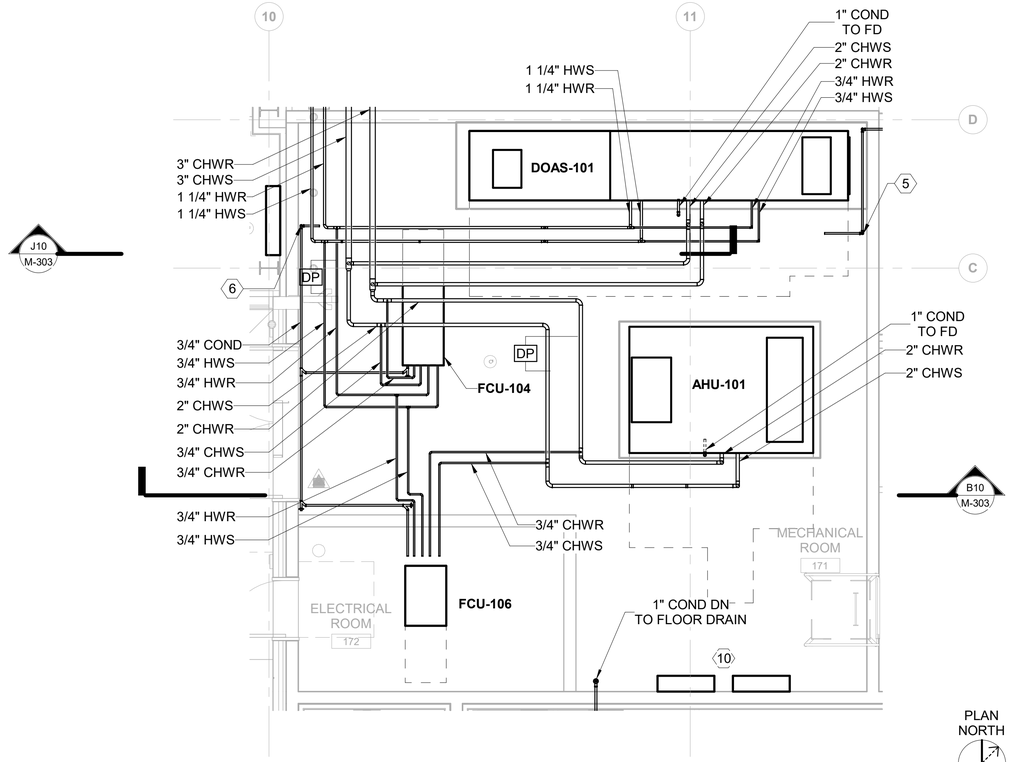
READY-TO-ADVERTISE (RTA) SUBMITTAL



J9 MECHANICAL PIPING ENLARGED PLAN - AREA A - MECHANICAL ROOM 251

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

0 2' 4' 8'



A8 MECHANICAL PIPING ENLARGED PLAN - AREA B - MECHANICAL ROOM 171

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

0 2' 4' 8'

GENERAL SHEET NOTES

1. SEE SHEET M-001 FOR GENERAL NOTES, LEGEND, SYMBOLS, AND ABBREVIATIONS.
2. ALL HWS/R BRANCH PIPING TO VAV BOXES TO BE 3/4" UNLESS NOTED OTHERWISE.

SHEET KEYNOTES

1. PUMP PACKAGE CONTROL PANEL.
2. BOILER PLANT CONTROL PANEL.
3. 4" CHWS AND CHWR TO MECHANICAL YARD. SEE CIVIL UTILITY PLAN FOR ROUTING. ROUTE CHILLER CONTROL WIRE IN THE SAME TRENCH TO AND FROM THE CHILLER YARD.
4. PROVIDE NEUTRAL BRIDGE BETWEEN CHWS/CHWR IN THE VERTICAL PIPE AT 5FT AFF.
5. 3/4" COND FROM FCU-101 ROUTED DOWN MECH ROOM WALL TO NEAREST FLOOR DRAIN.
6. 3/4" COND FROM FCU-104 & 106 ROUTED DOWN MECH ROOM WALL TO NEAREST FLOOR DRAIN.
7. 3/4" COND FROM FCU-107 ROUTED DOWN MECH ROOM WALL TO NEAREST FLOOR DRAIN.
8. MAKEUP WATER CONNECTION FOR HYDRONIC CHILLED WATER SYSTEM FROM DIVISION 22. SEE PLUMBING SHEETS FOR CONTINUATION.
9. MAKEUP WATER CONNECTION FOR HYDRONIC HEATING HOT WATER SYSTEM FROM DIVISION 22. SEE PLUMBING SHEETS FOR CONTINUATION.
10. MAIN DDC PANELS.
11. EMERGENCY BOILER SHUTOFF BUTTON.

M 41419
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BYRON EDWARD K. FONSECA
MECHANICAL
STATE OF CALIFORNIA
07/23/2025

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MARK	DESCRIPTION	DATE
0	READY-TO-ADVERTISE (RTA) SUBMITTAL	JUL 2025

ISSUE DATE: JUL 2025
SOLICITATION NO.: W912725RA001
CONTRACT NO.: W912725D40007

DESIGNED BY: B. FONSECA
DRAWN BY: J. SMITH
CHECKED BY: C. DIXIE
SUBMITTED BY: B. STREEBIN
SIZE: ANSI D
FILE NAME:

US ARMY CORPS OF ENGINEERS
LITTLE ROCK DISTRICT
LITTLE ROCK, ARKANSAS

BURNS AND McDONNELL
9400 WARD PARKWAY,
KANSAS CITY, MO 64114
165438

F-35, SPECIAL ACCESS PROGRAM FACILITY
EBBING AIR NATIONAL GUARD BASE (ANGB), FORT SMITH, ARKANSAS

MECHANICAL ENLARGED PLANS

SHEET ID
M-402

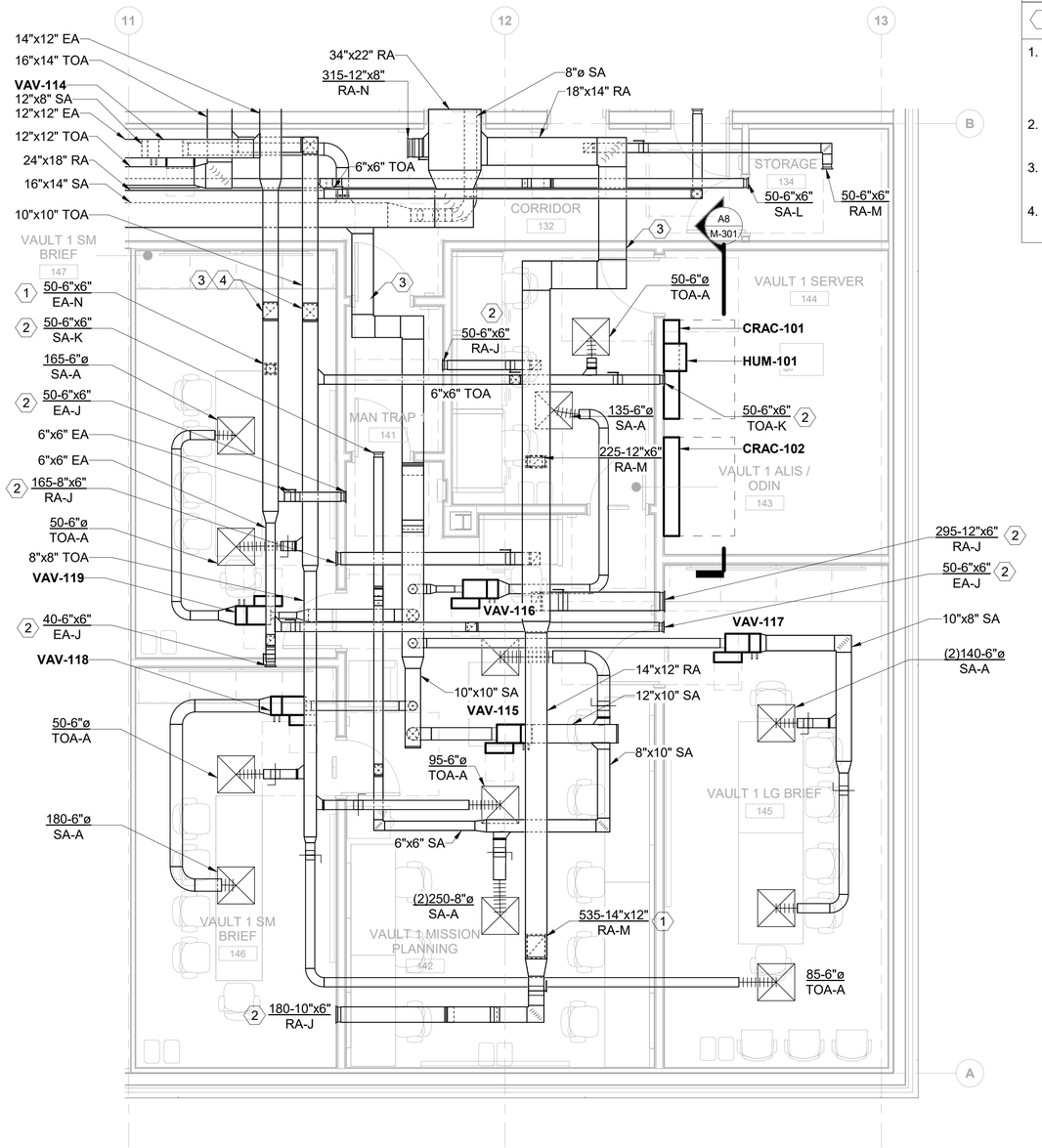
READY-TO-ADVERTISE (RTA) SUBMITTAL

GENERAL SHEET NOTES

1. SEE SHEET M-001 FOR GENERAL NOTES, LEGEND, SYMBOLS, AND ABBREVIATIONS.
2. DUCT SIZE TO VAV AND FPVAV BOXES TO BE SAME AS NECK SIZE SHOWN IN VAV AND FPVAV SCHEDULES ON SHEET M-602 UNLESS NOTED OTHERWISE.
3. DUCT SIZE TO DIFFUSERS, REGISTERS AND GRILLES TO BE SAME SIZE AS NECK SIZE SHOWN ON AIR DISTRIBUTION DEVICE TAG UNLESS NOTED OTHERWISE.

SHEET KEYNOTES

1. PROVIDE BRANCH DUCT IN THE VERTICAL WITH MANUAL BALANCING DAMPER . PROVIDE DUCT MOUNTED LOUVERED GRILLE ON VERTICAL BRANCH DUCT MOUNTED AT 11' AFF.
2. SURFACE MOUNTED LOUVERED GRILLE MOUNTED AT 11' AFF.
3. PROVIDE ACOUSTIC Z-BEND ACROSS STC50 WALL. SEE DETAIL G2/M-503 FOR FURTHER REQUIREMENTS.
4. Z-BEND IS IN THE VERTICAL DIRECTION.



PLAN NORTH

A8 HVAC ENLARGED PLAN - AREA C - VAULT 1
SCALE: 1/4" = 1'-0"

0 2' 4' 8'

US Army Corps of Engineers ®

MARK	DESCRIPTION	DATE
0	READY-TO-ADVERTISE (RTA) SUBMITTAL	JUL 2025

DESIGNED BY: B. FONSECA
DRAWN BY: J. SMITH
CHECKED BY: C. DAZE
ISSUE DATE: JUL 2025
SOLICITATION NO.: W912QZ25RA001
CONTRACT NO.: W912QZ24D0007
SUBMITTED BY: B. STREEBIN
SIZE: ANSI D
FILE NAME:

US ARMY CORPS OF ENGINEERS
LITTLE ROCK DISTRICT
LITTLE ROCK, ARKANSAS

BURNS AND McDONNELL
9400 WARD PARKWAY,
KANSAS CITY, MO 64114
165438

LICENSED PROFESSIONAL ENGINEER
BYRON EDWARD K. FONSECA
M 41419
MECHANICAL
STATE OF CALIFORNIA
07/23/2025

F-35 SPECIAL ACCESS PROGRAM FACILITY
EBBING AIR NATIONAL GUARD BASE (ANGB), FORT SMITH, ARKANSAS

MECHANICAL ENLARGED PLANS

SHEET ID
M-403

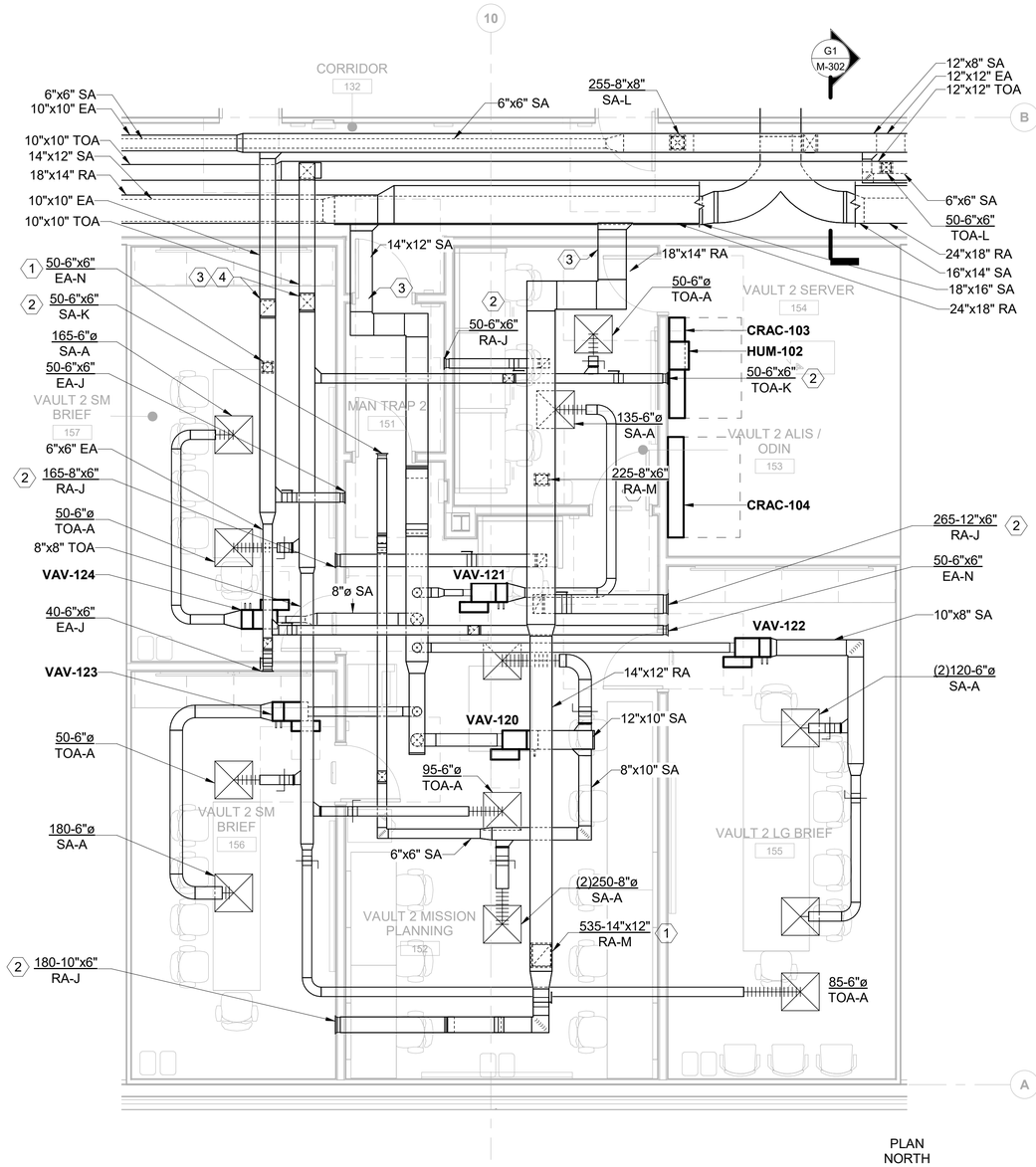
READY-TO-ADVERTISE (RTA) SUBMITTAL

GENERAL SHEET NOTES

1. SEE SHEET M-001 FOR GENERAL NOTES, LEGEND, SYMBOLS, AND ABBREVIATIONS.
2. DUCT SIZE TO VAV AND FPVAV BOXES TO BE SAME AS NECK SIZE SHOWN IN VAV AND FPVAV SCHEDULES ON SHEET M-602 UNLESS NOTED OTHERWISE.
3. DUCT SIZE TO DIFFUSERS, REGISTERS AND GRILLES TO BE SAME SIZE AS NECK SIZE SHOWN ON AIR DISTRIBUTION DEVICE TAG UNLESS NOTED OTHERWISE.

SHEET KEYNOTES

1. PROVIDE BRANCH DUCT IN THE VERTICAL WITH MANUAL BALANCING DAMPER . PROVIDE DUCT MOUNTED LOUVERED GRILLE ON VERTICAL BRANCH DUCT MOUNTED AT 11' AFF.
2. SURFACE MOUNTED LOUVERED GRILLE MOUNTED AT 11' AFF.
3. PROVIDE ACOUSTIC Z-BEND ACROSS STC50 WALL. SEE DETAIL G2/M-503 FOR FURTHER REQUIREMENTS.
4. Z-BEND IS IN THE VERTICAL DIRECTION.



A8 HVAC ENLARGED PLAN - AREA C - VAULT 2

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

0 2' 4' 8'

US Army Corps of Engineers ®

MARK	DESCRIPTION	DATE
0	READY-TO-ADVERTISE (RTA) SUBMITTAL	JUL 2025

DESIGNED BY: B. FONSECA
DRAWN BY: J. SMITH
CHECKED BY: C. DAZE
SUBMITTED BY: B. STREEBIN
ISSUE DATE: JUL 2025
SOLICITATION NO.: W912QR25RA001
CONTRACT NO.: W912QR24C0007
SIZE: ANSI D
FILE NAME:

US ARMY CORPS OF ENGINEERS
LITTLE ROCK DISTRICT
LITTLE ROCK, ARKANSAS

BURNS AND McDONNELL
9400 WARD PARKWAY,
KANSAS CITY, MO 64114
16543B

LICENSED PROFESSIONAL ENGINEER
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M 41419
MECHANICAL
STATE OF CALIFORNIA
07/23/2025

F-35: SPECIAL ACCESS PROGRAM FACILITY
EBBING AIR NATIONAL GUARD BASE (ANGB), FORT SMITH, ARKANSAS

MECHANICAL ENLARGED PLANS

SHEET ID
M-404

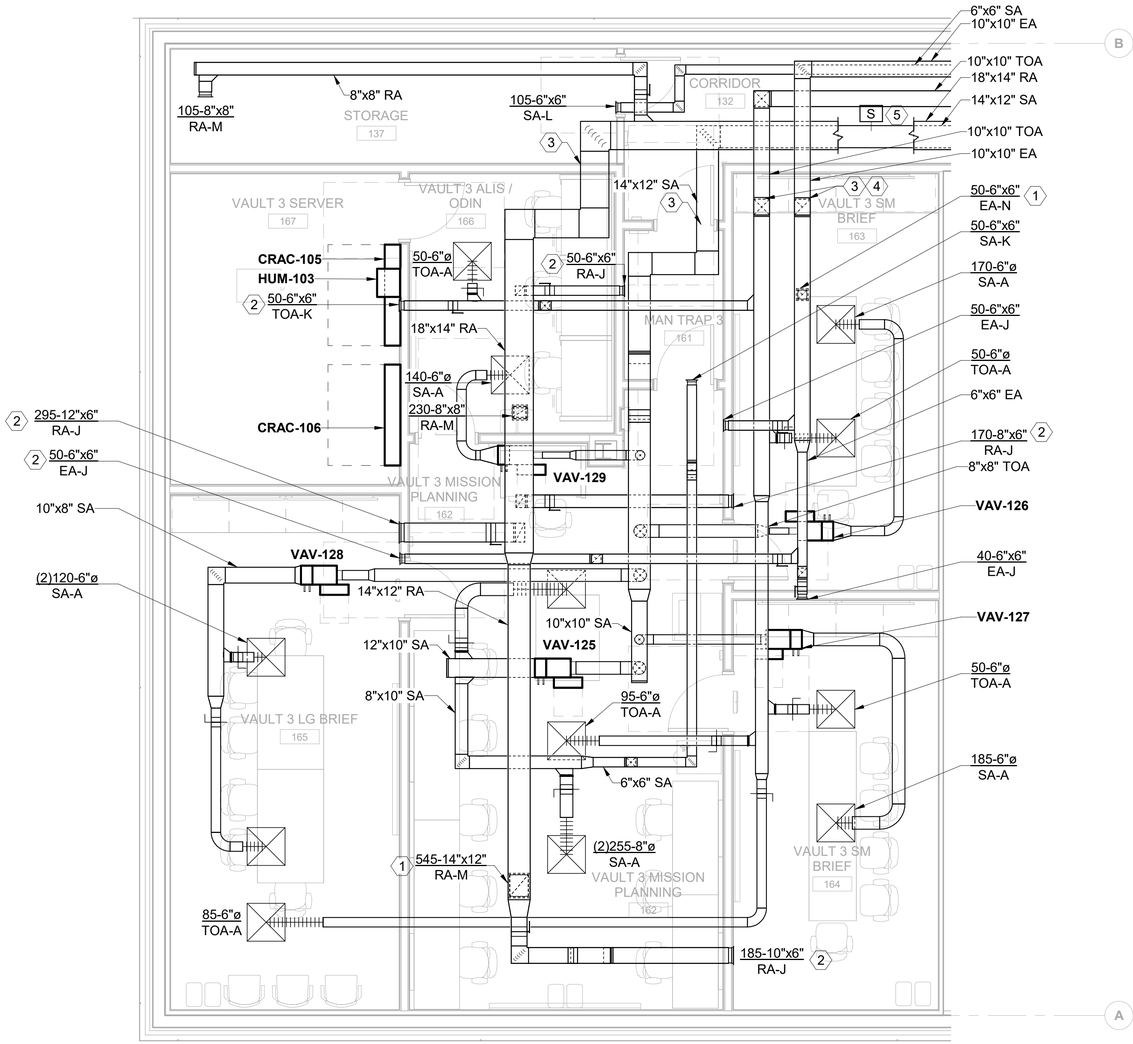
READY-TO-ADVERTISE (RTA) SUBMITTAL

GENERAL SHEET NOTES

1. SEE SHEET M-001 FOR GENERAL NOTES, LEGEND, SYMBOLS, AND ABBREVIATIONS.
2. DUCT SIZE TO VAV AND FPVAV BOXES TO BE SAME AS NECK SIZE SHOWN IN VAV AND FPVAV SCHEDULES ON SHEET M-602 UNLESS NOTED OTHERWISE.
3. DUCT SIZE TO DIFFUSERS, REGISTERS AND GRILLES TO BE SAME SIZE AS NECK SIZE SHOWN ON AIR DISTRIBUTION DEVICE TAG UNLESS NOTED OTHERWISE.

SHEET KEYNOTES

1. PROVIDE BRANCH DUCT IN THE VERTICAL WITH MANUAL BALANCING DAMPER . PROVIDE DUCT MOUNTED LOUVERED GRILLE ON VERTICAL BRANCH DUCT MOUNTED AT 11' AFF.
2. SURFACE MOUNTED LOUVERED GRILLE MOUNTED AT 11' AFF.
3. PROVIDE ACOUSTIC Z-BEND ACROSS STC50 WALL. SEE DETAIL G2/M-503 FOR FURTHER REQUIREMENTS.
4. Z-BEND IS IN THE VERTICAL DIRECTION.
5. INSTALL DUCT STATIC PRESSURE IN RECTANGULAR SUPPLY AIR DUCT TO SERVE AHU-101 SUPPLY FAN CONTROL.



A7 HVAC ENLARGED PLAN - AREA C - VAULT 3
SCALE: 1/4" = 1'-0"

0 2' 4' 8'

US Army Corps of Engineers ®

MARK	DESCRIPTION	DATE
0	READY-TO-ADVERTISE (RTA) SUBMITTAL	JUL 2025

DESIGNED BY: B. FONSECA
DRAWN BY: J. SMITH
CHECKED BY: C. DAZE
SUBMITTED BY: B. STREEBIN
SIZE: ANSI D
ISSUE DATE: JUL 2025
SOLICITATION NO.: W912QZ25RA001
CONTRACT NO.: W912QZ24C0007
FILE NAME:

US ARMY CORPS OF ENGINEERS
LITTLE ROCK DISTRICT
LITTLE ROCK, ARKANSAS

BURNS AND McDONNELL
9400 WARD PARKWAY,
KANSAS CITY, MO 64114
165438

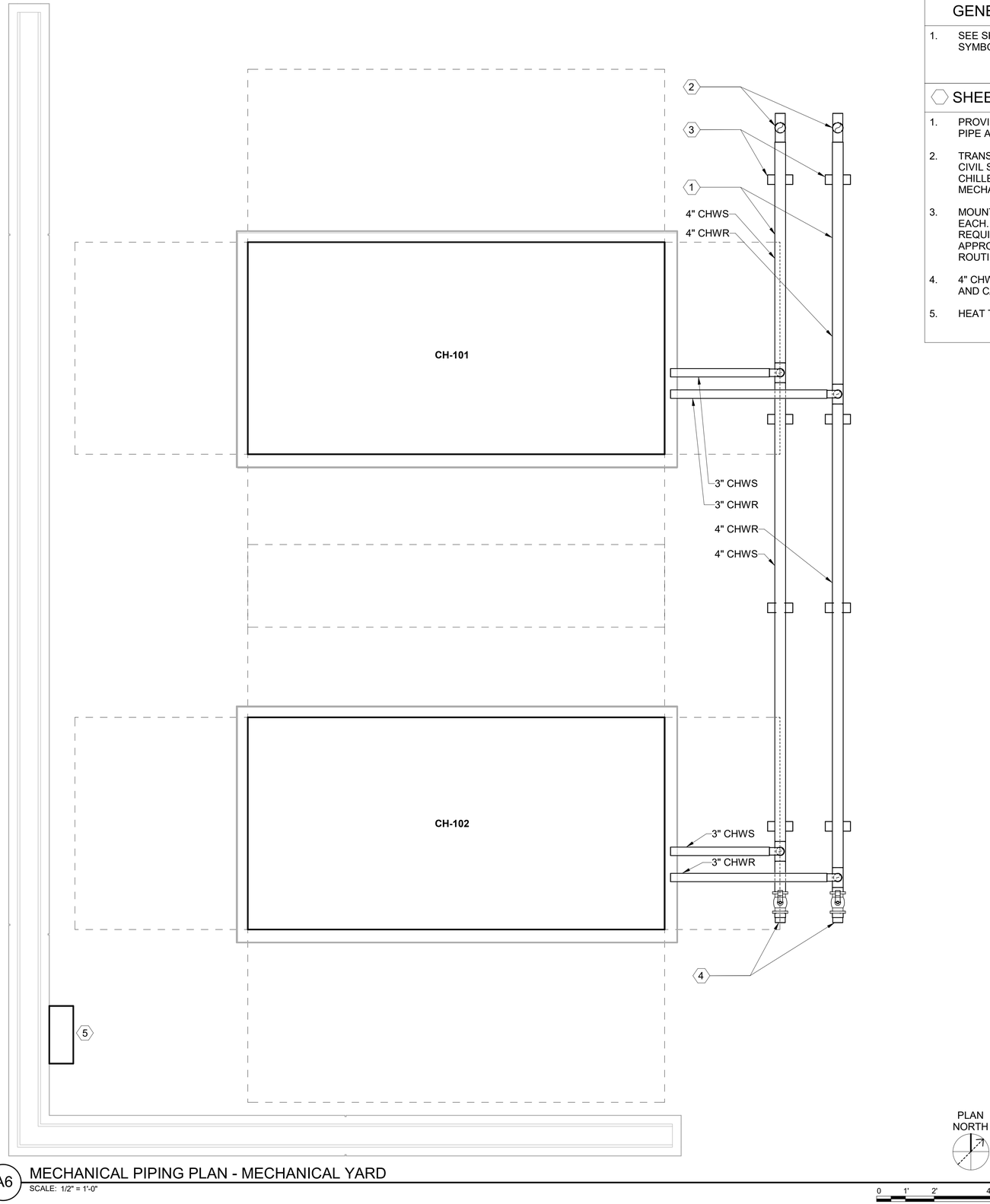
LICENSED PROFESSIONAL ENGINEER
BYRON EDWARD K. FONSECA
M 41419
MECHANICAL
STATE OF CALIFORNIA
07/23/2025

F-35: SPECIAL ACCESS PROGRAM FACILITY
EBBING AIR NATIONAL GUARD BASE (ANGB), FORT SMITH, ARKANSAS

MECHANICAL ENLARGED PLANS

SHEET ID
M-405

READY-TO-ADVERTISE (RTA) SUBMITTAL



GENERAL SHEET NOTES

1. SEE SHEET M-001 FOR GENERAL NOTES, LEGEND, SYMBOLS, AND ABBREVIATIONS.

SHEET KEYNOTES

1. PROVIDE HEAT TRACE ON ALL ABOVE GRADE PIPE AND PIPE ACCESSORIES IN THE MECHANICAL YARD.
2. TRANSITION FROM BELOW TO ABOVE GRADE PIPING. SEE CIVIL SHEETS FOR BELOW GRADE PIPING CONTINUATION. CHILLER CONTROL WIRE SHALL BE ROUTED TO THE MECHANICAL ROOM IN THE SAME UTILITY TRENCH.
3. MOUNT INDIVIDUAL PIPES ON A DEDICATED PIPE SUPPORT EACH. SEE DETAIL A14/M-505 FOR PIPE SUPPORT REQUIREMENTS. PIPE SUPPORT LOCATIONS ARE APPROXIMATE, CONFIRM LOCATIONS WITH FINAL PIPE ROUTING.
4. 4" CHWS/CHWR STUBOUTS WITH CAMLOCK COUPLINGS AND CAPS FOR TEMPORARY CHILLER CONNECTION.
5. HEAT TRACE ELECTRICAL PANEL.

PLAN NORTH

A6 MECHANICAL PIPING PLAN - MECHANICAL YARD
SCALE: 1/2" = 1'-0"

0 1' 2' 4'

US Army Corps of Engineers ®

MARK	DESCRIPTION	DATE
0	READY-TO-ADVERTISE (RTA) SUBMITTAL	JUL 2025

DESIGNED BY: B. FONSECA
DRAWN BY: J. SMITH
CHECKED BY: C. DICKEY
SUBMITTED BY: B. STREEBIN
SIZE: ANSI D
ISSUE DATE: JUL 2025
SOLICITATION NO.: W912QR24A001
CONTRACT NO.: W912QR24C0007
FILE NAME:

US ARMY CORPS OF ENGINEERS
LITTLE ROCK DISTRICT
LITTLE ROCK, ARKANSAS

BURNS AND McDONNELL
9400 WARD PARKWAY,
KANSAS CITY, MO 64114
165438

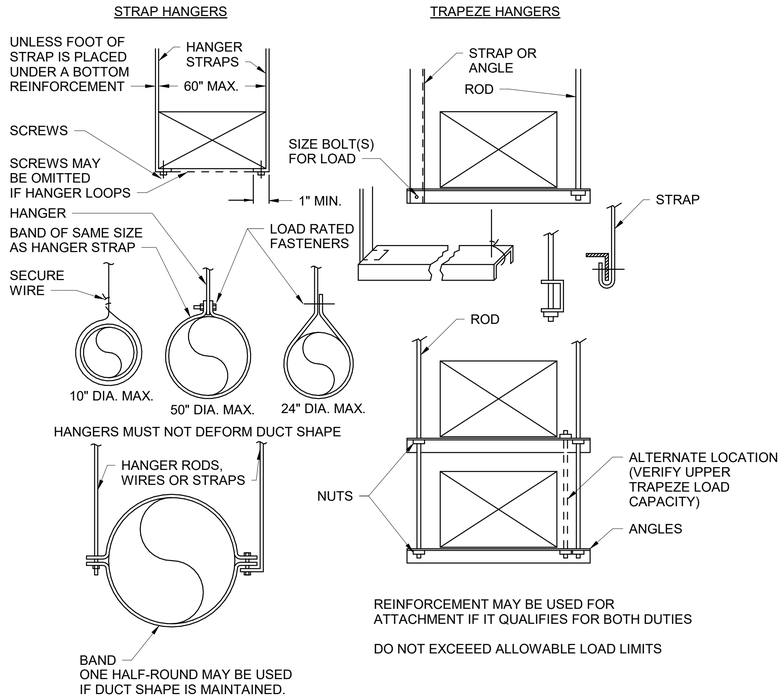
LICENSED PROFESSIONAL ENGINEER
BYRON EDWARD K. FONSECA
M 41419
MECHANICAL
STATE OF CALIFORNIA
07/23/2025

F-35: SPECIAL ACCESS PROGRAM FACILITY
EBBING AIR NATIONAL GUARD BASE (ANGB), FORT SMITH, ARKANSAS

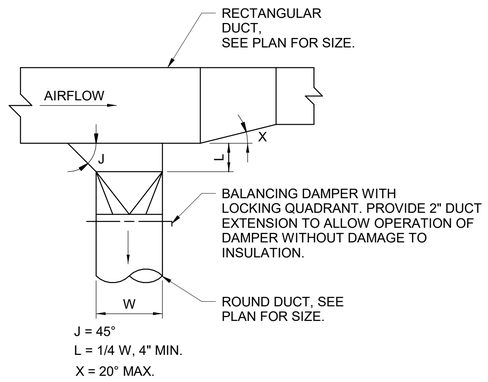
MECHANICAL ENLARGED PLANS

SHEET ID
M-406

READY-TO-ADVERTISE (RTA) SUBMITTAL

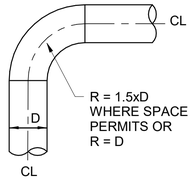


H1 LOWER DUCT HANGER ATTACHMENTS
SCALE: NTS

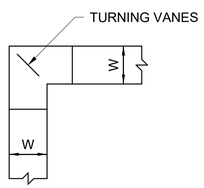


NOTES:
1. TAKEOFF ON BOTH SIDES OR SINGLE SIDE AS REQUIRED BY PLANS.
2. SEE SMACNA MANUAL FOR TAP-IN DETAILS.
3. WHEN FITTING HAS ONLY ONE SIDE SLOPED FOR A SINGLE SIDE TAKE-OFF, THE TAP-IN SHALL BE INSTALLED IN SLOPED SIDE.
4. CLINCH LOCK CONNECTION TO DUCT SHALL HAVE CORNER SEALS. (SEE SMACNA MANUAL)

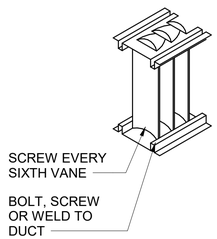
B1 ROUND BRANCH DUCT TAKE-OFF
SCALE: NTS



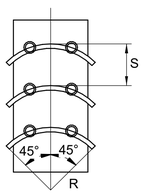
ROUND 90 ELBOW



SQUARE 90 ELBOW

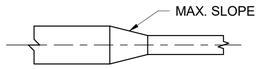


SINGLE VANE SCH.			
	R	S	GA
SMALL	2"	1.5"	24
LARGE	4.5"	2.25"	22

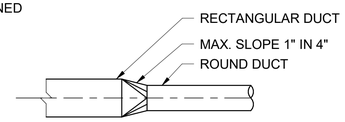


TURNING VANES

NOTES:
1. USE THIS DESIGN WHERE SQUARE 90°ELBOWS ARE SHOWN ON DRAWINGS OR IF SPACE DOES NOT PERMIT ROUND 90° ELBOWS.
2. BLADES IN TRANSITION ELBOWS SHALL BE DETERMINED ACCORDING TO SMALLEST WIDTH OF ELBOW.

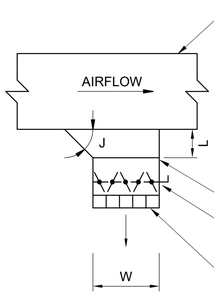


RECTANGULAR TRANSITION



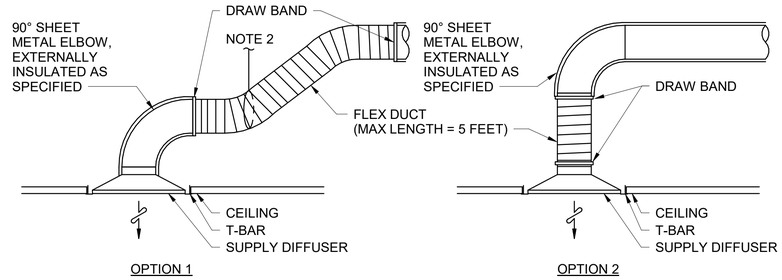
RECTANGULAR TO ROUND TRANSITION

A6 LOW VELOCITY DUCT LAYOUT
SCALE: NTS



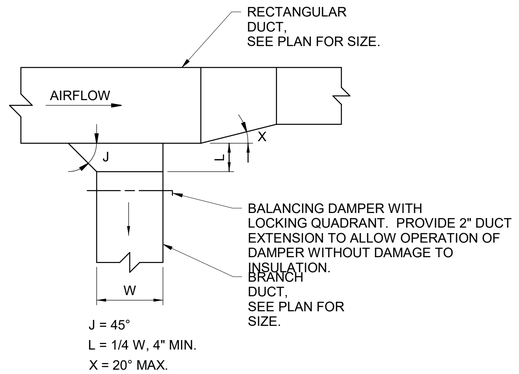
NOTES:
1. TAKEOFF ON BOTH SIDES OR SINGLE SIDE AS REQUIRED BY PLANS.
2. SEE SMACNA MANUAL FOR TAP-IN DETAILS.
3. WHEN FITTING HAS ONLY ONE SIDE SLOPED FOR A SINGLE SIDE TAKE-OFF, THE TAP-IN SHALL BE INSTALLED IN SLOPED SIDE.
4. CLINCH LOCK CONNECTION TO DUCT SHALL HAVE CORNER SEALS. (SEE SMACNA MANUAL).
5. EXTRACTORS, SCOOPS, DEFLECTORS OR DAMPERS THAT PROTRUDE INTO THE MAIN DUCT SHALL NOT BE USED. BALANCING DAMPERS SHALL BE LOCATED TO PREVENT PROTRUSION INTO THE MAIN DUCT AND TO PROVIDE STABLE AIR FLOW AND MINIMAL NOISE WHEN ADJUSTED.

L9 RECTANGULAR DUCT SIDEWALL DIFFUSER
SCALE: NTS



NOTES:
1. INSTALL PER OPTION 1 OR 2 FOR INDIVIDUAL INSTALLATIONS AS REQUIRED TO MAINTAIN A BEND RADIUS OF THE FLEXIBLE DUCT EQUAL TO OR GREATER THAN ONE DUCT DIAMETER
2. PROVIDE INTERMEDIATE SUPPORT, WHERE REQUIRED, TO PREVENT SAGGING AND KINKS AND TO KEEP FLEXIBLE DUCTWORK OFF SURROUNDING OBJECTS.

G13 FLEXIBLE DUCT AT DIFFUSER
SCALE: NTS



NOTES:
1. TAKEOFF ON BOTH SIDES OR SINGLE SIDE AS REQUIRED BY PLANS.
2. SEE SMACNA MANUAL FOR TAP-IN DETAILS.
3. WHEN FITTING HAS ONLY ONE SIDE SLOPED FOR A SINGLE SIDE TAKE-OFF, THE TAP-IN SHALL BE INSTALLED IN SLOPED SIDE.
4. CLINCH LOCK CONNECTION TO DUCT SHALL HAVE CORNER SEALS. (SEE SMACNA MANUAL).
5. EXTRACTORS, SCOOPS, DEFLECTORS OR DAMPERS THAT PROTRUDE INTO THE MAIN DUCT SHALL NOT BE USED. BALANCING DAMPERS SHALL BE LOCATED TO PREVENT PROTRUSION INTO THE MAIN DUCT AND TO PROVIDE STABLE AIR FLOW AND MINIMAL NOISE WHEN ADJUSTED.

A13 RECTANGULAR BRANCH DUCT TAKE-OFF
SCALE: NTS



US Army Corps of Engineers ®

MARK	DESCRIPTION	DATE
0	READY-TO-ADVERTISE (RTA) SUBMITTAL	JUL 2025

ISSUE DATE: JUL 2025
SOLICITATION NO.: W912T2S25RA001
CONTRACT NO.: W912T2S24F0007

DESIGNED BY: B. FONSECA
DRAWN BY: J. SMITH
CHECKED BY: C. LAZZE
SUBMITTED BY: B. STREEBIN
SIZE: ANSI D
FILE NAME:

US ARMY CORPS OF ENGINEERS
LITTLE ROCK DISTRICT
LITTLE ROCK, ARKANSAS

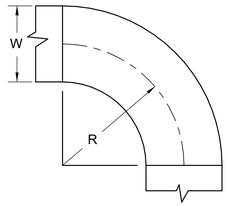
BURNS AND McDONNELL
9400 WARD PARKWAY
KANSAS CITY, MO 64114
165438

F-35 SPECIAL ACCESS PROGRAM FACILITY
EBBING AIR NATIONAL GUARD BASE (ANGB), FORT SMITH, ARKANSAS

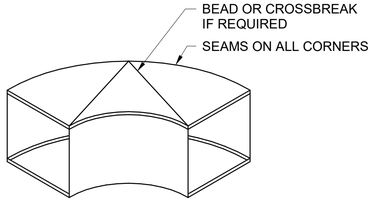
MECHANICAL DETAILS

SHEET ID
M-501

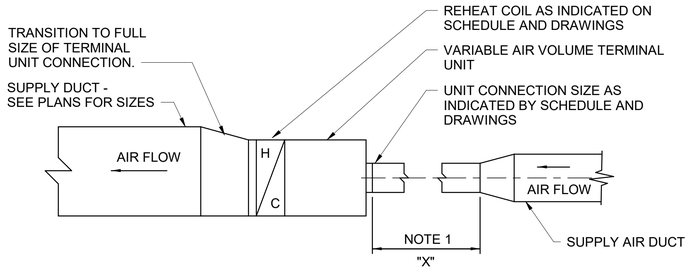
READY-TO-ADVERTISE (RTA) SUBMITTAL



RADIUS ELBOW
CENTERLINE R= W

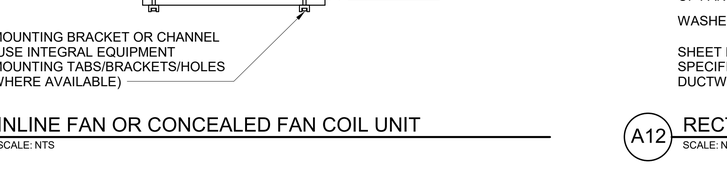


E1 RADIUS DUCT ELBOW
SCALE: NTS



NOTES:
1. INLET DUCT TO BE UNIT CONNECTION SIZE WITH A MINIMUM OF 3 DUCT DIAMETERS STRAIGHT LENGTH.
2. NO FLEXIBLE DUCTWORK ON UNIT INLET OR OUTLET DUCT IS ALLOWED.

K6 VAV TERMINAL UNIT
SCALE: NTS

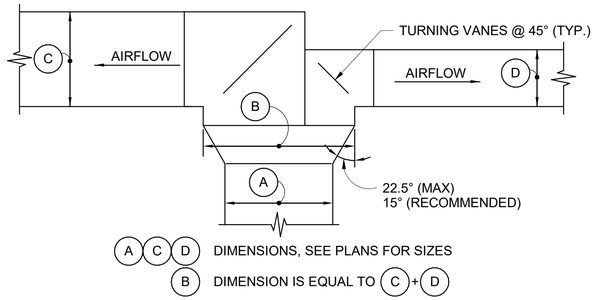


NOTES:
1. INLET DUCT TO BE UNIT CONNECTION SIZE WITH A MINIMUM OF 3 DUCT DIAMETERS LENGTH OF STRAIGHT DUCT.
2. NO FLEXIBLE DUCTWORK ON UNIT INLET DUCT IS ALLOWED.
3. PROVIDE CLEARANCE BELOW VAV BOX FOR MAINTENANCE ACCESS, FROM UNDERSIDE OF VAV BOX TO CEILING.

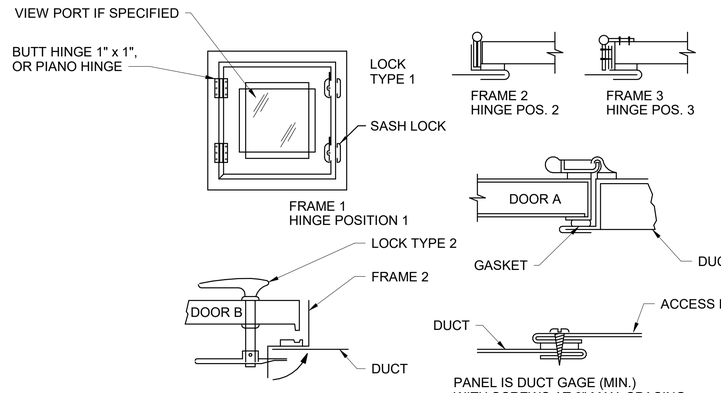
E6 PARALLEL FAN POWERED VAV TERMINAL UNIT
SCALE: NTS

A1 DUCTWORK CONNECTED TO LOUVER1
SCALE: NTS

A6 INLINE FAN OR CONCEALED FAN COIL UNIT
SCALE: NTS



M13 LOW PRESSURE DUCT TEE FITTING
SCALE: NTS



	DOOR SIZE	NO. OF HINGES	NO. OF LOCKS	METAL GAGE		
				FRAME	DOOR	BACK
2" W.G. STATIC AND LESS	12" x12" 16" x 20" 24" x 24"	2 2 3	1-S 2-S 2-S	24 22 22	26 24 24	26 26 26
3" W.G. STATIC	12" x 12" 16" x 20" 24" x 24"	2 2 3	1-S 1-S, 1-T, 1-B 2-S, 1-T, 1-B	22 20 20	22 20 20	26 26 26

B - BOTTOM
S - SIDE
T - TOP

E13 DUCT ACCESS DOORS
SCALE: NTS

A12 RECTANGULAR FLEXIBLE CONNECTION
SCALE: NTS

LICENSED PROFESSIONAL ENGINEER
BYRON EDWARD K. FONSECA
M 41419
MECHANICAL
STATE OF CALIFORNIA
07/23/2025

US Army Corps of Engineers ®

MARK	DESCRIPTION	DATE
0	READY-TO-ADVERTISE (RTA) SUBMITTAL	JUL 2025

DESIGNED BY: B. FONSECA
DRAWN BY: J. SMITH
CHECKED BY: C. DUKE
ISSUE DATE: JUL 2025
SOLICITATION NO.: W912QR25RA001
CONTRACT NO.: W912QR24F0007
SUBMITTED BY: B. STREEBIN
SIZE: ANSI D
FILE NAME:

US ARMY CORPS OF ENGINEERS
LITTLE ROCK DISTRICT
LITTLE ROCK, ARKANSAS

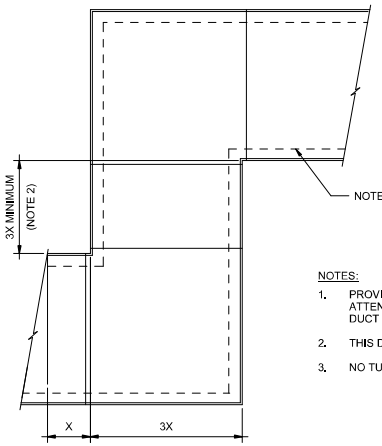
BURNS AND McDONNELL
9400 WARD PARKWAY,
KANSAS CITY, MO 64114
16438

F-35: SPECIAL ACCESS PROGRAM FACILITY
EBBING AIR NATIONAL GUARD BASE (ANGB), FORT SMITH, ARKANSAS

MECHANICAL DETAILS

SHEET ID
M-502

READY-TO-ADVERTISE (RTA) SUBMITTAL

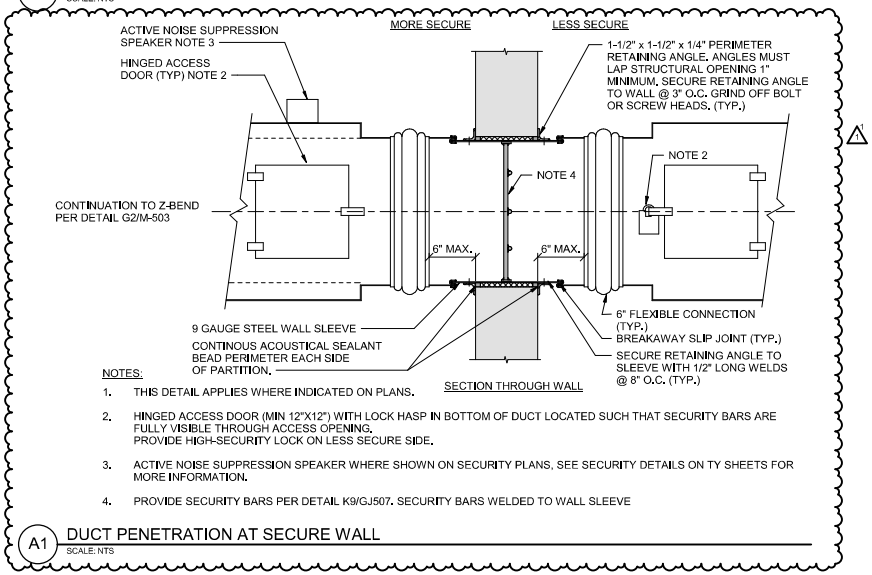


NOTES:

1. PROVIDE A MINIMUM OF 10 FEET LENGTH AND TWO 90° ELBOWS OF CLASS 2 SOUND ATTENUATED DUCTWORK. CONSTRUCTION MUST PRE-INSULATED DOUBLE WALL DUCT IN ACCORDANCE WITH SPECIFICATION 23 30 00.
2. THIS DETAIL APPLIES WHERE INDICATED ON PLANS.
3. NO TURNING VANES TO BE INSTALLED IN Z-BEND DUCT.

G2 DUCT PENETRATION AT SECURE OR STC50 WALL

SCALE: NTS

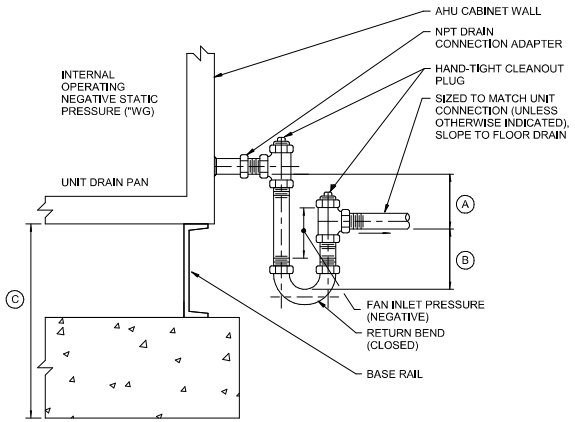


NOTES:

1. THIS DETAIL APPLIES WHERE INDICATED ON PLANS.
2. HINGED ACCESS DOOR (MIN 12"X12") WITH LOCK HASP IN BOTTOM OF DUCT LOCATED SUCH THAT SECURITY BARS ARE FULLY VISIBLE THROUGH ACCESS OPENING. PROVIDE HIGH-SECURITY LOCK ON LESS SECURE SIDE.
3. ACTIVE NOISE SUPPRESSION SPEAKER WHERE SHOWN ON SECURITY PLANS, SEE SECURITY DETAILS ON TY SHEETS FOR MORE INFORMATION.
4. PROVIDE SECURITY BARS PER DETAIL K9/GJ507. SECURITY BARS WELDED TO WALL SLEEVE

A1 DUCT PENETRATION AT SECURE WALL

SCALE: NTS



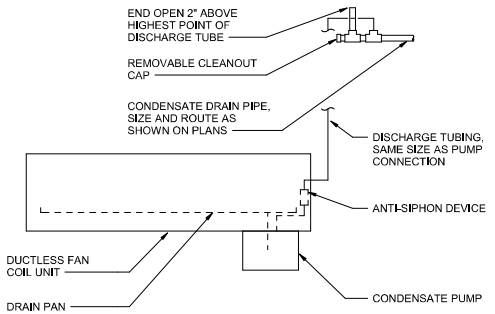
DRAW THRU UNIT

NOTES:

- (A) DIMENSION EQUAL TO MAXIMUM FAN INLET PRESSURE (INCH WC) +1" (MIN.)
- (B) DIMENSION EQUAL TO (A) /2 (MIN.)
- (C) INCREASE EQUIPMENT BASE RAIL HEIGHT AS REQUIRED TO ACHIEVE REQUIRED TRAP DEPTH

G12 HVAC CONDENSATE TRAP DRAIN

SCALE: NTS



A12 DUCTLESS FAN COIL CONDENSATE PUMP

SCALE: NTS

LICENSED PROFESSIONAL ENGINEER
AARON EDWARD K. FONSECA
M 41419
MECHANICAL
STATE OF CALIFORNIA
02/09/2026

US Army Corps of Engineers ®

MARK	DESCRIPTION	DATE
0	READY-TO-ADVERTISE (RTA) SUBMITTAL	JUL 2026
1	AMM067 - REVISED DUCT PENETRATION DETAIL	FEB 2026

DESIGNED BY: B. FONSECA
DRAWN BY: J. SMITH
CHECKED BY: C. DATE
ISSUE DATE: JUL 2026
SOLICITATION NO.: W912S424R0007
CONTRACT NO.: W912S424F0007
CONSTRUCTED BY: B. STREEBIN
SIZE: ANSI D
FILE NAME

US ARMY CORPS OF ENGINEERS
LITTLE ROCK DISTRICT
LITTLE ROCK, ARKANSAS

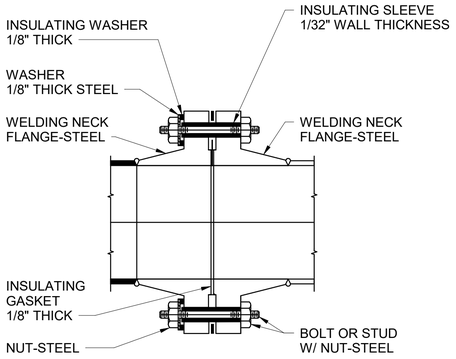
BURNS AND McDONNELL
9400 WARD PARKWAY
KANSAS CITY, MO 64114
16548

F-35, SPECIAL ACCESS PROGRAM FACILITY
EBBING AIR NATIONAL GUARD BASE (ANGB), FORT SMITH, ARKANSAS

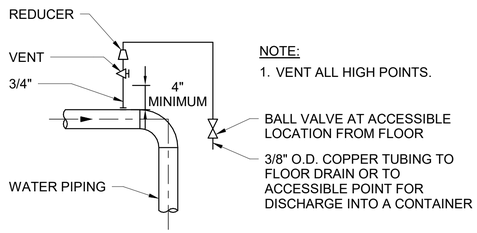
MECHANICAL DETAILS

SHEET ID
M-503.1

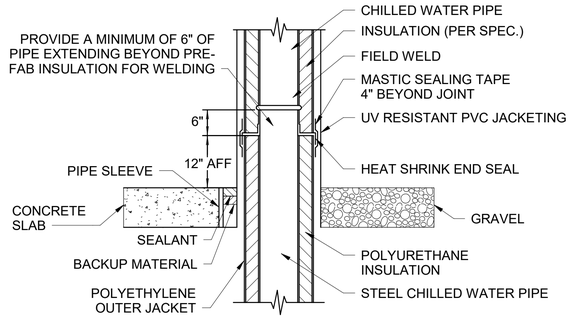
READY-TO-ADVERTISE (RTA) SUBMITTAL



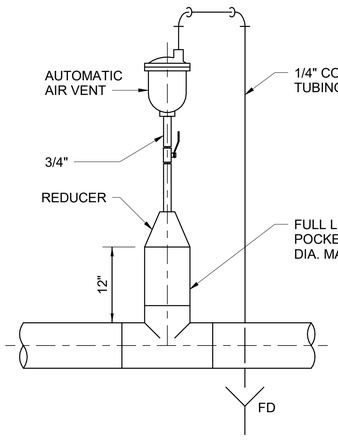
K1 INSULATING FLANGE
SCALE: NTS



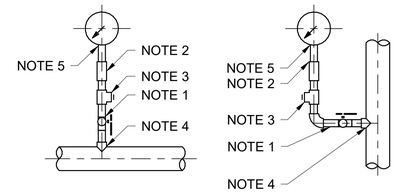
K6 MANUAL AIR VENT
SCALE: NTS



K12 ABOVE GROUND/BELOW GROUND CHILLED WATER PIPE TRANSITION
SCALE: NTS



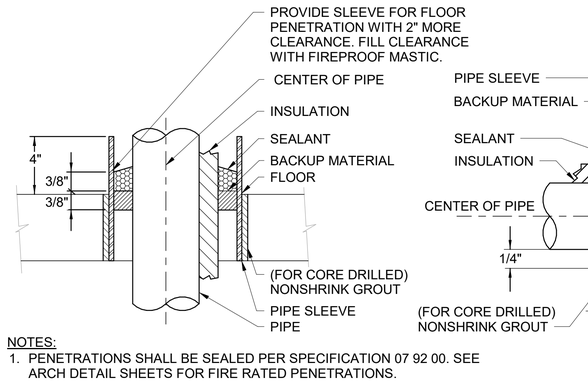
F1 AUTOMATIC AIR VENT
SCALE: NTS



NOTES:

1. PIPING AND VALVES AS SPECIFIED FOR MAIN LINE. (1/2")
2. PULSATION DAMPER AS SPECIFIED.
3. TEST TEE WITH PLUGGED BRANCH, 1/4" MIN. SIZE.
4. WELD-O-LET OR THREAD-O-LET BASED ON SPECIFIED JOINTS FOR FOR MAIN LINE.
5. REDUCE AS REQUIRED TO FIT PRESSURE GAUGE.

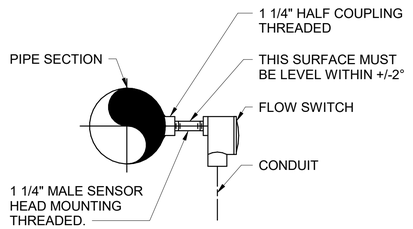
F6 PRESSURE GAUGE DEVICE INSTALLATION
SCALE: NTS



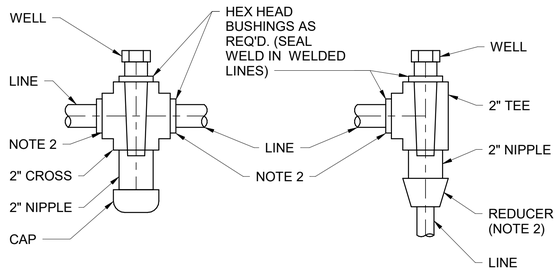
NOTES:

1. PENETRATIONS SHALL BE SEALED PER SPECIFICATION 07 92 00. SEE ARCH DETAIL SHEETS FOR FIRE RATED PENETRATIONS.

F12 PIPE PENETRATIONS THROUGH WALLS AND FLOORS
SCALE: NTS



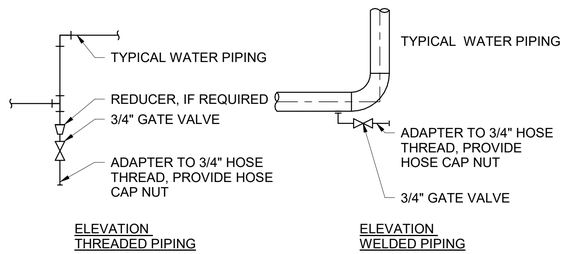
A1 FLOW SWITCH
SCALE: NTS



NOTES:

1. APPLIES TO ALL LINES 2" AND SMALLER, PLUS OTHERS AS REQUIRED.
2. USE BUSHINGS FOR 1 SIZE REDUCTION, OTHERWISE USE REDUCERS AND PIPE NIPPLE.

A6 THERMAL WELL INSTALLATION
SCALE: NTS



NOTES:

1. DRAIN ALL LOW POINTS.
2. WHERE DIRT LEGS ARE SHOWN ON PIPE RISER DIAGRAMS AND/OR PLANS LOCATE DRAIN AT BOTTOM OF DIRT LEG.

A12 LOW POINT DRAIN INSTALLATION
SCALE: NTS

US Army Corps of Engineers ®

MARK	DESCRIPTION	DATE
0	READY-TO-ADV/ERTISE (RTA) SUBMITTAL	JUL 2025

DESIGNED BY: B. FONSECA
DRAWN BY: J. SMITH
CHECKED BY: C. DUCKETT
ISSUE DATE: JUL 2025
SOLICITATION NO.: W912T5-25-RA001
CONTRACT NO.: W912T5-24-C-0007
SUBMITTED BY: B. STREEBIN
SIZE: ANSI D
FILE NAME:

US ARMY CORPS OF ENGINEERS
LITTLE ROCK DISTRICT
LITTLE ROCK, ARKANSAS

BURNS AND McDONNELL
9400 WARD PARKWAY,
KANSAS CITY, MO 64114
165438

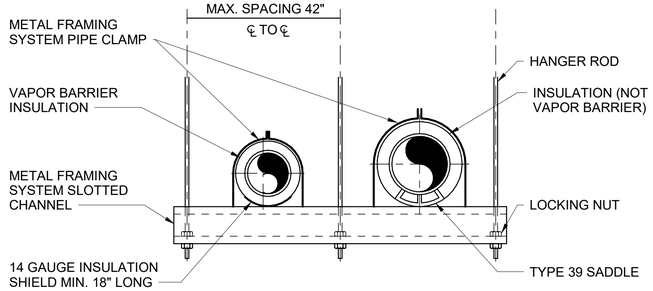
F-35 SPECIAL ACCESS PROGRAM FACILITY
EBBING AIR NATIONAL GUARD BASE (ANGB), FORT SMITH, ARKANSAS

MECHANICAL DETAILS

LICENSED PROFESSIONAL ENGINEER
BYRON EDWARD K. FONSECA
M 41419
MECHANICAL
STATE OF CALIFORNIA
07/23/2025

SHEET ID
M-504

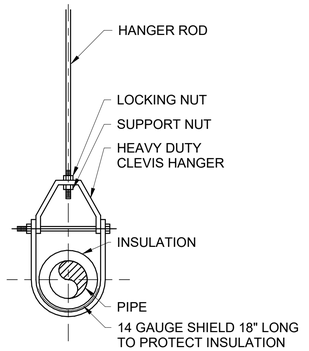
READY-TO-ADVERTISE (RTA) SUBMITTAL



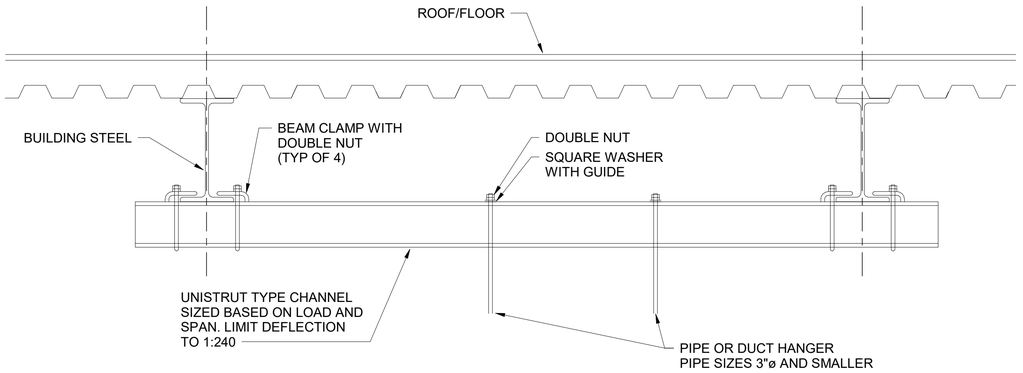
NOTES:

1. DETAIL APPLICABLE FOR COLD FLUID PIPING 6 INCH IPS AND SMALLER AND HOT FLUID PIPING 3 INCH IPS AND SMALLER.

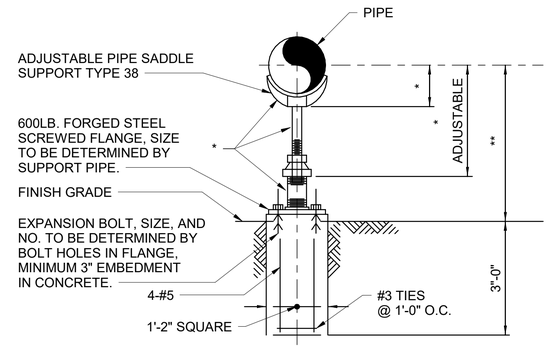
J4 PIPE HANGER - METAL FRAMING CHANNEL
SCALE: NTS



L14 PIPE HANGER - CLEVIS TYPE
SCALE: NTS



E4 MECHANICAL PIPE/DUCT SUPPORT STEEL DETAIL
SCALE: NTS



NOTES:

* SIZES AND DIMENSIONS DETERMINED BY PIPE SIZE

** DIMENSION DETERMINED BY PIPING, EQUIPMENT CONNECTIONS, CLEARANCES, AND OBSTRUCTIONS.

E14 PIPE SUPPORT DETAIL
SCALE: NTS

LICENSED PROFESSIONAL ENGINEER
BYRON EDWARD K. FONSECA
M 41419
MECHANICAL
STATE OF CALIFORNIA
07/23/2025

US Army Corps of Engineers ®

MARK	DESCRIPTION	DATE
0	READY-TO-ADVERTISE (RTA) SUBMITTAL	JUL 2025

DESIGNED BY: B. FONSECA
DRAWN BY: J. SMITH
CHECKED BY: C. DEAZE
SUBMITTED BY: B. STREEBIN
SIZE: ANSI D
ISSUE DATE: JUL 2025
SOLICITATION NO.: W912QR25RA001
CONTRACT NO.: W912QR24F0007
FILE NAME:

US ARMY CORPS OF ENGINEERS
LITTLE ROCK DISTRICT
LITTLE ROCK, ARKANSAS

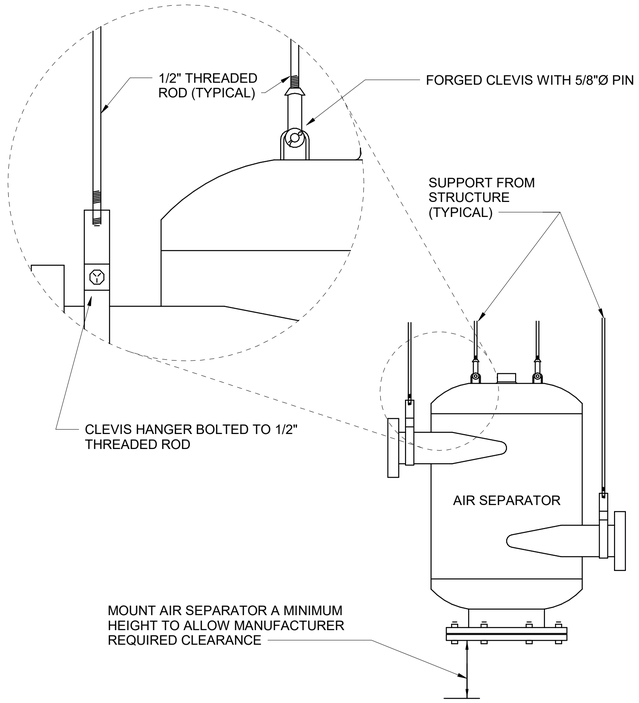
BURNS AND McDONNELL
9400 WARD PARKWAY,
KANSAS CITY, MO 64114
165438

F-35: SPECIAL ACCESS PROGRAM FACILITY
EBBING AIR NATIONAL GUARD BASE (ANGB), FORT SMITH, ARKANSAS

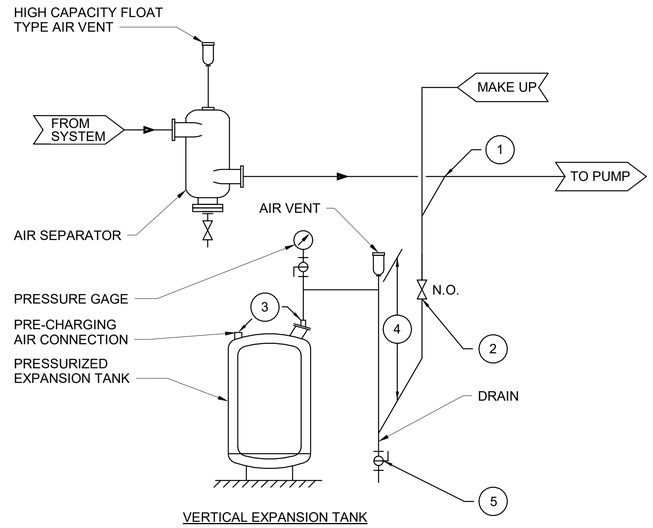
MECHANICAL DETAILS

SHEET ID
M-505

READY-TO-ADVERTISE (RTA) SUBMITTAL



F6 AIR SEPARATOR SUPPORT
SCALE: NTS

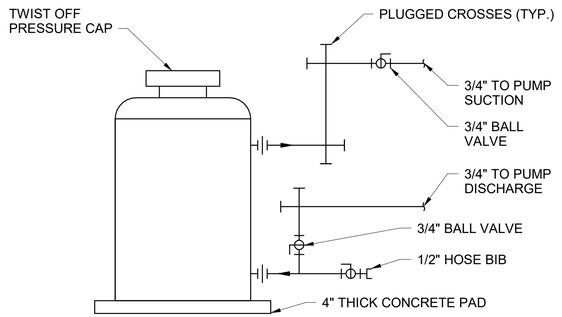


VERTICAL EXPANSION TANK

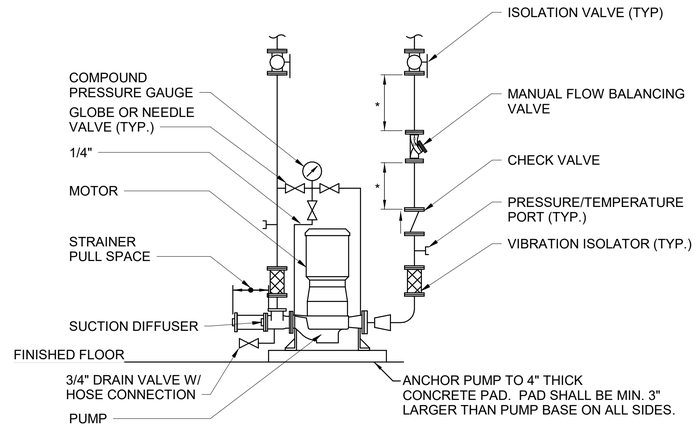
NOTES:

1. CONNECT TO SIDE OF MAIN. AVOID TOP OR BOTTOM CONNECTION TO PREVENT AIR OR DEBRIS FROM ENTERING PIPE TO TANK.
2. SHUT-OFF VALVE (LOCKED NORMALLY OPEN)
3. TANK CONNECTION LOCATIONS MAY VARY DEPENDING ON TANK SIZE AND MODEL.
4. PROVIDE 12" MIN. DROP FOR ANTI-THERMOSYPHON LOOP TO PREVENT HEATING OF TANK.
5. DRAIN VALVE REQUIRED TO PROPERLY PRECHARGE TANK.

F13 VERTICAL EXPANSION TANK WITH TANGENTIAL AIR SEPARATOR
SCALE: NTS



A6 SHOT FEEDER
SCALE: NTS



* STRAIGHT LENGTHS OF UNOBSTRUCTED PIPE WITHOUT INLINE APPURTENANCES MUST BE INSTALLED UP/DOWNSTREAM OF FLOW BALANCING VALVE PER MFGR'S INSTALLATION INSTRUCTIONS

A13 INLINE PUMP
SCALE: NTS

LICENSED PROFESSIONAL ENGINEER
BYRON EDWARD K. FONSECA
M 41419
MECHANICAL
STATE OF CALIFORNIA
07/23/2025

US Army Corps of Engineers ®

MARK	DESCRIPTION	DATE
0	READY-TO-ADVERTISE (RTA) SUBMITTAL	JUL 2025

DESIGNED BY: B. FONSECA
DRAWN BY: J. SMITH
CHECKED BY: C. DICKEY
SUBMITTED BY: B. STREEBIN
SIZE: ANSI D
ISSUE DATE: JUL 2025
SOLICITATION NO.: W912QR25RA001
CONTRACT NO.: W912QR24D0007
FILE NAME:

US ARMY CORPS OF ENGINEERS
LITTLE ROCK DISTRICT
LITTLE ROCK, ARKANSAS

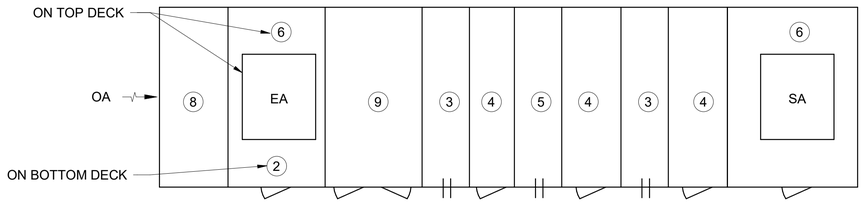
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9400 WARD PARKWAY,
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165438

F-35 SPECIAL ACCESS PROGRAM FACILITY
EBBING AIR NATIONAL GUARD BASE (ANGB), FORT SMITH, ARKANSAS

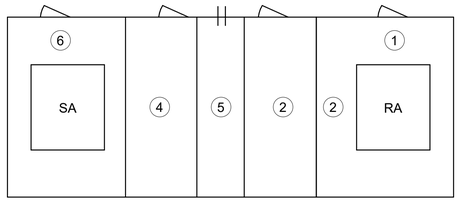
MECHANICAL DETAILS

SHEET ID
M-506

READY-TO-ADVERTISE (RTA) SUBMITTAL



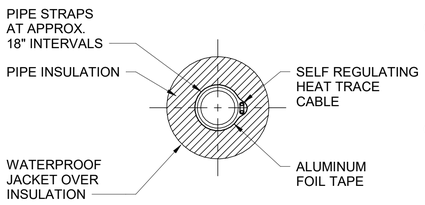
DOAS-101 & 102



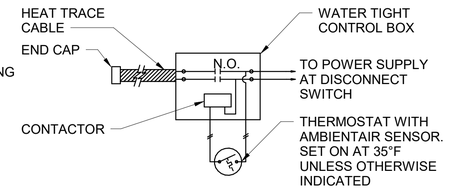
AHU-101 & 102

AIR HANDLING UNIT SECTIONS	
SECTION #	DESCRIPTION
1	MIXING BOX
2	FILTER RACKS
3	HOT WATER HEATING COIL
4	ACCESS
5	CHILLED WATER COOLING COIL
6	FAN SECTION
7	DISCHARGE PLENUM
8	INLET PLENUM
9	HEAT RECOVERY

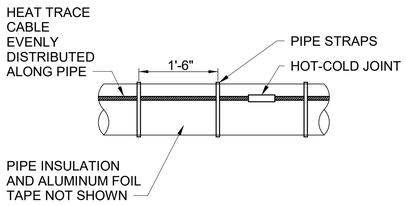
J1 AHU DIAGRAM
SCALE: NTS



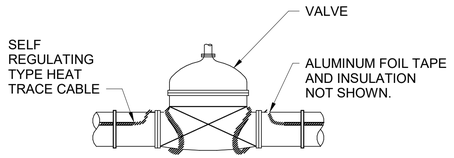
SECTION THRU PIPE



HEAT TRACE CONTROL BOX DIAGRAM



INSTALLATION DETAIL

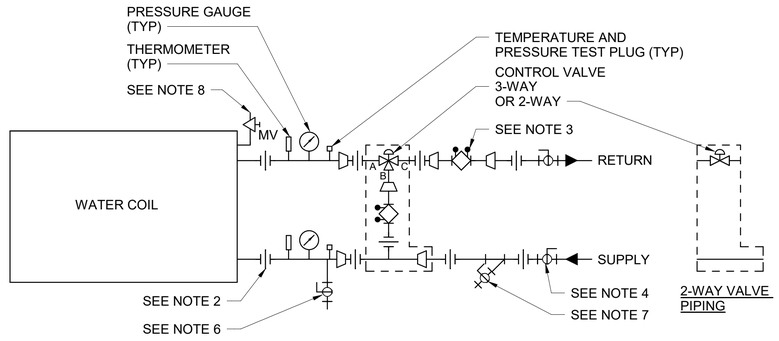


INSTALLATION AT VALVES

NOTE:

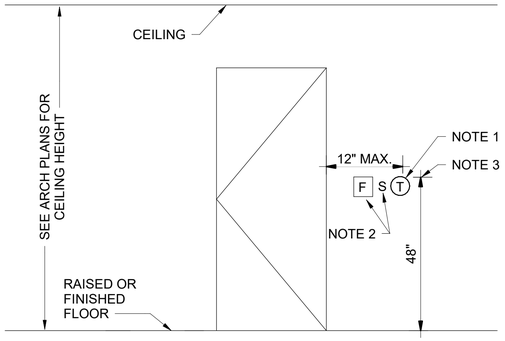
1. PROVIDE WEATHER RESISTANT LABELING ON EXTERIOR OF JACKET IDENTIFYING PIPES AS BEING "ELECTRIC TRACED" WITH VOLTAGE INDICATED.

J12 HEAT TRACING
SCALE: NTS



NOTES:

1. INSTALL REDUCERS AS REQUIRED FOR PIPE SIZE CHANGES.
2. LOCATE FLANGES AND UNIONS AND ARRANGE PIPING TO ALLOW FOR REMOVAL OF ALL COILS AND CONTROL VALVES.
3. BALANCING VALVES MUST BE INSTALLED IN CONFORMANCE WITH MANUFACTURER'S RECOMMENDED SPACING PROVIDING STRAIGHT LENGTHS OF UNOBSTRUCTED PIPING UPSTREAM AND DOWNSTREAM FROM "PIPE CHANGES IN DIRECTION" AND FROM "OTHER VALVES AND COMPONENTS" IN PIPING.
4. TYPE OF ISOLATION VALVE IS DEPENDENT UPON PIPING LINE SIZE. REFER TO SPECIFICATIONS FOR SPECIFIC REQUIREMENTS. TYPICAL ALL ISOLATION VALVES THIS DETAIL.
5. ALL COILS MUST BE PIPED FOR COUNTERFLOW ARRANGEMENT; I.E. CHILLED WATER ENTERS COIL NEAREST COIL FACE WHERE COLDEST AIR LEAVES OR HOT WATER ENTERS COIL NEAREST COIL FACE WHERE HOTTEST AIR LEAVES.
6. PROVIDE 3/4" BALL VALVE WITH 3/4" HOSE CONNECTION FOR DRAINING AND FLUSHING. WHEN DRAIN CONNECTION IS INSIDE OF CASING DRAIN MUST BE INSTALLED THROUGH HVAC UNIT CASING TO PERMIT COMPLETE DRAINAGE OF COILS FROM UNIT EXTERIOR. TYPICAL ALL DRAIN AND FLUSH CONNECTIONS.
7. PROVIDE STRAINER WITH 3/4" BALL VALVE WITH 3/4" HOSE CONNECTION FOR FLUSHING. TYPICAL ALL STRAINERS.
8. VENTS MUST BE INSTALLED THROUGH HVAC UNIT CASING TO PERMIT COMPLETE VENTING OF COILS FROM UNIT EXTERIOR. TYPICAL ALL VENT CONNECTIONS.
9. DO NOT INSTALL THERMOMETERS OR PRESSURE GAUGES ON DECENTRALIZED EQUIPMENT OR TERMINAL UNITS SUCH AS FAN COILS OR UNIT HEATERS.



DEVICE MOUNTING NOTES:

1. THERMOSTATS AND OTHER WALL-MOUNTED DEVICES SHALL BE MOUNTED WITHIN 12" OF DOOR FRAME. COORDINATE WITH ARCHITECTURAL DRAWING A-521. WHERE DEVICES ARE SHOWN ADJACENT TO THE DOOR ON THE HINGE-SIDE OF THE DOOR, AND THE DOOR SWINGS IN A MANNER THAT SHALL BLOCK THE DEVICE, MOUNT THE DEVICE 12" BEYOND THE DOOR SWING.
2. COORDINATE MOUNTING LOCATION WITH OTHER TRADES TO ENSURE A UNIFORM MOUNTING AND AESTHETICALLY-PLEASING APPEARANCE. DIMENSIONS SHOWN ON ARCHITECTURAL DRAWINGS SHALL GOVERN.
3. MOUNTING HEIGHT INDICATED IN LEGEND AND ON THE DRAWINGS SHALL BE THE DISTANCE MEASURED FROM THE CENTER OF THE DEVICE TO THE FINISHED FLOOR.

A6 TYPICAL DEVICE MOUNTING
SCALE: NTS

A12 SINGLE WATER COIL
SCALE: NTS

LICENSED PROFESSIONAL ENGINEER
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STATE OF CALIFORNIA
07/23/2025

US Army Corps of Engineers ®

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0	READY-TO-ADVERTISE (RTA) SUBMITTAL	JUL 2025

DESIGNED BY: B. FONSECA
DRAWN BY: J. SMITH
CHECKED BY: C. DUNN
SUBMITTED BY: B. STREEBIN
ISSUE DATE: JUL 2025
SOLICITATION NO.: W912725RA001
CONTRACT NO.: W912725A40007
SIZE: ANSI D
FILE NAME:

US ARMY CORPS OF ENGINEERS
LITTLE ROCK DISTRICT
LITTLE ROCK, ARKANSAS

BURNS AND McDONNELL
9400 WARD PARKWAY,
KANSAS CITY, MO 64114
165438

F-35 SPECIAL ACCESS PROGRAM FACILITY
EBBING AIR NATIONAL GUARD BASE (ANGB), FORT SMITH, ARKANSAS

MECHANICAL DETAILS

SHEET ID
M-507

READY-TO-ADVERTISE (RTA) SUBMITTAL

AIR HANDLING UNIT SCHEDULE (1/2)

TAG	LOCATION	ALTITUDE (FT)	SUPPLY AIR		SUPPLY FAN											PRE-FILTER			MAIN FILTER			DESIGN FILTER CONDITION
			MAX AIRFLOW (CFM)	MIN AIRFLOW (CFM)	QUANTITY	TYPE	EXTERNAL STATIC PRESSURE (IN W.C.)	BHP	RPM	DRIVE TYPE	MOTOR					TYPE	PRESSURE DROP (IN W.C.)	MERV	TYPE	PRESSURE DROP (IN W.C.)	MERV	
											SPEED CONTROL	HP	RPM	VOLTS	PHASE							
AHU-101	171 - MECHANICAL	449	9500	2880	1	PLENUM	3.5	14.7	2525	DIRECT	VFD	20	1800	460	3	PLEATED	0.65	8	CARTRIDGE	1.5	13	MID LIFE
AHU-102	251 - MECHANICAL	449	10400	3120	1	PLENUM	3.2	13.2	1907	DIRECT	VFD	15	1800	460	3	PLEATED	0.65	8	CARTRIDGE	1.5	13	MID LIFE

AIR HANDLING UNIT SCHEDULE (2/2)

TAG	TYPE	COOLING COIL														DISCHARGE SOUND POWER LEVEL (dB)								ELECTRICAL				WEIGHT (LBS)	NOTES
		CAPACITY		AIRSIDE							WATERSIDE																		
		TOTAL (MBH)	SENSIBLE (MBH)	DESIGN FLOW (CFM)	EAT DB (DEG. F)	EAT WB (DEG. F)	LAT DB (DEG. F)	LAT WB (DEG. F)	PRESSURE DROP (IN W.C.)	MAX. FACE VELOCITY (FT/MIN)	FLOW (GPM)	EWT (DEG. F)	LWT (DEG. F)	PRESSURE DROP (FT W.C.)	ROWS	FPI	63 HZ	125 HZ	250 HZ	500 HZ	1000 HZ	2000 HZ	4000 HZ	8000 HZ	FLA	HZ	PHASE	VOLTS		
AHU-101	CHILLED WATER	295.6	257.8	9500	78	62.3	52.3	51.9	0.5	500	39.4	42	57	7.5	4	12	83	88	90	88	87	83	85	77	27	60	3	460	2099	1,2,3,4,5
AHU-102	CHILLED WATER	336.8	282.2	10400	78	63.4	52.3	51.9	0.5	500	44.9	42	57	7.5	4	12	83	88	90	88	87	83	85	77	21	60	3	460	2600	1,2,3,4,5

NOTES:
1. PROVIDE WITH MANUFACTURER'S DISCONNECT, OVERLOAD PROTECTION, STARTER/VFD, AND SINGLE POINT POWER CONNECTION IN ACCORDANCE WITH DIVISION 26 SPECIFICATIONS.
2. PRESSURE DROPS ASSOCIATED WITH DIRTY FILTERS, COILS, ETC. SHALL BE INCLUDED IN THE TOTAL INTERNAL STATIC CALCULATION BY THE UNIT MANUFACTURER.
3. CHILLED WATER OPERATING FLUID IS WATER.
4. PROVIDE UNIT WITH MANUFACTURERS 8" HIGH BASE FRAME. INSCREASE BASE RAIL HEIGHT AS NECESSARY TO PROVIDE HEIGHT FOR CONDENSATE TRAP.
5. PROVIDE UNIT WITH PREFORATED PANELS TO REDUCE SOUND.

DEDICATED OUTDOOR AIR HANDLING UNIT SCHEDULE (1/4)

TAG	ALTITUDE (FT)	LOCATION	OUTSIDE AIR		SUPPLY FAN										OUTDOOR AIR PRE-FILTER				OUTDOOR AIR FINAL FILTER			
			MAX AIRFLOW (CFM)	MIN AIRFLOW (CFM)	QUANTITY	TYPE	EXTERNAL STATIC PRESSURE (IN W.C.)	BHP	RPM	DRIVE TYPE	MOTOR					TYPE	THICKNESS (IN)	PRESSURE DROP (IN W.C.)	MERV	TYPE	THICKNESS (IN)	MID LIFE PRESSURE DROP (IN W.C.)	MERV
											SPEED CONTROL	HP	RPM	VOLTS	PHASE								
DOAS-101	449	171 - MECHANICAL ROOM	2745	2745	1	PLENUM	1.31	3.4	2885	DIRECT	VFD	5	1800	460	3	PLEATED	2	0.65	8	CARTRIDGE	4	0.8	13
DOAS-102	449	251 - MECHANICAL ROOM	2670	2670	1	PLENUM	1.13	3.3	2849	DIRECT	VFD	5	1800	460	3	PLEATED	2	0.65	8	CARTRIDGE	4	0.8	13

DEDICATED OUTDOOR AIR HANDLING UNIT SCHEDULE (2/4)

TAG	PREHEAT COIL												COOLING COIL											
	TYPE	CAPACITY (MBH)	AIRSIDE				WATERSIDE						TYPE	TOTAL (MBH)	SENSIBLE (MBH)	AIRSIDE						WATERSIDE					
			AIRFLOW (CFM)	EAT (DEG F.)	LAT (DEG F.)	PRESSURE DROP (IN W.C.)	FLOW (GPM)	EWT (DEG. F)	LWT (DEG. F)	PRESSURE DROP (FT W.C.)	ROWS	FPI				DESIGN FLOW (CFM)	EAT DB (DEG. F)	EAT WB (DEG. F)	LAT DB (DEG. F)	LAT WB (DEG. F)	PRESSURE DROP (IN W.C.)	MAX. FACE VELOCITY (FT/MIN)	FLOW (GPM)	EWT (DEG. F)	LWT (DEG. F)	PRESSURE DROP (FT W.C.)	ROWS	FPI
DOAS-101	HOT WATER	119.7	2745	18	55	0.1	8	150	120	7	1	9	CHILLED WATER	233.8	90.5	2745	84.8	78	53	52.5	1	500	31.2	42	57	18	6	9
DOAS-102	HOT WATER	116.3	2670	18	55	0.1	7.8	150	120	7	1	9	CHILLED WATER	227.4	87.8	2670	84.8	78	53	52.5	1	500	30.3	42	57	18	6	9

DEDICATED OUTDOOR AIR HANDLING UNIT SCHEDULE (3/4)

TAG	REHEAT COIL											EXHAUST FAN								EXHAUST FILTER				ENERGY RECOVERY WHEEL									
			AIRSIDE				WATERSIDE							MOTOR										SUMMER ENERGY RECOVERY PERFORMANCE									
																								OUTSIDE AIR		SUPPLY AIR		RETURN AIR		EXHAUST AIR		MINIMUM EFFECTIVENESS (%)
	TYPE	CAPACITY (MBH)	AIFRLOW (CFM)	EAT (DEG. F)	LAT (DEG. F)	PRESSURE DROP (IN W.C.)	FLOW (GPM)	EWT (DEG. F)	LWT (DEG. F)	PRESSURE DROP (FT W.C.)	FPI	AIRFLOW (CFM)	EXTERNAL STATIC PRESSURE (IN W.C.)	BHP	SPEED CONTROL	RPM	HP	VOLTS	PHASE	TYPE	THICKNESS (IN)	PRESSURE DROP (IN. W.C.)	MERV	DB (DEG. F)	WB (DEG. F)	DB (DEG. F)	WB (DEG. F)	DB (DEG. F)	WB (DEG. F)	DB (DEG. F)	WB (DEG. F)	
DOAS-101	HOT WATER	45.6	2745	53	68	0.1	3.0	150	120	0.05	7	1975	0.86	1.30	VFD	1800	1.5	460	3	THROW AWAY	2	0.6	5	84.8	78	81.2	71.8	78	64.9	86.6	75.6	70
DOAS-102	HOT WATER	44.3	2670	53	68	0.1	3.0	150	120	0.05	7	1975	0.75	1.13	VFD	1800	1.5	460	3	THROW AWAY	2	0.6	5	84.8	78	81.2	71.8	78	64.9	86.6	75.6	70

DEDICATED OUTDOOR AIR HANDLING UNIT SCHEDULE (4/4)

TAG	WINTER ENERGY RECOVERY PERFORMANCE								ENERGY WHEEL ELECTRICAL					DIMENSIONS			WEIGHT (LBS)	NOTES
	OUTSIDE AIR		SUPPLY AIR		RETURN AIR		EXHAUST AIR											
	DB (DEG. F)	WB (DEG. F)	DB (DEG. F)	WB (DEG. F)	DB (DEG. F)	WB (DEG. F)	DB (DEG. F)	WB (DEG. F)	EFFECTIVENESS (%)	FLA	HZ	MCA	PHASE	VOLTS	HEIGHT (IN)	LENGTH (IN)	WIDTH (IN)		
DOAS-101	18	16	41.5	38	68	56.7	26.8	25.7	70	0.66	60	0.77	3	460	5' - 11"	20' - 0"	3' - 8"	2843	1,2,3,4,5
DOAS-102	18	16	41.5	38	68	56.7	26.8	25.7	70	0.66	60	0.77	3	460	5' - 11"	20' - 0"	3' - 8"	2843	1,2,3,4,5

NOTES:
1. PROVIDE WITH MANUFACTURERS DISCONNECT, OVERLOAD PROTECTION, STARTER/VFD IN ACCORDANCE WITH DIVISION 26 SPECIFICATIONS. PROVIDE THREE ELECTRICAL CONNECTIONS. ONE FOR SUPPLY FAN, ONE FOR EXHAUST FAN, AND ONE FOR ENERGY WHEEL.
2. PRESSURE DROPS ASSOCIATED WITH DIRTY FILTERS, COILS, ETC. SHALL BE INCLUDED IN THE TOTAL INTERNAL STATIC CALCULATION BY THE UNIT MANUFACTURER.
3. CHILLED WATER AND HEATING WATER OPERATING FLUID IS WATER.
4. PROVIDE AHU WITH MANUFACTURER'S 8" HIGH BASE FRAME. INCREASE BASE RAIL HEIGHT AS NECESSARY TO PROVIDE HEIGHT FOR CONDENSATE TRAP.
5. PROVIDE PIEZOMETER RING AIRFLOW MEASURING SYSTEM IN FAN INLET CONE.

LICENSED PROFESSIONAL ENGINEER
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STATE OF CALIFORNIA
07/23/2025

US Army Corps of Engineers ®

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0	READY-TO-ADVERTISE (RTA) SUBMITTAL	JUL 2025

DESIGNED BY: B. FONSECA
DRAWN BY: J. SMITH
CHECKED BY: C. DAZE
ISSUE DATE: JUL 2025
SOLICITATION NO.: W912QR25RA001
CONTRACT NO.: W912QR24D0007
SUBMITTED BY: B. STREEBIN
SIZE: ANSI D
FILE NAME:

US ARMY CORPS OF ENGINEERS
LITTLE ROCK DISTRICT
LITTLE ROCK, ARKANSAS

BURNS AND McDONNELL
9400 WARD PARKWAY,
KANSAS CITY, MO 64114
16543

F-35 SPECIAL ACCESS PROGRAM FACILITY
EBBING AIR NATIONAL GUARD BASE (ANGB), FORT SMITH, ARKANSAS

HVAC SCHEDULES

SHEET ID
M-601

READY-TO-ADVERTISE (RTA) SUBMITTAL

COMPUTER ROOM AIR CONDITIONER SCHEDULE (CRAC) 1/2

TAG	ALTITUDE (FT)	LOCATION	TYPE	AIRFLOW (CFM)	FAN			COOLING COIL										
									CAPACITY		AIRSIDE					WATERSIDE				
											EAT		LAT		FACE VELOCITY (FT/MIN)					
					TYPE	QUANTITY	KW	TYPE	TOTAL (MBH)	SENSIBLE (MBH)	DB (DEG. F)	WB (DEG. F)	DB (DEG. F)	WB (DEG. F)		FLUID TYPE	FLOW (GPM)	EWT (DEG. F)	LWT (DEG. F)	PRESSURE DROP (FT W.C.)
CRAC-101	449	143 - VAULT 1 SERVER	WALL MOUNT	1200	TANGENTIAL	3	0.4	CHILLED WATER	31.2	28.8	77.5	62.7	54.5	54	500	WATER	6.2	42	52	16
CRAC-102	449	143 - VAULT 1 SERVER	WALL MOUNT	1200	TANGENTIAL	3	0.4	CHILLED WATER	31.2	28.8	77.5	62.7	54.5	54	500	WATER	6.2	42	52	16
CRAC-103	449	143 - VAULT 1 SERVER	WALL MOUNT	1200	TANGENTIAL	3	0.4	CHILLED WATER	31.2	28.8	77.5	62.7	54.5	54	500	WATER	6.2	42	52	16
CRAC-104	449	143 - VAULT 1 SERVER	WALL MOUNT	1200	TANGENTIAL	3	0.4	CHILLED WATER	31.2	28.8	77.5	62.7	54.5	54	500	WATER	6.2	42	52	16
CRAC-105	449	143 - VAULT 1 SERVER	WALL MOUNT	1200	TANGENTIAL	3	0.4	CHILLED WATER	31.2	28.8	77.5	62.7	54.5	54	500	WATER	6.2	42	52	16
CRAC-106	449	143 - VAULT 1 SERVER	WALL MOUNT	1200	TANGENTIAL	3	0.4	CHILLED WATER	31.2	28.8	77.5	62.7	54.5	54	500	WATER	6.2	42	52	16

FAN SCHEDULE

TAG	ALTITUDE (FT)	AREA SERVED	SERVICE USED FOR	TYPE	AIRFLOW (CFM)	EXTERNAL STATIC PRESSURE (IN W.C.)	MOTOR			DRIVE TYPE	ELECTRICAL		WEIGHT (LBS)	NOTES
							TYPE	HP	SPEED CONTROL		VOLTS	PHASE		
BF-101	449	114 - LIFE SUPPORT	DRYER EXHAUST	DRYER BOOSTER FAN	230	0.7	ODP	1/6	CONSTANT	DIRECT	115	1	40	1,2,3,4

NOTES:
1. PROVIDE WITH MANUFACURER'S DISCONNECT.
2. PROVIDE WITH ELECTRONICALLY COMMUTATED MOTOR (ECM).
3 DRYER BOOSTER FAN MUST BE INTERLOCKED WITH THE DRYER OPERATION.
4. BOOSTER FAN MUST BE A UL-705 COMPLIANT DRY EXHAUST DUCT POWER VENTILATOR (DEPV).

COMPUTER ROOM AIR CONDITIONER SCHEDULE (CRAC) 2/2

TAG	REHEAT COIL		FILTER		ELECTRICAL				WEIGHT (LBS)	NOTES
	TYPE	CAPACITY (KW)	TYPE	MERV	VOLTS	PHASE	HZ	FLA		
CRAC-101	ELECTRIC	5.5	WASHABLE	4	208	1	60	30	365	1,2
CRAC-102	ELECTRIC	5.5	WASHABLE	4	208	1	60	30	365	1,2
CRAC-103	ELECTRIC	5.5	WASHABLE	4	208	1	60	30	365	1,2
CRAC-104	ELECTRIC	5.5	WASHABLE	4	208	1	60	30	365	1,2
CRAC-105	ELECTRIC	5.5	WASHABLE	4	208	1	60	30	365	1,2
CRAC-106	ELECTRIC	5.5	WASHABLE	4	208	1	60	30	365	1,2

NOTES:
1. PROVIDE WITH MANUFACTURER'S DISCONNECT AND SINGLE POINT POWER CONNECTION IN ACCORDANCE WITH DIVISION 26 SPECIFICATIONS.
2. CHILLED WATER OPERATING FLUID IS WATER.
3. PROVIDE WITH CONDENSATE PUMP DESIGNED TO MOUNT TO WALL DIRECTLY BELOW UNIT AND COLLECT CONDENSATE FROM THE UNIT DRAIN PAN. PUMP SHALL BE POWERED THROUGH THE TERMINAL BLOCK ON THE UNIT.

FAN COIL UNIT SCHEDULE (FCU)

TAG	LOCATION	ALTITUDE (FT)	MOUNTING HEIGHT (FT - IN)	TYPE	FAN			COOLING COIL										
					AIRFLOW (CFM)	EXTERNAL STATIC PRSSURE (IN)	MOTOR HP	TYPE	CAPACITY		AIRSIDE				WATERSIDE				
									TOTAL (MBH)	SENSIBLE (MBH)	EAT		LAT		FLUID TYPE	FLOW (GPM)	EWT (DEG. F)	LWT (DEG. F)	PRESSURE DROP (FT W.C.)
											DB (DEG. F)	WB (DEG. F)	DB (DEG. F)	WB (DEG. F)					
FCU-101	127 - MAIN COMM ROOM	449	8-0	WALL MOUNT	850	N/A	1/12	CHILLED WATER	24,800	22,500	80	65	55	54.5	WATER	3.8	42	55	5
FCU-102	133 - SECURE COMM	449	8-0	WALL MOUNT	850	N/A	1/12	CHILLED WATER	24,800	22,500	80	65	55	54.5	WATER	3.8	42	55	5
FCU-103	136 - SECURE ELEC ROOM	449	8-6	WALL MOUNT	850	N/A	1/12	CHILLED WATER	24,800	22,500	80	65	55	54.5	WATER	3.8	42	55	5
FCU-104	171 - MECHANICAL ROOM	449	9-0	HORIZONTAL CABINET	450	N/A	1/4	CHILLED WATER	18,610	14,500	85	67	55	53.3	WATER	3.7	42	52	25
FCU-105	216 - COMM	449	8-0	WALL MOUNT	850	N/A	1/12	CHILLED WATER	30,000	25,100	80	65	52	51.5	WATER	6.3	42	51.5	12
FCU-106	172 - ELECTRICAL ROOM	449	10-0	HORIZONTAL CABINET	240	N/A	1/8	CHILLED WATER	11,600	8,620	85	67	51.5	50.5	WATER	2.3	42	54	11
FCU-107	251 - MECHANICAL ROOM	449	12-0	HORIZONTAL CABINET	420	N/A	1/4	CHILLER WATER	17,300	13,980	85	67	54	53.3	WATER	2.6	42	55	5
FCU-108	252 - ELECTRICAL ROOM	449	9-4	HORIZONTAL CABINET	175	N/A	1/8	CHILLED WATER	7,210	5,810	85	67	54.5	53.3	WATER	1.1	42	54.75	5
FCU-109	253 - FIRE	449	8-6	WALL MOUNT	120	N/A	1/60	CHILLED WATER	4,945	3,877	85	67	55	54.5	WATER	0.5	42	55	5

FAN COIL UNIT SCHEDULE (FCU) 2/2

TAG	HEATING COIL								FILTER		ELECTRICAL				WEIGHT (LBS)	NOTES
			AIRSIDE		WATERSIDE											
	TYPE	CAPACITY (MBH)	EAT (DEG. F)	LAT (DEG. F)	FLOW (GPM)	EWT (DEG. F)	LWT (DEG. F)	PRSSURE DROP (FT W.C.)	TYPE	MERV	VOLTS	PHASE	HZ	FLA		
FCU-101	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	WASHABLE / REMOVABLE	8	120	1	60	0.88	55	1,2,3
FCU-102	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	WASHABLE / REMOVABLE	8	120	1	60	0.88	55	1,2,3
FCU-103	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	WASHABLE / REMOVABLE	8	120	1	60	0.88	55	1,2,3
FCU-104	HOT WATER	4,300	68	77	0.8	150	138.7	0.2	THROWAWAY	8	208	1	60	0.66	155	1,2,3
FCU-105	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	WASHABLE / REMOVABLE	8	120	1	60	0.88	55	1,2,3
FCU-106	HOT WATER	2,900	68	79.5	0.5	150	138.2	0.2	THROWAWAY	8	208	1	60	0.19	155	1,2,3
FCU-107	HOT WATER	4,500	68	78	0.5	150	132	0.2	THROWAWAY	8	208	1	60	0..31	155	1,2,3
FCU-108	HOT WATER	2,600	68	81.4	0.5	150	139.8	0.2	THROWAWAY	8	208	1	60	0.12	155	1,2,3
FCU-109	HOT WATER	2,600	68	81.4	0.5	150	139.8	0.2	WASHABLE / REMOVABLE	8	120	1	60	0.33	155	1,2,3

NOTES:
1. PRESSURE DROP ASSOCIATED WITH FILTERS, COILS, ETC. SHALL BE INCLUDED IN THE TOTAL STATIC CALCULATION BY THE MANUFACTURER.
2. PROVIDE WITH SINGLE POINT POWER CONNECTION.
3. PROVIDE WITH CONDENSATE PUMP DESIGNED TO MOUNT TO WALL DIRECTLY BELOW UNIT AND COLLECT CONDENSATE FROM THE UNIT DRAIN PAN. PUMP SHALL BE POWERED THROUGH THE TERMINAL BLOCK ON THE UNIT.

LICENSED PROFESSIONAL ENGINEER
BYRON EDWARD K. FONSECA
M 41419
MECHANICAL
STATE OF CALIFORNIA
07/23/2025

US Army Corps of Engineers ®

MARK	DESCRIPTION	DATE
0	READY-TO-ADVERTISE (RTA) SUBMITTAL	JUL 2025

DESIGNED BY: B. FONSECA
DRAWN BY: J. SMITH
CHECKED BY: C. DICKEY
SUBMITTED BY: B. STREEBIN
ISSUE DATE: JUL 2025
SOLICITATION NO.: W912QR25RA001
CONTRACT NO.: W912QR24D0007
SIZE: ANSI D
FILE NAME:

US ARMY CORPS OF ENGINEERS
LITTLE ROCK DISTRICT
LITTLE ROCK, ARKANSAS

BURNS AND McDONNELL
9400 WARD PARKWAY,
KANSAS CITY, MO 64114
165438

F-35, SPECIAL ACCESS PROGRAM FACILITY
EBBING AIR NATIONAL GUARD BASE (ANGB), FORT SMITH, ARKANSAS

HVAC SCHEDULES

SHEET ID
M-602

READY-TO-ADVERTISE (RTA) SUBMITTAL

VARIABLE AIR VOLUME TERMINAL UNIT SCHEDULE (VAV)

TAG	AHU CONNECTION	ROOM SERVED	NECK SIZE (IN)	TYPE	CASING TYPE	MAX AIRFLOW (CFM)	MIN. AIRFLOW (CFM)	ALTITUDE (FT)	HEATING COIL										MIN INLET PRESSUE (IN W.C.)	SOUND LEVEL (dBA)	ELECTRICAL		NOTES
									CAPACITY (MBH)	AIRSIDE				WATERSIDE							VOLTS	PHASE	
										HEATING AIRFLOW (CFM)	EAT (DEG . F)	LAT (DEG . F)	PRESSURE DROP (IN W.C.)	FLOW (GPM)	EWT (DEG. F)	LWT (DEG. F)	PRESSURE DROP (FT W.C.)	ROWS	FPI				
VAV-101	AHU-101	105 - STEP DESK	6	SINGLE DUCT	STANDARD	310	65	449	2.3	65	55	88	0.2	0.5	150	140.9	1	1-RH	10	1	30	120	1	1,2,3,4
VAV-102	AHU-101	106 - CORRIDOR	4	SINGLE DUCT	STANDARD	160	30	449	2.3	65	55	88	0.2	0.5	150	140.9	1	2-RH	10	1	30	120	1	1,2,3,4
VAV-103	AHU-101	107 - SCHEDULE & TRAINING	6	SINGLE DUCT	STANDARD	360	65	449	7.8	220	55	88	0.2	0.7	150	127.8	1	2-RH	10	1	30	120	1	1,2,3
VAV-104	AHU-101	108 - DO	4	SINGLE DUCT	STANDARD	165	30	449	4.6	130	55	88	0.2	0.7	150	137	1	2-RH	10	1	30	120	1	1,2,3,4
VAV-105	AHU-101	109 - SARM	4	SINGLE DUCT	STANDARD	145	30	449	4.1	110	55	90	0.2	0.5	150	133.5	1	2-RH	10	1	30	120	1	1,2,3,4
VAV-106	AHU-101	110 - SARM ADMIN	6	SINGLE DUCT	STANDARD	300	65	449	8.1	230	55	88	0.2	0.7	150	123	1	2-RH	10	1	30	120	1	1,2,3,4
VAV-107	AHU-101	111 - STAN/EVAL	6	SINGLE DUCT	STANDARD	310	65	449	6.0	170	55	88	0.2	0.5	150	126	1	2-RH	10	1	30	120	1	1,2,3,4
VAV-108	AHU-101	112 - AFE MAINTENANCE	8	SINGLE DUCT	STANDARD	530	125	449	5.3	150	55	88	0.2	0.6	150	132.5	1	1-RH	12	1	30	120	1	1,2,3,4
VAV-109	AHU-101	116 - PILOT LOCKER ROOM	8	SINGLE DUCT	STANDARD	550	550	449	11.6	550	55	75	0.2	0.7	150	116.5	1	1-RH	12	1	30	120	1	1,2,3,4
VAV-110	AHU-101	121 - HALL, 122 - CORRIDOR	4	SINGLE DUCT	STANDARD	140	30	449	3.4	95	55	88	0.2	0.5	150	136.5	1	2-RH	10	1	30	120	1	1,2,3,4
VAV-111	AHU-101	124 - CORRIDOR, 125 - BREAK	6	SINGLE DUCT	STANDARD	370	65	449	4.6	130	55	88	0.2	0.6	150	134.8	1	1-RH	10	1	30	120	1	1,2,3,4
VAV-112	AHU-101	126 - MAINT DEBRIEF	6	SINGLE DUCT	STANDARD	270	65	449	9.0	240	55	90	0.2	0.8	150	124.5	1	2-RH	10	1	30	120	1	1,2,3,4
VAV-113	AHU-101	131 - MAN TRAP, 135 SECURITY	8	SINGLE DUCT	STANDARD	640	125	449	9.0	255	55	88	0.2	0.6	150	120	2	1-RH	10	1	30	120	1	1,2,3,4
VAV-114	AHU-101	132 - CORRIDOR	8	SINGLE DUCT	STANDARD	410	125	449	17.3	405	55	95	0.2	1.1	150	118.5	1	1-RH	10	1	30	120	1	1,2,3
VAV-115	AHU-101	141 - MAN TRAP, 142 - VAULT 1 MISSION PLANNING	8	SINGLE DUCT	STANDARD	550	125	449	5.1	145	55	88	0.2	0.5	150	129.5	1	1-RH	12	1	30	120	1	1,2,3,4
VAV-116	AHU-101	143 - VAULT 1 ALIS/ODIN ADMIN	4	SINGLE DUCT	STANDARD	135	30	449	2.3	65	55	88	0.2	0.5	150	140.8	1	1-RH	10	1	30	120	1	1,2,3,4
VAV-117	AHU-101	145 - VAULT 1 LG BRIEF	6	SINGLE DUCT	STANDARD	280	65	449	8.3	235	55	88	0.2	0.8	150	129.3	1	2-RH	10	1	30	120	1	1,2,3,4
VAV-118	AHU-101	146 - VAULT 1 SM BRIEF	6	SINGLE DUCT	STANDARD	180	65	449	3.0	85	55	88	0.2	0.5	150	138	1	1-RH	10	1	30	120	1	1,2,3,4
VAV-119	AHU-101	147 - VAULT 1 SM BRIEF	4	SINGLE DUCT	STANDARD	165	30	449	2.8	80	55	88	0.2	0.5	150	138.8	1	1-RH	10	1	30	120	1	1,2,3,4
VAV-120	AHU-101	151 - MAN TRAP 2, 152 - VAULT 2 MISSION PLANNING	8	SINGLE DUCT	STANDARD	550	125	449	5.3	150	55	88	0.2	0.6	150	132.5	1	1-RH	12	1	30	120	1	1,2,3,4
VAV-121	AHU-101	153 - VAULT 2 ALIS/ODIN ADMIN	4	SINGLE DUCT	STANDARD	135	30	449	2.4	65	55	90	0.2	0.5	150	140.2	1	1-RH	10	1	30	120	1	1,2,3,4
VAV-122	AHU-101	155 - VAULT 2 LG BRIEF	6	SINGLE DUCT	STANDARD	240	65	449	3.7	105	55	88	0.2	0.5	150	135.3	1	1-RH	12	1	30	120	1	1,2,3,4
VAV-123	AHU-101	156 - VAULT 2 SM BRIEF	6	SINGLE DUCT	STANDARD	185	65	449	3.0	85	55	88	0.2	0.5	150	138	1	1-RH	10	1	30	120	1	1,2,3,4
VAV-124	AHU-101	157 - VAULT 2 SM BRIEF	4	SINGLE DUCT	STANDARD	165	30	449	3.2	90	55	88	0.2	0.5	150	137.3	1	1-RH	10	1	30	120	1	1,2,3,4
VAV-125	AHU-101	161 - MAN TRAP 3, 162 - VAULT 3 MISSION	8	SINGLE DUCT	STANDARD	560	125	449	5.3	150	55	88	0.2	0.6	150	132.5	1	2-RH	12	1	30	120	1	1,2,3,4
VAV-126	AHU-101	163 - VAULT 3 SM BRIEF	4	SINGLE DUCT	STANDARD	170	30	449	3.2	90	55	88	0.2	0.5	150	137.3	1	1-RH	10	1	30	120	1	1,2,3,4
VAV-127	AHU-101	164 - VAULT 3 SM BRIEF	6	SINGLE DUCT	STANDARD	185	65	449	3.2	90	55	88	0.2	0.5	150	137.3	1	1-RH	10	1	30	120	1	1,2,3,4
VAV-128	AHU-101	165 - VAULT 3 SM BRIEF	6	SINGLE DUCT	STANDARD	280	65	449	8.3	235	55	88	0.2	0.8	150	129.4	1	1-RH	10	1	30	120	1	1,2,3,4
VAV-129	AHU-101	166 - VAULT 3 ALIS/ODIN	4	SINGLE DUCT	STANDARD	140	30	449	2.3	65	55	88	0.2	0.5	150	140.8	1	1-RH	10	1	30	120	1	1,2,3,4
VAV-130	AHU-101	129 - PRINT/COPY	4	SINGLE DUCT	STANDARD	135	135	449	2.9	135	55	75	0.2	0.5	150	138.4	1	2-RH	10	1	30	120	1	1,2,3,4
VAV-201	AHU-102	202 - COMMAND SUPPORT STAFF	10	SINGLE DUCT	STANDARD	810	210	449	18.0	510	55	88	0.25	1.4	150	124.3	1	2-RH	10	1	30	120	1	1,2,3,4
VAV-202	AHU-102	203 - APC/RA	4	SINGLE DUCT	STANDARD	140	30	449	3.7	105	55	88	0.2	0.5	150	135.3	1	2-RH	10	1	30	120	1	1,2,3,4
VAV-203	AHU-102	204 - SQUADRON COMMANDER	6	SINGLE DUCT	STANDARD	230	65	449	7.1	200	55	88	0.2	0.7	150	129.8	1	2-RH	10	1	30	120	1	1,2,3,4
VAV-204	AHU-102	205 - CONFERENCE ROOM	8	SINGLE DUCT	STANDARD	620	125	449	12.7	360	55	88	0.25	1.0	150	124.5	1	2-RH	10	1	30	120	1	1,2,3,4
VAV-205	AHU-102	206 - IMSO	4	SINGLE DUCT	STANDARD	150	30	449	3.9	110	55	88	0.2	0.5	150	134.4	1	2-RH	10	1	30	120	1	1,2,3,4
VAV-206	AHU-102	207 - SNR M-1	6	SINGLE DUCT	STANDARD	250	65	449	6.2	175	55	88	0.2	0.5	150	125.3	1	2-RH	10	1	30	120	1	1,2,3,4
VAV-207	AHU-102	208 - SNR M-2	4	SINGLE DUCT	STANDARD	175	30	449	4.6	130	55	88	0.2	0.6	150	134.8	1	2-RH	10	1	30	120	1	1,2,3,4
VAV-208	AHU-102	209 - SNR M-3	6	SINGLE DUCT	STANDARD	220	65	449	5.1	145	55	88	0.2	0.5	150	129.6	1	2-RH	10	1	30	120	1	1,2,3,4
VAV-209	AHU-102	212 & 213 - COPY & STUDENT COLLAB	8	SINGLE DUCT	STANDARD	450	125	449	11.8	335	55	88	0.2	0.9	150	123.8	1	2-RH	10	1	30	120	1	1,2,3,4
VAV-210A	AHU-102	214 - LARGE BRIEFING	10	SINGLE DUCT	STANDARD	750	210	449	12.3	350	55	88	0.35	1.0	150	125.4	1	2-RH	10	1	30	120	1	1,2,3,4
VAV-210B	AHU-102	214 - LARGE BRIEFING	10	SINGLE DUCT	STANDARD	750	210	449	12.3	350	55	88	0.35	1.0	150	125.4	1	2-RH	10	1	30	120	1	1,2,3,4
VAV-211	AHU-102	215 - AV	8	SINGLE DUCT	STANDARD	490	125	449	2.8	125	55	76	0.2	0.5	150	138.8	1	1-RH	12	1	30	120	1	1,2,3,4
VAV-212	AHU-102	217 - STUDENT LOCKERS	8	SINGLE DUCT	STANDARD	580	580	449	15.5	580	55	80	0.35	1.0	150	119	1	2-RH	10	1	30	120	1	1,2,3,4
VAV-213	AHU-102	226 - IP M-1	4	SINGLE DUCT	STANDARD	145	30	449	4.2	120	55	88	0.2	0.6	150	136	1	2-RH	10	1	30	120	1	1,2,3,4
VAV-214	AHU-102	227 - IP M-2	4	SINGLE DUCT	STANDARD	145	30	449	4.2	120	55	88	0.2	0.6	150	136	1	2-RH	10	1	30	120	1	1,2,3,4
VAV-215	AHU-102	211 - RA	6	SINGLE DUCT	STANDARD	325	65	449	8.5	240	55	88	0.2	0.8	150	128.8	1	2-RH	10	1	30	120	1	1,2,3,4
VAV-216	AHU-102	229 - BREAKROOM	8	SINGLE DUCT	STANDARD	690	125	449	15.3	435	55	88	0.25	1.4	150	128.1	1	2-RH	10	1	30	120	1	1,2,3,4
VAV-217	AHU-102	223 - FLIGHT MEDICAL OFFICE	6	SINGLE DUCT	STANDARD	340	65	449	7.6	215	55	88	0.2	0.7	150	128.4	1	1-RH	10	1	30	120	1	1,2,3,4
VAV-218	AHU-102	234 - MOTHERS ROOM	4	SINGLE DUCT	STANDARD	170	30	449	2.3	65	55	88	0.2	0.5	150	140.8	1	1-RH	10	1	30	120	1	1,2,3,4
VAV-219	AHU-102	235 - IP M-6	4	SINGLE DUCT	STANDARD	165	30	449	3.9	110	55	88	0.2	0.5	150	134.5	1	2-RH	10	1	30	120	1	1,2,3,4
VAV-220	AHU-102	236 - IP M-5	4	SINGLE DUCT	STANDARD	165	30	449	3.9	110	55	88	0.2	0.5	150	134.5	1	2-RH	10	1	30	120	1	1,2,3,4
VAV-221	AHU-102	237 - IP M-4	4	SINGLE DUCT	STANDARD	165	30	449	3.9	110	55	88	0.2	0.5	150	134.5	1	2-RH	10	1	30	120	1	1,2,3,4
VAV-222	AHU-102	239 - IP M-3	4	SINGLE DUCT	STANDARD	145	30	449	4.2	120	55	88	0.2	0.6	150	136	1	2-RH	10	1	30	120	1	1,2,3,4
VAV-223	AHU-102	241 - TEAM	6	SINGLE DUCT	STANDARD	295	65	449	8.6	245	55	88	0.2	0.8	150	128.5	1	2-RH	10	1	30	120	1	1,2,3,4

NOTES:
1. OPERATING FLUID IS WATER.
2. PROVIDE SINGLE POINT 120V ELECTRICAL CONNECTION AND DISCONNECT SWITCH.
3. PROVIDE CONTROL POWER TRANSFORMER (IF REQUIRED).
4. MINIMUM INLET STATIC PRESSURE INCLUDES PRESSURE DORP ACROSS THE VAV BOX. A PRESSURE DROP OF 0.25 IN W.C. IS ASSUMED IN THE LOW PRESSURE DUCT DOWNSTREAM OF VAV BOX.

FAN POWERED VARIABLE AIR VOLUME TERMINAL UNIT SCHEDULE (FPVAV)

TAG	ALTITUDE (FT)	AHU CONNECTION	LOCATION		NECK SIZE (IN)	TYPE	PRIMARY AIRFLOW		FAN			HEATING COIL										MIN INLET PRESS. (IN W.C.)	MIN OUTLET PRESS. (IN WC)	SOUND LEVEL (dBA)	ELECTRICAL			NOTES
													AIRSIDE				WATERSIDE											
			NAME	NO.			MAX DESIGN (CFM)	MIN. DESIGN (CFM)	AIRFLOW (CFM)	ESP (IN WC)	MOTOR HP	CAPACITY (MBH)	MAX AIRFLOW (CFM)	EAT (°F)	LAT (°F)	MAX PRESS. DROP (IN W.C.)	FLOW (GPM)	EWT (°F)	LWT (°F)	PRESS. DROP (FT W.C.)	ROWS	MAX FPI			VOLTS	PHASE	MCA	
FPVAV-101	449	AHU-101	CORRIDOR	102	10	PARALLEL	1050	210	1100	0.1	1/2	32.1	1310	65.1	88	0.18	2.9	150	127.9	2.2	2-RH	10	1	0.25	30	120	1	6.2	1,2,3
FPVAV-102	449	AHU-101	LOBBY	104	12	PARALLEL	1300	290	700	0.1	1/2	25.9	990	63.5	88	0.09	2.4	150	129.3	1.4	2-RH	10	1	0.25	30	120	1	6.2	1,2,3
FPVAV-201A	449	AHU-102	STUDENT WORKSTATIONS	222	14	PARALLEL	1680	360	750	0.1	1/2	29.5	1110	63.1	88	0.04	1.7	150	115.3	1.1	2-RH	10	1	0.25	30	120	1	6.2	1,2,3
FPVAV-201B	449	AHU-102	STUDENT WORKSTATIONS	222	14	PARALLEL	1680	360	750	0.1	1/2	29.5	1110	63.1	88	0.04	1.7	150	115.3	1.1	2-RH	10	1	0.25	30	120	1	6.2	1,2,3

NOTES:
1. OPERATING FLUID IS WATER.
2. PROVIDE SINGLE POINT 120V ELECTRICAL CONNECTION AND DISCONNECT SWITCH.
3. PROVIDE CONTROL POWER TRANSFORMER (IF REQUIRED).

LICENSED PROFESSIONAL ENGINEER
BYRON EDWARD K. FONSECA
M 41419
MECHANICAL
STATE OF CALIFORNIA
07/23/2025

US Army Corps of Engineers ®

MARK	DESCRIPTION	DATE
0	READY-TO-ADVERTISE (RTA) SUBMITTAL	JUL 2025

DESIGNED BY: B. FONSECA
DRAWN BY: J. SMITH
CHECKED BY: C. DAVIS
SUBMITTED BY: B. STREEBIN
SIZE: ANSI D
ISSUE DATE: JUL 2025
SOLICITATION NO.: W9127S25RA001
CONTRACT NO.: W912F524D0007
FILE NAME:

US ARMY CORPS OF ENGINEERS
LITTLE ROCK DISTRICT
LITTLE ROCK, ARKANSAS

BURNS AND McDONNELL
9400 WARD PARKWAY,
KANSAS CITY, MO 64114
165438

F-35: SPECIAL ACCESS PROGRAM FACILITY
EBBING AIR NATIONAL GUARD BASE (ANGB), FORT SMITH, ARKANSAS

HVAC SCHEDULES

SHEET ID
M-603

READY-TO-ADVERTISE (RTA) SUBMITTAL

DIFFUSER, REGISTER, & GRILLE SCHEDULE (DRG)

TAG	DESCRIPTION	MODEL			FACE SIZE	BLADE DESIGN			SLOT		MOUNTING	DAMPER	NOTES
		TITUS	PRICE	KRUEGER		SPACING	DEFLECTION ORIENTATION	DEFLECTION ANGLE	QTY	WIDTH			
A	PLAQUE FACE DIFFUSER	OMNI	SPD	PLQ	24x24	NA	NA	NA	NA	NA	LAY-IN	NO	SEE PLANS FOR NECK SIZE
B	PLAQUE FACE DIFFUSER	OMNI	SPD	PLQ	12x12	NA	NA	NA	NA	NA	LAY-IN	NO	SEE PLANS FOR NECK SIZE
C	PLAQUE FACE DIFFUSER	OMNI	SPD	PLQ	12x12	NA	NA	NA	NA	NA	SURFACE	NO	SEE PLANS FOR NECK SIZE
D	RETURN/EXHAUST/TRANSFER EGGCRATE GRILLE	50F	80	EGC5	12x12	1/2"	GRID	0°	NA	NA	LAY-IN	NO	SEE PLANS FOR NECK SIZE
E	RETURN/EXHAUST/TRANSFER EGGCRATE GRILLE	50F	80	EGC5	24x24	1/2"	GRID	0°	NA	NA	LAY-IN	NO	SEE PLANS FOR NECK SIZE
F	RETURN/EXHAUST/TRANSFER EGGCRATE GRILLE	50F	80	EGC5	24x24	1/2"	GRID	0°	NA	NA	LAY-IN	NO	SEE PLANS FOR NECK SIZE
G	RETURN/EXHAUST/TRANSFER EGGCRATE GRILLE	50F	80	EGC5	24x12	1/2"	GRID	0°	NA	NA	LAY-IN	NO	SEE PLANS FOR NECK SIZE
H	RETURN/EXHAUST/TRANSFER EGGCRATE GRILLE	50F	80	EGC5	NA	1/2"	GRID	0°	NA	NA	SURFACE	NO	SEE PLANS FOR NECK SIZE
I	EXHAUST/TRANSFER EGGCRATE GRILLE	50F	80	EGC5	NA	1/2"	GRID	0°	NA	NA	SURFACE	NO	SEE PLANS FOR NECK SIZE
J	LOUVERED FACE RETURN/EXHAUST/TRANSER AIR GRILLE WITH BLADES PARALLEL WITH LONG DIMENSION	350RL	530	S80	NA	3/4"	HORIZONTAL	35°	NA	NA	SURFACE	NO	SEE PLANS FOR SIZE
K	LOUVERED FACE SUPPLY AIR GRILLE WITH BLADES PARALLEL WITH SHORT DIMENSION	300RS	520	880	NA	3/4"	VERTICAL	22.5°	NA	NA	SURFACE	NO	SEE PLANS FOR SIZE
L	LOUVERED FACE SUPPLY AIR GRILLE WITH BLADES PARALLEL WITH SHORT DIMENSION	300RS	520	880	NA	3/4"	VERTICAL	22.5°	NA	NA	DUCT	NO	SEE PLANS FOR SIZE
M	LOUVERED FACE RETURN/EXHAUST/TRANSER AIR GRILLE WITH BLADES PARALLEL WITH LONG DIMENSION	350RL	530	S80	NA	3/4"	HORIZONTAL	35°	NA	NA	DUCT	NO	SEE PLANS FOR SIZE
N	LOUVERED FACE RETURN/EXHAUST/TRANSER AIR GRILLE WITH BLADES PARALLEL WITH LONG DIMENSION	350RL	530	S80	NA	3/4"	HORIZONTAL	35°	NA	NA	DUCT	NO	SEE PLANS FOR SIZE
O	ARCHITECTURAL LINEAR SLOT DIFFUSER	FL	CF	DFL	NA	NA	NA	NA	<varies>	1"	SURFACE	NO	INSTALL WITH INSULATED PLENUM, 4' LONG, SEE PLANS FOR NECK SIZE AND THROW PATTERN
P	LINEAR SLOT DIFFUSER	ML	SDS	1900	NA	NA	NA	NA	1	1"	LAY-IN	NO	INSTALL WITH INSULATED PLENUM, 6' LONG, SEE PLANS FOR NECK SIZE AND THROW PATTERN
Q	LINEAR SLOT DIFFUSER	ML	SDR	1900	NA	NA	NA	NA	1	1/2"	SURFACE	NO	INSTALL WITH INSULATED PLENUM, 2' LONG, SEE PLANS FOR NECK SIZE AND THROW PATTERN
R	LINEAR SLOT DIFFUSER	ML	SDS	1900	NA	NA	NA	NA	2	1/2"	LAY-IN	NO	INSTALL WITH INSULATED PLENUM, 4' LONG, SEE PLANS FOR NECK SIZE AND THROW PATTERN
S	LINEAR SLOT DIFFUSER	ML	<varies>	1900	NA	NA	NA	NA	1	1/2"	LAY-IN	NO	INSTALL WITH INSULATED PLENUM, 4' LONG, SEE PLANS FOR NECK SIZE AND THROW PATTERN
T	LINEAR SLOT DIFFUSER	ML	SDS	1900	NA	NA	NA	NA	3	1"	LAY-IN	NO	INSTALL WITH INSULATED PLENUM, 4' LONG, SEE PLANS FOR NECK SIZE AND THROW PATTERN
U	LINEAR SLOT DIFFUSER	ML	SDS	1900	NA	NA	NA	NA	1	1/2"	LAY-IN	NO	INSTALL WITH INSULATED PLENUM, 2' LONG, SEE PLANS FOR NECK SIZE AND THROW PATTERN
V	LINEAR SLOT DIFFUSER	ML	SDR	1900	NA	NA	NA	NA	4	1"	SURFACE	NO	INSTALL WITH INSULATED PLENUM, 4' LONG, SEE PLANS FOR NECK SIZE AND THROW PATTERN
W	LINEAR SLOT DIFFUSER	ML	SDS	1900	NA	NA	NA	NA	1	1"	LAY-IN	NO	INSTALL WITH INSULATED PLENUM, 5' LONG, SEE PLANS FOR NECK SIZE AND THROW PATTERN
X	LINEAR SLOT DIFFUSER	ML	SDS	1900	NA	NA	NA	NA	2	1"	LAY-IN	NO	INSTALL WITH INSULATED PLENUM, 4' LONG, SEE PLANS FOR NECK SIZE AND THROW PATTERN
Y	LINEAR SLOT DIFFUSER	ML	SDR	1900	NA	NA	NA	NA	2	1/2"	SURFACE	NO	INSTALL WITH INSULATED PLENUM, 2' LONG, SEE PLANS FOR NECK SIZE AND THROW PATTERN
Z	LINEAR SLOT DIFFUSER	ML	SDR	1900	NA	NA	NA	NA	4	1"	LAY-IN	NO	INSTALL WITH INSULATED PLENUM, 4' LONG, SEE PLANS FOR NECK SIZE AND THROW PATTERN

CONTROL DAMPER SCHEDULE (CD)

TAG	SYSTEM	INTERLOCK	AIRFLOW (CFM)	PRESSURE DROP (IN W.C.)	DIMENSIONS HEIGHT (IN)	DIMENSIONS WIDTH (IN)	DIMENSIONS DIAMETER (IN)	BLADE OPERATION	VOLTS
CD-101	OA	DOAS-101 OA	2695	0.1	20	20	N/A	OPPOSED	24
CD-102	EA	DOAS-101 EA	1925	0.1	16	18	N/A	PARALLEL	24
CD-103	OA	DOAS-102 OA	2670	0.1	16	24	N/A	OPPOSED	24
CD-104	EA	DOAS 102 EA	1975	0.1	16	20	N/A	PARALLEL	24

LOUVER SCHEDULE (L)

TAG	LOUVER SIZE WIDTH (IN)	LOUVER SIZE HEIGHT (IN)	DUCT CONNECTION WIDTH (IN)	DUCT CONNECTION HEIGHT (IN)	FLOW DIRECTION	AIRFLOW (CFM)	MAX FREE AREA VELOCITY (FT/MIN)	PRESSURE DROP (IN W.C.)	NOTES
L01	36	24	34	22	EXHAUST	1925	725	0.1	1,2
L02	72	24	70	22	INTAKE	2670	500	0.1	1,2
L03	34	24	32	22	EXHAUST	1975	775	0.1	1,2

NOTES:

1. SEE ARCHITECTURAL DRAWINGS FOR ADDITIONAL DETAILS.
2. WHERE DUCT CONNECTION SIZE DIFFERS FROM LOUVER SIZE, THE FREE AREA VELOCITY AND PRESSURE DROP SHALL BE BASED ON THE DUCT CONNECTION AREA.

DUCTWORK CONSTRUCTION AND LEAKAGE TESTING TABLE

SYSTEM	DUCT PRESSURE CLASS INCHES OF WATER COLUMN SUPPLY/DISCHARGE DUCT	RETURN DUCT	EXHAUST DUCT	OUTSIDE AIR DUCT	ROUND/OVAL DUCT SEAL CLASS	ROUND/OVAL DUCT LEAK CLASS	RECTANGULAR DUCT SEAL CLASS	RECTANGULAR DUCT LEAK CLASS	DUCT TEST PRESSURE (IN W.C.)	NOTES
AHU-101 AND 102 (UPSTREAM OF VAV BOXES)	3	-	-	-	A	6	A	12	3	1, 2
	-	-2	-	-	A	12	A	24	2	1, 2
AHU-101 AND 102 (DOWNSTREAM OF VAV BOXES)	2	-	-	-	A	12	A	24	2	1, 2
DOAS-101 & -102	2	-	-	-	A	12	A	24	2	1, 2
	-	-	-	-1	A	12	A	24	1	1, 2
	-	-1	-	-	A	12	A	24	1	1, 2
	-	-	1	-	A	12	A	24	1	1, 2
EF-101, SF-101 THRU 103	1	-	-	-	A	12	A	24	1	1, 2
	-	-	-1	-	A	12	A	24	1	1, 2

NOTES:

1. TEST IN ACCORDANCE WITH SECTION 23 05 93 - TESTING, ADJUSTING, AND BALANCING FOR HVAC, AND WITH PROCEDURES IN SMACNA HVAC AIR DUCT LEAKAGE MANUAL.
2. DUCT LEAK CLASS EXPRESSED IN CFM PER 100 SQ FT AT 1 IN. W.G.

GRAVITY HOOD SCHEDULE (GH)

TAG	LOCATION	FLOW DIRECTION	EQUIPMENT SERVED	AIRFLOW (CFM)	EXTERNAL STATIC PRESSURE (IN W.C.)	THROAT SIZE WIDTH (IN)	THROAT SIZE LENGTH (IN)	CURB SIZE WIDTH (IN)	CURB SIZE LENGTH (IN)	VELOCITY (FT/MIN)	WEIGHT (LBS)	NOTES
GH-101	171 - MECHANICAL	INTAKE	DOAS-101	2695	0.1	30	30	36	36	780		1,2

NOTES:

1. PROVIDE WITH INSECT SCREEN.
2. COORDINATE CURB WITH ARCHITECTURAL AND ROOF CONSTRUCTION TYPE.

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STATE OF CALIFORNIA
07/23/2025

US Army Corps of Engineers ®

MARK	DESCRIPTION	DATE
0	READY-TO-ADVERTISE (RTA) SUBMITTAL	JUL 2025

ISSUE DATE: JUL 2025
SOLICITATION NO.: W912T2526A001
CONTRACT NO.: W912T2624F0007

DESIGNED BY: B. FONSECA
DRAWN BY: J. SMITH
CHECKED BY: C. DAZE
SUBMITTED BY: B. STREEBIN
SIZE: ANSI D
FILE NAME:

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LITTLE ROCK, ARKANSAS

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READY-TO-ADVERTISE (RTA) SUBMITTAL

HUMIDIFIER SCHEDULE (HUM)

TAG	LOCATION	MOUNTING	TYPE	MIN. CAPACITY (LBS/HR)	INPUT (KW)	ELECTRICAL			WEIGHT (LBS)	NOTES
						VOLTS	PHASE	FLA		
HUM-101	143 - VAULT 1 SERVER	WALL MOUNT	RESISTIVE STEAM HUMIDIFIER	3	3.7	208	1	17.8	63	1,2,3,4,5
HUM-102	154 - VAULT 2 SERVER	WALL MOUNT	RESISTIVE STEAM HUMIDIFIER	3	3.7	208	1	17.8	63	1,2,3,4,5
HUM-103	167 - VAULT 3 SERVER	WALL MOUNT	RESISTIVE STEAM HUMIDIFIER	3	3.7	208	1	17.8	63	1,2,3,4,5
HUM-106										

NOTES:
1. PROVIDE WITH INTEGRAL BLOWER PACK MOUNTED FLUSHED WITH TOP OF HUMIDIFIER.
2. INSTALL PER MANUFACTURER REQUIREMENTS AND CLEARANCES.
3. ELECTRICAL DISCONNECT PROVIDED BY DIVISION 26.
4. HUMIDIFIER MUST ACCEPT A MINIMUM WATER CONDUCTIVITY OF 80 MICROSIEMENS PER CENTIMETER.
5. PROVIDE HUMIDIFIER WITH AN EXTERNALLY MOUNTED CONDENSATE PUMP RATED FOR STEAM HUMIDIFIER CONDENSATE TEMPERATURES IN COMPLIANCE WITH THE MANUFACTURER REQUIREMENTS. CONDENSATE PUMP MUST BE POWERED SEPARATELY FROM THE HUMIDIFIER WITH 115V/1PH/60HZ, 1/2 HP.

AIR COOLED CHILLER (CH)

TAG	ALTITUDE (FT)	COOLING CAPACITY (TONS)	COMPRESSOR		EFFICIENCY		EVAPORATOR					CONDENSER		ELECTRICAL				WEIGHT (LBS.)	NOTES
			QUANTITY	TYPE	FULL LOAD EER	IPLV	FLUID TYPE	FLOW (GPM)	EWT (DEG. F)	LWT (DEG. F)	PRESSURE DROP (FT W.C.)	DESIGN AMBIENT (DEG. F)	FAN QUANTITY	VOLTS	PHASE	MCA	TOTAL POWER (KW)		
CH-101	449	54.5	4	SCROLL	9.9	16.5	WATER	93.7	55.9	42	10	105	4	460	3	137	64.28	7855	1,2,3,4,5,6,7,8
CH-102	449	54.5	4	SCROLL	9.9	16.5	WATER	93.7	55.9	42	10	105	4	460	3	137	64.28	7855	1,2,3,4,5,6,7,9

NOTES:
1. OPERATING FLUID IS WATER.
2. PROVIDE SOUND ATTENUATION KIT.
3. PROVIDE CONTROL PANEL WITH INTERFACE TO EMCS SYSTEM.
4. PROVIDE WITH MANUFACTURER'S DISCONNECT, VFD, AND SINGLE POINT POWER CONNECTION IN ACCORDANCE WITH DIVISION 26 SPECIFICATIONS.
5. PROVIDE WITH MANUFACTURER'S BUFFER TANK. MINIMUM SIZE SHALL BE 120 GALLONS.
6. PROVIDE CHILLER WITH DUAL PUMP PACKAGE. PUMPS SHALL BE CAPABLE OF FULL CHILLER FLOW AND A MINIMUM 25 FT WG HEAD.
7. PROVIDE CHILLER WITH EVAPORATOR AND BUFFER TANK HEATERS. EACH HEATER WILL BE POWERED BY SEPARATE 115V / 1PH / 60HZ / 20 AMP POWER CONNECTIONS.
8. PACKAGED PUMPS SHALL BE IDENTIFIED AS CHWP-104 & CHWP-105.
9. PACKAGED PUMPS SHALL BE IDENTIFIED AS CHWP-106 & CHWP-107.

HVAC PUMP PACKAGE SCHEDULE

TAG	PUMP TAGS	LOCATION	TYPE	SERVICE	SYSTEM	FLUID TYPE	FLUID TEMP (DEG. F)	PUMP QUANTITIES		SYSTEM FLOW (GPM)	PER PUMP							ELECTRICAL			NOTES
								ACTIVE	STANDBY		FLOW (GPM)	HEAD (FT W.C.)	EFFICIENCY (%)	MOTOR					VOLTS	PHASE	FLA	
														TYPE	HP	BHP	RPM	SPEED CONTROL			
CPP-101	CHWP-101, CHWP-102, CHWP-103	251 - MECHANICAL	MULTISTAGE INLINE	SECONDARY LOOP	CHILLED WATER	WATER	42	2	1	187	93.7	60	72	TEFC	5	2	3600	VFD	460	3	13.4	1
HPP-101	HWP-101, HWP-102	251 - MECHANICAL	MULTISTAGE INLINE	VARIABLE PRIMARY	HEATING HOT WATER	WATER	150	1	1	68	68	57	72	TEFC	2	1.41	3600	VFD	460	3	6.3	1

NOTES:
1. PROVIDE PUMP PACKAGE WITH SINGLE POINT ELECTRICAL CONNECTION.

ELECTRIC UNIT HEATER SCHEDULE (CUH/EUH)

TAG	LOCATION	ALTITUDE (FT)	ORIENTATION	HEATING COIL		ELECTRICAL			NOTES
				CAPACITY (KW)	TYPE	VOLTS	PHASE	FLA	
CUH-101	101 - VESTIBULE	439	VERTICAL CABINET	7	ELECTRIC	460	3	7.3	1
CUH-102	103 - VESTIBULE	439	VERTICAL CABINET	7	ELECTRIC	460	3	7.3	1

NOTES:
1. PROVIDE WITH MANUFACTURER'S DISCONNECT FOR A SINGLE-POINT ELECTRICAL CONNECTION PER DIVISION 26 SPECIFICATIONS.

BOILER SCHEDULE (HWB)

TAG	LOCATION	TYPE	ALTITUDE (FT)	PRESSURE RATING (PSIG)	MIN. GROSS OUTPUT (MBH)	WATERSIDE					ELECTRICAL			WEIGHT (LBS)	NOTES
						FLUID TYPE	LWT (DEG. F)	EWT (DEG. F)	FLOW (GPM)	PRESSURE DROP (FT W.C.)	VOLTS	PHASE	FLA		
HWB-101	251 - MECHANICAL	ELECTRIC	449	150	519.3	WATER	150	126	34	2	480	3	196	488	1,2,3
HWB-102	251 - MECHANICAL	ELECTRIC	449	150	519.3	WATER	150	126	34	2	480	3	196	488	1,2,3

NOTES:
1. PROVIDE EXTERNAL CONDENSATE NEUTRALIZATION KIT COMPLETE WITH VISUAL INSPECTION AND ACCESS FOR MEDIA REPLACEMENT.
2. BOILER SHALL HAVE MINIMUM 5:1 TURNDOWN RATIO.
3. PROVIDE FACTORY 75 PSI ASME RELIEF VALVE AND LOW WATER CUTOFF WITH MANUAL RESET AND TEST.

AIR SEPARATOR SCHEDULE (AS)

TAG	LOCATION	SYSTEM	TYPE	FLOW (GPM)	PRESSURE DROP (FT W.G.)	CONNECTION TYPE	CONNECTION SIZE (IN)	MAX PRESSURE (PSIG)	NOTES
AS-101	251 - MECHANICAL	CHW	TANGENTIAL	187.3	9.5	FLANGED	4	125	1,2,3
AS-102	251 - MECHANICAL	HHW	TANGENTIAL	68	9.5	FLANGED	2 1/2	125	1,2,3

NOTES:
1. OPERATING FLUID IS WATER.
2. AIR SEPARATOR SHALL BE THE TANGENTIAL TYPE WITH STRAINER.
3. AIR SEPARATOR SHALL BE ASME SECTION VIII, DIVISION 1 RATED.

TANK SCHEDULE

TAG	LOCATION	ORIENTATION	SYSTEM	MIN. TANK VOLUME (GAL)	MIN. TANK ACCEPTANCE VOLUME (GAL)	RELIEF VALVE SETPOINT (PSI)	DIMENSIONS		NOTES
							DIAMETER (IN)	LENGTH / HEIGHT (IN)	
ET-101	251 - MECHANICAL ROOM	VERTICAL	HEATING HOT WATER	8	3	65	16	30	1
ET-102	251 - MECHANICAL ROOM	VERTICAL	CHILLED WATER	16	8	65	16	30	1

NOTES:
1. PROVIDE TANK THAT MEETS OR EXCEEDS BOTH VOLUME REQUIREMENTS EVEN IF FULL ACCEPTANCE TANK IS PROVIDED.

CHEMICAL POT FEEDER SCHEDULE (CP)

TAG	SERVICE	TYPE	TANK CAPACITY (GAL)	TANK DIAMETER (IN)	TANK HEIGHT (IN)	CONNECTION SIZE (IN)	MAX PRESSURE (PSI)
CP-101	CHILLED WATER	BYPASS FEEDER	5	10	29 3/4	3/4	300
CP-102	HOT WATER	BYPASS FEEDER	5	10	29 3/4	3/4	300

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0	READY-TO-ADVERTISE (RTA) SUBMITTAL	JUL 2025

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DRAWN BY: J. SMITH
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READY-TO-ADVERTISE (RTA) SUBMITTAL

CONTROL VALVE SCHEDULE (CV) (1/2)

VALVE TAG	FLUID TYPE	SERVICE	TYPE	OPERATION	FAIL POSITION	FLOW (GPM)	CALCULATED VALVE CV	PIPE SIZE (INCHES)	DIFFERENTIAL PRESSURE (PSI)	NOTES
CV-101	CHWR	CH-101	BUTTERFLY TWO-WAY	MODULATING	NC	96.2	96.20	3	1	1,2,3
CV-102	CHWR	CH-102	BUTTERFLY TWO-WAY	MODULATING	NC	96.2	96.20	3	1	1,2,3
CV-103	CHWR	AHU-101	THREE-WAY MOD.	MODULATING	NC	39.4	17.62	2	5	1,2
CV-104	CHWR	AHU-102	PICV	MODULATING	NC	44.9	20.08	2 1/2	5	1,2
CV-105	CHWR	DOAS-101	PICV	MODULATING	NC	31.2	13.68	2	5	1,2
CV-106	CHWR	DOAS-102	PICV	MODULATING	NC	30.3	13.55	2	5	1,2
CV-107	CHWR	FCU-101	PICV	MODULATING	NC	3.8	1.70	1	5	1,2
CV-108	CHWR	FCU-102	PICV	MODULATING	NC	3.8	1.70	1	5	1,2
CV-109	CHWR	FCU-103	PICV	MODULATING	NC	3.8	1.70	1	5	1,2
CV-110	CHWR	FCU-104	PICV	MODULATING	NC	3.6	1.61	3/4	5	1,2
CV-111	CHWR	FCU-105	PICV	MODULATING	NC	6.3	2.82	1	5	1,2
CV-112	CHWR	FCU-106	PICV	MODULATING	NC	2.3	1.03	3/4	5	1,2
CV-113	CHWR	FCU-107	PICV	MODULATING	NC	2.6	1.16	3/4	5	1,2
CV-114	CHWR	FCU-108	PICV	MODULATING	NC	1.1	0.49	3/4	5	1,2
CV-115	CHWR	FCU-109	THREE-WAY MOD.	MODULATING	NC	1.0	0.45	3/4	5	1,2
CV-116	CHWR	CRAC-101	PICV	MODULATING	NC	6.2	2.77	1	5	1,2
CV-117	CHWR	CRAC-102	THREE-WAY MOD.	MODULATING	NC	6.2	2.77	1	5	1,2
CV-118	CHWR	CRAC-103	PICV	MODULATING	NC	6.2	2.77	1	5	1,2
CV-119	CHWR	CRAC-104	THREE-WAY MOD.	MODULATING	NC	6.2	2.77	1	5	1,2
CV-120	CHWR	CRAC-105	PICV	MODULATING	NC	6.2	2.77	1	5	1,2
CV-121	CHWR	CRAC-106	THREE-WAY	MODULATING	NC	6.2	2.77	1	1	1,2
CV-122	HWR	B-101	BUTTERFLY TWO-WAY	MODULATING	NO	34.0	44.10	2	1	1,2
CV-123	HWR	B-102	BUTTERFLY TWO-WAY	MODULATING	NO	34.0	44.10	2	5	1,2
CV-124	HWR	DOAS-101 PREHEAT	THREE-WAY MOD.	MODULATING	NO	8.0	3.49	1 1/4	5	1,2
CV-125	HWR	DOAS-101 REHEAT	PICV	MODULATING	NO	3.0	1.34	3/4	5	1,2
CV-126	HWR	DOAS-102 PREHEAT	THREE-WAY MOD.	MODULATING	NO	7.8	5.52	1 1/4	5	1,2
CV-127	HWR	DOAS-102 REHEAT	PICV	MODULATING	NO	3.0	1.34	3/4	5	1,2
CV-128	HWR	FPVAV-101	THREE-WAY MOD.	MODULATING	NO	2.9	2.05	3/4	5	1,2
CV-129	HWR	FPVAV-102	PICV	MODULATING	NO	2.5	1.77	3/4	5	1,2
CV-130	HWR	VAV-101	PICV	MODULATING	NO	0.5	0.22	3/4	5	1,2
CV-131	HWR	VAV-102	PICV	MODULATING	NO	0.5	0.22	3/4	5	1,2
CV-132	HWR	VAV-103	THREE-WAY MOD.	MODULATING	NO	0.7	0.31	3/4	5	1,2
CV-133	HWR	VAV-104	PICV	MODULATING	NO	0.7	0.31	3/4	5	1,2
CV-134	HWR	VAV-105	PICV	MODULATING	NO	0.5	0.22	3/4	5	1,2
CV-135	HWR	VAV-106	PICV	MODULATING	NO	0.6	0.27	3/4	5	1,2
CV-136	HWR	VAV-107	PICV	MODULATING	NO	0.5	0.22	3/4	5	1,2
CV-137	HWR	VAV-108	PICV	MODULATING	NO	0.6	0.27	3/4	5	1,2
CV-138	HWR	VAV-109	PICV	MODULATING	NO	0.7	0.31	3/4	5	1,2
CV-139	HWR	VAV-110	PICV	MODULATING	NO	0.5	0.22	3/4	5	1,2
CV-140	HWR	VAV-111	PICV	MODULATING	NO	0.6	0.27	3/4	5	1,2
CV-141	HWR	VAV-112	PICV	MODULATING	NO	0.7	0.31	3/4	5	1,2
CV-142	HWR	VAV-113	PICV	MODULATING	NO	0.6	0.27	3/4	5	1,2
CV-143	HWR	VAV-114	PICV	MODULATING	NO	1.1	0.49	3/4	5	1,2
CV-144	HWR	VAV-115	THREE-WAY MOD.	MODULATING	NO	0.5	0.22	3/4	5	1,2
CV-145	HWR	VAV-116	PICV	MODULATING	NO	0.5	0.22	3/4	5	1,2
CV-146	HWR	VAV-117	PICV	MODULATING	NO	0.8	0.36	3/4	5	1,2
CV-147	HWR	VAV-118	PICV	MODULATING	NO	0.5	0.22	3/4	5	1,2
CV-148	HWR	VAV-119	PICV	MODULATING	NO	0.5	0.22	3/4	5	1,2
CV-149	HWR	VAV-120	THREE-WAY MOD.	MODULATING	NO	0.6	0.27	3/4	5	1,2
CV-150	HWR	VAV-121	PICV	MODULATING	NO	0.5	0.22	3/4	5	1,2
CV-151	HWR	VAV-122	PICV	MODULATING	NO	0.6	0.22	3/4	5	1,2
CV-152	HWR	VAV-123	PICV	MODULATING	NO	0.5	0.22	3/4	5	1,2

CONTROL VALVE SCHEDULE (CV) (2/2)

VALVE TAG	FLUID TYPE	SERVICE	TYPE	OPERATION	FAIL POSITION	FLOW (GPM)	CALCULATED VALVE CV	PIPE SIZE (INCHES)	DIFFERENTIAL PRESSURE (PSI)	NOTES
CV-153	HWR	VAV-124	PICV	MODULATING	NO	0.5	0.22	3/4	5	1,2
CV-154	HWR	VAV-125	THREE-WAY MOD.	MODULATING	NO	0.6	0.27	3/4	5	1,2
CV-155	HWR	VAV-126	PICV	MODULATING	NO	0.5	0.22	3/4	5	1,2
CV-156	HWR	VAV-127	PICV	MODULATING	NO	0.5	0.22	3/4	5	1,2
CV-157	HWR	VAV-128	PICV	MODULATING	NO	0.8	0.36	3/4	5	1,2
CV-158	HWR	VAV-129	PICV	MODULATING	NO	0.5	0.22	3/4	5	1,2
CV-159	HWR	VAV-130	PICV	MODULATING	NO	0.5	0.22	3/4	5	1,2
CV-160	HWR	FPVAV-20...	PICV	MODULATING	NO	1.7	0.76	3/4	5	1,2
CV-161	HWR	FPVAV-20...	PICV	MODULATING	NO	1.7	0.76	3/4	5	1,2
CV-162	HWR	VAV-201	PICV	MODULATING	NO	1.4	0.63	3/4	5	1,2
CV-163	HWR	VAV-202	THREE-WAY MOD.	MODULATING	NO	0.5	0.22	3/4	5	1,2
CV-164	HWR	VAV-203	PICV	MODULATING	NO	0.7	0.31	3/4	5	1,2
CV-165	HWR	VAV-204	PICV	MODULATING	NO	1.0	0.45	3/4	5	1,2
CV-166	HWR	VAV-205	PICV	MODULATING	NO	0.5	0.22	3/4	5	1,2
CV-167	HWR	VAV-206	PICV	MODULATING	NO	0.5	0.22	3/4	5	1,2
CV-168	HWR	VAV-207	PICV	MODULATING	NO	0.6	0.27	3/4	5	1,2
CV-169	HWR	VAV-208	PICV	MODULATING	NO	0.5	0.22	3/4	5	1,2
CV-170	HWR	VAV-209	PICV	MODULATING	NO	0.9	0.40	3/4	5	1,2
CV-171	HWR	VAV-210A	PICV	MODULATING	NO	1.0	0.45	3/4	5	1,2
CV-172	HWR	VAV-210B	THREE-WAY MOD.	MODULATING	NO	1.0	0.45	3/4	5	1,2
CV-173	HWR	VAV-211	PICV	MODULATING	NO	0.5	0.22	3/4	5	1,2
CV-174	HWR	VAV-212	PICV	MODULATING	NO	1.0	0.45	3/4	5	1,2
CV-175	HWR	VAV-213	PICV	MODULATING	NO	0.6	0.27	3/4	5	1,2
CV-176	HWR	VAV-214	PICV	MODULATING	NO	0.6	0.27	3/4	5	1,2
CV-177	HWR	VAV-215	PICV	MODULATING	NO	0.8	0.36	3/4	5	1,2
CV-178	HWR	VAV-216	PICV	MODULATING	NO	1.4	0.63	3/4	5	1,2
CV-179	HWR	VAV-217	PICV	MODULATING	NO	0.7	0.31	3/4	5	1,2
CV-180	HWR	VAV-218	PICV	MODULATING	NO	0.5	0.22	3/4	5	1,2
CV-181	HWR	VAV-219	PICV	MODULATING	NO	0.5	0.22	3/4	5	1,2
CV-182	HWR	VAV-220	PICV	MODULATING	NO	0.5	0.22	3/4	5	1,2
CV-183	HWR	VAV-221	PICV	MODULATING	NO	0.5	0.22	3/4	5	1,2
CV-184	HWR	VAV-222	PICV	MODULATING	NO	0.6	0.27	3/4	5	1,2
CV-185	HWR	VAV-223	PICV	MODULATING	NO	0.8	0.36	3/4	5	1,2
CV-186	HWR	FCU-104	THREE-WAY MOD.	MODULATING	NO	0.8	0.36	3/4	5	1,2
CV-187	HWR	FCU-106	PICV	MODULATING	NO	0.5	0.22	3/4	5	1,2
CV-188	HWR	FCU-107	THREE-WAY MOD.	MODULATING	NO	0.5	0.22	3/4	5	1,2
CV-189	HWR	FCU-108	PICV	MODULATING	NO	0.5	0.22	3/4	5	1,2
CV-190	HWR	FCU-109	THREE-WAY MOD.	MODULATING	NO	0.5	0.22	3/4	5	1,2

NOTES:

1. VALVES MUST BE ELECTRIC ACTUATED AND BE SIZED AND PROVIDED BY THE CONTROLS CONTRACTOR. CONTROL VALVE SIZES MAY BE SMALLER THAN PIPE SIZE.
2. CONTROLS CONTRACTOR TO CONFIRM AND SIZE VALVE BASED ON DIFFERENTIAL PRESSURE AND CORRELATING VALVE CV. COORDINATE WITH THE MECHANICAL CONTRACTOR FOR PIPE SIZES.
3. EQUIPMENT CONNECTION VALVES ARE TWO-WAY BUT LISTED AS MODULATING TO OPEN AND CLOSE AT A RATE DETERMINED AND ADJUSTED BY THE DDC SYSTEM.

LICENSED PROFESSIONAL ENGINEER
BYRON EDWARD K. FONSECA
M 41419
MECHANICAL
STATE OF CALIFORNIA
07/23/2025

US Army Corps of Engineers ®

MARK	DESCRIPTION	DATE
0	READY-TO-ADVERTISE (RTA) SUBMITTAL	JUL 2025

DESIGNED BY: B. FONSECA
DRAWN BY: J. SMITH
CHECKED BY: C. DUNN
SUBMITTED BY: B. STREEBIN
SIZE: ANSI D
ISSUE DATE: JUL 2025
SOLICITATION NO.: W912QR24A001
CONTRACT NO.: W912QR24C0007
FILE NAME:

US ARMY CORPS OF ENGINEERS
LITTLE ROCK DISTRICT
LITTLE ROCK, ARKANSAS

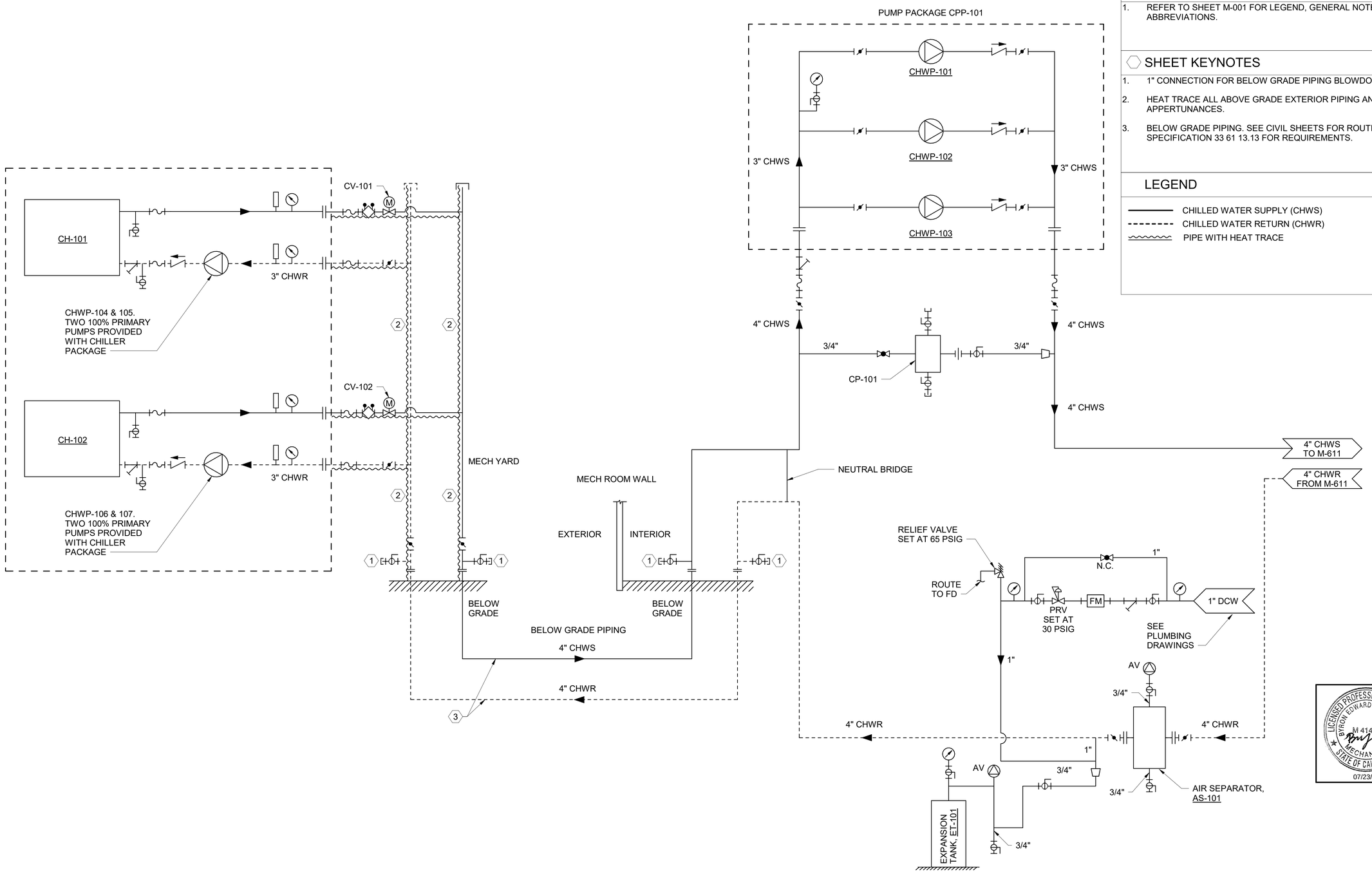
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F-35 SPECIAL ACCESS PROGRAM FACILITY
EBBING AIR NATIONAL GUARD BASE (ANGB), FORT SMITH, ARKANSAS

HVAC SCHEDULES

SHEET ID
M-606

READY-TO-ADVERTISE (RTA) SUBMITTAL



B1 CHILLED WATER FLOW DIAGRAM - PLANT
SCALE: NTS

GENERAL SHEET NOTES

1. REFER TO SHEET M-001 FOR LEGEND, GENERAL NOTES, AND ABBREVIATIONS.

SHEET KEYNOTES

1. 1" CONNECTION FOR BELOW GRADE PIPING BLOWDOWN.
2. HEAT TRACE ALL ABOVE GRADE EXTERIOR PIPING AND APPERTUNANCES.
3. BELOW GRADE PIPING. SEE CIVIL SHEETS FOR ROUTING. SEE SPECIFICATION 33 61 13.13 FOR REQUIREMENTS.

LEGEND

- CHILLED WATER SUPPLY (CHWS)
- CHILLED WATER RETURN (CHWR)
- PIPE WITH HEAT TRACE

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CHECKED BY: C. DAZE
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CONTRACT NO.: W912QR24F0007
SUBMITTED BY: B. STREEBIN
SIZE: ANSI D
FILE NAME:

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F-35: SPECIAL ACCESS PROGRAM FACILITY
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CHILLED WATER FLOW DIAGRAM

SHEET ID
M-610

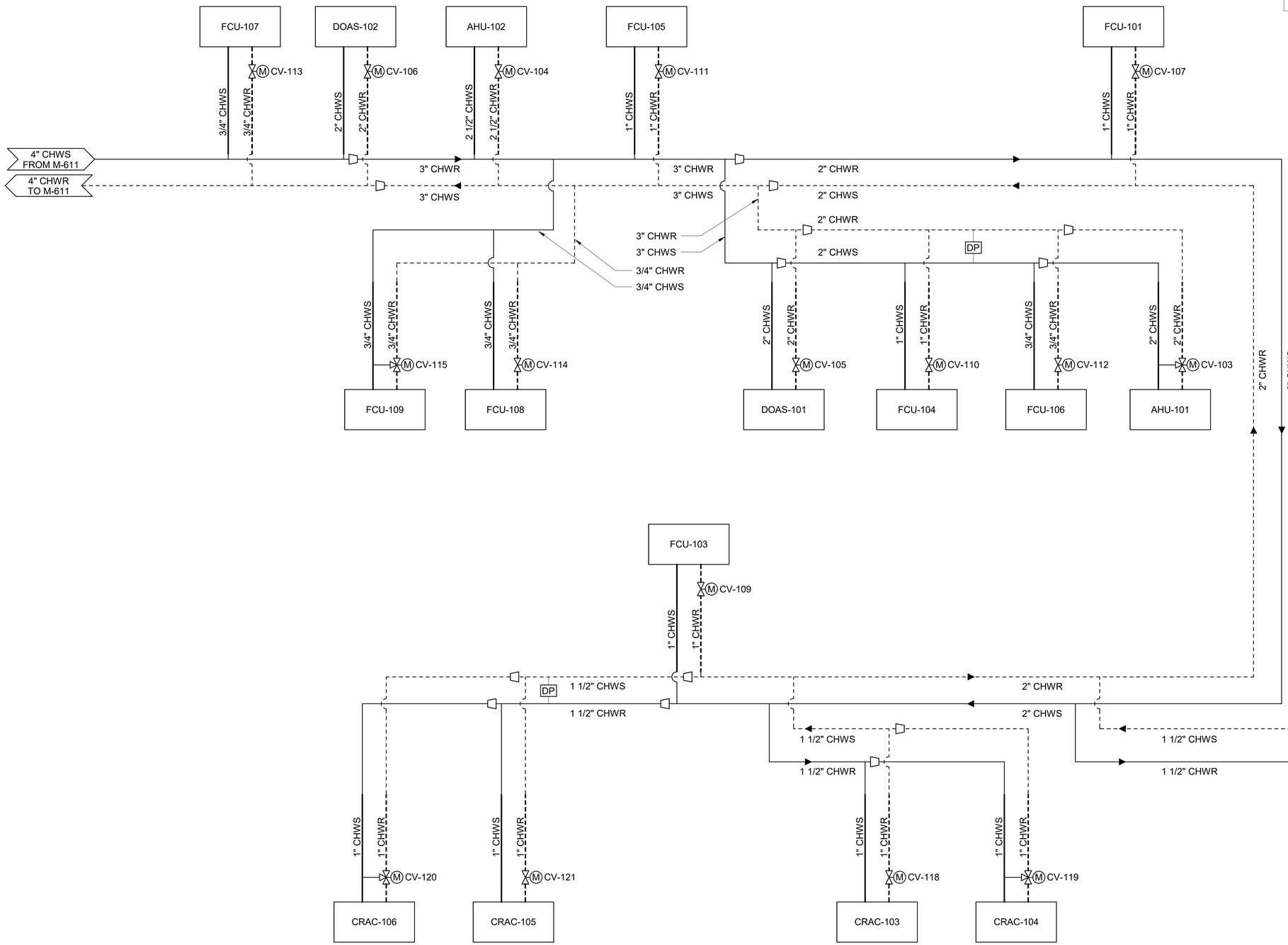
READY-TO-ADVERTISE (RTA) SUBMITTAL

GENERAL SHEET NOTES

1. REFER TO SHEET M-001 FOR LEGEND, GENERAL NOTES, AND ABBREVIATIONS.

LEGEND

- CHILLED WATER SUPPLY (CHWS)
- CHILLED WATER RETURN (CHWR)



A1 CHILLED WATER FLOW DIAGRAM - COILS
SCALE: NTS

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SUBMITTED BY: B. STREEBIN
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ISSUE DATE: JUL 2025
SOLICITATION NO.: W912TS25RA001
CONTRACT NO.: W912TS24F0007
FILE NAME:

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CHILLED WATER FLOW DIAGRAM

SHEET ID
M-611

READY-TO-ADVERTISE (RTA) SUBMITTAL

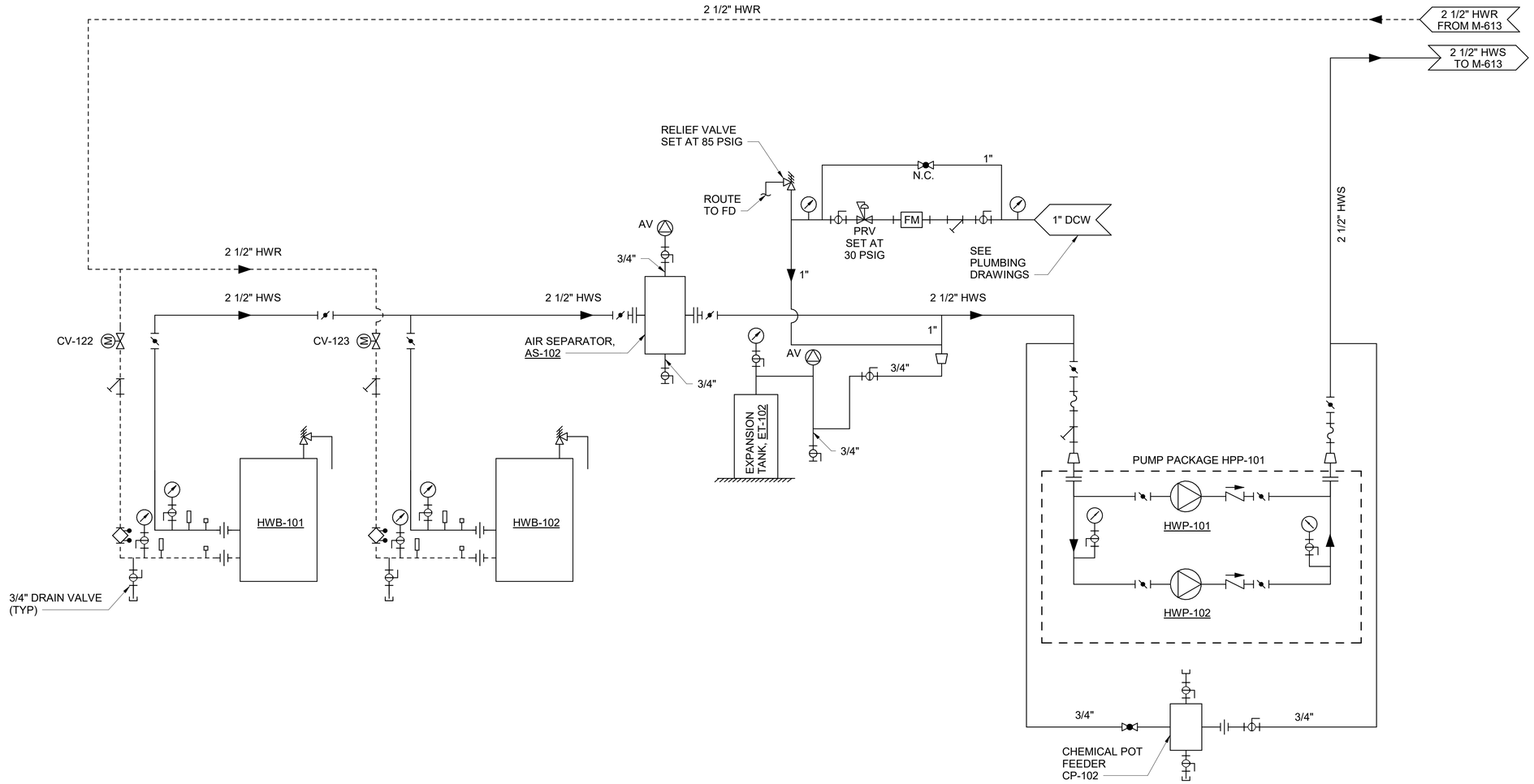
GENERAL SHEET NOTES

1. REFER TO SHEET M-001 FOR LEGEND, GENERAL NOTES, AND ABBREVIATIONS.

LEGEND

HEATING WATER SUPPLY (HWS)

HEATING WATER RETURN (HWR)



B2 HEATING HOT WATER PLANT FLOW DIAGRAM - PLANT

SCALE: NTS

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CONTRACT NO.: W912QZ24C0007
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US ARMY CORPS OF ENGINEERS
LITTLE ROCK DISTRICT
LITTLE ROCK, ARKANSAS

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HEATING HOT WATER FLOW DIAGRAM

SHEET ID

M-612

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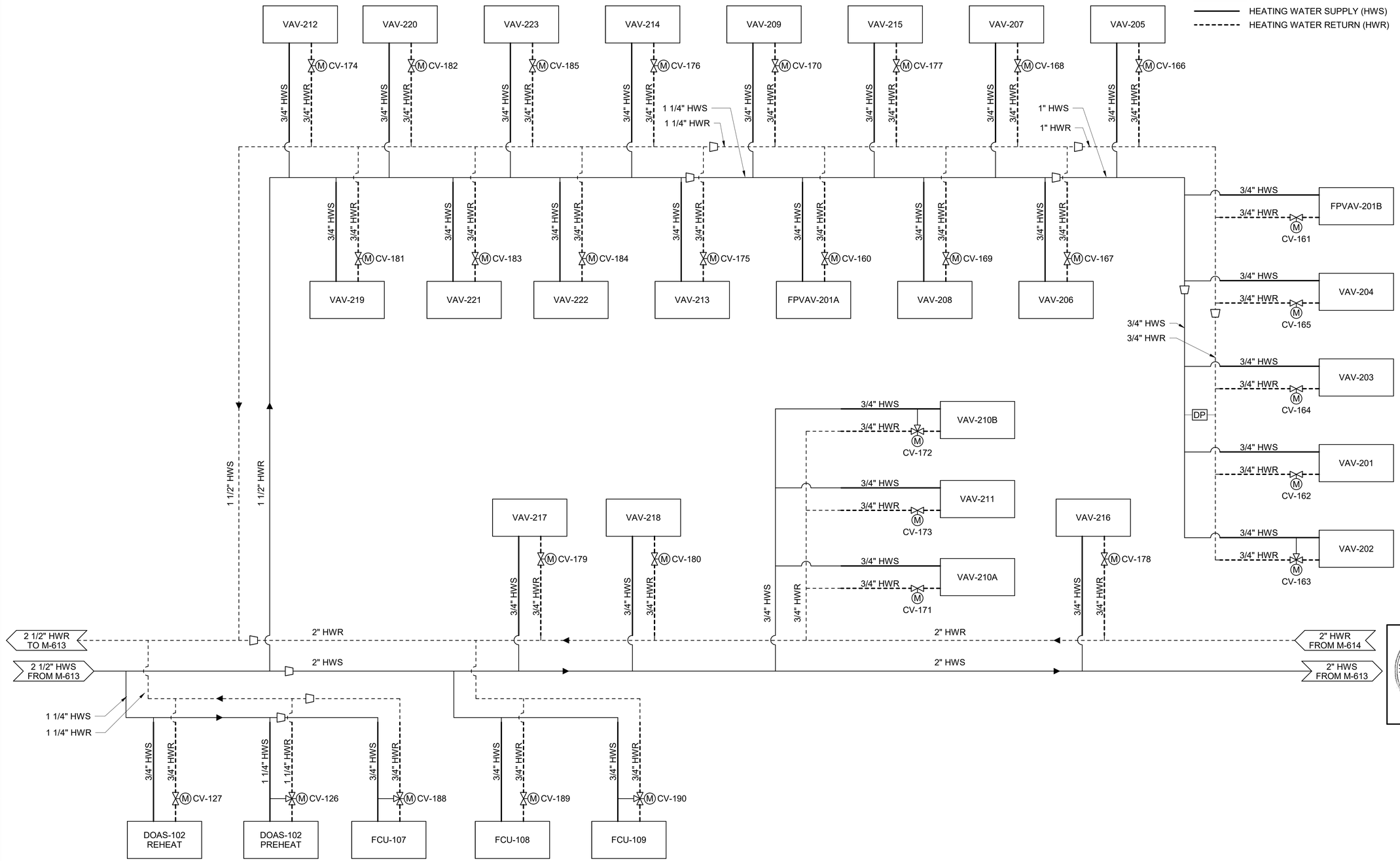
GENERAL SHEET NOTES

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LEGEND

HEATING WATER SUPPLY (HWS)

HEATING WATER RETURN (HWR)



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A1 HEATING HOT WATER PLANT FLOW DIAGRAM - COILS (1/3)
SCALE: NTS

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SUBMITTED BY: B. STREEBIN
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LITTLE ROCK, ARKANSAS

BURNS AND McDONNELL
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HEATING HOT WATER FLOW DIAGRAM

SHEET ID

M-613

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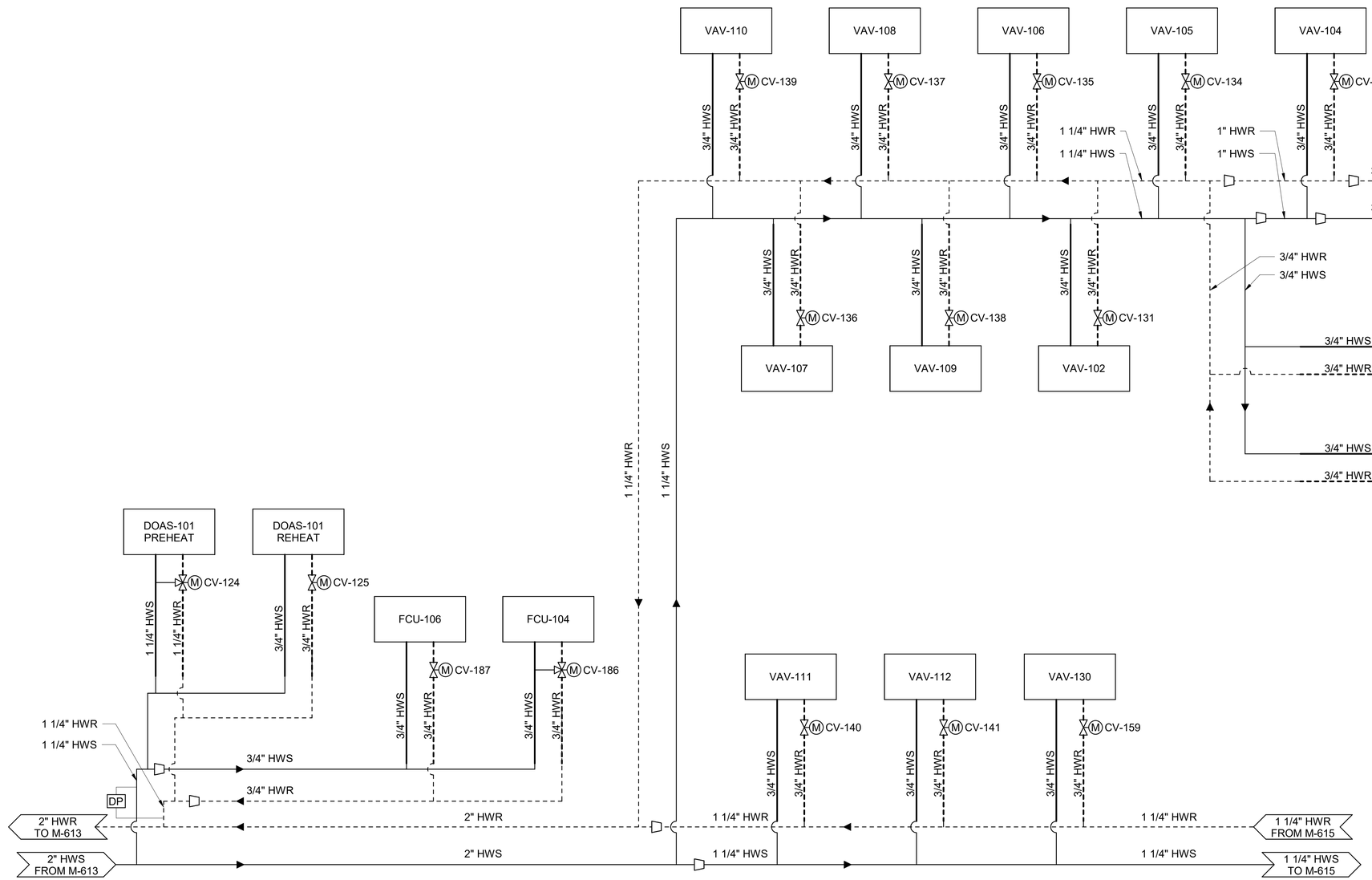
GENERAL SHEET NOTES

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LEGEND

HEATING WATER SUPPLY (HWS)

HEATING WATER RETURN (HWR)



A1 HEATING HOT WATER PLANT FLOW DIAGRAM - COILS (2/3)

SCALE: NTS

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HEATING HOT WATER FLOW DIAGRAM

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SHEET ID

M-614

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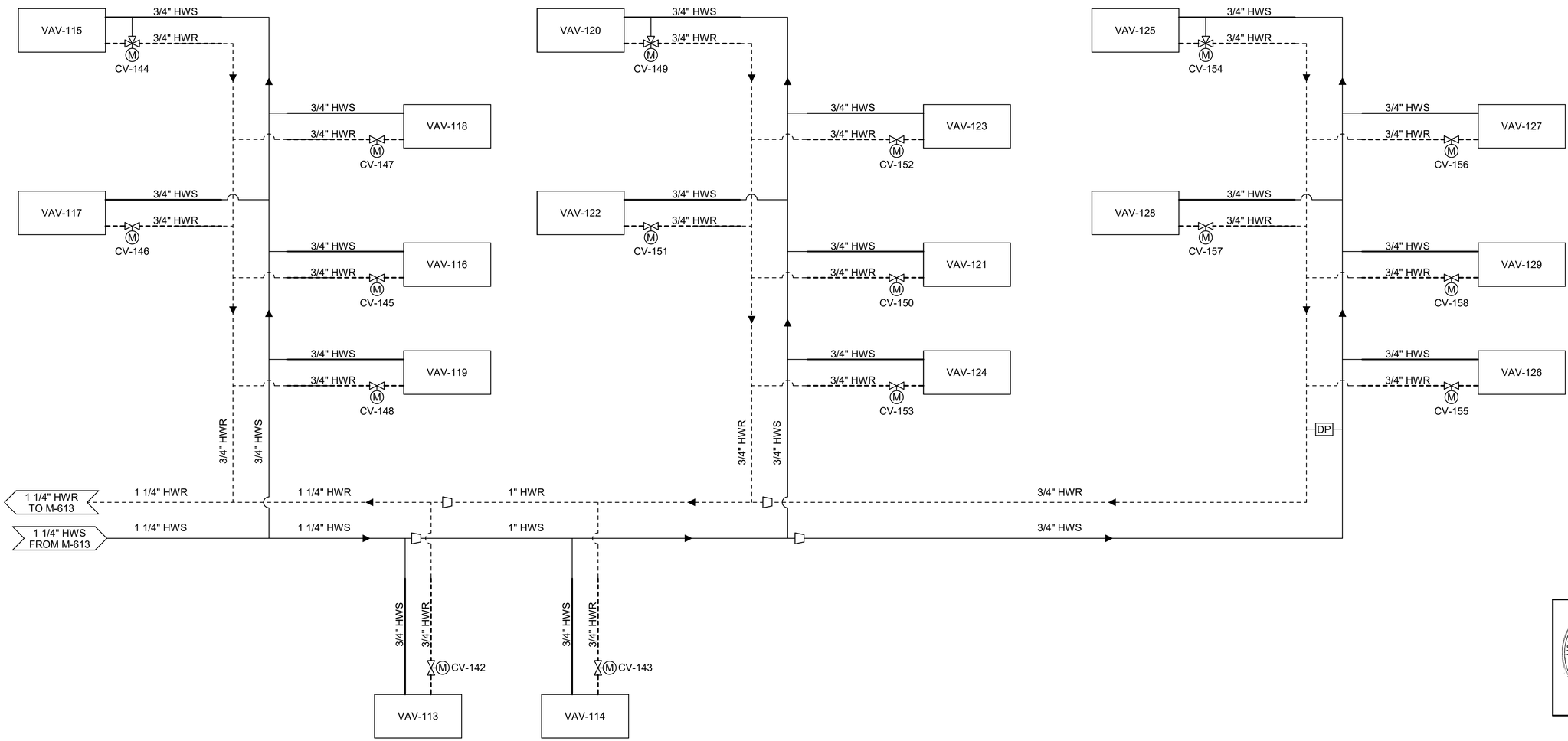
GENERAL SHEET NOTES

1. REFER TO SHEET M-001 FOR LEGEND, GENERAL NOTES, AND ABBREVIATIONS.

LEGEND

HEATING WATER SUPPLY (HWS)

HEATING WATER RETURN (HWR)



A1 HEATING HOT WATER PLANT FLOW DIAGRAM - COILS (3/3)

SCALE: NTS

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07/23/2025

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SUBMITTED BY: B. STREEBIN
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CONTRACT NO.: W912T5-24-C-0007
FILE NAME:

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HEATING HOT WATER FLOW DIAGRAM

SHEET ID

M-615

READY-TO-ADVERTISE (RTA) SUBMITTAL

LEGEND & SYMBOLS

W-X-Y-Z ## — DEVICE SYMBOL, GENERIC
USED TO REPRESENT SENSORS, INSTRUMENTS SAFETIES, AND OTHER CONTROL DEVICES W-X-Y-Z : (SEE ABBREVIATIONS AND ACRONYMS) GENERIC USAGE TO SHOW LOCATION OF DEVICE; PROCESS OR DEVICE BEING MEASURED OR CONTROLLED; SIGNAL TYPE; MODIFIERS AND OTHER APPLICATION INFORMATION

W-X-Y-Z ## — DEVICE SYMBOL, GENERIC
MULTIPLE OUTPUT DEVICE WHERE AT LEAST 1 OUTPUT IS ALWAYS SAFETY INTERLOCK

W-X-Y-Z / DDC ## / DIR / REV — DEVICE SYMBOL, CONTROLLER
DDC : DIRECT DIGITAL CONTROL
: DEVICE NUMBER
DIR : DIRECT CONTROL ACTION, OR
REV : REVERSE CONTROL ACTION
W-X-Y-Z : (SEE ABBREVIATIONS AND ACRONYMS)
GENERIC USAGE TO SHOW LOCATION OF DEVICE; PROCESS OR DEVICE BEING MEASURED OR CONTROLLED; SIGNAL TYPE; MODIFIERS AND OTHER APPLICATION INFORMATION

LDP ## — LOCAL DISPLAY PANEL
= SEQUENTIAL NUMBER
(WHEN MORE THAN 1 LDP)

H / P / L — PRESSURE SWITCH, DIFFERENTIAL, WITH GAGE
H = HIGH PRESSURE TAP
L = LOW PRESSURE TAP
SEE "DEVICE SYMBOL, GENERIC"

RST-BUT — RESET BUTTON FOR SAFETY RESET

SMOKE DETECTOR, DUCT-MOUNTED
SEE "DEVICE SYMBOL, GENERIC"

TEMPERATURE SENSOR, AVERAGING OR TEMPERATURE LOW LIMIT / FREEZESTAT
SEE "DEVICE SYMBOL, GENERIC"

TEMPERATURE SENSOR, POINT
SEE "DEVICE SYMBOL, GENERIC"

STAT — THERMOSTAT WITH SPECIFIED I/O FUNCTIONS

AFMA — AIR FLOW MEASUREMENT ARRAY,
WITH FLOW TRANSMITTER
SEE "DEVICE SYMBOL, GENERIC"

CONTROL SIGNAL LINE, LOW VOLTAGE

C — COIL, COOLING

DX — COIL, COOLING, DIRECT-EXPANSION

H — COIL, HEATING

PC — COIL, PRECOOL

PH — COIL, PREHEAT

FAN

FILTER

HUMIDIFIER

DAMPER, BALANCING

DAMPER, PARALLEL BLADE
NORMALLY OPEN OR CLOSED AS SHOWN

DAMPER, OPPOSED BLADE
NORMALLY OPEN OR CLOSED AS SHOWN

BOILER

CHILLER

SHELL AND TUBE
HEAT EXCHANGER

PLATE AND FRAME
HEAT EXCHANGER

PUMP

ACTUATOR, ELECTRIC

THERMOWELL IN PIPE

VALVE, BALANCING

V-## / N.C./N.O. — VALVE, WITH SPRING FAILSAFE
N.O. = NORMALLY OPEN
N.C. = NORMALLY CLOSED
= VALVE NUMBER AS SHOWN IN VALVE SCHEDULE

V-## / F.L. — VALVE
F.L. = FAIL IN LAST POSITION
= VALVE NUMBER AS SHOWN IN VALVE SCHEDULE

V-## / COM / N.O. / N.C. — VALVE, 3-WAY DIVERTING WITH SPRING FAILSAFE
N.O. = NORMALLY OPEN
N.C. = NORMALLY CLOSED
COM = COMMON PORT
= VALVE NUMBER AS SHOWN IN VALVE SCHEDULE

V-## / N.O. / COM / N.C. — VALVE, 3-WAY MIXING WITH SPRING RETURN FAILSAFE
N.O. = NORMALLY OPEN
N.C. = NORMALLY CLOSED
COM = COMMON PORT
= VALVE NUMBER AS SHOWN IN VALVE SCHEDULE

PP — POSITIVE POSITIONER
SEE "ACTUATOR, PNEUMATIC"

P — PRESSURE GAGE

T — TEMPERATURE GAGE

M# — MOTOR

MS — MOTOR STARTER

CT — CURRENT TRANSDUCER/SWITCH

FM — FLOW METER

VFD / XX-C / XX-S / XX-SS — VARIABLE FREQUENCY DRIVE
XX = PROCESS/DEVICE BEING CONTROLLED

SS = START/STOP COMMAND
S = STATUS FEEDBACK (ON/OFF)
C = 4-20 mA, VDC, or SNVT CONTROL SIGNAL

ABBREVIATIONS & ACRONYMS

2P	TWO-POSITION (CONTROL SIGNAL)	ISO	ISOLATION
ADJ	ADJUSTABLE/ADJUSTMENT	IR	INFRARED
AFMA	AIRFLOW MEASUREMENT ARRAY	L	LEVEL
AHU	AIR HANDLING UNIT	LDP	LOCAL DISPLAY PANEL
AI	ANALOG INPUT	LL	LOW LIMIT
ALM	ALARM	LVG	LEAVING
AO	ANALOG OUTPUT	M	MOTOR or MAIN
ASD	ADJUSTABLE SPEED DRIVE	M&C	MONITORING & CONTROL (SOFTWARE)
AVE	AVERAGE	MA	MIXED AIR
BI	BINARY INPUT	MINOA	MINIMUM OUTSIDE AIR
BLDG	BUILDING	MOIST	MOISTURE
BLR	BOILER	MS	MOTOR STARTER
BO	BINARY OUTPUT	MUW	MAKE-UP WATER
BUT	BUTTON	N/A	NOT APPLICABLE
BYP	BYPASS	N.C.	NORMALLY CLOSED
C	COMMAND (MODULATING CONTROL SIGNAL)	nci	NETWORK CONFIGURATION INPUT
CAP	CAPACITY	N.O.	NORMALLY OPEN
CF	CONDENSER FAN	NVI	NETWORK VARIABLE INPUT
CH	CHILLER	NVO	NETWORK VARIABLE OUTPUT
CHW	CHILLED WATER	OA	OUTSIDE AIR
CHWS	CHILLED WATER SUPPLY	OCC	OCCUPIED
CHWR	CHILLED WATER RETURN	OPN	OPEN
CLD	CLOSED	OVRD	OVERRIDE
CLG	COOLING	OWS	OPERATOR WORKSTATION
CO2	CARBON DIOXIDE	P	PRESSURE
COM	COMMON	PC	PRE-COOLING
COMP	COMPRESSOR	PH	PREHEAT
COV	CHANGE OF VALUE	PHTG	PREHEATING
CSR	CURRENT SENSING RELAY	PID	PROPORTIONAL INTEGRAL DERIVATIVE (CONTROL)
CT	CURRENT TRANSFORMER/SWITCH	PMP	PUMP
CWR	CONDENSER WATER RETURN	PP	POSITIVE POSITIONER
CWS	CONDENSER WATER SUPPLY	PR	PRIMARY
CW	CONDENSER WATER	PWR	POWER
D	DAMPER	R	RELAY
DA	DISCHARGE AIR	RA	RETURN AIR
DBD	DEADBAND	RE	RELIEF AIR
DDC	DIRECT DIGITAL CONTROL(LER)	REF	RELIEF FAN
DEC	DECOUPLER	REQ	REQUIRED
DIFF	DIFFERENCE	RF	RETURN FAN
DIS	DISABLE	RH	RELATIVE HUMIDITY
DISP	DISPLAY	RHTG	REHEATING
DPT	DEW POINT TEMPERATURE	RM	ROOM
DX	DIRECT EXPANSION (UNIT)	RQST	REQUEST
EA	EXHAUST AIR	RST	RESET
ECM	ELECTRICALLY COMMUTATED MOTOR	S	STATUS
ECO	ECONOMIZER	SA	SUPPLY AIR
EF	EXHAUST FAN	SEC	SECONDARY
EFF	EFFECTIVE	SF	SUPPLY FAN
EH	ENTHALPY	SHUTDN	SHUTDOWN
EMER	EMERGENCY	SMK	SMOKE
ENA	ENABLE	SNVT	STANDARD NETWORK VARIABLE TYPE
EW	ENTHALPY WHEEL	SO	SHUT-OFF
F	FLOW	SP	SETPOINT
FACP	FIRE ALARM CONTROL PANEL	SS	START/STOP COMMAND
F.L.	FAIL IN LAST POSITION	STAT	THERMOSTAT
FLT	FILTER	SYS	SYSTEM
GLY	GLYCOL	SCHD	SCHEDULER
H2	HYDROGEN	T	TEMPERATURE
HL	HIGH LIMIT	TRB	TROUBLE
HTG	HEATING	UNOCC	UNOCCUPIED
HUM	HUMIDIFIER	V	VALVE
HW	HOT WATER	VAV	VARIABLE AIR VOLUME
HWR	HOT WATER RETURN	VFD	VARIABLE FREQUENCY DRIVE, SEE ASD
HWS	HOT WATER SUPPLY	VIB	VIBRATION
HX	HEAT EXCHANGER	WB	WET BULB (TEMPERATURE)
IO	INPUT/OUTPUT	XFMR	TRANSFORMER
		ZN	ZONE

"HVAC CONTROLS" GENERAL NOTES: SHEETS M-700 SERIES

1. THE CONTROL DIAGRAMS AND SCHEMATICS ILLUSTRATE THE FUNCTIONAL REQUIREMENTS AND CONTROL RELATIONSHIPS, ALL ACCESSORIES AND DEVICES MAY NOT BE SHOWN IN DETAIL
2. THE SPECIFICATIONS SHOULD BE CONSULTED FOR DETAILED REQUIREMENTS.
3. BUILDING CONTROL SYSTEM SHALL BE COMPLETELY OPERATIONAL BEFORE BUILDING COMMISSIONING CAN TAKE PLACE

"POINTS LIST SCHEDULE" GENERAL NOTES: SHEETS M-700 SERIES

1. CELLS WITH "<___>" SHALL BE DETERMINED BY THE CONTRACTOR
2. SPACES WHERE NO ENTRY IS REQUIRED CONTAIN " ~ "
3. AN ALARM PRIORITY OF CRITICAL (CRIT) INDICATES THAT THE ALARM SHALL REMAIN IN ALARM UNTIL ACKNOWLEDGED BY A SYSTEM OPERATOR AND UNTIL THE ALARM CONDITION NO LONGER EXISTS.
4. AN ALARM PRIORITY OF INFORMATIONAL (INFO) INDICATES THAT THE ALARM SHALL REMAIN IN ALARM UNTIL THE ALARM CONDITION NO LONGER EXISTS OR THE ALARM IS ACKNOWLEDGED.

LICENSED PROFESSIONAL ENGINEER — BYRON EDWARD K. FONSECA — M 41419 — MECHANICAL — STATE OF CALIFORNIA
07/23/2025

US Army Corps of Engineers ®

MARK	DESCRIPTION	DATE
0	READY-TO-ADVERTISE (RTA) SUBMITTAL	JUL 2025

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CHECKED BY: C. BLAZE
ISSUE DATE: JUL 2025
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CONTRACT NO.: W912T2-24-C-0007
SUBMITTED BY: B. STREEBIN
SIZE: ANSI D
FILE NAME:

US ARMY CORPS OF ENGINEERS
LITTLE ROCK DISTRICT
LITTLE ROCK, ARKANSAS

BURNS AND McDONNELL
9400 WARD PARKWAY,
KANSAS CITY, MO 64114
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F-35, SPECIAL ACCESS PROGRAM FACILITY
EBBING AIR NATIONAL GUARD BASE (ANGB), FORT SMITH, ARKANSAS

MECHANICAL CONTROLS LEGEND

SHEET ID
M-701

READY-TO-ADVERTISE (RTA) SUBMITTAL

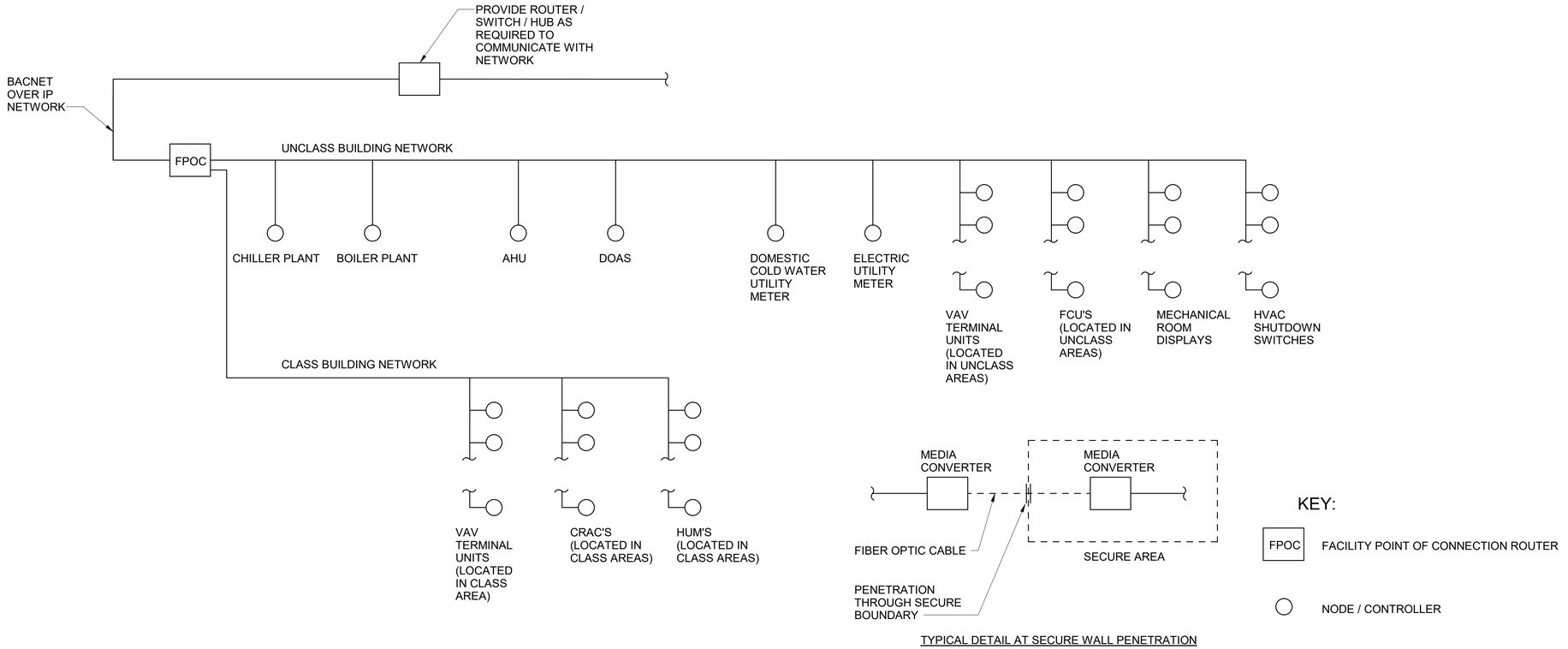
GENERAL SHEET NOTES

1. SYSTEM ARCHITECTURE IS SCHEMATIC. CONTRACTOR SHALL PROVIDE ADDITIONAL DEVICES AS REQUIRED FOR A COMPLETE AND FUNCTIONAL SYSTEM IN COMPLIANCE WITH SPECIFICATION SECTIONS 23 09 00, 23 09 13, 23 09 23.02, AND 25 10 10.

2. CONTRACTOR IS RESPONSIBLE FOR SELECTING FINAL DETAILS OF THE ARCHITECTURE AND ENSURING THAT THE SYSTEM (DEVICES, NETWORK BINDINGS, AND NETWORK ARCHITECTURE) MEETS THE BANDWIDTH AND COMMUNICATION SPEED REQUIREMENTS SPECIFIED IN SECTIONS 23 09 00, 23 09 13, 23 09 23.02 ,AND 25 10 10.

3. 120 VOLT SINGLE PHASE POWER CONNECTION JUNCTION BOXES HAVE BE PROVIDED FOR USE TO POWER DDC SYSTEM COMPONENTS. THESE JUNCTION BOXES ARE SHOWN ON THE ELECTRICAL POWER PLAN DRAWINGS. THE DDC CONTROLS CONTRACTOR IS RESPONSIBLE FOR ALL POWER WIRING AND COMPONENTS DOWNSTREAM OF THESE JUNCTION BOXES AND VERIFYING THE QUANTITY AND LOCATION OF THE JUNCTION BOXES IS ADEQUATE. ADDITIONAL POWER CONNECTIONS ARE THE RESPONSIBILITY OF THE DDC CONTROLS CONTRACTOR.

4. ALL CONTROL LOGIC AND FUNCTIONS SHALL BE DONE THROUGH COMPONENTS LOCATED WITHIN THE BUILDING. IF THERE IS A LOSS OF COMMUNICATION WITH THE BASEWIDE CONTROL SYSTEM, THE BUILDING SYSTEMS SHALL CONTINUE TO OPERATE USING DEFAULT SETTINGS FOR ANY INPUTS REQUIRED FROM THE BASEWIDE SYSTEM. ALL POINTS MUST BE READ-ONLY WHEN ACCESSED FROM OUTSIDE OF THE BUILDING INCLUDING THE BASEWIDE CONTROL SYSTEM GUI. NONE OF THE BUILDING'S SYSTEMS OR UTILITIES SHALL BE SUBJECT TO DEMAND LIMITING.



TYPICAL DETAIL AT SECURE WALL PENETRATION

A1 HVAC CONTROL ARCHITECTURE
SCALE: NTS

US Army Corps of Engineers ®

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F-35 SPECIAL ACCESS PROGRAM FACILITY
EBBING AIR NATIONAL GUARD BASE (ANGB), FORT SMITH, ARKANSAS

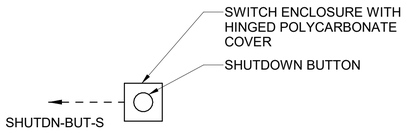
MECHANICAL CONTROLS ARCHITECTURE

SHEET ID
M-702

READY-TO-ADVERTISE (RTA) SUBMITTAL

GENERAL SHEET NOTES

1. REFER TO SHEET M-001 FOR LEGEND, GENERAL NOTES, AND ABBREVIATIONS.
2. REFER TO SHEET M-701 FOR CONTROLS SPECIFIC LEGEND, GENERAL NOTES, AND ABBREVIATIONS.



L2 HVAC SYSTEM EMERGENCY SHUTDOWN CONTROL SCHEMATIC
SCALE: NTS

SEQUENCE OF OPERATION - HVAC SYSTEM EMERGENCY SHUTDOWN

GENERAL:
EMERGENCY HVAC SHUTDOWN SWITCH SHALL BE DOUBLE ACTION SWITCH. LABEL SWITCH WITH A PLASTIC LAMINATE PLACARD STATING THE FOLLOWING "EMERGENCY HVAC SHUTDOWN SWITCH" SEE PLANS FOR LOCATION OF SWITCH.

DDC MONITORING:
THE DDC SYSTEM SHALL MONITOR THE STATUS OF THE EMERGENCY SHUTDOWN SWITCH.

EQUIPMENT SHUTDOWN:
UPON ACTIVATION OF THE EMERGENCY SHUTDOWN SWITCH EQUIPMENT SHALL SHUTDOWN WITHIN 30 SECONDS AS INDICATED IN THE SEQUENCE OF OPERATION. FANS SHALL BE SHUTDOWN THROUGH THE MOTOR STARTER OR VFD SAFETY CIRCUITS AND THE DDC SYSTEM SHALL PLACE UNITS INTO OFF MODE. SEE INDIVIDUAL UNIT CONTROLS FOR WHICH UNITS ARE SHUTDOWN.

SEQUENCE OF OPERATION - MONITORING OF UTILITY METERS

TYPICAL FOR DOMESTIC COLD WATER AND ELECTRIC METERS.

GENERAL:
THE DDC SYSTEM SHALL MONITOR THE METER FOR CONSUMPTION ON A CONTINUAL BASIS. THESE VALUES SHALL BE MADE AVAILABLE TO THE SYSTEM AT ALL TIMES. THE OPERATOR INTERFACE SHALL DISPLAY THE CURRENT DEMAND AS WELL AS THE HISTORIES DESCRIBED BELOW.

PEAK DEMAND HISTORY:
THE DDC SYSTEM SHALL MONITOR AND RECORD THE PEAK (HIGH AND LOW) DEMAND READINGS FROM THE METER. THESE READINGS SHALL BE RECORDED ON A DAILY, MONTH-TO-DATE, AND YEAR-TO-DATE BASIS.

USAGE HISTORY:
THE DDC SYSTEM SHALL MONITOR AND RECORD METER READINGS TO PROVIDE A CONSUMPTION HISTORY. USAGE READINGS SHALL BE RECORDED ON A DAILY, MONTH-TO-DATE, AND YEAR-TO-DATE BASIS.

MISCELLANEOUS POINTS LIST SCHEDULE

FUNCTION	NAME	DESCRIPTION	SETTING (WITH UNITS)	RANGE (WITH UNITS)	IO TYPE	LDP AND M&C DISPLAY: LDP VIEW REQ'D	LDP AND M&C DISPLAY: M&C DISP REQ'D	LDP AND M&C DISPLAY: M&C TREND REQ'D	OVERRIDES: LDP OVRD REQ'D	OVERRIDES: M&C OVRD REQ'D	ALARMS: ALARM CONDITION (SEE NOTES)	ALARMS: ALARM PRIORITY
ALARMS	SHUTDN-BUT-S-#	HVAC SYSTEM EMERGENCY SHUTDOWN BUTTON STATUS (PROVIDE A POINT PER BUTTON)	~	ALM/NORMAL	BI	~	X	~	~	~	BUTTON DEPRESSED	CRIT
METERING	DCW-F	DOMESTIC COLD WATER FLOW	~	<___>	AI	~	X	X	~	~	~	~
	DCW-F-TOT	DOMESTIC COLD WATER TOTAL FLOW CONSUMPTION	~	<___>	AI	~	X	X	~	~	~	~
	PWR-TOT	REAL POWER (TOTAL)	~	<___>	AI	~	X	X	~	~	~	~
	KWH-TOT	TOTAL kWh (TOTAL ENERGY)	~	<___>	AI	~	X	X	~	~	~	~

NOTES:
1. THE CONTRACTOR SHALL COMPLETE THE POINTS SCHEDULE AS SPECIFIED AND AS DESCRIBED IN THE GENERAL POINTS SCHEDULE NOTES ON THE CONTROLS LEGEND DRAWING.
2. THE CONTRACTOR SHALL PROVIDE A POINTS SCHEDULE INCLUDING ALL COLUMNS SHOWN AS WELL AS ALL ADDITIONAL COLUMNS DESCRIBED IN PART 3 OF SPECIFICATION SECTION 23 09 00.

LICENSED PROFESSIONAL ENGINEER
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07/23/2025

US Army Corps of Engineers ®

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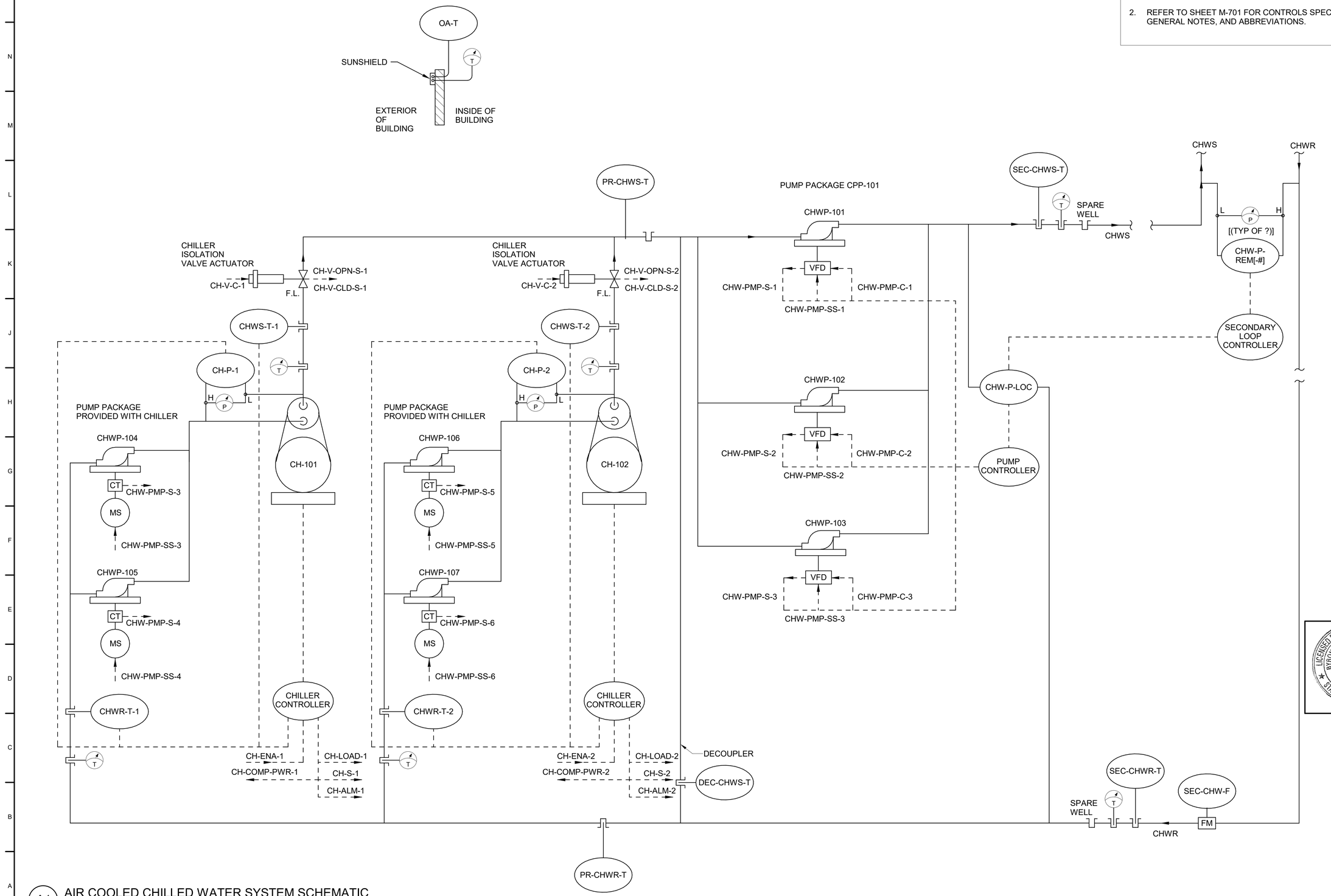
MECHANICAL CONTROLS MISC POINTS

SHEET ID
M-703

READY-TO-ADVERTISE (RTA) SUBMITTAL

GENERAL SHEET NOTES

1. REFER TO SHEET M-001 FOR LEGEND, GENERAL NOTES, AND ABBREVIATIONS.
2. REFER TO SHEET M-701 FOR CONTROLS SPECIFIC LEGEND, GENERAL NOTES, AND ABBREVIATIONS.



A1 AIR COOLED CHILLED WATER SYSTEM SCHEMATIC
SCALE: NTS

US Army Corps of Engineers ®

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F-35 SPECIAL ACCESS PROGRAM FACILITY
EBBING AIR NATIONAL GUARD BASE (ANGB), FORT SMITH, ARKANSAS

MECHANICAL CONTROLS SCHEMATIC - CHILLED WATER SYSTEM

SHEET ID
M-704

READY-TO-ADVERTISE (RTA) SUBMITTAL

SEQUENCE OF OPERATION - AIR COOLED CHILLED WATER SYSTEM WITH PRIMARY/SECONDARY PUMPING

GENERAL:
CHILLED WATER SYSTEM IS DESIGNED WITH TWO 50% CAPACITY CHILLERS, TWO 100% PRIMARY PUMPS, AND THREE 50% SECONDARY PUMPS.

SYSTEM ENABLE:
THE CHILLER PLANT SHALL INCLUDE AN ENABLING SCHEDULE THAT ALLOWS OPERATORS TO LOCK OUT THE PLANT DURING OFF-HOURS, HOLIDAYS, OR ANY OTHER SCHEDULED EVENTS, E.G., TO ALLOW OFF-HOUR OPERATION OF HVAC SYSTEMS EXCEPT THE CHILLER PLANT. THE DEFAULT SCHEDULE SHALL BE 24/7 (ADJ.).

ENABLE THE PLANT IN THE LOWEST STAGE WHEN THE PLANT HAS BEEN DISABLED FOR AT LEAST 15 MINUTES AND (1) THE NUMBER OF CHILLER PLANT REQUESTS IS GREATER THAN 1 (ADJ.); (2) OUTSIDE AIR TEMPERATURE IS GREATER THAN THE LOW LIMIT TEMPERATURE SETPOINT; AND (3) THE CHILLER PLANT ENABLE SCHEDULE IS ACTIVE. CHILLER PLANT REQUESTS SHALL BE GENERATED FOR EACH AIR HANDLING UNIT, DOAS, OR CRAC CALLING FOR COOLING. DISABLE THE PLANT WHEN IT HAS BEEN ENABLED FOR AT LEAST 15 MINUTES AND (1) THE NUMBER OF CHILLER PLANT REQUESTS IS LESS THAN 1 (ADJ.) FOR 3 MINUTES (ADJ.); (2) OUTSIDE AIR TEMPERATURE IS LESS THAN THE LOW LIMIT TEMPERATURE SETPOINT BY MORE THAN 1 °F (ADJ.); OR (3) THE CHILLER PLANT ENABLE SCHEDULE IS INACTIVE. CHILLER PLANT REQUESTS ARE GENERATED BY COIL CONTROL VALVES. REQUEST EXISTS IF THE COOLING COIL CONTROL VALVE COMMAND HAS BEEN GREATER THAN 5% (ADJ.) FOR 5 MINUTES (ADJ.).

WHEN THE PLANT IS ENABLED (1) OPEN THE CHILLER ISOLATION VALVE OF THE LEAD CHILLER; (2) STAGE ON LEAD PRIMARY CHILLED WATER PUMP AND LEAD SECONDARY CHILLED WATER PUMP PER PRIMARY CHILLED WATER PUMP CONTROL AND SECONDARY CHILLED WATER PUMP CONTROL SECTIONS RESPECTIVELY; AND (3) ONCE THE LEAD PUMPS ARE PROVEN ON, ENABLE THE LEAD CHILLER.

WHEN THE PLANT IS DISABLED (1) SHUT OFF THE ENABLED CHILLER(S); (2) AFTER 3 MINUTES (ADJ.) OR THE CHILLER IS NOT REQUESTING FLOW, DISABLE THE OPERATING PRIMARY CHILLED WATER PUMP(S) AND SECONDARY CHILLED WATER PUMP(S) PER PRIMARY CHILLED WATER PUMP CONTROL AND SECONDARY CHILLED WATER PUMP CONTROL SECTIONS RESPECTIVELY; AND (3) FOR EACH ENABLED CHILLER, CLOSE THE CHILLED WATER ISOLATION VALVE.

CHILLER CONTROL:
CHILLERS SHALL BE STARTED/STOPPED AS DESCRIBED BELOW IN THE CHILLER STAGING PARAGRAPHS TO MEET LOAD REQUIREMENTS. ENERGIZED CHILLERS SHALL OPERATE TOGETHER AT EQUAL PERCENTAGE LOADING IN ACCORDANCE WITH CHILLER MANUFACTURER'S RECOMMENDATIONS. CHILLED WATER SHALL BE MAINTAINED AT SETPOINT. IF A CHILLER IS IN ALARM ITS CHILLED WATER ISOLATION VALVE SHALL BE CLOSED.

STARTING LEAD CHILLER: UPON THE LEAD CHILLER BEING ENABLED, THE CHILLER CHILLED WATER ISOLATION VALVE SHALL OPEN AND ONCE PROVEN OPEN THE PAIRED PRIMARY CHILLED WATER PUMP SHALL START. THE SEQUENCE SHALL CONTINUE AFTER THE PRIMARY PUMP IS PROVED ON AND PROOF OF FLOW IS VERIFIED BY THE CHILLED WATER DIFFERENTIAL PRESSURE SWITCH. THE LEAD CHILLER SHALL BE COMMANDED TO START. THE CHILLER SHALL BE CONTROLLED BY THE MANUFACTURER PROVIDED CONTROLLER TO MAINTAIN CHILLED WATER SUPPLY TEMPERATURE AT SETPOINT.

CHILLERS SHALL BE LEAD/LAG CONTROLLED.

STAGE CHILLERS BASED ON THE OPERATIVE PART LOAD RATIO (OPLR) WHICH IS A FUNCTION OF THE REQUIRED CAPACITY (Q_REQ) AND DESIGN CAPACITY OF CHILLERS (CH-CAP-DES-X, OF CHILLER X) ACTIVE IN THE STAGE. THE REQUIRED CAPACITY IS A FUNCTION OF THE LOOP FLOW RATE (CHW-F), THE CHILLED WATER RETURN TEMPERATURE (CWR-T), AND THE CHILLED WATER SUPPLY TEMPERATURE SETPOINT (CWS-T-SP). THE REQUIRED CAPACITY USED IN LOGIC SHALL BE A 5-MINUTE ROLLING AVERAGE OF INSTANTANEOUS VALUES SAMPLED AT A MINIMUM OF EVERY 30 SECONDS. WHEN A STAGE UP OR STAGE DOWN TRANSITION IS INITIATED, HOLD REQUIRED CAPACITY FIXED AT ITS LAST VALUE UNTIL THE LAG CHILLER IS PROVEN ON AND AN ADDITIONAL 15 MINUTES HAS ELAPSED. STAGING EVENTS REQUIRE THAT A CHILLER STAGE BE AVAILABLE. A STAGE SHALL BE DEEMED UNAVAILABLE IF THE STAGE CANNOT BE ACHIEVED BECAUSE A CHILLER REQUIRED TO OPERATE IN THE STAGE IS FAULTED; OTHERWISE, THE STAGE SHALL BE DEEMED AVAILABLE. WHEN THE OPLR CALCULATED USING THE CURRENT STAGE AVAILABLE CAPACITY EXCEEDS THE STAGE UP PART LOAD RATIO (80%, ADJ.) FOR 15 MINUTES (ADJ.) AND IS NOT DECREASING AT A RATE GREATER THAN 2.5% PER MINUTE AVERAGED OVER 5 MINUTES STAGE UP SHALL BE INITIATED. STAGE UP SHALL ALSO BE INITIATED IF THE EQUIPMENT NECESSARY TO OPERATED THE CURRENT STAGE ARE UNAVAILABLE OR A FAILSAFE CONDITION OCCURS. FAILSAFE SHALL BE TRIGGERED IF CHW SUPPLY TEMPERATURE IS 2°F GREATER THAN SETPOINT FOR 15 MINUTES. WHEN THE OPLR CALCULATED USING THE NEXT LOWER STAGE AVAILABLE CAPACITY FAILS BELOW THE STAGE DOWN PART LOAD RATIO (80%, ADJ.) FOR 15 MINUTES (ADJ.) AND IS NOT INCREASING AT A RATE GREATER THAN 2.5% PER MINUTE AVERAGED OVER 5 MINUTES STAGE DOWN SHALL BE INITIATED. DO NOT STAGE DOWN IF ANY OF THE FAILSAFE CONDITIONS ARE TRUE.

STAGING SHALL BE EXECUTED PER THE FOLLOWING CONDITIONS AND SUBJECT TO THE FOLLOWING REQUIREMENTS: (1) EACH STAGE SHALL HAVE A MINIMUM RUNTIME OF 15 MINUTES; (2) TIMERS SHALL RESET TO ZERO AT THE COMPLETION OF EVERY STAGE CHANGE; (3) ANY UNAVAILABLE STAGE SHALL BE SKIPPED DURING STAGING EVENTS, BUT STAGING CONDITIONALS IN THE CURRENT STAGE SHALL BE EVALUATED AS PER USUAL; (4) CHILLED WATER SUPPLY AND RETURN TEMPERATURES USED IN STAGING LOGIC SHALL BE THOSE LOCATED IN COMMON SUPPLY AND RETURN MAINS HARDWIRED TO PLANT CONTROLLERS.

WHENEVER THERE IS A STAGE-UP COMMAND: (1) OPEN THE CHILLED WATER ISOLATION VALVE OF THE CHILLER BEING ENABLED; (2) ONCE THE CHILLED WATER ISOLATION VALVE IS PROVEN FULLY OPEN, THE PAIRED PRIMARY CHILLED WATER PUMP SHALL START; (3) ONCE CHILLED WATER FLOW IS PROVEN BY THE CHILLER CONTROLLER AND DIFFERENTIAL PRESSURE SWITCHE, START THE NEXT STAGE CHILLER.

WHENEVER THERE IS A STAGE-DOWN COMMAND: (1) SHUT OFF THE CHILLER WITH THE HIGHEST STAGING RUNTIME; (2) WHEN THE CONTROLLER OF THE CHILLER BEING SHUT OFF INDICATES NO REQUEST FOR CHILLED WATER FLOW OR 3 MINUTES HAS ELAPSED,SHUT OFF THE CHILLER'S PAIRED PRIMARY PUMP; AND (3) CLOSE THE CHILLER'S CHILLED WATER ISOLATION VALVE.

CHILLER CONTROL FUNCTIONS, MINIMUM RUNTIMES, SAFETY INTERLOCKS, AND MAXIMUM STARTS PER HOUR SHALL BE AS RECOMMENDED BY THE MANUFACTURER.

SECONDARY CHILLED WATER PUMP CONTROL:
THE THREE SECONDARY CHILLED WATER PUMPS ARE EACH SIZED FOR 50% OF THE MAXIMUM FLOW (LEAD/LAG/STANDBY). CHILLED WATER PUMPS SHALL BE LEAD/LAG/STANDBY CONTROLLED. ENABLE LEAD CHILLED WATER PUMP WHEN PLANT IS ENABLED AND ANY LOAD SERVED BY THE PUMP(S) IS GENERATING A CHILLER PLANT REQUEST. DISABLE THE LEAD PUMP OTHERWISE. CHILLED WATER PUMPS SHALL BE STAGED BASED ON THE CHILLED WATER FLOW RATIO (CHWFR) WHICH IS A FUNCTION OF THE CURRENT CHILLED WATER FLOW (SEC-CHW-F) AND THE DESIGN FLOW (SEC-CHW-F-DES) AND THE NUMBER OF PUMPS THAT OPERATE AT FULL DESIGN CONDITIONS (N-CHW-PMP-DES) AND THE NUMBER OF CURRENTLY OPERATING PUMPS. STAGE UP SHALL BE INITIATED WHEN THE SCHWFR IS GREATER THAN THE RATIO OF THE NUMBER OF OPERATING PUMPS AND N-CHW-PMP-DES MINUS 0.03 (SEE EQUATIONS SECTION). STAGE DOWN SHALL BE INITIATED WHEN THE SCHWFR IS LESS THAN THE RATIO OF THE NUMBER OF OPERATING PUMPS MINUS 1 AND N-CHW-PMP-DES MINUS 0.03 (SEE EQUATIONS SECTION).

REMOTE SECONDARY LOOP DPs SHALL BE MAINTAINED AT A SETPOINTS DETERMINED BY THE RESET SCHEME DESCRIBED HEREIN. SETPOINTS SHALL BE MAINTAINED BY A REVERSE ACTING PID LOOP RUNNING IN THE CONTROLLER TO WHICH THE REMOTE SENSORS IS WIRED; THE LOOP OUTPUT SHALL BE A DP SETPOINT FOR THE LOCAL SECONDARY LOOP DP SENSOR HARDWIRED TO THE SECONDARY PUMP CONTROLLER. RESET LOCAL DP FROM MINIMUM SETPOINT AT 0% LOOP OUTPUT TO THE MAXIMUM LOCAL CHILLED WATER DP AT 100% LOOP OUTPUT. WHEN ANY SECONDARY CHILLED WATER PUMP IS PROVEN ON, PUMP SPEED WILL BE CONTROLLED BY A REVERSE ACTING PID LOOP MAINTAINING THE LOCAL SECONDARY DP SIGNAL AT THE DP SETPOINT OUTPUT OF THE REMOTE SENSOR CONTROL LOOP. ALL RUNNING PUMPS RECEIVE THE SAME SPEED SIGNAL. WHERE MULTIPLE REMOTE DP SENSORS EXIST, A PID LOOP SHALL RUN FOR EACH SENSOR. EACH REMOTE DIFFERENTIAL PRESSURE SENSOR SHALL HAVE AN INDIVIDUALLY ADJUSTABLE SETPOINT. THE DP SETPOINT FOR THE LOCAL DP SENSOR SHALL BE BASE ON THE HIGHEST DP SETPOINT OUTPUT FROM EACH OF THOSE REMOTE LOOPS.

PUMP MINIMUM SPEED SHALL BE DETERMINED BASED ON ACTUAL PUMP SELECTION IN ORDER TO KEEP THE PUMP ABOVE THE MINIMUM CONTINUOUS STABLE FLOW WHEN FOLLOWING THE ASSUMED SYSTEM CURVE.

REMOTE DIFFERENTIAL PRESSURE SETPOINT RESET: A SEPARATE RESET CALCULATION SHALL BE DONE FOR EACH REMOTE DP SENSOR. THE MODULATING CHILLED WATER VALVES OF RUNNING UNITS (AHU'S, FCU'S, VAV'S, ETC.) ON THE ASSOCIATED PIPING LOOP SHALL BE POLLED FOR VALVE POSITION EVERY FIVE MINUTES (ADJ.). EACH VALVE SHALL BE ASSIGNED TO ONLY ONE REMOTE DP SENSOR. THE SETPOINT SHALL BE INCREASED AND DECREASED WITH A TRIM AND RESPOND CONTROL STRATEGY SUCH THAT AT LEAST ONE VALVE IS 90-95% (ADJ) OPEN AND NO VALVES ARE MORE THAN 95% (ADJ.) OPEN. THE CONTROL LOGIC SHALL BE SLOW-ACTING TO AVOID HUNTING. IN THE EVENT OF LOSS OF COMMUNICATION WITH ONE OR MORE VALVES THE SYSTEM SHALL REVERT TO THE MAXIMUM DP SETPOINT.

WHEN THE CHILLED WATER SYSTEM IS DISABLED, THE CAPACITY MODULATION OUTPUT TO THE VFDs SHALL BE ZERO PERCENT.

LEAD/LAG/STANDBY CONTROL:
TWO RUNTIME POINTS SHALL BE DEFINED FOR EACH EQUIPMENT: LIFETIME RUNTIME DEFINED AS THE CUMULATIVE RUNTIME OF THE EQUIPMENT SINCE EQUIPMENT START-UP (THIS POINT SHALL NOT BE READILY RESETTABLE BY OPERATORS) AND STAGING RUNTIME DEFINED AS AN OPERATOR RESETTABLE RUNTIME POINT THAT STORES CUMULATIVE RUNTIME SINCE THE LAST OPERATOR RESET.

PARALLEL STAGED EQUIPMENT SHALL BE LEAD/LAG/STANDBY ALTERNATED SO THAT THE EQUIPMENT WITH THE MOST OPERATING HOURS AS DETERMINED BY STAGING RUNTIME IS MADE THE LAST STAGE EQUIPMENT (STANDBY) AND THE ONE WITH THE LEAST NUMBER OF HOURS IS MADE THE LEAD STAGE EQUIPMENT. FOR EMAPLE, FOR A PLANT WITH THREE EQUIPMENT WITH N+1 REDUNDANCY, IF ALL THREE ARE OFF, THE STAGING ORDER WILL BE SET BASED ON RUN HOURS FROM LOWEST TO HIGHEST. IF TWO EQUIPMENT ARE ON, THE ONE WITH MORE HOURS WILL BE SET TO BE STAGE 2 (LAG) WHILE THE OTHER IS SET TO STAGE 1 (LEAD). IF TWO OF THE QUIPMENT ARE OFF, THE ONE WITH MORE HOURS WILL BE SET TO STAGE 3 (STANDBY) WHILE THE OTHER IS SET TO STAGE 2 (LAG).

OPERATORS WITH APPROPRIATE ACCESS LEVEL SHALL BE ABLE TO MANUALLY COMMAND STAGING ORDER VIA SOFTWARE POINTS, BUT NOT OVERRIDING THE IN-ALARM OR HAND-OPERATION LOGIC IN THE FOLLOWING SUBSECTIONS. STAGING ORDER CHANGES INITIATED VIA OPERATOR OVERRIDE SHALL BE INSTITUTED AS PART OF NORMAL STAGING EVENTS. STAGING ORDER SHALL REMAIN OVERRIDDEN UNTIL RELEASED BY OPERATORS.

A FAULTED EQUIPMENT IS ANY EQUIPMENT COMMANDED TO RUN THAT IS EITHER NOT RUNNING OR UNABLE TO PERFORM ITS REQUIRED DUTY. IF AN OPERATING EQUIPMENT HAS ANY FAULT CONDITION DESCRIBED SUBSEQUENTLY, AN ALARM SHALL BE GENERATED AND A RESPONSE SHALL BE TRIGGERED AS DEFINED HEREIN. PUMP FAULT DETERMINED BY STATUS POINT NOT MATCHING ITS ON/OFF COMMAND FOR 3 SECONDS AFTER A TIME DELAY OF 15 SECONDS WHILE THE EQUIPMENT IS COMMANDED ON. CHILLER FAULT DETERMINED BY EITHER (1) A SAFETY SHUTDOWN ALARM CONDITION EITHER THROUGH NETWORK OR HARDWIRED ALARM CONTACT; (2) THE CHILLER IS MANUALLY SHUT OFF AS INDICATED BY THE STATUS OF THE LOCAL/AUTO SWITCH FROM CHILLER GATEWAY; (3) THE CHILLER STATUS REMAINS OFF 5 MINUTES AFTER COMMAND TO START WHEN A CHILLER FIRST STARTS (ONCE STATUS IS PROVEN AFTER A START COMMAND, THEN STATUS IS NO LONGER USED AS A FAULT CONDITION); (4) CHILLED WATER ISOLATION VALVE FEEDBACK INDICATES VALVE IS NOT OPEN 90 SECONDS AFTER VALVE IS COMMANDED OPEN; (5) THE PAIRED PRIMARY CHILLED WATER PUMP IS FAULTED; OR (6) FOR 10 MINUTES, CHILLED WATER SUPPLY TEMPERATURE HAS BEEN AT LEAST 5°F ABOVE THE SETPOINT, AND DELTA-T ACROSS THE CHILLER, AS DETERMINED BASED ON THE DIFFERENCE BETWEEN CHILLED WATER RETURN TEMPERATURE AND CHILLED WATER SUPPLY TEMPERATURE MEASURED AT THE CHILLER, HAS BEEN LESS THAN 3°F.

UPON IDENTIFICATION OF A PUMP FAULT (1) THE NEXT COMMANDED OFF EQUIPMENT IN THE STAGING ORDER, EQUIPMENT “B”, SHALL BE COMMANDED ON WHILE ALARMING EQUIPMENT “A” REMAINS COMMANDED ON; (2) IF EQUIPMENT “B” FAILS TO PROVE STATUS, IT SHALL REMAIN COMMANDED ON AND THE PRECEDING STEP SHALL BE REPEATED UNTIL THE QUANTITY OF EQUIPMENT CALLED FOR BY THE CURRENT STAGE HAS PROVEN ON, OR THERE ARE NO MORE AVAILABLE EQUIPMENT; (3) SET ALARMING EQUIPMENT TO THE LAST POSITIONS IN THE LEAD/LAG/STANDBY STAGING ORDER SEQUENCED REVERSE CHRONOLOGICALLY (EQUIPMENT THAT ALARMED MOST RECENTLY IS SENT TO LAST POSITION); (4) STAGING ORDER OF NON-ALARMING EQUIPMENT SHALL FOLLOW THE EVEN WEAR LOGIC, EQUIPMENT IN ALARM CAN ONLY AUTOMATICALLY MOVE UP ON THE STAGING ORDER IF ANOTHER EQUIPMENT GOES INTO ALARM; AND (5) EQUIPMENT IN ALARM SHALL RUN IF SO CALLED FOR BY THE LEAD/LAG/STANDBY STAGING ORDER AND PRESENT STAGE.

UPON IDENTIFICATION OF A CHILLER FAULT (1) THE NEXT COMMANDED OFF EQUIPMENT IN THE STAGING ORDER, EQUIPMENT “B”, SHALL BE COMMANDED ON WHILE ALARMING EQUIPMENT “A” IS COMMANDED OFF AND SET TO THE LAST POSITION IN THE LEAD/LAG STAGING ORDER; (2) IF EQUIPMENT B FAILS TO PROVE STATUS, REPEAT THE PRECEDING STEP UNTIL THE QUANTITY OF EQUIPMENT CALLED FOR BY THE LEAD/LAG LOGIC HAVE PROVEN ON OR UNTIL ALL EQUIPMENT HAS BEEN TRIED; (3) IF ALL EQUIPMENT HAS BEEN TRIED AND THE QUANTITY OF NON-ALARMING EQUIPMENT IS LESS THAN CALLED FOR THEN THE MOST RECENTLY ALARMED EQUIPMENT WILL REMAIN COMMANDED ON; (4) STAGING ORDER OF NON-ALARMING EQUIPMENT SHALL FOLLOW THE EVEN WEAR LOGIC, EQUIPMENT IN ALARM CAN ONLY AUTOMATICALLY MOVE UP IN THE STAGING ORDER IF ANOTHER EQUIPMENT GOES INTO ALARM; (5) EQUIPMENT IN ALARM SHALL RUN IF SO CALLED FOR BY THE LEAD/LAG STAGING ORDER AND PRESENT STAGE.

IF A PUMP IS ON-IN-HAND (VIA AN HOA SWITCH OR LOCAL CONTROL OF VFD), THE EQUIPMENT SHALL BE SET TO THE LEAD DEVICE, AND AN ALARM SHALL BE GENERATED. THE EQUIPMENT WILL REMAIN AS LEAD UNTIL NO LONGER ON-IN-HAND AT WHICH POINT NORMAL LEAD/LAG/STANDBY CONTROL SHALL RESUME. HAND OPERATION IS DETERMINED WHEN THE STATUS POINT NOT MATCHING ITS ON/OFF POINT FOR 15 SECONDS AFTER A TIME DELAY OF 60 SECONDS WHEN THE EQUIPMENT IS COMMANDED OFF.

MISCELLANEOUS MONITORING:
THE CHILLED WATER RETURN AND SUPPLY TEMPERATURES AT EACH CHILLER SHALL BE MONITORED AND VIEWABLE ON THE DDC SYSTEM.

THE SYSTEM CHILLED WATER RETURN TEMPERATURE SHALL BE MONITORED AND VIEWABLE ON THE DDC SYSTEM.

ALARMS:
PUMP MAINTENANCE INTERVAL ALARM: PUMP HAS OPERATED FOR MORE THAN 3000 HOURS (ADJ.) AS INDICATED BY THE STAGING RUNTIME: RESET THE STAGING RUNTIME INTERVAL COUNTER WHEN ALARM IS ACKNOWLEDGED.
CHILLER MAINTENANCE INTERVAL ALARM: CHILLER HAS OPERATED FOR MORE THAN 1000 HOURS (ADJ.) AS INDICATED BY THE STAGING RUNTIME: RESET THE STAGING RUNTIME INTERVAL COUNTER WHEN ALARM IS ACKNOWLEDGED.
CHILLER ALARM: ANY ALARM GENERATED BY THE CHILLER CONTROLLER.
PUMP ALARM: INDICATED BY THE STATUS INPUT BEING DIFFERENT FROM THE OUTPUT COMMAND FOR 15 SECONDS (60 SECONDS IF COMMANDED OFF).
VALVE ALARM: INDICATED BY THE END SWITCH STATUS BEING DIFFERENT FROM THE OUTPUT COMMAND FOR 90 SECONDS.

GENERAL SHEET NOTES

1. REFER TO SHEET M-001 FOR LEGEND, GENERAL NOTES, AND ABBREVIATIONS.
2. REFER TO SHEET M-701 FOR CONTROLS SPECIFIC LEGEND, GENERAL NOTES, AND ABBREVIATIONS.

EQUATIONS:

$$OPLR = \frac{Q\_REQ\ [TONS]}{SUM\ OF\ CH\_CAP\_DES\_X\ FOR\ CHILLERS\ IN\ STAGE}$$

$$Q\_REQ = \frac{CHW\_F \times (CHWR\_T - CHWS\_T\_SP)}{24}\ [TONS]$$

$$CHWFR = \frac{SEC\_CHW\_F}{SEC\_CHW\_F\_DES}$$

$$CHWFR > \frac{NUMBER\ OF\ OPERATING\ PUMPS}{N\_CHW\_PMP\_DES} - 0.03 \quad (STAGE\ UP)$$

$$CHWFR < \frac{NUMBER\ OF\ OPERATING\ PUMPS - 1}{N\_CHW\_PMP\_DES} - 0.03 \quad (STAGE\ DOWN)$$

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ISSUE DATE: JUL 2025
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CONTRACT NO.: W912QR24C0007
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EBBING AIR NATIONAL GUARD BASE (ANGB), FORT SMITH, ARKANSAS

MECHANICAL CONTROLS SEQUENCE - CHILLED WATER SYSTEM

SHEET ID
M-705

READY-TO-ADVERTISE (RTA) SUBMITTAL

POINTS LIST SCHEDULE - AIR COOLED CHILLED WATER SYSTEM PRIMARY/SECONDARY PUMPING

FUNCTION	NAME	DESCRIPTION	SETTING (WITH UNITS)	RANGE (WITH UNITS)	IO TYPE	HOA REQ'D	LDP AND M&C DISPLAY: LDP VIEW REQ'D	LDP AND M&C DISPLAY: M&C DISP REQ'D	LDP AND M&C DISPLAY: M&C TREND REQ'D	OVERRIDES: LDP OVRD REQ'D	OVERRIDES: M&C OVRD REQ'D	ALARMS: ALARM CONDITION (SEE NOTES)	ALARMS: ALARM PRIORITY
PROOFS & SAFETIES	CHW-PMP-S-1	CHILLED WATER PUMP STATUS (CHWP-101)	~	ON/OFF	BI	~	X	X	X	~	~	COMMANDED ON BUT STATUS IS OFF	CRIT
	CHW-PMP-S-2	CHILLED WATER PUMP STATUS (CHWP-102)	~	ON/OFF	BI	~	X	X	X	~	~	COMMANDED ON BUT STATUS IS OFF	CRIT
	CHW-PMP-S-3	CHILLED WATER PUMP STATUS (CHWP-103)	~	ON/OFF	BI	~	X	X	X	~	~	COMMANDED ON BUT STATUS IS OFF	CRIT
	CHW-PMP-S-4	CHILLED WATER PUMP STATUS (CHWP-104)	~	ON/OFF	BI	~	X	X	X	~	~	COMMANDED ON BUT STATUS IS OFF	CRIT
	CHW-PMP-S-5	CHILLED WATER PUMP STATUS (CHWP-105)	~	ON/OFF	BI	~	X	X	X	~	~	COMMANDED ON BUT STATUS IS OFF	CRIT
	CHW-PMP-S-6	CHILLED WATER PUMP STATUS (CHWP-106)	~	ON/OFF	BI	~	X	X	X	~	~	COMMANDED ON BUT STATUS IS OFF	CRIT
	CHW-PMP-S-7	CHILLED WATER PUMP STATUS (CHWP-107)	~	ON/OFF	BI	~	X	X	X	~	~	COMMANDED ON BUT STATUS IS OFF	CRIT
	CH-S-#	CHILLER STATUS (PROVIDE A POINT PER CHILLER)	~	ON/OFF	BI	~	X	X	X	~	~	COMMANDED ON BUT STATUS IS OFF	CRIT
	CH-V-OPN-S-1	CHILLER CHW ISOLATION VALVE OPEN STATUS (CH-101)	~	OPEN/FALSE	BI	~	X	X	X	~	~	COMMANDED CLOSED BUT STATUS IS OPEN	CRIT
	CH-V-OPN-S-2	CHILLER CHW ISOLATION VALVE OPEN STATUS (CH-102)	~	OPEN/FALSE	BI	~	X	X	X	~	~	COMMANDED CLOSED BUT STATUS IS OPEN	CRIT
	CH-V-CLD-S-1	CHILLER CHW ISOLATION VALVE CLOSED STATUS (CH-101)	~	CLOSED/FALSE	BI	~	X	X	X	~	~	COMMANDED OPEN BUT STATUS IS CLOSED	CRIT
	CH-V-CLD-S-2	CHILLER CHW ISOLATION VALVE CLOSED STATUS (CH-102)	~	CLOSED/FALSE	BI	~	X	X	X	~	~	COMMANDED OPEN BUT STATUS IS CLOSED	CRIT
START/STOP	SYS-ENA	SYSTEM ENABLE	~	ENABLE/DISABLE	NVI	~	X	X	~	~	X	~	~
	OA-T-LL-SP	OUTSIDE AIR TEMPERATURE LOW LIMIT SETPOINT	0 °F	~	~	~	X	X	~	~	X	~	~
	CHW-PMP-SS-1	CHILLED WATER PUMP START/STOP (CHWP-101)	~	START/STOP	BO	X	~	~	~	X	X	~	~
	CHW-PMP-SS-2	CHILLED WATER PUMP START/STOP (CHWP-102)	~	START/STOP	BO	X	~	~	~	X	X	~	~
	CHW-PMP-SS-3	CHILLED WATER PUMP START/STOP (CHWP-103)	~	START/STOP	BO	X	~	~	~	X	X	~	~
	CHW-PMP-SS-4	CHILLED WATER PUMP START/STOP (CHWP-104)	~	START/STOP	BO	X	~	~	~	X	X	~	~
	CHW-PMP-SS-5	CHILLED WATER PUMP START/STOP (CHWP-105)	~	START/STOP	BO	X	~	~	~	X	X	~	~
	CHW-PMP-SS-6	CHILLED WATER PUMP START/STOP (CHWP-106)	~	START/STOP	BO	X	~	~	~	X	X	~	~
	CHW-PMP-SS-6	CHILLED WATER PUMP START/STOP (CHWP-107)	~	START/STOP	BO	X	~	~	~	X	X	~	~
	CH-ENA-#	CHILLER ENABLE (PROVIDE A POINT PER CHILLER)	~	ENABLE/DISABLE	BO	~	~	X	~	X	X	~	~
	CH-V-C-1	CHILLER CHW ISOLATION VALVE COMMAND (CH-101)	~	OPEN/CLOSED	BO	X	X	X	X	X	X	~	~
	CH-V-C-2	CHILLER CHW ISOLATION VALVE COMMAND (CH-102)	~	OPEN/CLOSED	BO	X	X	X	X	X	X	~	~
CHILLED WATER TEMPERATURE CONTROL	CHWS-T-1	CHILLED WATER SUPPLY TEMPERATURE (CH-101)	~	<___>	AI	~	X	X	X	~	~	CHWS-T GREATER THAN 46 °F OR LESS THAN 40 °F	INFO
	CHWS-T-2	CHILLED WATER SUPPLY TEMPERATURE (CH-102)	~	<___>	AI	~	X	X	X	~	~	CHWS-T GREATER THAN 46 °F OR LESS THAN 40 °F	INFO
	CHWS-T-SP	CHILLED WATER SUPPLY TEMPERATURE SETPOINT	42 °F	~	~	~	X	X	X	X	X	~	~
CHILLER STAGING	PR-CHWS-T	PRIMARY CHILLED WATER SUPPLY TEMPERATURE	~	<___>	AI	~	X	X	X	~	~	~	~
	DEC-CHWS-T	DECOUPLER CHILLED WATER SUPPLY TEMPERATURE	~	<___>	AI	~	X	X	X	~	~	DEC-CHWS-T GREATER THAN PR-CHWS-T BY MORE THAN 1°F	INFO
	SEC-CHWS-T	SECONDARY CHILLED WATER SUPPLY TEMPERATURE	~	<___>	AI	~	X	X	X	~	~	SEC-CHWS-T GREATER THAN 46 °F OR LESS THAN 40 °F	INFO
	PR-CHWR-T	PRIMARY CHILLED WATER RETURN TEMPERATURE	~	<___>	AI	~	X	X	X	~	~	~	~
	SEC-CHWR-T	SECONDARY CHILLED WATER RETURN TEMPERATURE	~	<___>	AI	~	X	X	X	~	~	~	~
	CH-RT-STG-#	CHILLER STAGING RUNTIME (PROVIDE A POINT PER CHILLER)	~	<___>	~	~	X	X	X	~	~	HOURS EXCEEDS THOSE INDICATED IN THE SEQUENCE OF OPERATIONS	CRIT
	CH-RT-LIFE-#	CHILLER LIFETIME RUNTIME (PROVIDE A POINT PER CHILLER)	~	<___>	~	~	X	X	X	~	~	~	~
CHILLER MONITORING	CHWR-T-1	CHILLED WATER RETURN TEMPERATURE (CH-101)	~	<___>	AI	~	X	X	X	~	~	~	~
	CHWR-T-2	CHILLED WATER RETURN TEMPERATURE (CH-102)	~	<___>	AI	~	X	X	X	~	~	~	~
	CH-P-1	CHILLER DIFFERENTIAL PRESSURE (CH-101)	~	ON/OFF	BI	~	X	X	X	~	~	~	~
	CH-P-2	CHILLER DIFFERENTIAL PRESSURE (CH-102)	~	ON/OFF	BI	~	X	X	X	~	~	~	~
	CH-LOAD-#	CHILLER LOADING (PROVIDE A POINT PER CHILLER)	~	0-100%	AI	~	X	X	X	~	~	~	~
	CH-COMP-PWR-#	CHILLER COMPRESSOR POWER (PROVIDE A POINT PER CHILLER)	~	<0-__> KW	AI	~	X	X	X	~	~	~	~
	CH-ALM-#	CHILLER ALARM (PROVIDE A POINT PER CHILLER)	~	ALM/NORMAL	BI	~	X	X	X	~	~	~	~
CHILLED WATER LOOP PRESSURE CONTROL	CHW-P-LOC	CHILLED WATER SYSTEM DIFFERENTIAL PRESSURE, LOCAL	~	<___>	AI	~	X	X	X	~	~	CHW-P-LOC 25% LESS THAN OR GREATER THAN CHW-P-LOC-SP**	
	CHW-P-LOC-SP	CHILLED WATER SYSTEM DIFFERENTIAL PRESSURE SETPOINT, LOCAL	~	<___>	~	~	X	X	X	X	X	~	~
	CHW-P-LOC-SP-MIN	CHILLED WATER SYSTEM DIFFERENTIAL PRESSURE MINIMUM SETPOINT, LOCAL	5 PSIG	<___>	~	~	X	X	X	X	X	~	~
	CHW-P-LOC-SP-MAX	CHILLED WATER SYSTEM DIFFERENTIAL PRESSURE MAXIMUM SETPOINT, LOCAL	35 PSIG...	<___>	~	~	X	X	X	X	X	~	~
	CHW-P-REM-#	CHILLED WATER SYSTEM DIFFERENTIAL PRESSURE, REMOTE (TYP OF 2)	~	<___>	AI	~	X	X	X	~	~	CHW-P-REM 25% LESS THAN OR GREATER THAN CHW-P-REM-SP**	
	CHW-P-RM-SP-#	CHILLED WATER SYSTEM DIFFERENTIAL PRESSURE SETPOINT, REMOTE (TYP OF 2)	10 PSIG (NOTE 6)	<___>	~	~	X	X	X	X	X	~	~
	CHW-PMP-C-1	CHILLED WATER PUMP COMMAND (CHWP-101)	~	0-100%	AO	~	X	X	X	X	X	~	~
	CHW-PMP-C-2	CHILLED WATER PUMP COMMAND (CHWP-102)	~	0-100%	AO	~	X	X	X	X	X	~	~
	CHW-PMP-C-3	CHILLED WATER PUMP COMMAND (CHWP-103)	~	0-100%	AO	~	X	X	X	X	X	~	~
OTHER POINTS	OA-T	OUTSIDE AIR TEMPERATURE	~	<___>	AI	~	X	X	X	~	~	~	~
	SEC-CHW-F	SECONDARY LOOP CHILLED WATER FLOW RATE	~	<___>	AI	~	X	X	X	~	~	~	~
	CHW-PMP-RT-STG-#	CHILLED WATER PUMP STAGING RUNTIME (PROVIDE A POINT PER PUMP)	~	<___>	~	~	X	X	X	~	~	HOURS EXCEEDS THOSE INDICATED IN THE SEQUENCE OF OPERATIONS	CRIT
	CHW-PMP-RT-LIFE-#	CHILLED WATER PUMP LIFETIME RUNTIME (PROVIDE A POINT PER PUMP)	~	<___>	~	~	X	X	X	~	~	~	~

NOTES:

1. THE CONTRACTOR SHALL COMPLETE THE POINTS SCHEDULE AS SPECIFIED AND AS DESCRIBED IN THE GENERAL POINTS SCHEDULE NOTES ON THE CONTROLS LEGEND DRAWING.
2. THE CONTRACTOR SHALL PROVIDE A POINTS SCHEDULE INCLUDING ALL COLUMNS SHOWN AS WELL AS ALL ADDITIONAL COLUMNS DESCRIBED IN PART 3 OF SPECIFICATION SECTION 23 09 00.
3. UNIT MANUFACTURERS PROOFS AND SAFETIES: THE CONTRACTOR SHALL SHOW EACH PROOF AND SAFETY AS A SEPARATE ROW.
4. SYS-OCC: OVERRIDE OF SYS-OCC IS ACCOMPLISHED THROUGH THE SYSTEM SCHEDULER.
5. ALARM CONDITIONS MARKED WITH AN ASTERISK (*) SHALL BE ACTIVE ONLY WHEN THE SYSTEM HAS BEEN IN ON FOR MORE THAN: * = 5 MINUTES ** = 15 MINUTES
6. SETPOINT SHALL BE DETERMINED DURING TEST AND BALANCE TO INSURE ADEQUATE FLOW TO ALL COOLING COILS.
7. ALL POINTS THAT ARE AVAILABLE FROM THE CHILLER CONTROL PANEL TO THE BUILDING AUTOMATION SYSTEM SHALL BE VIEWABLE FROM THE BUILDING AUTOMATION SYSTEM.

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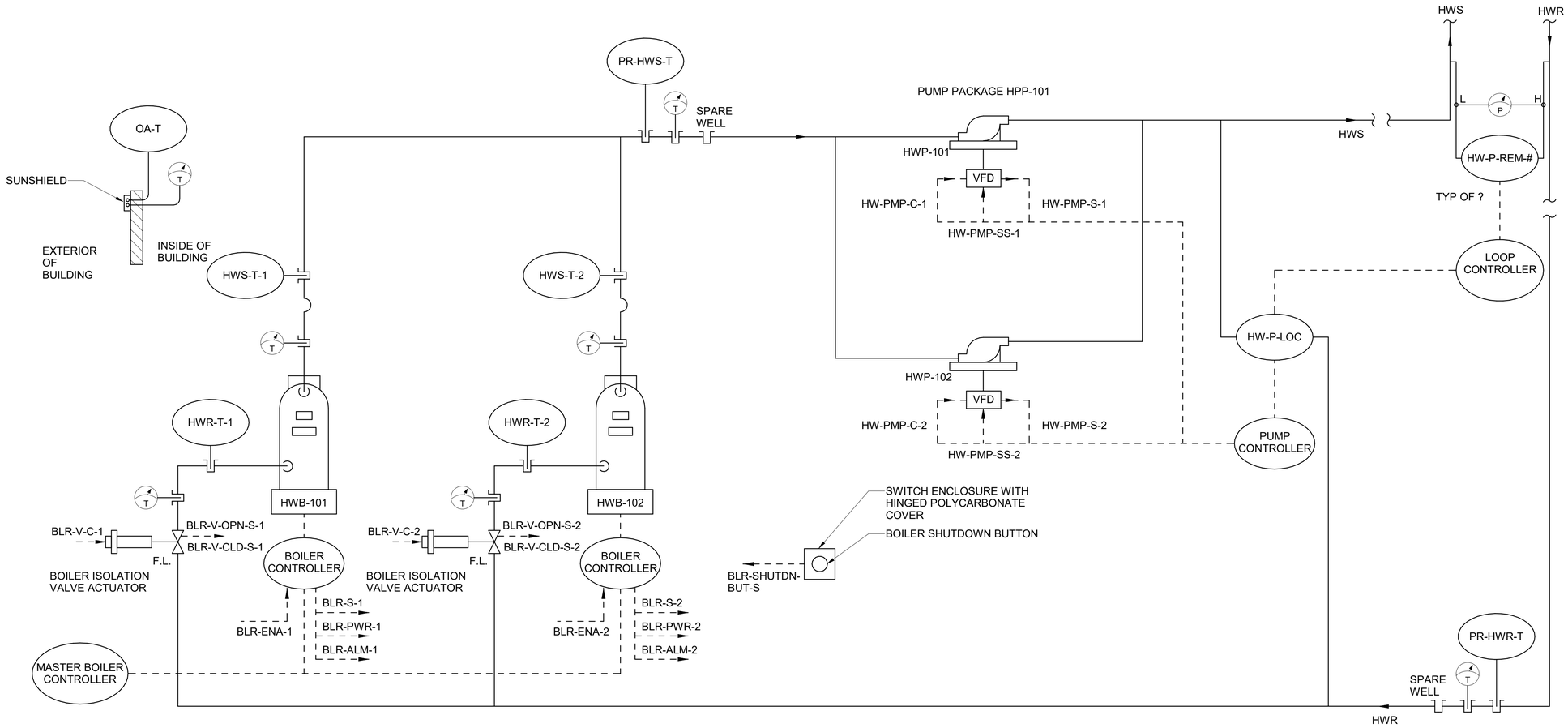
MECHANICAL CONTROLS POINTS SCHEDULE - CHILLED WATER SYSTEM

SHEET ID
M-706

READY-TO-ADVERTISE (RTA) SUBMITTAL

GENERAL SHEET NOTES

1. REFER TO SHEET M-001 FOR LEGEND, GENERAL NOTES, AND ABBREVIATIONS.
2. REFER TO SHEET M-701 FOR CONTROLS SPECIFIC LEGEND, GENERAL NOTES, AND ABBREVIATIONS.



D2 HEATING HOT WATER SYSTEM WITH PRIMARY ONLY PUMPING SCHEMATIC
SCALE: NTS

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EBBING AIR NATIONAL GUARD BASE (ANGB), FORT SMITH, ARKANSAS

MECHANICAL CONTROLS SCHEMATIC - HEATING WATER SYSTEM

SHEET ID
M-707

READY-TO-ADVERTISE (RTA) SUBMITTAL

GENERAL SHEET NOTES

1. REFER TO SHEET M-001 FOR LEGEND, GENERAL NOTES, AND ABBREVIATIONS.
2. REFER TO SHEET M-701 FOR CONTROLS SPECIFIC LEGEND, GENERAL NOTES, AND ABBREVIATIONS.

SEQUENCE OF OPERATION HEATING HOT WATER SYSTEM WITH PRIMARY ONLY PUMPING

GENERAL:
HEATING HOT WATER SYSTEM CONSISTS OF TWO 65% BOILERS AND TWO 100% VARIABLE PRIMARY PUMPS. THE BOILERS ARE EACH SIZED FOR 65% OF THE TOTAL LOAD. THE BOILERS SHALL BE CONTROLLED BY A MASTER CONTROLLER SEQUENCING SYSTEM WHICH SHALL MONITOR, ENABLE/DISABLE AND CONTROL THE CAPACITY MODULATION OF EACH BOILER. THE MASTER CONTROLLER SHALL ALSO CONTROL THE BOILER ISOLATION VALVES. THE MASTER CONTROLLER MUST BE PROVIDED BY THE BOILER MANUFACTURER AND MAY BE INTEGRAL TO ONE OF THE BOILERS. BOILER CONTROL FUNCTIONS, SAFETY INTERLOCKS, ALARMS, AND MONITORED PARAMETERS SHALL BE MADE AVAILABLE TO AND MONITORED BY THE DDC SYSTEM.

SYSTEM ENABLE:
THE HEATING HOT WATER PLANT SHALL INCLUDE AN ENABLING SCHEDULE THAT ALLOWS OPERATORS TO LOCK OUT THE PLANT DURING OFF-HOURS, HOLIDAYS, OR ANY OTHER SCHEDULED EVENTS, E.G., TO ALLOW OFF-HOUR OPERATION OF HVAC SYSTEMS EXCEPT THE HEATING HOT WATER PLANT. THE DEFAULT SCHEDULE SHALL BE 24/7 (ADJ.).

DDC SYSTEM SHALL ENABLE THE HOT WATER PLANT WHEN EITHER THE OUTSIDE TEMPERATURE IS BELOW THE LOW LIMIT SET POINT OR UPON ANY AIRSIDE EQUIPMENT CALLING FOR HEATING.

WHEN THE PLANT IS ENABLED (1) OPEN THE BOILER ISOLATION VALVE OF THE LEAD BOILER; (2) STAGE ON LEAD HOT WATER PUMP PER HOT WATER PUMP CONTROL SECTION; AND (3) ONCE THE LEAD PUMP IS PROVEN ON, THE BOILER CONTROLLER SHALL BE ENABLED.

WHEN THE PLANT IS DISABLED (1) SHUT OFF ENABLED BOILER(S); (2) DISABLE THE OPERATING HEATING HOT WATER PUMP(S) PER HOT WATER PUMP CONTROL SECTION AFTER 10 MINUTES (ADJ.); AND (3) CLOSE THE BOILER ISOLATION VALVE.

TO PREVENT SHORT CYCLING, THE HEATING HOT WATER SYSTEM SHALL RUN TIME SHALL BY ADJUSTABLE AS REQUIRED BY THE MANUFACTURERS RECOMMENDATIONS, UNLESS ON SHUTDOWN SAFETIES.

HOT WATER PUMP CONTROL:
THE 2 HOT WATER PUMPS ARE EACH SIZED FOR 100% OF THE MAXIMUM FLOW (LEAD/STANDBY). LEAD PUMP SHALL START WHEN HEATING HOT WATER SYSTEM IS ENABLED. THE MINIMUM PUMP SPEED SHALL BE 30% (ADJ.) OF FULL LOAD SPEED.

PUMP MINIMUM SPEED SHALL BE DETERMINED BASED ON ACTUAL PUMP SELECTION IN ORDER TO KEEP THE PUMP ABOVE THE MINIMUM CONTINUOUS STABLE FLOW WHEN FOLLOWING THE ASSUMED SYSTEM CURVE.

REMOTE LOOP DPs SHALL BE MAINTAINED AT SETPOINTS DETERMINED BY THE RESET SCHEME DESCRIBED HEREIN. SETPOINTS SHALL BE MAINTAINED BY A REVERSE ACTING PID LOOP RUNNING IN THE CONTROLLER TO WHICH THE REMOTE SENSORS IS WIRED; THE LOOP OUTPUT SHALL BE A DP SETPOINT FOR THE LOCAL LOOP DP SENSOR HARDWIRED TO THE PUMP CONTROLLER. RESET LOCAL DP FROM MINIMUM SETPOINT AT 0% LOOP OUTPUT TO THE MAXIMUM LOCAL HOT WATER DP AT 100% LOOP OUTPUT. WHEN ANY HOT WATER PUMP IS PROVEN ON, PUMP SPEED WILL BE CONTROLLED BY A REVERSE ACTING PID LOOP MAINTAINING THE LOCAL DP SIGNAL AT THE DP SETPOINT OUTPUT OF THE REMOTE SENSOR CONTROL LOOP. WHERE MULTIPLE REMOTE DP SENSORS EXIST, A PID LOOP SHALL RUN FOR EACH SENSOR. EACH REMOTE DIFFERENTIAL PRESSURE SENSOR SHALL HAVE AN INDIVIDUALLY ADJUSTABLE SETPOINT. THE DP SETPOINT FOR THE LOCAL DP SENSOR SHALL BE BASE ON THE HIGHEST DP SETPOINT OUTPUT FROM EACH OF THOSE REMOTE LOOPS.

REMOTE DIFFERENTIAL PRESSURE SETPOINT RESET: A SEPARATE RESET CALCULATION SHALL BE DONE FOR EACH REMOTE DP SENSOR. THE MODULATING HEATING HOT WATER VALVES OF RUNNING UNITS (DOAS'S, FCU'S, VAV'S, ETC.) ON THE ASSOCIATED PIPING LOOP SHALL BE POLLED FOR VALVE POSITION EVERY FIVE MINUTES (ADJ). EACH VALVE SHALL BE ASSIGNED TO ONLY ONE REMOTE DP SENSOR. THE SETPOINT SHALL BE INCREASED AND DECREASED WITH A TRIM AND RESPOND CONTROL STRATEGY SUCH THAT AT LEAST ONE VALVE IS 90-95% (ADJ) OPEN AND NO VALVES ARE MORE THAN 95% (ADJ.) OPEN. THE CONTROL LOGIC SHALL BE SLOW-ACTING TO AVOID HUNTING. IN THE EVENT OF LOSS OF COMMUNICATION WITH ONE OR MORE VALVES THE SYSTEM SHALL REVERT TO THE MAXIMUM DP SETPOINT.

WHEN THE HEATING HOT WATER SYSTEM IS DISABLED, THE DDC HARDWARE CAPACITY MODULATION OUTPUT TO THE VFDs SHALL BE ZERO PERCENT.

BOILER / HOT WATER TEMPERATURE CONTROL:
WHEN THIS LOOP IS ENABLED THE MASTER CONTROLLER SHALL MODULATE THE BOILER(S) TO MAINTAIN THE HOT WATER SUPPLY TEMPERATURE AT SETPOINT. THE MASTER BOILER CONTROLLER SHALL BE RESPONSIBLE FOR STARTING/STOPPING BOILERS. THE MASTER CONTROLLER SHALL ALSO DETERMINE THE NUMBER OF BOILERS OPERATING AND THE BOILER LOAD ALLOCATION TO MAXIMIZE OPERATING EFFICIENCY.

BOILERS SHALL ROTATE EITHER MANUALLY THROUGH A SOFTWARE SWITCH OR AUTOMATICALLY TO EQUALIZE BOILER RUNTIME EVERY 300 HOURS (ADJ.)

UPON BEING ENABLED, THE BOILER ISOLATION VALVE SHALL OPEN. ONCE THE VALVE IS PROVED OPEN AND THE LEAD PUMP IS PROVED ON, BOILER SHALL BE COMMANDED ON AND MODULATE TO MAINTAIN SUPPLY TEMPERATURE AT SETPOINT.

THE ISOLATION VALVE FOR DISABLED BOILERS SHALL BE CLOSED.

BOILER REDUNDANCY: IF ANY OPERATIONAL BOILER FAILS, AN ALARM SHALL BE GENERATED AND THE FAILED BOILER SHALL BE SHUTDOWN AND DISABLED. AFTER A 5 MINUTES (ADJ.) DELAY IF THERE IS AN AVAILABLE BOILER IT SHALL BE ENABLED AND REPLACE THE FAILED BOILER.

HOT WATER TEMPERATURE RESET:
THE HOT WATER SUPPLY TEMPERATURE SETPOINT SHALL BE RESET BASED ON OUTSIDE AIR TEMPERATURE. WHEN THE OUTSIDE AIR TEMPERATURE IS 25 DEGREES F (ADJ) OR LOWER THE SETPOINT SHALL BE 150 DEGREES F. WHEN THE OUTSIDE AIR TEMPERATURE IS 50 DEGRESS (ADJ) OR HIGHER THE SETPOINT SHALL BE 110 DEGREES F. THE SETPOINT SHALL BE TAMPED LINEARLY BETWEEN 140 AND 100 DEGREES F AT TEMPERATURES BETWEEN 25 AND 50 DEGREES F.

SAFETY CONTROLS:
BOILERS SHALL RUN SUBJECT TO THEIR INTERNAL SAFETIES AND CONTROLS.

ALARMS:
PUMP MAINTENANCE INTERVAL ALARM: PUMP HAS OPERATED FOR MORE THAN 3000 HOURS (ADJ.) AS INDICATED BY THE STAGING RUNTIME: RESET THE STAGING RUNTIME INTERVAL COUNTER WHEN ALARM IS ACKNOWLEDGED.

BOILER MAINTENANCE INTERVAL ALARM: BOILER HAS OPERATED FOR MORE THAN 1000 HOURS (ADJ.) AS INDICATED BY THE STAGING RUNTIME: RESET THE STAGING RUNTIME INTERVAL COUNTER WHEN ALARM IS ACKNOWLEDGED.

EMERGENCY BOILER SHUTDOWN BUTTON:
EMERGENCY BOILER SHUTDOWN SWITCH SHALL BE DOUBLE ACTION SWITCH. LABEL SWITCH WITH A PLASTIC LAMINATE PLACARD STATING THE FOLLOWING "EMERGENCY BOILER SHUTDOWN SWITCH" SEE PLANS FOR LOCATION OF SWITCH.

UPON ACTIVATION OF THE EMERGENCY SHUTDOWN SWITCH BOTH BOILERS SHALL SHUTDOWN WITHIN 30 SECONDS. BOILERS SHALL RETURN TO NORMAL OPERATION AFTER ALARM IS CLEARED BY THE DDC.

BOILER ALARM: ANY ALARM GENERATED BY THE BOILER CONTROLLER.

PUMP ALARM: INDICATED BY THE STATUS INPUT BEING DIFFERENT FROM THE OUTPUT COMMAND FOR 15 SECONDS (60 SECONDS IF COMMANDED OFF).

VALVE ALARM: INDICATED BY THE END SWITCH STATUS BEING DIFFERENT FROM THE OUTPUT COMMAND FOR 90 SECONDS.

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MARK	DESCRIPTION	DATE
0	READY-TO-ADVERTISE (RTA) SUBMITTAL	JUL 2025

DESIGNED BY: B. FONSECA
DRAWN BY: J. SMITH
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SUBMITTED BY: B. STREEBIN
ISSUE DATE: JUL 2025
SOLICITATION NO.: W912QR25RA001
CONTRACT NO.: W912QR24C0007
SIZE: ANSI D
FILE NAME:

US ARMY CORPS OF ENGINEERS
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LITTLE ROCK, ARKANSAS

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F-35: SPECIAL ACCESS PROGRAM FACILITY
EBBING AIR NATIONAL GUARD BASE (ANGB), FORT SMITH, ARKANSAS

MECHANICAL CONTROLS SEQUENCE - HEATING WATER SYSTEM

SHEET ID
M-708

READY-TO-ADVERTISE (RTA) SUBMITTAL

GENERAL SHEET NOTES

1. REFER TO SHEET M-001 FOR LEGEND, GENERAL NOTES, AND ABBREVIATIONS.
2. REFER TO SHEET M-701 FOR CONTROLS SPECIFIC LEGEND, GENERAL NOTES, AND ABBREVIATIONS.

POINTS LIST SCHEDULE - HEATING HOT WATER SYSTEM PRIMARY ONLY PUMPING

							LDP AND M&C DISPLAY			OVERRIDES		ALARMS	
								M&C					
FUNCTION	NAME	DESCRIPTION	SETTING (WITH UNITS)	RANGE (WITH UNITS)	IO TYPE	HOA REQ'D	LDP VIEW REQ'D	DISP REQ'D	TREND REQ'D	LDP OVRD REQ'D	M&C OVRD REQ'D	ALARM CONDITION (SEE NOTES)	ALARM PRIORITY
PROOFS & SAFETIES	HW-PMP-S-1	HOT WATER PUMP STATUS (HWP-101)	~	ON/OFF	BI	~	X	X	~	~	~	COMMANDED ON BUT STATUS IS OFF	CRIT
	HW-PMP-S-2	HOT WATER PUMP STATUS (HWP-102)	~	ON/OFF	BI	~	X	X	~	~	~	COMMANDED ON BUT STATUS IS OFF	CRIT
	BLR-S-1	BOILER STATUS (HWB-101)	~	ON/OFF	BI	~	X	X	~	~	~	COMMANDED ON BUT STATUS IS OFF	CRIT
	BLR-S-2	BOILER STATUS (BLR-102)	~	ON/OFF	BI	~	X	X	~	~	~	COMMANDED ON BUT STATUS IS OFF	CRIT
	BLR-V-OPN-S-1	BOILER ISOLATION VALVE OPEN STATUS (HWB-101)	~	OPEN/FALSE	BI	~	X	X	X	~	~	COMMANDED CLOSED BUT STATUS IS OPEN	CRIT
	BLR-V-OPN-S-2	BOILER ISOLATION VALVE OPEN STATUS (HWB-102)	~	OPEN/FALSE	BI	~	X	X	X	~	~	COMMANDED CLOSED BUT STATUS IS OPEN	CRIT
	BLR-V-CLD-S-1	BOILER ISOLATION VALVE CLOSED STATUS (HWB-101)	~	CLOSED/FALSE	BI	~	X	X	X	~	~	COMMANDED OPEN BUT STATUS IS CLOSED	CRIT
	BLR-V-CLD-S-2	BOILER ISOLATION VALVE CLOSED STATUS (HWB-102)	~	CLOSED/FALSE	BI	~	X	X	X	~	~	COMMANDED OPEN BUT STATUS IS CLOSED	CRIT
START/STOP	SYS-ENA	SYSTEM ENABLE	~	ENABLE/DISABLE	NVI	~	X	X	~	~	X	~	~
	HW-PMP-SS-1	HOT WATER PUMP START/STOP (HWP-101)	~	START/STOP	BO	X	X	X	~	X	X	~	~
	HW-PMP-SS-2	HOT WATER PUMP START/STOP (HWP-102)	~	START/STOP	BO	X	X	X	~	X	X	~	~
	BLR-ENA-1	BOILER ENABLE (HWB-101)	~	ENABLE/DISABLE	BO	~	X	X	~	X	X	~	~
	BLR-ENA-2	BOILER ENABLE (HWB-102)	~	ENABLE/DISABLE	BO	~	X	X	~	X	X	~	~
HOT WATER TEMPERATURE CONTROL	OA-T	OUTSIDE AIR TEMPERATURE	~	<___>	AI	~	X	X	~	~	~	~	~
	OA-T-HL-SP	OUTSIDE AIR TEMPERATURE HIGH LIMIT OPERATING POINT	55 °F	<___>	~	~	X	X	~	X	X	~	~
	PR-HWS-T	PRIMARY HOT WATER SUPPLY TEMPERATURE	~	<___>	AI	~	X	X	X	~	~	HWS-T MORE THAN 20 °F ABOVE OR BELOW PR-HWS-T-SP	INFO
	PR-HWS-T-SP	PRIMARY HOT WATER SUPPLY TEMPERATURE SETPOINT	150 °F	~	~	~	X	X	X	~	X	~	~
	HWS-T-1	HOT WATER SUPPLY TEMPERATURE (HWB-101)	~	<___>	AI	~	X	X	X	~	~	~	~
	HWS-T-2	HOT WATER SUPPLY TEMPERATURE (HWB-102)	~	<___>	AI	~	X	X	X	~	~	~	~
	HWR-T-1	HOT WATER RETURN TEMPERATURE (HWB-101)	~	<___>	AI	~	X	X	X	~	~	~	~
	HWR-T-2	HOT WATER RETURN TEMPERATURE (HWB-102)	~	<___>	AI	~	X	X	X	~	~	~	~
	BLR-V-C-1	BOILER ISOLATION VALVE COMMAND (HWB-101)	~	OPEN/CLOSED	BO	X	X	X	~	X	X	~	~
	BLR-V-C-2	BOILER ISOLATION VALVE COMMAND (HWB-102)	~	OPEN/CLOSED	BO	X	X	X	~	X	X	~	~
BOILER MONITORING	BLR-PWR-1	BOILER POWER CONSUMPTION (HWB-101)	~	0-100%	AI	~	X	X	X	~	~	~	~
	BLR-PWR-2	BOILER POWER CONSUMPTION (HWB-102)	~	0-100%	AI	~	X	X	X	~	~	~	~
	BLR-ALM-1	BOILER ALARM (HWB-101)	~	ALM/NORMAL	BI	~	X	X	X	~	~	~	~
	BLR-ALM-2	BOILER ALARM (HWB-102)	~	ALM/NORMAL	BI	~	X	X	X	~	~	~	~
HOT WATER LOOP PRESSURE CONTROL	HW-P-LOC	HOT WATER SYSTEM DIFFERENTIAL PRESSURE, LOCAL	~	<___>	AI	~	X	X	X	~	~	HW-P 25% LESS THAN OR GREATER THAN HW-P-SP**	INFO
	HW-P-LOC-SP	HOT WATER SYSTEM DIFFERENTIAL PRESSURE SETPOINT, LOCAL	~	<___>	~	~	X	X	X	X	X		
	HW-P-LOC-SP-MIN	HOT WATER SYSTEM DIFFERENTIAL PRESSURE MINIMUM SETPOINT, LOCAL	5 PSIG	<___>	~	~	X	X	X	X	X		
	HW-P-LOC-SP-MAX	HOT WATER SYSTEM DIFFERENTIAL PRESSURE MAXIMUM SETPOINT, LOCAL	35 PSIG...	<___>	~	~	X	X	X	X	X		
	HW-P-REM-#	HOT WATER SYSTEM DIFFERENTIAL PRESSURE, REMOTE (TYP OF 4)	~	<___>	AI	~	x	x	x	~	~	HW-P-REM 25% LESS THAN OR GREATER THAN HW-P-REM-SP**	
	HW-P-RM-SP-#	HOT WATER SYSTEM DIFFERENTIAL PRESSURE SETPOINT, REMOTE (TYP OF 4)	10 PSIG...	<___>	~	~	X	X	X	X	X	~	~
	HW-PMP-C-1	HOT WATER PUMP COMMAND (HWP-101)	~	0-100%	AO	~	X	X	~	X	X	~	~
	HW-PMP-C-2	HOT WATER PUMP COMMAND (HWP-102)	~	0-100%	AO	~	X	X	~	X	X	~	~
OTHER POINTS	PR-HWR-T	PRIMARY HOT WATER RETURN TEMPERATURE	~	<___>	AI	~	X	X	X	~	~	~	~
	BLR-RT-STG-#	BOILER STAGING RUNTIME (PROVIDE A POINT PER BOILER)	~	<___>	~	~	X	X	X	~	~	HOURS EXCEEDS THOSE INDICATED IN THE SEQUENCE OF OPERATIONS	CRIT
	BLR-RT-LIFE-#	BOILER LIFETIME RUNTIME (PROVIDE A POINT PER BOILER)	~	<___>	~	~	X	X	X	~	~	~	~
	HW-PMP-RT-STG-#	HOT WATER PUMP STAGING RUNTIME (PROVIDE A POINT PER PUMP)	~	<___>	~	~	X	X	X	~	~	HOURS EXCEEDS THOSE INDICATED IN THE SEQUENCE OF OPERATIONS	CRIT
	HW-PMP-RT-LIFE-#	HOT WATER PUMP LIFETIME RUNTIME (PROVIDE A POINT PER PUMP)	~	<___>	~	~	X	X	X	~	~	~	~
	BLR-SHUTDN-BUT-S	EMERGENCY BOILER SHUTDOWN BUTTON	~	ALM/NORMAL	BI	~	~	X	~	~	~	BUTTON DEPRESSED	CRIT

NOTES:
1. THE CONTRACTOR SHALL COMPLETE THE POINTS SCHEDULE AS SPECIFIED AND AS DESCRIBED IN THE GENERAL POINTS SCHEDULE NOTES ON THE CONTROLS LEGEND DRAWING.
2. THE CONTRACTOR SHALL PROVIDE A POINTS SCHEDULE INCLUDING ALL COLUMNS SHOWN AS WELL AS ALL ADDITIONAL COLUMNS DESCRIBED IN PART 3 OF SPECIFICATION SECTION 23 09 00.
3. UNIT MANUFACTURERS PROOFS AND SAFETIES: THE CONTRACTOR SHALL SHOW EACH PROOF AND SAFETY AS A SEPARATE ROW.
4. SYS-OCC: OVERRIDE OF SYS-OCC IS ACCOMPLISHED THROUGH THE SYSTEM SCHEDULER.
5. ALARM CONDITIONS MARKED WITH AN ASTERISK (*) SHALL BE ACTIVE ONLY WHEN THE SYSTEM IS IN OCCUPIED MODE AND HAS BEEN IN OCCUPIED MODE FOR MORE THAN: * = 5 MINUTES ** = 30 MINUTES
6. SETPOINT SHALL BE DETERMINED DURING TEST AND BALANCE TO INSURE ADEQUATE FLOW TO ALL HEATING COILS

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07/23/2025

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MARK	DESCRIPTION	DATE
0	READY-TO-ADVERTISE (RTA) SUBMITTAL	JUL 2025

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SUBMITTED BY: B. STREEBIN
ISSUE DATE: JUL 2025
SOLICITATION NO.: W912QR25RA001
CONTRACT NO.: W912QR24C0007
SIZE: ANSI D
FILE NAME:

US ARMY CORPS OF ENGINEERS
LITTLE ROCK DISTRICT
LITTLE ROCK, ARKANSAS

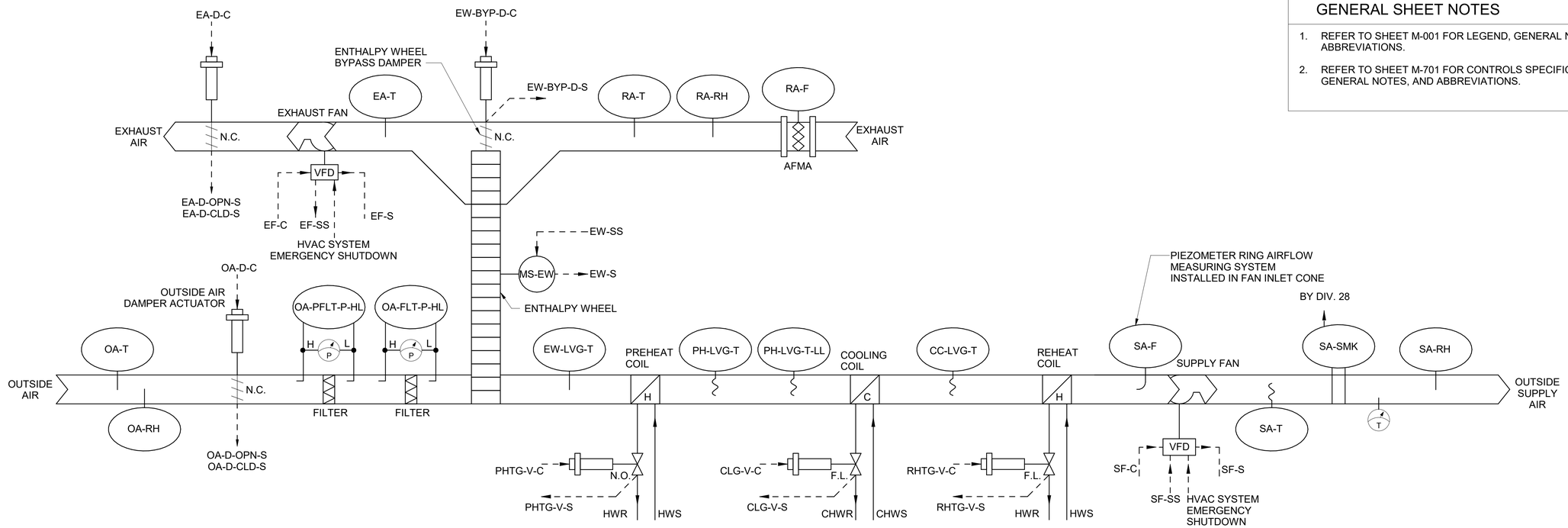
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F-35: SPECIAL ACCESS PROGRAM FACILITY
EBBING AIR NATIONAL GUARD BASE (ANGB), FORT SMITH, ARKANSAS

MECHANICAL CONTROLS POINTS SCHEDULE - HEATING WATER SYSTEM

SHEET ID
M-709

READY-TO-ADVERTISE (RTA) SUBMITTAL



H1 DOAS CONTROL SCHEMATIC (DOAS-101)
SCALE: NTS

GENERAL SHEET NOTES

1. REFER TO SHEET M-001 FOR LEGEND, GENERAL NOTES, AND ABBREVIATIONS.
2. REFER TO SHEET M-701 FOR CONTROLS SPECIFIC LEGEND, GENERAL NOTES, AND ABBREVIATIONS.

SEQUENCE OF OPERATION DEDICATED OUTDOOR AIR SYSTEM (DOAS-101 & DOAS-102)

GENERAL:
THE SYSTEM SHALL HAVE THE FOLLOWING MODES OF OPERATION: OFF, UNOCCUPIED, AND OCCUPIED.
ALL SETPOINTS SHALL BE USER ADJUSTABLE IN THE DDC.

OFF:
THE DOAS SUPPLY FAN AND EXHAUST FAN SHALL BE OFF. OA DAMPER AND EA DAMPER SHALL BE CLOSED. COOLING VALVE SHALL BE CLOSED. THE PREHEAT AND REHEAT VALVES SHALL BE CLOSED UNLESS CONTROLLED OTHERWISE DUE TO FREEZESTAT.

ENTHALPY WHEEL SHALL BE OFF AND BYPASS DAMPER SHALL BE CLOSED.

UNOCCUPIED:
UNOCCUPIED MODE SHALL BE INITIATED BY THE DDC SYSTEM THROUGH THE USE OF A SCHEDULE.

THE DOAS SUPPLY FAN SHALL BE OFF. OA DAMPER SHALL BE CLOSED. COOLING VALVE SHALL BE CLOSED. THE PREHEAT AND REHEAT VALVES SHALL BE CLOSED UNLESS CONTROLLED OTHERWISE DUE TO FREEZESTAT.

ENTHALPY WHEEL SHALL BE OFF AND BYPASS DAMPER SHALL BE CLOSED.

UNOCCUPIED OVERRIDE: UPON THE UNOCCUPIED OVERRIDE BUTTON BEING DEPRESSED ON ANY OF THE VAV TERMINALS UNITS, UNIT SHALL GO INTO OCCUPIED MODE FOR TWO HOURS (ADJ) AND THEN REVERT TO UNOCCUPIED MODE.

OCCUPIED:
OCCUPIED MODE SHALL BE INITIATED BY THE DDC SYSTEM THROUGH THE USE OF A SCHEDULE.

THE OA DAMPER SHALL OPEN. UPON PROOF OF THE OA DAMPER BEING OPEN THE SUPPLY FAN SHALL BE ENERGIZED. SUPPLY FAN SPEED SHALL MODULATE TO MAINTAIN SUPPLY AIR FLOW AT SETPOINT. EXHAUST FAN SHALL BE ON AND MODULATE TO MAINTAIN RETURN AIR FLOW AT SETPOINT.

PREHEAT CONTROL: THE PREHEAT VALVE SHALL MODULATE TO MAINTAIN THE PREHEAT COIL DISCHARGE AIR TEMPERATURE AT SETPOINT. THE PREHEAT VALVE SHALL BE FULLY CLOSED WHEN THE COOLING VALVE IS OPENED UNLESS THE FREEZESTAT IS ON.

COOLING CONTROL: THE COOLING COIL VALVE SHALL MODULATE TO MAINTAIN THE COOLING COIL LEAVING AIR TEMPERATURE AT SET POINT OR THE SUPPLY AIR TEMPERATURE AT SET POINT DEPENDING ON THE CURRENT MODE.

REHEAT CONTROL: THE REHEAT COIL VALVE SHALL MODULATE TO MAINTAIN THE SUPPLY AIR TEMPERATURE AT SETPOINT DEPENDING ON THE CURRENT MODE.

MODE DETERMINATION: THE VAV TERMINAL UNITS ATTACHED TO AHU-101 SHALL BE POLLED. IF MORE THAN 50% OF THE VAV TERMINAL UNITS ARE HAVE BEEN IN COOLING MODE FOR 5 MINUTES (ADJ.) THEN THE DOAS SHALL BE GO INTO COOLING MODE. IF LESS THAN 50% OF THE VAV TERMINAL UNITS HAVE BEEN IN COOLING MODE FOR 5 MINUTES (ADJ.) THEN THE DOAS SHALL GO INTO HEATING MODE. WHENEVER THE OUTSIDE AIR DEW POINT IS ABOVE THE DEW POINT TEMPERATURE HIGH LIMIT, THE UNIT SHALL BE IN DEHUMIDIFICATION MODE. THE DEHUMIDIFICATION MODE IS A SUBMODE TO COOLING OR HEATING, MEANING THE UNIT CAN BE IN COOLING DEHUMIDIFICATION MODE OR HEATING DEHUMIDIFICATION MODE.

COOLING MODE: THE COOLING COIL SHALL CONTROL THE SUPPLY AIR TEMPERATURE SET POINT TO THE COOLING SET POINT. THE REHEAT VALVE SHALL BE CLOSED.

HEATING MODE: THE COOLING COIL OR REHEAT COIL SHALL CONTROL THE SUPPLY AIR TEMPERATURE SET POINT TO THE HEATING SET POINT.

DEHUMIDIFICATION MODE: THE COOLING COIL SHALL CONTROL THE COOLING COIL LEAVING AIR TEMPERATURE TO THE DEHUMIDIFICATION SET POINT. IF THE DOAS IS IN HEATING MODE, THE REHEAT COIL SHALL CONTROL THE SUPPLY AIR TEMPERATURE SET POINT TO THE HEATING SET POINT. IF THE DOAS IS IN COOLING MODE, THE REHEAT VALVE SHALL BE CLOSED.

ENTHALPY WHEEL:

IN HEATING MODE: IF THE OUTSIDE AIR TEMPERATURE IS LESS THAN THE RETURN AIR TEMPERATURE, THE WHEEL SHALL BE ON AND THE ENTHALPY WHEEL BYPASS DAMPER SHALL MODULATE TO MAINTAIN THE SUPPLY AIR TEMPERATURE SET POINT TO THE HEATING SET POINT. CONTROL OF THE BYPASS DAMPER AND REHEATING VALVE SHALL BE STAGGERED SUCH THAT THE BYPASS DAMPER FULLY CLOSES BEFORE THE REHEATING VALVE STARTS TO OPEN. IF THE OUTSIDE AIR TEMPERATURE IS GREATER THAN THE RETURN AIR TEMPERATURE, THE WHEEL SHALL BE OFF AND THE ENTHALPY WHEEL BYPASS DAMPER SHALL BE FULLY OPEN.

IN COOLING MODE OR DEHUMIDIFICATION MODE: IF THE OUTSIDE AIR ENTHALPY IS GREATER THAN THE RETURN AIR ENTHALPY, THE WHEEL SHALL BE ON AND THE ENTHALPY WHEEL BYPASS DAMPER SHALL BE FULLY CLOSED. IF THE OUTSIDE AIR ENTHALPY IS LESS THAN THE RETURN AIR ENTHALPY, THE WHEEL SHALL BE OFF AND THE ENTHALPY WHEEL BYPASS DAMPER SHALL BE FULLY OPEN.

WHEN THE DOAS IS ON BUT THE ENTHALPY WHEEL IS OFF, THE WHEEL SHALL OPERATE FOR 2 MINUTES EVERY 4 HOURS TO AVOID FOULING.

FROST CONTROL: IF THE OUTSIDE AIR TEMPERATURE DROPS BELOW THE LOW LIMIT SETPOINT, THE ENTHALPY WHEEL SHALL TURN OFF UNTIL THE OUTSIDE AIR TEMPERATURE RISES ABOVE THE LOW LIMIT SETPOINT.

AIRFLOW MONITORING: IF THE SUPPLY OR EXHAUST AIRFLOW VARIES BY MORE THAN ±10% FROM SETPOINT AN ALARM SHALL BE SENT TO THE DDC SYSTEM INDICATING AN OUTSIDE AIR ALARM.

SAFETIES, ALARMS, AND INTERLOCKS:
SMOKE DETECTOR: IF THE SUPPLY AIR SMOKE DETECTOR SENSES SMOKE IN THE DUCTWORK, THE FIRE ALARM SYSTEM SHALL DISABLE FANS AND SEND AN ALARM TO THE DDC SYSTEM AND THE UNIT SHALL GO INTO OFF MODE.

HVAC SYSTEM EMERGENCY SHUTDOWN: WHEN THE HVAC SYSTEM EMERGENCY SHUTDOWN SWITCH IS PRESSED THE SUPPLY FAN SHALL STOP, OA AND EA DAMPERS SHALL CLOSE, UNIT SHALL GO INTO OFF MODE, AND AN ALARM SHALL BE SENT TO THE DDC PANEL.

LOSS OF COMMUNICATIONS: IN THE EVENT THE UNIT CONTROLLER LOOSES COMMUNICATIONS WITH THE DDC IT SHALL DEFAULT TO THE OCCUPIED MODE.

DIRTY AIR FILTER: IF THE OUTSIDE AIR PRE-FILTER OR FILTER PRESSURE SWITCH EXCEEDS HIGH LIMIT, AN ALARM SHALL BE GENERATED AND SENT TO THE DDC SYSTEM FOR THE FILTER.

FREEZESTAT: IF THE PREHEAT LEAVING AIR TEMPERATURE DROPS BELOW THE FREEZESTAT SET POINT, THE UNIT SHALL GO INTO OFF MODE, THE HEATING VALVE SHALL BE FULL OPEN, AND AN ALARM SHALL BE SENT TO THE DDC SYSTEM.

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F-35: SPECIAL ACCESS PROGRAM FACILITY
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MECHANICAL CONTROLS SCHEMATIC - DOAS

SHEET ID
M-710

READY-TO-ADVERTISE (RTA) SUBMITTAL

GENERAL SHEET NOTES

1. REFER TO SHEET M-001 FOR LEGEND, GENERAL NOTES, AND ABBREVIATIONS.
2. REFER TO SHEET M-701 FOR CONTROLS SPECIFIC LEGEND, GENERAL NOTES, AND ABBREVIATIONS.

POINTS LIST SCHEDULE - DOAS-101 THRU 102

							LDP AND M&C DISPLAY			OVERRIDES		ALARMS	
								M&C					
FUNCTION	NAME	DESCRIPTION	SETTING (WITH UNITS)	RANGE (WITH UNITS)	IO TYPE	HOA REQ'D	LDP VIEW REQ'D	DISP REQ'D	TREND REQ'D	LDP OVRD REQ'D	M&C OVRD REQ'D	ALARM CONDITION (SEE NOTES)	ALARM PRIORITY
PROOFS & SAFETIES	PH-LVG-T-LL	PREHEAT COIL LEAVING TEMPERATURE LOW LIMIT (FREEZESTAT)	35 DEG F	ALM/NORMAL	BI	~	~	~	X	~	~	ALM	CRIT
	SA-SMK	SUPPLY AIR SMOKE	~	ALM/NORMAL	BI	~	~	~	~	~	~	ALM	CRIT
	SF-S	SUPPLY FAN STATUS	~	ON/OFF	BI	~	X	X	X	~	~	SUPPLY FAN PROOF FAILED	INFO
	EF-S	EXHAUST FAN STATUS	~	ON/OFF	BI	~	X	X	X	~	~	EXHAUST FAN PROOF FAILED	INFO
	EW-S	ENTHALPY WHEEL STATUS	~	ON/OFF	BI	~	X	X	X	~	~	ENTHALPY WHEEL PROOF FAILED	INFO
	OA-D-OPN-S	OUTSIDE AIR DAMPER OPEN STATUS	~	OPEN/FALSE	BI	~	X	X	X	~	~	DAMPER COMMANDED OPEN BUT STATUS CLOSED	INFO
	OA-D-CLD-S	OUTSIDE AIR DAMPER CLOSED STATUS	~	CLOSED/FALSE	BI	~	X	X	X	~	~	DAMPER COMMANDED CLOSED BUT STATUS OPEN	INFO
	EA-D-OPN-S	EXHAUST AIR DAMPER OPEN STATUS	~	OPEN/FALSE	BI	~	X	X	X	~	~	DAMPER COMMANDED OPEN BUT STATUS CLOSED	INFO
	EA-D-CLD-S	EXHAUST AIR DAMPER CLOSED STATUS	~	CLOSED/FALSE	BI	~	X	X	X	~	~	DAMPER COMMANDED CLOSED BUT STATUS OPEN	INFO
	EW-BYP-D-S	ENTHALPY WHEEL BYPASS DAMPER STATUS	~	0-100% OPEN	AI	~	X	X	X	~	~	~	~
	CLG-V-S	COOLING COIL VALVE STATUS	~	0-100% OPEN	AI	~	X	X	X	~	~	~	~
	PHTG-V-S	PREHEATING COIL VALVE STATUS	~	0-100% OPEN	AI	~	X	X	X	~	~	~	~
	RHTG-V-S	REHEATING COIL VALVE STATUS	~	0-100% OPEN	AI	~	X	X	X	~	~	~	~
START / STOP	SYS-OCC	OCCUPANCY INPUT (FROM SYSTEM SCHEDULER)		<___>	NVI	~	X	X	X	SEE NOTES		~	~
	SF-SS	SUPPLY FAN START/STOP	~	ON/OFF	BO	X	X	X	X	X	X	~	~
	EF-SS	EXHAUST FAN START/STOP	~	ON/OFF	BO	X	X	X	X	X	X	~	~
	EW-SS	ENTHALPY WHEEL START/STOP	~	ON/OFF	BO	X	X	X	X	X	X	~	~
	OA-D-C	OUTSIDE AIR DAMPER COMMAND	~	OPEN/CLOSED	BO	X	X	X	X	X	X	~	~
	EA-D-C	EXHAUST AIR DAMPER COMMAND	~	OPEN/CLOSED	BO	X	X	X	X	X	X	~	~
FAN CAPACITY CONTROL	SA-F	SUPPLY AIR FLOW	~	SEE NOTE 6	AI	~	X	~	X	X	X	SA-F VARIES FROM SA-F-SP BY 10% OR MORE	INFO
	SA-F-SP	SUPPLY AIR FLOW SET POINT	SEE DOAS SCHEDULE	~	~	~	X	X	X	~	~	~	~
	SF-C	SUPPLY FAN COMMAND	~	0-100%	AO	~	~	X	X	~	X	~	~
	RA-F	RETURN AIR FLOW	~	SEE NOTE 6	AI	~	X	~	X	X	X	RA-F VARIES FROM EA-F-SP BY 10% OR MORE	INFO
	RA-F-SP	RETURN AIR FLOW SET POINT	SEE DOAS SCHEDULE	~	~	~	X	X	X	~	~	~	~
	EF-C	EXHAUST FAN COMMAND	~	0-100%	AO	X	~	X	X	~	X	~	~
SUPPLY AIR CONTROL	OA-T	OUTSIDE AIR TEMPERATURE	~	<___>°F	AI	~	X	X	X	~	~	~	~
	OA-RH	OUTSIDE AIR RELATIVE HUMIDITY	~	<___>°F	AI	~	X	X	X	~	~	~	~
	OA-DPT	OUTSIDE AIR DEW POINT TEMPERATURE (CALCULATED)	~	<___>°F	AI	~	X	X	X	~	~	~	~
	OA-T-DPT-HL-SP	OUTSIDE AIR DEW POINT TEMPERATURE HIGH LIMIT	57°F	<___>°F	~	~	X	X	X	X	X	~	~
	PH-LVG-T	PREHEAT COIL LEAVING TEMPERATURE	~	<___>°F	AI	~	X	X	X	~	~	~	~
	PH-LVG-T-SP	PREHEAT COIL LEAVING TEMPERATURE SETPOINT	(CC-LVG-T-SP) - 2°F	<___>°F	~	~	X	X	X	X	X	~	~
	CC-LVG-T	COOLING COIL LEAVING TEMPERATURE	~	<___>°F	AI	~	X	X	X	~	~	~	~
	CC-LVG-T-SP-DHUM	COOLING COIL LEAVING TEMPERATURE SETPOINT (DEHUMIDIFICATION MODE)	50°F	<___>°F	~	~	X	X	X	X	X	~	~
	SA-T	SUPPLY AIR TEMPERATURE	~	<___>°F	AI	~	X	X	X	~	~	*SA-T MORE THAN 5 DEG F ABOVE OR 10 DEG F BELOW SETPOINT	INFO
	SA-T-CLG-SP	SUPPLY AIR TEMPERATURE COOLING SETPOINT	55°F	<___>°F	~	~	X	X	X	X	X	~	~
	SA-T-HTG-SP	SUPPLY AIR TEMPERATURE HEATING SETPOINT	68°F	<___>°F	~	~	X	X	X	X	X	~	~
	CLG-V-C	COOLING COIL VALVE COMMAND	~	0-100%	AO	X	X	X	X	~	~	~	~
	PHTG-V-C	PREHEATING COIL VALVE COMMAND	~	0-100%	AO	X	X	X	X	~	~	~	~
	RHTG-V-C	REHEATING COIL VALVE COMMAND	~	0-100%	AO	X	X	X	X	~	~	~	~
	EW-BYP-D-C	ENTHALPY WHEEL BYPASS DAMPER COMMAND	~	0-100%	AO	X	X	X	X	~	~	~	~
OTHER POINTS	EW-LVG-T	ENTHALPY WHEEL LEAVING AIR TEMP	~	<___>°F	AI	~	X	X	X	~	~	~	~
	RA-T	RETURN AIR TEMP	~	<___>°F	AI	~	X	X	X	~	~	~	~
	RA-RH	RETURN AIR RELATIVE HUMIDITY	~	<___>%	AI	~	X	X	X	~	~	~	~
	RA-EH	RETURN AIR ENTHALPY (CALCULATED)	~	<___>	AI	~	X	X	X	~	~	~	~
	OA-EH	OUTSIDE AIR ENTHALPY (CALCULATED)	~	<___>	AI	~	X	X	X	~	~	~	~
	EA-T	EXHAUST AIR TEMP	~	<___>°F	AI	~	X	X	X	~	~	~	~
	OA-T-LL-SP	OUTSIDE AIR TEMPERATURE LOW LIMIT	14°F	<___>°F	~	~	X	X	~	X	X	~	~
	OA-PFLT-P-HL	OUTSIDE AIR PREFILTER PRESSURE HIGH LIMIT SWITCH	1 IN. WG.	ALM/NORMAL	BI	~	X	~	X	~	~	TRUE	CRIT
	OA-FLT-P-HL	OUTSIDE AIR FILTER PRESSURE HIGH LIMIT SWITCH	1.2 IN. WG.	ALM/NORMAL	BI	~	X	~	X	~	~	TRUE	CRIT
	SA-RH	SUPPLY AIR RELATIVE HUMIDITY	~	0-100%	AI	~	X	X	X	X	X	~	~
	SA-DPT	SUPPLY AIR DEW POINT TEMPERATURE (CALCULATED)	~	<___>°F	AI	~	X	X	X	~	~	~	~

NOTES:
1. THE CONTRACTOR SHALL COMPLETE THE POINTS SCHEDULE AS SPECIFIED AND AS DESCRIBED IN THE GENERAL POINTS SCHEDULE NOTES ON THE CONTROLS LEGEND DRAWING.
2. THE CONTRACTOR SHALL PROVIDE A POINTS SCHEDULE INCLUDING ALL COLUMNS SHOWN AS WELL AS ALL ADDITIONAL COLUMNS DESCRIBED IN PART 3 OF SPECIFICATION SECTION 23 09 00.
3. UNIT MANUFACTURERS PROOFS AND SAFETIES: THE CONTRACTOR SHALL SHOW EACH PROOF AND SAFETY AS A SEPARATE ROW.
4. SYS-OCC: OVERRIDE OF SYS-OCC IS ACCOMPLISHED THROUGH THE SYSTEM SCHEDULER.
5. ALARM CONDITIONS MARKED WITH AN ASTERISK (*) SHALL BE ACTIVE ONLY WHEN THE SYSTEM IS IN OCCUPIED MODE AND HAS BEEN IN OCCUPIED MODE FOR MORE THAN: * = 5 MINUTES ** = 30 MINUTES
6. AIR FLOW MEASUREMENT DEVICE SHALL BE ABLE TO MEASURE FLOW ACCURATELY BETWEEN 50% AND 150% OF THE SCHEDULED MINIMUM OUTSIDE AIRFLOW

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0	READY-TO-ADVERTISE (RTA) SUBMITTAL	JUL 2025

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ISSUE DATE: JUL 2025
SOLICITATION NO.: W912S2RA001
CONTRACT NO.: W912S24D0007
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F-35: SPECIAL ACCESS PROGRAM FACILITY
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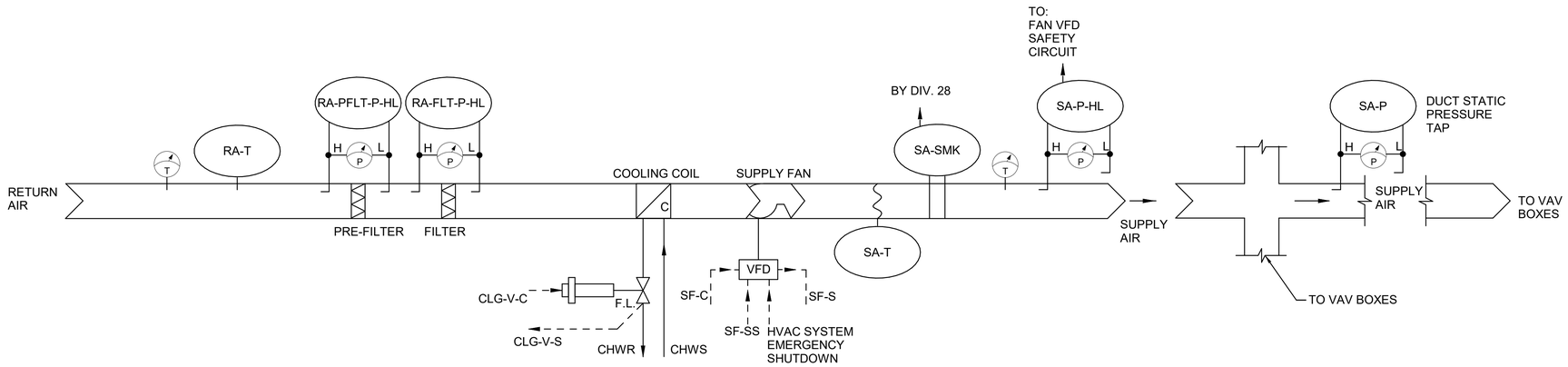
MECHANICAL CONTROLS POINTS SCHEDULE - DOAS

SHEET ID
M-711

READY-TO-ADVERTISE (RTA) SUBMITTAL

GENERAL SHEET NOTES

1. REFER TO SHEET M-001 FOR LEGEND, GENERAL NOTES, AND ABBREVIATIONS.
2. REFER TO SHEET M-701 FOR CONTROLS SPECIFIC LEGEND, GENERAL NOTES, AND ABBREVIATIONS.



J1 VAV AHU CONTROL SCHEMATIC (AHU-101 & AHU-102)
SCALE: NTS

SEQUENCE OF OPERATION - VAV AHU (AHU-101)

GENERAL:
THE HVAC SYSTEM SHALL HAVE THE FOLLOWING MODES OF OPERATION: OFF, UNOCCUPIED, WARM-UP, COOL-DOWN, AND OCCUPIED.

OFF:
THE AHU SUPPLY FAN SHALL BE OFF. CHILLED WATER VALVE SHALL BE CLOSED.

UNOCCUPIED:
UNOCCUPIED MODE SHALL BE INITIATED BY THE DDC SYSTEM THROUGH THE SYSTEM SCHEDULER.

THE AHU SUPPLY FAN SHALL BE OFF SUBJECT TO ZONE TEMPERATURES.

THE COOLING VALVE SHALL BE CLOSED SUBJECT TO ZONE TEMPERATURES.

IF ANY ZONE TEMPERATURE FALLS BELOW THE UNOCCUPIED HEATING TEMPERATURE SETPOINT OR RISES ABOVE THE UNOCCUPIED COOLING TEMPERATURE SETPOINT OR ANY OF THE ASSOCIATED VAV TERMINAL UNITS' UNOCCUPIED OVERRIDE BUTTONS ARE PRESSED, THE SUPPLY FAN SHALL ENERGIZE AND OPERATE AS DESCRIBED IN "OCCUPIED MODE." DUCT STATIC PRESSURE SETPOINT RESET SHALL BE DISABLED. THE COOLING VALVE SHALL OPERATE AS DESCRIBED IN "OCCUPIED MODE" INCLUDING SUPPLY AIR TEMPERATURE RESET. ONCE ALL ZONE TEMPERATURES ARE SATISFIED OR THE OCCUPANCY OVERRIDE TIMER EXPIRES, THE SUPPLY FAN SHALL DE-ENERGIZE AND THE COOLING VALVE SHALL CLOSE.

OPTIMAL START:
AN OPTIMAL START PROGRAM SHALL START THE UNIT AT THE LATEST POSSIBLE TIME TO REACH THE DESIRED OCCUPIED SPACE TEMPERATURE SETPOINT AT OCCUPANCY TIME. AT THIS START TIME THE UNIT SHALL GO INTO WARM-UP OR COOL-DOWN MODE AS DESCRIBED BELOW. WHEN ALL VAV TERMINAL UNITS HAVE SATISFIED THE OCCUPIED ZONE TEMPERATURE SETPOINTS THE UNIT SHALL GO INTO OCCUPIED MODE. WARM-UP OR COOL-DOWN SHALL OCCUR A MAXIMUM OF ONCE A DAY AND SHALL START NO EARLIER THAN 3 HOURS (ADJ.) BEFORE THE START OF SCHEDULED OCCUPANCY.

WARM-UP:
IF THE AVERAGE ZONE TEMPERATURE IS BELOW THE OCCUPIED ZONE TEMPERATURE SETPOINT (DETERMINED BY POLLING VAV TERMINAL UNITS), THE SUPPLY FAN SHALL BE ENERGIZED. THE COOLING VALVE SHALL BE FULLY CLOSED. THE SUPPLY FAN SHALL BE CONTROLLED AS DESCRIBED IN OCCUPIED MODE, DUCT STATIC PRESSURE SETPOINT RESET SHALL BE DISABLED.

COOL-DOWN:
IF THE AVERAGE ZONE TEMPERATURE IS ABOVE THE OCCUPIED ZONE TEMPERATURE SETPOINT (DETERMINED BY POLLING VAV TERMINAL UNITS), THE SUPPLY FAN SHALL BE ENERGIZED AND BE CONTROLLED AS DESCRIBED IN "OCCUPIED" MODE. THE COOLING VALVE SHALL MODULATE TO MAINTAIN THE MINIMUM SUPPLY AIR TEMPERATURE SETPOINT.

OCCUPIED:
OCCUPIED MODE SHALL BE INITIATED BY THE CONTROLS SYSTEM THROUGH THE SYSTEM SCHEDULER.

SUPPLY FAN CONTROL: SUPPLY FAN VFD SHALL MODULATE TO SATISFY THE DUCT STATIC PRESSURE SENSOR(S) SET POINT. WHEN ANY SENSOR IS BELOW SET POINT, SUPPLY FAN VFD SHALL INCREASE SPEED UNTIL ALL SENSORS ARE SATISFIED. WHEN ALL SENSORS ARE ABOVE SET POINT, SUPPLY FAN VFD SHALL DECREASE SPEED UNTIL ALL SENSORS ARE WITHIN SET POINT RANGE.

DUCT STATIC PRESSURE SETPOINT RESET: THE VAV TERMINAL UNITS SHALL BE POLLED FOR DAMPER POSITION EVERY TWO MINUTES (ADJ). IF A VAV DAMPER POSITION IS 90% (ADJ) OR GREATER OPEN, A PRESSURE REQUEST SHALL BE GENERATED. AFTER THE VAV TERMINAL UNITS HAVE BEEN POLLED, IF THERE ARE NO PRESSURE REQUESTS THE DUCT STATIC PRESSURE SETPOINT SHALL BE DECREASED BY 0.05 IN. WG. (ADJ). IF THERE ARE MORE THAN TWO (ADJ) PRESSURE REQUESTS THE SETPOINT SHALL BE INCREASED BY 0.06 IN. WG. THE CONTROL LOGIC SHALL BE SLOW-ACTING TO AVOID HUNTING. THE MINIMUM DUCT STATIC PRESSURE SETPOINT SHALL BE 0.2 IN. WG. (ADJ) AND THE MAXIMUM DUCT STATIC PRESSURE SETPOINT SHALL BE 1.5 IN. WG. (ADJ). MAXIMUM SETPOINT SHALL BE CONFIRMED/ADJUSTED DURING TEST AND BALANCING. IN THE EVENT OF LOSS OF COMMUNICATION WITH ONE OR MORE VAV TERMINAL UNITS THE SYSTEM SHALL REVERT TO THE MAXIMUM DUCT STATIC PRESSURE SETPOINT.

COOLING CONTROL: COOLING VALVE SHALL MODULATE TO MAINTAIN SUPPLY AIR TEMPERATURE AT SETPOINT. THE COOLING VALVE SHALL BE FULLY CLOSED WHEN THE PREHEAT VALVE IS OPENED.

SUPPLY AIR TEMPERATURE RESET: THE VAV TERMINAL UNITS SHALL BE POLLED FOR COOLING DEMAND SIGNAL EVERY TWO MINUTES (ADJ). IF A VAV COOLING DEMAND SIGNAL IS 95% (ADJ) OR GREATER, A COOLING REQUEST SHALL BE GENERATED. IF A VAV TERMINAL UNIT'S ZONE TEMPERATURE IS 3°F (ADJ.) ABOVE COOLING SETPOINT FOR TWO MINUTES OR MORE AFTER AT LEAST A 15 MINUTE (ADJ) DELAY SINCE THE LAST SUPPLY AIR TEMPERATURE SETPOINT DECRESSE RESET, TWO COOLING REQUESTS SHALL BE GENERATED. AFTER THE VAV TERMINAL UNITS HAVE BEEN POLLED, IF THERE ARE NO COOLING REQUESTS THE SA TEMPERATURE SETPOINT SHALL BE INCREASED BY 0.2 DEGREES F (ADJ). IF THERE ARE MORE THAN TWO (ADJ) COOLING REQUESTS THE SETPOINT SHALL BE DECREASED BY 0.3 DEGREES F (ADJ). THE CONTROL LOGIC SHALL BE SLOW-ACTING TO AVOID HUNTING. THE MINIMUM SA TEMPERATURE SETPOINT SHALL BE AS SCHEDULED AND THE MAXIMUM SA TEMPERATURE SETPOINT SHALL BE 60 DEGREES F (ADJ). IN THE EVENT OF LOSS OF COMMUNICATION WITH ONE OR MORE VAV TERMINAL UNITS THE SYSTEM SHALL REVERT TO THE MINIMUM SA TEMPERATURE SETPOINT.

FILTER MONITORING: IF THE PRESSURE DROP ACROSS A FILTER EXCEEDS THE ALARM SETPOINT AN ALARM SHALL BE SENT TO THE DDC SYSTEM INDICATING WHICH FILTER NEEDS TO BE CHANGED.

SAFETY CONTROLS:
SMOKE DETECTOR: IF THE SUPPLY AIR SMOKE DETECTOR SENSES SMOKE IN THE DUCTWORK, THE FIRE ALARM SYSTEM SHALL DISABLE FANS AND SEND AN ALARM TO THE DDC SYSTEM AND THE UNIT SHALL GO INTO OFF MODE.

BUILDING FIRE ALARM CONDITION: IF BUILDING IS IN FIRE ALARM CONDITION, THE FIRE ALARM CONTROL PANEL SHALL DISABLE FANS AND SEND AN ALARM TO THE DDC SYSTEM AND UNIT SHALL GO INTO OFF MODE.

SUPPLY AIR HIGH STATIC PRESSURE: WHEN THE SUPPLY AIR STATIC PRESSURE EXCEEDS SETPOINT, THE HIGH-LIMIT STATIC-PRESSURE SWITCH IN THE FAN DISCHARGE SHALL STOP THE SUPPLY FAN, THE UNIT SHALL GO INTO "OFF" MODE, AND SEND A HIGH-STATIC PRESSURE ALARM TO THE DDC SYSTEM.

HVAC SYSTEM EMERGENCY SHUTDOWN: WHEN THE HVAC SYSTEM EMERGENCY SHUTDOWN SWITCH IS PRESSED, AHU SUPPLY FAN SHALL STOP, UNIT SHALL GO INTO OFF MODE, AND AN ALARM SHALL BE SENT TO THE DDC PANEL.

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SIZE: ANSI D
ISSUE DATE: JUL 2025
SOLICITATION NO.: W912QR25RA001
CONTRACT NO.: W912QR24C0007
FILE NAME:

US ARMY CORPS OF ENGINEERS
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LITTLE ROCK, ARKANSAS

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F-35: SPECIAL ACCESS PROGRAM FACILITY
EBBING AIR NATIONAL GUARD BASE (ANGB), FORT SMITH, ARKANSAS

MECHANICAL CONTROLS SCHEMATIC - VAV AIR HANDLING UNIT

SHEET ID
M-712

READY-TO-ADVERTISE (RTA) SUBMITTAL

GENERAL SHEET NOTES

1. REFER TO SHEET M-001 FOR LEGEND, GENERAL NOTES, AND ABBREVIATIONS.
2. REFER TO SHEET M-701 FOR CONTROLS SPECIFIC LEGEND, GENERAL NOTES, AND ABBREVIATIONS.

POINTS LIST SCHEDULE - VAV AHU (AHU-101 THRU 102)

							LDP AND M&C DISPLAY			OVERRIDES		ALARMS	
								M&C					
FUNCTION	NAME	DESCRIPTION	SETTING (WITH UNITS)	RANGE (WITH UNITS)	IO TYPE	HOA REQ'D	LDP VIEW REQ'D	DISP REQ'D	TREND REQ'D	LDP OVRD REQ'D	M&C OVRD REQ'D	ALARM CONDITION (SEE NOTES)	ALARM PRIORITY
PROOFS & SAFETIES	SF-S	SUPPLY FAN STATUS	~	ON/OFF	BI	~	X	X	X	~	~	SUPPLY FAN PROOF FAILED	INFO
	CLG-V-S	COOLING VALVE POSITION STATUS	~	0-100% OPEN	AI	~	X	X	~	~	~	~	~
	SA-SMK	SUPPLY AIR SMOKE	~	ALM/NORMAL	BI	~	~	~	~	~	~	ALM	CRIT
	SA-P-HL	SUPPLY AIR PRESSURE HIGH LIMIT	3 IN. WG.	ALM/NORMAL	BI	~	~	~	~	~	~	ALM	INFO
START / STOP	SYS-OCC	OCCUPANCY INPUT (FROM SYSTEM SCHEDULER)		<___>	NVI	~	X	X	~	SEE NOTES		~	~
	SF-SS	SUPPLY FAN START/STOP	~	ON/OFF	BO	X	X	X	~	~	X	~	~
SUPPLY FAN CAPACITY CONTROL	SA-P	SUPPLY AIR PRESSURE	~	<___>	AI	~	X	X	X	~	~	*SA-P MORE THAN 20% ABOVE OR BELOW SA-P-SP	INFO
	SA-P-SP	SUPPLY AIR PRESSURE SETPOINT	<___>	~	~	~	X	X	~	~	X	~	~
	SF-C	SUPPLY FAN COMMAND	~	0-100%	AO	~	~	X	X	~	X	~	~
SUPPLY AIR TEMPERATURE	SA-T	SUPPLY AIR TEMPERATURE	~	<___>	AI	~	X	X	X	~	~	*SA-T MORE THAN 5 DEG F ABOVE OR BELOW SETPOINT	INFO
	SA-T-SP	SUPPLY AIR TEMPERATURE SETPOINT	55-60 DEG F	~	~	~	X	X	X	~	X	~	~
	CLG-V-C	COOLING VALVE COMMAND	~	0-100% OPEN	AO	X	X	X	X	~	X	~	~
OTHER POINTS	RA-T	RETURN AIR TEMPERATURE	~	<___>	AI	~	X	X	X	~	~	~	~
	RA-FLT-P-HL	RETURN AIR FILTER PRESSURE HIGH LIMIT SWITCH	1.2 IN. WG.	ALM/NORMAL	BI	~	X	~	~	~	~	TRUE	CRIT
	RA-PFLT-P-HL	RETURN AIR PRE-FILTER PRESSURE HIGH LIMIT SWITCH	1 IN. WG.	ALM/NORMAL	BI	~	X	~	~	~	~	TRUE	CRIT

NOTES:

1. THE CONTRACTOR SHALL COMPLETE THE POINTS SCHEDULE AS SPECIFIED AND AS DESCRIBED IN THE GENERAL POINTS SCHEDULE NOTES ON THE CONTROLS LEGEND DRAWING.
2. THE CONTRACTOR SHALL PROVIDE A POINTS SCHEDULE INCLUDING ALL COLUMNS SHOWN AS WELL AS ALL ADDITIONAL COLUMNS DESCRIBED IN PART 3 OF SPECIFICATION SECTION 23 09 00.
3. UNIT MANUFACTURERS PROOFS AND SAFETIES: THE CONTRACTOR SHALL SHOW EACH PROOF AND SAFETY AS A SEPARATE ROW.
4. SYS-OCC: OVERRIDE OF SYS-OCC IS ACCOMPLISHED THROUGH THE SYSTEM SCHEDULER.
5. ALARM CONDITIONS MARKED WITH AN ASTERISK (*) SHALL BE ACTIVE ONLY WHEN THE SYSTEM IS IN OCCUPIED MODE AND HAS BEEN IN OCCUPIED MODE FOR MORE THAN: * = 5 MINUTES ** = 30 MINUTES
6. AIR FLOW MEASUREMENT ARRAY SHALL BE ABLE TO MEASURE FLOW ACCURATELY BETWEEN 50% AND 150% OF THE SCHEDULED MINIMUM OUTSIDE AIRFLOW

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F-35, SPECIAL ACCESS PROGRAM FACILITY
EBBING AIR NATIONAL GUARD BASE (ANGB), FORT SMITH, ARKANSAS

MECHANICAL CONTROLS POINTS SCHEDULE - VAV AIR HANDLING UNIT

SHEET ID
M-713

READY-TO-ADVERTISE (RTA) SUBMITTAL

SEQUENCE OF OPERATION - VAV TERMINAL UNIT WITH HOT WATER REHEAT

GENERAL:
THE HVAC SYSTEM SHALL HAVE THE FOLLOWING MODES OF OPERATION: UNOCCUPIED, WARM-UP, COOL-DOWN, AND OCCUPIED.

UNOCCUPIED:
UNOCCUPIED MODE SHALL BE INITIATED BY THE DDC SYSTEM THROUGH THE SYSTEM SCHEDULER..

VAV DAMPER SHALL BE AT MINIMUM POSITION.

IF THE ZONE TEMPERATURE FALLS BELOW OR RISES ABOVE THE UNOCCUPIED HEATING OR COOLING TEMPERATURE SETPOINT, THE UNIT SHALL OPERATE AS DESCRIBED IN "OCCUPIED" MODE UNTIL THE SETPOINT HAS BEEN SATISFIED.

ZONE UNOCCUPIED OVERRIDE: THE THERMOSTAT SHALL HAVE AN UNOCCUPIED OVERRIDE BUTTON. UPON THE BUTTON BEING DEPRESSED THE TERMINAL UNIT SHALL GO INTO OCCUPIED MODE FOR ONE HOUR (ADJ) AND THEN REVERT TO UNOCCUPIED MODE.

WARM-UP/COOL-DOWN:
VAV BOX DAMPER AND HEATING VALVE SHALL MODULATE AS DESCRIBED IN THE "OCCUPIED" MODE SECTION.

OCCUPIED:
OCCUPIED MODE SHALL BE INITIATED BY THE CONTROLS SYSTEM THROUGH THE SYSTEM SCHEDULER.

COOLING MODE: AS THE ZONE TEMPERATURE RISES ABOVE THE CURRENT COOLING TEMPERATURE SETPOINT, COOLING MODE SHALL BE ENABLED. IF THE ZONE TEMPERATURE IS BELOW THE CURRENT COOLING TEMPERATURE SETPOINT AND THE COOLING DEMAND SIGNAL IS ZERO FOR 30 SECONDS (ADJ.), COOLING MODE SHALL BE DISABLED. CONTROLLER SHALL VARY THE COOLING DEMAND SIGNAL (0%: NO COOLING – 100%: FULL COOLING) TO MAINTAIN THE ZONE TEMPERATURE AT THE ZONE TEMPERATURE COOLING SETPOINT. THE AIRFLOW SETPOINT SHALL BE VARIED BASED ON THE COOLING DEMAND SIGNAL SUCH THAT AT 0% IT IS AT MINIMUM, FROM 0% TO 100% IT VARIES LINEARLY, AND AT 100% IT IS AT COOLING MAXIMUM.

HEATING MODE: AS THE ZONE TEMPERATURE FALLS BELOW THE CURRENT HEATING TEMPERATURE SETPOINT, HEATING MODE SHALL BE ENABLED. IF THE ZONE TEMPERATURE IS ABOVE THE CURRENT HEATING TEMPERATURE SETPOINT AND THE HEATING DEMAND SIGNAL IS ZERO FOR 30 SECONDS (ADJ.), HEATING MODE SHALL BE DISABLED. CONTROLLER SHALL VARY THE HEATING DEMAND SIGNAL (0%: NO HEATING – 100%: FULL HEATING) TO MAINTAIN THE ZONE TEMPERATURE AT THE ZONE TEMPERATURE HEATING SETPOINT. THE DISCHARGE AIR TEMPERATURE SETPOINT SHALL BE VARIED BASED ON THE HEATING DEMAND SUCH THAT AT 0% IT IS AT MINIMUM (EQUAL TO THE AHU SUPPLY AIR TEMPERATURE SETPOINT), FROM 0% TO 50% IT VARIES LINEARLY, AND AT 50% AND ABOVE THE IT IS AT MAXIMUM (SEE VAV TERMINAL UNIT SCHEDULE). THE AIRFLOW SETPOINT SHALL BE VARIED BASED ON THE HEATING DEMAND SIGNAL SUCH THAT AT 50% AND BELOW IT IS AT MINIMUM, FROM 50% TO 100% IT VARIES LINEARLY, AND AT 100% IT IS AT HEATING MAXIMUM. THE TRANSITION HEATING DEMAND PERCENTAGE (50%) SHALL BE ADJUSTABLE PER EACH ZONE AND THE CONTRACTOR SHALL ADJUST THE PRECISE VALUES TO PROVIDE STABLE CONTROL.

DEADBAND: WHEN BOTH COOLING MODE AND HEATING MODE ARE DISABLED, THE AIRFLOW SETPOINT SHALL BE MINIMUM AIRFLOW.

DAMPER CONTROL: VAV BOX DAMPER SHALL MODULATE BETWEEN MINIMUM AND MAXIMUM POSITION TO MAINTAIN VAV BOX SUPPLY AIR FLOW AT SETPOINT AS MEASURED BY A MULTI-POINT FLOW SENSING ELEMENT AT THE INLET OF THE VAV BOX.

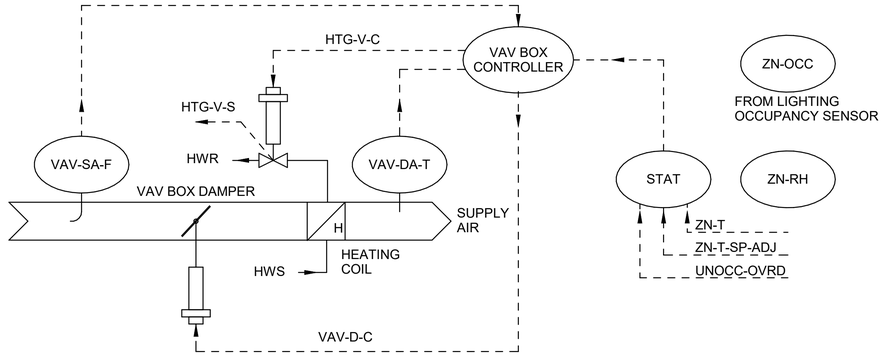
HEATING CONTROL: WHEN HEATING MODE IS ENABLED, THE HEATING VALVE SHALL MODULATE TO MAINTAIN DISCHARGE AIR TEMPERATURE AT SETPOINT. WHEN HEATING MODE IS DISABLED, THE HEATING VALVE SHALL BE CLOSED.

ZONE TEMPERATURE SETPOINT ADJUST: THE OCCUPANT SHALL BE ABLE TO ADJUST THE ZONE TEMPERATURE SETPOINT COOLER OR WARMER AT THE THERMOSTAT. THE ZONE TEMPERATURE SETPOINT SHALL BE THE STORED SETPOINT (CLG/HTG) PLUS/MINUS THE OCCUPANT ADJUSTMENT.

UNPOPULATED SETBACK: (FOR ZONES THAT HAVE AN OCCUPANCY SWITCH AND ARE INDICATED TO BE SUBJECT TO UNPOPULATED SETBACK) WHEN THE OCCUPANCY SWITCH INDICATES THAT THE SPACE HAS BEEN UNPOPULATED FOR 5 MINUTES (ADJ.) CONTINUOUSLY, THE ZONE HEATING TEMPERATURE SETPOINT SHALL BE DECREASED BY 1 °F (ADJ.) AND THE ZONE COOLING TEMPERATURE SETPOINT SHALL BE INCREASED BY 1 °F (ADJ.). WHEN UNPOPULATED AND THE ZONE TEMPERATURE IS IN THE DEADBAND, THE VAV DAMPER SHALL FULLY CLOSE. WHEN THE OCCUPANCY SWITCH INDICATES THAT THE SPACE HAS BEEN POPULATED FOR 1 MINUTE (ADJ.) CONTINUOUSLY, THE HEATING AND COOLING ZONE TEMPERATURE SETPOINTS SHALL RETURN TO NORMAL OCCUPIED VALUES.

GENERAL SHEET NOTES

1. REFER TO SHEET M-001 FOR LEGEND, GENERAL NOTES, AND ABBREVIATIONS.
2. REFER TO SHEET M-701 FOR CONTROLS SPECIFIC LEGEND, GENERAL NOTES, AND ABBREVIATIONS.



H11 VAV TERMINAL UNIT WITH HOT WATER REHEAT
SCALE: NTS

ZONE TEMPERATURE SETPOINT SCHEDULE

ZONE TYPE	OCCUPIED MODE		UNOCCUPIED MODE	
	COOLING (°F)	HEATING (°F)	COOLING (°F)	HEATING (°F)
ALL ROOMS	78	68	84	62

POINTS LIST SCHEDULE - VAV TERMINAL UNIT WITH HOT WATER REHEAT

FUNCTION	NAME	DESCRIPTION	SETTING (WITH UNITS)	RANGE (WITH UNITS)	IO TYPE	LDP AND M&C DISPLAY			OVERRIDES		ALARMS	
						LDP VIEW REQ'D	M&C DISP REQ'D	M&C TREND REQ'D	LDP OVRD REQ'D	M&C OVRD REQ'D	ALARM CONDITION (SEE NOTES)	ALARM PRIORITY
START/STOP	SYS-OCC	OCCUPANCY INPUT (FROM SYSTEM SCHEDULER)	~	~	NVI	~	X	~	SEE NOTES		~	~
	UNOCC-OVRD	UNOCCUPIED OVERRIDE INPUT (OVERRIDE BUTTON ON STAT)	~	~	BI	~	~	~	~	~	~	~
	EFF-OCC	EFFECTIVE OCCUPANCY	~	OCC/UNOCC	NVO	~	X	~	~	~	~	~
ZONE TEMPERATURE CONTROL	ZN-T	ZONE TEMPERATURE **	~	<___>	AI	~	X	X	~	~	** ZN-T 2 DEG F MORE THAN ZN-T-SP-CLG OR...	INFO
	ZN-T-SP	ZONE TEMPERATURE SETPOINT (CLG/HTG)	SEE SCHED	~	~	~	X	X	X	X	~	~
	ZN-T-SP-ADJ	ZONE TEMPERATURE SETPOINT OCCUPANT ADJUSTMENT	OCCUPANT...	±1 DEG F	AI	~	X	~	X	X	~	~
	ZN-T-SP-UNOCC	ZONE TEMPERATURE SETPOINT FOR UNOCCUPIED MODE (CLG/HTG)	SEE SCHED	~	~	~	X	~	X	X	~	~
	VAV-SA-F	VAV SUPPLY AIR FLOW	~	<___>	AI	~	X	X	~	~	~	~
	VAV-SA-F-SP	VAV SUPPLY AIR FLOW SETPOINT	~	~	~	~	X	X	~	~	~	~
	VAV-D-C	VAV DAMPER COMMAND	~	0-100% OPEN	AO	~	X	X	~	~	~	~
	HTG-V-C	HEATING VALVE COMMAND	~	0-100% OPEN	AO	~	X	X	X	X	~	~
	HTG-V-S	HEATING VALVE POSITION STATUS	~	0-100% OPEN	AI	~	X	X	~	~	~	~
	VAV-DA-T	VAV DISCHARGE AIR TEMPERATURE	~	<___>	AI	~	X	X	~	~	~	~
	VAV-DA-T-SP	VAV DISCHARGE AIR TEMPERATURE SETPOINT	~	~	~	~	X	X	~	X	~	~
	ZN-RH	ZONE RELATIVE HUMIDITY	~	0-100%	AI	X	X	X	X	X	*ZN-RH IS BELOW 40% RH OR ABOVE 70% RH	INFO
	ZN-RH-HL-SP	ZONE RELATIVE HUMIDITY HIGH LIMIT SETPOINT	55%	0-100%	~	X	X	X	~	X	~	~
	ZN-RH-SP	ZONE RELATIVE HUMIDITY SETPOINT	52.5%	0-100%	~	X	X	X	~	X	~	~
	ZN-OCC	ZONE OCCUPANCY	~	OCC/UNOCC	BI	X	X	X	X	X	~	~

NOTES:
1. THE CONTRACTOR SHALL COMPLETE THE POINTS SCHEDULE AS SPECIFIED AND AS DESCRIBED IN THE GENERAL POINTS SCHEDULE NOTES ON THE CONTROLS LEGEND DRAWING.
2. THE CONTRACTOR SHALL PROVIDE A POINTS SCHEDULE INCLUDING ALL COLUMNS SHOWN AS WELL AS ALL ADDITIONAL COLUMNS DESCRIBED IN PART 3 OF SPECIFICATION SECTION 23 09 00.
3. UNIT MANUFACTURERS PROOFS AND SAFETIES: THE CONTRACTOR SHALL SHOW EACH PROOF AND SAFETY AS A SEPARATE ROW.
4. SYS-OCC: OVERRIDE OF SYS-OCC IS ACCOMPLISHED THROUGH THE SYSTEM SCHEDULER.
5. ALARM CONDITIONS MARKED WITH A DOUBLE ASTERISK (**) SHALL BE ACTIVE ONLY WHEN THE SYSTEM IS IN OCCUPIED MODE AND HAS BEEN IN OCCUPIED MODE FOR MORE THAN 30 MINUTES.

LICENSED PROFESSIONAL ENGINEER
BYRON EDWARD K. FONSECA
M 41419
MECHANICAL
STATE OF CALIFORNIA
07/23/2025

US Army Corps of Engineers ®

MARK	DESCRIPTION	DATE
0	READY-TO-ADVERTISE (RTA) SUBMITTAL	JUL 2025

DESIGNED BY: B. FONSECA
DRAWN BY: J. SMITH
CHECKED BY: C. DUNN
ISSUE DATE: JUL 2025
SOLICITATION NO.: W912T2526A001
CONTRACT NO.: W912T2524C0007
SUBMITTED BY: B. STREEBIN
SIZE: ANSI D
FILE NAME:

US ARMY CORPS OF ENGINEERS
LITTLE ROCK DISTRICT
LITTLE ROCK, ARKANSAS

BURNS AND McDONNELL
9400 WARD PARKWAY,
KANSAS CITY, MO 64114
16543B

F-35 SPECIAL ACCESS PROGRAM FACILITY
EBBING AIR NATIONAL GUARD BASE (ANGB), FORT SMITH, ARKANSAS

MECHANICAL CONTROLS SCHEMATIC - VAV TERMINAL UNIT

SHEET ID
M-714

READY-TO-ADVERTISE (RTA) SUBMITTAL

SEQUENCE OF OPERATION - PARALLEL FAN POWERED VAV TERMINAL UNIT WITH HOT WATER REHEAT

GENERAL:
THE HVAC SYSTEM SHALL HAVE THE FOLLOWING MODES OF OPERATION: UNOCCUPIED, WARM-UP, COOL-DOWN, AND OCCUPIED.

UNOCCUPIED:
UNOCCUPIED MODE SHALL BE INITIATED BY THE DDC SYSTEM THROUGH THE SYSTEM SCHEDULER..

VAV DAMPER SHALL BE CLOSED.

FAN SHALL BE OFF.

IF THE ZONE TEMPERATURE FALLS BELOW UNOCCUPIED HEATING SETPOINT, THE VAV BOX PRIMARY DAMPER SHALL CLOSE, THE FAN SHALL RUN CONTINUOUSLY, AND THE HEATING VALVE SHALL MODULATE TO MAINTAIN ZONE HEATING TEMPERATURE SETPOINT.

IF THE ZONE TEMPERATURE RISES ABOVE THE UNOCCUPIED COOLING SETPOINT, THE UNIT SHALL OPERATE AS DESCRIBED IN "OCCUPIED" MODE UNTIL THE COOLING SETPOINT HAS BEEN SATISFIED.

AFTER THE ZONE TEMPERATURE HAS BEEN WITHIN SETPOINT FOR 15 MINUTES (ADJ) THE VAV DAMPER SHALL RETURN TO MINIMUM POSITION AND THE FAN SHALL BE OFF.

ZONE UNOCCUPIED OVERRIDE: THE THERMOSTAT SHALL HAVE AN UNOCCUPIED OVERRIDE BUTTON. UPON THE BUTTON BEING DEPRESSED THE TERMINAL UNIT SHALL GO INTO OCCUPIED MODE FOR ONE HOUR (ADJ) AND THEN REVERT TO UNOCCUPIED MODE.

WARM-UP/COOL-DOWN:
VAV BOX DAMPER, HEATING VALVE, AND FAN SHALL MODULATE AS DESCRIBED IN THE "OCCUPIED" MODE SECTION.

OCCUPIED:
OCCUPIED MODE SHALL BE INITIATED BY THE CONTROLS SYSTEM THROUGH THE SYSTEM SCHEDULER.

COOLING MODE: AS THE ZONE TEMPERATURE RISES ABOVE THE CURRENT COOLING TEMPERATURE SETPOINT, COOLING MODE SHALL BE ENABLED. IF THE ZONE TEMPERATURE IS BELOW THE CURRENT COOLING TEMPERATURE SETPOINT AND THE COOLING DEMAND SIGNAL IS ZERO FOR 30 SECONDS (ADJ.), COOLING MODE SHALL BE DISABLED. CONTROLLER SHALL VARY THE COOLING DEMAND SIGNAL (0%: NO COOLING – 100%: FULL COOLING) TO MAINTAIN THE ZONE TEMPERATURE AT THE ZONE TEMPERATURE COOLING SETPOINT. THE AIRFLOW SETPOINT SHALL BE VARIED BASED ON THE COOLING DEMAND SIGNAL SUCH THAT AT 0% IT IS AT MINIMUM, FROM 0% TO 100% IT VARIES LINEARLY, AND AT 100% IT IS AT COOLING MAXIMUM.

HEATING MODE: AS THE ZONE TEMPERATURE FALLS BELOW THE CURRENT HEATING TEMPERATURE SETPOINT, HEATING MODE SHALL BE ENABLED. IF THE ZONE TEMPERATURE IS ABOVE THE CURRENT HEATING TEMPERATURE SETPOINT AND THE HEATING DEMAND SIGNAL IS ZERO FOR 30 SECONDS (ADJ.), HEATING MODE SHALL BE DISABLED. CONTROLLER SHALL VARY THE HEATING DEMAND SIGNAL (0%: NO HEATING – 100%: FULL HEATING) TO MAINTAIN THE ZONE TEMPERATURE AT THE ZONE TEMPERATURE HEATING SETPOINT. THE DISCHARGE AIR TEMPERATURE SETPOINT SHALL BE VARIED BASED ON THE HEATING DEMAND SUCH THAT AT 0% IT IS AT MINIMUM (EQUAL TO THE AHU SUPPLY AIR TEMPERATURE SETPOINT), FROM 0% TO 100% IT VARIES LINEARLY, AND AT 100% IT IS AT MAXIMUM (SEE VAV TERMINAL UNIT SCHEDULE). THE PRIMARY AIRFLOW SETPOINT SHALL BE MINIMUM AIRFLOW. WHEN THE HEATING DEMAND SIGNAL IS GREATER THAN 0% THE FAN SHALL BE ENERGIZED AND RUN AT A CONSTANT SPEED.

DEADBAND: WHEN BOTH COOLING MODE AND HEATING MODE ARE DISABLED, THE PRIMARY AIRFLOW SETPOINT SHALL BE MINIMUM AIRFLOW.

DAMPER CONTROL: VAV BOX DAMPER SHALL MODULATE BETWEEN MINIMUM AND MAXIMUM POSITION TO MAINTAIN VAV BOX SUPPLY AIR FLOW AT SETPOINT AS MEASURED BY A MULTI-POINT FLOW SENSING ELEMENT AT THE INLET OF THE VAV BOX.

HEATING CONTROL: WHEN HEATING MODE IS ENABLED, THE HEATING VALVE SHALL MODULATE TO MAINTAIN DISCHARGE AIR TEMPERATURE AT SETPOINT. WHEN HEATING MODE IS DISABLED, THE HEATING VALVE SHALL BE CLOSED.

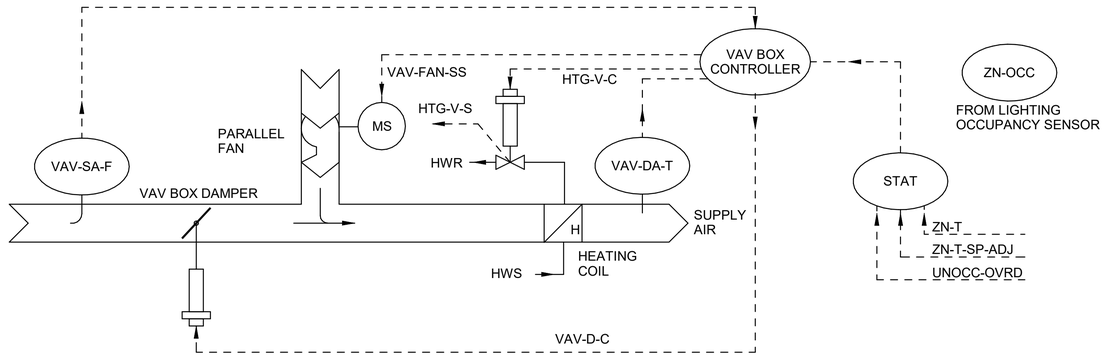
ZONE TEMPERATURE SETPOINT ADJUST: THE OCCUPANT SHALL BE ABLE TO ADJUST THE ZONE TEMPERATURE SETPOINT COOLER OR WARMER AT THE THERMOSTAT. THE ZONE TEMPERATURE SETPOINT SHALL BE THE STORED SETPOINT (CLG/HTG) PLUS/MINUS THE OCCUPANT ADJUSTMENT.

UNPOPULATED SETBACK: (FOR ZONES THAT HAVE AN OCCUPANCY SWITCH AND ARE INDICATED TO BE SUBJECT TO UNPOPULATED SETBACK) WHEN THE OCCUPANCY SWITCH INDICATES THAT THE SPACE HAS BEEN UNPOPULATED FOR 5 MINUTES (ADJ.) CONTINUOUSLY, THE ZONE HEATING TEMPERATURE SETPOINT SHALL BE DECREASED BY 1 °F (ADJ.) AND THE ZONE COOLING TEMPERATURE SETPOINT SHALL BE INCREASED BY 1 °F (ADJ.). WHEN UNPOPULATED AND THE ZONE TEMPERATURE IS IN THE DEADBAND, THE VAV DAMPER SHALL FULLY CLOSE. WHEN THE OCCUPANCY SWITCH INDICATES THAT THE SPACE HAS BEEN POPULATED FOR 1 MINUTE (ADJ.) CONTINUOUSLY, THE HEATING AND COOLING ZONE TEMPERATURE SETPOINTS SHALL RETURN TO NORMAL OCCUPIED VALUES.

SAFETY CONTROLS:
THE FAN SHALL START AND STOP AS ALLOWED BY THE INTERNAL SAFETIES OF THE VAV BOX CONTROLLER.

GENERAL SHEET NOTES

1. REFER TO SHEET M-001 FOR LEGEND, GENERAL NOTES, AND ABBREVIATIONS.
2. REFER TO SHEET M-701 FOR CONTROLS SPECIFIC LEGEND, GENERAL NOTES, AND ABBREVIATIONS.



J11 PARALLEL FAN POWERED VAV TERMINAL UNIT WITH HOT WATER REHEAT
SCALE: NTS

ZONE TEMPERATURE SETPOINT SCHEDULE

ZONE TYPE	OCCUPIED MODE		UNOCCUPIED MODE	
	COOLING (°F)	HEATING (°F)	COOLING (°F)	HEATING (°F)
ALL ROOMS	78	68	84	62

POINTS LIST SCHEDULE - PARALLEL FAN POWERED VAV TERMINAL UNIT WITH HOT WATER REHEAT

FUNCTION	NAME	DESCRIPTION	SETTING (WITH UNITS)	RANGE (WITH UNITS)	IO TYPE	LDP AND M&C DISPLAY			OVERRIDES		ALARMS	
						LDP VIEW REQ'D	M&C DISP REQ'D	M&C TREND REQ'D	LDP OVRD REQ'D	M&C OVRD REQ'D	ALARM CONDITION (SEE NOTES)	ALARM PRIORITY
START/STOP	SYS-OCC	OCCUPANCY INPUT (FROM SYSTEM SCHEDULER)	~	~	NVI	~	X	~	SEE NOTES		~	~
	UNOCC-OVRD	UNOCCUPIED OVERRIDE INPUT (OVERRIDE BUTTON ON STAT)	~	~	BI	~	~	~	~	~	~	~
	EFF-OCC	EFFECTIVE OCCUPANCY	~	OCC/UNOCC	NVO	~	X	~	~	~	~	~
	VAV-FAN-SS	VAV FAN START/STOP	~	START/STOP	BO	~	X	~	~	~	~	~
ZONE TEMPERATURE CONTROL	ZN-T	ZONE TEMPERATURE **	~	<___>	AI	~	X	X	~	~	** ZN-T 2 DEG F MORE THAN ZN-T-SP-CLG OR...	INFO
	ZN-T-SP	ZONE TEMPERATURE SETPOINT (CLG/HTG)	78/68 DEG	~	~	~	X	X	X	X	~	~
	ZN-T-SP-ADJ	ZONE TEMPERATURE SETPOINT OCCUPANT ADJUSTMENT	OCCUPANT...	±1 DEG F	AI	~	X	~	X	X	~	~
	ZN-T-SP-UNOCC	ZONE TEMPERATURE SETPOINT FOR UNOCCUPIED MODE (CLG/HTG)	84/62 DEG	~	~	~	X	~	X	X	~	~
	VAV-SA-F	VAV SUPPLY AIR FLOW	~	<___>	AI	~	X	X	~	~	~	~
	VAV-SA-F-SP	VAV SUPPLY AIR FLOW SETPOINT	~	~	~	~	X	X	~	~	~	~
	VAV-D-C	VAV DAMPER COMMAND	~	0-100% OPEN	AO	~	X	X	~	~	~	~
	HTG-V-C	HEATING VALVE COMMAND	~	0-100% OPEN	AO	~	X	X	X	X	~	~
	HTG-V-S	HEATING VALVE POSITION STATUS	~	0-100% OPEN	AI	~	X	X	~	~	~	~
	VAV-DA-T	VAV DISCHARGE AIR TEMPERATURE	~	<___>	AI	~	X	X	~	~	~	~
	ZN-OCC	ZONE OCCUPANCY	~	OCC/UNOCC	BI	X	X	X	X	X	~	~

NOTES:
1. THE CONTRACTOR SHALL COMPLETE THE POINTS SCHEDULE AS SPECIFIED AND AS DESCRIBED IN THE GENERAL POINTS SCHEDULE NOTES ON THE CONTROLS LEGEND DRAWING.
2. THE CONTRACTOR SHALL PROVIDE A POINTS SCHEDULE INCLUDING ALL COLUMNS SHOWN AS WELL AS ALL ADDITIONAL COLUMNS DESCRIBED IN PART 3 OF SPECIFICATION SECTION 23 09 00.
3. UNIT MANUFACTURERS PROOFS AND SAFETIES: THE CONTRACTOR SHALL SHOW EACH PROOF AND SAFETY AS A SEPARATE ROW.
4. SYS-OCC: OVERRIDE OF SYS-OCC IS ACCOMPLISHED THROUGH THE SYSTEM SCHEDULER.
5. ALARM CONDITIONS MARKED WITH A DOUBLE ASTERISK (**) SHALL BE ACTIVE ONLY WHEN THE SYSTEM IS IN OCCUPIED MODE AND HAS BEEN IN OCCUPIED MODE FOR MORE THAN 30 MINUTES.

LICENSED PROFESSIONAL ENGINEER
BYRON EDWARD K. FONSECA
M 41419
MECHANICAL
STATE OF CALIFORNIA
07/23/2025

US Army Corps of Engineers ®

MARK	DESCRIPTION	DATE
0	READY-TO-ADVERTISE (RTA) SUBMITTAL	JUL 2025

DESIGNED BY: B. FONSECA
DRAWN BY: J. SMITH
CHECKED BY: C. DIXON
ISSUE DATE: JUL 2025
SOLICITATION NO.: W912QR24RA001
CONTRACT NO.: W912QR24C0007
SUBMITTED BY: B. STREEBIN
SIZE: ANSI D
FILE NAME:

US ARMY CORPS OF ENGINEERS
LITTLE ROCK DISTRICT
LITTLE ROCK, ARKANSAS

BURNS AND McDONNELL
9400 WARD PARKWAY,
KANSAS CITY, MO 64114
16438

F-35 SPECIAL ACCESS PROGRAM FACILITY
EBBING AIR NATIONAL GUARD BASE (ANGB), FORT SMITH, ARKANSAS

MECHANICAL CONTROLS SCHEMATIC - FPVAV TERMINAL UNIT

SHEET ID
M-715

READY-TO-ADVERTISE (RTA) SUBMITTAL

GENERAL SHEET NOTES

1. REFER TO SHEET M-001 FOR LEGEND, GENERAL NOTES, AND ABBREVIATIONS.
2. REFER TO SHEET M-701 FOR CONTROLS SPECIFIC LEGEND, GENERAL NOTES, AND ABBREVIATIONS.

SEQUENCE OF OPERATION - FAN COIL UNIT HEATING AND COOLING

FCU-101
TYPICAL FOR: FCU-102 THRU -109

GENERAL:
THE HVAC SYSTEM SHALL HAVE THE FOLLOWING MODES OF OPERATION: OFF AND ON.

OFF:
THE FCU SUPPLY FAN SHALL BE DE-ENERGIZED. HEATING AND COOLING VALVES SHALL BE CLOSED.

ON:
ON MODE SHALL BE INITIATED BY THE CONTROLS SYSTEM.

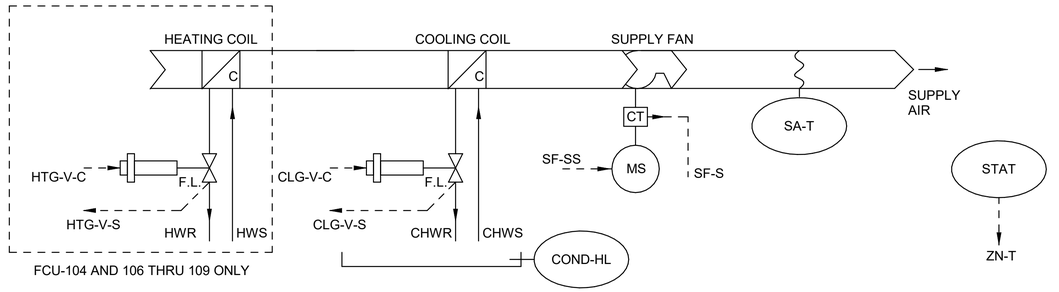
HEATING AND COOLING UNITS (FCU-104 AND 106 THRU 109)
FAN CONTROL: THE SUPPLY FAN SHALL CYCLE ON WHEN THE ZONE TEMPERATURE IS ABOVE THE COOLING SETPOINT OR BELOW THE HEATING SETPOIINT. WHEN THE ZONE TEMPERATURE IS BETWEEN THE COOLING AND HEATING SETPOINTS THE FAN SHALL BE OFF.

ZONE TEMPERATURE CONTROL: UPON A RISE IN ZONE TEMPERATURE ABOVE COOLING SETPOINT THE COOLING VALVE SHALL MODULATE TO MAINTAIN ZONE TEMPERATURE AT THE COOLING SETPOINT. WHEN THE ZONE TEMPERATURE IS BETWEEN THE COOLING AND HEATING SETPOINT THE COOLING AND HEATING VALVES SHALL BE CLOSED. UPON A FALL IN ZONE TEMPERATURE BELOW HEATING SETPOINT THE HEATING VALVE SHALL MODULATE TO MAINTAIN ZONE TEMPERATURE AT THE HEATING SETPOINT.

COOLING ONLY UNITS (FCU-101 THRU 103 AND 105)
FAN CONTROL: THE SUPPLY FAN SHALL CYCLE ON WHEN THE ZONE TEMPERATURE IS ABOVE THE COOLING SETPOINT. WHEN THE ZONE TEMPERATURE IS BELOW THE COOLING SETPOINT THE FAN SHALL BE OFF.

ZONE TEMPERATURE CONTROL: UPON A RISE IN ZONE TEMPERATURE ABOVE COOLING SETPOINT THE COOLING VALVE SHALL MODULATE TO MAINTAIN ZONE TEMPERATURE AT THE COOLING SETPOINT. WHEN THE ZONE TEMPERATURE IS BELOW THE COOLING SETPOINT THE COOLING VALVE SHALL BE CLOSED.

SAFETY CONTROLS:
CONDENSATE OVERFLOW: WHEN THE CONDENSATE OVERFLOW SWITCH DETECTS A HIGH LEVEL THE SUPPLY FAN SHALL BE DE-ENERGIZED, THE COOLING VALVE SHALL BE CLOSED, AND AN ALARM SHALL BE SENT TO THE DDC SYSTEM. SWITCH SHALL BE DIRECT-HARDWIRE INTERLOCKED TO THE FAN STARTER TO STOP THE FAN WHEN UPON DETECTION OF HIGH LEVEL.



K10 FAN COIL UNIT HEATING AND COOLING CONTROL SCHEMATIC
SCALE: NTS

POINTS LIST SCHEDULE - FAN COIL UNIT

FUNCTION	NAME	DESCRIPTION	SETTING (WITH UNITS)	RANGE (WITH UNITS)	IO TYPE	LDP AND M&C DISPLAY: LDP VIEW REQ'D	M&C DISP REQ'D	M&C TREND REQ'D	OVERRIDES: LDP OVRD REQ'D	M&C OVRD REQ'D	ALARMS: ALARM CONDITION (SEE NOTES)	ALARM PRIORITY
PROOFS & SAFETIES	SF-S	SUPPLY FAN STATUS	~	ON/OFF	BI	X	X	~	~	~	SUPPLY FAN PROOF FAILED	INFO
	HTG-V-S	HEATING VALVE POSITION STATUS	~	0-100% OPEN	AI	X	X	~	~	~	~	~
	CLG-V-S	COOLING VALVE POSITION STATUS	~	0-100% OPEN	AI	X	X	~	~	~	~	~
	COND-HL	CONDENSATE DRAIN PAIN HIGH LEVEL	~	ALM/NORMAL	BI	X	X	~	~	~	TRUE	CRIT
START / STOP	SYS-ON	ON INPUT (FROM SYSTEM SCHEDULER)		<___>	NVI	X	X	~	SEE NOTES		~	~
	SF-SS	SUPPLY FAN START/STOP	~	ON/OFF	BO	X	X	~	X	X	~	~
ZONE TEMPERATURE CONTROL	ZN-T	ZONE TEMPERATURE **	~	<___>	AI	~	X	X	~	~	** ZN-T 5 °F LESS THAN ZN-T-SP-HTG OR MORE THAN ZN-T-SP-CLG	INFO
	ZN-T-SP	ZONE TEMPERATURE SETPOINT (CLG/HTG)	SEE SCHED	~	~	~	X	~	X	X	~	~
	HTG-V-C	HEATING VALVE COMMAND	~	0-100% OPEN	AO	~	X	~	X	X	~	~
	CLG-V-C	COOLING VALVE COMMAND	~	0-100% OPEN	AO	~	X	~	X	X	~	~
OTHER POINTS	SA-T	SUPPLY AIR TEMPERATURE	~	<___>	AI	X	X	X	~	~	~	~

NOTES:
1. THE CONTRACTOR SHALL COMPLETE THE POINTS SCHEDULE AS SPECIFIED AND AS DESCRIBED IN THE GENERAL POINTS SCHEDULE NOTES ON THE CONTROLS LEGEND DRAWING.
2. THE CONTRACTOR SHALL PROVIDE A POINTS SCHEDULE INCLUDING ALL COLUMNS SHOWN AS WELL AS ALL ADDITIONAL COLUMNS DESCRIBED IN PART 3 OF SPECIFICATION SECTION 23 09 00.
3. UNIT MANUFACTURERS PROOFS AND SAFETIES: THE CONTRACTOR SHALL SHOW EACH PROOF AND SAFETY AS A SEPARATE ROW.
4. SYS-ON: OVERRIDE OF SYS-ON IS ACCOMPLISHED THROUGH THE SYSTEM SCHEDULER.
5. ALARM CONDITIONS MARKED WITH AN ASTERISK (*) SHALL BE ACTIVE ONLY WHEN THE SYSTEM IS IN ON MODE AND HAS BEEN IN ON MODE FOR MORE THAN: * = 5 MINUTES ** = 30 MINUTES

ZONE TEMPERATURE SETPOINT SCHEDULE

ZONE TYPE	COOLING (°F)	HEATING (°F)
MECHANICAL ROOMS	85	68
FIRE SUPPRESSION ROOMS	85	68
ELECTRICAL ROOMS	85	N/A
TELECOMM ROOMS	81	N/A

LICENSED PROFESSIONAL ENGINEER
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165438

F-35, SPECIAL ACCESS PROGRAM FACILITY
EBBING AIR NATIONAL GUARD BASE (ANGB), FORT SMITH, ARKANSAS

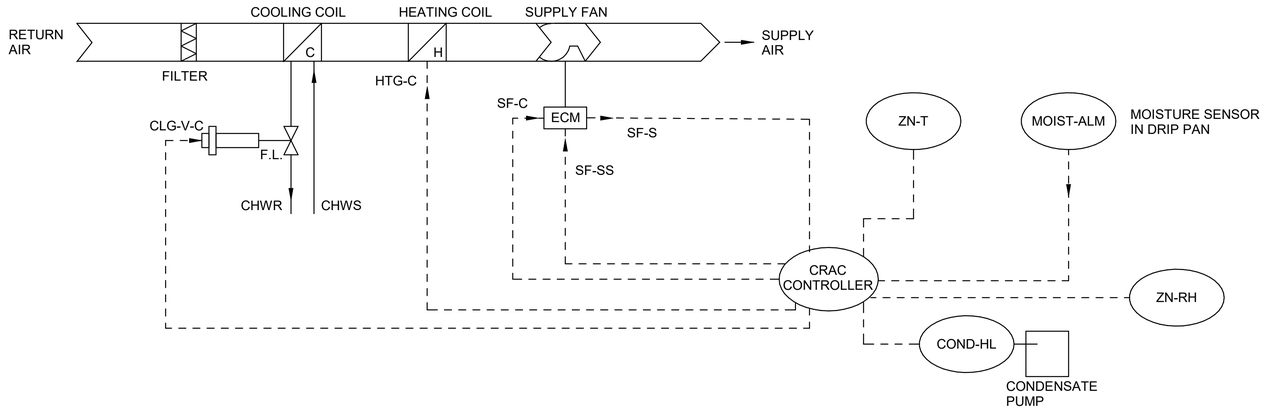
MECHANICAL CONTROLS SCHEMATIC - FAN COIL UNIT

SHEET ID
M-716

READY-TO-ADVERTISE (RTA) SUBMITTAL

GENERAL SHEET NOTES

1. REFER TO SHEET M-001 FOR LEGEND, GENERAL NOTES, AND ABBREVIATIONS.
2. REFER TO SHEET M-701 FOR CONTROLS SPECIFIC LEGEND, GENERAL NOTES, AND ABBREVIATIONS.



J4 CONTROL DIAGRAM - COMPUTER ROOM AIR CONDITIONER (WALL MOUNTED)
SCALE: NTS

SEQUENCE OF OPERATION - COMPUTER ROOM AIR CONDITIONER

CRAC-101
TYPICAL FOR: CRAC-102 THROUGH CRAC-106

GENERAL:
THE CRAC SHALL BE CONTROLLED BY A UNIT MOUNTED CONTROL PANEL. ALL POINTS SHALL BE MONITORED BY THE DDC SYSTEM WITH SETPOINT ADJUSTMENT CONTROL VIA A CRAC INTERFACE CONTROL PANEL OR WITH THE DDC SYSTEM. ALL ALARMS SHALL BE INDICATED TO THE DDC SYSTEM.

EACH ROOM HAS TWO CRAC UNITS, ONE OF WHICH IS REDUNDANT FOR N+1. UNDER NORMAL CONDITIONS, ONE CRAC SHALL BE STANDBY. IF SYSTEM INDICATES THAT THE PRIMARY UNIT IS IN ALARM CONDITION OR IF SUPPLY TEMPERATURE IS NOT BEING SATISFIED WITH PRIMARY UNITS, THEN THE STANDBY UNIT SHALL BE ENABLED AND AN ALARM SHALL BE SENT TO THE DDC SYSTEM.

OFF:
THE CRAC SUPPLY FAN SHALL BE DE-ENERGIZED. THE COOLING VALVE SHALL BE CLOSED. THE HEATING COIL SHALL BE DE-ENERGIZED. HUMIDIFIER SHALL BE DISABLED.

ON:
ON MODE SHALL BE INITIATED BY THE CONTROLS SYSTEM. THE SUPPLY FAN SHALL BE ON.

COOLING CYCLE: THE COOLING VALVE SHALL MODULATE TO MAINTAIN SUPPLY TEMPERATURE AT SETPOINT.

DEHUMIDIFICATION CONTROL: UPON A RISE IN ZONE RELATIVE HUMIDITY ABOVE THE HIGH LIMIT SETPOINT THE COOLING VALVE SHALL MODULATE TO BRING THE ZONE RELATIVE HUMIDITY DOWN TO SETPOINT. ONCE THE ZONE RELATIVE HUMIDITY REACHES SETPOINT THE UNIT SHALL LEAVE DEHUMIDIFICATION MODE AND RETURN TO NORMAL COOLING CONTROL. HEATING CYCLE SHALL BE AVAILABLE TO CONTROL SPACE TEMPERATURE.

STANDBY:
FAN CONTROL: THE SUPPLY FAN SHALL BE IN OFF MODE.

THE COOLING VALVE SHALL BE CLOSED. HUMIDIFIER SHALL BE DISABLED.

TEAMWORK:
THE DDC SYSTEM SHALL OPERATE THE UNITS TO OPERATE IN A TEAMWORK MODE AND MONITOR THE OPERATING CONDITIONS OF EACH UNIT TO ENABLE/DISABLE. THE UNITS SHALL OPERATE AS LEAD AND STANDBY UNIT. THE UNITS SHALL ROTATE EVERY 100 HOURS (ADJ). THE LEAD UNIT SHALL HAVE FANS ON. THE STANDBY UNIT SHALL BE IN STANDBY. IF THE RUNNING UNITS FAILS, THE STANDBY UNIT SHALL REPLACE IT.

ALARMS:
IF ANY OF THE FOLLOWING CONDITIONS OCCUR THE UNIT CONTROLLER SHALL MAKE AND STORE A DATA POINT INCLUDING THE EVENT, DATE, AND TIME. AN ALARM SHALL BE SENT TO THE DDC SYSTEM.
- HIGH/LOW ZONE HUMIDITY
- HIGH/LOW ZONE TEMPERATURE
- MOISTURE DETECTED IN THE DRIP PAN.

SAFETY CONTROLS:

CONDENSATE OVERFLOW: WHEN THE CONDENSATE OVERFLOW SWITCH DETECTS A HIGH LEVEL THE SUPPLY FAN SHALL BE DE-ENERGIZED, THE COOLING VALVE SHALL BE CLOSED, UNIT SHALL BE CONSIDERED FAILED, AND AN ALARM SHALL BE SENT TO THE DDC SYSTEM. IF AVAILABLE THE STANDBY UNIT SHALL BECOME THE LEAD UNIT.

LICENSED PROFESSIONAL ENGINEER
BYRON EDWARD K. FONSECA
M 41419
MECHANICAL
STATE OF CALIFORNIA
07/23/2025

US Army Corps of Engineers ®

MARK	DESCRIPTION	DATE
0	READY-TO-ADVERTISE (RTA) SUBMITTAL	JUL 2025

DESIGNED BY: B. FONSECA
DRAWN BY: J. SMITH
CHECKED BY: C. DUKE
SUBMITTED BY: B. STREEBIN
SIZE: ANSI D
ISSUE DATE: JUL 2025
SOLICITATION NO.: W912QR25RA001
CONTRACT NO.: W912QR24D0007
FILE NAME:

US ARMY CORPS OF ENGINEERS
LITTLE ROCK DISTRICT
LITTLE ROCK, ARKANSAS

BURNS AND McDONNELL
9400 WARD PARKWAY,
KANSAS CITY, MO 64114
16438

F-35: SPECIAL ACCESS PROGRAM FACILITY
EBBING AIR NATIONAL GUARD BASE (ANGB), FORT SMITH, ARKANSAS

MECHANICAL CONTROLS - COMPUTER ROOM UNIT

SHEET ID
M-717

READY-TO-ADVERTISE (RTA) SUBMITTAL

GENERAL SHEET NOTES

1. REFER TO SHEET M-001 FOR LEGEND, GENERAL NOTES, AND ABBREVIATIONS.
2. REFER TO SHEET M-701 FOR CONTROLS SPECIFIC LEGEND, GENERAL NOTES, AND ABBREVIATIONS.

POINTS LIST SCHEDULE - WALL MOUNTED COMPUTER ROOM AIR CONDITIONER

						LDP AND M&C DISPLAY			OVERRIDES		ALARMS	
						LDP VIEW REQ'D	M&C DISP REQ'D	M&C TREND REQ'D	LDP OVRD REQ'D	M&C OVRD REQ'D	ALARM CONDITION (SEE NOTES)	ALARM PRIORITY
PROOFS & SAFETIES	SF-S	SUPPLY FAN STATUS	~	ON/OFF	BI	X	X	X	~	~	SUPPLY FAN PROOF FAILED	INFO
	COND-HL	CONDENSATE DRAIN PAN HIGH LEVEL	~	ALM/NORMAL	BI	X	X	~	~	~	TRUE	CRIT
START / STOP	SYS-OCC	OCCUPANCY INPUT (FROM SYSTEM SCHEDULER)		ON/OFF	NVI	X	X	~	SEE NOTES		~	~
	SF-SS	SUPPLY FAN START/STOP	~	ON/OFF	BO	X	X	~	X	X	~	~
SUPPLY FAN...	SF-C	SUPPLY FAN COMMAND		70-100%	AO	X	X	X	X	X	~	~
ZONE TEMPERATURE CONTROL	CLG-V-C	COOLING VALVE COMMAND	~	0-100%	AO	X	X	X	~	~	~	~
	ZN-T	ZONE TEMPERATURE	~	<___>	AI	X	X	X	~	~	ZN-T MORE THAN 71°F OR LESS THAN 65°F	INFO
	ZN-H	ZONE RELATIVE HUMIDITIY	~	0-100%	AI	X	X	X	~	~	ZN-RH EXCEEDS 70% OR IS BELOW 40%	~
	ZN-T-SP-HTG	SUPPLY TEMPERATURE SETPOINT HEATING	67 °F	<___>	~	X	X	~	X	X	~	~
	ZN-RH-HL-SP	ZONE RELATIVE HUMIDITY HIGH LIMIT SETPOINT	55%	~	~	X	X	~	~	X	~	~
	ZN-RH-SP	ZONE RELATIVE HUMIDITY SETPOIN	52.5%	~	~	X	X	~	~	X	~	~
	HTG-C	HEATING COMMAND	~	0-100%	AO	X	X	X	~	~	~	~
OTHER POINTS	MOIST-ALM	MOISTURE ALARM	~	ALM/NORMAL	BI	X	X	~	~	~	ALM	CRIT

NOTES:
1. THE CONTRACTOR SHALL COMPLETE THE POINTS SCHEDULE AS SPECIFIED AND AS DESCRIBED IN THE GENERAL POINTS SCHEDULE NOTES ON DRAWING M701.
2. THE CONTRACTOR SHALL PROVIDE A POINTS SCHEDULE INCLUDING ALL COLUMNS SHOWN AS WELL AS ALL ADDITIONAL COLUMNS DESCRIBED IN PART 3 OF SPECIFICATION SECTION 23 09 00.
3. UNIT MANUFACTURERS PROOFS AND SAFETIES: THE CONTRACTOR SHALL SHOW EACH PROOF AND SAFETY AS A SEPARATE ROW.
4. SYS-OCC: OVERRIDE OF SYS-OCC IS ACCOMPLISHED THROUGH THE SYSTEM SCHEDULER.
5. ALARM CONDITIONS MARKED WITH AN ASTERISK (*) SHALL BE ACTIVE ONLY WHEN THE SYSTEM IS IN ON MODE AND HAS BEEN IN ON MODE FOR MORE THAN: * = 5 MINUTES ** = 30 MINUTES



07/23/2025

US Army Corps of Engineers ®

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0	READY-TO-ADVERTISE (RTA) SUBMITTAL	JUL 2025

DESIGNED BY: B. FONSECA
DRAWN BY: J. SMITH
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SUBMITTED BY: B. STREEBIN
ISSUE DATE: JUL 2025
SOLICITATION NO.: W912T5-25-RA001
CONTRACT NO.: W912T5-24-C-0007
DATE:
SIZE: ANSI D
FILE NAME:

US ARMY CORPS OF ENGINEERS
LITTLE ROCK DISTRICT
LITTLE ROCK, ARKANSAS

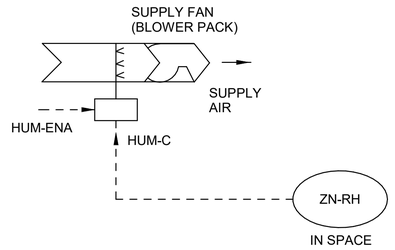
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165438

F-35: SPECIAL ACCESS PROGRAM FACILITY
EBBING AIR NATIONAL GUARD BASE (ANGB), FORT SMITH, ARKANSAS

MECHANICAL CONTROLS POINTS SCHEDULE - COMPUTER ROOM UNIT

SHEET ID
M-718

READY-TO-ADVERTISE (RTA) SUBMITTAL



K3 HUMIDIFIER CONTROL SCHEMATIC
SCALE: NTS

SEQUENCE OF OPERATION - HUMIDIFIER

HUM-101
TYPICAL FOR HUM-102 THRU HUM-103.

INTERLOCKS:
HUM-101 SHALL BE INTERLOCKED WITH CRAC-101 AND 102 SUCH THAT WHEN CRAC-101 OR 102 IS IN ENABLED HUM-101 IS ENABLED. OTHERWISE HUM-101 IS OFF.

HUM-102 SHALL BE INTERLOCKED WITH CRAC-103 AND 104.

HUM-103 SHALL BE INTERLOCKED WITH CRAC-105 AND 106.

GENERAL:
THE HVAC SYSTEM SHALL HAVE THE FOLLOWING MODES OF OPERATION: OFF AND ON.

OFF:
HUMIDIFIER SHALL BE OFF.

ON:
HUMIDIFICATION CONTROL: UPON A FALL IN ZONE HUMIDITY BELOW LOW LIMIT SETPOINT, HUMIDIFIER SHALL MODULATE TO BRING THE ZONE RELATIVE HUMIDITY UP TO SETPOINT. ONCE THE ZONE RELATIVE HUMIDITY SETPOINT IS REACHED THE HUMIDIFICATION CYCLE SHALL END UNTIL HUMIDITY DROPS BELOW THE LOW LIMIT SETPOINT AGAIN. IF THE SPACE RELATIVE HUMIDITY RISES ABOVE 60%, THE HUMIDIFIER SHALL BEGIN TO MODULATE TOWARDS CLOSED. IF THE SUPPLY AIR RELATIVE HUMIDITY REACHES 70%, THE HUMIDIFIER VALVE SHALL CLOSE COMPLETELY. ONCE THE SPACE RELATIVE HUMIDITY DROPS BELOW 40% NORMAL OPERATION SHALL RESUME.

POINTS LIST SCHEDULE - HUMIDIFIER

						LDP AND M&C DISPLAY			OVERRIDES		ALARMS	
							M&C					
FUNCTION	NAME	DESCRIPTION	SETTING (WITH UNITS)	RANGE (WITH UNITS)	IO TYPE	LDP VIEW REQ'D	DISP REQ'D	TREND REQ'D	LDP OVRD REQ'D	M&C OVRD REQ'D	ALARM CONDITION (SEE NOTES)	ALARM PRIORITY
HUMIDIFIER CONTROL	ZN-RH	ZONE RELATIVE HUMIDITY	~	0-100%	AI	X	X	X	~	~	ZN-RH EXCEEDS 70% OR IS BELOW 40%	INFO
	ZN-RH-LL-SP	ZONE RELATIVE HUMIDITY LOW LIMIT SETPOINT	50%	~	~	X	X	~	~	X	~	~
	ZN-RH-SP	ZONE RELATIVE HUMIDITY SETPOINT	52.5%	~	~	X	X	~	~	X	~	~
	HUM-ENA	HUMIDIFIER ENABLE	~	ENABLE/DISABLE	BO	X	X	~	X	X	~	~
	HUM-C	HUMIDIFIER COMMAND	~	0-100%	AO	X	X	X	~	~	~	~

NOTES:
1. THE CONTRACTOR SHALL COMPLETE THE POINTS SCHEDULE AS SPECIFIED AND AS DESCRIBED IN THE GENERAL POINTS SCHEDULE NOTES ON THE CONTROLS LEGEND DRAWING.
2. THE CONTRACTOR SHALL PROVIDE A POINTS SCHEDULE INCLUDING ALL COLUMNS SHOWN AS WELL AS ALL ADDITIONAL COLUMNS DESCRIBED IN PART 3 OF SPECIFICATION SECTION 23 09 00.
3. UNIT MANUFACTURERS PROOFS AND SAFETIES: THE CONTRACTOR SHALL SHOW EACH PROOF AND SAFETY AS A SEPARATE ROW.
4. ALARM CONDITIONS MARKED WITH AN ASTERISK (*) SHALL BE ACTIVE ONLY WHEN THE SYSTEM IS IN OCCUPIED MODE AND HAS BEEN IN OCCUPIED MODE FOR MORE THAN: * = 5 MINUTES ** = 30 MINUTES

LICENSED PROFESSIONAL ENGINEER
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07/23/2025

US Army Corps of Engineers ®

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ISSUE DATE: JUL 2025
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CONTRACT NO.: W912T2524C0007

DESIGNED BY: B. FONSECA
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SUBMITTED BY: B. STREEBIN
SIZE: ANSI D
FILE NAME:

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F-35 SPECIAL ACCESS PROGRAM FACILITY
EBBING AIR NATIONAL GUARD BASE (ANGB), FORT SMITH, ARKANSAS

MECHANICAL CONTROLS - SPACE HUMIDIFIER

SHEET ID
M-719

READY-TO-ADVERTISE (RTA) SUBMITTAL

LEGEND NOTES

1. SYMBOLS ORIENTATION DOES NOT IMPLY DEVICE OR EQUIPMENT ORIENTATION UNLESS NOTED AS SUCH. SEE REFLECTED CEILING PLANS FOR LIGHT FIXTURE POSITIONS AND ORIENTATIONS.
2. SYMBOL SIZE DOES NOT IMPLY EQUIPMENT SIZE, UON.
3. MOUNTING HEIGHT INDICATED IN LEGEND AND ON THE DRAWINGS SHALL BE THE DISTANCE MEASURED FROM THE CENTER OF THE DEVICE TO THE FINISHED FLOOR.
4. NOT ALL SYMBOLS ON THIS SHEET ARE USED AS PART OF THIS PROJECT.

SYMBOLS - GROUNDING/LIGHTNING PROTECTION

- GROUND ROD
- GROUND TEST WELL
- LIGHTNING PROTECTION AIR TERMINAL
- STATIC GROUND
- GROUNDING COUNTERPOISE/CONDUCTOR
  - BURIED, BARE CABLE (EXTERIOR)
  - COPPER, #4/0 AWG MINIMUM, UON
- GROUND BAR
  - MGB = MAIN GROUND BUSBAR
  - PBB, SBB = TELECOMM BONDING BUSBARS
  - MPG = LAB MULTIPOINT GROUND (AND STATIC)
- BOLTED GROUND CONNECTION
- EXOTHERMIC WELDED CONNECTION
- DOWN CONDUCTOR, #2AWG COPPER MINIMUM, UON

SYMBOLS - MODIFIERS

AC	ABOVE COUNTER MOUNTING
C	RECESSED IN CEILING
CB	COFFEE BREWER
CO	COPIER
DW	DISHWASHER
EP OR EXP	EXPLOSION PROOF
F	RECESSED IN FLOOR
GD	GARBAGE DISPOSAL
GFI	GROUND FAULT CIRCUIT INTERRUPTER
IG	ISOLATED GROUND
MW	MICROWAVE
PR	PRINTER
PROJ	PROJECTOR
REF	REFRIGERATOR
SB	SMART BOARD
SH	SHREDDER
SP	SINGLE POINT CONNECTION
SW: XX	CONTROLLED BY SWITCH LABELED "XX"
TV	TELEVISION OR DISPLAY MONITOR
VM	VENDING MACHINE
WC	WALL-MOUNTED CLOCK
WF	WATER COOLER
WP	WEATHERPROOF, WITH GFI
WPIU	WEATHERPROOF IN USE, WITH GFI
XX" AFF	MOUNT XX" AFF
XX" AFP	MOUNT XX" AFP

SYMBOLS - POWER

WIRING RACEWAY TYPES

- LADDER TYPE CABLE TRAY
- EXPOSED CONDUIT - SINGLE LINE
- CONCEALED CONDUIT - SINGLE LINE
- UNDERGROUND DUCTBANK
- CONDUIT ROUTED VERTICALLY

RECEPTACLES

- 120V, NEMA 5-20R, MOUNT AT 18" UON

RECESSED SIMPLEX	SURFACE SIMPLEX
RECESSED DUPLEX	SURFACE DUPLEX
RECESSED DUPLEX CONTROLLED	SURFACE DUPLEX CONTROLLED
RECESSED QUAD	SURFACE QUAD
RECESSED QUAD CONTROLLED	SURFACE QUAD CONTROLLED
CEILING RECESSED DUPLEX	FLOORBOX RECESSED DUPLEX
SPECIAL RECEPTACLE (REFER TO DRAWINGS FOR NEMA CONFIGURATION)	FLOORBOX RECESSED QUAD
	CORD REEL

RECEPTACLES WITH COMM OUTLETS

- SEE COMMUNICATIONS OUTLET DETAILS FOR POWER AND COMMUNICATIONS REQUIREMENTS

FB1 — RECESSED FLOOR BOX W. DUPLEX 5-20R POWER/SPARE GANG FOR USER AV CABLES.

FB2 — RECESSED FLOOR BOX W. DUPLEX 5-20R POWER, SPARE GANG FOR FUTURE POWER (OR COMM), AND SPECIAL RECEPTACLE (IF NOTED)

RECESSED POWER/COMM, MOUNTED AT + 84", UON

SURFACE POWER/COMM, MOUNTED AT + 84", UON

SF# — POWER/COMMUNICATION JUNCTION BOX CONNECTION. REFER TO DETAIL B1 ON SHEET EP502 AND A1 ON SHEET EP503.
- NUMBER OF WORKSTATION ON CIRCUIT

POWER DEVICES GENERAL INFORMATION

LP-X / GFI
- PANELBOARD - CIRCUIT
- SYMBOL MODIFIER(S)
- ANY RECEPTACLE LISTED ABOVE

EF-X / J / LP-X / GFI
- EQUIPMENT IDENTIFICATION
- PANELBOARD - CIRCUIT
- SYMBOL MODIFIER(S)
- ANY JUNCTION BOX LISTED ABOVE

EF-X / HL-X / GFI / J
- EQUIPMENT IDENTIFICATION
- PANELBOARD - CIRCUIT
- SYMBOL MODIFIER(S)
- MECHANICAL EQUIPMENT CONNECTION
  - SEE MECHANICAL EQUIPMENT SCHEDULE FOR CONNECTION INFORMATION
- REMOTE DISCONNECT SWITCH:
  - SEE MECHANICAL EQUIPMENT SCHEDULE FOR ADDITIONAL INFORMATION

JUNCTION BOXES

- COORDINATE JUNCTION BOX INSTALLATION WITH NEARBY EQUIPMENT.

(J) RECESSED IN WALL, UON

J RECESSED IN FLOOR, UON

J SURFACE ON WALL, UON

EQUIPMENT CONNECTIONS

(M) MECHANICAL EQUIPMENT CONNECTION. PROVIDE DISCONNECT / STARTER / VFD AS INDICATED ON MECHANICAL EQUIPMENT PLAN AND SCHEDULES

(E) ELECTRICAL CONNECTION

SWITCHES

DISCONNECT SWITCH
- DISCONNECTS SHOWN ON ELECTRICAL PLANS MUST BE EXTERNAL TO EQUIPMENT

COMBINATION STARTER/DISCONNECT SWITCH

M — MOTOR-RATED SWITCH

EQUIPMENT

LP11 — EQUIPMENT IDENTIFIER

- ELECTRICAL EQUIPMENT INCLUDING, BUT NOT LIMITED TO, TRANSFORMERS, SWITCHBOARDS AND PANELBOARDS ARE DRAWN TO SCALE IN THE PLANS AND ARE CALLED OUT WITH A UNIQUE IDENTIFIER.

SYMBOLS - LIGHTING

LIGHTING FIXTURES

- REFER TO FIXTURE SCHEDULE FOR FIXTURE TYPE INFORMATION

- LINEAR FIXTURE
- EMERGENCY FIXTURE WITH BATTERY BACKUP, UON (NOTE: ALL FIXTURES NOTED ON PLAN WITH HALF-SHADE INDICATE EMERGENCY BATTERY BACKUP)
- DOWNLIGHT OR SPOTLIGHT, UON
- EXIT SIGNS, CEILING: ARROW INDICATES EGRESS DIRECTION
- EXIT SIGNS, WALL: ARROW INDICATES EGRESS DIRECTION
- WALL PACK FIXTURE
- (B) FLASHING BLUE LIGHT FIXTURE, CEILING MOUNTED
- (OB) OBSTRUCTION LIGHT FIXTURE, ROOF MOUNTED

FIXTURE GENERAL INFORMATION

F1E / LP-1 / 10' - 0" / a
- FIXTURE TYPE
- 'E' DENOTES EMERGENCY FIXTURE
- PANELBOARD - CIRCUIT NUMBER
- FIXTURE MOUNTING HEIGHT (IF APPLICABLE)
- SWITCH 'LEG'
  - THE SWITCH WITH SAME LETTER OPERATES THIS FIXTURE

CONTROL DEVICES GENERAL INFORMATION

- (OS) OCCUPANCY SENSOR
- (DS) DAYLIGHT SENSOR

LINE VOLTAGE TOGGLE SWITCH — DEMARCATION
- EP: EXPLOSION PROOF
- a: DENOTES SWITCH "LEG". SWITCH OPERATES FIXTURES IN SPACE WITH SAME LETTER.
- 3: 3-WAY SWITCH
- 4: 4-WAY SWITCH

NOTE: NO DEMARCATION OR SWITCH 'LEG' INDICATES THAT THE SWITCH CONTROLS ALL OF THE FIXTURES (EXCEPT EXIT SIGNAGE) WITHIN SPACE. ADDITIONAL DEMARCATIONS SEPARATED BY A COMMA "," INDICATE ADDITIONAL SWITCHES WITHIN A COMMON SWITCH BACKBOX.

LOW VOLTAGE SWITCH — DEMARCATION
- EP: EXPLOSION PROOF
- #: # OF PUSH BUTTONS ON LOW VOLTAGE SWITCH

NOTE: SWITCH CONTROLS ALL LIGHT FIXTURES AND SWITCH LEGS (EXCEPT EXIT SIGNAGE) WITHIN THE SAME ROOM, UON. REFER TO LOW VOLTAGE SWITCH CONTROL SCHEMES FOR SAMPLE SWITCH CONTROL PROGRAMMING.

SYMBOLS - ONE-LINE

- CONNECTION
- CONTINUATION
- SEPARABLE CONNECTOR OR CONNECTION FOR DRAWOUT ASSEMBLIES
- FUSED DISCONNECT SWITCH
- TRANSFORMER
- GROUND
- Δ / Y — DELTA - WYE TRANSFORMER CONNECTION
- DM — DIGITAL METER
- SPD — SURGE PROTECTIVE DEVICE
- VFD — VARIABLE FREQUENCY DRIVE
- ST — SHUNT TRIP
- KWH — KILOWATT HOUR METER
- VS — VOLTMETER SELECTOR SWITCH
- AS — AMMETER SELECTOR SWITCH
- (V) VOLTMETER
- (A) AMMETER
- CIRCUIT BREAKER
- SWITCH
- DISCONNECT SWITCH
- SPECIAL RECEPTACLE
- M — PANELBOARD (PANELBOARD NAMED 'M')
- LIGHTNING ARRESTOR
- MANUAL TRANSFER SWITCH
- MFM — MULTI-FUNCTION DIGITAL METER
- G / N — NEUTRAL CONNECTION TO GROUND
- (G) DIESEL ENGINE GENERATOR
- (K) KIRK-KEY INTERLOCK
- (R) RELAY
- (C) CONTACTOR
- PHOTOCELL
- (20) ELECTRICAL MOTOR 20 - MOTOR HORSEPOWER

Professional Engineer
I hereby certify that this plan, specification, or report was prepared by me or under my direct supervision and that I am a duly Licensed Professional Engineer under the laws of the state of Minnesota.
Signature:
Typed or Printed Name: DUGAN BRADLEY
Date: 07/23/25 License Number: 61869

US Army Corps of Engineers ®

MARK	DESCRIPTION	DATE
0	READY-TO-ADV/ERTISE (RTA) SUBMITTAL	JUL 2025

DESIGNED BY: D. BRADLEY
DRAWN BY: S. YUNKER
CHECKED BY: C. STRATTON
SUBMITTED BY: B. STREEBIN
SIZE: ANSI D
ISSUE DATE: JUL 2025
SOLICITATION NO.: W912T2-25-RA001
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FILE NAME: 165438_E_R22_r.rvt

US ARMY CORPS OF ENGINEERS
LITTLE ROCK DISTRICT
LITTLE ROCK, ARKANSAS

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9400 WARD PARKWAY,
KANSAS CITY, MO 64114
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F-35 SPECIAL ACCESS PROGRAM FACILITY
EBBING AIR NATIONAL GUARD BASE (ANGB), FORT SMITH, ARKANSAS

ELECTRICAL LEGEND

SHEET ID
E-001

READY-TO-ADVERTISE (RTA) SUBMITTAL

ABBREVIATIONS

A	AMPERES
AC	ALTERNATING CURRENT
AFF	ABOVE FINISHED FLOOR
AIC	AMPERES INTERRUPTING CAPACITY
AV	AUDIO/VIDEO
AWG	AMERICAN WIRE GAUGE
BAS	BUILDING AUTOMATION SYSTEM
BBC	BONDING BACKBONE CONDUCTOR
BICSI	BUILDING INDUSTRY CONSULTING SERVICE INTERNATIONAL
C	CONDUIT
CAT	CATEGORY
CATV	CABLE TELEVISION
CBP	COPPER BACKBONE PATCH PANEL
CCTV	CLOSED CIRCUIT TELEVISION
CH	CHILLED WATER
CL	CENTERLINE
COMM	COMMUNICATIONS
COR	CONTRACTING OFFICER REPRESENTATIVE
CPP	COPPER HORIZONTAL PATCH PANEL
CT	CABLE TRAY
CU	COPPER
DBL. N.	DOUBLE NEUTRAL
EC	EMPTY CONDUIT
EF	EXHAUST FAN
EGC	EQUIPMENT GROUNDING CONDUCTOR
EIA	ELECTRONICS INDUSTRIES ASSOCIATIONS
EM/NL	EMERGENCY / NIGHT LIGHT
EMT	ELECTRICAL METALLIC TUBING
EPO	EMERGENCY POWER OFF
ETR	EXISTING TO REMAIN
EX OR EXP	EXPLOSION PROOF
FAAP	FIRE ALARM ANNUNCIATOR PANEL
FACP	FIRE ALARM CONTROL PANEL
FBO	FURNISHED BY OTHERS
FO	FIBER OPTIC
FPD	FLAT PANEL DISPLAY
FPP	FIBER OPTIC PATCH PANEL
FT	FEET OR FOOT
GFCI	GOVERNMENT FURNISHED, CONTRACTOR INSTALLED
GFGI	GOVERNMENT FURNISHED AND INSTALLED
GFI	GROUND FAULT INTERRUPTER
G OR GND	GROUND
GFE	GOVERNMENT FURNISHED EQUIPMENT
GFR	GROUND FAULT RELAY
GFP	GROUND FAULT PROTECTION
GRS	GALVANIZED RIGID STEEL CONDUIT
HID	HIGH INTENSITY DISCHARGE
HZ	HERTZ
IDS	INTRUSION DETECTION SYSTEM
IG	ISOLATED GROUND
IPDS	INTEGRATED POWER DISTRIBUTION SYSTEM
K	KILO
KCMIL	THOUSAND CIRCULAR MILS
KVA	KILOVOLT AMPERES
KWH	KILOWATT HOURS
LC	LIGHTING CONTACTOR
LP	LIGHTNING PROTECTION
LPS	LIGHTNING PROTECTION SYSTEM
LSI	LONG TIME, SHORT TIME, INSTANTANEOUS
LW	LOCKABLE WIREWAY
MAX	MAXIMUM
MCB	MAIN CIRCUIT BREAKER
MDP	MAIN DISTRIBUTION PANEL
MH	MAINTENANCE HOLE
MLO	MAIN LUGS ONLY
MM	MULTIMODE
MN/PA	MASS NOTIFICATION/PUBLIC ADDRESS
MTD	MOUNTED
N	NEUTRAL CONDUCTOR
N.C.	NORMALLY CLOSED
NEC	NATIONAL ELECTRICAL CODE
NEMA	NATIONAL ELECTRICAL MANUFACTURER'S ASSOCIATION
NIC	NOT IN CONTRACT
NIPR	NON-CLASSIFIED INTERNET PROTOCOL ROUTING
NL	NIGHT LIGHT
N.O.	NORMALLY OPEN
NTS	NOT TO SCALE
OC	ON CENTER
PBB	PRIMARY BONDING BUSBAR
PDU	POWER DISTRIBUTION UNIT
PIV	POST INDICATOR VALVE
PR	PAIR
PVC	POLYVINYL CHLORIDE
RBB	RACK BONDING BUSBAR
RECEPT	RECEPTACLE
RGS	RIGID GALVANIZED STEEL CONDUIT
RM	ROOM
RMC	RIGID METAL CONDUIT
SBB	SECONDARY BONDING BUSBAR
SBC	SECONDARY BONDING CONDUCTOR
SCCR	SHORT CIRCUIT CURRENT RATING
STP	SHIELDED TWISTED PAIR
SIPR	SECRET INTERNET PROTOCOL ROUTING
SM	SINGLE MODE
SPD	SURGE PROTECTION DEVICE
SPECS	CONTRACT SPECIFICATIONS
SPDT	SINGLE POLE DOUBLE THROW
SPST	SINGLE POLE SINGLE THROW
SRG	STATIC REFERENCE GRID
STR	STRAND
T	TRANSFORMER
TB	TELEPHONE BACKBOARD
TBB	TELECOMMUNICATIONS BONDING BACKBONE
TDMM	TELECOMMUNICATIONS DISTRIBUTION METHODS MANUAL
TEBC	TELECOMMUNICATIONS EQUIPMENT BONDING CONDUCTOR
TECH	TECHNICIAN
TR	TELECOMMUNICATIONS ROOM
TVSS	TRANSIENT VOLTAGE SURGE SUPPRESSION
TYP	TYPICAL
TZC	TIME ZONE CLOCK
UL	UNDERWRITERS' LABORATORIES
UON	UNLESS OTHERWISE NOTED
UTP	UNSHIELDED TWISTED PAIR
V	VOLTS
VA	VOLT AMPERES
VFD	VARIABLE FREQUENCY DRIVE
W	WIRE OR WATT
WP	WEATHERPROOF
WPIU	WEATHERPROOF WHILE IN USE
XFMR	TRANSFORMER
Z	IMPEDANCE

ARC FLASH LABEL FOR EQUIPMENT

1. PROVIDE SELF-ADHESIVE VINYL LABEL TO AFFIX TO ELECTRICAL EQUIPMENT TO WARN OF ARC FLASH HAZARDS.
2. THE LABEL FORMAT AND TEXT MUST BE IN ACCORDANCE WITH THE FIGURE BELOW.
3. THE LABEL MUST BE LOCATED ON THE EQUIPMENT TO BE CLEARLY VISIBLE TO QUALIFIED PERSONS BEFORE EXAMINATION, ADJUSTMENT, SERVICING, OR MAINTENANCE OF THE EQUIPMENT.
4. THE SIZE OF THE LABEL MUST BE:

EQUIPMENT	TYPE HEIGHT	WIDTH
INDOOR	50mm	75mm
OUTDOOR	100mm	150mm

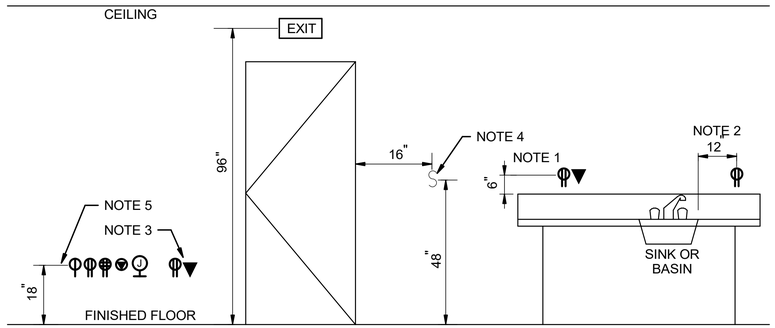
5. A DOWNLOADABLE WINDOWS METAFILE IS AVAILABLE ON THE WHOLE BUILDING DESIGN GUIDE WEBSITE (WWW.WDBG.ORG) FOR USE IN A LABEL MAKING MACHINE.
   A. THE FILE IS LOCATED ON THE "NAVFAC CADD DETAILS" PAGE. TO NAVIGATE TO THIS LOCATION, FOLLOW: HOME > DOCUMENTS & REFERENCES > CCB > CADD LIBRARY > NAVFAC CADD RESOURCES > NAVFAC CADD DETAILS.
6. PROVIDE ARC FLASH WARNING LABELS ON ELECTRICAL EQUIPMENT LIKELY TO REQUIRE EXAMINATION, SERVICING, OR MAINTENANCE WHILE ENERGIZED. EQUIPMENT MUST INCLUDE BUT NOT LIMITED TO INCLUDE PAD-MOUNTED TRANSFORMERS, SWITCHGEAR, SWITCHBOARDS, PANELBOARDS, DISCONNECT SWITCHES, INDUSTRIAL CONTROL PANELS, AND METER SOCKET ENCLOSURES.
7. PROVIDE A COPY OF THE ARC FLASH STUDY REQUIRED BY SECTION 26 05 73.00 10 POSTED IN THE ELECTRICAL ROOM.



GENERAL NOTES

1. ALL CONDUCTORS MUST BE RUN IN CONDUIT, AND ALL CONDUIT MUST BE ROUTED CONCEALED UNLESS OTHERWISE NOTED ON THE DRAWINGS.
2. ALL NEW EQUIPMENT MUST BE FIELD MARKED TO WARN QUALIFIED PERSONS OF POTENTIAL ELECTRIC ARC FLASH HAZARD IN ACCORDANCE WITH NFPA 70 AND 70E.
3. COORDINATE WITH MECHANICAL TRADE REGARDING ELECTRICAL REQUIREMENTS OF ACTUAL EQUIPMENT PROVIDED.
4. MOUNTING HEIGHT FOR LIGHT FIXTURES MUST BE FROM THE BOTTOM OF FIXTURES TO THE FINISHED FLOOR OR GRADE.
5. ALL ELECTRICAL WORK MUST COMPLY WITH NEC (NFPA 70), NFPA 72, NFPA 101, AND DoD UNIFORM FACILITY CRITERIA, OR AIR FORCE TECHNICAL LETTERS, IN ADDITION TO LOCAL CODES AND ORDINANCES.
6. ALL GROUNDING MUST COMPLY WITH NFPA 70, ARTICLE 250 FOR ELECTRICAL SYSTEMS AND NEC ARTICLE 800 AND TIA-607-D FOR TELECOMMUNICATIONS SYSTEMS.
7. PROVIDE A GREEN CONTINUOUS INSULATED EQUIPMENT GROUNDING CONDUCTOR TO ALL ELECTRICAL, TELECOMMUNICATIONS AND SECURITY EQUIPMENT SIZED PER NEC ARTICLE 250 AND TIA 607.
8. ALL CONDUCTORS MUST BE COPPER.
9. ALL ELECTRICAL EQUIPMENT AND OUTLET INSTALLATION LOCATIONS MUST BE COORDINATED WITH FURNITURE INSTALLATION.
10. COORDINATE PENETRATIONS IN FIRE RATED WALLS WITH DETAILS SHOWN ON ARCHITECTURAL DRAWINGS.
11. ALL NEW FLOOR MOUNTED ELECTRICAL EQUIPMENT INCLUDING BUT NOT LIMITED TO SWITCHBOARDS, TRANSFORMERS, MOTOR CONTROL CENTERS, AND POWER CONDITIONERS MUST BE MOUNTED ON A CONCRETE EQUIPMENT PAD IN ACCORDANCE WITH STRUCTURAL DETAILS
12. AIC RATING LISTED ON ELECTRICAL EQUIPMENT IS A MINIMUM RATING.
13. UNLESS OTHERWISE NOTED, ALL CIRCUIT BREAKERS RATED AT 400A AND LARGER MUST BE 100 PERCENT RATED ASSEMBLIES.
14. ALL AREAS DISTURBED BY TRENCHING / DIGGING FOR DUCT AND MAINTENANCE HOLE INSTALLATION MUST BE RETURNED TO THE ORIGINAL CONDITION PRIOR TO BEGINNING OF PROJECT.
15. SEE GJ & TY SHEETS FOR SECURE AREA AND TEMPEST BOUNDARIES AND REQUIREMENTS OF PENETRATIONS THROUGH THESE BOUNDARIES. CONSTRUCTION FOR SECURE AREAS, SECURE AREA MATERIALS AND COMPONENTS MUST COMPLY WITH UFC 4-010-05 AND IC TECH SPECS FOR ICD/ICS 705, AND FULLY MEET AND PASS ALL ACCREDITATION. COORDINATE WITH CONTRACTING OFFICER DURING CONSTRUCTION OF SECURE AREAS.

TYPICAL DEVICE MOUNTING DETAIL AND NOTES



TYPICAL DEVICE MOUNTING HEIGHTS (UON):

REF	REFRIGERATOR, 48" AFF
ICE	ICE MACHINE, 48" AFF
CO	COPIER OR PLOTTER, 18" AFF
GD	GARBAGE DISPOSAL, 18" AFF (NOTE 6)
FPD	FLAT PANEL DISPLAY (NOTE 6)
TV	TELEVISION (NOTE 6)
SB	SMART BOARD (NOTE 6)
TZC	TIME ZONE CLOCK (NOTE 6)
WF	WATER COOLER (NOTE 6)
COF	COFFEE MAKER (NOTE 1, NOTE 6)
MIC	MICROWAVE (NOTE 1, NOTE 6)
AC	ABOVE COUNTER, SEE "DEVICE MOUNTING NOTES", (NOTE 1)
CRD	CREDENZA, 18" AFF

NOTES:

1. COORDINATE ABOVE COUNTER DEVICES AND RECEPTACLES WITH CASEWORK OR COUNTERS SUCH THAT THE DEVICES AND RECEPTACLES ARE LOCATED AT +42" AFF OR 6" ABOVE THE COUNTERTOP OR BACKSPLASH, WHICHEVER IS HIGHER.
2. ALL RECEPTACLES INSTALLED WITHIN 6'-0" OF ANY SINK OF BASIN MUST HAVE GFI PROTECTION. DO NOT INSTALL RECEPTACLES WITHIN 12" OF THE EDGE OF A SINK OR BASIN.
3. COORDINATE WITH THE COMMUNICATIONS DRAWINGS TO ENSURE THAT A DUPLEX RECEPTACLE IS INSTALLED WITHIN 18" HORIZONTAL TO ALL SIGNAL AND DATA DEVICE LOCATIONS, UON.
4. SWITCHES AND OTHER FLUSH WALL-MOUNTED DEVICES MUST BE MOUNTED WITHIN 16" OF DOORFRAME. COORDINATE WITH ARCHITECTURAL DRAWINGS FOR DOORS WITH ADJACENT SIDELIGHTS. WHERE DEVICES ARE SHOWN ADJACENT TO THE DOOR ON THE HINGE-SIDE OF THE DOOR, AND THE DOOR SWINGS IN A MANNER THAT MUST BLOCK THE DEVICE, MOUNT THE DEVICE 12" BEYOND THE DOOR SWING. COORDINATE ROUGH-IN LOCATIONS WITH DIV. 27 AND 28 DEVICES AS WELL. COORDINATE MOUNTING LOCATION WITH OTHER TRADES TO ENSURE A UNIFORM MOUNTING AND AESTHETICALLY-PLEASING APPEARANCE.
5. MOUNTING HEIGHT INDICATED IN LEGEND AND ON THE DRAWINGS MUST BE THE DISTANCE MEASURED FROM THE CENTER OF THE DEVICE TO THE FINISHED FLOOR, UON.
6. COORDINATE FINAL RECEPTACLE HEIGHT AND LOCATION FOR ALL DEVICE RECEPTACLES WITH ARCHITECTURAL/INTERIORS AND AV PLANS.

Professional Engineer
I hereby certify that this plan, specification, or report was prepared by me or under my direct supervision and that I am a duly Licensed Professional Engineer under the laws of the state of Minnesota.
Signature:
Typed or Printed Name: DUGAN BRADLEY
Date: 07/23/25 License Number: 61869

US Army Corps of Engineers ®

MARK	DESCRIPTION	DATE
0	READY-TO-ADVERTISE (RTA) SUBMITTAL	JUL 2025

DESIGNED BY: D. BRADLEY
DRAWN BY: S. YUNKER
CHECKED BY: C. STRATTON
SUBMITTED BY: B. STREEBIN
ISSUE DATE: JUL 2025
SOLICITATION NO.: W912T2-25-RA001
CONTRACT NO.: W912T2-24-F0007
SIZE: ANSI D
FILE NAME: 165438_E_R22_1.rvt

US ARMY CORPS OF ENGINEERS
LITTLE ROCK DISTRICT
LITTLE ROCK, ARKANSAS

BURNS AND McDONNELL
9400 WARD PARKWAY,
KANSAS CITY, MO 64114
165438

F-35: SPECIAL ACCESS PROGRAM FACILITY
EBBING AIR NATIONAL GUARD BASE (ANGB), FORT SMITH, ARKANSAS

ELECTRICAL LEGEND

SHEET ID
E-002

READY-TO-ADVERTISE (RTA) SUBMITTAL



A1 OVERALL ELECTRICAL DEMOLITION SITE PLAN
SCALE: 1"=200'

GENERAL SHEET NOTES

1. REFER TO ES001 FOR ELECTRICAL GENERAL NOTES, LEGEND AND ABBREVIATIONS.
2. NOT ALL UTILITIES ARE LOCATED ON THE PLANS. LOCATE ALL UTILITIES PRIOR TO WORK.
3. THE CONTRACTING OFFICER MUST BE NOTIFIED PRIOR TO STARTING ANY DEMOLITION WORK.
4. ALL WORK MUST BE PERFORMED IN ACCORDANCE WITH CIVIL PHASING PLANS. SEE GC SERIES SHEETS.
5. REFER TO TN001 FOR TELECOMM. OUTSIDE PLANT GENERAL NOTES.

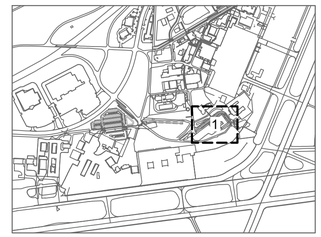
Professional Engineer
I hereby certify that this plan, specification, or report was prepared by me or under my direct supervision and that I am a duly Licensed Professional Engineer under the laws of the state of Minnesota.

Signature:

Typed or Printed Name: DUGAN BRADLEY

Date: 07/23/25 License Number: 61869

KEY PLAN



US Army Corps of Engineers ®

MARK	DESCRIPTION	DATE
0	READY-TO-ADVERTISE (RTA) SUBMITTAL	JUL 2025

DESIGNED BY: D. BRADLEY
DRAWN BY: S. YUNKER
CHECKED BY: S. STRATTON
SUBMITTED BY: STREEPER
SIZE: ANSI D
ISSUE DATE: JUL 2025
SOLICITATION NO.: W9127S25RA001
CONTRACT NO.: W9127S24F0007
FILE NAME: 165438ED110.dwg

US ARMY CORPS OF ENGINEERS
LITTLE ROCK DISTRICT
LITTLE ROCK, ARKANSAS

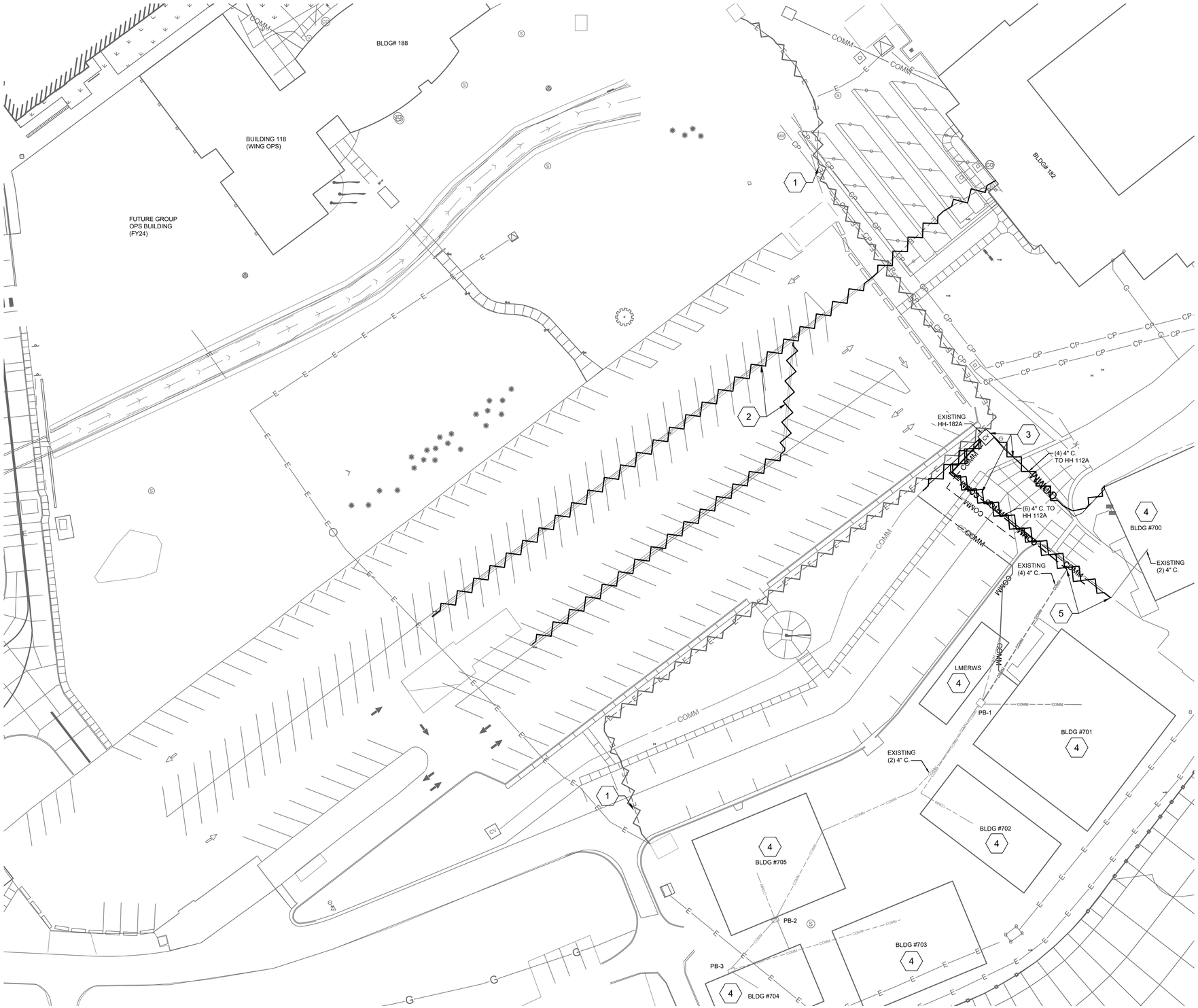
BURNS AND McDONNELL
9400 WARD PARKWAY
KANSAS CITY MO, 64114
165438

F-35 SPECIAL ACCESS PROGRAM FACILITY
EBBING AIR NATIONAL GUARD BASE (ANGB), FORT SMITH, ARKANSAS

OVERALL ELECTRICAL DEMOLITION SITE PLAN

SHEET ID
ED110

READY-TO-ADVERTISE (RTA) SUBMITTAL



A1 ENLARGED ELECTRICAL DEMOLITION SITE PLAN - 1

SCALE: 1"=30'

GENERAL SHEET NOTES

1. REFER TO ES001 FOR ELECTRICAL GENERAL NOTES, LEGEND AND ABBREVIATIONS.
2. NOT ALL UTILITIES ARE LOCATED ON THE PLANS. LOCATE ALL UTILITIES PRIOR TO WORK.
3. THE CONTRACTING OFFICER MUST BE NOTIFIED PRIOR TO STARTING ANY DEMOLITION WORK.
4. ALL WORK MUST BE PERFORMED IN ACCORDANCE WITH CIVIL PHASING PLANS. SEE GC SERIES SHEETS.
5. REFER TO TN001 FOR TELECOMM OUTSIDE PLANT GENERAL NOTES.

SHEET KEYNOTES

1. UNDERGROUND PRIMARY DUCT BANK DEMOLITION BY OG&E.
2. DISCONNECT AND REMOVE EXISTING UNDERGROUND BRANCH CIRCUIT/FEEDER.DEMOLISH BACK TO SOURCE. DEMOLISH LIGHT POLES ALONG DEMOLISHED BRANCH CIRCUIT REFER TO CIVIL DEMO DRAWINGS FOR LIGHT POLE LOCATIONS.
3. AFTER COMPLETION OF NEW WORK (REFER TO ES116); DEMOLISH EXISTING COMMUNICATION CONDUIT INFRASTRUCTURE AS REQUIRED INCLUDING EXISTING HH-182A TO EXTENTS INDICATED. REFER TO CIVIL DEMOLITION DRAWINGS FOR ADDITIONAL INFORMATION.
4. DEMO EXISTING FIBER OPTIC CABLES SERVING TEMPORARY FACILITIES 700, 701, 702, 703, 704, AND 705. EXISTING CONDUIT INFRASTRUCTURE TO REMAIN WHERE INDICATED. REFER TO ES116 FOR ADDITIONAL INFORMATION.
5. APPROXIMATE ROUTING OF TEMPORARY FACILITIES COMM. DUCTBANKS. CONTRACTOR SHALL FIELD VERIFY PRIOR TO COMMENCEMENT OF WORK.

LEGEND

- EXISTING UNDERGROUND ELECTRICAL - PRIMARY FEED
- EXISTING COMMUNICATIONS
- EXISTING UNDERGROUND ELECTRICAL - SECONDARY FEED
- EXISTING UNDERGROUND ELECTRICAL - PRIMARY FEED TO BE DEMOED
- EXISTING COMMUNICATIONS TO BE DEMOED
- EXISTING UNDERGROUND ELECTRICAL - SECONDARY FEED TO BE DEMOED

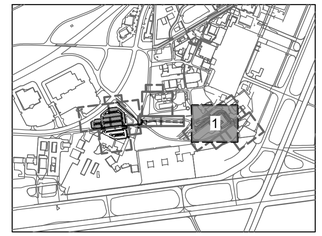
Professional Engineer
I hereby certify that this plan, specification, or report was prepared by me or under my direct supervision and that I am a duly Licensed Professional Engineer under the laws of the state of Minnesota.

Signature:

Typed or Printed Name: DUGAN BRADLEY

Date: 03/13/26 License Number: 61869

KEY PLAN



US Army Corps of Engineers ®

MARK	DESCRIPTION	DATE
1	AM0003 - COMM CONDUIT DEMO CLARIFICATION	JAN 2026
0	READY-TO-ADVERTISE (RTA) SUBMITTAL	JUL 2025

DESIGNED BY: D. BRADLEY
DRAWN BY: S. YUNKER
CHECKED BY: S. STRATTON
SUBMITTED BY: STREEPER
SIZE: ANSI D
ISSUE DATE: JUL 2025
SOLICITATION NO.: W9127S25RA001
CONTRACT NO.: W9127S24F0007
FILE NAME: 165438ED111.dwg

US ARMY CORPS OF ENGINEERS
LITTLE ROCK DISTRICT
LITTLE ROCK, ARKANSAS

BURNS AND McDONNELL
9400 WARD PARKWAY,
KANSAS CITY MO, 64114
165438

F-35; SPECIAL ACCESS PROGRAM FACILITY
EBBING AIR NATIONAL GUARD BASE (ANGB), FORT SMITH, ARKANSAS

ENLARGED ELECTRICAL DEMOLITION SITE PLAN - 1

SHEET ID

ED111.1

READY-TO-ADVERTISE (RTA) SUBMITTAL

LEGEND NOTES

1. EXISTING FACILITIES SHALL REMAIN OPERATIONAL FOR DURATION OF CONSTRUCTION. NEW ELECTRICAL DUCTBANKS REQUIRED TO SUPPORT EXISTING FACILITIES SHALL BE IN PLACE PRIOR TO DEMOLITION.

2. CONTRACTOR SHALL LOCATE AND VERIFY ALL ELECTRICAL SYSTEMS WITHIN THE IDENTIFIED AREAS PRIOR TO STARTING ANY WORK. ANY DISCREPANCIES BETWEEN INFORMATION SHOWN AND ACTUAL CONDITIONS SHALL BE BROUGHT TO THE ATTENTION OF THE CONTRACTING OFFICER.

3. PROVIDE ALL MATERIALS, LABOR AND EQUIPMENT REQUIRED FOR A COMPLETE AND OPERATIONAL INSTALLATION. MATERIALS AND WORKMANSHIP SHALL FULLY COMPLY WITH THE REQUIREMENTS OF THE LATEST EDITION OF TIA STANDARDS.

4. STUB-OUTS SHALL BE PLUGGED INSIDE THE MANHOLE OR BUILDING, TAGGED IDENTIFYING THEM AS STUB-OUTS AND CAPPED ON THE FAR END TO PREVENT SOLIDS AND WATER FROM ENTERING THE DUCT. A LOCATOR BALL SHALL BE PLACED AT THE STUB-OUT LOCATION.

5. ELECTRICAL MANHOLES SHALL BE INSTALLED IN ACCORDANCE WITH THE MANUFACTURER'S INSTRUCTIONS. MANHOLES SHALL HAVE A MINIMUM COMPRESSIVE STRENGTH OF 7000 PSI AT 28-DAYS, MEET AASHTO H-20 LOADING, INCLUDE GALVANIZED EMBEDDED PULLING IRONS IN EACH CORNER, TOP AND BOTTOM, INCLUDE FOUR GALVANIZED C-CHANNELS ON EACH LONGITUDINAL SIDE, AND SHALL BE EQUIPPED WITH PVC DUCT TERMINATIONS AT ALL POINTS OF ENTRY.

6. INSTALL DUCTS IN MANHOLES AT THE LOWEST AVAILABLE DUCT POSITIONS TO ALLOW DUCTS TO BE PLACED ON TOP IF REQUIRED IN THE FUTURE. COORDINATE WITH COMM DUCT BANK INSTALLATION AND AVOID PLACEMENT OF DUCTS THAT WOULD PREVENT THE ABILITY TO INSTALL FUTURE DUCTS. TRANSITION DUCT BANKS FROM TRENCH DEPTH TO LOWER DUCT WINDOWS IN NO LESS THAN 30-LINEAR FEET TO MAINTAIN MINIMUM BEND RADIUS. CONCRETE ENCASEMENT SHALL SURROUND DUCTS WITH NO VOIDS. DUCTS SHALL BE TESTED WITH A 12-INCH NON-FLEXIBLE MANDREL WITH A DIAMETER THAT IS 1/2" LESS THAN THE DUCT INSIDE DIAMETER IN ALL MAIN RUNS. ALL DUCTS, SUB-DUCTS AND INNERDUCTS SHALL BE PLUGGED USING UNIVERSAL SCREW-TYPE DUCT PLUGS.

SYMBOLS - MODIFIERS

ANSI	AMERICAN NATIONAL STANDARDS
AWG	AMERICAN WIRE GAUGE
BICSI	BUILDING INDUSTRY CONSULTANTS SERVICE INTERNATIONAL
C	CONDUIT
CAT	CATEGORY (E.G. CAT6)
CEP	CENTRAL ENERGY PLANT
CFCI	CONTRACTOR FURNISHED, CONTRACTOR INSTALLED
CL	CENTERLINE
COMM	TELECOMMUNICATIONS
COR	CONTRACTING OFFICER'S REPRESENTATIVE
EMI	ELECTROMAGNETIC INTERFERENCE
EMT	ELECTRICAL METALLIC TUBING
FO	FIBER OPTIC
FT	FEET OR FOOT
G	GROUND
GFGI	GOVERNMENT FURNISHED, GOVERNMENT INSTALLED
GND	GROUND
GRS	GALVANIZED RIGID STEEL CONDUIT
HZ	HERTZ
K	KILO
KCMIL	THOUSAND CIRCULAR MILS
LAN	LOCAL AREA NETWORK
MAX	MAXIMUM
MH	MAINTENANCE HOLE
MHZ	MEGAHERTZ
MM	MULTI-MODE
MPOE	MAIN POINT OF ENTRY
NEC	NATIONAL ELECTRIC CODE
NEMA	NATIONAL ELECTRICAL MANUFACTURERS ASSOCIATION
NIC	NOT IN CONTRACT
NTS	NOT TO SCALE
OC	ON CENTER
OD	OUTSIDE DIAMETER
OH	OVERHEAD
OSP	OUTSIDE PLANT
OTDR	OPTICAL TIME DOMAIN REFLECTOMETRY
PBB	PRIMARY BONDING BUSBAR
PET	PROTECTED ENTRANCE TERMINAL
RGS	RIGID GALVANIZED STEEL CONDUIT
RMS	ROOT MEAN SQUARE
SCCR	SHORT CIRCUIT CURRENT RATING
SM	SINGLE-MODE
SPECS	SPECIFICATIONS
STR	STRAND
SYM	SYMMETRICAL
TDR	TIME DOMAIN REFLECTOMETRY
TIA	TELECOMMUNICATIONS INDUSTRY ASSOCIATION
TYP	TYPICAL
UG	UNDERGROUND
UL	UNDERWRITERS' LABORATORIES
UM	MICROMETER
UON	UNLESS OTHERWISE NOTED
UTP	UNSHIELDED TWISTED PAIR
V	VOLTS
VA	VOLT AMPERES
VAC	VOLTS, ALTERNATING CURRENT
VOIP	VOICE OVER INTERNET PROTOCOL
W	WATT
XFMR	TRANSFORMER
Z	IMPEDANCE

SYMBOLS

- LIGHTER LINEWEIGHT INDICATES EXISTING

—UE———UE—	UNDERGROUND ELECTRICAL
—ESL———ESL—	UNDERGROUND ELECTRICAL LIGHTING
—OE———OE—	OVERHEAD ELECTRICAL
— E ——— E —	ELECTRICAL DUCTBANK
—CE———CE—	ELECTRICAL AND TELECOMMUNICATIONS DUCTBANK
	EXISTING TO BE REMOVED
MH	MAINTENANCE HOLE
HH	HANDHOLE
T	TRANSFORMER
	POLE MOUNTED LIGHT FIXTURE
	BOLLARD LIGHT FIXTURE, UON

Professional Engineer
I hereby certify that this plan, specification, or report was prepared by me or under my direct supervision and that I am a duly Licensed Professional Engineer under the laws of the state of Minnesota.

Signature: _____

Typed or Printed Name: DUGAN BRADLEY

Date: 07/23/25 License Number: 61869

US Army Corps of Engineers ®

MARK	DESCRIPTION	DATE
0	READY-TO-ADVERTISE (RTA) SUBMITTAL	JUL 2025

DESIGNED BY: D. BRADLEY
DRAWN BY: S. YUNKER
CHECKED BY: S. STRATTON
SUBMITTED BY: B. STREEBIN
SIZE: ANSI D
ISSUE DATE: JUL 2025
SOLICITATION NO.: W912735RA001
CONTRACT NO.: W912S424F0007
FILE NAME: 165438_E_R22_r.rvt

US ARMY CORPS OF ENGINEERS
LITTLE ROCK DISTRICT
LITTLE ROCK, ARKANSAS

BURNS AND McDONNELL
9400 WARD PARKWAY,
KANSAS CITY, MO 64114
165438

F-35: SPECIAL ACCESS PROGRAM FACILITY
EBBING AIR NATIONAL GUARD BASE (ANGB), FORT SMITH, ARKANSAS

ELECTRICAL SITE LEGEND

SHEET ID

ES001

READY-TO-ADVERTISE (RTA) SUBMITTAL



A1 ELECTRICAL SITE PLAN - OVERALL
SCALE: 1"=200'

GENERAL SHEET NOTES

1. REFER TO ES001 FOR ELECTRICAL GENERAL NOTES, LEGEND AND ABBREVIATIONS.
2. REFER TO TN001 FOR TELECOMM. OUTSIDE PLANT GENERAL NOTES.

SHEET KEYNOTES

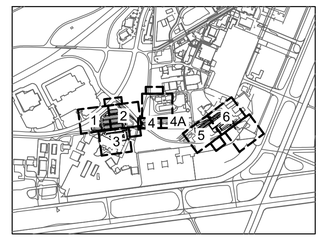
1. PROVIDE (1) 4" CONDUITS FROM EXISTING HH-XX TO ABOVE GROUND ELECTRONICS SECURITY ENCLOSURE, REFER TO ES114 FOR CONTINUATION.
2. PROVIDE 12"W X 24"L X 24"D HANDHOLE.

LEGEND

- NEW UNDERGROUND ELECTRICAL - PRIMARY FEED
- NEW COMMUNICATIONS
- COMMUNICATIONS MANHOLE
- TRANSFORMER
- EXISTING UNDERGROUND ELECTRICAL - PRIMARY FEED
- EXISTING COMMUNICATIONS
- EXISTING UNDERGROUND ELECTRICAL - SECONDARY FEED

Professional Engineer
I hereby certify that this plan, specification, or report was prepared by me or under my direct supervision and that I am a duly Licensed Professional Engineer under the laws of the state of Minnesota.
Signature:
Typed or Printed Name: DUGAN BRADLEY
Date: 01/27/26 License Number: 61869

KEY PLAN



US Army Corps of Engineers ®

MARK	DESCRIPTION	DATE
1	AM0005 - COMM CONDUIT AND HANDHOLE CLARIFICATION	JAN 2026
0	READY-TO-ADVERTISE (RTA) SUBMITTAL	JUL 2025

DESIGNED BY: D. BRADLEY
DRAWN BY: S. YUNKER
CHECKED BY: S. STRATTON
SUBMITTED BY: STREEPER, RYAN
SIZE: ANSI D
ISSUE DATE: JUL 2025
SOLICITATION NO.: W9127S25RA001
CONTRACT NO.: W9127S24F0007
FILE NAME: 165438ES110.dwg

US ARMY CORPS OF ENGINEERS
LITTLE ROCK DISTRICT
LITTLE ROCK, ARKANSAS

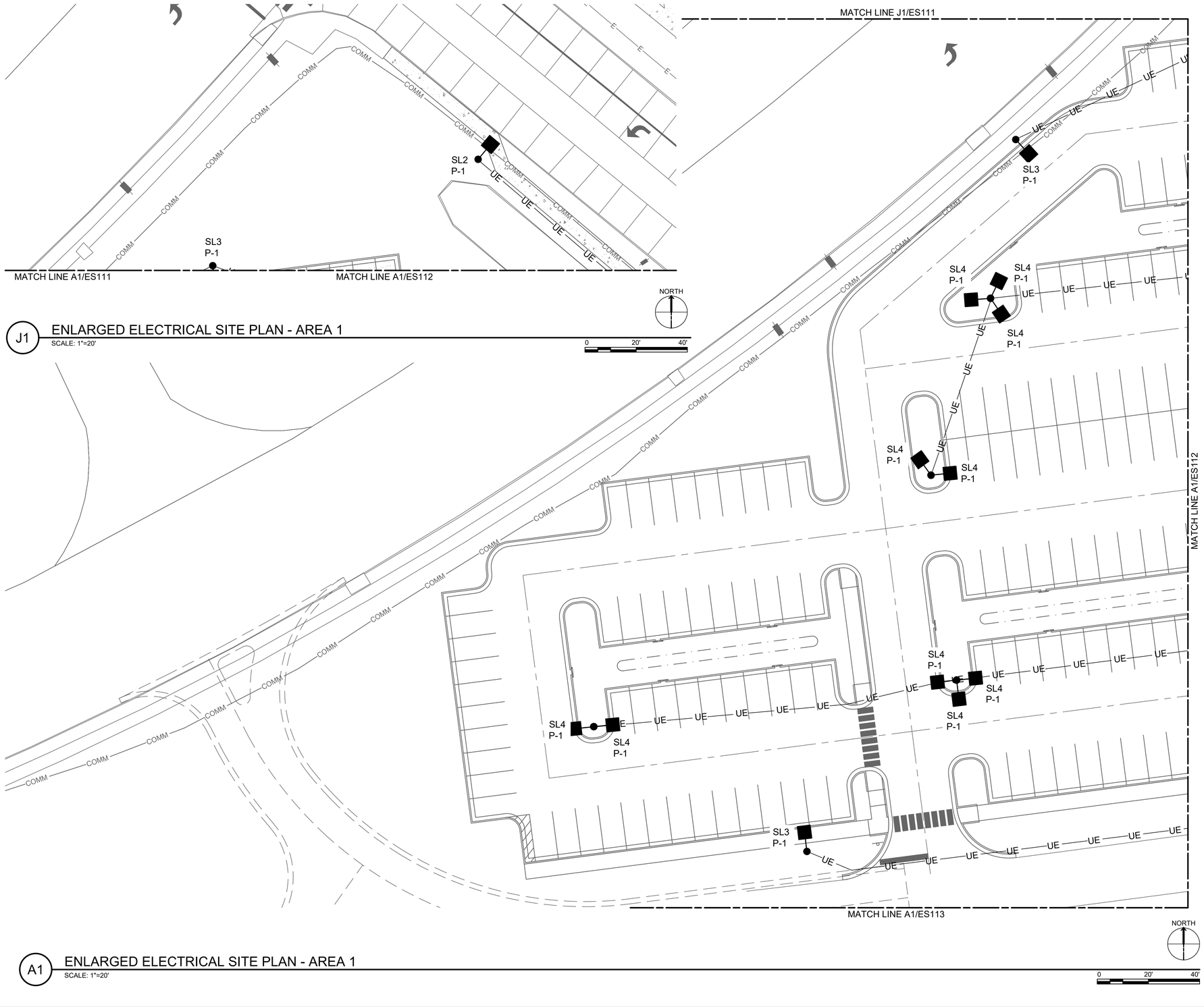
BURNS AND McDONNELL
9400 WARD PARKWAY,
KANSAS CITY MO, 64114
165438

F-35: SPECIAL ACCESS PROGRAM FACILITY
EBBING AIR NATIONAL GUARD BASE (ANGB), FORT SMITH, ARKANSAS

ELECTRICAL SITE PLAN - OVERALL

SHEET ID
ES110.1

READY-TO-ADVERTISE (RTA) SUBMITTAL



J1 ENLARGED ELECTRICAL SITE PLAN - AREA 1
SCALE: 1"=20'

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

GENERAL SHEET NOTES

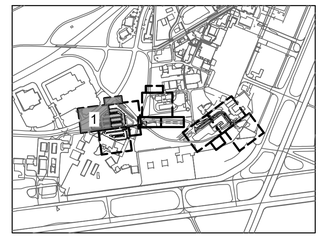
1. REFER TO ES001 FOR ELECTRICAL GENERAL NOTES, LEGEND AND ABBREVIATIONS.
2. ALL ELECTRICAL SCOPE SHOWN ON THIS SHEET IS A BID OPTION.
3. REFER TO TN001 FOR TELECOMM. OUTSIDE PLANT GENERAL NOTES.

LEGEND

- NEW UNDERGROUND ELECTRICAL
- NEW COMMUNICATIONS
- COMMUNICATIONS MANHOLE
- TRANSFORMER
- EXISTING UNDERGROUND ELECTRICAL - PRIMARY FEED
- EXISTING COMMUNICATIONS
- EXISTING UNDERGROUND ELECTRICAL - SECONDARY FEED
- EXISTING UNDERGROUND ELECTRICAL - SECONDARY FEED
- NEW UNDERGROUND ELECTRICAL - SECONDARY FEED

Professional Engineer
I hereby certify that this plan, specification, or report was prepared by me or under my direct supervision and that I am a duly Licensed Professional Engineer under the laws of the state of Minnesota.
Signature:
Typed or Printed Name: DUGAN BRADLEY
Date: 07/23/25 License Number: 61869

KEY PLAN



US Army Corps of Engineers ®

MARK	DESCRIPTION	DATE
0	READY-TO-ADVERTISE (RTA) SUBMITTAL	JUL 2025

DESIGNED BY: D. BRADLEY
DRAWN BY: S. YUNKER
CHECKED BY: S. STRATTON
SUBMITTED BY: STREEPER
SIZE: ANSI D
ISSUE DATE: JUL 2025
SOLICITATION NO.: W9127S25RA001
CONTRACT NO.: W9127S24F0007
FILE NAME: 165438ES111-ES116.dwg

US ARMY CORPS OF ENGINEERS
LITTLE ROCK DISTRICT
LITTLE ROCK, ARKANSAS

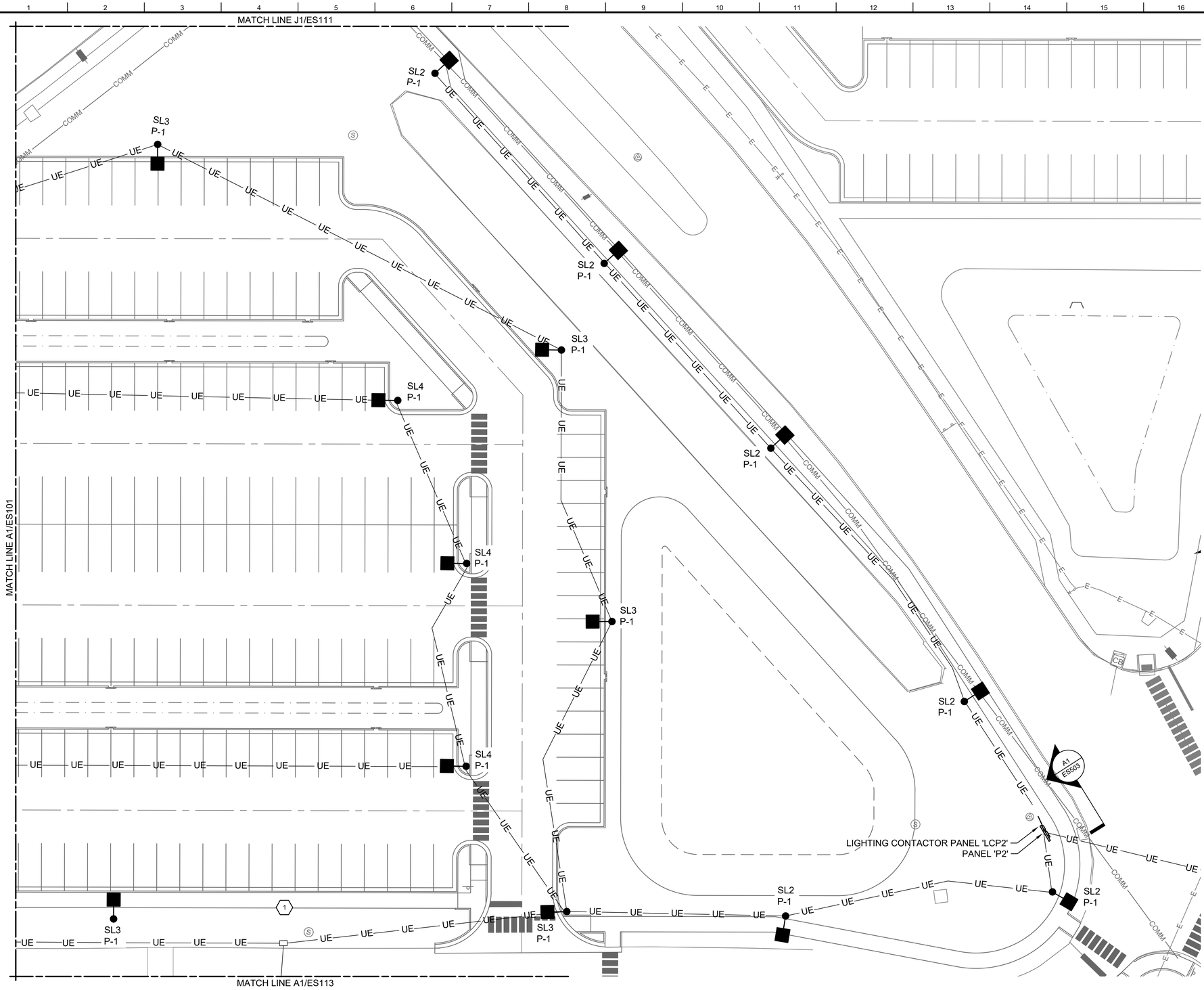
BURNS AND McDONNELL
9400 WARD PARKWAY,
KANSAS CITY MO. 64114
165438

F-35; SPECIAL ACCESS PROGRAM FACILITY
EBBING AIR NATIONAL GUARD BASE (ANGB), FORT SMITH, ARKANSAS

ENLARGED ELECTRICAL SITE PLAN - AREA 1

SHEET ID
ES111

READY-TO-ADVERTISE (RTA) SUBMITTAL



GENERAL SHEET NOTES

1. REFER TO ES001 FOR ELECTRICAL GENERAL NOTES, LEGEND AND ABBREVIATIONS.
2. ALL ELECTRICAL SCOPE SHOWN ON THIS SHEET IS A BID OPTION.
3. REFER TO TN001 FOR TELECOMM. OUTSIDE PLANT GENERAL NOTES.

SHEET KEYNOTES

1. PROVIDE 12"W X 24"L X 24"D HANDHOLE.

LEGEND

- NEW UNDERGROUND ELECTRICAL - PRIMARY FEED
- NEW COMMUNICATIONS
- COMMUNICATIONS MANHOLE
- TRANSFORMER
- EXISTING UNDERGROUND ELECTRICAL - PRIMARY FEED
- EXISTING COMMUNICATIONS
- EXISTING UNDERGROUND ELECTRICAL - SECONDARY FEED
- NEW UNDERGROUND ELECTRICAL - SECONDARY FEED

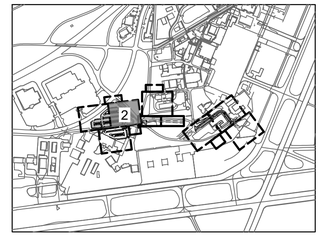
Professional Engineer
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Signature:

Typed or Printed Name: DUGAN BRADLEY

Date: 07/23/25 License Number: 61869

KEY PLAN



A1 ENLARGED ELECTRICAL SITE PLAN - AREA 2
SCALE: 1"=20'

US Army Corps of Engineers ®

MARK	DESCRIPTION	DATE
0	READY-TO-ADVERTISE (RTA) SUBMITTAL	JUL 2025

DESIGNED BY: D. BRADLEY
DRAWN BY: S. YUNKER
CHECKED BY: S. STRATTON
SUBMITTED BY: STREEPER
SIZE: ANSI D
ISSUE DATE: JUL 2025
SOLICITATION NO.: W9127S25RA001
CONTRACT NO.: W9127S24F0007
FILE NAME: 165438ES111-ES113.dwg

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LITTLE ROCK DISTRICT
LITTLE ROCK, ARKANSAS

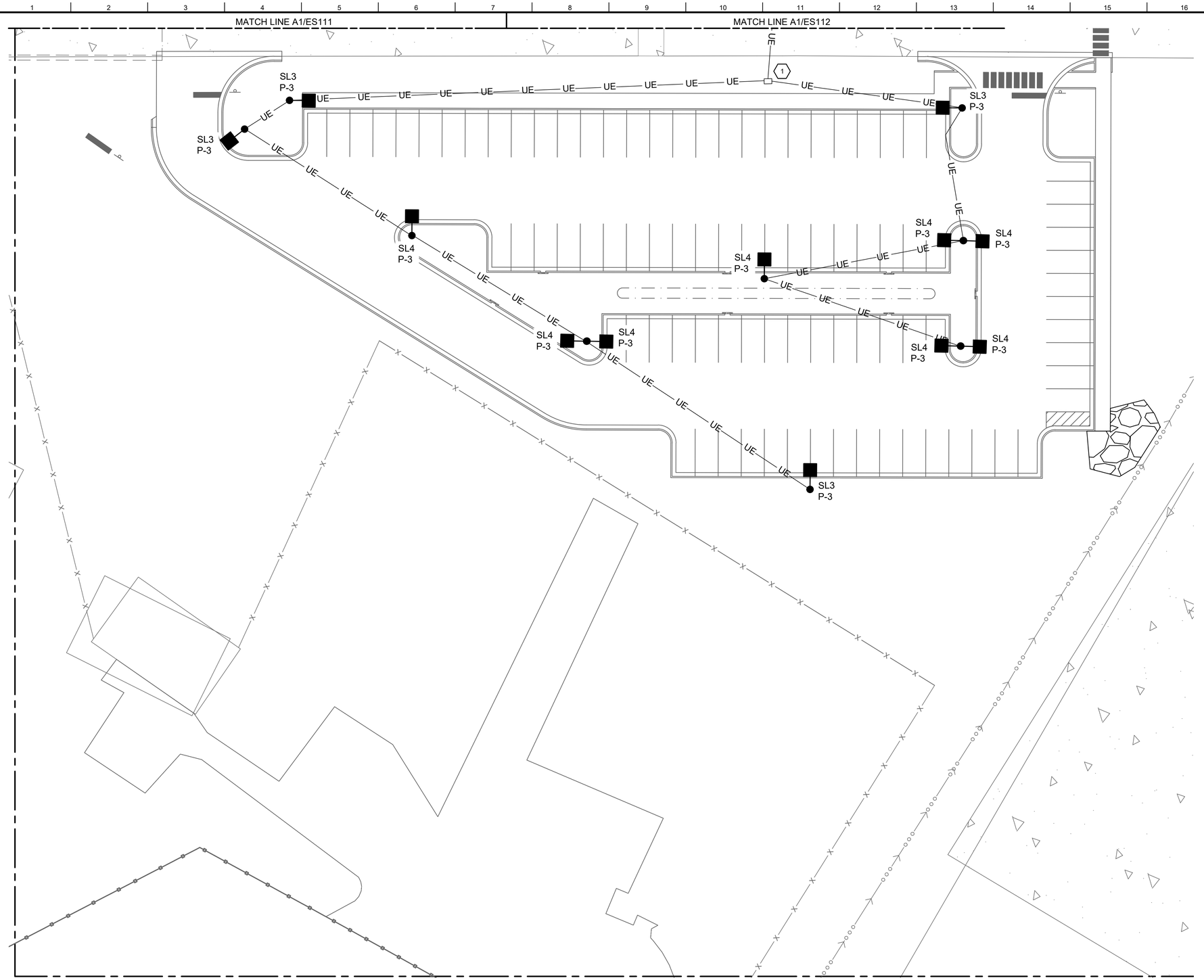
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KANSAS CITY MO, 64114
165438

F-35; SPECIAL ACCESS PROGRAM FACILITY
EBBING AIR NATIONAL GUARD BASE (ANGB), FORT SMITH, ARKANSAS

ENLARGED ELECTRICAL SITE PLAN - AREA 2

SHEET ID
ES112

READY-TO-ADVERTISE (RTA) SUBMITTAL



A1 ENLARGED ELECTRICAL SITE PLAN - AREA 3

SCALE: 1"=20'

GENERAL SHEET NOTES

1. REFER TO ES001 FOR ELECTRICAL GENERAL NOTES, LEGEND AND ABBREVIATIONS.
2. ALL ELECTRICAL SCOPE SHOWN ON THIS SHEET IS A BID OPTION.
3. REFER TO TN001 FOR TELECOMM. OUTSIDE PLANT GENERAL NOTES.

SHEET KEYNOTES

1. PROVIDE 12"W X 24"L X 24"D HANDHOLE.

LEGEND

- NEW UNDERGROUND ELECTRICAL - PRIMARY FEED
- NEW COMMUNICATIONS
- COMMUNICATIONS MANHOLE
- TRANSFORMER
- EXISTING UNDERGROUND ELECTRICAL - PRIMARY FEED
- EXISTING COMMUNICATIONS
- EXISTING UNDERGROUND ELECTRICAL - SECONDARY FEED
- NEW UNDERGROUND ELECTRICAL - SECONDARY FEED

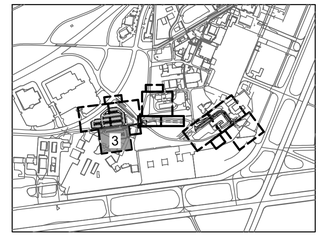
Professional Engineer
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Signature:

Typed or Printed Name: DUGAN BRADLEY

Date: 07/23/25 License Number: 61869

KEY PLAN



US Army Corps of Engineers ®

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DESIGNED BY: D. BRADLEY
DRAWN BY: S. YUNKER
CHECKED BY: S. STRATTON
SUBMITTED BY: STREEPER
SIZE: ANSI D
ISSUE DATE: JUL 2025
SOLICITATION NO.: W9127S25RA001
CONTRACT NO.: W9127S24F0007
FILE NAME: 165438ES111-ES116.dwg

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LITTLE ROCK DISTRICT
LITTLE ROCK, ARKANSAS

BURNS AND McDONNELL
9400 WARD PARKWAY,
KANSAS CITY MO, 64114
165438

F-35, SPECIAL ACCESS PROGRAM FACILITY
EBBING AIR NATIONAL GUARD BASE (ANGB), FORT SMITH, ARKANSAS

ENLARGED ELECTRICAL SITE PLAN - AREA 3

SHEET ID
ES113

READY-TO-ADVERTISE (RTA) SUBMITTAL

PLACEHOLDER. SHEET GENERATED IN ACAD
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Professional Engineer
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Signature: _____

Typed or Printed Name: DUGAN BRADLEY

Date: 07/23/25 License Number: 61869

US Army Corps of Engineers ®

MARK	DESCRIPTION	DATE

DESIGNED BY:	ISSUE DATE:
D. BRADLEY	JUL 2025
DRAWN BY:	SOLICITATION NO.:
S. YUNKER	W912725RA001
CHECKED BY:	CONTRACT NO.:
S. STRATTON	W912PS24F0007
SUBMITTED BY:	
B. STREEBIN	
SIZE:	FILE NAME:
ANSI D	165438_E_R22_1.rvt

US ARMY CORPS OF ENGINEERS
LITTLE ROCK DISTRICT
LITTLE ROCK, ARKANSAS

BURNS AND McDONNELL
9400 WARD PARKWAY,
KANSAS CITY, MO 64114
165438

F-35 SPECIAL ACCESS PROGRAM FACILITY
EBBING AIR NATIONAL GUARD BASE (ANGB), FORT SMITH, ARKANSAS

ENLARGED ELECTRICAL SITE PLAN - AREA 4/4A

SHEET ID

ES114

READY-TO-ADVERTISE (RTA) SUBMITTAL

PLACEHOLDER. SHEET GENERATED IN ACAD
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Signature: _____

Typed or Printed Name: DUGAN BRADLEY

Date: 07/23/25 License Number: 61869

US Army Corps of Engineers ®

MARK	DESCRIPTION	DATE

DESIGNED BY:	ISSUE DATE:
D. BRADLEY	JUL 2025
DRAWN BY:	SOLICITATION NO.:
S. YUNKER	W912725RA001
CHECKED BY:	CONTRACT NO.:
S. STRATTON	W912724F0007
SUBMITTED BY:	
B. STREEBIN	
SIZE:	FILE NAME:
ANSI D	165438_E_R22_1.rvt

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LITTLE ROCK, ARKANSAS

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9400 WARD PARKWAY,
KANSAS CITY, MO 64114
165438

F-35 SPECIAL ACCESS PROGRAM FACILITY
EBBING AIR NATIONAL GUARD BASE (ANGB), FORT SMITH, ARKANSAS

ENLARGED ELECTRICAL SITE PLAN - AREA 5

SHEET ID

ES115

READY-TO-ADVERTISE (RTA) SUBMITTAL

PLACEHOLDER. SHEET GENERATED IN ACAD
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Professional Engineer
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Signature: _____

Typed or Printed Name: DUGAN BRADLEY

Date: 07/23/25 License Number: 61869

US Army Corps of Engineers ®

MARK	DESCRIPTION	DATE

DESIGNED BY: D. BRADLEY
DRAWN BY: S. YUNKER
CHECKED BY: S. STRATTON
SUBMITTED BY: B. STREEBIN
SIZE: ANSI D
ISSUE DATE: JUL 2025
SOLICITATION NO.: W9127S25RA001
CONTRACT NO.: W9127S24F0007
FILE NAME: 165438_E_R22_1.rvt

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LITTLE ROCK DISTRICT
LITTLE ROCK, ARKANSAS

BURNS AND McDONNELL
9400 WARD PARKWAY,
KANSAS CITY, MO 64114
165438

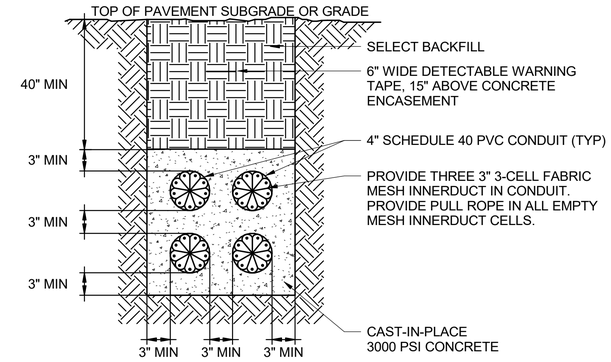
F-35 SPECIAL ACCESS PROGRAM FACILITY
EBBING AIR NATIONAL GUARD BASE (ANGB), FORT SMITH, ARKANSAS

ENLARGED ELECTRICAL SITE PLAN - AREA 6

SHEET ID

ES116

READY-TO-ADVERTISE (RTA) SUBMITTAL



NOTES:
1. USE PLASTIC CONDUIT SPACERS AT 5'-0" OC.

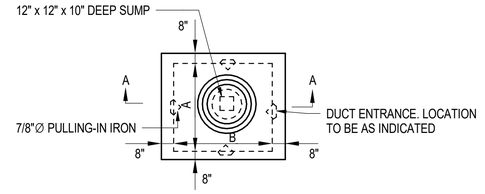
K13 TYPICAL 4-WAY CONCRETE ENCASED TELECOMMUNICATIONS DUCTBANK

SCALE: NTS

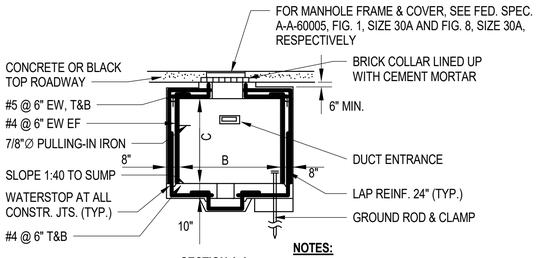
NOTES:
1. USE PLASTIC CONDUIT SPACERS AT 5'-0" OC.

E13 TYPICAL 2-WAY CONCRETE ENCASED TELECOMMUNICATIONS DUCTBANK

SCALE: NTS



PLAN



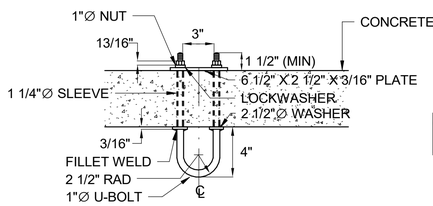
SECTION A-A

MANHOLE DIMENSIONS			
TYPE	A	B	C (AT HIGH PT.)
3	6'-0"	6'-0"	6'-8"
4	6'-0"	8'-0"	6'-6"

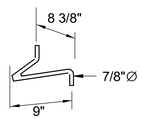
NOTES:
1. MANHOLE AND COVERS ARE DESIGNED FOR MAXIMUM WHEEL LOAD IN ACCORDANCE WITH AASHTO HS20-44.
2. FOR DETAILS OF CABLE RACKS, DUCT ENTRANCE AND PULLING-IN IRONS, SEE DETAIL C4.
3. MINIMUM CONCRETE COMPRESSIVE STRENGTH SHALL BE 3000 PSI.
4. DUCT ENTRANCE. LOCATION TO BE AS INDICATED ON THE PROJECT DRAWING.

A1 STANDARD ELECTRICAL MANHOLE (TRAFFIC RATED)

SCALE: NTS



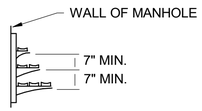
ALTERNATE METHOD



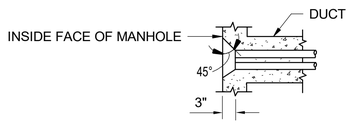
CAST IN PLACE

NOTE:
ALL METAL PARTS SHALL BE HOT DIP GALVANIZED

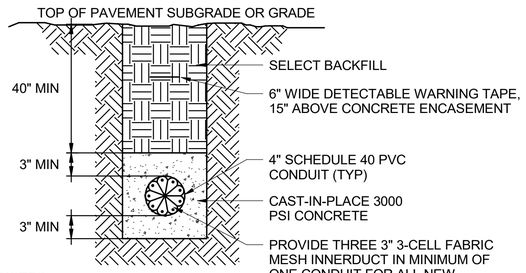
DETAIL OF PULLING-IN IRON



TYPICAL CABLE RACK



TYPICAL DUCT ENTRANCE



NOTES:
1. USE PLASTIC CONDUIT SPACERS AT 5'-0" OC.

A13 TYPICAL 1-WAY CONCRETE ENCASED TELECOMMUNICATIONS DUCT

SCALE: NTS

Professional Engineer
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Date: 07/23/25 License Number: 61869

US Army Corps of Engineers ®

MARK	DESCRIPTION	DATE
0	READY-TO-ADVERTISE (RTA) SUBMITTAL	JUL 2025

DESIGNED BY: D. BRADLEY
DRAWN BY: S. YUNKER
CHECKED BY: S. STRATTON
SUBMITTED BY: B. STREEBIN
SIZE: ANSI D
ISSUE DATE: JUL 2025
SOLICITATION NO.: W9127S25RA001
CONTRACT NO.: W9127S24F0007
FILE NAME: 165438_E_R22_1.rvt

US ARMY CORPS OF ENGINEERS
LITTLE ROCK DISTRICT
LITTLE ROCK, ARKANSAS

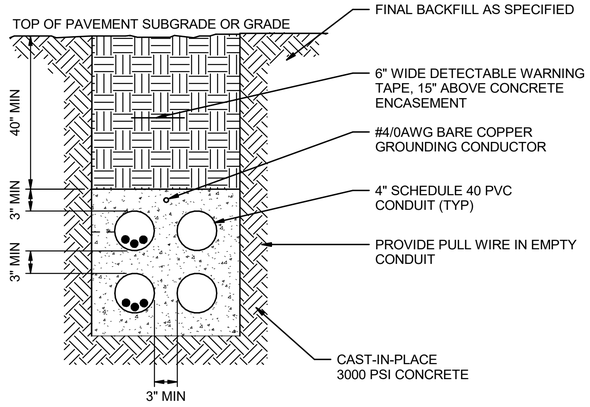
BURNS AND McDONNELL
9400 WARD PARKWAY,
KANSAS CITY, MO 64114
165438

F-35: SPECIAL ACCESS PROGRAM FACILITY
EBBING AIR NATIONAL GUARD BASE (ANGB), FORT SMITH, ARKANSAS

ELECTRICAL SITE DETAILS

SHEET ID
ES501

READY-TO-ADVERTISE (RTA) SUBMITTAL

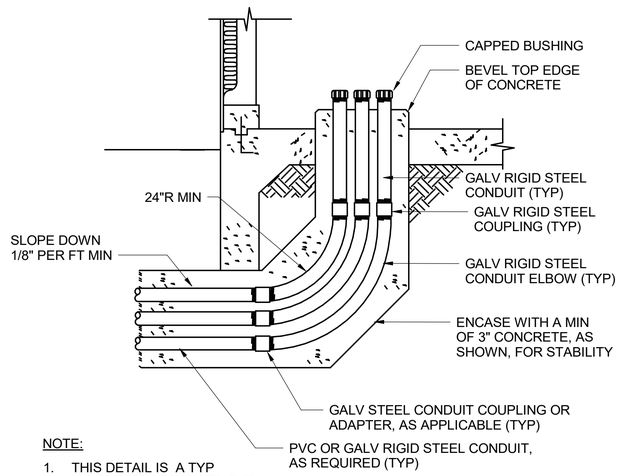


NOTE:

1. USE PLASTIC CONDUIT SPACERS AT 5'-0" OC.

G4 ELECTRICAL CONCRETE ENCASED DUCTBANK - SAPF TRANSFORMER SECONDARY

SCALE: NTS

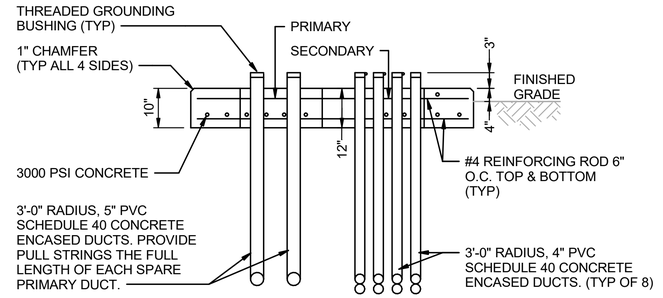


NOTE:

1. THIS DETAIL IS A TYP MULTIDUCT ARRANGEMENT.

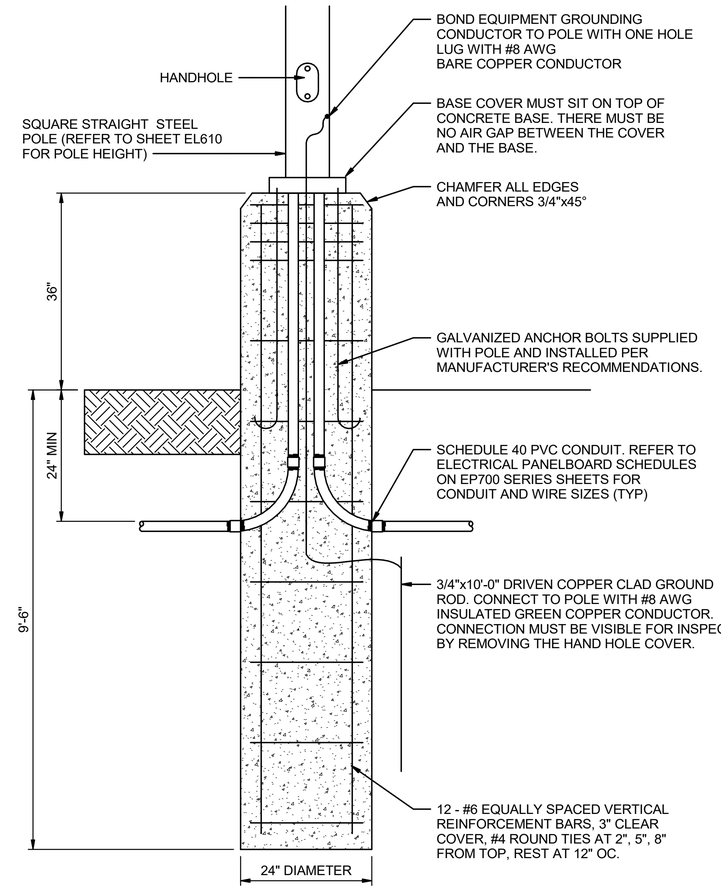
A4 TYPICAL STUBBED DUCTBANK RISER

SCALE: NTS



L12 TRANSFORMER SECTION

SCALE: NTS



NOTES:

1. BASE MUST BE HAND RUBBED FINISH UNLESS OTHERWISE SPECIFIED.
2. EQUIPMENT GROUNDING LUGS TO BE FACTORY INSTALLED
3. TOP OF ANCHOR BOLTS MUST EXTEND AT LEAST 1/2" ABOVE THE TOP-MOST NUT TO PREVENT WATER ACCUMULATION.
4. MINIMUM COMPRESSIVE STRENGTH OF CONCRETE MUST BE 4000 PSI AND REINFORCEMENT MUST COMPLY WITH ASTM A615.

A12 TYPICAL LIGHTING POLE BASE

SCALE: NTS

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SUBMITTED BY: B. STREEBIN
SIZE: ANSI D
ISSUE DATE: JUL 2025
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CONTRACT NO.: W912T524F0007
FILE NAME: 165438_E_R22_1.rvt

US ARMY CORPS OF ENGINEERS
LITTLE ROCK DISTRICT
LITTLE ROCK, ARKANSAS

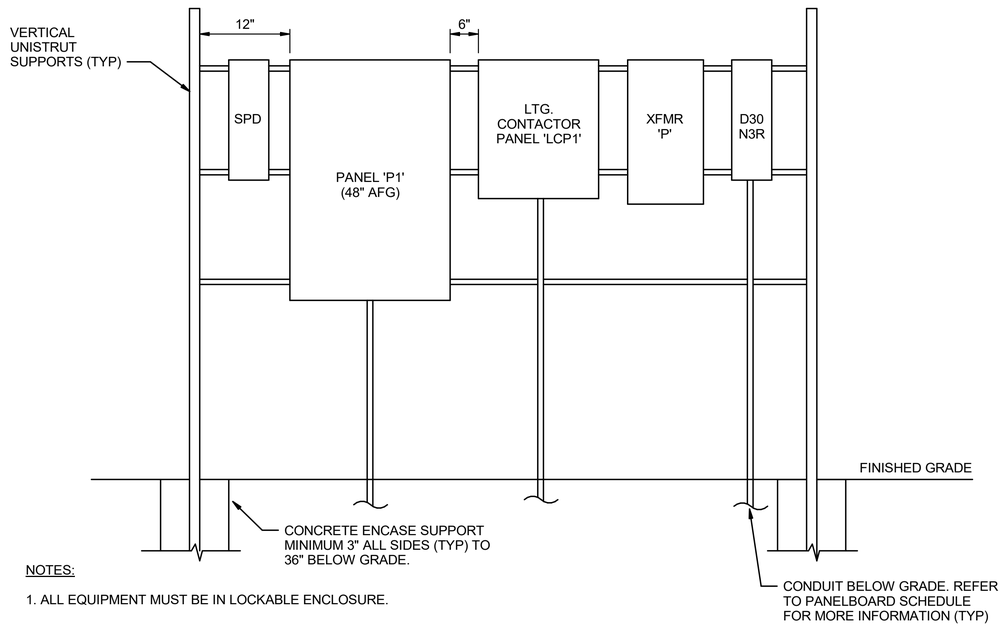
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KANSAS CITY, MO 64114
165438

F-35: SPECIAL ACCESS PROGRAM FACILITY
EBBING AIR NATIONAL GUARD BASE (ANGB), FORT SMITH, ARKANSAS

ELECTRICAL SITE DETAILS

SHEET ID
ES502

READY-TO-ADVERTISE (RTA) SUBMITTAL

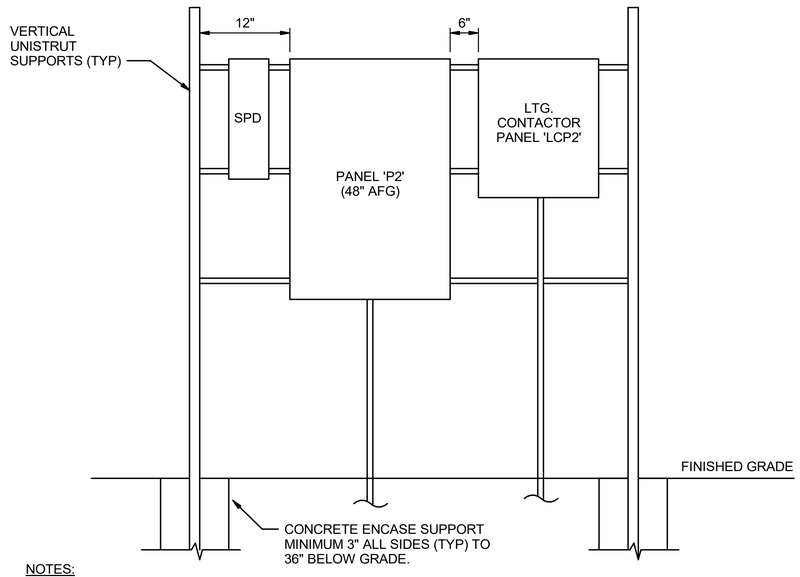


NOTES:

1. ALL EQUIPMENT MUST BE IN LOCKABLE ENCLOSURE.

H1 SECURITY TURNSTILE ELECTRICAL EQUIPMENT ELEVATION

SCALE: NTS

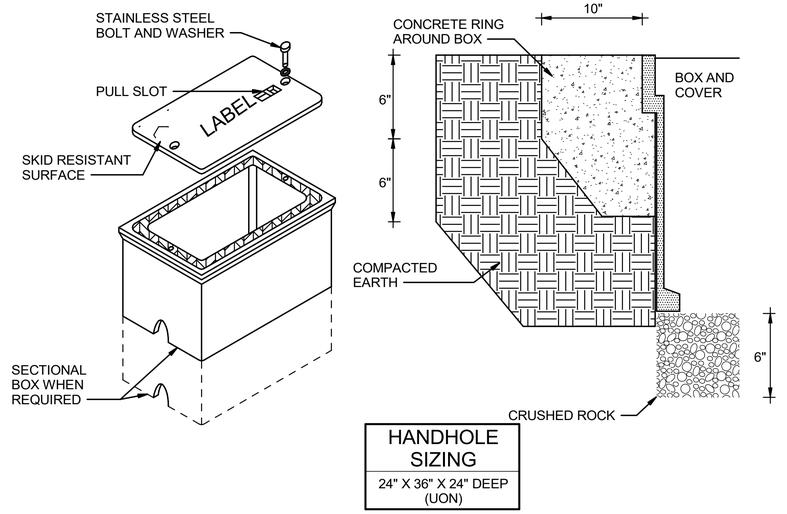


NOTES:

1. ALL EQUIPMENT MUST BE IN LOCKABLE ENCLOSURE.

A1 POV PARKING ELECTRICAL EQUIPMENT ELEVATION

SCALE: NTS



HANDHOLE SIZING

24" X 36" X 24" DEEP (UON)

HANDHOLE REQUIREMENTS:

1. HOUSING TO BE A POLYMER CONCRETE REINFORCED WITH A HEAVY WEAVE FIBERGLASS REINFORCING WITH COMPRESSIVE STRENGTH OF NO LESS THAN 10,000 PSI.
2. COVER AND BOX MUST WITHSTAND A SERVICE LOAD OF NO LESS THAN 15,000 LBS OVER A 10" X 10" AREA.
3. PROVIDE STAINLESS STEEL TAMPERPROOF BOLTS AND INSERTS.
4. PROVIDE WITH (2) 2 1/2" MOUSEHOLES.
5. PROVIDE LABEL "ELECTRICAL" FOR POWER HANDHOLES OR "TELECOMMUNICATIONS" FOR COMMUNICATIONS HANDHOLES, OR AS INDICATED.

A12 ELECTRICAL HANDHOLE (NON-TRAFFIC UNO)

SCALE: NTS

Professional Engineer
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Typed or Printed Name: DUGAN BRADLEY
Date: 07/23/25 License Number: 61869

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CHECKED BY: C. STRATTON
SUBMITTED BY: B. STREEBIN
SIZE: ANSI D
ISSUE DATE: JUL 2025
SOLICITATION NO.: W912T525RA001
CONTRACT NO.: W912T524F0007
FILE NAME: 165438_E_R22_i.rvt

US ARMY CORPS OF ENGINEERS
LITTLE ROCK DISTRICT
LITTLE ROCK, ARKANSAS

BURNS AND McDONNELL
9400 WARD PARKWAY,
KANSAS CITY, MO 64114
165438

F-35: SPECIAL ACCESS PROGRAM FACILITY
EBBING AIR NATIONAL GUARD BASE (ANGB), FORT SMITH, ARKANSAS

ELECTRICAL SITE DETAILS

SHEET ID
ES503

READY-TO-ADVERTISE (RTA) SUBMITTAL

ROOM SCHEDULE	
NAME	NUMBER
VESTIBULE	101
CORRIDOR	102
VESTIBULE	103
LOBBY	104
STEP DESK	105
CORRIDOR	106
SCHEDULING & TRAINING	107
DO	108
SARM	109
SARM ADMIN	110
STAN / EVAL	111
AFE MAINTENANCE	112
HELMET ALIGNMENT	113
LIFE SUPPORT	114
MAINTENANCE OFFICE	115
PILOT LOCKER ROOM	116
SHOWER	117

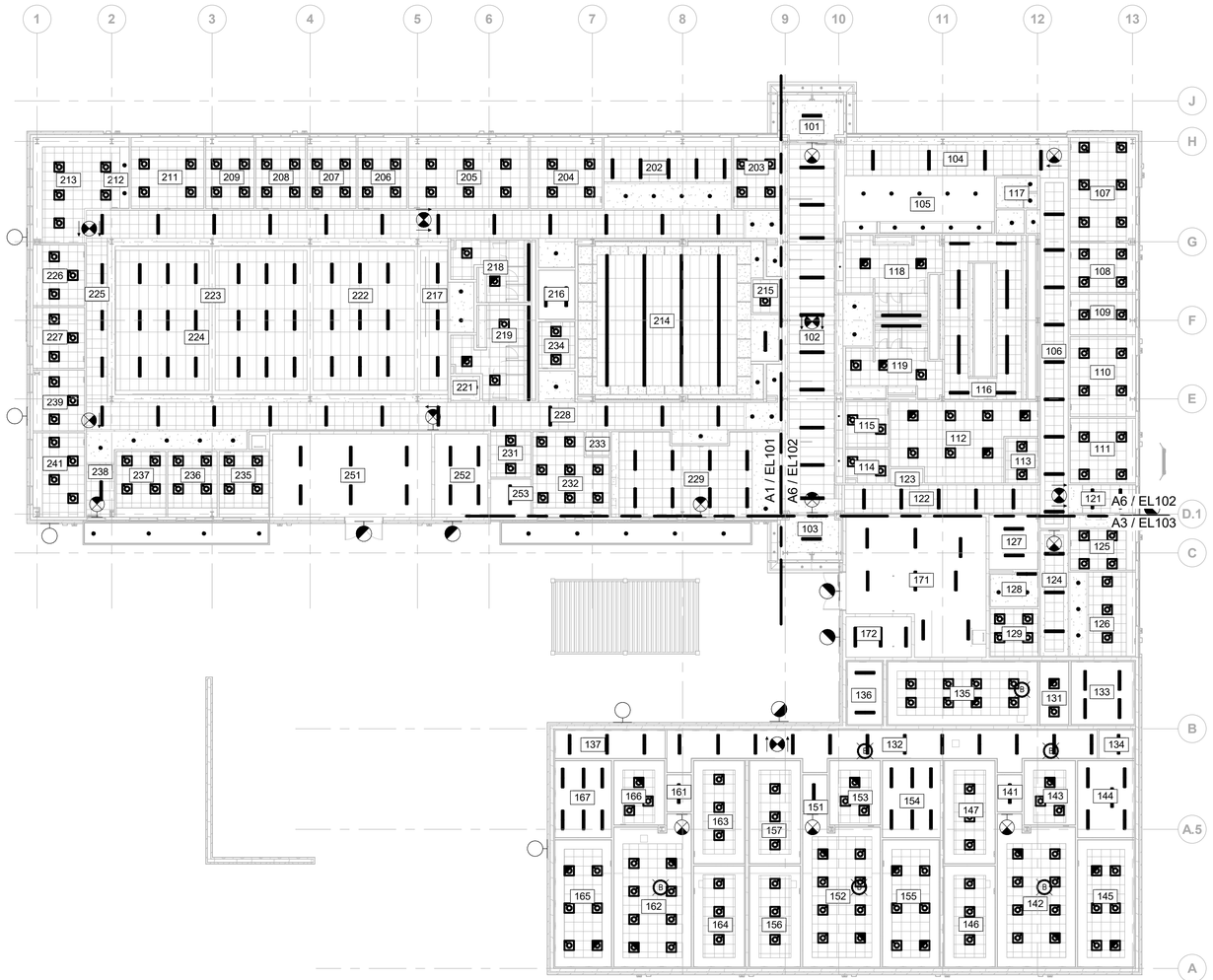
ROOM SCHEDULE	
NAME	NUMBER
WOMEN'S RESTROOM	118
MEN'S RESTROOM	119
HALL	121
CORRIDOR	122
ELECTRICAL CLOSET	123
CORRIDOR	124
BREAK ROOM	125
MAINT DEBRIEF	126
MAIN COMM ROOM	127
UNISEX RESTROOM	128
PRINT / COPY	129
MAN TRAP	131
CORRIDOR	132
SECURE COMM ROOM	133
STORAGE	134
SECURITY	135
SECURE ELEC ROOM	136

ROOM SCHEDULE	
NAME	NUMBER
STORAGE	137
MAN TRAP 1	141
VAULT 1 MISSION PLANNING	142
VAULT 1 ALIS / ODIN	143
VAULT 1 SERVER	144
VAULT 1 LG BRIEF	145
VAULT 1 SM BRIEF	146
VAULT 1 SM BRIEF	147
MAN TRAP 2	151
VAULT 2 MISSION PLANNING	152
VAULT 2 ALIS / ODIN	153
VAULT 2 SERVER	154
VAULT 2 LG BRIEF	155
VAULT 2 SM BRIEF	156
VAULT 2 SM BRIEF	157
MAN TRAP 3	161
VAULT 3 MISSION PLANNING	162

ROOM SCHEDULE	
NAME	NUMBER
VAULT 3 SM BRIEF	163
VAULT 3 SM BRIEF	164
VAULT 3 LG BRIEF	165
VAULT 3 ALIS / ODIN	166
VAULT 3 SERVER	167
MECHANICAL ROOM	171
ELECTRICAL ROOM	172
CORRIDOR	201
COMMAND SUPPORT STAFF	202
ACTIVITY PROGRAM COORDINATOR (APC) / RESOURCE ADVISOR (RA)	203
SQUADRON COMMANDER OFFICE	204
CONFERENCE ROOM	205
INTERNATIONAL MILITARY STUDENT OFFICER (IMSO)	206

ROOM SCHEDULE	
NAME	NUMBER
SNR M-1	207
SNR M-2	208
SNR M-3	209
RA	211
COPY / STORAGE	212
STUDENT COLLAB	213
LG BRIEFING RM	214
AV	215
COMM	216
STUDENT LOCKERS	217
WOMEN'S RESTROOM	218
MEN'S RESTROOM	219
JANITOR'S CLOSET	221
STUDENT WORKSTATIONS	222
INSTRUCTOR WORKSTATIONS	223
MISSION OPS SUPPORT	224
CORRIDOR	225

ROOM SCHEDULE	
NAME	NUMBER
IP M-1	226
IP M-2	227
CORRIDOR	228
BREAK ROOM	229
STORAGE	231
FLIGHT MEDICAL OFFICE	232
STORAGE	233
MOTHER'S ROOM	234
IP M-6	235
IP M-5	236
IP M-4	237
CORRIDOR	238
IP M-3	239
TEAM	241
ROOF ACCESS	242
MECHANICAL	251
ELECTRICAL	252
FIRE	253



PLAN NORTH

A5 FIRST FLOOR LIGHTING PLAN - OVERALL
SCALE: 1/16" = 1'-0"

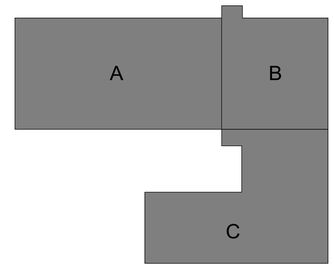
0 8' 16' 32'
SCALE IN FEET

GENERAL SHEET NOTES

1. REFER TO SHEETS E-001 AND E-002 FOR LEGEND, GENERAL NOTES, AND ABBREVIATIONS.
2. REFER TO SHEET EL610 FOR LIGHT FIXTURE SCHEDULE.
3. REFER TO SHEET EL601 FOR LIGHTING CONTROL SCHEDULE.
4. PROVIDE OCCUPANCY AND DAYLIGHT SENSORS IN SPACES AS NOTED ON LIGHTING CONTROL SCHEDULE EL601. LAYOUT MUST BE FINALIZED BY MANUFACTURER PRIOR TO COMMENCING WORK. CONTRACTOR MUST ENGAGE MANUFACTURER'S REPRESENTATIVE TO PERFORM INITIAL ADJUSTMENT AND STARTUP OF ALL OCCUPANCY SENSORS. REFER TO SHEET EL601 FOR ADDITIONAL INFORMATION.
5. ALL NORMAL LIGHTING IN THE NON-SECURE SPACES MUST BE CIRCUITED TO PANEL LH1 OR LH2. ALL LIGHTING IN THE SECURE SPACES MUST BE CIRCUITED TO PANEL BRL1. FIXTURE TYPES AND CIRCUITS ARE TYPICAL PER SPACE AS NOTED ON PLAN.
6. COORDINATE LIGHT FIXTURE LOCATION WITH CABLE TRAY IN COMMUNICATIONS/SERVER ROOMS. LIGHT MUST NOT BE OBSTRUCTED BY CABLE TRAY.
7. NO FORM OF WIRELESS OR BLUETOOTH TECHNOLOGY LIGHTING CONTROLS WILL BE ACCEPTED. ANY LIGHT FIXTURE OR CONTROL DEVICE WITH THAT CAPABILITY WILL BE REMOVED AND CONTRACTOR MUST REPLACE IN KIND.

Professional Engineer
I hereby certify that this plan, specification, or report was prepared by me or under my direct supervision and that I am a duly Licensed Professional Engineer under the laws of the state of Minnesota.
Signature:
Typed or Printed Name: DUGAN BRADLEY
Date: 07/23/25 License Number: 61869

KEY PLAN



US Army Corps of Engineers ®

MARK	DESCRIPTION	DATE
0	READY-TO-ADVERTISE (RTA) SUBMITTAL	JUL 2025

DESIGNED BY: D. BRADLEY
DRAWN BY: S. YUNKER
CHECKED BY: C. STRATTON
SUBMITTED BY: B. STREEBIN
SIZE: ANSI D
ISSUE DATE: JUL 2025
SOLICITATION NO.: W9127S25RA001
CONTRACT NO.: W9127S24T0007
FILE NAME: 16543B_E_R22_1.rvt

US ARMY CORPS OF ENGINEERS
LITTLE ROCK DISTRICT
LITTLE ROCK, ARKANSAS

BURNS AND McDONNELL
9400 WARD PARKWAY,
KANSAS CITY, MO 64114
165438

F-35: SPECIAL ACCESS PROGRAM FACILITY
EBBING AIR NATIONAL GUARD BASE (ANGB), FORT SMITH, ARKANSAS

FIRST FLOOR LIGHTING PLAN - OVERALL

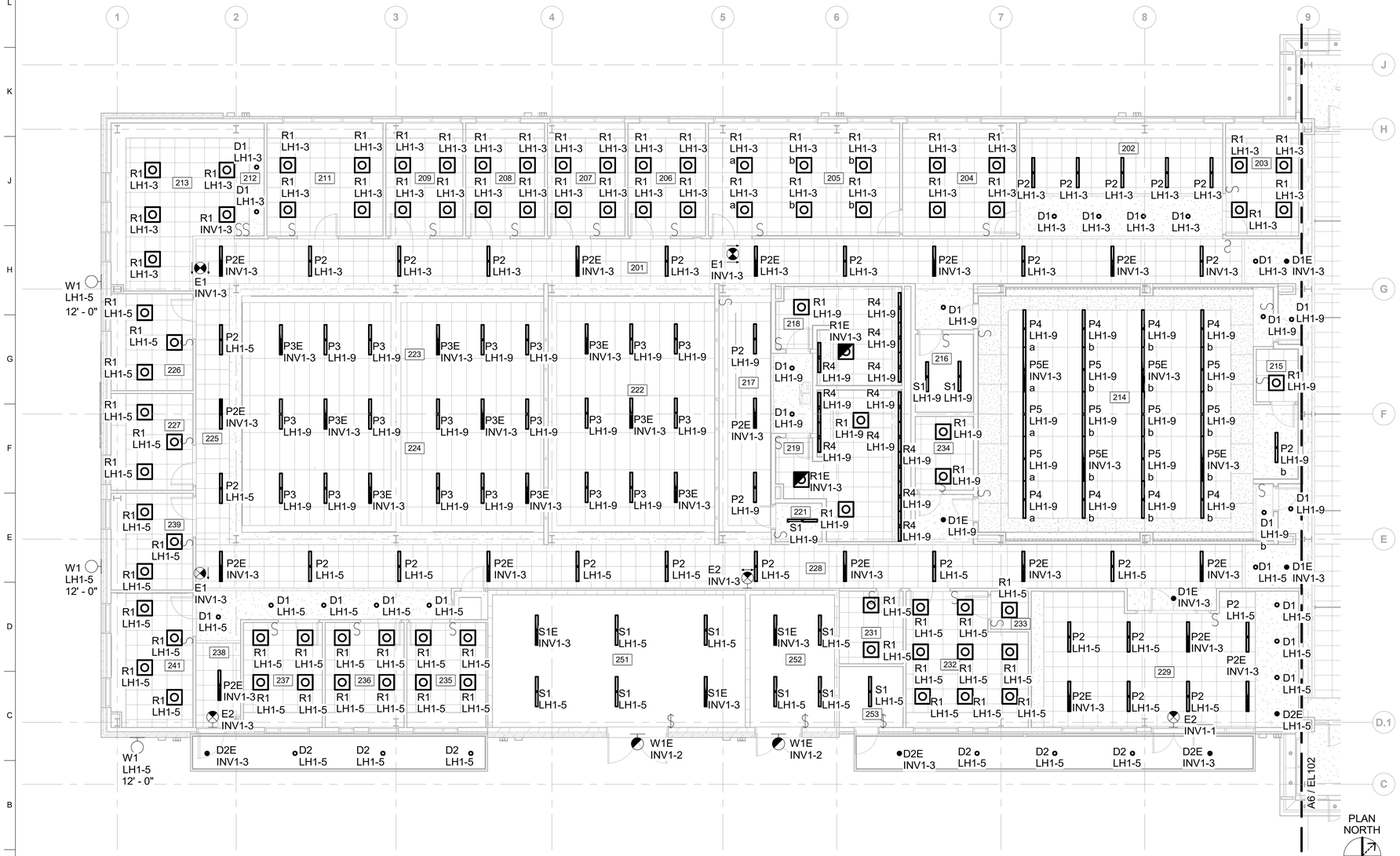
SHEET ID
EL010

READY-TO-ADVERTISE (RTA) SUBMITTAL

ROOM SCHEDULE - AREA A	
NAME	NUMBER
COMMAND SUPPORT STAFF	202
ACTIVITY PROGRAM COORDINATOR (APC) / RESOURCE ADVISOR (RA)	203
SQUADRON COMMANDER OFFICE	204
CONFERENCE ROOM	205
INTERNATIONAL MILITARY STUDENT OFFICER (IMSO)	206
SNR M-1	207
SNR M-2	208
SNR M-3	209
RA	211
COPY / STORAGE	212
STUDENT COLLAB	213

ROOM SCHEDULE - AREA A	
NAME	NUMBER
LG BRIEFING RM	214
AV	215
COMM	216
STUDENT LOCKERS	217
WOMEN'S RESTROOM	218
MEN'S RESTROOM	219
JANITOR'S CLOSET	221
STUDENT WORKSTATIONS	222
INSTRUCTOR WORKSTATIONS	223
MISSION OPS SUPPORT	224
CORRIDOR	225
IP M-1	226
IP M-2	227
CORRIDOR	228

ROOM SCHEDULE - AREA A	
NAME	NUMBER
BREAK ROOM	229
STORAGE	231
FLIGHT MEDICAL OFFICE	232
STORAGE	233
MOTHER'S ROOM	234
IP M-6	235
IP M-5	236
IP M-4	237
CORRIDOR	238
IP M-3	239
TEAM	241
MECHANICAL	251
ELECTRICAL	252
FIRE	253



A1 FIRST FLOOR LIGHTING PLAN - AREA A
SCALE: 1/8" = 1'-0"

0 4' 8' 16'
SCALE IN FEET

GENERAL SHEET NOTES

1. REFER TO SHEETS E-001 AND E-002 FOR LEGEND, GENERAL NOTES, AND ABBREVIATIONS.
2. REFER TO SHEET EL610 FOR LIGHT FIXTURE SCHEDULE.
3. REFER TO SHEET EL601 FOR LIGHTING CONTROL SCHEDULE.
4. PROVIDE OCCUPANCY AND DAYLIGHT SENSORS IN SPACES AS NOTED ON LIGHTING CONTROL SCHEDULE EL601. LAYOUT MUST BE FINALIZED BY MANUFACTURER PRIOR TO COMMENCING WORK. CONTRACTOR MUST ENGAGE MANUFACTURER'S REPRESENTATIVE TO PERFORM INITIAL ADJUSTMENT AND STARTUP OF ALL OCCUPANCY SENSORS. REFER TO SHEET EL601 FOR ADDITIONAL INFORMATION.
5. ALL NORMAL LIGHTING IN THE NON-SECURE SPACES MUST BE CIRCUITED TO PANEL LH1 OR LH2. ALL LIGHTING IN THE SECURE SPACES MUST BE CIRCUITED TO PANEL BRL1. FIXTURE TYPES AND CIRCUITS ARE TYPICAL PER SPACE AS NOTED ON PLAN.
6. COORDINATE LIGHT FIXTURE LOCATION WITH CABLE TRAY IN COMMUNICATIONS/SERVER ROOMS. LIGHT MUST NOT BE OBSTRUCTED BY CABLE TRAY.
7. NO FORM OF WIRELESS OR BLUETOOTH TECHNOLOGY LIGHTING CONTROLS WILL BE ACCEPTED. ANY LIGHT FIXTURE OR CONTROL DEVICE WITH THAT CAPABILITY WILL BE REMOVED AND CONTRACTOR MUST REPLACE IN KIND.

SHEET KEYNOTES

US Army Corps of Engineers ®

MARK	DESCRIPTION	DATE
0	READY-TO-ADVERTISE (RTA) SUBMITTAL	JUL 2025

DESIGNED BY: D. BRADLEY
DRAWN BY: S. YUNKER
CHECKED BY: C. STRATTON
SUBMITTED BY: B. STREEBIN
SIZE: ANSI D
ISSUE DATE: JUL 2025
SOLICITATION NO.: W912T525RA001
CONTRACT NO.: W912T524F0007
FILE NAME: 165438_E_R22_1.rvt

US ARMY CORPS OF ENGINEERS
LITTLE ROCK DISTRICT
LITTLE ROCK, ARKANSAS

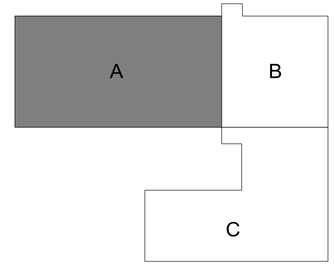
BURNS AND McDONNELL
9400 WARD PARKWAY,
KANSAS CITY, MO 64114
165438

Professional Engineer
I hereby certify that this plan, specification, or report was prepared by me or under my direct supervision and that I am a duly Licensed Professional Engineer under the laws of the state of Minnesota.
Signature:
Typed or Printed Name: DUGAN BRADLEY
Date: 07/23/25 License Number: 61869

F-35: SPECIAL ACCESS PROGRAM FACILITY
EBBING AIR NATIONAL GUARD BASE (ANGB), FORT SMITH, ARKANSAS

FIRST FLOOR LIGHTING PLAN - AREA A

KEY PLAN

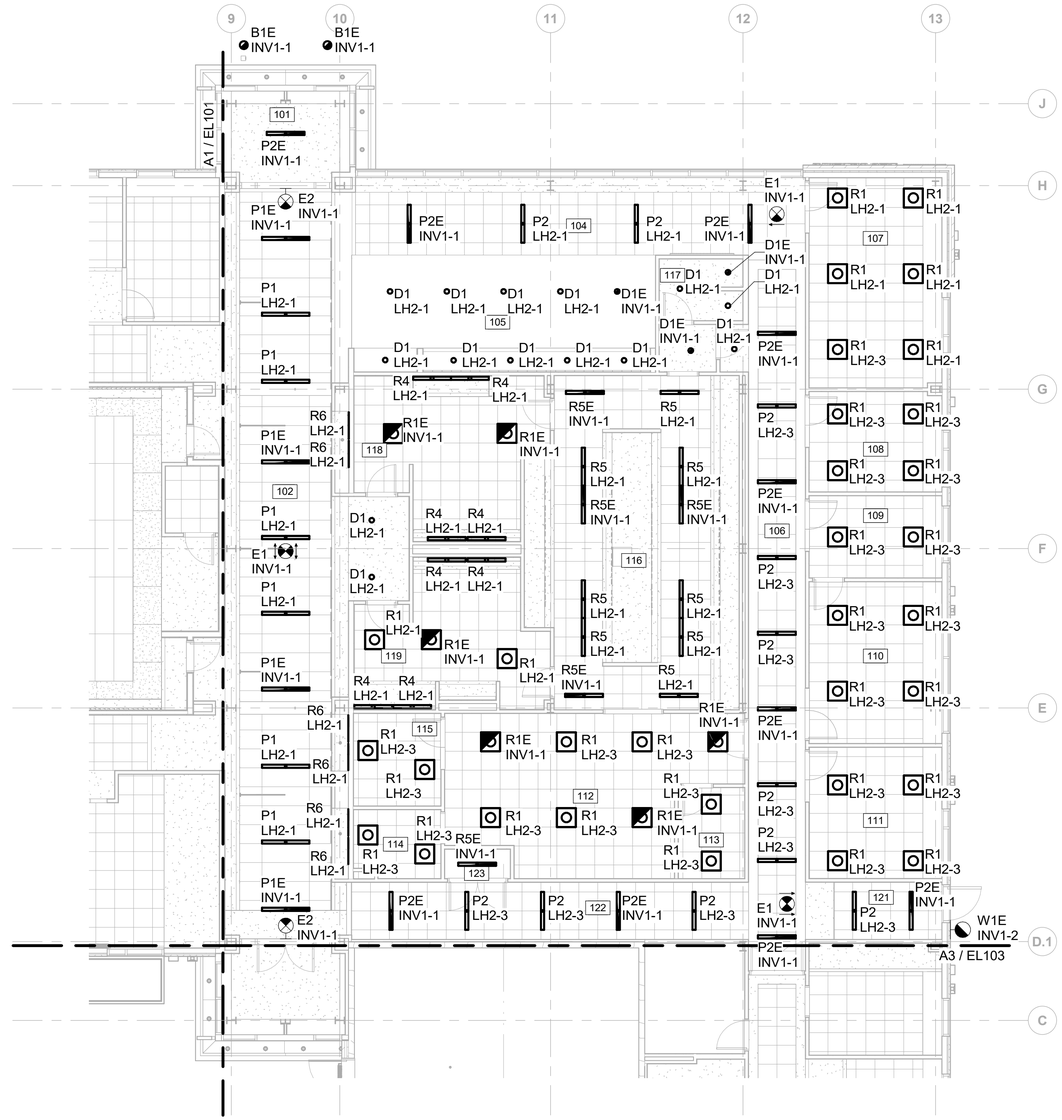


SHEET ID
EL101

READY-TO-ADVERTISE (RTA) SUBMITTAL

ROOM SCHEDULE - AREA B	
NAME	NUMBER
VESTIBULE	101
CORRIDOR	102
LOBBY	104
STEP DESK	105
CORRIDOR	106
SCHEDULING & TRAINING	107
DO	108
SARM	109
SARM ADMIN	110
STAN / EVAL	111
AFE MAINTENANCE	112

ROOM SCHEDULE - AREA B	
NAME	NUMBER
HELMET ALIGNMENT	113
LIFE SUPPORT	114
MAINTENANCE OFFICE	115
PILOT LOCKER ROOM	116
SHOWER	117
WOMEN'S RESTROOM	118
MEN'S RESTROOM	119
HALL	121
CORRIDOR	122
ELECTRICAL CLOSET	123



A6 FIRST FLOOR LIGHTING PLAN - AREA B

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

0 4' 8' 16'

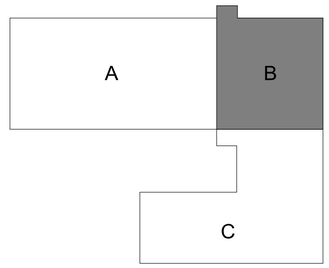
SCALE IN FEET

GENERAL SHEET NOTES

1. REFER TO SHEETS E-001 AND E-002 FOR LEGEND, GENERAL NOTES, AND ABBREVIATIONS.
2. REFER TO SHEET EL610 FOR LIGHT FIXTURE SCHEDULE.
3. REFER TO SHEET EL601 FOR LIGHTING CONTROL SCHEDULE.
4. PROVIDE OCCUPANCY AND DAYLIGHT SENSORS IN SPACES AS NOTED ON LIGHTING CONTROL SCHEDULE EL601. LAYOUT MUST BE FINALIZED BY MANUFACTURER PRIOR TO COMMENCING WORK. CONTRACTOR MUST ENGAGE MANUFACTURER'S REPRESENTATIVE TO PERFORM INITIAL ADJUSTMENT AND STARTUP OF ALL OCCUPANCY SENSORS. REFER TO SHEET EL601 FOR ADDITIONAL INFORMATION.
5. ALL NORMAL LIGHTING IN THE NON-SECURE SPACES MUST BE CIRCUITED TO PANEL LH1 OR LH2. ALL LIGHTING IN THE SECURE SPACES MUST BE CIRCUITED TO PANEL BRL1. FIXTURE TYPES AND CIRCUITS ARE TYPICAL PER SPACE AS NOTED ON PLAN.
6. COORDINATE LIGHT FIXTURE LOCATION WITH CABLE TRAY IN COMMUNICATIONS/SERVER ROOMS. LIGHT MUST NOT BE OBSTRUCTED BY CABLE TRAY.
7. NO FORM OF WIRELESS OR BLUETOOTH TECHNOLOGY LIGHTING CONTROLS WILL BE ACCEPTED. ANY LIGHT FIXTURE OR CONTROL DEVICE WITH THAT CAPABILITY WILL BE REMOVED AND CONTRACTOR MUST REPLACE IN KIND.

Professional Engineer
I hereby certify that this plan, specification, or report was prepared by me or under my direct supervision and that I am a duly Licensed Professional Engineer under the laws of the state of Minnesota.
Signature:
Typed or Printed Name: DUGAN BRADLEY
Date: 07/23/25 License Number: 61869

KEY PLAN



US Army Corps of Engineers ®

MARK	DESCRIPTION	DATE
0	READY-TO-ADVERTISE (RTA) SUBMITTAL	JUL 2025

DESIGNED BY: D. BRADLEY
DRAWN BY: S. YONKER
CHECKED BY: C. HETCHLER
SUBMITTED BY: B. STREEBIN
SIZE: ANSI D
ISSUE DATE: JUL 2025
SOLICITATION NO.: W912S2RKA001
CONTRACT NO.: W912S24F0007
FILE NAME: 165438_E_R22_1.rvt

US ARMY CORPS OF ENGINEERS
LITTLE ROCK DISTRICT
LITTLE ROCK, ARKANSAS

BURNS AND McDONNELL
9400 WARD PARKWAY,
KANSAS CITY, MO 64114
165438

F-35, SPECIAL ACCESS PROGRAM FACILITY
EBBING AIR NATIONAL GUARD BASE (ANGB), FORT SMITH, ARKANSAS

FIRST FLOOR LIGHTING PLAN - AREA B

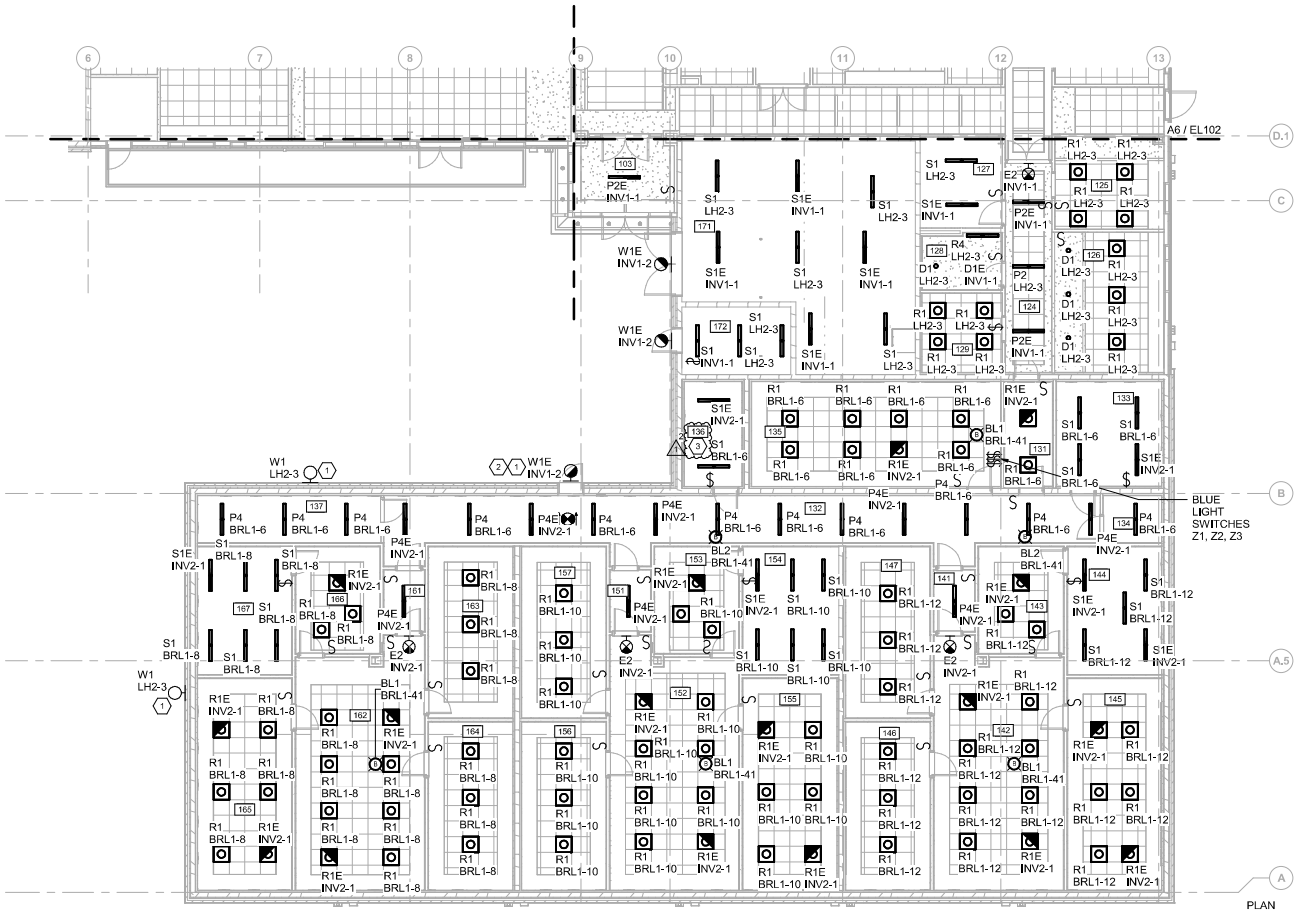
SHEET ID
EL102

READY-TO-ADVERTISE (RTA) SUBMITTAL

ROOM SCHEDULE - AREA C	
NAME	NUMBER
VESTIBULE	103
CORRIDOR	124
BREAK ROOM	125
MAINT DEBRIEF	126
MAIN COMM ROOM	127
UNISEX RESTROOM	128
PRINT / COPY	129
MAN TRAP	131
CORRIDOR	132
SECURE COMM ROOM	133
STORAGE	134
SECURITY	135
SECURE ELEC ROOM	136

ROOM SCHEDULE - AREA C	
NAME	NUMBER
STORAGE	137
MAN TRAP 1	141
VAULT 1 MISSION PLANNING	142
VAULT 1 ALIS / ODIN	143
VAULT 1 SERVER	144
VAULT 1 LG BRIEF	145
VAULT 1 SM BRIEF	146
VAULT 1 SM BRIEF	147
MAN TRAP 2	151
VAULT 2 MISSION PLANNING	152
VAULT 2 ALIS / ODIN	153
VAULT 2 SERVER	154

ROOM SCHEDULE - AREA C	
NAME	NUMBER
VAULT 2 LG BRIEF	155
VAULT 2 SM BRIEF	156
VAULT 2 SM BRIEF	157
MAN TRAP 3	161
VAULT 3 MISSION PLANNING	162
VAULT 3 SM BRIEF	163
VAULT 3 SM BRIEF	164
VAULT 3 LG BRIEF	165
VAULT 3 ALIS / ODIN	166
VAULT 3 SERVER	167
MECHANICAL ROOM	171
ELECTRICAL ROOM	172



A3 FIRST FLOOR LIGHTING PLAN - AREA C
SCALE: 1/8" = 1'-0"

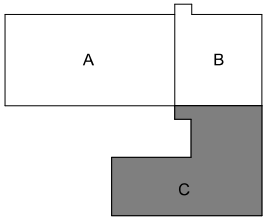
GENERAL SHEET NOTES

1. REFER TO SHEETS E-001 AND E-002 FOR LEGEND, GENERAL NOTES, AND ABBREVIATIONS.
2. REFER TO SHEET EL610 FOR LIGHT FIXTURE SCHEDULE.
3. REFER TO SHEET EL601 FOR LIGHTING CONTROL SCHEDULE.
4. PROVIDE OCCUPANCY AND DAYLIGHT SENSORS IN SPACES AS NOTED ON LIGHTING CONTROL SCHEDULE EL601. LAYOUT MUST BE FINALIZED BY MANUFACTURER PRIOR TO COMMENCING WORK. CONTRACTOR MUST ENGAGE MANUFACTURER'S REPRESENTATIVE TO PERFORM INITIAL ADJUSTMENT AND STARTUP OF ALL OCCUPANCY SENSORS. REFER TO SHEET EL601 FOR ADDITIONAL INFORMATION.
5. ALL NORMAL LIGHTING IN THE NON-SECURE SPACES MUST BE CIRCUITED TO PANEL LH1 OR LH2. ALL LIGHTING IN THE SECURE SPACES MUST BE CIRCUITED TO PANEL BRL1. FIXTURE TYPES AND CIRCUITS ARE TYPICAL PER SPACE AS NOTED ON PLAN.
6. COORDINATE LIGHT FIXTURE LOCATION WITH CABLE TRAY IN COMMUNICATIONS/SERVER ROOMS. LIGHT MUST NOT BE OBSTRUCTED BY CABLE TRAY.
7. NO FORM OF WIRELESS OR BLUETOOTH TECHNOLOGY LIGHTING CONTROLS WILL BE ACCEPTED. ANY LIGHT FIXTURE OR CONTROL DEVICE WITH THAT CAPABILITY WILL BE REMOVED AND CONTRACTOR MUST REPLACE IN KIND.

SHEET KEYNOTES

1. LIGHT FIXTURE AND BRANCH CIRCUIT INSTALL NOT TO PENETRATE TEMPEST BOUNDARY. REFER TO DETAIL L7/A-523 FOR MORE INFORMATION. CONDUIT MUST RUN UNDER SLAB FROM MAIN ELECTRICAL ROOM TO LIGHT FIXTURE. ROUTE CONDUIT WITHIN HORIZONTAL WALL AIR GAP. COORDINATE INSTALL PROCESS WITH EXTERIOR WALL INSTALLER.
2. PROVIDE 1" CONDUIT FROM FIRE RISER 253 TO SPEAKER LOCATED NEXT TO EXTERIOR DOOR. RUN CONDUIT IN PARALLEL WITH LIGHT FIXTURE CONDUIT. INSTALL NOT TO PENETRATE TEMPEST BOUNDARY. REFER TO DETAIL L7/A-523 FOR MORE INFORMATION. CONDUIT MUST RUN UNDER SLAB FROM MAIN ELECTRICAL ROOM TO LIGHT FIXTURE. ROUTE CONDUIT WITHIN HORIZONTAL WALL AIR GAP. COORDINATE INSTALL PROCESS WITH EXTERIOR WALL INSTALLER. REFER TO SHEET FA103 FOR SPEAKER LOCATION.
3. ALL CIRCUITS FED FROM PANELS IN THIS ROOM MUST BE SURFACE MOUNTED EMT CONDUIT.

KEY PLAN



Professional Engineer
I hereby certify that this plan, specification, or report was prepared by me or under my direct supervision and that I am a duly Licensed Professional Engineer under the laws of the state of Minnesota.
Signature:
Typed or Printed Name: SUSAN BRADLEY
Date: 07/10/25 License Number: 51999

US Army Corps of Engineers ®

MARK	DESCRIPTION	DATE
0	READY-TO-ADVERTISE (RTA) SUBMITTAL	JUL 2025
1	AM0067 - SURFACE MOUNT EMT CONDUIT CLARIFICATION	FEB 2026

DESIGNED BY: D. BRADLEY
DRAWN BY: M. MAHLER
CHECKED BY: S. STRATTON
QA/QC BY: B. STREEBIN
SIZE: ANSI D
FILE NAME: 165458_E02_1.rvt
ISSUE DATE: JUL 2025
SOLICITATION NO.: W912QR25R0007
CONTRACT NO.: W912QR24F0007

US ARMY CORPS OF ENGINEERS
LITTLE ROCK DISTRICT
LITTLE ROCK, ARKANSAS

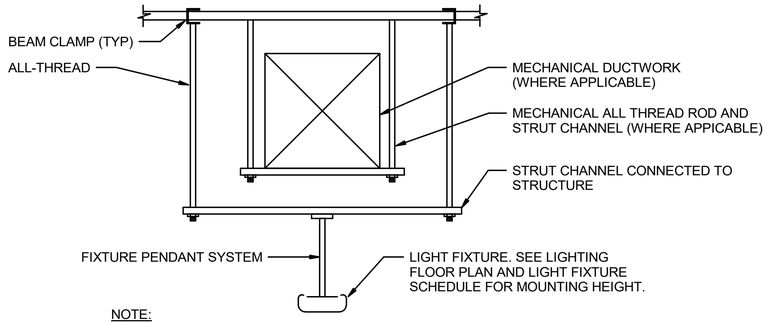
BURNS AND McDONNELL
9400 WARD PARKWAY
KANSAS CITY, MO 64114
165458

F-35, SPECIAL ACCESS PROGRAM FACILITY
EBBING AIR NATIONAL GUARD BASE (ANGB), FORT SMITH, ARKANSAS

FIRST FLOOR LIGHTING PLAN - AREA C

SHEET ID
EL103.1

READY-TO-ADVERTISE (RTA) SUBMITTAL

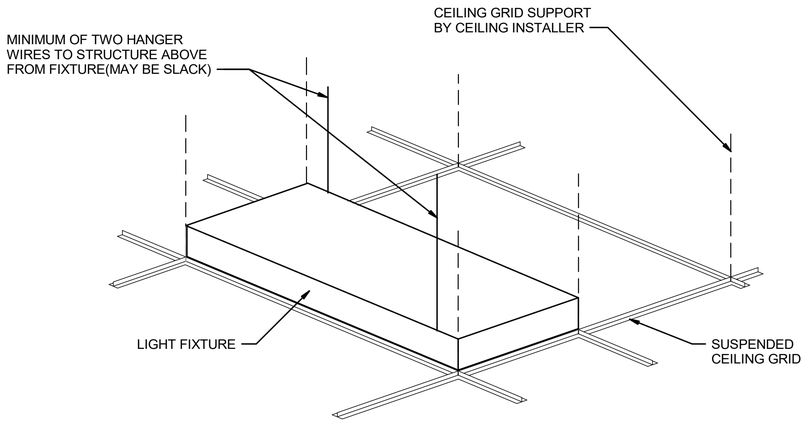


NOTE:

1. DETAIL IS FOR TYPICAL MOUNTING. CONTRACTOR TO ROUTE STRUT CHANNEL AND ALL THREAD ROD AS REQUIRED TO HANG LIGHT FROM STRUCTURE ABOVE.

F11 TYPICAL PENDANT FIXTURE MOUNTING DETAIL

SCALE: NTS



A11 TYPICAL RECESSED FIXTURE DETAIL

SCALE: NTS

Professional Engineer
I hereby certify that this plan, specification, or report was prepared by me or under my direct supervision and that I am a duly Licensed Professional Engineer under the laws of the state of Minnesota.

Signature: _____

Typed or Printed Name: DUGAN BRADLEY

Date: 07/23/25 License Number: 61869

US Army Corps of Engineers ®

MARK	DESCRIPTION	DATE
0	READY-TO-ADVERTISE (RTA) SUBMITTAL	JUL 2025

DESIGNED BY: D. BRADLEY
DRAWN BY: S. YUNKER
CHECKED BY: C. STRATTON
SUBMITTED BY: B. STREEBIN
SIZE: ANSI D
ISSUE DATE: JUL 2025
SOLICITATION NO.: W9127S25RA001
CONTRACT NO.: W9127S24F0007
FILE NAME: 165438_E_R22_1.rvt

US ARMY CORPS OF ENGINEERS
LITTLE ROCK DISTRICT
LITTLE ROCK, ARKANSAS

BURNS AND McDONNELL
9400 WARD PARKWAY,
KANSAS CITY, MO 64114
165438

F-35; SPECIAL ACCESS PROGRAM FACILITY
EBBING AIR NATIONAL GUARD BASE (ANGB), FORT SMITH, ARKANSAS

LIGHTING DETAILS

SHEET ID

EL501

READY-TO-ADVERTISE (RTA) SUBMITTAL

LIGHTING CONTROL SCHEDULE

SPACE NUMBER	SPACE NAME	ASHRAE LIGHTING CONTROLS	SENSOR TYPE
101	VESTIBULE	POS1	DUAL TECH
102	CORRIDOR	POS1	DUAL TECH
103	VESTIBULE	POS1	DUAL TECH
104	LOBBY	POS1	DUAL TECH
105	STEP DESK	OS1	DUAL TECH
106	CORRIDOR	OS1	DUAL TECH
107	SCHEDULING & TRAINING	PVS1	DUAL TECH
108	DO	VS1	DUAL TECH
109	SARM	VS1	DUAL TECH
110	SARM ADMIN	VS1	DUAL TECH
111	STAN / EVAL	VS1	DUAL TECH
112	AFE MAINTENANCE	OS1	DUAL TECH
113	HELMET ALIGNMENT	VS1	DUAL TECH
114	LIFE SUPPORT	VS1	DUAL TECH
115	MAINTENANCE OFFICE	VS1	DUAL TECH
116	PILOT LOCKER ROOM	VS1	DUAL TECH
117	SHOWER	OS1	DUAL TECH
118	WOMEN'S RESTROOM	OS1	DUAL TECH
119	MEN'S RESTROOM	OS1	DUAL TECH
121	HALL	OS1	DUAL TECH
122	CORRIDOR	OS1	DUAL TECH
123	ELECTRICAL CLOSET	S1	N/A
124	CORRIDOR	OS1	DUAL TECH
125	BREAK ROOM	OS2	DUAL TECH
126	MAINT DEBRIEF	OS1	DUAL TECH
127	MAIN COMM ROOM	S1	N/A
128	UNISEX RESTROOM	OS1	DUAL TECH
129	PRINT / COPY	VS1	DUAL TECH
131	MAN TRAP	OS1	PIR
132	CORRIDOR	OS1	PIR
133	SECURE COMM ROOM	S1	PIR
134	STORAGE	OS1	PIR
135	SECURITY	VS1	PIR
136	SECURE ELEC ROOM	S1	N/A
137	STORAGE	OS1	PIR
141	MAN TRAP 1	OS1	PIR
142	VAULT 1 MISSION PLANNING	VS1	PIR
143	VAULT 1 ALIS / ODIN	VS1	PIR
144	VAULT 1 SERVER	S1	N/A
145	VAULT 1 LG BRIEF	VS1	PIR
146	VAULT 1 SM BRIEF	VS1	PIR
147	VAULT 1 SM BRIEF	VS1	PIR
151	MAN TRAP 2	OS1	PIR
152	VAULT 2 MISSION PLANNING	VS1	PIR
153	VAULT 2 ALIS / ODIN	VS1	PIR
154	VAULT 2 SERVER	S1	N/A
155	VAULT 2 LG BRIEF	VS1	PIR
156	VAULT 2 SM BRIEF	VS1	PIR
157	VAULT 2 SM BRIEF	VS1	PIR
161	MAN TRAP 3	OS1	PIR
162	VAULT 3 MISSION PLANNING	VS1	PIR
163	VAULT 3 SM BRIEF	VS1	PIR

LIGHTING CONTROL SCHEDULE

SPACE NUMBER	SPACE NAME	ASHRAE LIGHTING CONTROLS	SENSOR TYPE
164	VAULT 3 SM BRIEF	VS1	PIR
165	VAULT 3 LG BRIEF	VS1	PIR
166	VAULT 3 ALIS / ODIN	VS1	PIR
167	VAULT 3 SERVER	S1	N/A
171	MECHANICAL ROOM	S1	N/A
172	ELECTRICAL ROOM	S1	N/A
201	CORRIDOR	OS1	DUAL TECH
202	COMMAND SUPPORT STAFF	POS1	DUAL TECH
203	ACTIVITY PROGRAM COORDINATOR (APC) / RESOURCE ADVISOR (RA)	VS1	DUAL TECH
204	SQUADRON COMMANDER OFFICE	VS1	DUAL TECH
205	CONFERENCE ROOM	PVS1	DUAL TECH
206	INTERNATIONAL MILITARY STUDENT OFFICER (IMSO)	VS1	DUAL TECH
207	SNR M-1	VS1	DUAL TECH
208	SNR M-2	VS1	DUAL TECH
209	SNR M-3	VS1	DUAL TECH
211	RA	VS1	DUAL TECH
212	COPY / STORAGE	OS2	DUAL TECH
213	STUDENT COLLAB	OS2	DUAL TECH
214	LG BRIEFING RM	VS1	DUAL TECH
215	AV	S1	N/A
216	COMM	S1	N/A
217	STUDENT LOCKERS	OS1	DUAL TECH
218	WOMEN'S RESTROOM	OS1	DUAL TECH
219	MEN'S RESTROOM	OS1	DUAL TECH
221	JANITOR'S CLOSET	OS1	DUAL TECH
222	STUDENT WORKSTATIONS	POS2	DUAL TECH
223	INSTRUCTOR WORKSTATIONS	POS2	DUAL TECH
224	MISSION OPS SUPPORT	POS2	DUAL TECH
225	CORRIDOR	OS1	DUAL TECH
226	IP M-1	VS1	DUAL TECH
227	IP M-2	VS1	DUAL TECH
228	CORRIDOR	OS1	DUAL TECH
229	BREAK ROOM	POS2	DUAL TECH
231	STORAGE	OS1	DUAL TECH
232	FLIGHT MEDICAL OFFICE	PVS1	DUAL TECH
233	STORAGE	OS1	DUAL TECH
234	MOTHER'S ROOM	VS1	DUAL TECH
235	IP M-6	VS1	DUAL TECH
236	IP M-5	VS1	DUAL TECH
237	IP M-4	VS1	DUAL TECH
238	CORRIDOR	OS1	DUAL TECH
239	IP M-3	VS1	DUAL TECH
241	TEAM	VS1	DUAL TECH
242	ROOF ACCESS	(none)	
251	MECHANICAL	S1	N/A
252	ELECTRICAL	S1	N/A
253	FIRE	S1	N/A

LIGHTING CONTROL LEGEND

LIGHTING CONTROLS	MANUAL (ON/OFF)	MANUAL DIMMING (MULTI-LEVEL FUNCTIONALITY)	OCCUPANCY SENSOR AUTOMATIC ON TO 50% OUTPUT	OCCUPANCY SENSOR AUTOMATIC ON TO 100% OUTPUT	OCCUPANCY SENSOR AUTOMATIC DIM TO 50% OUTPUT WHEN NO MOTION IS SENSED WITHIN THE SPACE FOR 15 MINUTES	OCCUPANCY SENSOR AUTOMATIC OFF WHEN NO MOTION IS SENSED WITHIN THE SPACE FOR 15 MINUTES	OCCUPANCY SENSOR AUTOMATIC OFF WHEN NO MOTION IS SENSED WITHIN THE SPACE FOR 2 HOURS	DAYLIGHT SENSOR TO DIM FIXTURES IN SPACE WHEN DAYLIGHT CONTRIBUTION IS PRESENT
(none)								
OS1	X			X		X		
OS2	X	X	X			X		
POS1	X			X		X		X
POS2	X	X	X			X		X
PVS1	X	X				X		X
S1	X							
VS1	X	X				X		

GENERAL SHEET NOTES

1. WHERE DAYLIGHTING CONTROLS ARE INDICATED, EACH SPACE SHALL BE CAPABLE OF BEING CALIBRATED FROM WITHIN THE SPACE. DAYLIGHT SENSOR LAYOUT AND FIXTURES CONTROLLED BY DAYLIGHT SENSOR SHALL BE DETERMINED BY MANUFACTURER PRIOR TO COMMENCING WORK. CONTRACTOR SHALL ENGAGE MANUFACTURER'S REPRESENTATIVE TO PERFORM INITIAL ADJUSTMENT AND TUNE UP OF ALL DAYLIGHT SENSORS.
2. DAYLIGHT SENSORS SHALL BE CAPABLE OF DIMMING LIGHT FIXTURES INDICATED FROM 100% TO 15% OR LOWER.
3. OCCUPANCY SENSOR LAYOUT SHALL BE DETERMINED BY MANUFACTURER PRIOR TO COMMENCING WORK. CONTRACTOR SHALL ENGAGE MANUFACTURER'S REPRESENTATIVE TO PERFORM INITIAL ADJUSTMENT AND TUNE UP OF ALL OCCUPANCY SENSORS.
4. REFER TO LIGHTING CONTROL SCHEDULE FOR OCCUPANCY SENSOR TECHNOLOGY TYPE REQUIREMENTS BY ROOM.
5. NO FORM OF WIRELESS OR BLUETOOTH TECHNOLOGY LIGHTING CONTROLS WILL BE ACCEPTED. ANY LIGHT FIXTURE OR CONTROL DEVICE WITH THAT CAPABILITY WILL BE REMOVED AND CONTRACTOR MUST REPLACE IN KIND.

LOW VOLTAGE SWITCH CONTROL SCHEMES:

PROVIDE LOW-VOLTAGE SWITCHES WITH THE NUMBER OF BUTTONS AS SPECIFIED ON FLOOR PLANS. FOR SPACES WITH MULTI-LEVEL DIMMING, ASSUME 3 BUTTON CONFIGURATION, UON. COORDINATE FINAL LOW-VOLTAGE SWITCHING SCENES WITH CONTRACTING OFFICER. EXAMPLE SCENES FOR BUTTON CONFIGURATIONS ARE DESCRIBED BELOW.

2 BUTTON:
1. ALL ON TO 100%
2. ALL OFF

3 BUTTON:
1. ALL ON TO 100%
2. ALL ON/DIM TO 50%
3. ALL OFF

4 BUTTON:
1. ALL ON TO 100%
2. ZONE "b" to 50%
3. ZONE "a" TO 25%, ZONE "b" TO 50%
4. ALL OFF

Professional Engineer
I hereby certify that this plan, specification, or report was prepared by me or under my direct supervision and that I am a duly Licensed Professional Engineer under the laws of the state of Minnesota.
Signature:
Typed or Printed Name: DUGAN BRADLEY
Date: 07/23/25 License Number: 61869

US Army Corps of Engineers ®

MARK	DESCRIPTION	DATE
0	READY-TO-ADV/ERTISE (RTA) SUBMITTAL	JUL 2025

DESIGNED BY: D. BRADLEY
DRAWN BY: S. YUNKER
CHECKED BY: S. STRATTON
SUBMITTED BY: B. STREEBIN
SIZE: ANSI D
ISSUE DATE: JUL 2025
SOLICITATION NO.: W9127S25RA001
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FILE NAME: 16438_E_R22_1.rvt

US ARMY CORPS OF ENGINEERS
LITTLE ROCK DISTRICT
LITTLE ROCK, ARKANSAS

BURNS AND McDONNELL
9400 WARD PARKWAY,
KANSAS CITY, MO 64114
16438

F-35: SPECIAL ACCESS PROGRAM FACILITY
EBBING AIR NATIONAL GUARD BASE (ANGB), FORT SMITH, ARKANSAS

LIGHTING CONTROLS SCHEDULE

SHEET ID
EL601

READY-TO-ADVERTISE (RTA) SUBMITTAL

LIGHT FIXTURE SCHEDULE

FIXTURE TYPE NAME	LAMP TYPE	COLOR TEMP	NOMINAL FIXTURE LUMENS	VOLTAGE	WATTAGE	DESCRIPTION	MOUNTING
B1E	LED	4000 K	800 lm	MVOLT	16 W	8" ROUND X 40" HIGH BOLLARD, ASYMMETRIC DISTRIBUTION, NATURAL ALUMINUM IN COLOR.	BOLLARD
BL1	LED			120V	11 W	BLUE, 4" DOME, LED INDICATING LIGHT WITH 360 DEGREE LIGHT ROTATION WITHOUT MOVING PARTS	CEILING, UON
BL2	LED			120V	11 W	BLUE, 4" DOME, LED INDICATING LIGHT WITH 360 DEGREE LIGHT ROTATION WITHOUT MOVING PARTS	WALL MOUNTED AT 8' AFF, UON.
D1	LED	3500 K	1000 lm	MVOLT	9 W	6" ROUND DOWNLIGHT, INTEGRAL 0-10V DIMMING DRIVER, FROSTED LENS AT TOP OF REFLECTOR, WIDE OPTIC DISTRIBUTION (65 DEGREES), CLEAR SEMI-SPECULAR REFLECTOR AND WHITE FLANGE. IF CEILING IS NOT WHITE, PAINT FLANGE TO MATCH CEILING COLOR.	CEILING, RECESSED
D1E	LED	3500 K	1000 lm	MVOLT	9 W	6" ROUND DOWNLIGHT, INTEGRAL 0-10V DIMMING DRIVER, FROSTED LENS AT TOP OF REFLECTOR, WIDE OPTIC DISTRIBUTION (65 DEGREES), CLEAR SEMI-SPECULAR REFLECTOR AND FLANGE. IF CEILING IS NOT WHITE, PAINT FLANGE TO MATCH CEILING COLOR.	CEILING, RECESSED
D2	LED	3500 K	1000 lm	MVOLT	27 W	6" ROUND DOWNLIGHT, INTEGRAL 0-10V DIMMING DRIVER, FROSTED LENS AT TOP OF REFLECTOR, WIDE OPTIC DISTRIBUTION (65 DEGREES), CLEAR SEMI-SPECULAR REFLECTOR AND WHITE FLANGE. IF CEILING IS NOT WHITE, PAINT FLANGE TO MATCH CEILING COLOR, WET LOCATION RATED.	CEILING, RECESSED
D2E	LED	3500 K	1000 lm	MVOLT	27 W	6" ROUND DOWNLIGHT, INTEGRAL 0-10V DIMMING DRIVER, FROSTED LENS AT TOP OF REFLECTOR, WIDE OPTIC DISTRIBUTION (65 DEGREES), CLEAR SEMI-SPECULAR REFLECTOR AND WHITE FLANGE. IF CEILING IS NOT WHITE, PAINT FLANGE TO MATCH CEILING COLOR, WET LOCATION RATED.	CEILING, RECESSED
E1	LED			MVOLT	3 W	CEILING MOUNTED LED EXIT SIGN, RED LETTERS ON WHITE HOUSING, SINGLE OR DOUBLE FACE AS INDICATED ON DRAWINGS, DIRECTIONAL ARROWS AS INDICATED ON DRAWINGS, INCLUDES EMERGENCY BATTERY BACKUP	CEILING, SURFACE
E2	LED			MVOLT	3 W	WALL MOUNTED LED EXIT SIGN, RED LETTERS ON WHITE HOUSING, SINGLE OR DOUBLE FACE AS INDICATED ON DRAWINGS, DIRECTIONAL ARROWS AS INDICATED ON DRAWINGS, MOUNTING AS INDICATED ON DRAWINGS, INCLUDES EMERGENCY BATTERY BACKUP	WALL, SURFACE AT 96" TO CENTER OF LIGHT FIXTURE, UON
P1	LED	3500 K	4375 lm	MVOLT	45 W	5' LENGTH, 4" WIDTH, INDIRECT LINEAR PENDANT, INTEGRAL 0-10V DIMMABLE DRIVER. ASYMMETRICAL LENS. PROVIDE CONTINUOUS LENGTHS WHEN FIXTURES ARE NEXT TO EACH OTHER AS INDICATED ON PLAN, POWDER COAT MATTE SILVER FINISH, WHITE POWER CORD.	SUSPENDED AT 20' AFF, UON.
P1E	LED	3500 K	4375 lm	MVOLT	45 W	5' LENGTH, 4" WIDTH, INDIRECT LINEAR PENDANT, INTEGRAL 0-10V DIMMABLE DRIVER. ASYMMETRICAL LENS. PROVIDE CONTINUOUS LENGTHS WHEN FIXTURES ARE NEXT TO EACH OTHER AS INDICATED ON PLAN, POWDER COAT MATTE SILVER FINISH, WHITE POWER CORD.	SUSPENDED AT 20' AFF, UON.
P2	LED	3500 K	4000 lm	MVOLT	41 W	4' LENGTH, 4" WIDTH, INDIRECT LINEAR PENDANT, INTEGRAL 0-10V DIMMABLE DRIVER. ASYMMETRICAL LENS. PROVIDE CONTINUOUS LENGTHS WHEN FIXTURES ARE NEXT TO EACH OTHER AS INDICATED ON PLAN, POWDER COAT MATTE SILVER FINISH, WHITE POWER CORD.	CEILING, RECESSED
P2E	LED	3500 K	4000 lm	MVOLT	41 W	4' LENGTH, 4" WIDTH, INDIRECT LINEAR PENDANT, INTEGRAL 0-10V DIMMABLE DRIVER. ASYMMETRICAL LENS. PROVIDE CONTINUOUS LENGTHS WHEN FIXTURES ARE NEXT TO EACH OTHER AS INDICATED ON PLAN, POWDER COAT MATTE SILVER FINISH, WHITE POWER CORD.	CEILING, RECESSED
P3	LED	3500 K	4000 lm	MVOLT	41 W	4' LENGTH, 4" WIDTH, INDIRECT LINEAR PENDANT, INTEGRAL 0-10V DIMMABLE DRIVER. ASYMMETRICAL LENS. PROVIDE CONTINUOUS LENGTHS WHEN FIXTURES ARE NEXT TO EACH OTHER AS INDICATED ON PLAN, POWDER COAT MATTE SILVER FINISH, WHITE POWER CORD.	PENDANT MOUNTED AT 14' AFF, UON.
P3E	LED	3500 K	4000 lm	MVOLT	41 W	4' LENGTH, 4" WIDTH, INDIRECT LINEAR PENDANT, INTEGRAL 0-10V DIMMABLE DRIVER. ASYMMETRICAL LENS. PROVIDE CONTINUOUS LENGTHS WHEN FIXTURES ARE NEXT TO EACH OTHER AS INDICATED ON PLAN, POWDER COAT MATTE SILVER FINISH, WHITE POWER CORD.	PENDANT MOUNTED AT 14' AFF, UON.
P4	LED	3500 K	4375 lm	MVOLT	45 W	5' LENGTH, 4" WIDTH, INDIRECT LINEAR PENDANT, INTEGRAL 0-10V DIMMABLE DRIVER. ASYMMETRICAL LENS. PROVIDE CONTINUOUS LENGTHS WHEN FIXTURES ARE NEXT TO EACH OTHER AS INDICATED ON PLAN, POWDER COAT MATTE SILVER FINISH, WHITE POWER CORD.	CEILING, RECESSED
P5	LED	3500 K	5250 lm	MVOLT	54 W	6' LENGTH, 4" WIDTH, INDIRECT LINEAR PENDANT, INTEGRAL 0-10V DIMMABLE DRIVER. ASYMMETRICAL LENS. PROVIDE CONTINUOUS LENGTHS WHEN FIXTURES ARE NEXT TO EACH OTHER AS INDICATED ON PLAN, POWDER COAT MATTE SILVER FINISH, WHITE POWER CORD.	CEILING, RECESSED
P5E	LED	3500 K	5250 lm	MVOLT	54 W	6' LENGTH, 4" WIDTH, INDIRECT LINEAR PENDANT, INTEGRAL 0-10V DIMMABLE DRIVER. ASYMMETRICAL LENS. PROVIDE CONTINUOUS LENGTHS WHEN FIXTURES ARE NEXT TO EACH OTHER AS INDICATED ON PLAN, POWDER COAT MATTE SILVER FINISH, WHITE POWER CORD.	CEILING, RECESSED
R1	LED	3500 K	3300 lm	MVOLT	26 W	2'-0"L X 2'-0"W TROFFER, FROSTED ACRYLIC CENTER BASKET LENS, INTEGRAL 0-10V DIMMABLE DRIVER, WHITE REFLECTOR.	CEILING, RECESSED
R1E	LED	3500 K	3300 lm	MVOLT	26 W	2'-0"L X 2'-0"W TROFFER, FROSTED ACRYLIC CENTER BASKET LENS, INTEGRAL 0-10V DIMMABLE DRIVER, WHITE REFLECTOR.	CEILING, RECESSED
R4	LED	3500 K	1400 lm	MVOLT	12 W	4' LENGTH, 4" WIDE PERIMETER LINEAR, INTEGRAL 0-10V DIMMABLE DRIVER, WHITE REFLECTOR, FROSTED ACRYLIC LENS, PROVIDE CONTINUOUS RUNS WHEN FIXTURES ARE NEXT TO EACH OTHER AS SHOWN ON PLAN	CEILING, RECESSED
R5	LED	3500 K	2300 lm	MVOLT	20 W	4' LENGTH, 4" WIDE PERIMETER LINEAR, INTEGRAL 0-10V DIMMABLE DRIVER, WHITE REFLECTOR, FROSTED ACRYLIC LENS, PROVIDE CONTINUOUS RUNS WHEN FIXTURES ARE NEXT TO EACH OTHER AS SHOWN ON PLAN	SUSPENDED AT 9' AFF, UON.
R5E	LED	3500 K	2300 lm	MVOLT	20 W	4' LENGTH, 4" WIDE PERIMETER LINEAR, INTEGRAL 0-10V DIMMABLE DRIVER, WHITE REFLECTOR, FROSTED ACRYLIC LENS, PROVIDE CONTINUOUS RUNS WHEN FIXTURES ARE NEXT TO EACH OTHER AS SHOWN ON PLAN	SUSPENDED AT 9' AFF, UON.
R6	LED	3500 K	457 lm	MVOLT	9 W	33.44" LONG LED DISPLAY CASE FIXTURE.	MOUNTED ON TOP OF DISPLAY CASEWORK
S1	LED	3500 K	5000 lm	MVOLT	30 W	4'-0"L INDUSTRIAL STRIP FIXTURE, 180-DEGREE ROUND FROSTED ACRYLIC LENS, INTEGRAL 0-10V DIMMABLE DRIVER, AIRCRAFT CABLE SUSPENSION SYSTEM, WHITE FINISH.	SUSPENDED AT 9' AFF, UON.
S1E	LED	3500 K	5000 lm	MVOLT	30 W	4'-0"L INDUSTRIAL STRIP FIXTURE, 180-DEGREE ROUND FROSTED ACRYLIC LENS, INTEGRAL 0-10V DIMMABLE DRIVER, AIRCRAFT CABLE SUSPENSION SYSTEM, WHITE FINISH.	SUSPENDED AT 9' AFF, UON.
SL1	LED	4000 K	12181 lm	MVOLT	85 W	16"W x 22"L X 4"H AREA LIGHT FIXTURE, IP66 RATED, 7" ARM, INTEGRAL BI-LEVEL DIMMING MOTION SENSOR, TYPE 2R DISTRIBUTION, SINGLE POLE MOUNTED HEAD, B2-U0-G2 BUG RATING.	POLE MOUNTED AT 30' AFF.
SL2	LED	4000 K	6233 lm	MVOLT	44 W	16"W x 22"L X 4"H AREA LIGHT FIXTURE, IP66 RATED, 7" ARM, INTEGRAL BI-LEVEL DIMMING MOTION SENSOR, TYPE 2R DISTRIBUTION, SINGLE POLE MOUNTED HEAD, B1-U0-G1 BUG RATING, MOTION SENSOR FOR DIMMING OPERATION	POLE MOUNTED AT 30' AFF.
SL3	LED	4000 K	11610 lm	MVOLT	85 W	16"W x 22"L X 4"H AREA LIGHT FIXTURE, IP66 RATED, 7" ARM, INTEGRAL BI-LEVEL DIMMING MOTION SENSOR, TYPE 4W DISTRIBUTION, SINGLE POLE MOUNTED HEAD, B2-U0-G2 BUG RATING.	POLE MOUNTED AT 30' AFF.
SL4	LED	4000 K	12317 lm	MVOLT	85 W	16"W x 22"L X 4"H AREA LIGHT FIXTURE, IP66 RATED, 7" ARM, INTEGRAL BI-LEVEL DIMMING MOTION SENSOR, TYPE 5W DISTRIBUTION, SINGLE POLE MOUNTED HEAD, B4-U0-G2 BUG RATING.	POLE MOUNTED AT 30' AFF.
W1	LED	4000 K	2900 lm	MVOLT	25 W	12"W X 8"H X 3"D WALL PACK, IP66 RATED, INTEGRAL 0-10V DIMMABLE DRIVER, SINGLE CIRCUIT.	WALL
W1E	LED	4000 K	2900 lm	MVOLT	25 W	12"W X 8"H X 3"D WALL PACK, IP66 RATED, INTEGRAL 0-10V DIMMABLE DRIVER, SINGLE CIRCUIT.	WALL

GENERAL SHEET NOTES

1. LIGHT FIXTURES SHALL BE MINIMUM 80 CRI AND 4000K CCT, UON.
2. PROVIDE ALL LIGHT FIXTURES WITH INTEGRAL 0-10V DIMMING DRIVERS CAPABLE OF DIMMING DOWN TO 10% WITHOUT FLICKERING, NOISE, OR OTHER DEFECTS IN LIGHTING FUNCTIONALITY, UON.
3. CONTRACTOR SHALL VERIFY FUNCTIONALITY OF ALL DRIVERS WITH LIGHTING CONTROL SYSTEM.
4. WHERE EMERGENCY LIGHTS ARE INDICATED, CIRCUIT THROUGH BUILDING CENTRAL EMERGENCY LIGHTING INVERTERS. INVERTERS LOCATED IN MAIN ELECTRICAL ROOM 252 AND ELECTRICAL ROOM 136. UPON POWER FAILURE TO INDIVIDUAL ROOM, MULTIPLE ROOMS, OR WHOLE BUILDING, EMERGENCY LIGHT FIXTURE SHALL TURN ON TO 100% OF EMERGENCY LIGHT FIXTURE OUTPUT REGARDLESS OF LIGHT SWITCH POSITION OR ONBOARD OCCUPANCY SENSOR CONTROL. PROVIDE ANY ADDITIONAL DEVICES REQUIRED TO MEET THE REQUIREMENTS OF NFPA 101.
5. FIXTURES SHOWN ARE BASIS OF DESIGN FOR LIGHTING CALCULATIONS. CONTRACTOR MAY SELECT DIFFERENT FIXTURES BUT MUST SUBMIT LIGHTING DESIGN CALCULATIONS FOR APPROVAL TO ENSURE LIGHTING REQUIREMENTS PER UFC 3-350-01, SPECIFICATIONS/CONTRACT DOCUMENTATION, AND NFPA 101 ARE MET. FOR CALCULATIONS, LIGHT LOSS FACTOR MUST BE 0.8 AND REFLECTANCES MUST BE THE FOLLOWING: 80% FOR CEILINGS, 50% FOR WALLS, AND 20% FOR FLOORS.
6. ALL EXIT SIGNS SHALL BE UNSWITCHED AND FED FROM NORMAL LIGHTING CIRCUIT WITHIN ROOM. PROVIDE UL924 OVERRIDE DEVICE CONNECTED TO INDICATED EMERGENCY LIGHTING CIRCUIT FOR EMERGENCY POWER BACKUP.
7. REFER TO LIGHTING PLANS FOR FIXTURE MOUNTING HEIGHTS NOT INDICATED ON LIGHT FIXTURE SCHEDULE.
8. ALL FIXTURES MUST COMPLY WITH ENERGY STAR OR THE FEDERAL ENERGY MANAGEMENT PROGRAM (FEMP).
9. NO FORM OF WIRELESS OR BLUE TECHNOLOGY LIGHTING CONTROLS WILL BE ACCEPTED. ANY LIGHT FIXTURE OR CONTROL DEVICE WITH THAT CAPABILITY WILL BE REMOVED AND CONTRACTOR MUST REPLACE IN KIND.
10. WHERE AIRCRAFT CABLE IS INDICATED, PROVIDE MINIMUM 96" OF LENGTH AND ADJUSTABLE CAPABILITY. EXCESS TO BE FIELD CUT DOWN TO 12" OF EXCESS SLACK AFTER INSTALLATION AND FINAL PUNCH LIST.
11. FIXTURE TYPES WITH 'E' AT END OF NAME INDICATES FIXTURE IS EMERGENCY AND IS POWERED BY INVERTER.

Professional Engineer
I hereby certify that this plan, specification, or report was prepared by me or under my direct supervision and that I am a duly Licensed Professional Engineer under the laws of the state of Minnesota.
Signature:
Typed or Printed Name: DUGAN BRADLEY
Date: 07/23/25 License Number: 61869

US Army Corps of Engineers ®

MARK	DESCRIPTION	DATE
0	READY-TO-ADVERTISE (RTA) SUBMITTAL	JUL 2025

DESIGNED BY: D. BRADLEY
DRAWN BY: S. YUNKER
CHECKED BY: C. STRATTON
SUBMITTED BY: B. STREEBIN
SIZE: ANSI D
ISSUE DATE: JUL 2025
SOLICITATION NO.: W9127S25RA001
CONTRACT NO.: W9127S24T0007
FILE NAME: 165438_E_R22_1.rvt

US ARMY CORPS OF ENGINEERS
LITTLE ROCK DISTRICT
LITTLE ROCK, ARKANSAS

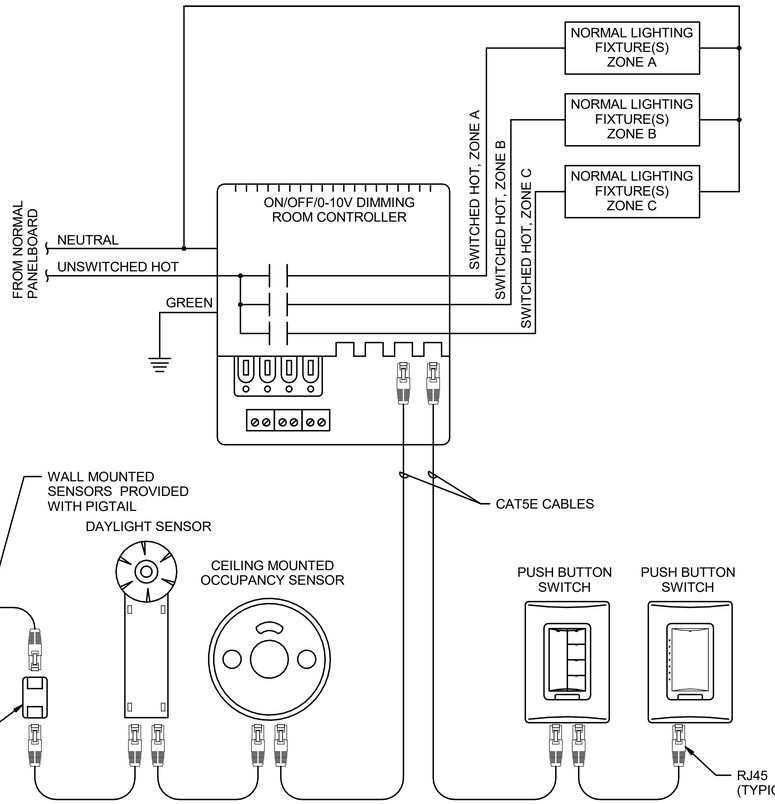
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KANSAS CITY, MO 64114
165438

F-35 SPECIAL ACCESS PROGRAM FACILITY
EBBING AIR NATIONAL GUARD BASE (ANGB), FORT SMITH, ARKANSAS

LIGHTING FIXTURE SCHEDULE

SHEET ID
EL610

READY-TO-ADVERTISE (RTA) SUBMITTAL

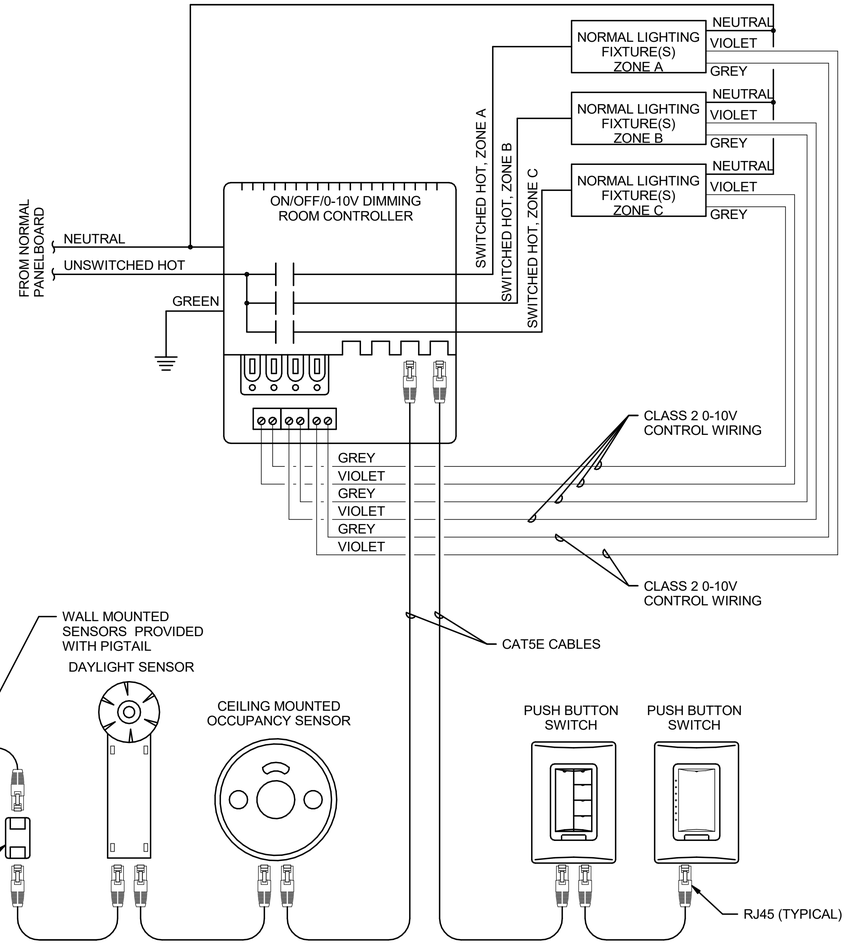


NOTES:

1. LIGHTING CONTROL CABLING SHALL BE PLENUM RATED. LIGHTING CONTROL CABLING JACKET COLOR MUST NOT BE THE SAME COLOR AS ANY OTHER LOW VOLTAGE SYSTEM.
2. LIGHTING CONTROL CABLING SHALL BE INSTALLED IN CONDUIT IN THE FOLLOWING LOCATIONS: BLOCK WALLS, GYPSUM PARTITION WALLS, EXPOSED CEILINGS, AND GYPSUM (HARD LID) CEILING AREAS.
3. OPEN CABLING MAY BE USED IN LAY-IN CEILING AREAS. CABLING SHALL BE SUSPENDED A MINIMUM OF 8 INCHES ABOVE CEILINGS BY CABLE SUPPORTS NO GREATER THAN 60 INCHES APART. CABLE SHALL NOT BE RUN THROUGH STRUCTURAL MEMBERS OR IN CONTACT WITH PIPES, DUCTS, OR OTHER POTENTIALLY DAMAGING ITEMS. PLACEMENT OF CABLE PARALLEL TO POWER CONDUCTORS SHALL BE AVOIDED WHERE POSSIBLE.
4. TYPICAL CONNECTIONS TO SWITCHES AND SENSORS ARE SHOWN IN THIS DETAIL. REFER TO FLOOR PLANS AND LIGHTING CONTROL SCHEDULE FOR CONTROL STRATEGIES IN EACH SPACE.
5. NO FORM OF WIRELESS OR BLUETOOTH TECHNOLOGY LIGHTING CONTROLS WILL BE ACCEPTED. ANY LIGHT FIXTURE OR CONTROL DEVICE WITH THAT CAPABILITY WILL BE REMOVED AND CONTRACTOR MUST REPLACE IN KIND.

A1 TYPICAL ROOM CONTROLLER WIRING DIAGRAM - ON/OFF ONLY

SCALE: NTS



NOTES:

1. LIGHTING CONTROL CABLING SHALL BE PLENUM RATED. LIGHTING CONTROL CABLING JACKET COLOR MUST NOT BE THE SAME COLOR AS ANY OTHER LOW VOLTAGE SYSTEM.
2. LIGHTING CONTROL CABLING SHALL BE INSTALLED IN CONDUIT IN THE FOLLOWING LOCATIONS: BLOCK WALLS, GYPSUM PARTITION WALLS, EXPOSED CEILINGS, AND GYPSUM (HARD LID) CEILING AREAS.
3. OPEN CABLING MAY BE USED IN LAY-IN CEILING AREAS. CABLING SHALL BE SUSPENDED A MINIMUM OF 8 INCHES ABOVE CEILINGS BY CABLE SUPPORTS NO GREATER THAN 60 INCHES APART. CABLE SHALL NOT BE RUN THROUGH STRUCTURAL MEMBERS OR IN CONTACT WITH PIPES, DUCTS, OR OTHER POTENTIALLY DAMAGING ITEMS. PLACEMENT OF CABLE PARALLEL TO POWER CONDUCTORS SHALL BE AVOIDED WHERE POSSIBLE.
4. TYPICAL CONNECTIONS TO SWITCHES AND SENSORS ARE SHOWN IN THIS DETAIL. REFER TO FLOOR PLANS AND LIGHTING CONTROL SCHEDULE FOR CONTROL STRATEGIES IN EACH SPACE.
5. NO FORM OF WIRELESS OR BLUETOOTH TECHNOLOGY LIGHTING CONTROLS WILL BE ACCEPTED. ANY LIGHT FIXTURE OR CONTROL DEVICE WITH THAT CAPABILITY WILL BE REMOVED AND CONTRACTOR MUST REPLACE IN KIND.

A10 TYPICAL ROOM CONTROLLER WIRING DIAGRAM - ON/OFF/DIMMING

SCALE: NTS

Professional Engineer

I hereby certify that this plan, specification, or report was prepared by me or under my direct supervision and that I am a duly Licensed Professional Engineer under the laws of the state of Minnesota.

Signature:

Typed or Printed Name: DUGAN BRADLEY

Date: 07/23/25 License Number: 61869

US Army Corps of Engineers ®

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LITTLE ROCK, ARKANSAS

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F-35: SPECIAL ACCESS PROGRAM FACILITY
EBBING AIR NATIONAL GUARD BASE (ANGB), FORT SMITH, ARKANSAS

LIGHTING CONTROL WIRING DIAGRAMS

SHEET ID

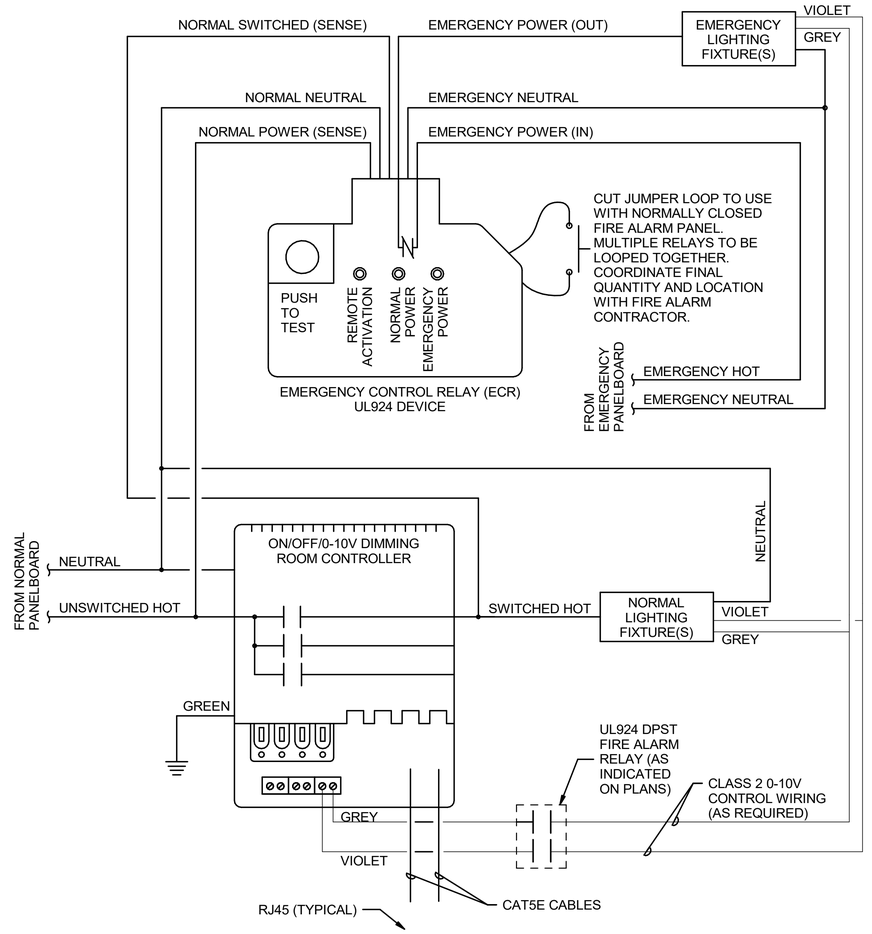
EL701

READY-TO-ADVERTISE (RTA) SUBMITTAL



SEQUENCE OF OPERATIONS: UPON LOSS OF NORMAL POWER, THE UL924 EMERGENCY SHUNT RELAY SHALL BYPASS THE TOGGLE SWITCH AND FORCE EMERGENCY FIXTURES "ON".

A3 TYPICAL EMERGENCY SHUNT RELAY WIRING DIAGRAM
SCALE: NTS



SEQUENCE OF OPERATIONS: UPON LOSS OF NORMAL POWER OR SIGNAL FROM THE FIRE ALARM SYSTEM, THE UL924 EMERGENCY CONTROL RELAY SHALL BYPASS THE ROOM CONTROLLER AND FORCE EMERGENCY FIXTURES "ON". UPON LOSS OF SIGNAL FROM THE FIRE ALARM SYSTEM, ALL EMERGENCY FIXTURES SHALL TURN ON TO 100% OF THEIR EMERGENCY OUTPUT.

NOTES:

1. FOR SIMPLICITY, ONLY ONE ZONE WIRING IS SHOWN. WHERE MULTIPLE ZONES ARE INDICATED WITHIN A SPACE WITH EMERGENCY, WIRING AND EMERGENCY CONTROL RELAY (AS REQUIRED) SHALL BE DUPLICATED.
2. PROVIDE A DPST FIRE ALARM RELAY FOR ALL CONTROL WIRING CIRCUITS CONTROLLING DIMMING OF EMERGENCY FIXTURES. FIRE ALARM SYSTEM SHALL HOLD SIGNAL TO NORMALLY OPEN DPST RELAY AT ALL TIMES EXCEPT WHEN A FIRE EVENT IS OCCURING. UPON SIGNAL LOSS FROM THE FIRE ALARM SYSTEM, THE NORMALLY OPEN DPST RELAY WILL NO LONGER RECEIVE POWER AND WILL OPEN THE CONTROL WIRING CONNECTION FORCING ALL FIXTURES ON CIRCUIT TO 100% OUTPUT. MULTIPLE RELAYS MAY BE LOOPED TOGETHER. QUANTITIY OF RELAYS ON A SINGLE LOOP SHALL NOT EXCEED MANUFACTURER RECOMMENDATIONS.
3. LIGHTING CONTROL CABLING SHALL BE PLENUM RATED. LIGHTING CONTROL CABLING JACKET COLOR MUST NOT BE THE SAME COLOR AS ANY OTHER LOW VOLTAGE SYSTEM.
4. LIGHTING CONTROL CABLING SHALL BE INSTALLED IN CONDUIT IN THE FOLLOWING LOCATIONS: BLOCK WALLS, GYPSUM PARTITION WALLS, EXPOSED CEILINGS, AND GYPSUM (HARD LID) CEILING AREAS.
5. OPEN CABLING MAY BE USED IN LAY-IN CEILING AREAS. CABLING SHALL BE SUSPENDED A MINIMUM OF 8 INCHES ABOVE CEILINGS BY CABLE SUPPORTS NO GREATER THAN 60 INCHES APART. CABLE SHALL NOT BE RUN THROUGH STRUCTURAL MEMBERS OR IN CONTACT WITH PIPES, DUCTS, OR OTHER POTENTIALLY DAMAGING ITEMS. PLACEMENT OF CABLE PARALLEL TO POWER CONDUCTORS SHALL BE AVOIDED WHERE POSSIBLE.
6. NO FORM OF WIRELESS OR BLUETOOTH TECHNOLOGY LIGHTING CONTROLS WILL BE ACCEPTED. ANY LIGHT FIXTURE OR CONTROL DEVICE WITH THAT CAPABILITY WILL BE REMOVED AND CONTRACTOR MUST REPLACE IN KIND.

A11 TYPICAL ROOM CONTROLLER WITH EMERGENCY WIRING DIAGRAM
SCALE: NTS

Professional Engineer
I hereby certify that this plan, specification, or report was prepared by me or under my direct supervision and that I am a duly Licensed Professional Engineer under the laws of the state of Minnesota.
Signature:
Typed or Printed Name: DUGAN BRADLEY
Date: 07/23/25 License Number: 61869

US Army Corps of Engineers ®

MARK	DESCRIPTION	DATE
0	READY-TO-ADV/ERTISE (RTA) SUBMITTAL	JUL 2025

DESIGNED BY: D. BRADLEY
DRAWN BY: S. YUNKER
CHECKED BY: S. STRATTON
SUBMITTED BY: B. STREEBIN
SIZE: ANSI D
ISSUE DATE: JUL 2025
SOLICITATION NO.: W9127S25RA001
CONTRACT NO.: W9127S24F0007
FILE NAME: 16438_E_R22_1.rvt

US ARMY CORPS OF ENGINEERS
LITTLE ROCK DISTRICT
LITTLE ROCK, ARKANSAS

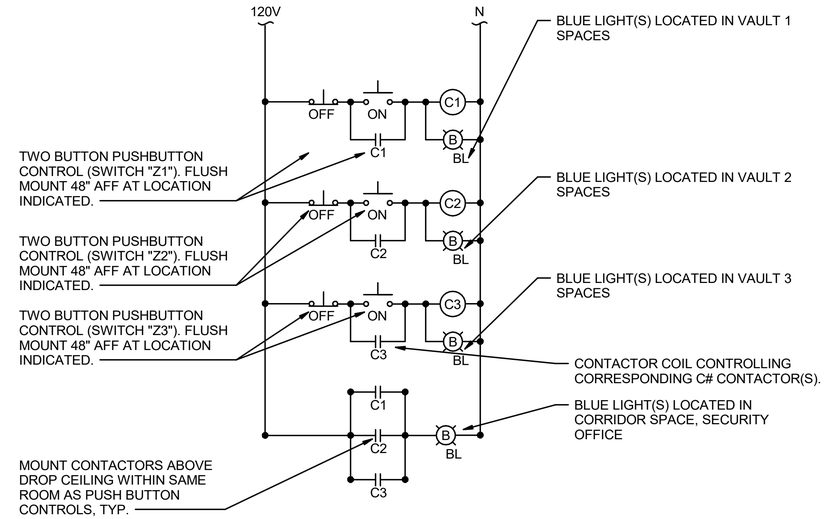
BURNS AND McDONNELL
9400 WARD PARKWAY,
KANSAS CITY, MO 64114
165438

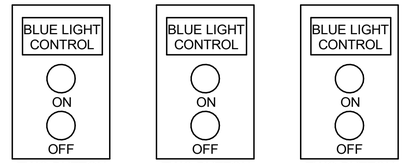
F-35 SPECIAL ACCESS PROGRAM FACILITY
EBBING AIR NATIONAL GUARD BASE (ANGB), FORT SMITH, ARKANSAS

LIGHTING CONTROL WIRING DIAGRAMS

SHEET ID
EL702

READY-TO-ADVERTISE (RTA) SUBMITTAL





TWO BUTTON CONTROL DETAIL SWITCH "Z1"

TWO BUTTON CONTROL DETAIL SWITCH "Z2"

TWO BUTTON CONTROL DETAIL SWITCH "Z3"

ZONE SCHEDULE

Z1: SECURE CORRIDORS/SECURITY OFFICE, VAULT 1
Z2: SECURE CORRIDORS/SECURITY OFFICE, VAULT 2
Z3: SECURE CORRIDORS/SECURITY OFFICE, VAULT 3

NOTES:

1. REFER TO LIGHTING PLANS FOR SWITCH LOCATIONS.
2. SEQUENCE OF OPERATIONS DESCRIPTION:
   - SWITCH "Z#" ON BUTTON IS PRESSED. BLUE LIGHTS IN CORRESPONDING AREA ARE TURNED ON.
     - SECURE CORRIDOR LIGHTS MUST TURN ON IF ANY OF THE 3 SWITCHES IS TURNED ON. SECURE CORRIDOR LIGHTS MUST TURN OFF ONLY WHEN ALL 3 SWITCHES ARE TURNED OFF.

A10 BLUE SECURITY LIGHTING CONTROL DIAGRAM

SCALE: NTS

Professional Engineer
I hereby certify that this plan, specification, or report was prepared by me or under my direct supervision and that I am a duly Licensed Professional Engineer under the laws of the state of Minnesota.

Signature: _____

Typed or Printed Name: DUGAN BRADLEY

Date: 07/23/25 License Number: 61869

US Army Corps of Engineers ®

MARK	DESCRIPTION	DATE
0	READY-TO-ADV/ERTISE (RTA) SUBMITTAL	JUL 2025

ISSUE DATE: JUL 2025
SOLICITATION NO.: W912725RA001
CONTRACT NO.: W912724F0007

DESIGNED BY: D. BRADLEY
DRAWN BY: S. YUNKER
CHECKED BY: C. STRATTON
SUBMITTED BY: B. STREEBIN
SIZE: ANSI D
FILE NAME: 165438_E_R22_I.rvt

US ARMY CORPS OF ENGINEERS
LITTLE ROCK DISTRICT
LITTLE ROCK, ARKANSAS

BURNS AND McDONNELL
9400 WARD PARKWAY,
KANSAS CITY, MO 64114
165438

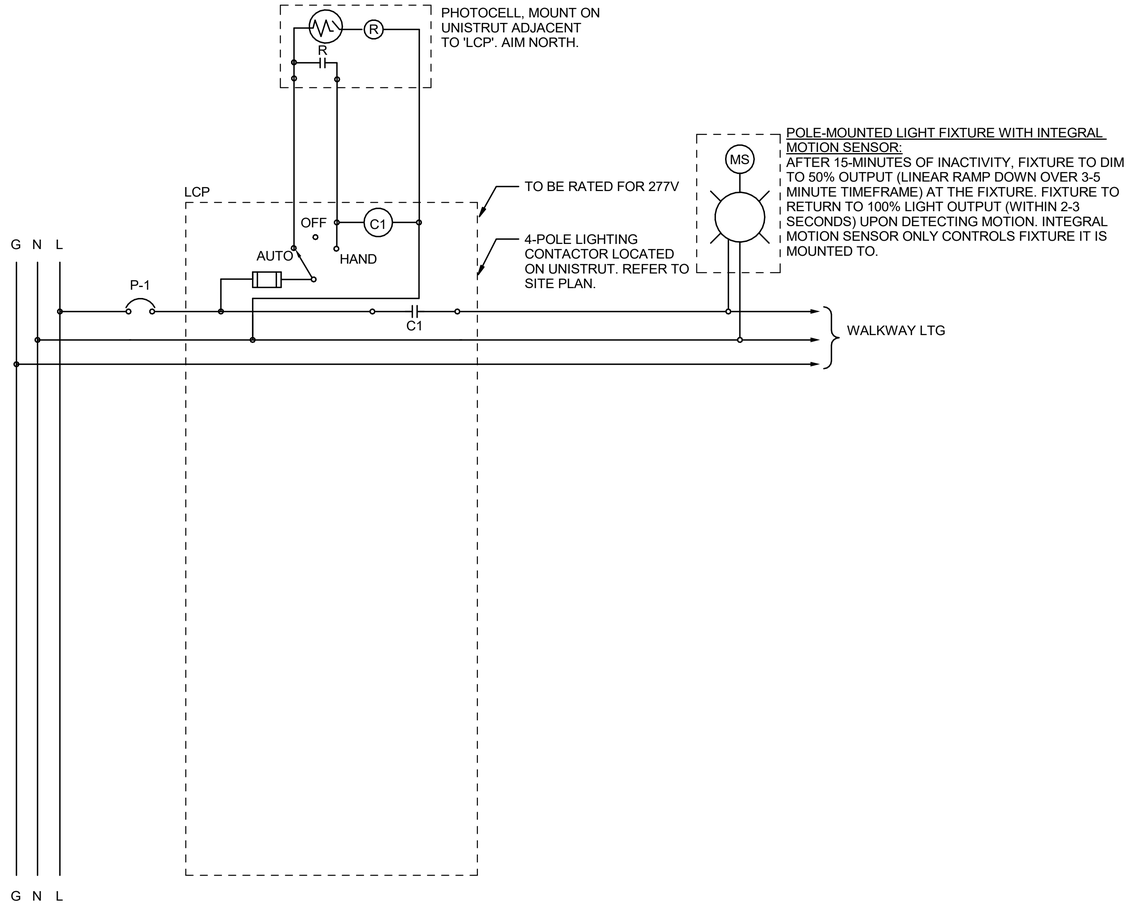
F-35, SPECIAL ACCESS PROGRAM FACILITY
EBBING AIR NATIONAL GUARD BASE (ANGB), FORT SMITH, ARKANSAS

LIGHTING CONTROL WIRING DIAGRAMS

SHEET ID

EL703

READY-TO-ADVERTISE (RTA) SUBMITTAL



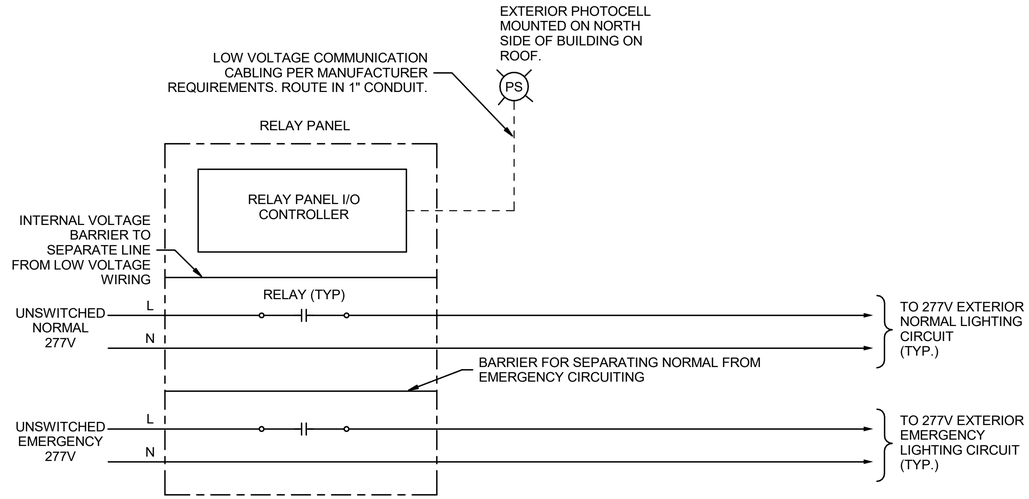
CONTROL SCHEME:

- EXTERIOR LIGHTING CONTROLS TO FUNCTION ACCORDING TO THE FOLLOWING:
  1. DAYLIGHT HOURS: ALL EXTERIOR FIXTURES ARE IN THE 'OFF' POSITION AS DETERMINED BY THE EXTERIOR PHOTOCELL.
  2. DUSK: ALL EXTERIOR FIXTURES ARE IN THE 'ON' POSITION AS DETERMINED BY THE EXTERIOR PHOTOCELL.
     A. WHILE LIGHTS ARE 'ON' EACH FIXTURE BI-LEVEL DIMMING MOTION SENSOR TO CONTROL THE FIXTURE AS DESCRIBED IN THE DETAIL ABOVE.
  3. DAWN: ALL EXTERIOR FIXTURES ARE IN THE 'OFF' POSITION (ALL RELAYS OPEN) AS DETERMINED BY THE EXTERIOR PHOTOCELL.

NOTES:

1. PROVIDE MINIMUM 25% SPARE RELAYS (NOT SHOWN) FOR FUTURE EXPANSION.
2. SEE ELECTRICAL PANELBOARD SCHEDULES ON EP600 SERIES SHEETS.

A1 EXTERIOR LIGHTING CONTACTOR LCP1 SCHEMATIC
SCALE: NTS



CONTROL SCHEME:

- PROGRAM EXTERIOR LIGHTING CONTROLS TO ACHIEVE THE FOLLOWING:
  1. DAYLIGHT HOURS: ALL EXTERIOR FIXTURES ARE IN THE 'OFF' POSITION (ALL RELAYS OPEN) AS DETERMINED BY THE EXTERIOR PHOTOCELL.
  2. DUSK: ALL EXTERIOR FIXTURES ARE IN THE 'ON' POSITION (ALL RELAYS CLOSED) AS DETERMINED BY THE EXTERIOR PHOTOCELL.
     A. WHILE LIGHTS ARE 'ON' EACH FIXTURE BI-LEVEL DIMMING MOTION SENSOR TO CONTROL THE FIXTURE AS DESCRIBED IN THE DETAIL ABOVE.
  3. DAWN: ALL EXTERIOR FIXTURES ARE IN THE 'OFF' POSITION (ALL RELAYS OPEN) AS DETERMINED BY THE EXTERIOR PHOTOCELL.

NOTES:

1. THIS SCHEMATIC IS DIAGRAMMATIC AND REPRESENTS THE INTENDED CONTROL FUNCTIONS. NOT ALL WIRING OR RELAYS ARE SHOWN. FURNISH AND INSTALL (1) 20A/120V/14kAIC RATED MECHANICALLY-HELD RELAY FOR EACH HOMERUN INDICATED ON DETAIL. RELAYS MUST BE SUITABLE FOR LED CIRCUIT CONTROL.
2. LIGHTING CONTROL PANEL TO CONTAIN INTEGRAL 365/7-DAY TIMECLOCK WITH MINIMUM 12 PROGRAMMABLE EVENTS PER DAY AND INTEGRATE WITH EXTERIOR PHOTOCELL CONTROL. PANEL TO RETAIN PROGRAMMING (DATE, TIME, SCHEDULES, ETC.) UPON LOSS OF NORMAL POWER FOR UP TO 30 DAYS VIA BACKUP POWER MEANS PROVIDED WITH THE PANEL.
3. PROVIDE MINIMUM 25% SPARE RELAYS (NOT SHOWN) FOR FUTURE EXPANSION.
4. REFER TO POWER PLANS FOR PANEL LOCATION.
5. PROVIDE UNSWITCHED 120V OR 277V NORMAL POWER TO PANEL CONTROL UNIT FROM NEAREST BRANCH CIRCUIT IN CABINET.
6. OVERRIDE PUSHBUTTONS: PROVIDE LOW VOLTAGE MOMENTARY PUSHBUTTON MOUNTED ADJACENT TO LIGHTING CONTROL PANEL. PUSHBUTTON TO PROVIDE MANUAL OVERRIDE CONTROL ALL EXTERIOR FIXTURES ON/OFF WHEN PRESSED.
7. FOR CIRCUITS CONNECTED TO CENTRAL LIGHTING INVERTER OUTPUT BREAKERS: PROVIDE BARRIER TO SEPARATE NORMAL CIRCUITS FROM EMERGENCY CIRCUITS PER NEC 700. PROVIDE UL924 LISTED BYPASS SHUNT RELAYS FOR THESE CIRCUITS. UPON LOSS OF NORMAL UTILITY POWER, THESE RELAYS TO AUTOMATICALLY CLOSE AND TURN ON ALL INDICATED EXTERIOR EMERGENCY LIGHTS.
8. PHOTOCELL MUST FAIL ALL RELAYS IN THE 'ON' POSITION (RELAYS CLOSED).
9. REFER TO A8/EP402 FOR PANEL 1LCP LOCATION.

A10 EXTERIOR LIGHTING CONTROL PANEL 1LCP SCHEMATIC
SCALE: NTS

Professional Engineer
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Signature:
Typed or Printed Name: DUGAN BRADLEY
Date: 07/23/25 License Number: 61869

US Army Corps of Engineers ®

MARK	DESCRIPTION	DATE
0	READY-TO-ADV/ERTISE (RTA) SUBMITTAL	JUL 2025

DESIGNED BY: D. BRADLEY
DRAWN BY: S. YUNKER
CHECKED BY: C. STRATTON
SUBMITTED BY: B. STREEBIN
SIZE: ANSI D
ISSUE DATE: JUL 2025
SOLICITATION NO.: W912T525RA001
CONTRACT NO.: W912T524F0007
FILE NAME: 16438_E_R22_r.rvt

US ARMY CORPS OF ENGINEERS
LITTLE ROCK DISTRICT
LITTLE ROCK, ARKANSAS

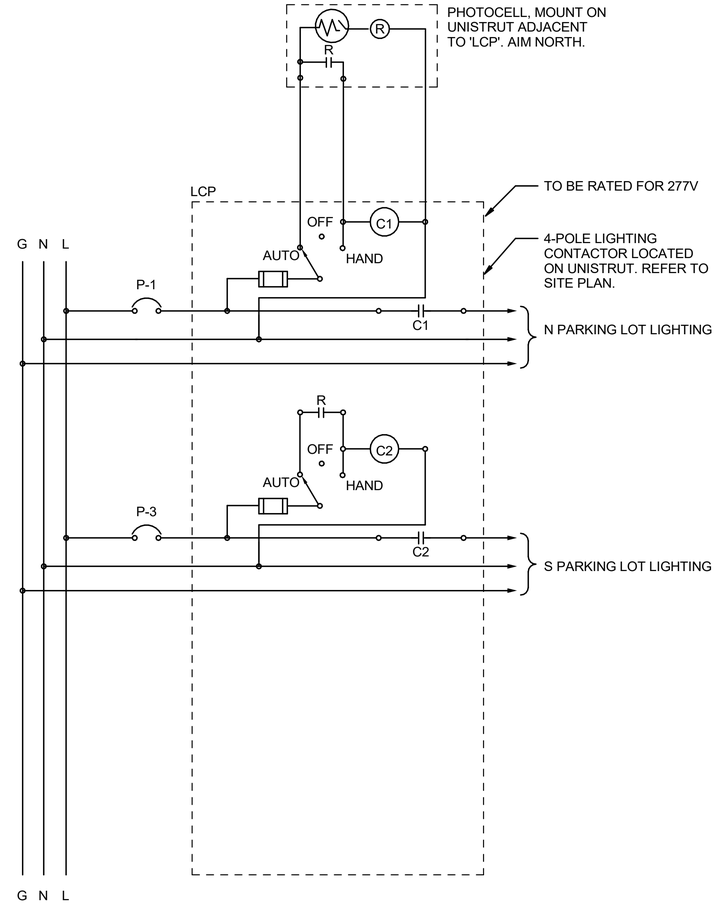
BURNS AND McDONNELL
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16438

F-35: SPECIAL ACCESS PROGRAM FACILITY
EBBING AIR NATIONAL GUARD BASE (ANGB), FORT SMITH, ARKANSAS

LIGHTING CONTROL WIRING DIAGRAMS

SHEET ID
EL704

READY-TO-ADVERTISE (RTA) SUBMITTAL



CONTROL SCHEME:

- EXTERIOR LIGHTING CONTROLS TO FUNCTION ACCORDING TO THE FOLLOWING:
  1. DAYLIGHT HOURS: ALL EXTERIOR FIXTURES ARE IN THE 'OFF' POSITION AS DETERMINED BY THE EXTERIOR PHOTOCELL.
  2. DUSK: ALL EXTERIOR FIXTURES ARE IN THE 'ON' POSITION AS DETERMINED BY THE EXTERIOR PHOTOCELL.
     A. WHILE LIGHTS ARE 'ON' EACH FIXTURE BI-LEVEL DIMMING MOTION SENSOR TO CONTROL THE FIXTURE AS DESCRIBED IN THE DETAIL ABOVE.
  3. DAWN: ALL EXTERIOR FIXTURES ARE IN THE 'OFF' POSITION (ALL RELAYS OPEN) AS DETERMINED BY THE EXTERIOR PHOTOCELL.

NOTES:

1. PROVIDE MINIMUM 25% SPARE RELAYS (NOT SHOWN) FOR FUTURE EXPANSION.
2. SEE ELECTRICAL PANELBOARD SCHEDULES ON EP600 SERIES SHEETS.

A12 EXTERIOR LIGHTING CONTACTOR LCP2 SCHEMATIC
SCALE: NTS

Professional Engineer
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SIZE: ANSI D
ISSUE DATE: JUL 2025
SOLICITATION NO.: W9127S25RA001
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US ARMY CORPS OF ENGINEERS
LITTLE ROCK DISTRICT
LITTLE ROCK, ARKANSAS

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F-35 SPECIAL ACCESS PROGRAM FACILITY
EBBING AIR NATIONAL GUARD BASE (ANGB), FORT SMITH, ARKANSAS

LIGHTING CONTROL WIRING DIAGRAMS

SHEET ID
EL705

READY-TO-ADVERTISE (RTA) SUBMITTAL

ROOM SCHEDULE	
NAME	NUMBER
VESTIBULE	101
CORRIDOR	102
VESTIBULE	103
LOBBY	104
STEP DESK	105
CORRIDOR	106
SCHEDULING & TRAINING	107
DO	108
SARM	109
SARM ADMIN	110
STAN / EVAL	111
AFE MAINTENANCE	112
HELMET ALIGNMENT	113
LIFE SUPPORT	114
MAINTENANCE OFFICE	115
PILOT LOCKER ROOM	116
SHOWER	117

ROOM SCHEDULE	
NAME	NUMBER
WOMEN'S RESTROOM	118
MEN'S RESTROOM	119
HALL	121
CORRIDOR	122
ELECTRICAL CLOSET	123
CORRIDOR	124
BREAK ROOM	125
MAINT DEBRIEF	126
MAIN COMM ROOM	127
UNISEX RESTROOM	128
PRINT / COPY	129
MAN TRAP	131
CORRIDOR	132
SECURE COMM ROOM	133
STORAGE	134
SECURITY	135
SECURE ELEC ROOM	136

ROOM SCHEDULE	
NAME	NUMBER
STORAGE	137
MAN TRAP 1	141
VAULT 1 MISSION PLANNING	142
VAULT 1 ALIS / ODIN	143
VAULT 1 SERVER	144
VAULT 1 LG BRIEF	145
VAULT 1 SM BRIEF	146
VAULT 1 SM BRIEF	147
MAN TRAP 2	151
VAULT 2 MISSION PLANNING	152
VAULT 2 ALIS / ODIN	153
VAULT 2 SERVER	154
VAULT 2 LG BRIEF	155
VAULT 2 SM BRIEF	156
VAULT 2 SM BRIEF	157
MAN TRAP 3	161
VAULT 3 MISSION PLANNING	162

ROOM SCHEDULE	
NAME	NUMBER
VAULT 3 SM BRIEF	163
VAULT 3 SM BRIEF	164
VAULT 3 LG BRIEF	165
VAULT 3 ALIS / ODIN	166
VAULT 3 SERVER	167
MECHANICAL ROOM	171
ELECTRICAL ROOM	172
CORRIDOR	201
COMMAND SUPPORT STAFF	202
ACTIVITY PROGRAM COORDINATOR (APC) / RESOURCE ADVISOR (RA)	203
SQUADRON COMMANDER OFFICE	204
CONFERENCE ROOM	205
INTERNATIONAL MILITARY STUDENT OFFICER (IMSO)	206

ROOM SCHEDULE	
NAME	NUMBER
SNR M-1	207
SNR M-2	208
SNR M-3	209
RA	211
COPY / STORAGE	212
STUDENT COLLAB	213
LG BRIEFING RM	214
AV	215
COMM	216
STUDENT LOCKERS	217
WOMEN'S RESTROOM	218
MEN'S RESTROOM	219
JANITOR'S CLOSET	221
STUDENT WORKSTATIONS	222
INSTRUCTOR WORKSTATIONS	223
MISSION OPS SUPPORT	224
CORRIDOR	225

ROOM SCHEDULE	
NAME	NUMBER
IP M-1	226
IP M-2	227
CORRIDOR	228
BREAK ROOM	229
STORAGE	231
FLIGHT MEDICAL OFFICE	232
STORAGE	233
MOTHER'S ROOM	234
IP M-6	235
IP M-5	236
IP M-4	237
CORRIDOR	238
IP M-3	239
TEAM	241
ROOF ACCESS	242
MECHANICAL	251
ELECTRICAL	252
FIRE	253



A5 FIRST FLOOR POWER PLAN - OVERALL

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

0 8' 16' 32'

SCALE IN FEET

GENERAL SHEET NOTES

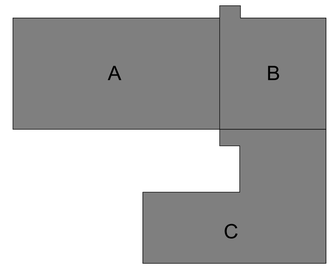
1. REFER TO SHEETS E-001 AND E-002 FOR LEGEND, GENERAL NOTES, AND ABBREVIATIONS.
2. ALL CONDUCTORS MUST BE ROUTED WITHIN CONDUIT AND ALL CONDUIT MUST BE ROUTED CONCEALED UNLESS OTHERWISE NOTED.
3. ALL EQUIPMENT MUST BE FIELD MARKED TO WARN QUALIFIED PERSONS OF POTENTIAL ELECTRIC ARC FLASH HAZARD IN ACCORDANCE WITH NFPA 70 AND 70E.
4. COORDINATE MECHANICAL EQUIPMIENT ELECTRICAL CONNECTIONS WITH MECHANICAL TRADE AND PROJECT SPECIFIC EQUIPMENT.
5. PROVIDE A GREEN CONTINUOUS INSULATED EQUIPMENT GROUNDING CONDUCTOR FOR ALL CIRCUITS INSTALLED IN CONDUIT AND RACEWAYS.
6. ALL CONDUCTORS MUST BE COPPER.
7. COORDINATE PENETRATIONS THROUGH FIRE RATED WALLS WITH ARCHITECTURAL FIRESTOPPING DETAILS AND SPECIFICATIONS.
8. ALL FLOOR MOUNTED ELECTRICAL EQUIPMENT MUST BE MOUNTED ON A 4" TALL CONCRETE EQUIPMENT PAD IN ACCORDANCE WITH STRUCTURAL DETAILS AND SPECIFICATIONS.

SHEET KEYNOTES

1. UTILITY TRANSFORMER. OG&E WILL PROVIDE AND INSTALL THE FOLLOWING
   - A. MEDIUM VOLTAGE CONNECTION UPSTREAM OF TRANSFORMER
   - B. TRANSFORMER
   - C. TRANSFORMER PAD
   - D. PRIMARY CONNECTION TO TRANSFORMER
   - E. CURRENT TRANSFORMER AND METER WITHIN TRANSFORMER
   - F. SECONDARY CONDUIT STUB OUTS 2'-0" PAST TRANSFORMER PAD
   - G. TERMINATE SECONDARY CONDUCTORS TO UTILITY TRANSFORMER (WILL NOT PROVIDE SECONDARY SERVICE CONDUCTORS)
2. PROVIDE 2" EMPTY CONDUIT FROM FIRE RISER ROOM TO ANTENNA TOWER STRUCTURE FOR FIRE ALARM CABLE INSTALLATION. STUB UP AND CAP CONDUIT 6" AFG AT BOTH ENDS.

Professional Engineer
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Signature:
Typed or Printed Name: DUGAN BRADLEY
Date: 07/23/25 License Number: 61869

KEY PLAN



US Army Corps of Engineers ®

MARK	DESCRIPTION	DATE
0	READY-TO-ADV/ERTISE (RTA) SUBMITTAL	JUL 2025

DESIGNED BY: D. BRADLEY
DRAWN BY: S. YUNKER
CHECKED BY: C. STRATTON
SUBMITTED BY: B. STREEBIN
SIZE: ANSI D
ISSUE DATE: JUL 2025
SOLICITATION NO.: W912735RA001
CONTRACT NO.: W912DS24F0007
FILE NAME: 16438_E_R22_1.rvt

US ARMY CORPS OF ENGINEERS
LITTLE ROCK DISTRICT
LITTLE ROCK, ARKANSAS

BURNS AND McDONNELL
9400 WARD PARKWAY,
KANSAS CITY, MO 64114
165438

F-35; SPECIAL ACCESS PROGRAM FACILITY
EBBING AIR NATIONAL GUARD BASE (ANGB), FORT SMITH, ARKANSAS

FIRST FLOOR POWER PLAN - OVERALL

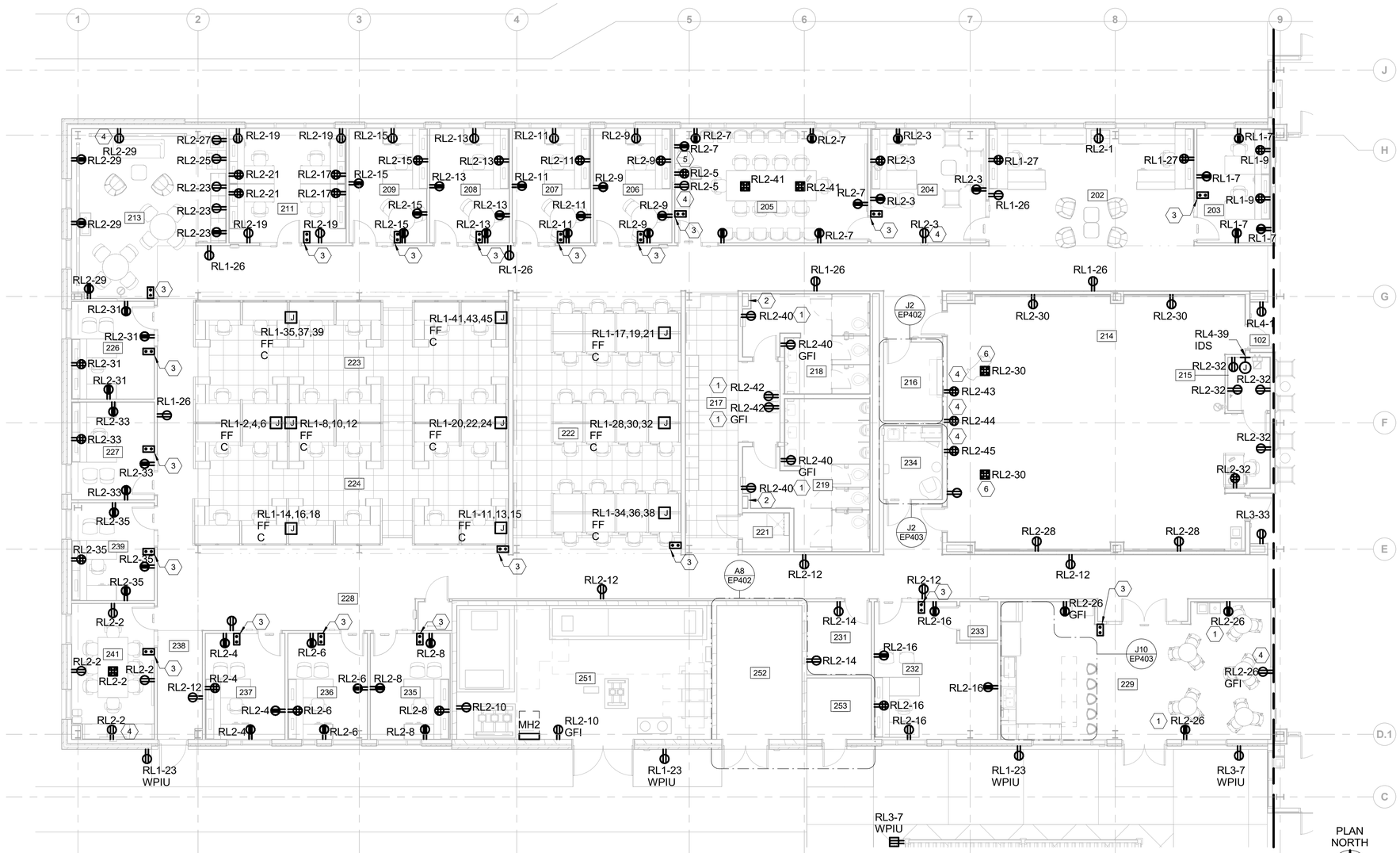
SHEET ID
EP010

READY-TO-ADVERTISE (RTA) SUBMITTAL

ROOM SCHEDULE - AREA A	
NAME	NUMBER
COMMAND SUPPORT STAFF	202
ACTIVITY PROGRAM COORDINATOR (APC) / RESOURCE ADVISOR (RA)	203
SQUADRON COMMANDER OFFICE	204
CONFERENCE ROOM	205
INTERNATIONAL MILITARY STUDENT OFFICER (IMSO)	206
SNR M-1	207
SNR M-2	208
SNR M-3	209
RA	211
COPY / STORAGE	212
STUDENT COLLAB	213

ROOM SCHEDULE - AREA A	
NAME	NUMBER
LG BRIEFING RM	214
AV	215
COMM	216
STUDENT LOCKERS	217
WOMEN'S RESTROOM	218
MEN'S RESTROOM	219
JANITOR'S CLOSET	221
STUDENT WORKSTATIONS	222
INSTRUCTOR WORKSTATIONS	223
MISSION OPS SUPPORT	224
CORRIDOR	225
IP M-1	226
IP M-2	227
CORRIDOR	228

ROOM SCHEDULE - AREA A	
NAME	NUMBER
BREAK ROOM	229
STORAGE	231
FLIGHT MEDICAL OFFICE	232
STORAGE	233
MOTHER'S ROOM	234
IP M-6	235
IP M-5	236
IP M-4	237
CORRIDOR	238
IP M-3	239
TEAM	241
MECHANICAL	251
ELECTRICAL	252
FIRE	253



PLAN NORTH

0 4' 8' 16'
SCALE IN FEET

A1 FIRST FLOOR POWER PLAN - AREA A
SCALE: 1/8" = 1'-0"

GENERAL SHEET NOTES

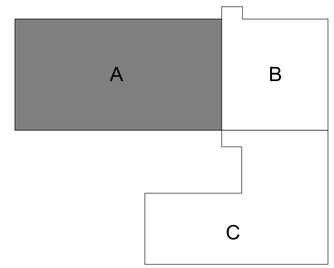
1. REFER TO SHEETS E-001 AND E-002 FOR LEGEND, GENERAL NOTES, AND ABBREVIATIONS.
2. ALL CONDUCTORS MUST BE ROUTED WITHIN CONDUIT AND ALL CONDUIT MUST BE ROUTED CONCEALED UNLESS OTHERWISE NOTED.
3. ALL EQUIPMENT MUST BE FIELD MARKED TO WARN QUALIFIED PERSONS OF POTENTIAL ELECTRIC ARC FLASH HAZARD IN ACCORDANCE WITH NFPA 70 AND 70E.
4. COORDINATE MECHANICAL EQUIPMIENT ELECTRICAL CONNECTIONS WITH MECHANICAL TRADE AND PROJECT SPECIFIC EQUIPMENT.
5. PROVIDE A GREEN CONTINUOUS INSULATED EQUIPMENT GROUNDING CONDUCTOR FOR ALL CIRCUITS INSTALLED IN CONDUIT AND RACEWAYS.
6. ALL CONDUCTORS MUST BE COPPER.
7. COORDINATE PENETRATIONS THROUGH FIRE RATED WALLS WITH ARCHITECTURAL FIRESTOPPING DETAILS AND SPECIFICATIONS.
8. ALL FLOOR MOUNTED ELECTRICAL EQUIPMENT MUST BE MOUNTED ON A 4" TALL CONCRETE EQUIPMENT PAD IN ACCORDANCE WITH STRUCTURAL DETAILS AND SPECIFICATIONS.

SHEET KEYNOTES

1. RECEPTACLES MUST BE CIRCUITED DOWNSTREAM OF GFI RECEPTACLE ON THIS CIRCUIT SO AS TO HAVE GFI PROTECTION.
2. CHASE TO RAISED ACCESS FLOOR. ALL CONDUITS SERVING SYSTEMS FURNITURE ON RAISED FLOOR MUST BE ROUTED THROUGH CHASES.
3. CONTROLLED RECEPTACLE OVERRIDE SWITCH. REFER TO SHEET EP502 FOR MORE INFORMATION.
4. MOUNT RECEPTACLE WITHIN A/V MULTI-SERVICE BOX. REFER TO TA SERIES SHEETS FOR MORE INFORMATION. COORDINATE WITH A/V BOX INSTALLER.
5. MOUNT RECEPTACLE BEHIND A/V CREDENZA IN MILLWORK. REFER TO TA SERIES SHEETS FOR MORE INFORMATION. COORDINATE WITH A/V BOX INSTALLER.
6. MOUNT RECEPTACLE IN FLOORBOX. REFER TO TA SERIES SHEETS FOR MORE INFORMATION. COORDINATE WITH A/V FLOORBOX INSTALLER.

Professional Engineer
I hereby certify that this plan, specification, or report was prepared by me or under my direct supervision and that I am a duly Licensed Professional Engineer under the laws of the state of Minnesota.
Signature:
Typed or Printed Name: DUGAN BRADLEY
Date: 07/23/25 License Number: 61869

KEY PLAN



US Army Corps of Engineers ®

MARK	DESCRIPTION	DATE
0	READY-TO-ADVERTISE (RTA) SUBMITTAL	JUL 2025

US ARMY CORPS OF ENGINEERS
LITTLE ROCK DISTRICT
LITTLE ROCK, ARKANSAS

BURNS AND McDONNELL
9400 WARD PARKWAY,
KANSAS CITY, MO 64114
165438

DESIGNED BY:	D. BRADLEY
DRAWN BY:	S. YUNKER
CHECKED BY:	S. STRATTON
SUBMITTED BY:	B. STREEBIN
SIZE:	ANSI D
ISSUE DATE:	JUL 2025
SOLICITATION NO.:	W912T5-25-RA001
CONTRACT NO.:	W912T5-24-T0007
FILE NAME:	165438_E_R22_1.rvt

F-35 SPECIAL ACCESS PROGRAM FACILITY
EBBING AIR NATIONAL GUARD BASE (ANGB), FORT SMITH, ARKANSAS

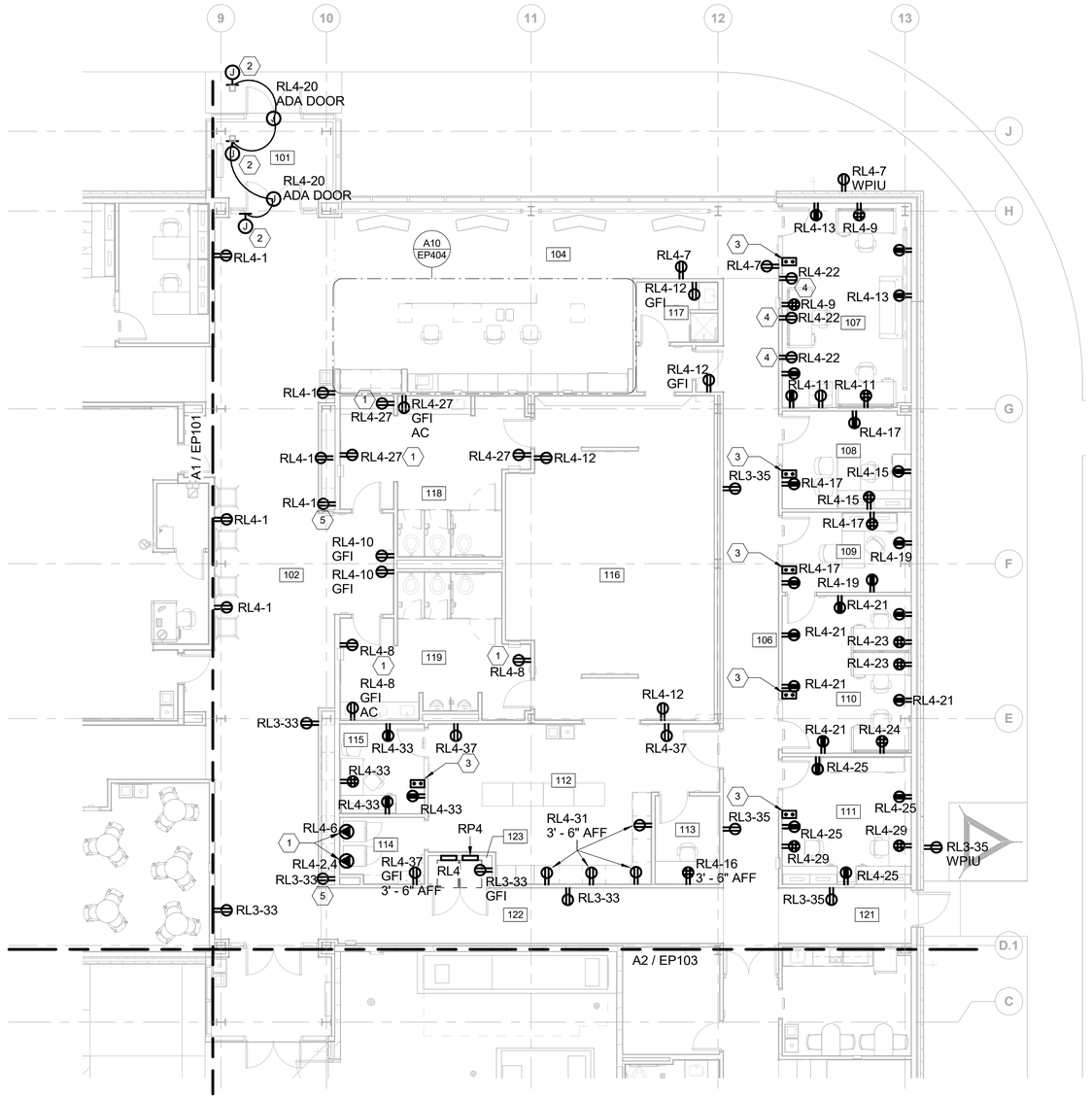
FIRST FLOOR POWER PLAN - AREA A

SHEET ID
EP101

READY-TO-ADVERTISE (RTA) SUBMITTAL

ROOM SCHEDULE - AREA B	
NAME	NUMBER
VESTIBULE	101
CORRIDOR	102
LOBBY	104
STEP DESK	105
CORRIDOR	106
SCHEDULING & TRAINING	107
DO	108
SARM	109
SARM ADMIN	110
STAN / EVAL	111
AFE MAINTENANCE	112

ROOM SCHEDULE - AREA B	
NAME	NUMBER
HELMET ALIGNMENT	113
LIFE SUPPORT	114
MAINTENANCE OFFICE	115
PILOT LOCKER ROOM	116
SHOWER	117
WOMEN'S RESTROOM	118
MEN'S RESTROOM	119
HALL	121
CORRIDOR	122
ELECTRICAL CLOSET	123



PLAN NORTH

A5 FIRST FLOOR POWER PLAN - AREA B

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

0 4' 8' 16'

SCALE IN FEET

GENERAL SHEET NOTES

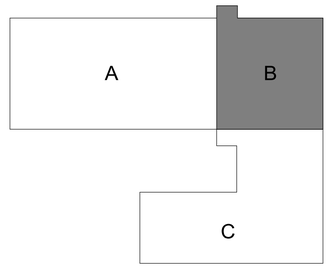
1. REFER TO SHEETS E-001 AND E-002 FOR LEGEND, GENERAL NOTES, AND ABBREVIATIONS.
2. ALL CONDUCTORS MUST BE ROUTED WITHIN CONDUIT AND ALL CONDUIT MUST BE ROUTED CONCEALED UNLESS OTHERWISE NOTED.
3. ALL EQUIPMENT MUST BE FIELD MARKED TO WARN QUALIFIED PERSONS OF POTENTIAL ELECTRIC ARC FLASH HAZARD IN ACCORDANCE WITH NFPA 70 AND 70E.
4. COORDINATE MECHANICAL EQUIPMIENT ELECTRICAL CONNECTIONS WITH MECHANICAL TRADE AND PROJECT SPECIFIC EQUIPMENT.
5. PROVIDE A GREEN CONTINUOUS INSULATED EQUIPMENT GROUNDING CONDUCTOR FOR ALL CIRCUITS INSTALLED IN CONDUIT AND RACEWAYS.
6. ALL CONDUCTORS MUST BE COPPER.
7. COORDINATE PENETRATIONS THROUGH FIRE RATED WALLS WITH ARCHITECTURAL FIRESTOPPING DETAILS AND SPECIFICATIONS.
8. ALL FLOOR MOUNTED ELECTRICAL EQUIPMENT MUST BE MOUNTED ON A 4" TALL CONCRETE EQUIPMENT PAD IN ACCORDANCE WITH STRUCTURAL DETAILS AND SPECIFICATIONS.

SHEET KEYNOTES

1. POWER FOR WASHER AND DRYER. COORDINATE POWER REQUIREMENTS WITH EQUIPMENT CUTSHEETS.
2. PUSH BUTTON SPECIFIED IN DIVISION 8. ALL CABLING MUST BE CONCEALED IN THE STOREFRONT FRAME OR ABOVE CEILING.
3. CONTROLLED RECEPTACLE OVERRIDE SWITCH. REFER TO SHEET EP502 FOR MORE INFORMATION.
4. MOUNT RECEPTACLE WITHIN A/V MULTI-SERVICE BOX. REFER TO TA SERIES SHEETS FOR MORE INFORMATION. COORDINATE WITH A/V BOX INSTALLER.
5. MOUNT AT MIDPOINT OF FIRST AND SECOND SHELF.
6. RECEPTACLES MUST BE CIRCUITED DOWNSTREAM OF GFI RECEPTACLE ON THIS CIRCUIT SO AS TO HAVE GFI PROTECTION.

Professional Engineer
I hereby certify that this plan, specification, or report was prepared by me or under my direct supervision and that I am a duly Licensed Professional Engineer under the laws of the state of Minnesota.
Signature:
Typed or Printed Name: DUGAN BRADLEY
Date: 07/23/25 License Number: 61869

KEY PLAN



US Army Corps of Engineers ®

MARK	DESCRIPTION	DATE
0	READY-TO-ADVERTISE (RTA) SUBMITTAL	JUL 2025

DESIGNED BY: D. BRADLEY
DRAWN BY: S. YUNKER
CHECKED BY: S. STRATTON
SUBMITTED BY: B. STREEBIN
SIZE: ANSI D
ISSUE DATE: JUL 2025
SOLICITATION NO.: W912T525RA001
CONTRACT NO.: W912T524F0007
FILE NAME: 16543B_E_R22.rvt

US ARMY CORPS OF ENGINEERS
LITTLE ROCK DISTRICT
LITTLE ROCK, ARKANSAS

BURNS AND McDONNELL
9400 WARD PARKWAY,
KANSAS CITY, MO 64114
16543B

F-35: SPECIAL ACCESS PROGRAM FACILITY
EBBING AIR NATIONAL GUARD BASE (ANGB), FORT SMITH, ARKANSAS

FIRST FLOOR POWER PLAN - AREA B

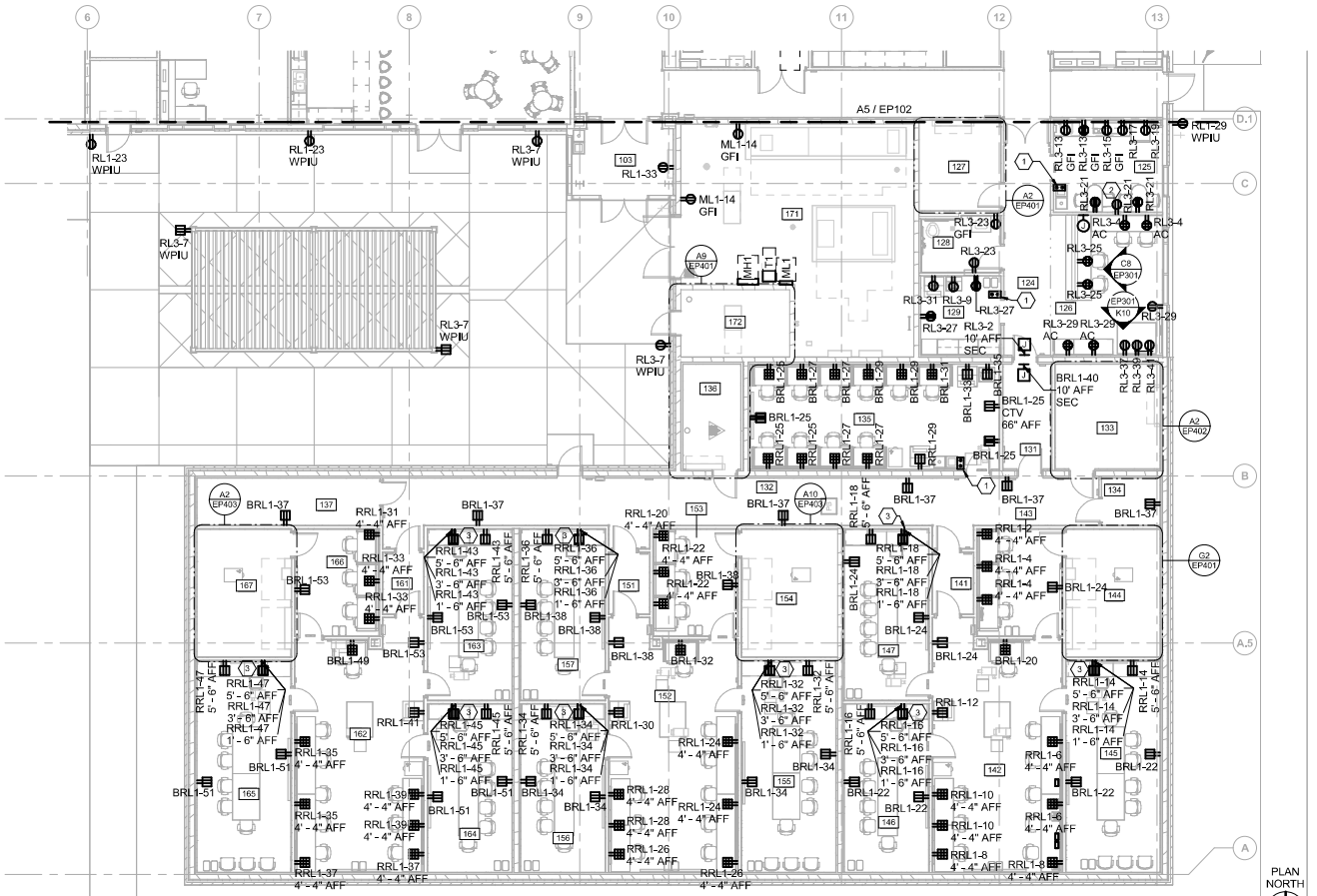
SHEET ID
EP102

READY-TO-ADVERTISE (RTA) SUBMITTAL

ROOM SCHEDULE - AREA C	
NAME	NUMBER
VESTIBULE	103
CORRIDOR	124
BREAK ROOM	125
MAINT DEBRIEF	126
MAIN COMM ROOM	127
UNISEX RESTROOM	128
PRINT / COPY	129
MAN TRAP	131
CORRIDOR	132
SECURE COMM ROOM	133
STORAGE	134
SECURITY	135
SECURE ELEC ROOM	136

ROOM SCHEDULE - AREA C	
NAME	NUMBER
STORAGE	137
MAN TRAP 1	141
VAULT 1 MISSION PLANNING	142
VAULT 1 ALIS / ODIN	143
VAULT 1 SERVER	144
VAULT 1 LG BRIEF	145
VAULT 1 SM BRIEF	146
VAULT 1 SM BRIEF	147
MAN TRAP 2	151
VAULT 2 MISSION PLANNING	152
VAULT 2 ALIS / ODIN	153
VAULT 2 SERVER	154

ROOM SCHEDULE - AREA C	
NAME	NUMBER
VAULT 2 LG BRIEF	155
VAULT 2 SM BRIEF	156
VAULT 2 SM BRIEF	157
MAN TRAP 3	161
VAULT 3 MISSION PLANNING	162
VAULT 3 SM BRIEF	163
VAULT 3 SM BRIEF	164
VAULT 3 LG BRIEF	165
VAULT 3 ALIS / ODIN	166
VAULT 3 SERVER	167
MECHANICAL ROOM	171
ELECTRICAL ROOM	172



A2 FIRST FLOOR POWER PLAN - AREA C
SCALE: 1/8" = 1'-0"

GENERAL SHEET NOTES

1. REFER TO SHEETS E-001 AND E-002 FOR LEGEND, GENERAL NOTES, AND ABBREVIATIONS.
2. ALL CONDUCTORS MUST BE ROUTED WITHIN CONDUIT AND ALL CONDUIT MUST BE ROUTED CONCEALED UNLESS OTHERWISE NOTED.
3. ALL EQUIPMENT MUST BE FIELD MARKED TO WARN QUALIFIED PERSONS OF POTENTIAL ELECTRIC ARC FLASH HAZARD IN ACCORDANCE WITH NFPA 70 AND 70E.
4. COORDINATE MECHANICAL EQUIPMENT ELECTRICAL CONNECTIONS WITH MECHANICAL TRADE AND PROJECT SPECIFIC EQUIPMENT.
5. PROVIDE A GREEN CONTINUOUS INSULATED EQUIPMENT GROUNDING CONDUCTOR FOR ALL CIRCUITS INSTALLED IN CONDUIT AND RACEWAYS.
6. ALL CONDUCTORS MUST BE COPPER.
7. COORDINATE PENETRATIONS THROUGH FIRE RATED WALLS WITH ARCHITECTURAL FIRESTOPPING DETAILS AND SPECIFICATIONS.
8. ALL FLOOR MOUNTED ELECTRICAL EQUIPMENT MUST BE MOUNTED ON A 4" TALL CONCRETE EQUIPMENT PAD IN ACCORDANCE WITH STRUCTURAL DETAILS AND SPECIFICATIONS.
9. ALL INTERIOR SURFACE MOUNTED RECEPTACLES MUST HAVE CONDUCTORS ROUTED IN SURFACE MOUNT EMT CONDUIT UNLESS OTHERWISE NOTED.

1

SHEET KEYNOTES

1. CONTROLLED RECEPTACLE OVERRIDE SWITCH. REFER TO SHEET EP502 FOR MORE INFORMATION.
2. MOUNT RECEPTACLE WITHIN A/V MULTI-SERVICE BOX. REFER TO TA SERIES SHEETS FOR MORE INFORMATION. COORDINATE WITH A/V BOX INSTALLER.
3. PROVIDE (3) SURFACE MOUNT DUPLEX RECEPTACLES, HEIGHTS AND CIRCUITS AS SHOWN.

Professional Engineer

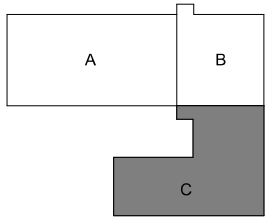
I hereby certify that this plan, specification, or report was prepared by me or under my direct supervision and that I am a duly Licensed Professional Engineer under the laws of the state of Minnesota.

Signature:

Typed or Printed Name: SUSAN BRADLEY

Date: 07/10/25 License Number: 51999

KEY PLAN



1

US Army Corps of Engineers ®

MARK	DESCRIPTION	DATE
0	READY-TO-ADVERTISE (RTA) SUBMITTAL	JUL 2025
1	AM0067 - SURFACE MOUNT EMT CONDUIT CLARIFICATION	FEB 2026

DESIGNED BY: D. BRADLEY
DRAWN BY: S. WEBER
CHECKED BY: S. STRATTON
APPROVED BY: B. STREEBIN
ANSI D
ISSUE DATE: JUL 2025
SOLICITATION NO.: W912QZ24R0007
CONTRACT NO.: W912QZ24F0007
FILE NAME: 165458_E2_Layout

US ARMY CORPS OF ENGINEERS
LITTLE ROCK DISTRICT
LITTLE ROCK, ARKANSAS

BURNS AND McDONNELL
9400 WARD PARKWAY
KANSAS CITY, MO 64114
165458

F-35 SPECIAL ACCESS PROGRAM FACILITY
EBBING AIR NATIONAL GUARD BASE (ANGB), FORT SMITH, ARKANSAS

FIRST FLOOR POWER PLAN - AREA C

SHEET ID
EP103.1

READY-TO-ADVERTISE (RTA) SUBMITTAL

ROOM SCHEDULE	
NAME	NUMBER
VESTIBULE	101
CORRIDOR	102
VESTIBULE	103
LOBBY	104
STEP DESK	105
CORRIDOR	106
SCHEDULING & TRAINING	107
DO	108
SARM	109
SARM ADMIN	110
STAN / EVAL	111
AFE MAINTENANCE	112
HELMET ALIGNMENT	113
LIFE SUPPORT	114
MAINTENANCE OFFICE	115
PILOT LOCKER ROOM	116
SHOWER	117

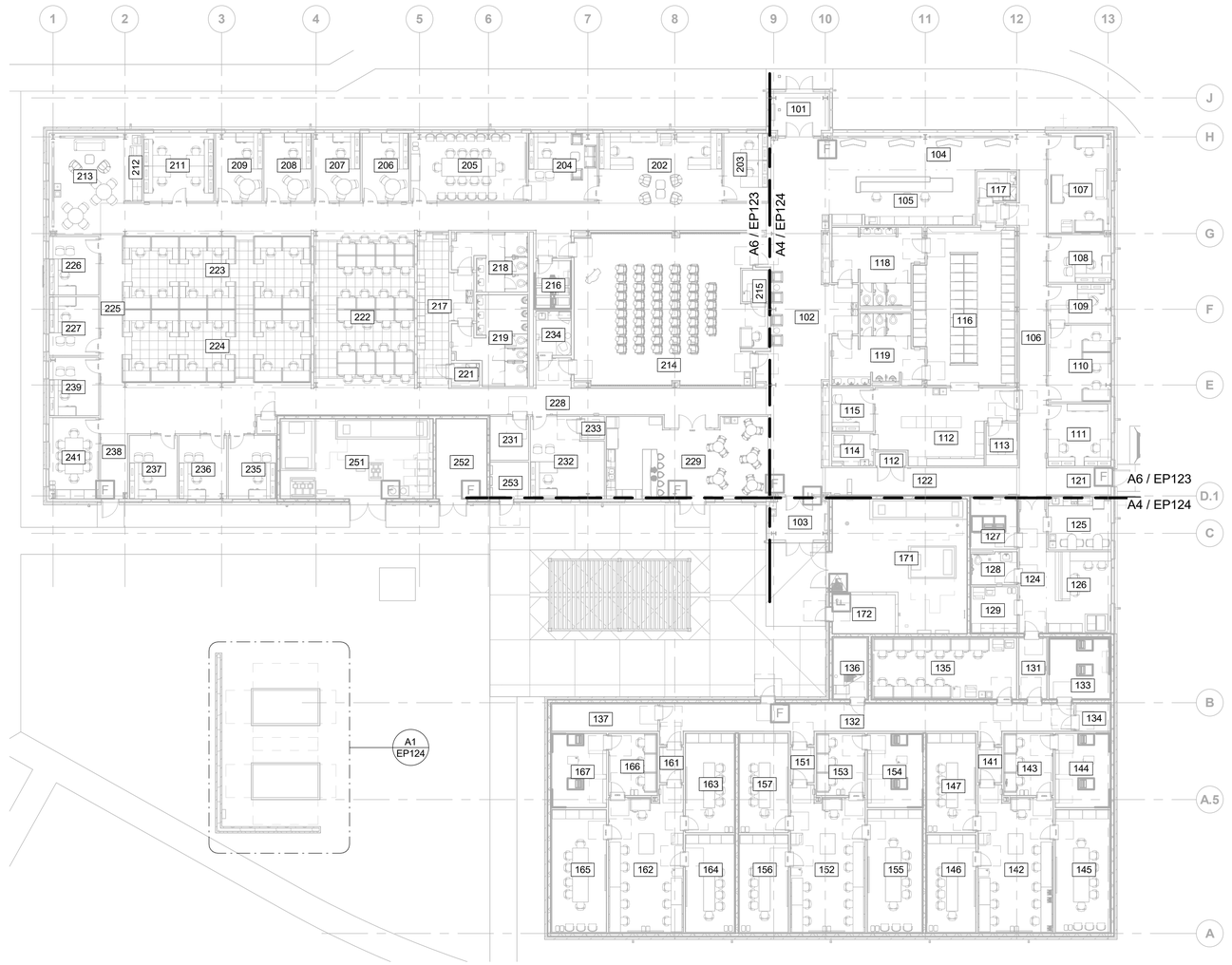
ROOM SCHEDULE	
NAME	NUMBER
WOMEN'S RESTROOM	118
MEN'S RESTROOM	119
HALL	121
CORRIDOR	122
ELECTRICAL CLOSET	123
CORRIDOR	124
BREAK ROOM	125
MAINT DEBRIEF	126
MAIN COMM ROOM	127
UNISEX RESTROOM	128
PRINT / COPY	129
MAN TRAP	131
CORRIDOR	132
SECURE COMM ROOM	133
STORAGE	134
SECURITY	135
SECURE ELEC ROOM	136

ROOM SCHEDULE	
NAME	NUMBER
STORAGE	137
MAN TRAP 1	141
VAULT 1 MISSION PLANNING	142
VAULT 1 ALIS / ODIN	143
VAULT 1 SERVER	144
VAULT 1 LG BRIEF	145
VAULT 1 SM BRIEF	146
VAULT 1 SM BRIEF	147
MAN TRAP 2	151
VAULT 2 MISSION PLANNING	152
VAULT 2 ALIS / ODIN	153
VAULT 2 SERVER	154
VAULT 2 LG BRIEF	155
VAULT 2 SM BRIEF	156
VAULT 2 SM BRIEF	157
MAN TRAP 3	161
VAULT 3 MISSION PLANNING	162

ROOM SCHEDULE	
NAME	NUMBER
VAULT 3 SM BRIEF	163
VAULT 3 SM BRIEF	164
VAULT 3 LG BRIEF	165
VAULT 3 ALIS / ODIN	166
VAULT 3 SERVER	167
MECHANICAL ROOM	171
ELECTRICAL ROOM	172
CORRIDOR	201
COMMAND SUPPORT STAFF	202
ACTIVITY PROGRAM COORDINATOR (APC) / RESOURCE ADVISOR (RA)	203
SQUADRON COMMANDER OFFICE	204
CONFERENCE ROOM	205
INTERNATIONAL MILITARY STUDENT OFFICER (IMSO)	206

ROOM SCHEDULE	
NAME	NUMBER
SNR M-1	207
SNR M-2	208
SNR M-3	209
RA	211
COPY / STORAGE	212
STUDENT COLLAB	213
LG BRIEFING RM	214
AV	215
COMM	216
STUDENT LOCKERS	217
WOMEN'S RESTROOM	218
MEN'S RESTROOM	219
JANITOR'S CLOSET	221
STUDENT WORKSTATIONS	222
INSTRUCTOR WORKSTATIONS	223
MISSION OPS SUPPORT	224
CORRIDOR	225

ROOM SCHEDULE	
NAME	NUMBER
IP M-1	226
IP M-2	227
CORRIDOR	228
BREAK ROOM	229
STORAGE	231
FLIGHT MEDICAL OFFICE	232
STORAGE	233
MOTHER'S ROOM	234
IP M-6	235
IP M-5	236
IP M-4	237
CORRIDOR	238
IP M-3	239
TEAM	241
ROOF ACCESS	242
MECHANICAL	251
ELECTRICAL	252
FIRE	253



PLAN NORTH

0 8' 16' 32'
SCALE IN FEET

A5 FIRST FLOOR HVAC POWER PLAN - OVERALL
SCALE: 1/16" = 1'-0"

GENERAL SHEET NOTES

1. REFER TO EP-SERIES SHEETS FOR ADDITIONAL GENERAL NOTES.
2. REFER TO SHEET EP611 FOR MECHANICAL EQUIPMENT CONNECTION SCHEDULE.

US Army Corps of Engineers ®

MARK	DESCRIPTION	DATE
0	READY-TO-ADVERTISE (RTA) SUBMITTAL	JUL 2025

DESIGNED BY: D. BRADLEY
DRAWN BY: S. YUNKER
CHECKED BY: S. STRATTON
SUBMITTED BY: B. STREEBIN
SIZE: ANSI D
ISSUE DATE: JUL 2025
SOLICITATION NO.: W912T525RA001
CONTRACT NO.: W912T524F0007
FILE NAME: 16438_E_R22_1.rvt

US ARMY CORPS OF ENGINEERS
LITTLE ROCK DISTRICT
LITTLE ROCK, ARKANSAS

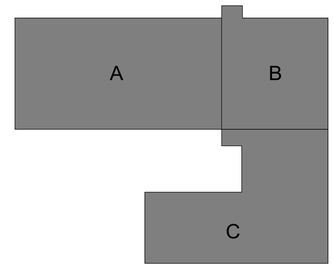
BURNS AND McDONNELL
9400 WARD PARKWAY,
KANSAS CITY, MO 64114
16438

Professional Engineer
I hereby certify that this plan, specification, or report was prepared by me or under my direct supervision and that I am a duly Licensed Professional Engineer under the laws of the state of Minnesota.
Signature:
Typed or Printed Name: DUGAN BRADLEY
Date: 07/23/25 License Number: 61869

F-35 SPECIAL ACCESS PROGRAM FACILITY
EBBING AIR NATIONAL GUARD BASE (ANGB), FORT SMITH, ARKANSAS

FIRST FLOOR HVAC POWER PLAN OVERALL

KEY PLAN



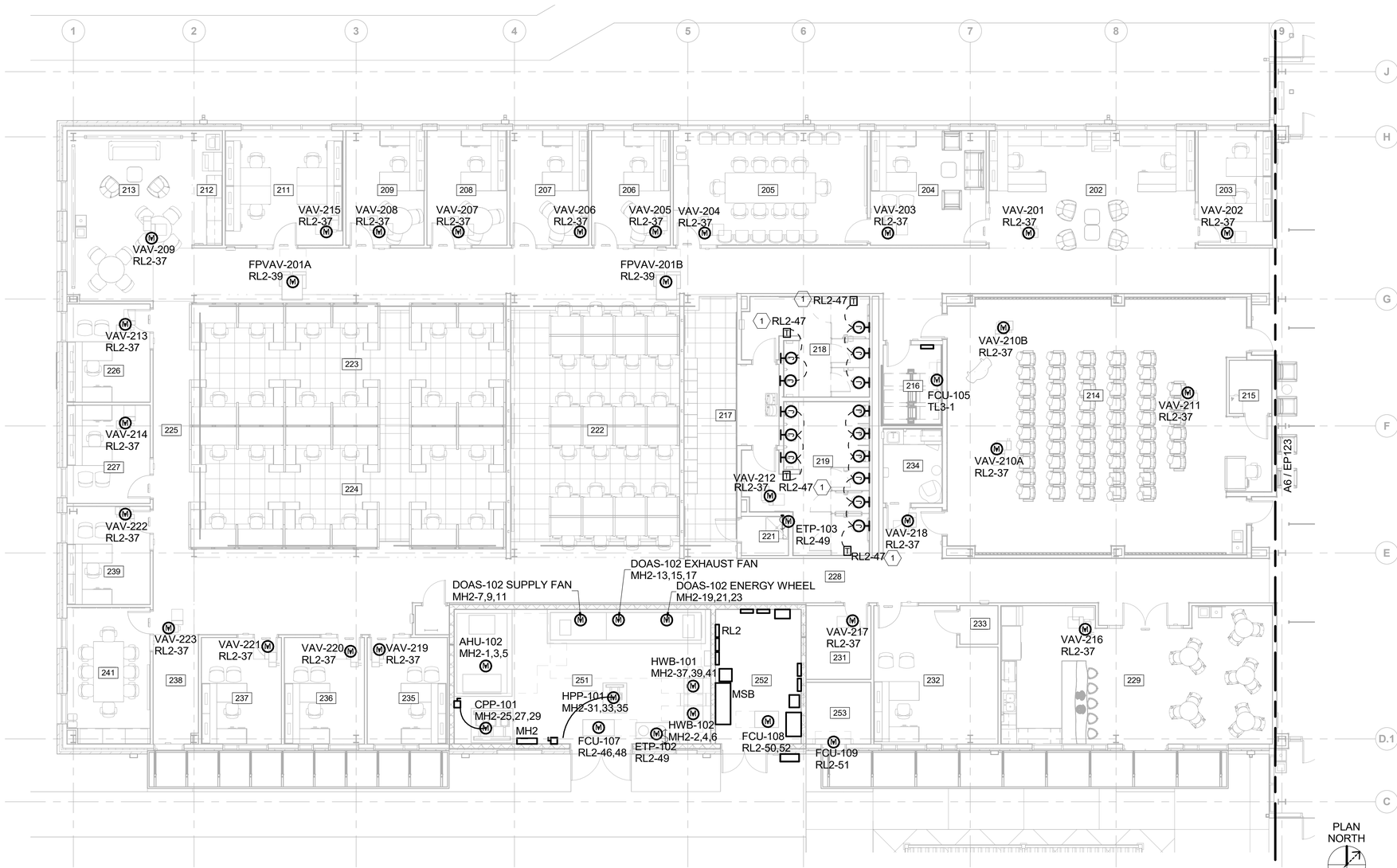
SHEET ID
EP121

READY-TO-ADVERTISE (RTA) SUBMITTAL

ROOM SCHEDULE - AREA A	
NAME	NUMBER
COMMAND SUPPORT STAFF	202
ACTIVITY PROGRAM COORDINATOR (APC) / RESOURCE ADVISOR (RA)	203
SQUADRON COMMANDER OFFICE	204
CONFERENCE ROOM	205
INTERNATIONAL MILITARY STUDENT OFFICER (IMSO)	206
SNR M-1	207
SNR M-2	208
SNR M-3	209
RA	211
COPY / STORAGE	212
STUDENT COLLAB	213

ROOM SCHEDULE - AREA A	
NAME	NUMBER
LG BRIEFING RM	214
AV	215
COMM	216
STUDENT LOCKERS	217
WOMEN'S RESTROOM	218
MEN'S RESTROOM	219
JANITOR'S CLOSET	221
STUDENT WORKSTATIONS	222
INSTRUCTOR WORKSTATIONS	223
MISSION OPS SUPPORT	224
CORRIDOR	225
IP M-1	226
IP M-2	227
CORRIDOR	228

ROOM SCHEDULE - AREA A	
NAME	NUMBER
BREAK ROOM	229
STORAGE	231
FLIGHT MEDICAL OFFICE	232
STORAGE	233
MOTHER'S ROOM	234
IP M-6	235
IP M-5	236
IP M-4	237
CORRIDOR	238
IP M-3	239
TEAM	241
MECHANICAL	251
ELECTRICAL	252
FIRE	253



A1 FIRST FLOOR HVAC POWER PLAN - AREA A

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

GENERAL SHEET NOTES

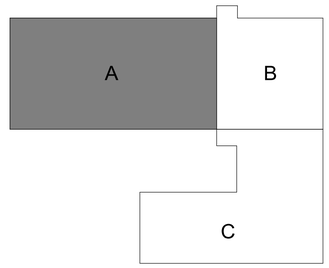
1. REFER TO EP-SERIES SHEETS FOR ADDITIONAL GENERAL NOTES.
2. REFER TO SHEET EP611 FOR MECHANICAL EQUIPMENT CONNECTION SCHEDULE.

SHEET KEYNOTES

1. PROVIDE ELECTRONIC TRANSFORMER & POWER SUPPLY FOR FLUSHING/FAUCETS. PROVIDE CONDUIT, BOXES, AND WIRING FOR ALL ELECTRONIC FLUSH DEVICES. INSTALL PWER MANUFACTURER RECOMMENDATIONS. COORDINATE WITH FIXTURE INSTALLER FOR JUNCTION BOX HEIGHTS AND CONNECTIONS. MOUNT TRANSFORMER AND POWER SUPPLY ABOVE CEILING. PROVIDE LOCKABLE ACCESS PANEL SIZED AS REQUIRED INSTALLED FLUSH WITH CEILING.

Professional Engineer
I hereby certify that this plan, specification, or report was prepared by me or under my direct supervision and that I am a duly Licensed Professional Engineer under the laws of the state of Minnesota.
Signature:
Typed or Printed Name: DUGAN BRADLEY
Date: 07/23/25 License Number: 61869

KEY PLAN



US Army Corps of Engineers ®

MARK	DESCRIPTION	DATE
0	READY-TO-ADVERTISE (RTA) SUBMITTAL	JUL 2025

DESIGNED BY: D. BRADLEY
DRAWN BY: S. YONKER
CHECKED BY: C. PETERSON
SUBMITTED BY: B. STREEBIN
SIZE: ANSI D
ISSUE DATE: JUL 2025
SOLICITATION NO.: W912T525RA001
CONTRACT NO.: W912T524F0007
FILE NAME: 165438_E_R22_r.rvt

US ARMY CORPS OF ENGINEERS
LITTLE ROCK DISTRICT
LITTLE ROCK, ARKANSAS

BURNS AND McDONNELL
9400 WARD PARKWAY,
KANSAS CITY, MO 64114
165438

F-35, SPECIAL ACCESS PROGRAM FACILITY
EBBING AIR NATIONAL GUARD BASE (ANGB), FORT SMITH, ARKANSAS

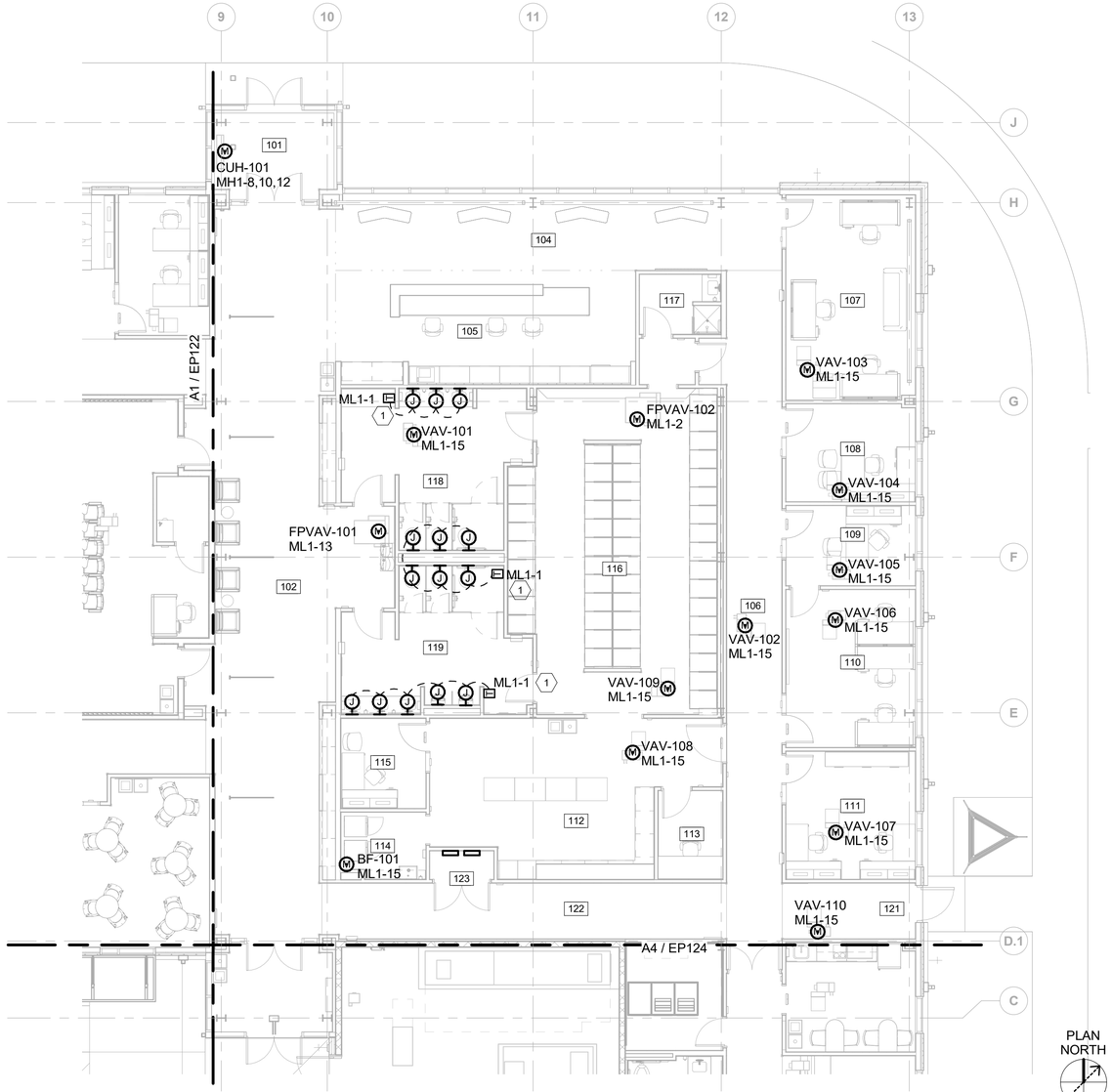
FIRST FLOOR HVAC POWER PLAN - AREA A

SHEET ID
EP122

READY-TO-ADVERTISE (RTA) SUBMITTAL

ROOM SCHEDULE - AREA B	
NAME	NUMBER
VESTIBULE	101
CORRIDOR	102
LOBBY	104
STEP DESK	105
CORRIDOR	106
SCHEDULING & TRAINING	107
DO	108
SARM	109
SARM ADMIN	110
STAN / EVAL	111
AFE MAINTENANCE	112

ROOM SCHEDULE - AREA B	
NAME	NUMBER
HELMET ALIGNMENT	113
LIFE SUPPORT	114
MAINTENANCE OFFICE	115
PILOT LOCKER ROOM	116
SHOWER	117
WOMEN'S RESTROOM	118
MEN'S RESTROOM	119
HALL	121
CORRIDOR	122
ELECTRICAL CLOSET	123



PLAN NORTH

A6 FIRST FLOOR HVAC POWER PLAN - AREA B

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

0 4' 8' 16'

SCALE IN FEET

GENERAL SHEET NOTES

1. REFER TO EP-SERIES SHEETS FOR ADDITIONAL GENERAL NOTES.
2. REFER TO SHEET EP611 FOR MECHANICAL EQUIPMENT CONNECTION SCHEDULE.

SHEET KEYNOTES

1. PROVIDE ELECTRONIC TRANSFORMER & POWER SUPPLY FOR FLUSHING/FAUCETS. PROVIDE CONDUIT, BOXES, AND WIRING FOR ALL ELECTRONIC FLUSH DEVICES. INSTALL PWER MANUFACTURER RECOMMENDATIONS. COORDINATE WITH FIXTURE INSTALLER FOR JUNCTION BOX HEIGHTS AND CONNECTIONS. MOUNT TRANSFORMER AND POWER SUPPLY ABOVE CEILING. PROVIDE LOCKABLE ACCESS PANEL SIZED AS REQUIRED INSTALLED FLUSH WITH CEILING.

US Army Corps of Engineers ®

MARK	DESCRIPTION	DATE
0	READY-TO-ADV/ERTISE (RTA) SUBMITTAL	JUL 2025

DESIGNED BY: D. BRADLEY
DRAWN BY: S. YUNKER
CHECKED BY: C. STRATTON
SUBMITTED BY: B. STREEBIN
SIZE: ANSI D
ISSUE DATE: JUL 2025
SOLICITATION NO.: W9127S25RA001
CONTRACT NO.: W912DS24F0007
FILE NAME: 165438_E_R22_1.rvt

US ARMY CORPS OF ENGINEERS
LITTLE ROCK DISTRICT
LITTLE ROCK, ARKANSAS

BURNS AND McDONNELL
9400 WARD PARKWAY,
KANSAS CITY, MO 64114
165438

Professional Engineer
I hereby certify that this plan, specification, or report was prepared by me or under my direct supervision and that I am a duly Licensed Professional Engineer under the laws of the state of Minnesota.

Signature:

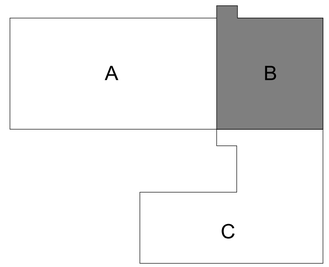
Typed or Printed Name: DUGAN BRADLEY

Date: 07/23/25 License Number: 61869

F-35: SPECIAL ACCESS PROGRAM FACILITY
EBBING AIR NATIONAL GUARD BASE (ANGB), FORT SMITH, ARKANSAS

FIRST FLOOR HVAC POWER PLAN - AREA B

KEY PLAN



SHEET ID

EP123

READY-TO-ADVERTISE (RTA) SUBMITTAL

ROOM SCHEDULE - AREA C	
NAME	NUMBER
VESTIBULE	103
CORRIDOR	124
BREAK ROOM	125
MAINT DEBRIEF	126
MAIN COMM ROOM	127
UNISEX RESTROOM	128
PRINT / COPY	129
MAN TRAP	131
CORRIDOR	132
SECURE COMM ROOM	133
STORAGE	134
SECURITY	135
SECURE ELEC ROOM	136

ROOM SCHEDULE - AREA C	
NAME	NUMBER
STORAGE	137
MAN TRAP 1	141
VAULT 1 MISSION PLANNING	142
VAULT 1 ALIS / ODIN	143
VAULT 1 SERVER	144
VAULT 1 LG BRIEF	145
VAULT 1 SM BRIEF	146
VAULT 1 SM BRIEF	147
MAN TRAP 2	151
VAULT 2 MISSION PLANNING	152
VAULT 2 ALIS / ODIN	153
VAULT 2 SERVER	154

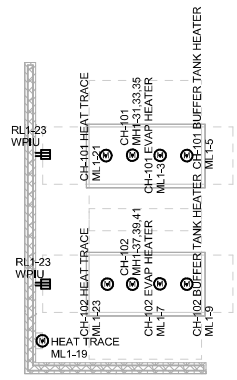
ROOM SCHEDULE - AREA C	
NAME	NUMBER
VAULT 2 LG BRIEF	155
VAULT 2 SM BRIEF	156
VAULT 2 SM BRIEF	157
MAN TRAP 3	161
VAULT 3 MISSION PLANNING	162
VAULT 3 SM BRIEF	163
VAULT 3 SM BRIEF	164
VAULT 3 LG BRIEF	165
VAULT 3 ALIS / ODIN	166
VAULT 3 SERVER	167
MECHANICAL ROOM	171
ELECTRICAL ROOM	172

GENERAL SHEET NOTES

1. REFER TO EP-SERIES SHEETS FOR ADDITIONAL GENERAL NOTES.
2. REFER TO SHEET EP611 FOR MECHANICAL EQUIPMENT CONNECTION SCHEDULE.

SHEET KEYNOTES

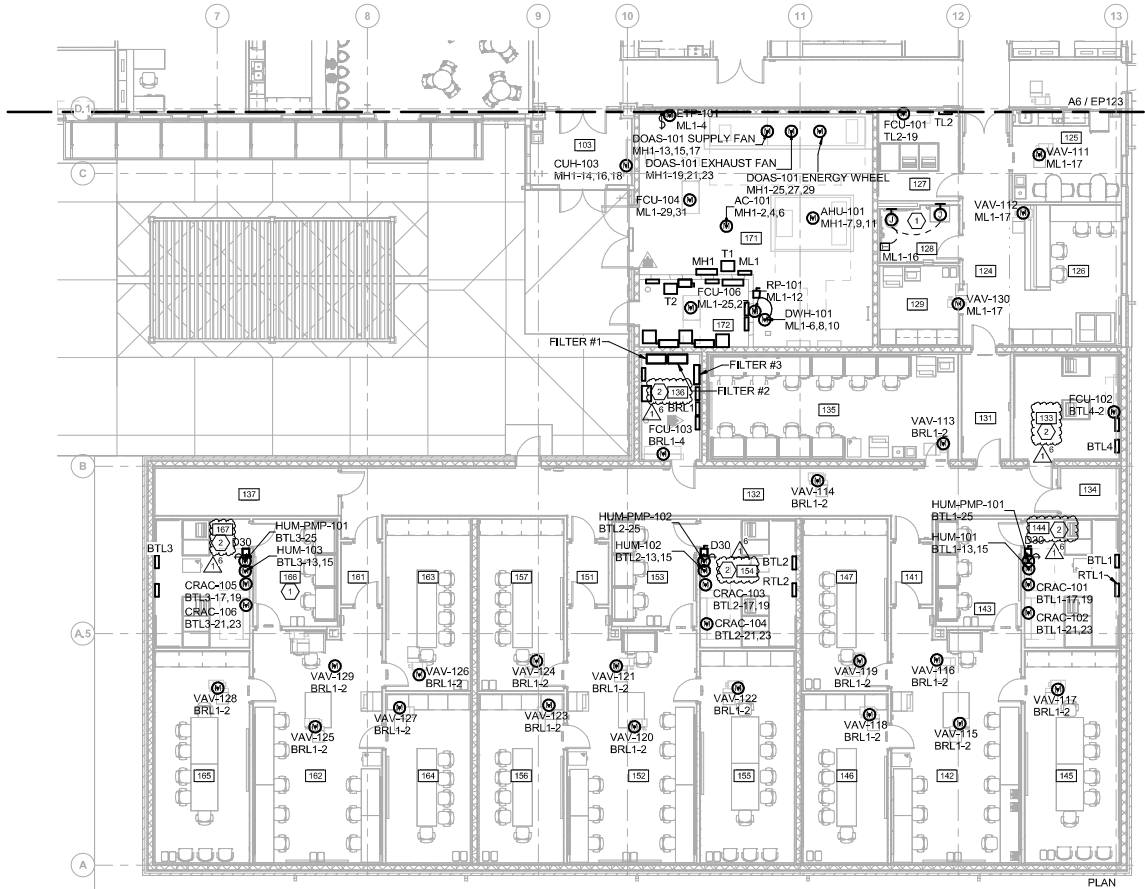
1. PROVIDE ELECTRONIC TRANSFORMER & POWER SUPPLY FOR FLUSHING/FAUCETS, PROVIDE CONDUIT, BOXES, AND WIRING FOR ALL ELECTRONIC FLUSH DEVICES. INSTALL PWER MANUFACTURER RECOMMENDATIONS. COORDINATE WITH FIXTURE INSTALLER FOR JUNCTION BOX HEIGHTS AND CONNECTIONS. MOUNT TRANSFORMER AND POWER SUPPLY ABOVE CEILING. PROVIDE LOCKABLE ACCESS PANEL SIZED AS REQUIRED INSTALLED FLUSH WITH CEILING.
2. ALL CIRCUITS FED FROM PANELS IN THIS ROOM MUST BE SURFACE MOUNTED EMT CONDUIT.



PLAN NORTH

A1 MECH YARD POWER PLAN
SCALE: 1/8" = 1'-0"

0 4' 8' 16'
SCALE IN FEET



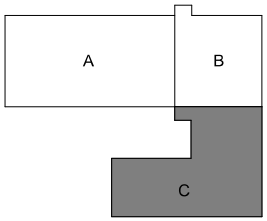
PLAN NORTH

A5 FIRST FLOOR HVAC POWER PLAN - AREA C
SCALE: 1/8" = 1'-0"

0 4' 8' 16'
SCALE IN FEET

Professional Engineer
I hereby certify that this plan, specification, or report was prepared by me or under my direct supervision and that I am a duly Licensed Professional Engineer under the laws of the state of Minnesota.
Signature:
Typed or Printed Name: SUSAN BRADLEY
Date: 07/10/26 License Number: 51999

KEY PLAN



US Army Corps of Engineers ®

MARK	DESCRIPTION	DATE
0	READY-TO-ADVERTISE (RTA) SUBMITTAL	JUL 2025
1	AM0067 - SURFACE MOUNT EMT CONDUIT CLARIFICATION	FEB 2026

DESIGNED BY: D. BRADLEY
DRAWN BY: S. VANDERWERF
CHECKED BY: S. STRATTON
QUALITY CONTROL BY: B. STREEBIN
SIZE: ANSI D
FILE NAME: 165458_EP2_1.rvt
ISSUE DATE: JUL 2025
SOLICITATION NO.: W912S2-25-R-0007
CONTRACT NO.: W912S2-24F0007

US ARMY CORPS OF ENGINEERS
ST. PAUL DISTRICT
LITTLE ROCK DISTRICT
LITTLE ROCK, ARKANSAS

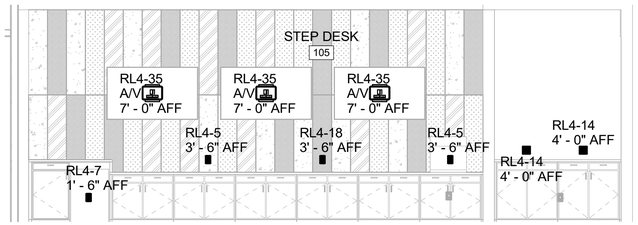
BURNS AND McDONNELL
9400 WARD PARKWAY
KANSAS CITY, MO 64114
165458

F-35, SPECIAL ACCESS PROGRAM FACILITY
EBBING AIR NATIONAL GUARD BASE (ANGB), FORT SMITH, ARKANSAS

FIRST FLOOR HVAC POWER PLAN - AREA C

SHEET ID
EP124.1

READY-TO-ADVERTISE (RTA) SUBMITTAL

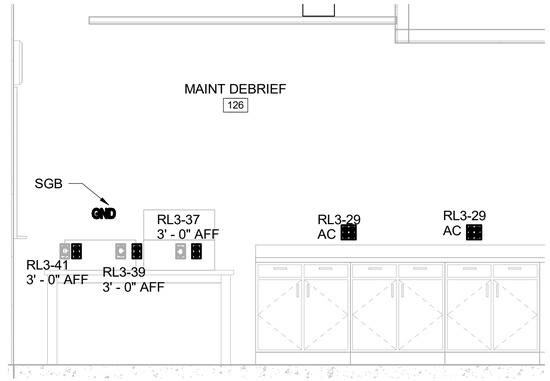


F2 STEP DESK 105 SOUTH

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

0 2' 4' 8'

SCALE IN FEET

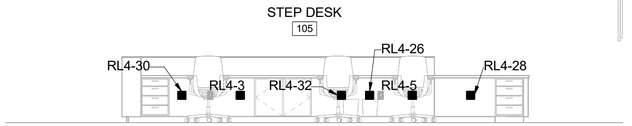


K10 MAIN DEBRIEF ROOM 126 NORTH

SCALE: 1/2" = 1'-0"

0 1' 2' 4'

SCALE IN FEET

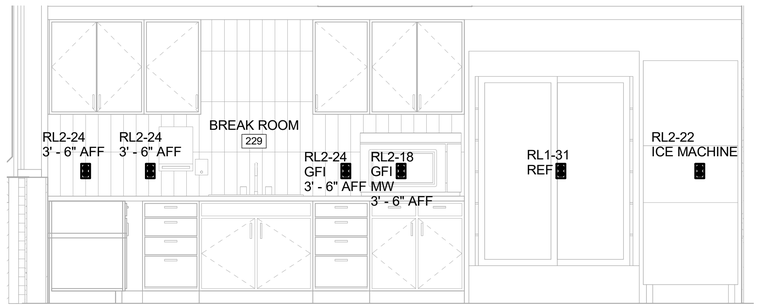


F10 STEP DESK 105 NORTH

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

0 2' 4' 8'

SCALE IN FEET

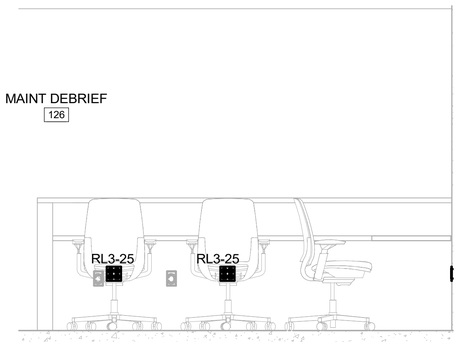


A2 BREAK ROOM 229

SCALE: 1/2" = 1'-0"

0 1' 2' 4'

SCALE IN FEET



C8 MAIN DEBRIEF ROOM 126 WEST

SCALE: 1/2" = 1'-0"

0 1' 2' 4'

SCALE IN FEET

GENERAL SHEET NOTES

1. REFER TO SHEETS E-001 AND E-002 FOR LEGEND, GENERAL NOTES, AND ABBREVIATIONS.
2. ALL CONDUCTORS MUST BE ROUTED WITHIN CONDUIT AND ALL CONDUIT MUST BE ROUTED CONCEALED UNLESS OTHERWISE NOTED.
3. ALL EQUIPMENT MUST BE FIELD MARKED TO WARN QUALIFIED PERSONS OF POTENTIAL ELECTRIC ARC FLASH HAZARD IN ACCORDANCE WITH NFPA 70 AND 70E.
4. COORDINATE MECHANICAL EQUIPMIENT ELECTRICAL CONNECTIONS WITH MECHANICAL TRADE AND PROJECT SPECIFIC EQUIPMENT.
5. PROVIDE A GREEN CONTINUOUS INSULATED EQUIPMENT GROUNDING CONDUCTOR FOR ALL CIRCUITS INSTALLED IN CONDUIT AND RACEWAYS.
6. ALL CONDUCTORS MUST BE COPPER.
7. COORDINATE PENETRATIONS THROUGH FIRE RATED WALLS WITH ARCHITECTURAL FIRESTOPPING DETAILS AND SPECIFICATIONS.
8. ALL FLOOR MOUNTED ELECTRICAL EQUIPMENT MUST BE MOUNTED ON A 4" TALL CONCRETE EQUIPMENT PAD IN ACCORDANCE WITH STRUCTURAL DETAILS AND SPECIFICATIONS.

Professional Engineer
I hereby certify that this plan, specification, or report was prepared by me or under my direct supervision and that I am a duly Licensed Professional Engineer under the laws of the state of Minnesota.

Signature:

Typed or Printed Name: DUGAN BRADLEY

Date: 07/23/25 License Number: 61869

US Army Corps of Engineers ®

MARK	DESCRIPTION	DATE
0	READY-TO-ADVERTISE (RTA) SUBMITTAL	JUL 2025

DESIGNED BY: D. BRADLEY
DRAWN BY: S. YONKER
CHECKED BY: C. STRATTON
SUBMITTED BY: B. STREEBIN
SIZE: ANSI D
ISSUE DATE: JUL 2025
SOLICITATION NO.: W912T525RA001
CONTRACT NO.: W912T524F0007
FILE NAME: 165438_E_R22_1.rvt

US ARMY CORPS OF ENGINEERS
LITTLE ROCK DISTRICT
LITTLE ROCK, ARKANSAS

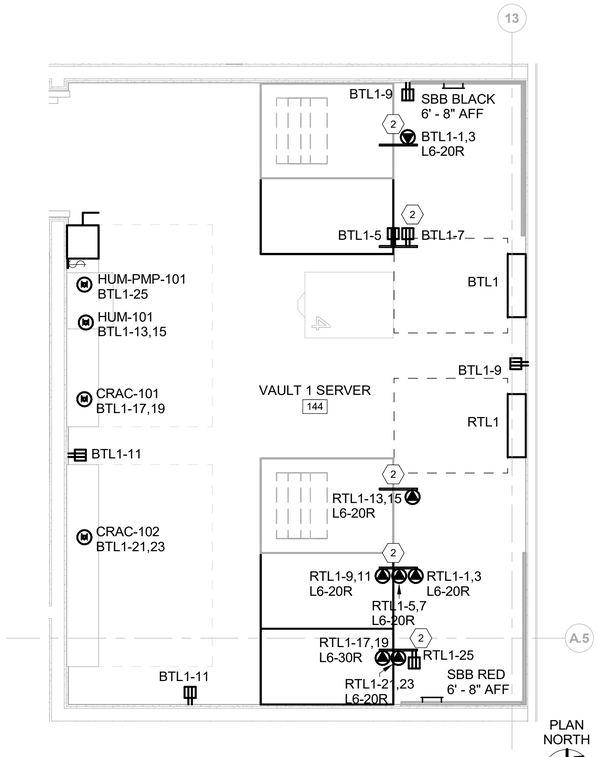
BURNS AND McDONNELL
9400 WARD PARKWAY,
KANSAS CITY, MO 64114
165438

F-35; SPECIAL ACCESS PROGRAM FACILITY
EBBING AIR NATIONAL GUARD BASE (ANGB), FORT SMITH, ARKANSAS

POWER ELEVATIONS

SHEET ID
EP301

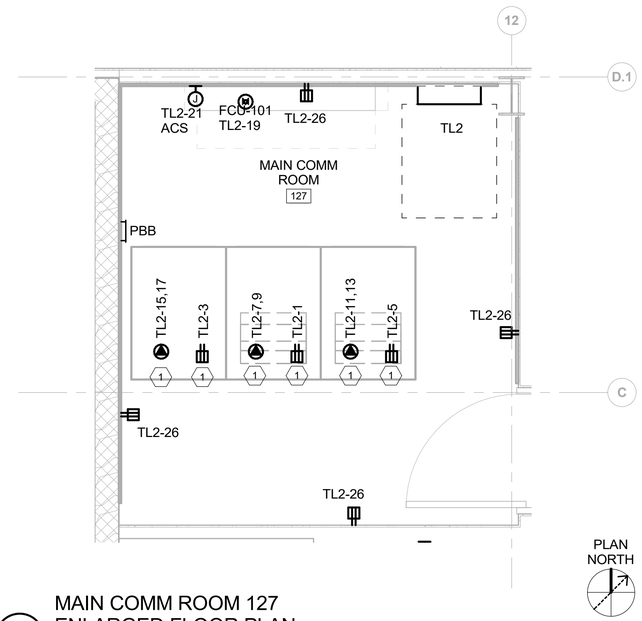
READY-TO-ADVERTISE (RTA) SUBMITTAL



G2 VAULT 1 SERVER 144 ENLARGED FLOOR PLAN

SCALE: 1/2" = 1'-0"

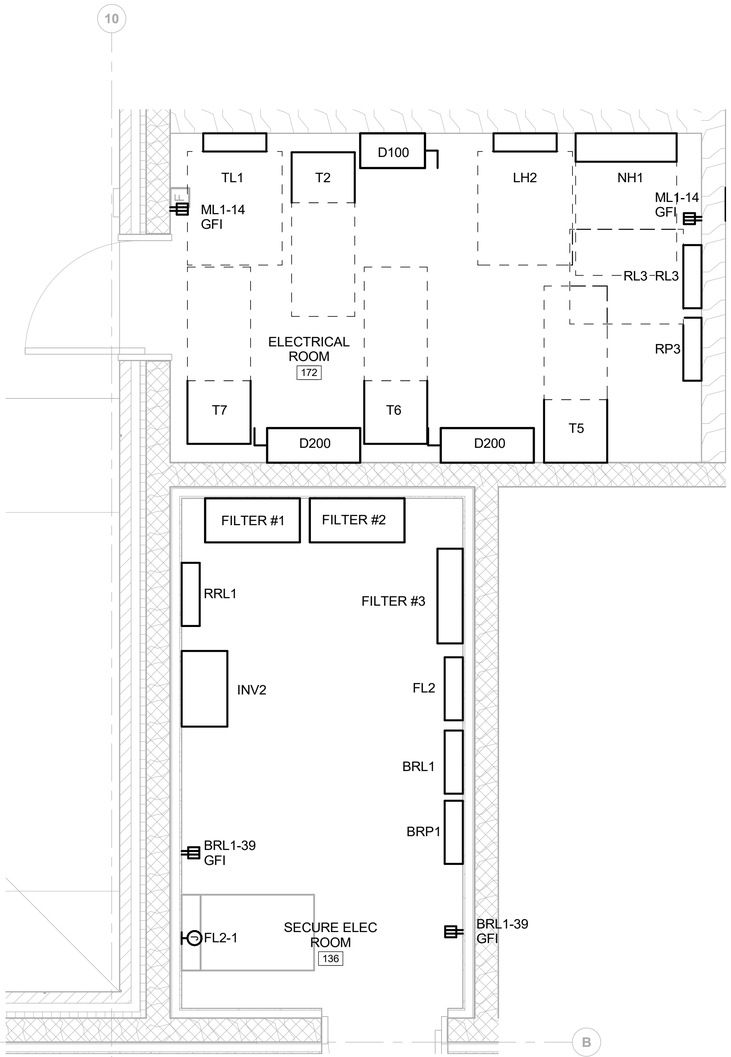
0 1' 2' 4'
SCALE IN FEET



A2 MAIN COMM ROOM 127 ENLARGED FLOOR PLAN

SCALE: 1/2" = 1'-0"

0 1' 2' 4'
SCALE IN FEET



A9 ELECTRICAL ROOM 172,135 ENLARGED FLOOR PLAN

SCALE: 1/2" = 1'-0"

0 1' 2' 4'
SCALE IN FEET

GENERAL SHEET NOTES

1. REFER TO SHEETS E-001 AND E-002 FOR LEGEND, GENERAL NOTES, AND ABBREVIATIONS.
2. ALL CONDUCTORS MUST BE ROUTED WITHIN CONDUIT AND ALL CONDUIT MUST BE ROUTED CONCEALED UNLESS OTHERWISE NOTED.
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4. COORDINATE MECHANICAL EQUIPMIENT ELECTRICAL CONNECTIONS WITH MECHANICAL TRADE AND PROJECT SPECIFIC EQUIPMENT.
5. PROVIDE A GREEN CONTINUOUS INSULATED EQUIPMENT GROUNDING CONDUCTOR FOR ALL CIRCUITS INSTALLED IN CONDUIT AND RACEWAYS.
6. ALL CONDUCTORS MUST BE COPPER.
7. COORDINATE PENETRATIONS THROUGH FIRE RATED WALLS WITH ARCHITECTURAL FIRESTOPPING DETAILS AND SPECIFICATIONS.
8. ALL FLOOR MOUNTED ELECTRICAL EQUIPMENT MUST BE MOUNTED ON A 4" TALL CONCRETE EQUIPMENT PAD IN ACCORDANCE WITH STRUCTURAL DETAILS AND SPECIFICATIONS.

SHEET KEYNOTES

1. PROVIDE (1) L6-30R RECEPTACLE AND (1) L5-20R RECEPTACLE FOR EACH RACK. MOUNT TO UNDERSIDE OF CABLE TRAY.
2. MOUNT RECEPTACLES FOR DATA EQUIPMENT IN VAULT SERVER TO UNISTRUT ABOVE EQUIPMENT.

Professional Engineer
I hereby certify that this plan, specification, or report was prepared by me or under my direct supervision and that I am a duly Licensed Professional Engineer under the laws of the state of Minnesota.
Signature:
Typed or Printed Name: DUGAN BRADLEY
Date: 07/23/25 License Number: 61869

US Army Corps of Engineers ®

MARK	DESCRIPTION	DATE
0	READY-TO-ADVERTISE (RTA) SUBMITTAL	JUL 2025

DESIGNED BY: D. BRADLEY
DRAWN BY: S. YUNKER
CHECKED BY: C. STRATTON
SUBMITTED BY: B. STREEBIN
SIZE: ANSI D
ISSUE DATE: JUL 2025
SOLICITATION NO.: W912QR25RA001
CONTRACT NO.: W912QR24F0007
FILE NAME: 165438_E_R22_1.rvt

US ARMY CORPS OF ENGINEERS
LITTLE ROCK DISTRICT
LITTLE ROCK, ARKANSAS

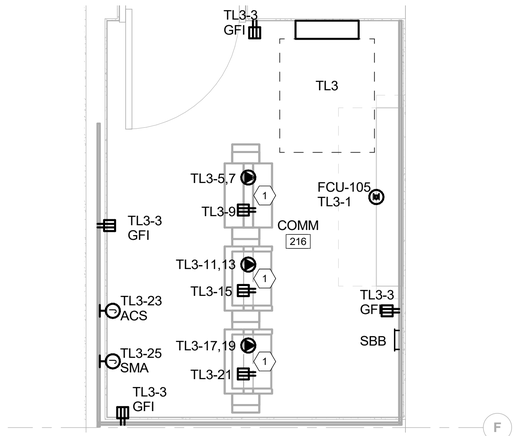
BURNS AND McDONNELL
9400 WARD PARKWAY,
KANSAS CITY, MO 64114
165438

F-35; SPECIAL ACCESS PROGRAM FACILITY
EBBING AIR NATIONAL GUARD BASE (ANGB), FORT SMITH, ARKANSAS

ENLARGED POWER PLAN

SHEET ID
EP401

READY-TO-ADVERTISE (RTA) SUBMITTAL

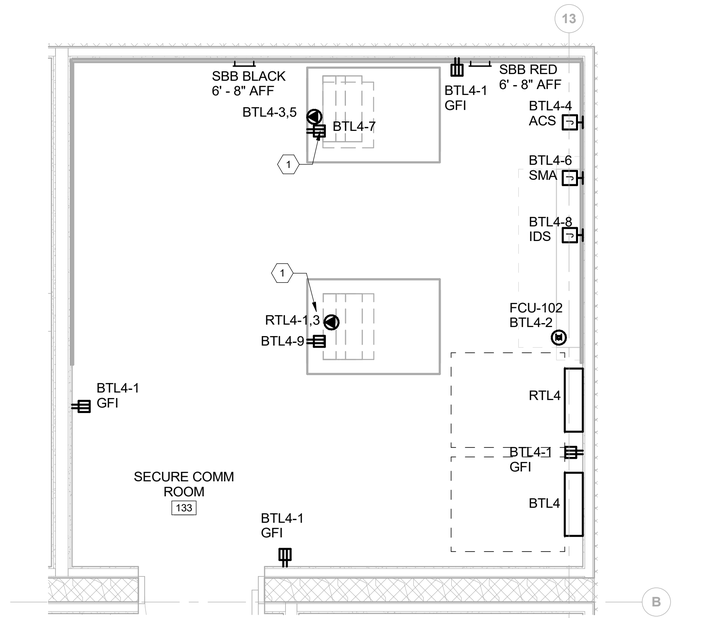


PLAN NORTH

J2 COMM ROOM 216 ENLARGED FLOOR PLAN

SCALE: 1/2" = 1'-0"

0 1' 2' 4'
SCALE IN FEET

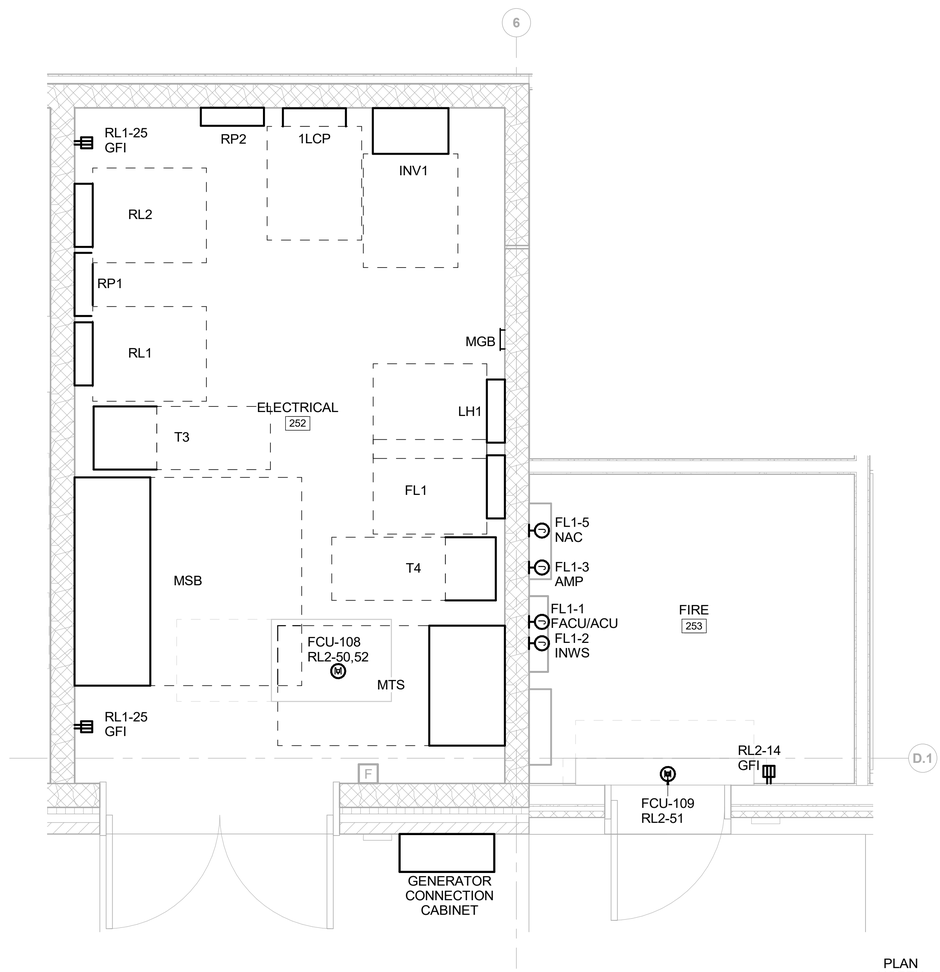


PLAN NORTH

A2 SECURE COMM ROOM 133 ENLARGED FLOOR PLAN

SCALE: 1/2" = 1'-0"

0 1' 2' 4'
SCALE IN FEET



PLAN NORTH

A8 ELECTRICAL ROOM 252, FIRE ROOM 253 ENLARGED FLOOR PLAN

SCALE: 1/2" = 1'-0"

0 1' 2' 4'
SCALE IN FEET

GENERAL SHEET NOTES

1. REFER TO SHEETS E-001 AND E-002 FOR LEGEND, GENERAL NOTES, AND ABBREVIATIONS.
2. ALL CONDUCTORS MUST BE ROUTED WITHIN CONDUIT AND ALL CONDUIT MUST BE ROUTED CONCEALED UNLESS OTHERWISE NOTED.
3. ALL EQUIPMENT MUST BE FIELD MARKED TO WARN QUALIFIED PERSONS OF POTENTIAL ELECTRIC ARC FLASH HAZARD IN ACCORDANCE WITH NFPA 70 AND 70E.
4. COORDINATE MECHANICAL EQUIPMIENT ELECTRICAL CONNECTIONS WITH MECHANICAL TRADE AND PROJECT SPECIFIC EQUIPMENT.
5. PROVIDE A GREEN CONTINUOUS INSULATED EQUIPMENT GROUNDING CONDUCTOR FOR ALL CIRCUITS INSTALLED IN CONDUIT AND RACEWAYS.
6. ALL CONDUCTORS MUST BE COPPER.
7. COORDINATE PENETRATIONS THROUGH FIRE RATED WALLS WITH ARCHITECTURAL FIRESTOPPING DETAILS AND SPECIFICATIONS.
8. ALL FLOOR MOUNTED ELECTRICAL EQUIPMENT MUST BE MOUNTED ON A 4" TALL CONCRETE EQUIPMENT PAD IN ACCORDANCE WITH STRUCTURAL DETAILS AND SPECIFICATIONS.

SHEET KEYNOTES

1. PROVIDE (1) L6-30R RECEPTACLE AND (1) L5-20R RECEPTACLE FOR EACH RACK. MOUNT TO UNDERSIDE OF CABLE TRAY.

Professional Engineer
I hereby certify that this plan, specification, or report was prepared by me or under my direct supervision and that I am a duly Licensed Professional Engineer under the laws of the state of Minnesota.

Signature:

Typed or Printed Name: DUGAN BRADLEY

Date: 07/23/25 License Number: 61869

US Army Corps of Engineers ®

MARK	DESCRIPTION	DATE
0	READY-TO-ADVERTISE (RTA) SUBMITTAL	JUL 2025

DESIGNED BY: D. BRADLEY
DRAWN BY: S. YUNKER
CHECKED BY: C. STRATTON
SUBMITTED BY: B. STREEBIN
SIZE: ANSI D
ISSUE DATE: JUL 2025
SOLICITATION NO.: W912725RA001
CONTRACT NO.: W912724F0007
FILE NAME: 16438_E_R22_1.rvt

US ARMY CORPS OF ENGINEERS
LITTLE ROCK DISTRICT
LITTLE ROCK, ARKANSAS

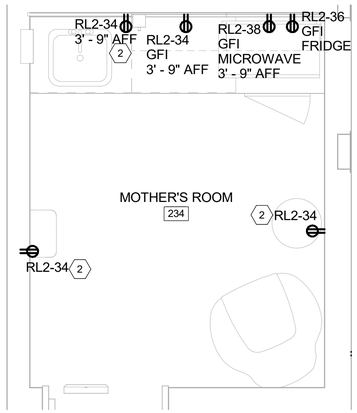
BURNS AND McDONNELL
9400 WARD PARKWAY,
KANSAS CITY, MO 64114
16438

F-35: SPECIAL ACCESS PROGRAM FACILITY
EBBING AIR NATIONAL GUARD BASE (ANGB), FORT SMITH, ARKANSAS

ENLARGED POWER PLAN

SHEET ID
EP402

READY-TO-ADVERTISE (RTA) SUBMITTAL



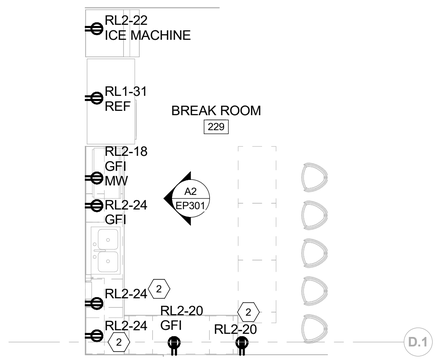
PLAN NORTH

J2 MOTHER'S ROOM 234 ENLARGED FLOOR PLAN

SCALE: 1/2" = 1'-0"

0 1' 2' 4'

SCALE IN FEET



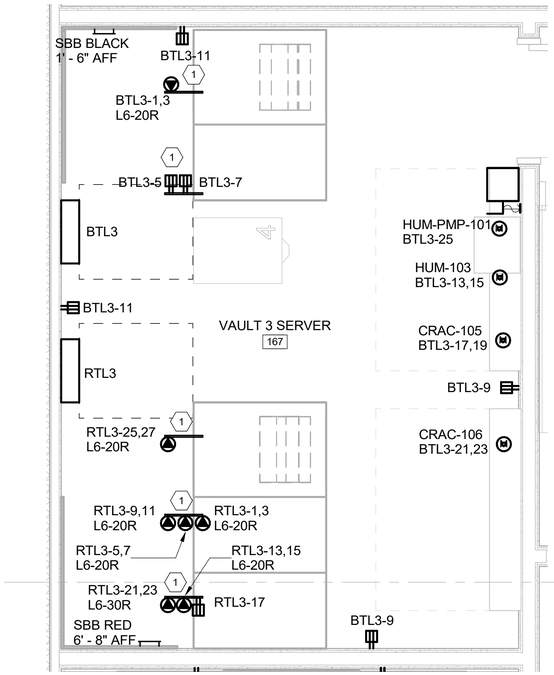
PLAN NORTH

J10 BREAK ROOM 229 ENLARGED FLOOR PLAN

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

0 2' 4' 8'

SCALE IN FEET



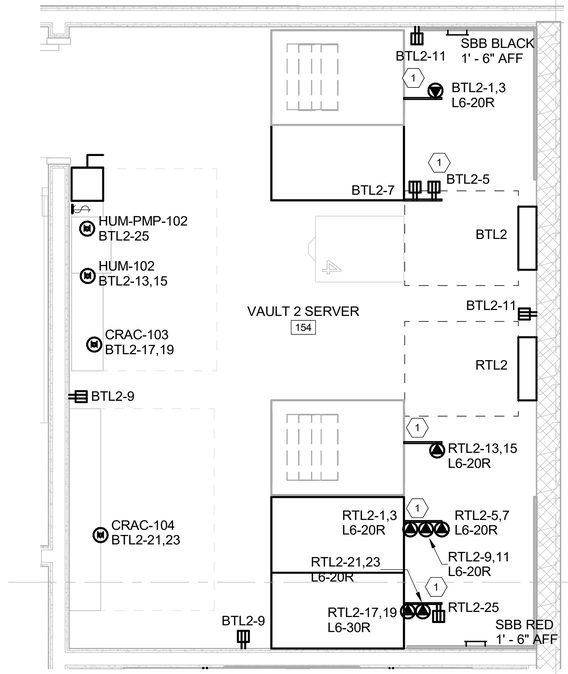
PLAN NORTH

A2 VAULT 3 SERVER 167 ENLARGED FLOOR PLAN

SCALE: 1/2" = 1'-0"

0 1' 2' 4'

SCALE IN FEET



PLAN NORTH

A10 VAULT 2 SERVER 154 ENLARGED FLOOR PLAN

SCALE: 1/2" = 1'-0"

0 1' 2' 4'

SCALE IN FEET

GENERAL SHEET NOTES

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3. ALL EQUIPMENT MUST BE FIELD MARKED TO WARN QUALIFIED PERSONS OF POTENTIAL ELECTRIC ARC FLASH HAZARD IN ACCORDANCE WITH NFPA 70 AND 70E.
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5. PROVIDE A GREEN CONTINUOUS INSULATED EQUIPMENT GROUNDING CONDUCTOR FOR ALL CIRCUITS INSTALLED IN CONDUIT AND RACEWAYS.
6. ALL CONDUCTORS MUST BE COPPER.
7. COORDINATE PENETRATIONS THROUGH FIRE RATED WALLS WITH ARCHITECTURAL FIRESTOPPING DETAILS AND SPECIFICATIONS.
8. ALL FLOOR MOUNTED ELECTRICAL EQUIPMENT MUST BE MOUNTED ON A 4" TALL CONCRETE EQUIPMENT PAD IN ACCORDANCE WITH STRUCTURAL DETAILS AND SPECIFICATIONS.

SHEET KEYNOTES

1. MOUNT RECEPTACLES FOR DATA EQUIPMENT IN VAULT SERVER TO UNISTRUT ABOVE EQUIPMENT.
2. RECEPTACLES MUST BE CIRCUITED DOWNSTREAM OF GFI RECEPTACLE ON THIS CIRCUIT SO AS TO HAVE GFI PROTECTION.

US Army Corps of Engineers ®

MARK	DESCRIPTION	DATE
0	READY-TO-ADV/ERTISE (RTA) SUBMITTAL	JUL 2025

DESIGNED BY: D. BRADLEY
DRAWN BY: S. YUNKER
CHECKED BY: S. PETKOVICH
SUBMITTED BY: B. STREEBIN
SIZE: ANSI D
ISSUE DATE: JUL 2025
SOLICITATION NO.: W912725RA001
CONTRACT NO.: W912HZ24F0007
FILE NAME: 16438_E_R22_1.rvt

US ARMY CORPS OF ENGINEERS
LITTLE ROCK DISTRICT
LITTLE ROCK, ARKANSAS

BURNS AND McDONNELL
9400 WARD PARKWAY,
KANSAS CITY, MO 64114
16438

Professional Engineer
I hereby certify that this plan, specification, or report was prepared by me or under my direct supervision and that I am a duly Licensed Professional Engineer under the laws of the state of Minnesota.
Signature:
Typed or Printed Name: DUGAN BRADLEY
Date: 07/23/25 License Number: 61869

F-35 SPECIAL ACCESS PROGRAM FACILITY
EBBING AIR NATIONAL GUARD BASE (ANGB), FORT SMITH, ARKANSAS

ENLARGED POWER PLAN

SHEET ID
EP403

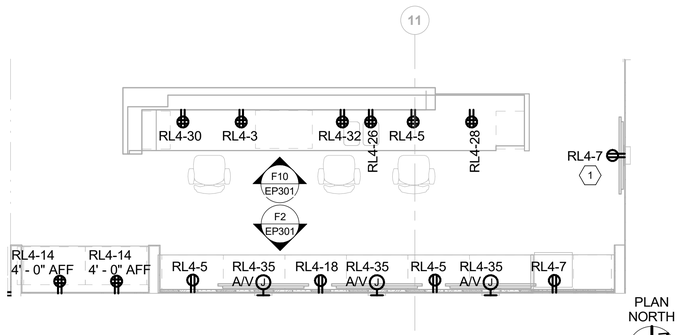
READY-TO-ADVERTISE (RTA) SUBMITTAL

GENERAL SHEET NOTES

1. REFER TO SHEETS E-001 AND E-002 FOR LEGEND, GENERAL NOTES, AND ABBREVIATIONS.
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7. COORDINATE PENETRATIONS THROUGH FIRE RATED WALLS WITH ARCHITECTURAL FIRESTOPPING DETAILS AND SPECIFICATIONS.
8. ALL FLOOR MOUNTED ELECTRICAL EQUIPMENT MUST BE MOUNTED ON A 4" TALL CONCRETE EQUIPMENT PAD IN ACCORDANCE WITH STRUCTURAL DETAILS AND SPECIFICATIONS.

SHEET KEYNOTES

1. MOUNT RECEPTACLE WITHIN A/V MULTI-SERVICE BOX. REFER TO TA SERIES SHEETS FOR MORE INFORMATION. COORDINATE WITH A/V BOX INSTALLER.



A10 STEP DESK ROOM 105 ENLARGED FLOOR PLAN

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

0 2' 4' 8'

SCALE IN FEET

Professional Engineer
I hereby certify that this plan, specification, or report was prepared by me or under my direct supervision and that I am a duly Licensed Professional Engineer under the laws of the state of Minnesota.

Signature:

Typed or Printed Name: DUGAN BRADLEY

Date: 07/23/25 License Number: 61869

US Army Corps of Engineers ®

MARK	DESCRIPTION	DATE
0	READY-TO-ADVERTISE (RTA) SUBMITTAL	JUL 2025

DESIGNED BY: D. BRADLEY
DRAWN BY: S. YUNKER
CHECKED BY: S. STRATTON
SUBMITTED BY: B. STREEBIN
SIZE: ANSI D
ISSUE DATE: JUL 2025
SOLICITATION NO.: W912725RA001
CONTRACT NO.: W912PS24F0007
FILE NAME: 165438_E_R22_1.rvt

US ARMY CORPS OF ENGINEERS
LITTLE ROCK DISTRICT
LITTLE ROCK, ARKANSAS

BURNS AND McDONNELL
9400 WARD PARKWAY,
KANSAS CITY, MO 64114
165438

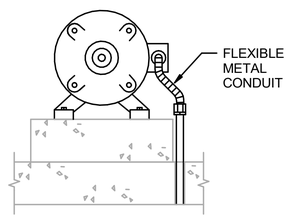
F-35 SPECIAL ACCESS PROGRAM FACILITY
EBBING AIR NATIONAL GUARD BASE (ANGB), FORT SMITH, ARKANSAS

ENLARGED POWER PLAN

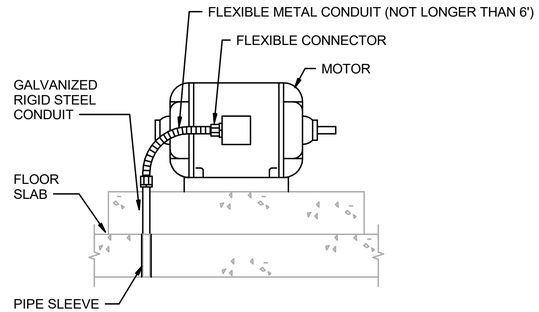
SHEET ID

EP404

READY-TO-ADVERTISE (RTA) SUBMITTAL



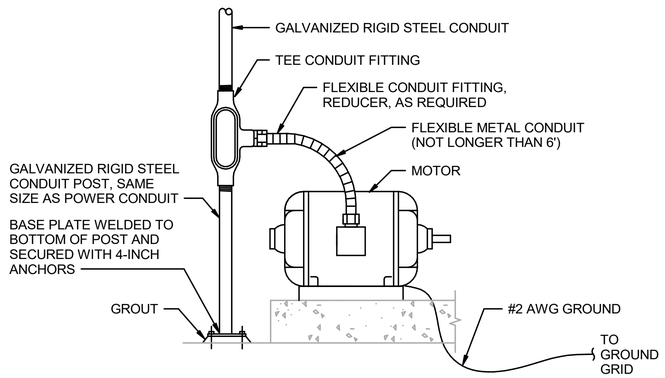
SIDE VIEW



FRONT VIEW

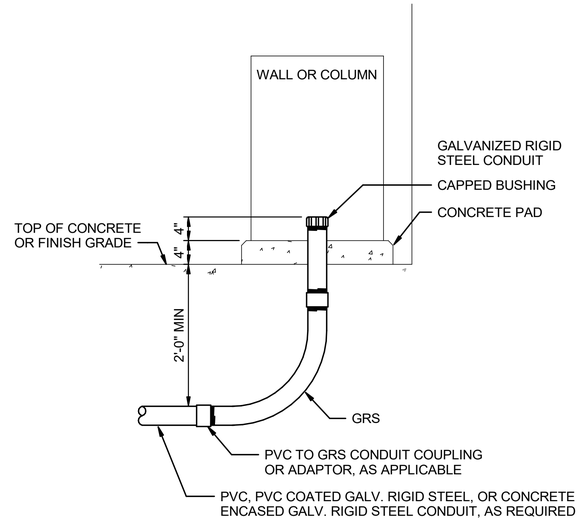
G11 TYPICAL FLOOR-FED CONDUIT SERVICE FOR MOTORS

SCALE: NTS



A5 TYPICAL OVERHEAD CONDUIT SERVICE FOR SMALL AND MEDIUM SIZE 480V MOTORS

SCALE: NTS



A13 TYPICAL STUBBED CONDUIT RISER INTO EQUIPMENT

SCALE: NTS

Professional Engineer
I hereby certify that this plan, specification, or report was prepared by me or under my direct supervision and that I am a duly Licensed Professional Engineer under the laws of the state of Minnesota.

Signature:

Typed or Printed Name: DUGAN BRADLEY

Date: 07/23/25 License Number: 61869

US Army Corps of Engineers ®

MARK	DESCRIPTION	DATE
0	READY-TO-ADVERTISE (RTA) SUBMITTAL	JUL 2025

DESIGNED BY: D. BRADLEY
DRAWN BY: S. YUNKER
CHECKED BY: S. STRATTON
SUBMITTED BY: B. STREEBIN
SIZE: ANSI D
ISSUE DATE: JUL 2025
SOLICITATION NO.: W9127S25RA001
CONTRACT NO.: W9127S24F0007
FILE NAME: 165438_E_R22_1.rvt

US ARMY CORPS OF ENGINEERS
LITTLE ROCK DISTRICT
LITTLE ROCK, ARKANSAS

BURNS AND McDONNELL
9400 WARD PARKWAY,
KANSAS CITY, MO 64114
165438

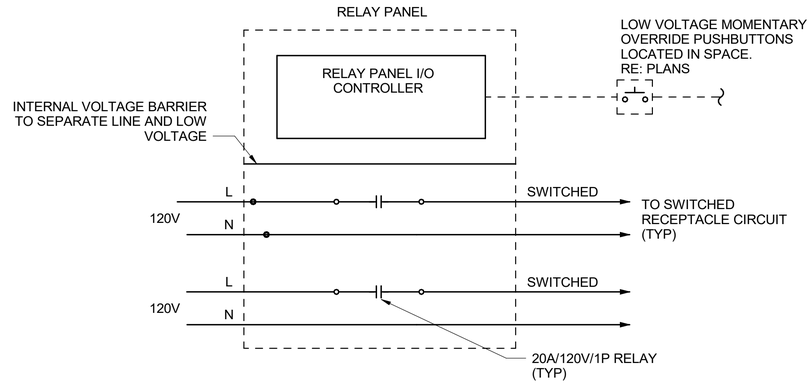
F-35 SPECIAL ACCESS PROGRAM FACILITY
EBBING AIR NATIONAL GUARD BASE (ANGB), FORT SMITH, ARKANSAS

POWER DETAILS

SHEET ID

EP501

READY-TO-ADVERTISE (RTA) SUBMITTAL



NOTES:

1. THIS SCHEMATIC IS DIAGRAMMATIC AND REPRESENTS THE INTENDED CONTROL FUNCTIONS. NOT ALL WIRING OR RELAYS ARE SHOWN. UON, PROVIDE (1) 20A/120V/10kAIC RATED MECHANICALLY HELD RELAY FOR EACH HOMERUN INDICATED ON RELAY PANEL SCHEDULES. RELAYS MUST BE SUITABLE FOR RECEPTACLE CIRCUIT CONTROL AND ABLE TO BE OPEN/CLOSE SEPARATELY.
2. RELAY PANEL TO CONTAIN INTEGRAL 365/7-DAY TIMECLOCK WITH MINIMUM 12 PROGRAMMABLE EVENTS PER DAY. PANEL TO RETAIN PROGRAMMING (DATE, TIME, SCHEDULES, ETC.) UPON LOSS OF NORMAL POWER FOR UP TO 30 DAYS VIA BACKUP POWER MEANS PROVIDED WITH THE PANEL.
3. PROVIDE MINIMUM 25% SPARE RELAYS (NOT SHOWN) FOR FUTURE EXPANSION.
4. REFER TO POWER PLANS FOR PANEL LOCATION(S) AND CONTROLLED RECEPTACLES. REFER TO SYMBOLS LEGEND ON E-001 AND E-002 FOR MORE INFORMATION.
5. PROVIDE UNSWITCHED 120V POWER TO INTEGRAL CONTROLLER UPSTREAM OF NEAREST RELAY IN CABINET.
6. PROVIDE RELAY PANEL SCHEDULE INSIDE DOOR. PROVIDE LABEL ON FACE OF RELAY PANEL DOOR PER DIVISION 26 SPECIFICATIONS.
7. INTENT TO PROVIDE AUTOMATIC CONTROL OF SWITCHED RECEPTACLES WHERE INDICATED. OPEN/CLOSE CONTROL OF RELAYS SHALL BE PERFORMED BY INTEGRAL TIMECLOCK AT TIMES INDICATED ON RELAY SCHEDULE.
8. OVERRIDE PUSHBUTTONS: PROVIDE LOW VOLTAGE MOMENTARY PUSHBUTTON FOR MANUAL OVERRIDE 'ON' OF SWITCHED RECEPTACLE LOADS WITHIN ROOM THE SWITCH IS LOCATED. PROGRAM 'ON' FOR A TWO-HOUR DURATION. PUSHBUTTON TO CONTAIN AN INDICATOR LIGHT - WHEN ILLUMINATED, RECEPTACLE CIRCUIT IN ROOM IS ENERGIZED. REFER TO PLANS FOR LOCATIONS AND QUANTITIES. PROVIDE MANUFACTURER REQUIRED COMMUNICATION CABLING AND PATHWAYS BETWEEN PUSHBUTTON AND RELAY PANEL. DAISY-CHAIN AS NEEDED. LABEL SWITCH "RECEPTACLES" WITH BLACK LETTERING ON CLEAR TAPE.
9. FOR ROOMS CONTAINING BOTH CONTROLLED AND UNCONTROLLED RECEPTACLES ON THE SAME CIRCUIT, PROVIDE UNSWITCHED LEG FROM POWER PANEL TO UNCONTROLLED RECEPTACLES, AND SWITCHED LEG THROUGH RELAY PANEL TO CONTROLLED RECEPTACLES PER DIAGRAM ABOVE.

RELAY PANEL	CORRESPONDING POWER PANEL	RELAY RATING (A) FOR EACH RELAY	SCHEDULE ON	SCHEDULE OFF
RP1	RL1	20 A	5:00 AM	8:00 PM
RP2	RL2	20 A	5:00 AM	8:00 PM
RP3	RL3	20 A	5:00 AM	8:00 PM
RP4	RL4	20 A	5:00 AM	8:00 PM
BRP1	BRL1	20 A	5:00 AM	8:00 PM

A10 TYPICAL RECEPTACLE RELAY PANEL (RP1, RP2, RP3, RP4, BRP1) SCHEMATIC
SCALE: NTS

Professional Engineer
I hereby certify that this plan, specification, or report was prepared by me or under my direct supervision and that I am a duly Licensed Professional Engineer under the laws of the state of Minnesota.
Signature:
Typed or Printed Name: DUGAN BRADLEY
Date: 07/23/25 License Number: 61869

US Army Corps of Engineers ®

MARK	DESCRIPTION	DATE
0	READY-TO-ADV/ERTISE (RTA) SUBMITTAL	JUL 2025

DESIGNED BY: D. BRADLEY
DRAWN BY: S. YUNKER
CHECKED BY: C. STRATTON
SUBMITTED BY: B. STREEBIN
SIZE: ANSI D
ISSUE DATE: JUL 2025
SOLICITATION NO.: W912T525RA001
CONTRACT NO.: W912T524F0007
FILE NAME: 16543B_E_R22_1.rvt

US ARMY CORPS OF ENGINEERS
LITTLE ROCK DISTRICT
LITTLE ROCK, ARKANSAS

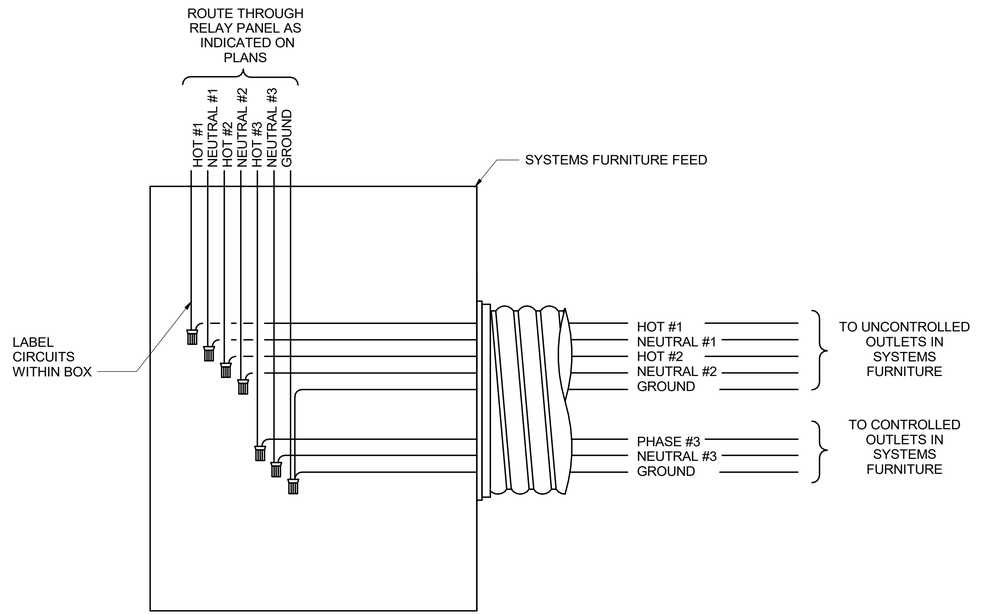
BURNS AND McDONNELL
9400 WARD PARKWAY,
KANSAS CITY, MO 64114
16543B

F-35, SPECIAL ACCESS PROGRAM FACILITY
EBBING AIR NATIONAL GUARD BASE (ANGB), FORT SMITH, ARKANSAS

POWER DETAILS

SHEET ID
EP502

READY-TO-ADVERTISE (RTA) SUBMITTAL



NOTES:

1. PROVIDE 3-POLE BREAKER TO POWERED SYSTEMS FURNITURE IN-FEED TO ENSURE ALL HOT CONDUCTORS WITHIN THE FURNITURE SYSTEM ARE SWITCHED TOGETHER.
2. EACH ELECTRICAL RECEPTACLE ON CONTROLLED PORTION OF CIRCUIT SHALL BE CLEARLY MARKED "CONTROLLED". REFER TO 'CONTROLLED PLUG LOAD RECEPTACLE FOR MORE INFORMATION.
3. COORDINATE WITH FURNITURE VENDOR TO ENSURE THAT EACH WORKSTATION POSITION IS INSTALLED WITH AT LEAST 25% CONTROLLED AND 75% UNCONTROLLED RECEPTACLES.
4. UON, WHERE SYSTEMS FURNITURE IS INDICATED AS CONTROLLED WITH MODIFIER "C" ON PLAN, CIRCUIT AS SHOWN. WHERE INDICATED ON PLAN, ALL THREE CIRCUITS TO BE ROUTED THROUGH A RELAY EACH.

F9 POWER SYSTEM FURNITURE CONNECTION - 8 WIRE SCHEMATIC

SCALE: NTS

Professional Engineer
I hereby certify that this plan, specification, or report was prepared by me or under my direct supervision and that I am a duly Licensed Professional Engineer under the laws of the state of Minnesota.

Signature: _____

Typed or Printed Name: DUGAN BRADLEY

Date: 07/23/25 License Number: 61869

US Army Corps of Engineers ®

MARK	DESCRIPTION	DATE
0	READY-TO-ADV/ERTISE (RTA) SUBMITTAL	JUL 2025

DESIGNED BY:	D. BRADLEY
DRAWN BY:	S. YUNKER
CHECKED BY:	C. STRATTON
SUBMITTED BY:	B. STREEBIN
SIZE: ANSI D	FILE NAME: 165438_E_R22_1.rvt
ISSUE DATE:	JUL 2025
SOLICITATION NO.:	W912T525RA001
CONTRACT NO.:	W912T524F0007

US ARMY CORPS OF ENGINEERS
LITTLE ROCK DISTRICT
LITTLE ROCK, ARKANSAS

BURNS AND McDONNELL
9400 WARD PARKWAY,
KANSAS CITY, MO 64114
165438

F-35: SPECIAL ACCESS PROGRAM FACILITY
EBBING AIR NATIONAL GUARD BASE (ANGB), FORT SMITH, ARKANSAS

POWER DETAILS

SHEET ID

EP503

READY-TO-ADVERTISE (RTA) SUBMITTAL

SWITCHBOARD: MSB

LOCATION: ELECTRICAL 252
SUPPLY FROM:
MOUNTING: FLOOR
ENCLOSURE: NEMA 1

VOLTAGE: 480Y/277V
PHASES: 3
WIRES: 4

A.I.C. RATING: 65000
MAINS TYPE: MCB
MAINS RATING: 1200 A
MCB RATING: 1200 A

NOTES:
PROVIDE 100% RATED MAIN BREAKER.

CKT	LOAD NAME	DESIGN WIRE AND CONDUIT	POLES	TRIP RATING	LOAD	COMMENTS
1	T2	SEE ONE-LINE DIAGRAM	3	50 A	20192 VA	
2	MH2	SEE ONE-LINE DIAGRAM	3	600 A	368966 VA	
3	MH1	SEE ONE-LINE DIAGRAM	3	400 A	211339 VA	
4	T3	SEE ONE-LINE DIAGRAM	3	70 A	48560 VA	
5	LH1	SEE ONE-LINE DIAGRAM	3	30 A	9651 VA	
6	T4	SEE ONE-LINE DIAGRAM	3	25 A	900 VA	
7	NH1	SEE ONE-LINE DIAGRAM	3	200 A	141930 VA	
8	SPARE		3	100 A	0 VA	
9	SPD	(SPD LEADS)	1	60 A	0 VA	
10						
11						
12						

SWITCHBOARD TOTALS	
TOTAL CONNECTED LOAD:	801538 VA
TOTAL ESTIMATED DEMAND LOAD:	730673 VA
TOTAL CONNECTED CURRENT:	964 A
TOTAL ESTIMATED DEMAND CURRENT:	879 A
DEMAND WITH EXPANSION:	1055 A

PANELBOARD: MH1

LOCATION: MECHANICAL ROOM 171
SUPPLY FROM: MSB
MOUNTING: SURFACE
ENCLOSURE: NEMA 1

VOLTAGE: 480Y/277V
PHASE: 3
WIRES: 4

A.I.C. RATING: 18000
MAINS TYPE: MCB
MAINS RATING: 400 A
MCB RATING: 400 A

NOTES:

#	BKR	P	LOAD SERVED	WIRE / GROUND / CONDUIT	A		B		C		WIRE / GROUND / CONDUIT	LOAD SERVED	P	BKR	#
1	25	3	T1	SEE ONE-LINE DIAGRAM	6539	7482					35-3	AC-101	3	35	2
3	--	--	--	--			5648	7482			--	--	--	--	4
5	--	--	--	--					4635	7482	--	--	--	--	6
7	60	3	AHU-101	60-3	7171	1939					20-3	CUH-101	3	20	8
9	--	--	--	--			7171	1939			--	--	--	--	10
11	--	--	--	--					7171	1939	--	--	--	--	12
13	15	3	DOAS-101 SUPPLY FAN	15-3	2351	1939					20-3	CUH-103	3	20	14
15	--	--	--	--			2351	1939			--	--	--	--	16
17	--	--	--	--					2351	1939	--	--	--	--	18
19	15	3	DOAS-101 EXHAUST FAN	15-3	903										20
21	--	--	--	--			903								22
23	--	--	--	--					903						24
25	15	3	DOAS-101 ENERGY WHEEL	15-3	175	0						SPARE	3	20	26
27	--	--	--	--			175	0			--	--	--	--	28
29	--	--	--	--					175	0	--	--	--	--	30
31	175	3	CH-101	175-3	21440	0						SPARE	3	20	32
33	--	--	--	--			21440	0			--	--	--	--	34
35	--	--	--	--					21440	0	--	--	--	--	36
37	175	3	CH-102	175-3	21440	0					(SPD LEADS)	SPD	3	30	38
39	--	--	--	--			21440	0			--	--	--	--	40
41	--	--	--	--					21440	0	--	--	--	--	42
				TOTAL LOAD:	71378 VA		70487 VA		69474 VA						

PANEL TOTALS	
TOTAL CONNECTED LOAD:	211339 VA
TOTAL ESTIMATED DEMAND LOAD:	211339 VA
TOTAL CONNECTED CURRENT:	254 A
TOTAL ESTIMATED DEMAND CURRENT:	254 A
DEMAND WITH EXPANSION:	305 A

PANELBOARD: MH2

LOCATION: MECHANICAL 251
SUPPLY FROM: MSB
MOUNTING: SURFACE
ENCLOSURE: NEMA 1

VOLTAGE: 480Y/277V
PHASE: 3
WIRES: 4

A.I.C. RATING: 18000
MAINS TYPE: MCB
MAINS RATING: 600 A
MCB RATING: 600 A

NOTES:

#	BKR	P	LOAD SERVED	WIRE / GROUND / CONDUIT	A		B		C		WIRE / GROUND / CONDUIT	LOAD SERVED	P	BKR	#
1	45	3	AHU-102	45-3	5577	54317					250-3	HWB-102	3	250	2
3	--	--	--	--			5577	54317			--	--	--	--	4
5	--	--	--	--					5577	54317	--	--	--	--	6
7	15	3	DOAS-102 SUPPLY FAN	15-3	2350										8
9	--	--	--	--			2350								10
11	--	--	--	--					2350						12
13	15	3	DOAS-102 EXHAUST FAN	15-3	903										14
15	--	--	--	--			903								16
17	--	--	--	--					903						18
19	15	3	DOAS-102 ENERGY WHEEL	15-3	159	0						SPARE	3	20	20
21	--	--	--	--			159	0			--	--	--	--	22
23	--	--	--	--					159	0	--	--	--	--	24
25	20	3	CPP-101	20-3	3559	0						SPARE	3	20	26
27	--	--	--	--			3559	0			--	--	--	--	28
29	--	--	--	--					3559	0	--	--	--	--	30
31	20	3	HPP-101	20-3	1806	0						SPARE	3	30	32
33	--	--	--	--			1806	0			--	--	--	--	34
35	--	--	--	--					1806	0	--	--	--	--	36
37	250	3	HWB-101	250-3	54317	0					(SPD LEADS)	SPD	3	30	38
39	--	--	--	--			54317	0			--	--	--	--	40
41	--	--	--	--					54317	0	--	--	--	--	42
				TOTAL LOAD:	122989 VA		122989 VA		122989 VA						

PANEL TOTALS	
TOTAL CONNECTED LOAD:	368966 VA
TOTAL ESTIMATED DEMAND LOAD:	368966 VA
TOTAL CONNECTED CURRENT:	444 A
TOTAL ESTIMATED DEMAND CURRENT:	444 A
DEMAND WITH EXPANSION:	533 A

Professional Engineer
I hereby certify that this plan, specification, or report was prepared by me or under my direct supervision and that I am a duly Licensed Professional Engineer under the laws of the state of Minnesota.
Signature:
Typed or Printed Name: DUGAN BRADLEY
Date: 07/23/25 License Number: 61869

US Army Corps of Engineers ®

MARK	DESCRIPTION	DATE
0	READY-TO-ADVERTISE (RTA) SUBMITTAL	JUL 2025

DESIGNED BY: D. BRADLEY
DRAWN BY: S. YUNKER
CHECKED BY: C. STRATTON
SUBMITTED BY: B. STREEBIN
SIZE: ANSI D
ISSUE DATE: JUL 2025
SOLICITATION NO.: W912QR25RA001
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FILE NAME: 16438_E_R22_1.rvt

US ARMY CORPS OF ENGINEERS
LITTLE ROCK DISTRICT
LITTLE ROCK, ARKANSAS

BURNS AND McDONNELL
9400 WARD PARKWAY,
KANSAS CITY, MO 64114
16438

F-35: SPECIAL ACCESS PROGRAM FACILITY
EBBING AIR NATIONAL GUARD BASE (ANGB), FORT SMITH, ARKANSAS

PANELBOARD SCHEDULES

SHEET ID
EP601

READY-TO-ADVERTISE (RTA) SUBMITTAL

PANELBOARD: TL1

LOCATION: ELECTRICAL ROOM 172
SUPPLY FROM: T2
MOUNTING: SURFACE
ENCLOSURE: NEMA 1

VOLTAGE: 208Y/120V
PHASE: 3
WIRES: 4

A.I.C. RATING: 10000
MAINS TYPE: MCB
MAINS RATING: 100 A
MCB RATING: 100 A

NOTES:
SUITABLE FOR NON-LINEAR LOADS. PROVIDE PANEL WITH 200% NEUTRAL.

#	BKR	P	LOAD SERVED	WIRE / GROUND / CONDUIT	A		B		C		WIRE / GROUND / CONDUIT	LOAD SERVED	P	BKR	#
1	60	3	TL2	SEE ONE-LINE DIAGRAM	3826	0						SPARE	3	60	2
3	--	--	--	--			3180	0			--	--	--	--	4
5	--	--	--	--					3000	0	--	--	--	--	6
7	60	3	TL3	SEE ONE-LINE DIAGRAM	3286	0					(SPD LEADS)	SPD	3	30	8
9	--	--	--	--			3720	0			--	--	--	--	10
11	--	--	--	--					3180	0	--	--	--	--	12
				TOTAL LOAD:	7112 VA		6900 VA		6180 VA						

PANEL TOTALS	
TOTAL CONNECTED LOAD:	20192 VA
TOTAL ESTIMATED DEMAND LOAD:	15472 VA
TOTAL CONNECTED CURRENT:	56 A
TOTAL ESTIMATED DEMAND CURRENT:	43 A
DEMAND WITH EXPANSION:	52 A

PANELBOARD: TL3

LOCATION: COMM 216
SUPPLY FROM: TL1
MOUNTING: SURFACE
ENCLOSURE: NEMA 1

VOLTAGE: 208Y/120V
PHASE: 3
WIRES: 4

A.I.C. RATING: 10000
MAINS TYPE: MCB
MAINS RATING: 100 A
MCB RATING: 60 A

NOTES:
SUITABLE FOR NON-LINEAR LOADS. PROVIDE PANEL WITH 200% NEUTRAL.

#	BKR	P	LOAD SERVED	WIRE / GROUND / CONDUIT	A		B		C		WIRE / GROUND / CONDUIT	LOAD SERVED	P	BKR	#
1	15	1	FCU-105	15-2	106	0						SPARE	1	20	2
3	20	1	RECEPTACLE COMM 216	20-2			720	0				SPARE	1	20	4
5	20	2	NEMA L6-20R	20-2					1000	0		SPARE	1	20	6
7	--	--	--	--	1000	0						SPARE	1	20	8
9	20	1	RECEPTACLE COMM 216	20-2			1000	0				SPARE	1	20	10
11	20	2	NEMA L6-20R	20-2					1000	0		SPARE	1	20	12
13	--	--	--	--	1000	0						SPARE	1	20	14
15	20	1	RECEPTACLE COMM 216	20-2			1000	0				SPARE	1	20	16
17	20	2	NEMA L6-20R	20-2					1000	0		SPARE	1	20	18
19	--	--	--	--	1000	0						SPARE	1	20	20
21	20	1	RECEPTACLE COMM 216	20-2			1000								22
23	20	1	ACS	20-2					180						24
25	20	1	SMA	20-2	180										26
27	20	1	SPARE				0								28
29	20	1	SPARE						0						30
				TOTAL LOAD:	3286 VA		3720 VA		3180 VA						

PANEL TOTALS	
TOTAL CONNECTED LOAD:	10186 VA
TOTAL ESTIMATED DEMAND LOAD:	10186 VA
TOTAL CONNECTED CURRENT:	28 A
TOTAL ESTIMATED DEMAND CURRENT:	28 A
DEMAND WITH EXPANSION:	34 A

PANELBOARD: ML1

LOCATION: MECHANICAL ROOM 171
SUPPLY FROM: T1
MOUNTING: SURFACE
ENCLOSURE: NEMA 1

VOLTAGE: 208Y/120V
PHASE: 3
WIRES: 4

A.I.C. RATING: 10000
MAINS TYPE: MCB
MAINS RATING: 100 A
MCB RATING: 60 A

NOTES:

#	BKR	P	LOAD SERVED	WIRE / GROUND / CONDUIT	A		B		C		WIRE / GROUND / CONDUIT	LOAD SERVED	P	BKR	#
1	20	1	MENS/WOMENS RESTROO...	20-2	180	595					20-2	FPVAV-102	1	20	2
3	20	1	CH-101 EVAP HEATER	20-2			180	180			15-2	ETP-101	1	15	4
5	20	1	CH-101 BUFFER TANK...	20-2					180	4000	50-3	DWH-101	3	50	6
7	20	1	CH-102 EVAP HEATER	20-2	180	4000					--	--	--	--	8
9	20	1	CH-102 BUFFER TANK...	20-2			180	4000			--	--	--	--	10
11										146	15-2	RP-101	1	15	12
13	15	1	FPVAV-101	20-2	595	720					20-2	RECEPTACLE MECHANICAL...	1	20	14
15	20	1	AREA B VAV'S & BF-101	20-2			728	180			20-2	POWER UNISEX RESTROOM 128	1	20	16
17	20	1	AREA C NONSECURE VAV'S	20-2					60	0		SPARE	1	20	18
19	20	1	HEAT TRACE PANEL (GFPE...	20-2	180	0						SPARE	1	20	20
21	20	1	CH-101 HEAT TRACE (GFP...	20-2			180	0				SPARE	1	20	22
23	20	1	CH-102 HEAT TRACE (GFP...	20-2					180	0		SPARE	1	20	24
25	15	2	FCU-106	15-2	20	0						SPARE	1	20	26
27	--	--	--	--			20	0				SPARE	1	20	28
29	15	2	FCU-104	15-2					69	0		SPARE	1	20	30
31	--	--	--	--	69	0						SPARE	1	20	32
33	20	1	SPARE				0	0				SPARE	1	20	34
35	20	1	SPARE						0	0		SPARE	1	20	36
37	20	1	SPARE		0	0					(SPD LEADS)	SPD	3	30	38
39	20	1	SPARE				0	0			--	--	--	--	40
41	20	1	SPARE						0	0	--	--	--	--	42
				TOTAL LOAD:	6539 VA		5648 VA		4635 VA						

PANEL TOTALS	
TOTAL CONNECTED LOAD:	16821 VA
TOTAL ESTIMATED DEMAND LOAD:	16821 VA
TOTAL CONNECTED CURRENT:	47 A
TOTAL ESTIMATED DEMAND CURRENT:	47 A
DEMAND WITH EXPANSION:	56 A

PANELBOARD: TL2

LOCATION: MAIN COMM ROOM 127
SUPPLY FROM: TL1
MOUNTING: SURFACE
ENCLOSURE: NEMA 1

VOLTAGE: 208Y/120V
PHASE: 3
WIRES: 4

A.I.C. RATING: 10000
MAINS TYPE: MCB
MAINS RATING: 100 A
MCB RATING: 60 A

NOTES:
SUITABLE FOR NON-LINEAR LOADS. PROVIDE PANEL WITH 200% NEUTRAL.

#	BKR	P	LOAD SERVED	WIRE / GROUND / CONDUIT	A		B		C		WIRE / GROUND / CONDUIT	LOAD SERVED	P	BKR	#
1	20	1	RACK RECEPT L5-20R	20-2	1000	0						SPARE	1	20	2
3	20	1	RACK RECEPT L5-20R	20-2			1000	0				SPARE	1	20	4
5	20	1	RACK RECEPT L5-20R	20-2					1000	0		SPARE	1	20	6
7	30	2	RACK RECEPT L6-30R	30-2	1000	0						SPARE	1	20	8
9	--	--	--	--			1000	0				SPARE	1	20	10
11	30	2	RACK RECEPT L6-30R	30-2					1000	0		SPARE	1	20	12
13	--	--	--	--	1000	--						SPACE	1	--	14
15	20	2	RACK RECEPT L6-30R	30-2			1000	--				SPACE	1	--	16
17	--	--	--	--					1000	--		SPACE	1	--	18
19	20	1	FCU-101	20-2	106	--						SPACE	1	--	20
21	20	1	ACS	20-2			180	--				SPACE	1	--	22
23	20	1	SPARE						0	--		SPACE	1	--	24
25	30	2	SPARE		0	720					20-2	RECEPTACLE MAIN COMM...	1	20	26
27	--	--	--	--			0								28
29	20	1	SPARE						0						30
				TOTAL LOAD:	3826 VA		3180 VA		3000 VA						

PANEL TOTALS	
TOTAL CONNECTED LOAD:	10006 VA
TOTAL ESTIMATED DEMAND LOAD:	10006 VA
TOTAL CONNECTED CURRENT:	28 A
TOTAL ESTIMATED DEMAND CURRENT:	28 A
DEMAND WITH EXPANSION:	33 A

US Army Corps of Engineers ®

MARK	DESCRIPTION	DATE
0	READY-TO-ADV/ERTISE (RTA) SUBMITTAL	JUL 2025

DESIGNED BY: D. BRADLEY
DRAWN BY: S. YUNKER
CHECKED BY: C. STRATTON
SUBMITTED BY: B. STREEBIN
SIZE: ANSI D
ISSUE DATE: JUL 2025
SOLICITATION NO.: W9127S25RA001
CONTRACT NO.: W9127S24F0007
FILE NAME: 16543B_E_R22_1.rvt

US ARMY CORPS OF ENGINEERS
LITTLE ROCK DISTRICT
LITTLE ROCK, ARKANSAS

BURNS AND McDONNELL
9400 WARD PARKWAY,
KANSAS CITY, MO 64114
16543B

Professional Engineer
I hereby certify that this plan, specification, or report was prepared by me or under my direct supervision and that I am a duly Licensed Professional Engineer under the laws of the state of Minnesota.
Signature:
Typed or Printed Name: DUGAN BRADLEY
Date: 07/23/25 License Number: 61869

F-35: SPECIAL ACCESS PROGRAM FACILITY
EBBING AIR NATIONAL GUARD BASE (ANGB), FORT SMITH, ARKANSAS

PANELBOARD SCHEDULES

SHEET ID
EP602

READY-TO-ADVERTISE (RTA) SUBMITTAL

PANELBOARD: RL1

LOCATION: ELECTRICAL 252
SUPPLY FROM: T3
MOUNTING: SURFACE
ENCLOSURE: NEMA 1

VOLTAGE: 208Y/120V
PHASE: 3
WIRES: 4

A.I.C. RATING: 10000
MAINS TYPE: MCB
MAINS RATING: 150 A
MCB RATING: 150 A

NOTES:
SUITABLE FOR NON-LINEAR LOADS. PROVIDE PANEL WITH 200% NEUTRAL.

#	BKR	P	LOAD SERVED	WIRE / GROUND / CONDUIT	A		B		C		WIRE / GROUND / CONDUIT	LOAD SERVED	P	BKR	#
1	100	3	RL2	SEE ONE-LINE DIAGRAM	11593	333					6#12AWG, 2#12GND, 1" C	POWER INSTRUCTOR...	3	20	2
3	--	--	--	--			11175	333			--	--	--	--	4
5	--	--	--	--					10573	333	--	--	--	--	6
7	20	1	RECEPTACLE ACTIVITY...	20-2	720	333					6#12AWG, 2#12GND, 1" C	POWER INSTRUCTOR...	3	20	8
9	20	1	RECEPTACLE ACTIVITY...	20-2			720	333			--	--	--	--	10
11	20	3	POWER MISSION OPS...	20-2					333	333	--	--	--	--	12
13	--	--	--	--	333	333					6#12AWG, 2#12GND, 1" C	POWER MISSION OPS SUPPOR...	3	20	14
15	--	--	--	--			333	333			--	--	--	--	16
17	20	3	POWER STUDENT...	6#12AWG, 2#12GND, 1" C					333	333	--	--	--	--	18
19	--	--	--	--	333	333					6#12AWG, 2#12GND, 1" C	POWER MISSION OPS SUPPOR...	3	20	20
21	--	--	--	--			333	333			--	--	--	--	22
23	20	1	RECEPTACLE	20-2					1080	333	--	--	--	--	24
25	20	1	RECEPTACLE ELECTRICAL...	20-2	360	1080					20-2	RECEPTACLE CORRIDOR 201	1	20	26
27	20	1	RECEPTACLE COMMAND...	20-2			720	333			6#12AWG, 2#12GND, 1" C	POWER STUDENT...	3	20	28
29	20	1	RECEPTACLE	20-2					180	333	--	--	--	--	30
31	20	1	*GFI BRKR* ICE 229	20-2	180	333					--	--	--	--	32
33	20	1	RECEPTACLE VESTIBULE...	20-2			180	333			6#12AWG, 2#12GND, 1" C	POWER STUDENT...	3	20	34
35	20	3	POWER INSTRUCTOR...	6#12AWG, 2#12GND, 1" C					333	333	--	--	--	--	36
37	--	--	--	--	333	333					--	--	--	--	38
39	--	--	--	--			333	0				SPARE	1	20	40
41	20	3	POWER INSTRUCTOR...	6#12AWG, 2#12GND, 1" C					333	0		SPARE	1	20	42
43	--	--	--	--	333	0						SPARE	1	20	44
45	--	--	--	--			333	0				SPARE	1	20	46
47										0		SPARE	1	20	48
49	20	1	SPARE		0	0					(SPD LEADS)	SPD	3	30	50
51	20	1	SPARE				0	0			--	--	--	--	52
53	20	1	SPARE						0	0	--	--	--	--	54
				TOTAL LOAD:	17266 VA		16128 VA		15166 VA						

PANEL TOTALS	
TOTAL CONNECTED LOAD:	48560 VA
TOTAL ESTIMATED DEMAND LOAD:	35450 VA
TOTAL CONNECTED CURRENT:	135 A
TOTAL ESTIMATED DEMAND CURRENT:	98 A
DEMAND WITH EXPANSION:	118 A

PANELBOARD: FL1

LOCATION: ELECTRICAL 252
SUPPLY FROM: T4
MOUNTING: SURFACE
ENCLOSURE: NEMA 1

VOLTAGE: 208Y/120V
PHASE: 3
WIRES: 4

A.I.C. RATING: 10000
MAINS TYPE: MCB
MAINS RATING: 100 A
MCB RATING: 30 A

NOTES:
PROVIDE PANELBOARD WITH RED ENCLOSURE. PROVIDE RED LAMINATED PLASTIC LABEL WITH WHITE CORE STATING "FIRE PROTECTION - LIFE SAFETY EQUIPMENT."

#	BKR	P	LOAD SERVED	WIRE / GROUND / CONDUIT	A		B		C		WIRE / GROUND / CONDUIT	LOAD SERVED	P	BKR	#
1	20	1	FACU/ACU	20-2	180	180					20-2	INWS	1	20	2
3	20	1	AMP	20-2			180	--				SPACE	1	--	4
5	20	1	NAC	20-2					180	--		SPACE	1	--	6
7	30	3	FL2	SEE ONE-LINE DIAGRAM	180	--						SPACE	1	--	8
9	--	--	--	--			0	--				SPACE	1	--	10
11	--	--	--	--					0	--		SPACE	1	--	12
				TOTAL LOAD:	540 VA		180 VA		180 VA						

PANEL TOTALS	
TOTAL CONNECTED LOAD:	900 VA
TOTAL ESTIMATED DEMAND LOAD:	900 VA
TOTAL CONNECTED CURRENT:	2 A
TOTAL ESTIMATED DEMAND CURRENT:	2 A
DEMAND WITH EXPANSION:	3 A

PANELBOARD: FL2

LOCATION: SECURE ELEC ROOM 136
SUPPLY FROM: FL1
MOUNTING: SURFACE
ENCLOSURE: NEMA 1

VOLTAGE: 208Y/120V
PHASE: 3
WIRES: 4

A.I.C. RATING: 10000
MAINS TYPE: MCB
MAINS RATING: 100 A
MCB RATING: 30 A

NOTES:
PROVIDE PANELBOARD WITH RED ENCLOSURE. PROVIDE RED LAMINATED PLASTIC LABEL WITH WHITE CORE STATING "FIRE PROTECTION - LIFE SAFETY EQUIPMENT."

#	BKR	P	LOAD SERVED	WIRE / GROUND / CONDUIT	A		B		C		WIRE / GROUND / CONDUIT	LOAD SERVED	P	BKR	#
1	20	1	AMP SECURE ELEC RM	20-2	180	--						SPACE	1	--	2
3	20	1	SPARE				0	--				SPACE	1	--	4
5	20	1	SPARE						0	--		SPACE	1	--	6
7	20	1	SPARE		0	--						SPACE	1	--	8
9	20	1	SPARE				0	--				SPACE	1	--	10
11	20	1	SPARE						0	--		SPACE	1	--	12
				TOTAL LOAD:	180 VA		0 VA		0 VA						

PANEL TOTALS	
TOTAL CONNECTED LOAD:	180 VA
TOTAL ESTIMATED DEMAND LOAD:	180 VA
TOTAL CONNECTED CURRENT:	0 A
TOTAL ESTIMATED DEMAND CURRENT:	0 A
DEMAND WITH EXPANSION:	1 A

PANELBOARD: RL2

LOCATION: ELECTRICAL 252
SUPPLY FROM: RL1
MOUNTING: SURFACE
ENCLOSURE: NEMA 1

VOLTAGE: 208Y/120V
PHASE: 3
WIRES: 4

A.I.C. RATING: 10000
MAINS TYPE: MCB
MAINS RATING: 100 A
MCB RATING: 100 A

NOTES:
SUITABLE FOR NON-LINEAR LOADS. PROVIDE PANEL WITH 200% NEUTRAL.

#	BKR	P	LOAD SERVED	WIRE / GROUND / CONDUIT	A		B		C		WIRE / GROUND / CONDUIT	LOAD SERVED	P	BKR	#
1	20	1	RECEPTACLE COMMAND...	20-2	180	1080					20-2	RECEPTACLE TEAM 241	1	20	2
3	20	1	RECEPTACLE SQUADRON...	20-2			1080	900			20-2	RECEPTACLE IP M-4 237	1	20	4
5	20	1	RECEPTACLE SQUADRON...	20-2					540	900	20-2	RECEPTACLE IP M-5 236	1	20	6
7	20	1	RECEPTACLE CONFERENC...	20-2	1080	900					20-2	RECEPTACLE IP M-6 235	1	20	8
9	20	1	RECEPTACLE...	20-2			1080	360			20-2	RECEPTACLE MECHANICAL 251	1	20	10
11	20	1	RECEPTACLE SNR M-1 207	20-2					1080	1080	20-2	RECEPTACLE CORRIDOR 238	1	20	12
13	20	1	RECEPTACLE SNR M-2 208	20-2	1080	540					20-2	RECEPTACLE FLIGHT MEDICA...	1	20	14
15	20	1	RECEPTACLE SNR M-3 209	20-2			1080	1080			20-2	RECEPTACLE FLIGHT MEDICA...	1	20	16
17	20	1	RECEPTACLE RA 211	20-2					720	180	20-2	MICROWAVE BREAK ROOM 229	1	20	18
19	20	1	RECEPTACLE RA 211	20-2	720	360					20-2	RECEPTACLE BREAK ROOM 229	1	20	20
21	20	1	RECEPTACLE RA 211	20-2			720	180			20-2	*GFI BREAKER* FRIDGE 229	1	20	22
23	20	1	RECEPTACLE COPY /...	20-2					540	540	20-2	RECEPTACLE BREAK ROOM 229	1	20	24
25	20	1	RECEPTACLE COPY /...	20-2	180	720					20-2	RECEPTACLE BREAK ROOM 229	1	20	26
27	20	1	RECEPTACLE COPY /...	20-2			180	540			20-2	RECEPTACLE LARGE BRIEFIN...	1	20	28
29	20	1	RECEPTACLE STUDENT...	20-2					720	1080	20-2	RECEPTACLE LARGE BRIEFIN...	1	20	30
31	20	1	RECEPTACLE IP M-1 226	20-2	900	1080					20-2	RECEPTACLE AV 215	1	20	32
33	20	1	RECEPTACLE IP M-1 226	20-2			900	720			20-2	RECEPTACLE MOTHER'S ROO...	1	20	34
35	20	1	RECEPTACLE IP M-3 239	20-2					900	1000	20-2	FRIDGE MOTHER'S ROOM 234	1	20	36
37	20	1	AREA A VAV'S	20-2	480	1200					20-2	MICROWAVE MOTHER'S ROOM...	1	20	38
39	20	1	FPVAV-201A, 201B	20-2			1190	720			20-2	RECEPTACLE MEN'S...	1	20	40
41	20	1	RECEPTACLE CONFERENC...	20-2					720	360	20-2	RECEPTACLE STUDENT...	1	20	42
43	20	1	TV RECEPTACLE RM 214	20-2	360	360					20-2	TV RECEPTACLE RM 214	1	20	44
45	20	1	TV RECEPTACLE RM 214	20-2			360	33			15-2	FCU-107	2	15	46
47	20	1	AUTO PLUMBING RM 218,...	20-2					180	33	--	--	--	--	48
49	20	1	ETP-102,103	20-2	360	13					15-2	FCU-108	2	15	50
51	15	1	FCU-109	15-2			40	13			--	--	--	--	52
53	20	1	SPARE						0	0		SPARE	1	20	54
				TOTAL LOAD:	11593 VA		11175 VA		10573 VA						

PANEL TOTALS	
TOTAL CONNECTED LOAD:	33340 VA
TOTAL ESTIMATED DEMAND LOAD:	22840 VA
TOTAL CONNECTED CURRENT:	93 A
TOTAL ESTIMATED DEMAND CURRENT:	63 A
DEMAND WITH EXPANSION:	76 A

Professional Engineer
I hereby certify that this plan, specification, or report was prepared by me or under my direct supervision and that I am a duly Licensed Professional Engineer under the laws of the state of Minnesota.

Signature:

Typed or Printed Name: DUGAN BRADLEY

Date: 07/23/25 License Number: 61869

US Army Corps of Engineers ®

MARK	DESCRIPTION	DATE
0	READY-TO-ADVERTISE (RTA) SUBMITTAL	JUL 2025

DESIGNED BY: D. BRADLEY
DRAWN BY: S. YUNKER
CHECKED BY: C. STRATTON
SUBMITTED BY: B. STREEBIN
SIZE: ANSI D
FILE NAME: 16543B_E_R22_1.rvt
ISSUE DATE: JUL 2025
SOLICITATION NO.: W912T525RA001
CONTRACT NO.: W912T524F0007

US ARMY CORPS OF ENGINEERS
LITTLE ROCK DISTRICT
LITTLE ROCK, ARKANSAS

BURNS AND McDONNELL
9400 WARD PARKWAY,
KANSAS CITY, MO 64114
16543B

F-35 SPECIAL ACCESS PROGRAM FACILITY
EBBING AIR NATIONAL GUARD BASE (ANGB), FORT SMITH, ARKANSAS

PANELBOARD SCHEDULES

SHEET ID
EP603

READY-TO-ADVERTISE (RTA) SUBMITTAL

PANELBOARD: LH1

LOCATION: ELECTRICAL 252
SUPPLY FROM: MSB
MOUNTING: SURFACE
ENCLOSURE: NEMA 1

VOLTAGE: 480Y/277V
PHASE: 3
WIRES: 4

A.I.C. RATING: 18000
MAINS TYPE: MCB
MAINS RATING: 100 A
MCB RATING: 30 A

NOTES:

#	BKR	P	LOAD SERVED	WIRE / GROUND / CONDUIT	A		B		C		WIRE / GROUND / CONDUIT	LOAD SERVED	P	BKR	#
1	20	1	INV1	SEE ONE-LINE DIAGRAM	2890	0						SPARE	1	20	2
3	20	1	NONSECURE SPACE LTG	20-2			1543	0				SPARE	1	20	4
5	20	1	NONSECURE SPACE LTG	20-2					2095	0		SPARE	1	20	6
7	20	1	SPARE		0	--						SPACE	1	--	8
9	20	1	NONSECURE SPACE LTG	20-2			2103	--				SPACE	1	--	10
11	20	1	ROADWAY LIGHTING NEAR...	2#10 / 1#10GND / 3/4" C					1020	--		SPACE	1	--	12
13	20	1	SPARE		0	--						SPACE	1	--	14
15	20	1	SPARE				0	--				SPACE	1	--	16
17	20	1	SPARE						0	--		SPACE	1	--	18
				TOTAL LOAD:	2890 VA		3646 VA		3115 VA						

PANEL TOTALS	
TOTAL CONNECTED LOAD:	9651 VA
TOTAL ESTIMATED DEMAND LOAD:	9651 VA
TOTAL CONNECTED CURRENT:	12 A
TOTAL ESTIMATED DEMAND CURRENT:	12 A
DEMAND WITH EXPANSION:	14 A

PANELBOARD: NH1

LOCATION: ELECTRICAL ROOM 172
SUPPLY FROM: MSB
MOUNTING: SURFACE
ENCLOSURE: NEMA 1

VOLTAGE: 480Y/277V
PHASE: 3
WIRES: 4

A.I.C. RATING: 18000
MAINS TYPE: MCB
MAINS RATING: 200 A
MCB RATING: 200 A

NOTES:

#	BKR	P	LOAD SERVED	WIRE / GROUND / CONDUIT	A		B		C		WIRE / GROUND / CONDUIT	LOAD SERVED	P	BKR	#
1	30	3	LH2	SEE ONE-LINE DIAGRAM	966	0						SPARE	3	20	2
3	--	--	--	--			1654	0			--	--	--	--	4
5	--	--	--	--					0	0	--	--	--	--	6
7	125	3	T6	SEE ONE-LINE DIAGRAM	13300	0						SPARE	1	20	8
9	--	--	--	--			14505	0				SPARE	1	20	10
11	--	--	--	--					10555	0		SPARE	1	20	12
13	125	3	T7	SEE ONE-LINE DIAGRAM	29167	0						SPARE	1	20	14
15	--	--	--	--			16939	0				SPARE	1	20	16
17	--	--	--	--					17483	0		SPARE	1	20	18
19	50	3	T5	SEE ONE-LINE DIAGRAM	12780	0						SPARE	1	20	20
21	--	--	--	--			12840	0				SPARE	1	20	22
23	--	--	--	--					11740	0		SPARE	1	20	24
25	20	3	SPARE		0	0						SPARE	1	20	26
27	--	--	--	--			0	0				SPARE	1	20	28
29	--	--	--	--					0	0		SPARE	1	20	30
				TOTAL LOAD:	56213 VA		45938 VA		39778 VA						

PANEL TOTALS	
TOTAL CONNECTED LOAD:	141930 VA
TOTAL ESTIMATED DEMAND LOAD:	99255 VA
TOTAL CONNECTED CURRENT:	171 A
TOTAL ESTIMATED DEMAND CURRENT:	119 A
DEMAND WITH EXPANSION:	143 A

PANELBOARD: RL3

LOCATION: ELECTRICAL ROOM 172
SUPPLY FROM: T5
MOUNTING: SURFACE
ENCLOSURE: NEMA 1

VOLTAGE: 208Y/120V
PHASE: 3
WIRES: 4

A.I.C. RATING: 10000
MAINS TYPE: MCB
MAINS RATING: 100 A
MCB RATING: 100 A

NOTES:
SUITABLE FOR NON-LINEAR LOADS. PROVIDE PANEL WITH 200% NEUTRAL.

#	BKR	P	LOAD SERVED	WIRE / GROUND / CONDUIT	A		B		C		WIRE / GROUND / CONDUIT	LOAD SERVED	P	BKR	#
1	100	3	RL4	SEE ONE-LINE DIAGRAM	8940	180					20-2	MANTRAP DOOR	1	20	2
3	--	--	--	--			8080	720			20-2	QUAD MAINT DEBRIEF 126	1	20	4
5	--	--	--	--					8080	0		SPARE	1	20	6
7	20	1	RECEPTACLE	20-2	900	0						SPARE	1	20	8
9	20	1	SHREDDER ROOM 129	20-2			500	0				SPARE	1	20	10
11	20	1	RECEPTACLE PRINT / COP...	20-2					500	0		SPARE	1	20	12
13	20	1	RECEPTACLE BREAK ROO...	20-2	360	0						SPARE	1	20	14
15	20	1	RECEPTACLE BREAK ROO...	20-2			1200	0				SPARE	1	20	16
17	20	1	RECEPTACLE BREAK ROO...	20-2					1000	0		SPARE	1	20	18
19	20	1	RECEPTACLE BREAK ROO...	20-2	1000	0						SPARE	1	20	20
21	20	1	RECEPTACLE BREAK ROO...	20-2			540	--				SPACE	1	--	22
23	20	1	RECEPTACLE MAN TRAP 131	20-2					360	--		SPACE	1	--	24
25	20	1	RECEPTACLE ALIS / ODIN...	20-2	720	--						SPACE	1	--	26
27	20	1	RECEPTACLE ALIS / ODIN...	20-2			540	--				SPACE	1	--	28
29	20	1	RECEPTACLE MAINT...	20-2					900	--		SPACE	1	--	30
31	20	1	COPIER ROOM 129	20-2	500	--						SPACE	1	--	32
33	20	1	RECEPTACLE CORRIDOR...	20-2			1080	--				SPACE	1	--	34
35	20	1	RECEPTACLE HALL 119	20-2					720	--		SPACE	1	--	36
37	20	1	RECEPTACLE MAINT...	20-2	180	0					(SPD LEADS)	SPD	3	30	38
39	20	1	RECEPTACLE MAINT...	20-2			180	0			--	--	--	--	40
41	20	1	RECEPTACLE MAINT...	20-2					180	0	--	--	--	--	42
				TOTAL LOAD:	12780 VA		12840 VA		11740 VA						

PANEL TOTALS	
TOTAL CONNECTED LOAD:	37360 VA
TOTAL ESTIMATED DEMAND LOAD:	24250 VA
TOTAL CONNECTED CURRENT:	104 A
TOTAL ESTIMATED DEMAND CURRENT:	67 A
DEMAND WITH EXPANSION:	81 A

Professional Engineer
I hereby certify that this plan, specification, or report was prepared by me or under my direct supervision and that I am a duly Licensed Professional Engineer under the laws of the state of Minnesota.

Signature:

Typed or Printed Name: DUGAN BRADLEY

Date: 07/23/25 License Number: 61869

US Army Corps of Engineers ®

MARK	DESCRIPTION	DATE
0	READY-TO-ADVERTISE (RTA) SUBMITTAL	JUL 2025

DESIGNED BY: D. BRADLEY
DRAWN BY: S. YUNKER
CHECKED BY: C. STRATTON
SUBMITTED BY: B. STREEBIN
SIZE: ANSI D
ISSUE DATE: JUL 2025
SOLICITATION NO.: W912725RA001
CONTRACT NO.: W912724F0007
FILE NAME: 16438_E_R22_r.rvt

US ARMY CORPS OF ENGINEERS
LITTLE ROCK DISTRICT
LITTLE ROCK, ARKANSAS

BURNS AND McDONNELL
9400 WARD PARKWAY,
KANSAS CITY, MO 64114
16438

F-35 SPECIAL ACCESS PROGRAM FACILITY
EBBING AIR NATIONAL GUARD BASE (ANGB), FORT SMITH, ARKANSAS

PANELBOARD SCHEDULES

SHEET ID
EP604

READY-TO-ADVERTISE (RTA) SUBMITTAL

PANELBOARD: RL4

LOCATION: ELECTRICAL CLOSET 123
SUPPLY FROM: RL3
MOUNTING: SURFACE
ENCLOSURE: NEMA 1

VOLTAGE: 208Y/120V
PHASE: 3
WIRES: 4

A.I.C. RATING: 10000
MAINS TYPE: MCB
MAINS RATING: 100 A
MCB RATING: 100 A

NOTES:
SUITABLE FOR NON-LINEAR LOADS. PROVIDE PANEL WITH 200% NEUTRAL.

#	BKR	P	LOAD SERVED	WIRE / GROUND / CONDUIT	A		B		C		WIRE / GROUND / CONDUIT	LOAD SERVED	P	BKR	#
1	20	1	RECEPTACLE VESTIBULE...	20-2	1260	1000					30-2	DRYER	2	30	2
3	20	1	RECEPTACLE STEP DESK...				360	1000			--	--	--	--	4
5	20	1	RECEPTACLE STEP DESK...	20-2					720	2000	20-2	WASHER	1	20	6
7	20	1	RECEPTACLE STEP DESK...	20-2	1220	540					20-2	RECEPTACLE MEN'S...	1	20	8
9	20	1	RECEPTACLE SCHEDULIN...	20-2			720	360			20-2	RECEPTACLE CORRIDOR 102	1	20	10
11	20	1	RECEPTACLE SCHEDULIN...	20-2					860	720	20-2	RECEPTACLE LOCKER ROOM...	1	20	12
13	20	1	RECEPTACLE SCHEDULIN...	20-2	900	720					20-2	RECEPTACLE STEP DESK 105	1	20	14
15	20	1	RECEPTACLE DO 108	20-2			540	360			20-2	RECEPTACLE HELMET...	1	20	16
17	20	1	RECEPTACLE DO 108	20-2					900	180	20-2	RADIO EQUIPMENT AT STEP...	1	20	18
19	20	1	RECEPTACLE SARM 109	20-2	360	240					20-2	ADA DOOR	1	20	20
21	20	1	RECEPTACLE SARM ADMIN...	20-2			1080	1500			20-2	RECEPTACLE SCHEDULING &...	1	20	22
23	20	1	RECEPTACLE SARM ADMIN...	20-2					720	360	20-2	RECEPTACLE SARM ADMIN 110	1	20	24
25	20	1	RECEPTACLE CONFERENC...	20-2	720	360						RECEPTACLE STEP DESK 105	1	20	26
27	20	1	RECEPTACLE WOMEN'S...	20-2			720	360				RECEPTACLE STEP DESK 105	1	20	28
29	20	1	RECEPTACLE STAN / EVAL...	20-2					720	360		RECEPTACLE STEP DESK 105	1	20	30
31	20	1	RECEPTACLE AFE...	20-2	720	360						RECEPTACLE STEP DESK 105	1	20	32
33	20	1	RECEPTACLE NCOIC OFFI...	20-2			900	--				SPACE	1	--	34
35	20	1	POWER STEP DESK 105	20-2					540	--		SPACE	1	--	36
37	20	1	RECEPTACLE AFE...	20-2	540	0						SPD	3	30	38
39	20	1	IDS	20-2			180	0			--	--	--	--	40
41	20	1	SPARE						0	0	--	--	--	--	42
			TOTAL LOAD:		8940 VA		8080 VA		8080 VA						

PANEL TOTALS	
TOTAL CONNECTED LOAD:	25100 VA
TOTAL ESTIMATED DEMAND LOAD:	18030 VA
TOTAL CONNECTED CURRENT:	70 A
TOTAL ESTIMATED DEMAND CURRENT:	50 A
DEMAND WITH EXPANSION:	60 A

PANELBOARD: RRL1

LOCATION: SECURE ELEC ROOM 136
SUPPLY FROM: T6
MOUNTING: SURFACE
ENCLOSURE: NEMA 1

VOLTAGE: 208Y/120V
PHASE: 3
WIRES: 4

A.I.C. RATING: 10000
MAINS TYPE: MCB
MAINS RATING: 225 A
MCB RATING: 225 A

NOTES:
SUITABLE FOR NON-LINEAR LOADS. PROVIDE PANEL WITH 200% NEUTRAL.

#	BKR	P	LOAD SERVED	WIRE / GROUND / CONDUIT	A		B		C		WIRE / GROUND / CONDUIT	LOAD SERVED	P	BKR	#
1	60	3	RTL1	SEE ONE-LINE DIAGRAM	2120	360					20-2	RECEPTACLE VAULT 1 ALIS /...	1	20	2
3	--	--	--	--			1940	720			20-2	RECEPTACLE VAULT 1 ALIS /...	1	20	4
5	--	--	--	--					1940	720	20-2	RECEPTACLE VAULT 1 MISSIO...	1	20	6
7	60	3	RTL2	SEE ONE-LINE DIAGRAM	2120	720					20-2	RECEPTACLE VAULT 1 MISSIO...	1	20	8
9	--	--	--	--			1940	720			20-2	RECEPTACLE VAULT 1 MISSIO...	1	20	10
11	--	--	--	--					1940	180	20-2	RECEPTACLE VAULT 1 MISSIO...	1	20	12
13	60	3	RTL3	SEE ONE-LINE DIAGRAM	1940	720					20-2	RECEPTACLE VAULT 1 LG BRI...	1	20	14
15	--	--	--	--			2425	720			20-2	RECEPTACLE VAULT 1 SM BRI...	1	20	16
17	--	--	--	--					1635	720	20-2	RECEPTACLE VAULT 1 SM BRI...	1	20	18
19	60	3	RTL4	SEE ONE-LINE DIAGRAM	1000	360					20-2	RECEPTACLE VAULT 2 ALIS /...	1	20	20
21	--	--	--	--			1000	720			20-2	RECEPTACLE VAULT 2 ALIS /...	1	20	22
23	--	--	--	--					0	720	20-2	RECEPTACLE VAULT 2 MISSIO...	1	20	24
25	20	1	RECEPTACLE SECURITY 135	20-2	720	720					20-2	RECEPTACLE VAULT 2 MISSIO...	1	20	26
27	20	1	RECEPTACLE SECURITY 135	20-2			720	720			20-2	RECEPTACLE VAULT 2 MISSIO...	1	20	28
29	20	1	RECEPTACLE SECURITY 135	20-2					180	180	20-2	RECEPTACLE VAULT 2 MISSIO...	1	20	30
31	20	1	RECEPTACLE VAULT 3 ALI...	20-2	360	720					20-2	RECEPTACLE VAULT 2 LG BRI...	1	20	32
33	20	1	RECEPTACLE VAULT 3 ALI...	20-2			720	720			20-2	RECEPTACLE VAULT 2 SM BRI...	1	20	34
35	20	1	RECEPTACLE VAULT 3...	20-2					720	720	20-2	RECEPTACLE VAULT 2 SM BRI...	1	20	36
37	20	1	RECEPTACLE VAULT 3...	20-2	720	0						SPARE	1	20	38
39	20	1	RECEPTACLE VAULT 3...	20-2			720	0				SPARE	1	20	40
41	20	1	RECEPTACLE VAULT 3...	20-2					180	0		SPARE	1	20	42
43	20	1	RECEPTACLE VAULT 3 SM...	20-2	720	0						SPARE	1	20	44
45	20	1	RECEPTACLE VAULT 3 SM...	20-2			720	0				SPARE	1	20	46
47	20	1	RECEPTACLE VAULT 3 LG...	20-2					720	0		SPARE	1	20	48
49	20	1	SPARE		0	0					(SPD LEADS)	SPD	3	30	50
51	20	1	SPARE				0	0			--	--	--	--	52
53	20	1	SPARE						0	0	--	--	--	--	54
			TOTAL LOAD:		13300 VA		14505 VA		10555 VA						

PANEL TOTALS	
TOTAL CONNECTED LOAD:	38360 VA
TOTAL ESTIMATED DEMAND LOAD:	24180 VA
TOTAL CONNECTED CURRENT:	106 A
TOTAL ESTIMATED DEMAND CURRENT:	67 A
DEMAND WITH EXPANSION:	81 A

PANELBOARD: LH2

LOCATION: ELECTRICAL ROOM 172
SUPPLY FROM: NH1
MOUNTING: SURFACE
ENCLOSURE: NEMA 1

VOLTAGE: 480Y/277V
PHASE: 3
WIRES: 4

A.I.C. RATING: 18000
MAINS TYPE: MCB
MAINS RATING: 100 A
MCB RATING: 30 A

NOTES:

#	BKR	P	LOAD SERVED	WIRE / GROUND / CONDUIT	A		B		C		WIRE / GROUND / CONDUIT	LOAD SERVED	P	BKR	#
1	20	1	NONSECURE SPACE...	20-2	966	--						SPACE	1	--	2
3	20	1	NONSECURE SPACE...	20-2			1654	--				SPACE	1	--	4
5	20	1	SPARE						0	--		SPACE	1	--	6
7	20	1	SPARE		0	--						SPACE	1	--	8
9	20	1	SPARE				0	--				SPACE	1	--	10
11	20	1	SPARE						0	--		SPACE	1	--	12
			TOTAL LOAD:		966 VA		1654 VA		0 VA						

PANEL TOTALS	
TOTAL CONNECTED LOAD:	2620 VA
TOTAL ESTIMATED DEMAND LOAD:	2620 VA
TOTAL CONNECTED CURRENT:	3 A
TOTAL ESTIMATED DEMAND CURRENT:	3 A
DEMAND WITH EXPANSION:	4 A

US Army Corps of Engineers ®

MARK	DESCRIPTION	DATE
0	READY-TO-ADVERTISE (RTA) SUBMITTAL	JUL 2025

DESIGNED BY: D. BRADLEY
DRAWN BY: S. YUNKER
CHECKED BY: C. STRATTON
SUBMITTED BY: B. STREEBIN
SIZE: ANSI D
ISSUE DATE: JUL 2025
SOLICITATION NO.: W912725RA001
CONTRACT NO.: W912724F0007
FILE NAME: 16438_E_R22_1.rvt

US ARMY CORPS OF ENGINEERS
LITTLE ROCK DISTRICT
LITTLE ROCK, ARKANSAS

BURNS AND McDONNELL
9400 WARD PARKWAY,
KANSAS CITY, MO 64114
16438

F-35 SPECIAL ACCESS PROGRAM FACILITY
EBBING AIR NATIONAL GUARD BASE (ANGB), FORT SMITH, ARKANSAS

PANELBOARD SCHEDULES

Professional Engineer
I hereby certify that this plan, specification, or report was prepared by me or under my direct supervision and that I am a duly Licensed Professional Engineer under the laws of the state of Minnesota.
Signature:
Typed or Printed Name: DUGAN BRADLEY
Date: 07/23/25 License Number: 61869

SHEET ID
EP605

READY-TO-ADVERTISE (RTA) SUBMITTAL

PANELBOARD: RTL1

LOCATION: VAULT 1 SERVER 144
SUPPLY FROM: RRL1
MOUNTING: SURFACE
ENCLOSURE: NEMA 1

VOLTAGE: 208Y/120V
PHASE: 3
WIRES: 4

A.I.C. RATING: 10000
MAINS TYPE: MCB
MAINS RATING: 100 A
MCB RATING: 60 A

NOTES:
SUITABLE FOR NON-LINEAR LOADS. PROVIDE PANEL WITH 200% NEUTRAL.

#	BKR	P	LOAD SERVED	WIRE / GROUND / CONDUIT	A		B		C		WIRE / GROUND / CONDUIT	LOAD SERVED	P	BKR	#
1	20	2	OBK-LO/MSK NEMA L6-20R	20-2	485	0						SPARE	1	20	2
3	--	--	--	--			485	0				SPARE	1	20	4
5	20	2	OBK-LO/MSK NEMA L6-20R	20-2					485	0		SPARE	1	20	6
7	--	--	--	--	485	0						SPARE	1	20	8
9	20	2	OBK-LO/MSK NEMA L6-20R	20-2			485	0				SPARE	1	20	10
11	--	--	--	--					485	0		SPARE	1	20	12
13	20	2	CAB. 02 NEMA L6-20R	20-2	485	0						SPARE	1	20	14
15	--	--	--	--			485	--				SPACE	1	--	16
17	30	2	IFED NEMA L6-30R	30-2					485	--		SPACE	1	--	18
19	--	--	--	--	485	--						SPACE	1	--	20
21	20	2	IFED NEMA L6-20R	20-2			485	--				SPACE	1	--	22
23	--	--	--	--					485	--		SPACE	1	--	24
25	20	1	IFED DUPLEX	20-2	180	--						SPACE	1	--	26
27	20	1	SPARE				0	--				SPACE	1	--	28
29	20	1	SPARE						0	--		SPACE	1	--	30
			TOTAL LOAD:		2120 VA		1940 VA		1940 VA						

PANEL TOTALS	
TOTAL CONNECTED LOAD:	6000 VA
TOTAL ESTIMATED DEMAND LOAD:	6000 VA
TOTAL CONNECTED CURRENT:	17 A
TOTAL ESTIMATED DEMAND CURRENT:	17 A
DEMAND WITH EXPANSION:	20 A

PANELBOARD: RTL2

LOCATION: VAULT 2 SERVER 154
SUPPLY FROM: RRL1
MOUNTING: SURFACE
ENCLOSURE: NEMA 1

VOLTAGE: 208Y/120V
PHASE: 3
WIRES: 4

A.I.C. RATING: 10000
MAINS TYPE: MCB
MAINS RATING: 100 A
MCB RATING: 60 A

NOTES:
SUITABLE FOR NON-LINEAR LOADS. PROVIDE PANEL WITH 200% NEUTRAL.

#	BKR	P	LOAD SERVED	WIRE / GROUND / CONDUIT	A		B		C		WIRE / GROUND / CONDUIT	LOAD SERVED	P	BKR	#
1	20	2	OBK-LO/MSK NEMA L6-20R	20-2	485	0						SPARE	1	20	2
3	--	--	--	--			485	0				SPARE	1	20	4
5	20	2	OBK-LO/MSK NEMA L6-20R	20-2					485	0		SPARE	1	20	6
7	--	--	--	--	485	0						SPARE	1	20	8
9	20	2	OBK-LO/MSK NEMA L6-20R	20-2			485	0				SPARE	1	20	10
11	--	--	--	--					485	0		SPARE	1	20	12
13	20	2	CAB. 02 NEMA L6-20R	20-2	485	0						SPARE	1	20	14
15	--	--	--	--			485	0				SPARE	1	20	16
17	30	2	IFED NEMA L6-30R	30-2					485	0		SPARE	1	20	18
19	--	--	--	--	485	0						SPARE	1	20	20
21	20	2	IFED NEMA L6-20R	20-2			485	--				SPACE	1	--	22
23	--	--	--	--					485	--		SPACE	1	--	24
25	20	1	IFED DUPLEX	20-2	180	--						SPACE	1	--	26
27	20	1	SPARE				0	--				SPACE	1	--	28
29	20	1	SPARE						0	--		SPACE	1	--	30
			TOTAL LOAD:		2120 VA		1940 VA		1940 VA						

PANEL TOTALS	
TOTAL CONNECTED LOAD:	6000 VA
TOTAL ESTIMATED DEMAND LOAD:	6000 VA
TOTAL CONNECTED CURRENT:	17 A
TOTAL ESTIMATED DEMAND CURRENT:	17 A
DEMAND WITH EXPANSION:	20 A

PANELBOARD: RTL3

LOCATION: VAULT 3 SERVER 167
SUPPLY FROM: RRL1
MOUNTING: SURFACE
ENCLOSURE: NEMA 1

VOLTAGE: 208Y/120V
PHASE: 3
WIRES: 4

A.I.C. RATING: 10000
MAINS TYPE: MCB
MAINS RATING: 100 A
MCB RATING: 60 A

NOTES:
SUITABLE FOR NON-LINEAR LOADS. PROVIDE PANEL WITH 200% NEUTRAL.

#	BKR	P	LOAD SERVED	WIRE / GROUND / CONDUIT	A		B		C		WIRE / GROUND / CONDUIT	LOAD SERVED	P	BKR	#
1	20	2	OBK-LO/MSK NEMA L6-20R	20-2	485	0						SPARE	1	20	2
3	--	--	--	--			485	0				SPARE	1	20	4
5	20	2	OBK-LO/MSK NEMA L6-20R	20-2					485	0		SPARE	1	20	6
7	--	--	--	--	485	0						SPARE	1	20	8
9	20	2	OBK-LO/MSK NEMA L6-20R	20-2			485	0				SPARE	1	20	10
11	--	--	--	--					485	0		SPARE	1	20	12
13	20	2	IFED NEMA L6-20R	20-2	485	0						SPARE	1	20	14
15	--	--	--	--			485	0				SPARE	1	20	16
17	20	1	IFED DUPLEX	20-2					180	0		SPARE	1	20	18
19						0						SPARE	1	20	20
21	30	2	IFED NEMA L6-30R	30-2			485	--				SPACE	1	--	22
23	--	--	--	--					485	--		SPACE	1	--	24
25	20	2	CAB. 02 NEMA L6-20R	20-2	485	--						SPACE	1	--	26
27	--	--	--	--			485	--				SPACE	1	--	28
29	20	1	SPARE						0	--		SPACE	1	--	30
			TOTAL LOAD:		1940 VA		2425 VA		1635 VA						

PANEL TOTALS	
TOTAL CONNECTED LOAD:	6000 VA
TOTAL ESTIMATED DEMAND LOAD:	6000 VA
TOTAL CONNECTED CURRENT:	17 A
TOTAL ESTIMATED DEMAND CURRENT:	17 A
DEMAND WITH EXPANSION:	20 A

Professional Engineer
I hereby certify that this plan, specification, or report was prepared by me or under my direct supervision and that I am a duly Licensed Professional Engineer under the laws of the state of Minnesota.
Signature:
Typed or Printed Name: DUGAN BRADLEY
Date: 07/23/25 License Number: 61869

US Army Corps of Engineers ®

MARK	DESCRIPTION	DATE
0	READY-TO-ADVERTISE (RTA) SUBMITTAL	JUL 2025

DESIGNED BY: D. BRADLEY
DRAWN BY: S. YUNKER
CHECKED BY: S. STRATTON
SUBMITTED BY: B. STREEBIN
SIZE: ANSI D
ISSUE DATE: JUL 2025
SOLICITATION NO.: W912S25RA001
CONTRACT NO.: W912S24F0007
FILE NAME: 16543B_E_R22_r.rvt

US ARMY CORPS OF ENGINEERS
LITTLE ROCK DISTRICT
LITTLE ROCK, ARKANSAS

BURNS AND McDONNELL
9400 WARD PARKWAY,
KANSAS CITY, MO 64114
16543B

F-35 SPECIAL ACCESS PROGRAM FACILITY
EBBING AIR NATIONAL GUARD BASE (ANGB), FORT SMITH, ARKANSAS

PANELBOARD SCHEDULES

SHEET ID
EP606

READY-TO-ADVERTISE (RTA) SUBMITTAL

PANELBOARD: RTL4

LOCATION: SECURE COMM ROOM 133
SUPPLY FROM: RRL1
MOUNTING: SURFACE
ENCLOSURE: NEMA 1

VOLTAGE: 208Y/120V
PHASE: 3
WIRES: 4

A.I.C. RATING: 10000
MAINS TYPE: MCB
MAINS RATING: 100 A
MCB RATING: 60 A

NOTES:
SUITABLE FOR NON-LINEAR LOADS. PROVIDE PANEL WITH 200% NEUTRAL.

#	BKR	P	LOAD SERVED	WIRE / GROUND / CONDUIT	A	B	C	WIRE / GROUND / CONDUIT	LOAD SERVED	P	BKR	#
1	30	2	RACK RECEPT L6-30R	30-2	1000							2
3	--	--	--	--		1000						4
5	20	1	SPARE				0					6
7	20	1	SPARE		0							8
9	20	1	SPARE			0						10
11	20	1	SPARE				0					12
13	20	1	SPARE		0							14
15	20	1	SPARE			0						16
17	20	1	SPARE				0					18
19	20	1	SPARE		0							20
21	20	1	SPARE			0						22
23	20	1	SPARE				0					24
				TOTAL LOAD:	1000 VA	1000 VA	0 VA					

PANEL TOTALS	
TOTAL CONNECTED LOAD:	2000 VA
TOTAL ESTIMATED DEMAND LOAD:	2000 VA
TOTAL CONNECTED CURRENT:	6 A
TOTAL ESTIMATED DEMAND CURRENT:	6 A
DEMAND WITH EXPANSION:	7 A

PANELBOARD: BRL1

LOCATION: SECURE ELEC ROOM 136
SUPPLY FROM: T7
MOUNTING: SURFACE
ENCLOSURE: NEMA 1

VOLTAGE: 208Y/120V
PHASE: 3
WIRES: 4

A.I.C. RATING: 10000
MAINS TYPE: MCB
MAINS RATING: 225 A
MCB RATING: 225 A

NOTES:
SUITABLE FOR NON-LINEAR LOADS. PROVIDE PANEL WITH 200% NEUTRAL.

#	BKR	P	LOAD SERVED	WIRE / GROUND / CONDUIT	A	B	C	WIRE / GROUND / CONDUIT	LOAD SERVED	P	BKR	#
1	60	3	BTL1	SEE ONE-LINE DIAGRAM	2006	340		20-2	SECURE SIDE VAV'S	1	20	2
3	--	--	--	--		2180	106	20-2	FCU-103	1	20	4
5	--	--	--	--			1180 527	20-2	SECURE AREA LIGHTING	1	20	6
7	60	3	BTL2	SEE ONE-LINE DIAGRAM	6813	623		20-2	VAULT LIGHTING	1	20	8
9	--	--	--	--		2697	623	20-2	VAULT LIGHTING	1	20	10
11	--	--	--	--			3660 584	20-2	VAULT LIGHTING	1	20	12
13	60	3	BTL3	SEE ONE-LINE DIAGRAM	6813	540		20-2	RM 143 FURNITURE FEED	1	20	14
15	--	--	--	--		2697	900	20-2	RM 142 FURNITURE FEED	1	20	16
17	--	--	--	--			3660 540	20-2	RM 142 FURNITURE FEED	1	20	18
19	60	3	BTL4	SEE ONE-LINE DIAGRAM	6813	360		20-2	RECEPTACLE VAULT 1 MISSIO...	1	20	20
21	--	--	--	--		2697	720	20-2	RECEPTACLE ROOM 145, 146	1	20	22
23	--	--	--	--			3660 720	20-2	RECEPTACLE ROOM 142, 147,...	1	20	24
25	20	1	RECEPTACLE SECURITY 135	20-2	900	540		20-2	POWER VAULT 2 ALIS / ODIN 153	1	20	26
27	20	1	RECEPTACLE SECURITY 135	20-2		720	900	20-2	POWER VAULT 2 MISSION...	1	20	28
29	20	1	RECEPTACLE SECURITY 135	20-2			720 540	20-2	POWER VAULT 2 MISSION...	1	20	30
31	20	1	RECEPTACLE SECURITY 135	20-2	360	360		20-2	RECEPTACLE VAULT 2 MISSIO...	1	20	32
33	20	1	PRINTER SECURITY 135	20-2		180	720	20-2	RECEPTACLE ROOM 155, 156	1	20	34
35	20	1	SHREDDER SECURITY 135	20-2			180 180	SEE ONE-LINE DIAGRAM	INV2	1	20	36
37	20	1	RECEPTACLE ROOM 132,...	20-2	1080	720		20-2	RECEPTACLE ROOM 153, 152,...	1	20	38
39	20	1	RECEPTACLE ELECTRICAL...	20-2		360	180	20-2	SECURE SIDE MANTRAP DOOR	1	20	40
41	20	1	SECURE AREA BLUE LIGHTS	20-2			72 0		SPARE	1	20	42
43	20	1	POWER VAULT 3 ALIS / ODI...	20-2	540	0			SPARE	1	20	44
45	20	1	POWER VAULT 3 MISSION...	20-2		540	0		SPARE	1	20	46
47	20	1	POWER VAULT 3 MISSION...	20-2			540 0		SPARE	1	20	48
49	20	1	RECEPTACLE VAULT 3...	20-2	360	0			(SPD LEADS)	3	30	50
51	20	1	RECEPTACLE ROOM 164,...	20-2		720	0		--	--	--	52
53	20	1	RECEPTACLE ROOM 166,...	20-2			720 0		--	--	--	54
				TOTAL LOAD:	29167 VA	16939 VA	17483 VA					

PANEL TOTALS	
TOTAL CONNECTED LOAD:	63589 VA
TOTAL ESTIMATED DEMAND LOAD:	58204 VA
TOTAL CONNECTED CURRENT:	177 A
TOTAL ESTIMATED DEMAND CURRENT:	162 A
DEMAND WITH EXPANSION:	194 A

PANELBOARD: BTL1

LOCATION: VAULT 1 SERVER 144
SUPPLY FROM: BRL1
MOUNTING: SURFACE
ENCLOSURE: NEMA 1

VOLTAGE: 208Y/120V
PHASE: 3
WIRES: 4

A.I.C. RATING: 10000
MAINS TYPE: MCB
MAINS RATING: 100 A
MCB RATING: 60 A

NOTES:
SUITABLE FOR NON-LINEAR LOADS. PROVIDE PANEL WITH 200% NEUTRAL.

#	BKR	P	LOAD SERVED	WIRE / GROUND / CONDUIT	A	B	C	WIRE / GROUND / CONDUIT	LOAD SERVED	P	BKR	#
1	20	2	CAB. 01 NEMA L6-20R	20-2	485	0			SPARE	1	20	2
3	--	--	--	--		485	0		SPARE	1	20	4
5	20	1	MPE-U DUPLEX	20-2			180 0		SPARE	1	20	6
7	20	1	MPE-U DUPLEX	20-2	180	0			SPARE	1	20	8
9	20	1	CONV RECEPTS	20-2		360	0		SPARE	1	20	10
11	20	1	CONV RECEPTS	20-2			360 0		SPARE	1	20	12
13	25	2	HUM-101	25-2	1852	0			SPARE	1	20	14
15	--	--	--	--		1852	0		SPARE	1	20	16
17	40	2	CRAC-101	40-2			3120 0		SPARE	1	20	18
19	--	--	--	--	3120	0			SPARE	1	20	20
21	40	2	CRAC-102	40-2		0	0		SPARE	1	20	22
23	--	--	--	--			0 0		SPARE	1	20	24
25	20	1	HUM-PMP-101	20-2	1176	0			SPARE	1	20	26
27	20	1	SPARE			0	0		SPARE	1	20	28
29	20	1	SPARE				0 0		SPARE	1	20	30
				TOTAL LOAD:	6813 VA	2697 VA	3660 VA					

PANEL TOTALS	
TOTAL CONNECTED LOAD:	13169 VA
TOTAL ESTIMATED DEMAND LOAD:	13169 VA
TOTAL CONNECTED CURRENT:	37 A
TOTAL ESTIMATED DEMAND CURRENT:	37 A
DEMAND WITH EXPANSION:	44 A

Professional Engineer
I hereby certify that this plan, specification, or report was prepared by me or under my direct supervision and that I am a duly Licensed Professional Engineer under the laws of the state of Minnesota.
Signature:
Typed or Printed Name: DUGAN BRADLEY
Date: 07/23/25 License Number: 61869

US Army Corps of Engineers ®

MARK	DESCRIPTION	DATE
0	READY-TO-ADVERTISE (RTA) SUBMITTAL	JUL 2025

DESIGNED BY: D. BRADLEY
DRAWN BY: S. YUNKER
CHECKED BY: C. STRATTON
SUBMITTED BY: B. STREEBIN
SIZE: ANSI D
ISSUE DATE: JUL 2025
FILE NAME: 165438_E_R22_1.rvt
SOLICITATION NO.: W912QR25RA001
CONTRACT NO.: W912QR24F0007

US ARMY CORPS OF ENGINEERS
LITTLE ROCK DISTRICT
LITTLE ROCK, ARKANSAS

BURNS AND McDONNELL
9400 WARD PARKWAY,
KANSAS CITY, MO 64114
165438

F-35 SPECIAL ACCESS PROGRAM FACILITY
EBBING AIR NATIONAL GUARD BASE (ANGB), FORT SMITH, ARKANSAS

PANELBOARD SCHEDULES

SHEET ID
EP607

READY-TO-ADVERTISE (RTA) SUBMITTAL

PANELBOARD: BTL2

LOCATION: VAULT 2 SERVER 154
SUPPLY FROM: BRL1
MOUNTING: SURFACE
ENCLOSURE: NEMA 1

VOLTAGE: 208Y/120V
PHASE: 3
WIRES: 4

A.I.C. RATING: 10000
MAINS TYPE: MCB
MAINS RATING: 100 A
MCB RATING: 60 A

NOTES:
SUITABLE FOR NON-LINEAR LOADS. PROVIDE PANEL WITH 200% NEUTRAL.

#	BKR	P	LOAD SERVED	WIRE / GROUND / CONDUIT	A		B		C		WIRE / GROUND / CONDUIT	LOAD SERVED	P	BKR	#
1	20	2	CAB. 01 NEMA L6-20R	20-2	485	0						SPARE	1	20	2
3	--	--	--	--			485	0				SPARE	1	20	4
5	20	1	MPE-U DUPLEX	20-2					180	0		SPARE	1	20	6
7	20	1	MPE-U DUPLEX	20-2	180	0						SPARE	1	20	8
9	20	1	CONV RECEPT	20-2			360	0				SPARE	1	20	10
11	20	1	CONV RECEPT	20-2					360	0		SPARE	1	20	12
13	25	2	HUM-102	25-2	1852	--						SPACE	1	--	14
15	--	--	--	--			1852	--				SPACE	1	--	16
17	40	2	CRAC-103	40-2					3120	--		SPACE	1	--	18
19	--	--		--	3120	--						SPACE	1	--	20
21	40	2	CRAC-104	40-2			0	--				SPACE	1	--	22
23	--	--	--	--					0	--		SPACE	1	--	24
25	20	1	HUM-PMP-102	20-2	1176	--						SPACE	1	--	26
27	20	1	SPARE				0	--				SPACE	1	--	28
29	20	1	SPARE						0	--		SPACE	1	--	30
				TOTAL LOAD:	6813 VA		2697 VA		3660 VA						

PANEL TOTALS	
TOTAL CONNECTED LOAD:	13169 VA
TOTAL ESTIMATED DEMAND LOAD:	13169 VA
TOTAL CONNECTED CURRENT:	37 A
TOTAL ESTIMATED DEMAND CURRENT:	37 A
DEMAND WITH EXPANSION:	44 A

PANELBOARD: BTL3

LOCATION: VAULT 3 SERVER 167
SUPPLY FROM: BRL1
MOUNTING: SURFACE
ENCLOSURE: NEMA 1

VOLTAGE: 208Y/120V
PHASE: 3
WIRES: 4

A.I.C. RATING: 10000
MAINS TYPE: MCB
MAINS RATING: 100 A
MCB RATING: 60 A

NOTES:
SUITABLE FOR NON-LINEAR LOADS. PROVIDE PANEL WITH 200% NEUTRAL.

#	BKR	P	LOAD SERVED	WIRE / GROUND / CONDUIT	A		B		C		WIRE / GROUND / CONDUIT	LOAD SERVED	P	BKR	#
1	20	2	CAB. 01 NEMA L6-20R	20-2	485	0						SPARE	1	20	2
3	--	--	--	--			485	0				SPARE	1	20	4
5	20	1	MPE-U DUPLEX	20-2					180	0		SPARE	1	20	6
7	20	1	MPE-U DUPLEX	20-2	180	0						SPARE	1	20	8
9	20	1	CONV RECEPT	20-2			360	0				SPARE	1	20	10
11	20	1	CONV RECEPT	20-2					360	0		SPARE	1	20	12
13	25	2	HUM-103	25-2	1852	--						SPACE	1	--	14
15	--	--	--	--			1852	--				SPACE	1	--	16
17	40	2	CRAC-105	40-2					3120	--		SPACE	1	--	18
19	--	--		--	3120	--						SPACE	1	--	20
21	40	2	CRAC-106	40-2			0	--				SPACE	1	--	22
23	--	--	--	--					0	--		SPACE	1	--	24
25	20	1	HUM-PMP-103	20-2	1176	--						SPACE	1	--	26
27	20	1	SPARE				0	--				SPACE	1	--	28
29	20	1	SPARE						0	--		SPACE	1	--	30
				TOTAL LOAD:	6813 VA		2697 VA		3660 VA						

PANEL TOTALS	
TOTAL CONNECTED LOAD:	13169 VA
TOTAL ESTIMATED DEMAND LOAD:	13169 VA
TOTAL CONNECTED CURRENT:	37 A
TOTAL ESTIMATED DEMAND CURRENT:	37 A
DEMAND WITH EXPANSION:	44 A

PANELBOARD: BTL4

LOCATION: SECURE COMM ROOM 133
SUPPLY FROM: BRL1
MOUNTING: SURFACE
ENCLOSURE: NEMA 1

VOLTAGE: 208Y/120V
PHASE: 3
WIRES: 4

A.I.C. RATING: 10000
MAINS TYPE: MCB
MAINS RATING: 100 A
MCB RATING: 60 A

NOTES:
SUITABLE FOR NON-LINEAR LOADS. PROVIDE PANEL WITH 200% NEUTRAL.

#	BKR	P	LOAD SERVED	WIRE / GROUND / CONDUIT	A		B		C		WIRE / GROUND / CONDUIT	LOAD SERVED	P	BKR	#
1	20	1	RECEPTACLE SECURE...	20-2	720	106					15-2	FCU-102	1	15	2
3	30	2	RACK RECEPT L6-30R	30-2			1000	180			20-2	ACS	1	20	4
5	--	--	--	--					1000	180	20-2	SMA	1	20	6
7	20	1	RACK RECEPT L5-20R	20-2	1000	180					20-2	IDS	1	20	8
9	20	1	RACK RECEPT L5-20R	20-2			1000	0				SPARE	1	20	10
11	20	1	SPARE						0	0		SPARE	1	20	12
13	20	1	SPARE		0	0						SPARE	1	20	14
15	30	2	SPARE				0	0				SPARE	1	20	16
17	--	--	--	--					0	0		SPARE	1	20	18
19	30	2	SPARE		0	--						SPACE	1	--	20
21	--	--	--	--			0	--				SPACE	1	--	22
23	30	2	SPARE						0	--		SPACE	1	--	24
25	--	--	--	--	0	--						SPACE	1	--	26
27	20	1	SPARE				0	--				SPACE	1	--	28
29	20	1	SPARE						0	--		SPACE	1	--	30
				TOTAL LOAD:	2006 VA		2180 VA		1180 VA						

PANEL TOTALS	
TOTAL CONNECTED LOAD:	5366 VA
TOTAL ESTIMATED DEMAND LOAD:	5366 VA
TOTAL CONNECTED CURRENT:	15 A
TOTAL ESTIMATED DEMAND CURRENT:	15 A
DEMAND WITH EXPANSION:	18 A

Professional Engineer
I hereby certify that this plan, specification, or report was prepared by me or under my direct supervision and that I am a duly Licensed Professional Engineer under the laws of the state of Minnesota.
Signature:
Typed or Printed Name: DUGAN BRADLEY
Date: 07/23/25 License Number: 61869

US Army Corps of Engineers ®

MARK	DESCRIPTION	DATE
0	READY-TO-ADVERTISE (RTA) SUBMITTAL	JUL 2025

DESIGNED BY: D. BRADLEY
DRAWN BY: S. YUNKER
CHECKED BY: C. STRATTON
SUBMITTED BY: B. STREEBIN
SIZE: ANSI D
ISSUE DATE: JUL 2025
SOLICITATION NO.: W9127S25RA001
CONTRACT NO.: W9127S24F0007
FILE NAME: 16543B_E_R22_1.rvt

US ARMY CORPS OF ENGINEERS
LITTLE ROCK DISTRICT
LITTLE ROCK, ARKANSAS

BURNS AND McDONNELL
9400 WARD PARKWAY,
KANSAS CITY, MO 64114
16543B

F-35 SPECIAL ACCESS PROGRAM FACILITY
EBBING AIR NATIONAL GUARD BASE (ANGB), FORT SMITH, ARKANSAS

PANELBOARD SCHEDULES

SHEET ID
EP608

READY-TO-ADVERTISE (RTA) SUBMITTAL

GENERAL SHEET NOTES

1. ALL VAV'S ARE SINGLE POINT POWER CONNECTION, WITH DISCONNECT PROVIDED BY MFR.

MECHANICAL EQUIPMENT SCHEDULE

EQUIPMENT TAG	LOCATION NO.	LOCATION NAME	POWER REQUIREMENTS VOLTAGE	POWER REQUIREMENTS POLES	DISCONNECTING MEANS TYPE	SIZE	ENC.	FUSE (A)	STARTER/VFD	COMMENTS
AC-101	171	MECHANICAL ROOM	480 V	3	SINGLE POINT	MFR	MFR	MFR	MFR	
AHU-101	171	MECHANICAL ROOM	480 V	3	SINGLE POINT	MFR	MFR	MFR	MFR	
AHU-102	251	MECHANICAL	480 V	3	SINGLE POINT	MFR	MFR	MFR	MFR	
BF-101	114	LIFE SUPPORT	120 V	1	N/A					
CH-101			480 V	3	SINGLE POINT	MFR	MFR	MFR	MFR	
CH-101 BUFFER TANK HEATER			120 V	1	SINGLE POINT	MFR	MFR	MFR	MFR	
CH-101 EVAP HEATER			120 V	1	SINGLE POINT	MFR	MFR	MFR	MFR	
CH-101 HEAT TRACE			120 V	1	N/A					PROVIDE GFPE BREAKER
CH-102			480 V	3	SINGLE POINT	MFR	MFR	MFR	MFR	
CH-102 BUFFER TANK HEATER			120 V	1	SINGLE POINT	MFR	MFR	MFR	MFR	
CH-102 EVAP HEATER			120 V	1	SINGLE POINT	MFR	MFR	MFR	MFR	
CH-102 HEAT TRACE			120 V	1	N/A					PROVIDE GFPE BREAKER
CPP-101	251	MECHANICAL	480 V	3	DISCONNECT	30A	NEMA 1	N/A	VFD	SIZE VFD TO MOTOR HP
CRAC-101	144	VAULT 1 SERVER	208 V	2	SINGLE POINT	MFR	MFR	MFR	MFR	
CRAC-102	144	VAULT 1 SERVER	208 V	2	SINGLE POINT	MFR	MFR	MFR	MFR	REDUNDANT TO CRAC ABOVE
CRAC-103	154	VAULT 2 SERVER	208 V	2	SINGLE POINT	MFR	MFR	MFR	MFR	
CRAC-104	154	VAULT 2 SERVER	208 V	2	SINGLE POINT	MFR	MFR	MFR	MFR	REDUNDANT TO CRAC ABOVE
CRAC-105	167	VAULT 3 SERVER	208 V	2	SINGLE POINT	MFR	MFR	MFR	MFR	
CRAC-106	167	VAULT 3 SERVER	208 V	2	SINGLE POINT	MFR	MFR	MFR	MFR	REDUNDANT TO CRAC ABOVE
CUH-101	101	VESTIBULE	480 V	3	DISCONNECT	OTHERS	OTHERS	OTHERS	OTHERS	
CUH-103	103	VESTIBULE	480 V	3	DISCONNECT	OTHERS	OTHERS	OTHERS	OTHERS	
DOAS-101 ENERGY WHEEL	171	MECHANICAL ROOM	480 V	3	SINGLE POINT	MFR	MFR	MFR	MFR	
DOAS-101 EXHAUST FAN	171	MECHANICAL ROOM	480 V	3	SINGLE POINT	MFR	MFR	MFR	MFR	
DOAS-101 SUPPLY FAN	171	MECHANICAL ROOM	480 V	3	SINGLE POINT	MFR	MFR	MFR	MFR	
DOAS-102 ENERGY WHEEL	251	MECHANICAL	480 V	3	SINGLE POINT	MFR	MFR	MFR	MFR	
DOAS-102 EXHAUST FAN	251	MECHANICAL	480 V	3	SINGLE POINT	MFR	MFR	MFR	MFR	
DOAS-102 SUPPLY FAN	251	MECHANICAL	480 V	3	SINGLE POINT	MFR	MFR	MFR	MFR	
DWH-101	171	MECHANICAL ROOM	208 V	3	DISCONNECT	60A	NEMA 1	N/A	N/A	
ETP-101	171	MECHANICAL ROOM	120 V	1	MOTOR RATED SWITCH	20A	NEMA 1	N/A	N/A	
ETP-102	251	MECHANICAL	120 V	1	MOTOR RATED SWITCH	20A	NEMA 1	N/A	N/A	
ETP-103			120 V	1	MOTOR RATED SWITCH	20A	NEMA 1	N/A	N/A	
FCU-101	127	MAIN COMM ROOM	120 V	1	SINGLE POINT	MFR	MFR	MFR	MFR	
FCU-102	133	SECURE COMM ROOM	120 V	1	SINGLE POINT	MFR	MFR	MFR	MFR	
FCU-103	136	SECURE ELEC ROOM	120 V	1	SINGLE POINT	MFR	MFR	MFR	MFR	
FCU-104	171	MECHANICAL ROOM	208 V	2	SINGLE POINT	MFR	MFR	MFR	MFR	
FCU-105	216	COMM	120 V	1	SINGLE POINT	MFR	MFR	MFR	MFR	
FCU-106	172	ELECTRICAL ROOM	208 V	2	SINGLE POINT	MFR	MFR	MFR	MFR	
FCU-107	251	MECHANICAL	208 V	2	SINGLE POINT	MFR	MFR	MFR	MFR	
FCU-108	252	ELECTRICAL	208 V	2	SINGLE POINT	MFR	MFR	MFR	MFR	
FCU-109	253	FIRE	120 V	1	SINGLE POINT	MFR	MFR	MFR	MFR	
FPVAV-101	102	CORRIDOR	120 V	1	SINGLE POINT	MFR	MFR	MFR	MFR	
FPVAV-102	116	PILOT LOCKER ROOM	120 V	1	SINGLE POINT	MFR	MFR	MFR	MFR	
FPVAV-201A	201	CORRIDOR	120 V	1	SINGLE POINT	MFR	MFR	MFR	MFR	
FPVAV-201B	201	CORRIDOR	120 V	1	SINGLE POINT	MFR	MFR	MFR	MFR	
HPP-101	251	MECHANICAL	480 V	3	DISCONNECT	30A	NEMA 1	N/A	VFD	SIZE VFD TO MOTOR HP
HUM-101	144	VAULT 1 SERVER	208 V	2	SINGLE POINT	30A	NEMA 1	N/A	N/A	
HUM-102	154	VAULT 2 SERVER	208 V	2	SINGLE POINT	30A	NEMA 1	N/A	N/A	
HUM-103	167	VAULT 3 SERVER	208 V	2	SINGLE POINT	30A	NEMA 1	N/A	N/A	
HUM-PMP-101	144	VAULT 1 SERVER	120 V	1	MOTOR RATED SWITCH	20A	NEMA 1	N/A	N/A	
HUM-PMP-101	167	VAULT 3 SERVER	120 V	1	MOTOR RATED SWITCH	20A	NEMA 1	N/A	N/A	
HUM-PMP-102	154	VAULT 2 SERVER	120 V	1	MOTOR RATED SWITCH	20A	NEMA 1	N/A	N/A	
HWB-101	251	MECHANICAL	480 V	3	DISCONNECT	OTHERS	OTHERS	OTHERS	OTHERS	
HWB-102	251	MECHANICAL	480 V	3	DISCONNECT	OTHERS	OTHERS	OTHERS	OTHERS	
RP-101	171	MECHANICAL ROOM	120 V	1	MOTOR RATED SWITCH	OTHERS	OTHERS	OTHERS	OTHERS	

MECHANICAL EQUIPMENT SCHEDULE

EQUIPMENT TAG	LOCATION NO.	LOCATION NAME	POWER REQUIREMENTS VOLTAGE	POWER REQUIREMENTS POLES	DISCONNECTING MEANS TYPE	SIZE	ENC.	FUSE (A)	STARTER/VFD	COMMENTS
VAV-101	118	WOMEN'S RESTROOM	120 V	1	SINGLE POINT	MFR	MFR	N/A	N/A	
VAV-102	106	CORRIDOR	120 V	1	SINGLE POINT	MFR	MFR	N/A	N/A	
VAV-103	107	SCHEDULING & TRAINING	120 V	1	SINGLE POINT	MFR	MFR	N/A	N/A	
VAV-104	108	DO	120 V	1	SINGLE POINT	MFR	MFR	N/A	N/A	
VAV-105	109	SARM	120 V	1	SINGLE POINT	MFR	MFR	N/A	N/A	
VAV-106	110	SARM ADMIN	120 V	1	SINGLE POINT	MFR	MFR	N/A	N/A	
VAV-107	111	STAN / EVAL	120 V	1	SINGLE POINT	MFR	MFR	N/A	N/A	
VAV-108	112	AFE MAINTENANCE	120 V	1	SINGLE POINT	MFR	MFR	N/A	N/A	
VAV-109	116	PILOT LOCKER ROOM	120 V	1	SINGLE POINT	MFR	MFR	N/A	N/A	
VAV-110	121	HALL	120 V	1	SINGLE POINT	MFR	MFR	N/A	N/A	
VAV-111	125	BREAK ROOM	120 V	1	SINGLE POINT	MFR	MFR	N/A	N/A	
VAV-112	126	MAINT DEBRIEF	120 V	1	SINGLE POINT	MFR	MFR	N/A	N/A	
VAV-113	135	SECURITY	120 V	1	SINGLE POINT	MFR	MFR	N/A	N/A	
VAV-114	132	CORRIDOR	120 V	1	SINGLE POINT	MFR	MFR	N/A	N/A	
VAV-115	142	VAULT 1 MISSION PLANNING	120 V	1	SINGLE POINT	MFR	MFR	N/A	N/A	
VAV-116	142	VAULT 1 MISSION PLANNING	120 V	1	SINGLE POINT	MFR	MFR	N/A	N/A	
VAV-117	145	VAULT 1 LG BRIEF	120 V	1	SINGLE POINT	MFR	MFR	N/A	N/A	
VAV-118	146	VAULT 1 SM BRIEF	120 V	1	SINGLE POINT	MFR	MFR	N/A	N/A	
VAV-119	147	VAULT 1 SM BRIEF	120 V	1	SINGLE POINT	MFR	MFR	N/A	N/A	
VAV-120	152	VAULT 2 MISSION PLANNING	120 V	1	SINGLE POINT	MFR	MFR	N/A	N/A	
VAV-121	152	VAULT 2 MISSION PLANNING	120 V	1	SINGLE POINT	MFR	MFR	N/A	N/A	
VAV-122	155	VAULT 2 LG BRIEF	120 V	1	SINGLE POINT	MFR	MFR	N/A	N/A	
VAV-123	156	VAULT 2 SM BRIEF	120 V	1	SINGLE POINT	MFR	MFR	N/A	N/A	
VAV-124	157	VAULT 2 SM BRIEF	120 V	1	SINGLE POINT	MFR	MFR	N/A	N/A	
VAV-125	162	VAULT 3 MISSION PLANNING	120 V	1	SINGLE POINT	MFR	MFR	N/A	N/A	
VAV-126	163	VAULT 3 SM BRIEF	120 V	1	SINGLE POINT	MFR	MFR	N/A	N/A	
VAV-127	164	VAULT 3 SM BRIEF	120 V	1	SINGLE POINT	MFR	MFR	N/A	N/A	
VAV-128	165	VAULT 3 LG BRIEF	120 V	1	SINGLE POINT	MFR	MFR	N/A	N/A	
VAV-129	162	VAULT 3 MISSION PLANNING	120 V	1	SINGLE POINT	MFR	MFR	N/A	N/A	
VAV-130	129	PRINT / COPY	120 V	1	SINGLE POINT	MFR	MFR	N/A	N/A	
VAV-201	202	COMMAND SUPPORT STAFF	120 V	1	SINGLE POINT	MFR	MFR	N/A	N/A	
VAV-202	203	ACTIVITY PROGRAM COORDINATOR (APC) / RESOURCE ADVISOR (RA)	120 V	1	SINGLE POINT	MFR	MFR	N/A	N/A	
VAV-203	204	SQUADRON COMMANDER OFFICE	120 V	1	SINGLE POINT	MFR	MFR	N/A	N/A	
VAV-204	205	CONFERENCE ROOM	120 V	1	SINGLE POINT	MFR	MFR	N/A	N/A	
VAV-205	206	INTERNATIONAL MILITARY STUDENT OFFICER (IMSO)	120 V	1	SINGLE POINT	MFR	MFR	N/A	N/A	
VAV-206	207	SNR M-1	120 V	1	SINGLE POINT	MFR	MFR	N/A	N/A	
VAV-207	208	SNR M-2	120 V	1	SINGLE POINT	MFR	MFR	N/A	N/A	
VAV-208	209	SNR M-3	120 V	1	SINGLE POINT	MFR	MFR	N/A	N/A	
VAV-209	213	STUDENT COLLAB	120 V	1	SINGLE POINT	MFR	MFR	N/A	N/A	
VAV-210A	214	LG BRIEFING RM	120 V	1	SINGLE POINT	MFR	MFR	N/A	N/A	
VAV-210B	214	LG BRIEFING RM	120 V	1	SINGLE POINT	MFR	MFR	N/A	N/A	
VAV-211	214	LG BRIEFING RM	120 V	1	SINGLE POINT	MFR	MFR	N/A	N/A	
VAV-212	219	MEN'S RESTROOM	120 V	1	SINGLE POINT	MFR	MFR	N/A	N/A	
VAV-213	226	IP M-1	120 V	1	SINGLE POINT	MFR	MFR	N/A	N/A	
VAV-214	227	IP M-2	120 V	1	SINGLE POINT	MFR	MFR	N/A	N/A	
VAV-215	211	RA	120 V	1	SINGLE POINT	MFR	MFR	N/A	N/A	
VAV-216	229	BREAK ROOM	120 V	1	SINGLE POINT	MFR	MFR	N/A	N/A	
VAV-217	231	STORAGE	120 V	1	SINGLE POINT	MFR	MFR	N/A	N/A	
VAV-218	228	CORRIDOR	120 V	1	SINGLE POINT	MFR	MFR	N/A	N/A	
VAV-219	235	IP M-6	120 V	1	SINGLE POINT	MFR	MFR	N/A	N/A	
VAV-220	236	IP M-5	120 V	1	SINGLE POINT	MFR	MFR	N/A	N/A	
VAV-221	237	IP M-4	120 V	1	SINGLE POINT	MFR	MFR	N/A	N/A	
VAV-222	239	IP M-3	120 V	1	SINGLE POINT	MFR	MFR	N/A	N/A	
VAV-223	225	CORRIDOR	120 V	1	SINGLE POINT	MFR	MFR	N/A	N/A	

Professional Engineer
I hereby certify that this plan, specification, or report was prepared by me or under my direct supervision and that I am a duly Licensed Professional Engineer under the laws of the state of Minnesota.

Signature: _____

Typed or Printed Name: DUGAN BRADLEY

Date: 07/23/25 License Number: 61869

US Army Corps of Engineers ®

MARK	DESCRIPTION	DATE
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DESIGNED BY: D. BRADLEY
DRAWN BY: S. YUNKER
CHECKED BY: C. STRATTON
SUBMITTED BY: B. STREEBIN
SIZE: ANSI D
ISSUE DATE: JUL 2025
SOLICITATION NO.: W912T525RA001
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US ARMY CORPS OF ENGINEERS
LITTLE ROCK DISTRICT
LITTLE ROCK, ARKANSAS

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165438

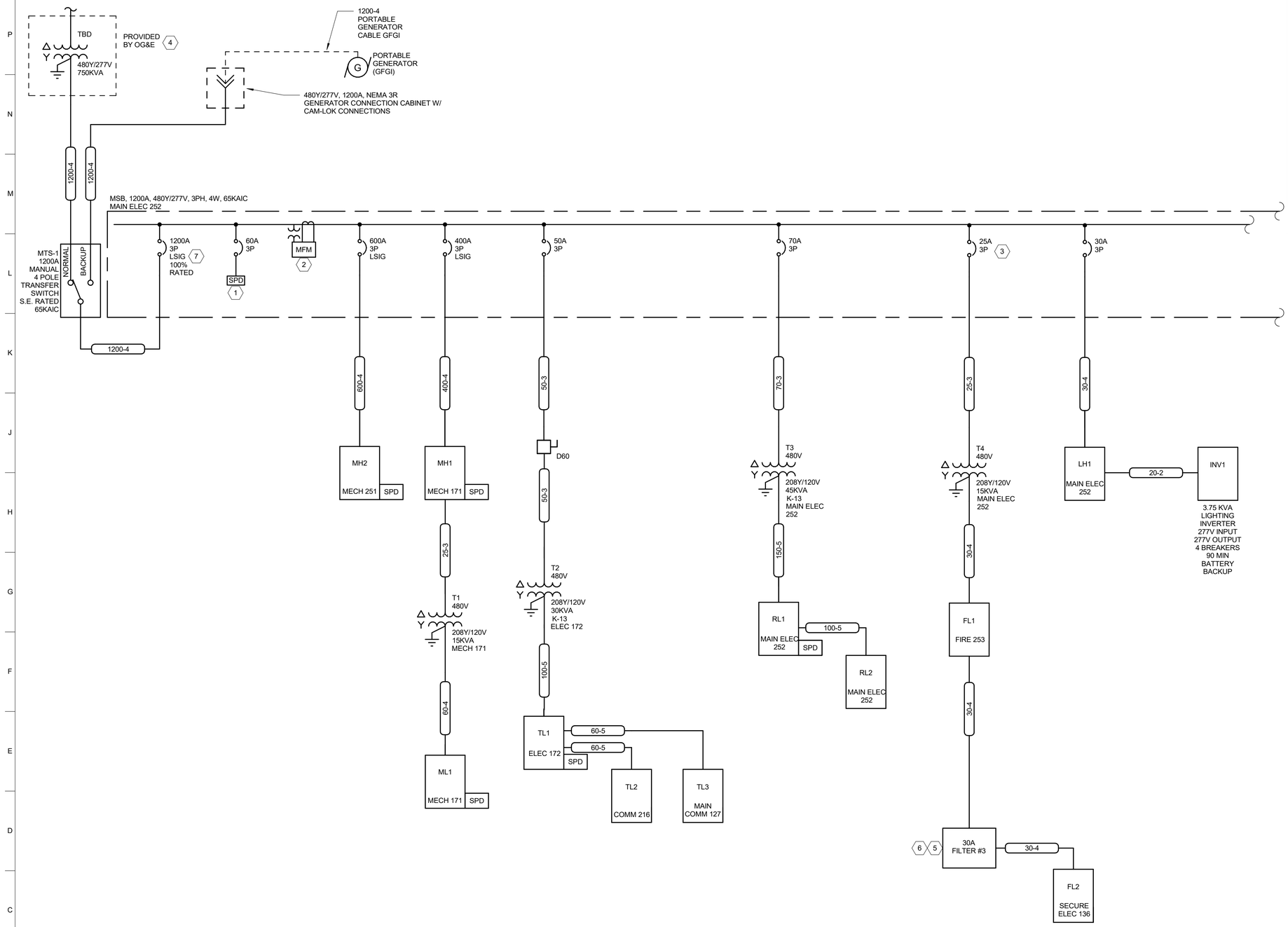
F-35, SPECIAL ACCESS PROGRAM FACILITY
EBBING AIR NATIONAL GUARD BASE (ANGB), FORT SMITH, ARKANSAS

MECHANICAL EQUIPMENT CONNECTION SCHEDULE

SHEET ID

EP611

READY-TO-ADVERTISE (RTA) SUBMITTAL



A1 ONE-LINE DIAGRAM - 1 OF 2
SCALE: NTS

GENERAL SHEET NOTES

1. SUBMIT SELECTIVE COORDINATION STUDY, ARC FLASH STUDY, AND SHORT CIRCUIT STUDY FOR REVIEW EPRIOR TO THE ELECTRICAL DISTRIBUTION EQUIPMENT SUBMITTAL. REFER TO SPECIFICATION 26 28 01.00 FOR MORE INFORMATION.
2. LABEL ALL ELECTRICAL GEAR. THIS INCLUDES, BUT NOT LIMITED TO: SWITCHBOARDS, DISTRIBUTION BOARDS, PANELBOARDS, TRANSFORMERS, DISCONNECTS, ETC.
3. PROVIDE EXTERNAL WALL MOUNTED SPD'S FOR EVERY PANELBOARD SHOWN ASIDE FROM MAIN SWITCHBOARD. SPD'S MUST BE LOCATED WITHIN 3 FT OF PANELBOARD.
4. ALL FEEDER CONDUCTORS TO BE COPPER, UON.

SHEET KEYNOTES

1. PROVIDE BREAKER SIZE PER SPD EQUIPMENT MANUFACTURER REQUIREMENTS.
2. PROVIDE INTEGRAL DIGITAL METER WITH SWITCHBOARD.
3. PROVIDE LOCK-ON BREAKER.
4. UTILITY TRANSFORMER. OG&E WILL PROVIDE AND INSTALL THE FOLLOWING:
   - A. MEDIUM VOLTAGE CONNECTION UPSTREAM OF TRANSFORMER
   - B. TRANSFORMER
   - C. TRANSFORMER PAD
   - D. GROUND RING FOR TRANSFORMER
   - E. PRIMARY CONNECTION TO TRANSFORMER
   - F. CURRENT TRANSFORMER AND METER WITHIN TRANSFORMER
   - G. SECONDARY CONDUIT STUB OUTS 2'-0" PAST TRANSFORMER PAD
   - H. TERMINATE SECONDARY CONDUCTORS TO UTILITY TRANSFORMER (WILL NOT PROVIDE SECONDARY SERVICE CONDUCTORS)
   - I. ELECTRICAL CONTRACTOR MUST PROVIDE SECONDARY CONDUCTORS, CONDUIT, AND TERMINATE TO MAIN SWITCHBOARD.
5. PROVIDE 208VAC/60HZ RATED POWER FILTER FOR ALL THREE PHASES AND NEUTRAL. FILTER INSERTION LOSS MUST BE A MINIMUM OF 80dB OVER A MINIMUM FREQUENCY RANGE OF 14KHz TO 18GHz.
6. PROVIDE #4AWG BOND FROM POWER FILTER ENCLOSURE TO ABOVE-CEILING GROUND LOOP, REFER TO EG101 FOR MORE INFORMATION.
7. PROVIDE ARC-FLASH REDUCTION MAINTENANCE SWITCH COMPLYING WITH NEC ARTICLE 240.87.

Professional Engineer
I hereby certify that this plan, specification, or report was prepared by me or under my direct supervision and that I am a duly Licensed Professional Engineer under the laws of the state of Minnesota.
Signature:
Typed or Printed Name: DUGAN BRADLEY
Date: 07/23/25 License Number: 61869

US Army Corps of Engineers ®

MARK	DESCRIPTION	DATE
0	READY-TO-ADVERTISE (RTA) SUBMITTAL	JUL 2025

DESIGNED BY: D. BRADLEY
DRAWN BY: S. YUNKER
CHECKED BY: C. STRATTON
SUBMITTED BY: B. STREEBIN
SIZE: ANSI D
ISSUE DATE: JUL 2025
SOLICITATION NO.: W912QR25RA001
CONTRACT NO.: W912QR24F0007
FILE NAME: 165438_E_R22_1.rvt

US ARMY CORPS OF ENGINEERS
LITTLE ROCK DISTRICT
LITTLE ROCK, ARKANSAS

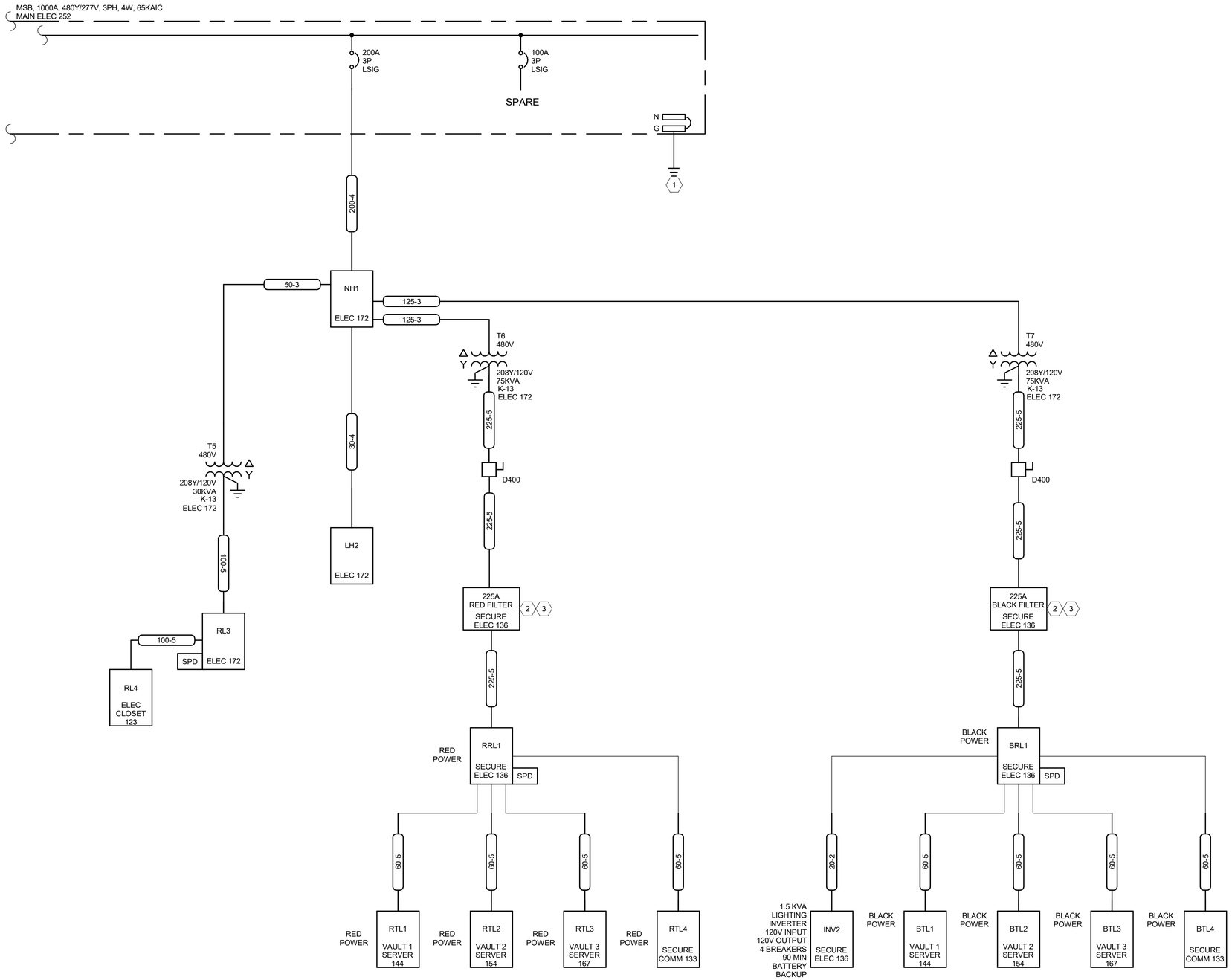
BURNS AND McDONNELL
9400 WARD PARKWAY,
KANSAS CITY, MO 64114
165438

F-35, SPECIAL ACCESS PROGRAM FACILITY
EBBING AIR NATIONAL GUARD BASE (ANGB), FORT SMITH, ARKANSAS

ONE-LINE DIAGRAM

SHEET ID
EP701

READY-TO-ADVERTISE (RTA) SUBMITTAL



A1 ONE-LINE DIAGRAM - 2 OF 2

SCALE: NTS

GENERAL SHEET NOTES

1. SUBMIT SELECTIVE COORDINATION STUDY, ARC FLASH STUDY, AND SHORT CIRCUIT STUDY FOR REVIEW EPRIOR TO THE ELECTRICAL DISTRIBUTION EQUIPMENT SUBMITTAL. REFER TO SPECIFICATION 26 28 01.00 FOR MORE INFORMATION.
2. LABEL ALL ELECTRICAL GEAR. THIS INCLUDES, BUT NOT LIMITED TO: SWITCHBOARDS, DISTRIBUTION BOARDS, PANELBOARDS, TRANSFORMERS, DISCONNECTS, ETC.
3. PROVIDE EXTERNAL WALL MOUNTED SPD'S FOR EVERY PANELBOARD SHOWN.

SHEET KEYNOTES

1. REFER TO BUILDING GROUNDING ELECTRODE RISER DIAGRAM ON SHEET EG505 FOR MORE INFORMATION..
2. PROVIDE 208VAC/60HZ RATED POWER FILTER FOR ALL THREE PHASES AND NEUTRAL. FILTER INSERTION LOSS MUST BE A MINIMUM OF 80dB OVER A MINIMUM FREQUENCY RANGE OF 14KHz TO 18GHz.
3. PROVIDE #4AWG BOND FROM POWER FILTER ENCLOSURE TO ABOVE-CEILING GROUND LOOP, REFER TO EG101 FOR MORE INFORMATION.

Professional Engineer
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Date: 07/23/25 License Number: 61869

US Army Corps of Engineers ®

MARK	DESCRIPTION	DATE
0	READY-TO-ADV/ERTISE (RTA) SUBMITTAL	JUL 2025

DESIGNED BY: D. BRADLEY
DRAWN BY: S. YUNKER
CHECKED BY: C. STRATTON
SUBMITTED BY: B. STREEBIN
SIZE: ANSI D
ISSUE DATE: JUL 2025
SOLICITATION NO.: W912735R5KA001
CONTRACT NO.: W912735R4T0007
FILE NAME: 16543B_E_R22_1.rvt

US ARMY CORPS OF ENGINEERS
LITTLE ROCK DISTRICT
LITTLE ROCK, ARKANSAS

BURNS AND McDONNELL
9400 WARD PARKWAY,
KANSAS CITY, MO 64114
16543B

F-35 SPECIAL ACCESS PROGRAM FACILITY
EBBING AIR NATIONAL GUARD BASE (ANGB), FORT SMITH, ARKANSAS

ONE-LINE DIAGRAM

SHEET ID
EP702

READY-TO-ADVERTISE (RTA) SUBMITTAL

PANELBOARD: P1

LOCATION:
SUPPLY FROM:
MOUNTING: SURFACE
ENCLOSURE: NEMA 3R

VOLTAGE: 480Y/277V
PHASE: 3
WIRES: 4

A.I.C. RATING: 22000
MAINS TYPE: MCB
MAINS RATING: 100 A
MCB RATING: 60 A

NOTES:

#	BKR	P	LOAD SERVED	WIRE / GROUND / CONDUIT	A		B		C		WIRE / GROUND / CONDUIT	LOAD SERVED	P	BKR	#
1	20	1	WALKWAY LTG	20-2	308	1964					SEE ONE-LINE DIAGRAM	P2	3	40	2
3	20	1	TURNSTILE VIA P XFMR	SEE ONE-LINE DIAGRAM			1500	1020			--	--	--	--	4
5	20	1	SPARE						0	0	--	--	--	--	6
7	20	1	SPARE		0	--						SPACE	1	--	8
9	20	1	SPARE				0	--				SPACE	1	--	10
11	20	1	SPARE						0	--		SPACE	1	--	12
13	20	1	SPARE		0	--						SPACE	1	--	14
15	20	1	SPARE				0	--				SPACE	1	--	16
17	20	1	SPARE						0	--		SPACE	1	--	18
19	20	1	SPARE		0	0					(SPD LEADS)	SPD	3	30	20
21	20	1	SPARE				0	0			--	--	--	--	22
23	20	1	SPARE						0	0	--	--	--	--	24
				TOTAL LOAD:	2272 VA		2520 VA		0 VA						

PANEL TOTALS	
TOTAL CONNECTED LOAD:	4792 VA
TOTAL ESTIMATED DEMAND LOAD:	4792 VA
TOTAL CONNECTED CURRENT:	6 A
TOTAL ESTIMATED DEMAND CURRENT:	6 A
DEMAND WITH EXPANSION:	7 A

PANELBOARD: P2

LOCATION:
SUPPLY FROM: P1
MOUNTING: SURFACE
ENCLOSURE: NEMA 3R

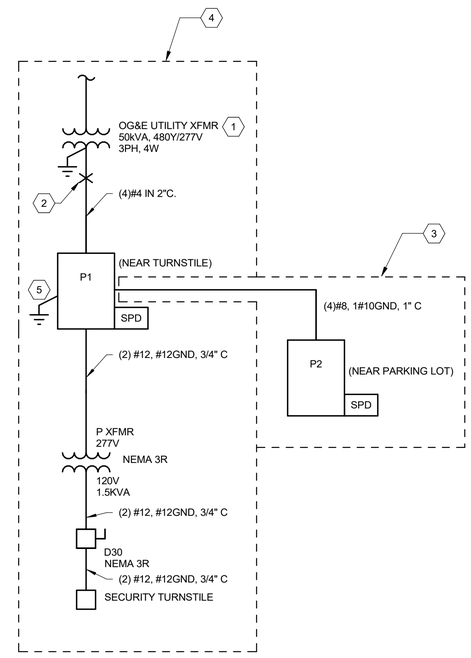
VOLTAGE: 480Y/277V
PHASE: 3
WIRES: 4

A.I.C. RATING: 22000
MAINS TYPE: MCB
MAINS RATING: 100 A
MCB RATING: 40 A

NOTES:

#	BKR	P	LOAD SERVED	WIRE / GROUND / CONDUIT	A		B		C		WIRE / GROUND / CONDUIT	LOAD SERVED	P	BKR	#
1	20	1	N PARKING LOT	20-2	1964	--						SPACE	1	--	2
3	20	1	S PARKING LOT	20-2			1020	--				SPACE	1	--	4
5	20	1	SPARE						0	--		SPACE	1	--	6
7	20	1	SPARE		0	--						SPACE	1	--	8
9	20	1	SPARE				0	--				SPACE	1	--	10
11	20	1	SPARE						0	--		SPACE	1	--	12
13	20	1	SPARE		0	--						SPACE	1	--	14
15	20	1	SPARE				0	--				SPACE	1	--	16
17	20	1	SPARE						0	--		SPACE	1	--	18
19	20	1	SPARE		0	0					(SPD LEADS)	SPD	3	30	20
21	20	1	SPARE				0	0			--	--	--	--	22
23	20	1	SPARE						0	0	--	--	--	--	24
				TOTAL LOAD:	1964 VA		1020 VA		0 VA						

PANEL TOTALS	
TOTAL CONNECTED LOAD:	2984 VA
TOTAL ESTIMATED DEMAND LOAD:	2984 VA
TOTAL CONNECTED CURRENT:	4 A
TOTAL ESTIMATED DEMAND CURRENT:	4 A
DEMAND WITH EXPANSION:	4 A



A12 ONE-LINE DIAGRAM - PARKING LOT & WALKWAY
SCALE: NTS

GENERAL SHEET NOTES

1. SUBMIT SELECTIVE COORDINATION STUDY, ARC FLASH STUDY, AND SHORT CIRCUIT STUDY FOR REVIEW EPRIOR TO THE ELECTRICAL DISTRIBUTION EQUIPMENT SUBMITTAL. REFER TO SPECIFICATION 26 28 01.00 FOR MORE INFORMATION.
2. LABEL ALL ELECTRICAL GEAR. THIS INCLUDES, BUT NOT LIMITED TO: SWITCHBOARDS, DISTRIBUTION BOARDS, PANELBOARDS, TRANSFORMERS, DISCONNECTS, ETC.
3. PROVIDE EXTERNAL WALL MOUNTED SPD'S FOR EVERY PANELBOARD SHOWN.

SHEET KEYNOTES

1. UTILITY TRANSFORMER. OG&E WILL PROVIDE AND INSTALL THE FOLLOWING:
   - TRANSFORMER
   - TRANSFORMER PAD
   - PRIMARY CONNECTION TO TRANSFORMER
   - C.T. AND METER WITHIN TRANSFORMER
   - SECONDARY CONDUIT STUB OUTS 2'-0" PAST TRANSFORMER PAD
   - TERMINATE SECONDARY CONDUCTORS TO UTILITY TRANSFORMER (WILL NOT PROVIDE SECONDARY SERVICE CONDUCTORS).
   -
2. CONTRACTOR TO CONNECT TO OG&E SECONDARY CONDUIT STUB OUTS. PULL AND TERMINATE SECONDARY.
3. BID OPTION - POV PARKING: ALL SCOPE WITHIN DASHED LINE.
4. BID OPTION - SECURITY TURNSTILE: ALL SCOPE WITHIN DASHED LINE.
5. GROUND TO NEUTRAL MAIN BONDING JUMPER IN THIS PANEL. PROVIDE 3/4" DIAMETER X 10'-0"L GROUND ROD ADJACENT TO PANEL. BOND WITH #6 AWG BARE COPPER CONDUCTOR.

Professional Engineer
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Signature:
Typed or Printed Name: DUGAN BRADLEY
Date: 07/23/25 License Number: 61869

US Army Corps of Engineers ®

MARK	DESCRIPTION	DATE
0	READY-TO-ADVERTISE (RTA) SUBMITTAL	JUL 2025

DESIGNED BY: D. BRADLEY
DRAWN BY: S. YONKER
CHECKED BY: C. STRATTON
SUBMITTED BY: B. STREEBIN
SIZE: ANSI D
ISSUE DATE: JUL 2025
SOLICITATION NO.: W912T525RA001
CONTRACT NO.: W912T524F0007
FILE NAME: 165438_E_R22_1.rvt

US ARMY CORPS OF ENGINEERS
LITTLE ROCK DISTRICT
LITTLE ROCK, ARKANSAS

BURNS AND McDONNELL
9400 WARD PARKWAY,
KANSAS CITY, MO 64114
165438

F-35: SPECIAL ACCESS PROGRAM FACILITY
EBBING AIR NATIONAL GUARD BASE (ANGB), FORT SMITH, ARKANSAS

ONE-LINE DIAGRAM - PARKING LOT & WALKWAY

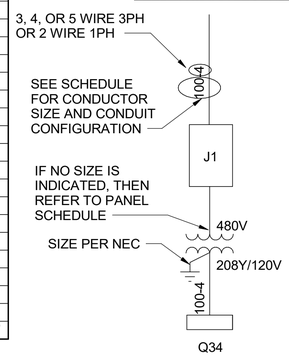
SHEET ID
EP703

READY-TO-ADVERTISE (RTA) SUBMITTAL

FEEDER AND BRANCH CIRCUIT SCHEDULE

MARK	PHASE & GROUNDED CONDUCTORS	EQUIP. GROUND CONDUCTOR	SUPPLY SIDE BONDING JUMPER	3Φ / 3W CONDUIT SIZE	3Φ / 4W CONDUIT SIZE	3Φ / 5W CONDUIT SIZE
15	#12	#12	#8	3/4"	3/4"	3/4"
20	#12	#12	#8	3/4"	3/4"	3/4"
25	#10	#10	#8	3/4"	3/4"	3/4"
30	#10	#10	#8	3/4"	3/4"	3/4"
35	#8	#10	#8	3/4"	1"	1"
40	#8	#10	#8	3/4"	1"	1"
45	#6	#10	#8	1"	1"	1"
50	#6	#10	#8	1"	1"	1"
60	#4	#10	#8	1-1/4"	1-1/4"	1-1/4"
70	#4	#8	#8	1-1/4"	1-1/4"	1-1/4"
80	#2	#8	#8	1-1/4"	1-1/2"	1-1/2"
90	#2	#8	#8	1-1/4"	1-1/2"	1-1/2"
100	#1	#8	#6	1-1/2"	2"	2"
110	#1	#6	#6	1-1/2"	2"	2"
125	#1/0	#6	#6	2"	2"	2"
150	#1/0	#6	#6	2"	2"	2"
175	#2/0	#6	#4	2"	2"	2"
200	#3/0	#6	#4	2"	2"	2-1/2"
225	#4/0	#4	#2	2"	2-1/2"	2-1/2"
250	250 kcmil	#4	#2	3"	3"	3"
300	350 kcmil	#4	#2	3"	3-1/2"	3-1/2"
350	500 kcmil	#3	#1/0	3"	3-1/2"	3-1/2"
400	2 SETS OF #3/0	#3	#1/0	(2)2"	(2)2-1/2"	(2)2-1/2"
500	2 SETS OF 250 kcmil	#2	#2	(2) 2-1/2"	(2) 3"	(2) 3"
600	2 SETS OF 350 kcmil	#1	#2	(2) 3"	(2) 3"	(2) 3"
800	2 SETS OF 500 kcmil	#1/0	#1/0	(2) 3-1/2"	(2) 4"	(2) 4"
1000	3 SETS OF 400 kcmil	#2/0	#2	(4) 2-1/2"	(4) 3"	(4) 3"
1200	4 SETS OF 350 kcmil	#3/0	#2	(4) 3"	(4) 3"	(4) 3"
1600	4 SETS OF 600 kcmil	#4/0	#2/0	(4) 4"	(4) 4"	(4) 4"
2000	6 SETS OF 500 kcmil	250 kcmil	#1/0	(6) 3"	(6) 3-1/2"	(6) 3-1/2"
2500	6 SETS OF 600 kcmil	350 kcmil	#2/0	(6) 3-1/2"	(6) 4"	(6) 4"
3000	8 SETS OF 500 kcmil	400 kcmil	#1/0	(8) 3-1/2"	(8) 3-1/2"	(8) 3-1/2"

FEEDER MARK LEGEND:



NOTES:

1. WIRE SIZES ARE MINIMUMS. CONTRACTOR MAY INCREASE AS LONG AS CONDUIT SIZES ARE ALSO ADJUSTED TO MAINTAIN NEC CONDUIT FILL REQUIREMENTS.
2. ALL CONDUCTORS TO BE COPPER, UON.
3. THIS NOMENCLATURE OF WIRE AND CONDUIT SIZE IS ONLY VALID FOR ABOVE GRADE INSTALLATIONS. FOR ANY FEEDERS THE CONTRACTOR INSTALLS BELOW GRADE, THE CONTRACTOR MUST BE RESPONSIBLE FOR AMPACITY ADJUSTMENTS & CONDUIT SIZE ADJUSTMENTS PER NEC.
4. ALL NEUTRAL CONDUCTORS MUST MATCH THE SIZE OF THE PHASE CONDUCTORS.
5. ALL EQUIPMENT GROUNDS MUST BE PER NEC ARTICLE 250.
6. NUMBER OF PHASE CONDUCTORS IS INDICATED AFTER THE CIRCUIT MARK.
   - "100-4" INDICATES "4" PHASE CONDUCTORS CORRESPONDING TO THE CIRCUIT MARK "100"
   - "5" INDICATES DOUBLE NEUTRAL
   - "4" INDICATES PHASE CONDUCTORS ONLY. ALL CIRCUITS MUST HAVE GROUND AND CONDUIT PROVIDED AND SIZED PER FEEDER AND BRANCH CIRCUIT SCHEDULE AND NEC.
1. CONDUIT SIZE IS BASED ON THE NUMBER OF PHASE CONDUCTORS INDICATED AFTER THE CIRCUIT MARK.
   - "100-4" INDICATES CONDUIT SIZED FOR A 3-PHASE / 4-WIRE CIRCUIT CORRESPONDING TO THE CIRCUIT MARK "100"

A5 ONE-LINE CONDUCTOR TABLES
SCALE: NTS

US Army Corps of Engineers ®

MARK	DESCRIPTION	DATE
0	READY-TO-ADV/ERTISE (RTA) SUBMITTAL	JUL 2025

DESIGNED BY: D. BRADLEY
DRAWN BY: S. YUNKER
CHECKED BY: S. STRATTON
SUBMITTED BY: B. STREEBIN
SIZE: ANSI D
ISSUE DATE: JUL 2025
SOLICITATION NO.: W912725RA001
CONTRACT NO.: W912724F0007
FILE NAME: 16438_E_R22_1.rvt

US ARMY CORPS OF ENGINEERS
LITTLE ROCK DISTRICT
LITTLE ROCK, ARKANSAS

BURNS AND McDONNELL
9400 WARD PARKWAY,
KANSAS CITY, MO 64114
16438

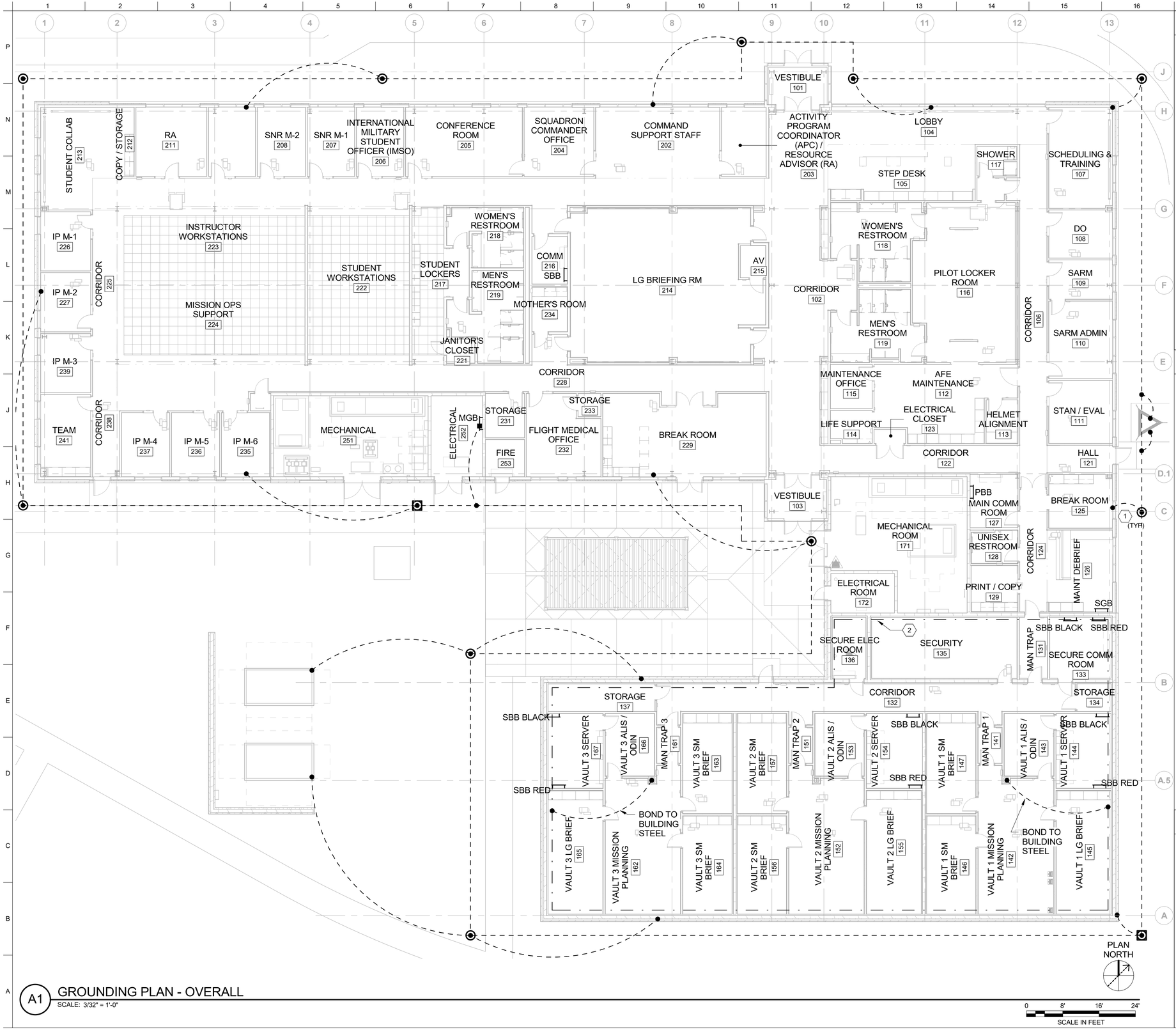
F-35: SPECIAL ACCESS PROGRAM FACILITY
EBBING AIR NATIONAL GUARD BASE (ANGB), FORT SMITH, ARKANSAS

ONE-LINE CONDUCTOR TABLES

Professional Engineer
I hereby certify that this plan, specification, or report was prepared by me or under my direct supervision and that I am a duly Licensed Professional Engineer under the laws of the state of Minnesota.
Signature:
Typed or Printed Name: DUGAN BRADLEY
Date: 07/23/25 License Number: 61869

SHEET ID
EP710

READY-TO-ADVERTISE (RTA) SUBMITTAL



GENERAL SHEET NOTES

1. REFER TO SHEETS E-001 AND E-002 FOR LEGEND, GENERAL NOTES, AND ABBREVIATIONS.
2. THESE DRAWINGS ARE SUPPLEMENTAL TO THE PROJECT SPECIFICATIONS, ARE SCHEMATIC IN NATURE AND MUST NOT BE USED FOR FIELD INSTALLATION. FIELD INSTALLATION MUST BE PER APPROVED SHOP DRAWINGS. SEE PROJECT SPECIFICATIONS FOR SHOP DRAWING REQUIREMENTS. THE LAYOUT OF ALL TELECOMMUNICATIONS EQUIPMENT MUST BE FULLY COORDINATED WITH OTHER TRADES, EQUIPMENT AND/OR FURNITURE WITHIN THE ROOM AND/OR SPACE PRIOR TO SUBMISSION OF SHOP DRAWINGS FOR APPROVAL.
3. ALL BONDING FOR TELECOMMUNICATIONS SYSTEMS MUST COMPLY WITH NEC ARTICLE 800 AND TIA-607-D.
4. DETAILS AND DIAGRAMS INDICATE TYPICAL BONDING CONNECTIONS FOR TELECOMMUNICATIONS SPACES. REFER TO T-100 AND T-400 SERIES SHEETS FOR ROOM AND BONDING BUSBAR LOCATIONS.
5. BEND RADIUS OF ANY COMMUNICATIONS GROUNDING CONDUCTORS MUST NOT BE LESS THAN 8" PER TIA-607-D.
6. DOWN CONDUCTORS MUST BE ROUTED ALONG EXTERIOR OF BUILDING (NO ROOFTOP PENETRATIONS).

SHEET KEYNOTES

1. BOND DOWN CONDUCTOR FOR LIGHTNING PROTECTION TO BUILDING GROUND RING.
2. PROVIDE #4/0 BARE COPPER GROUND CONDUCTOR ABOVE CEILING AND MOUNTED TO WALL ON SECURE SIDE. CONDUCTOR UTILIZED FOR BONDING OF ALL TEMPEST PENETRATIONS THROUGH WALL. REFER TO GC200 SERIES SHEETS FOR BONDING DETAILS. MOUNT TO WALL BELOW ALL TEMPEST PENETRATIONS BUT ABOVE ACCESSIBLE CEILING PLANE.

A1 GROUNDING PLAN - OVERALL
SCALE: 3/32" = 1'-0"

US Army Corps of Engineers ®

MARK	DESCRIPTION	DATE
0	READY-TO-ADVERTISE (RTA) SUBMITTAL	JUL 2025

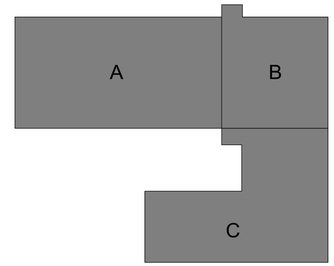
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SUBMITTED BY: B. STREEBIN
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ISSUE DATE: JUL 2025
SOLICITATION NO.: W912T5-25-RA001
CONTRACT NO.: W912T5-24-C-0007
FILE NAME: 16543B_E_R22_1.rvt

US ARMY CORPS OF ENGINEERS
LITTLE ROCK DISTRICT
LITTLE ROCK, ARKANSAS

BURNS AND McDONNELL
9400 WARD PARKWAY,
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16543B

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Date: 07/23/25 License Number: 61869

KEY PLAN

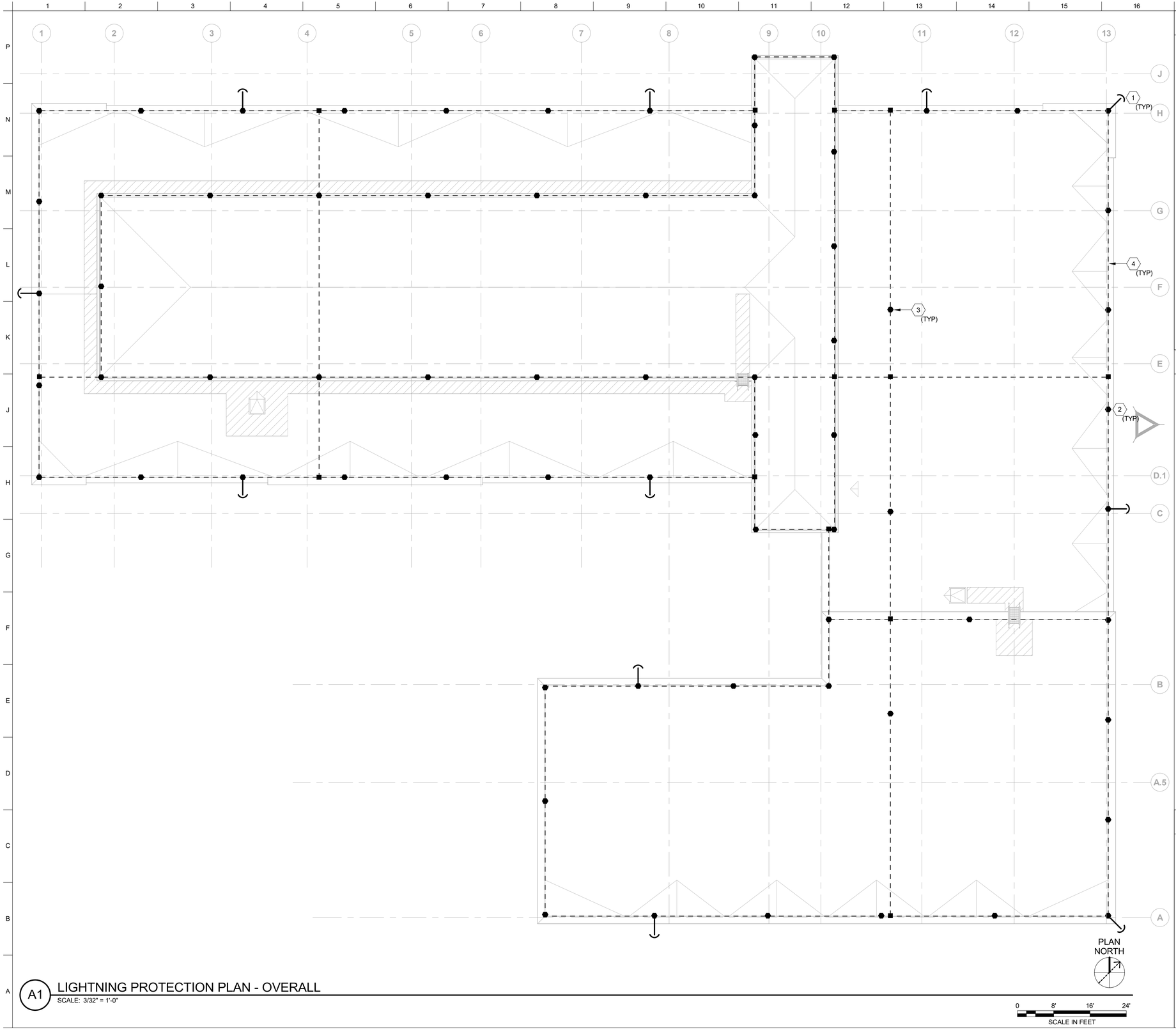


F-35: SPECIAL ACCESS PROGRAM FACILITY
EBBING AIR NATIONAL GUARD BASE (ANGB), FORT SMITH, ARKANSAS

GROUNDING PLAN - OVERALL

SHEET ID
EG101

READY-TO-ADVERTISE (RTA) SUBMITTAL



A1 LIGHTNING PROTECTION PLAN - OVERALL
SCALE: 3/32" = 1'-0"

GENERAL SHEET NOTES

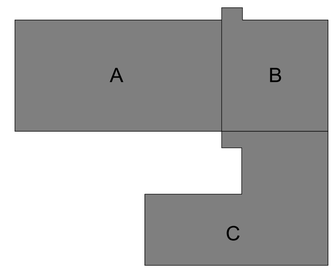
1. REFER TO SHEETS E-001 AND E-002 FOR LEGEND, GENERAL NOTES, AND ABBREVIATIONS.
2. THESE DRAWINGS ARE SUPPLEMENTAL TO THE PROJECT SPECIFICATIONS, ARE SCHEMATIC IN NATURE AND MUST NOT BE USED FOR FIELD INSTALLATION. FIELD INSTALLATION MUST BE PER APPROVED SHOP DRAWINGS. SEE PROJECT SPECIFICATIONS FOR SHOP DRAWING REQUIREMENTS. THE LAYOUT OF ALL TELECOMMUNICATIONS EQUIPMENT MUST BE FULLY COORDINATED WITH OTHER TRADES, EQUIPMENT AND/OR FURNITURE WITHIN THE ROOM AND/OR SPACE PRIOR TO SUBMISSION OF SHOP DRAWINGS FOR APPROVAL.
3. ALL BONDING FOR TELECOMMUNICATIONS SYSTEMS MUST COMPLY WITH NEC ARTICLE 800 AND TIA-607-D.
4. DETAILS AND DIAGRAMS INDICATE TYPICAL BONDING CONNECTIONS FOR TELECOMMUNICATIONS SPACES. REFER TO T-100 AND T-400 SERIES SHEETS FOR ROOM AND BONDING BUSBAR LOCATIONS.
5. BEND RADIUS OF ANY COMMUNICATIONS GROUNDING CONDUCTORS MUST NOT BE LESS THAN 8" PER TIA-607-D.
6. DOWN CONDUCTORS MUST BE ROUTED ALONG EXTERIOR OF BUILDING (NO ROOFTOP PENETRATIONS).

SHEET KEYNOTES

1. DOWN CONDUCTOR TO BUILDING GROUND RING. REFER TO DETAIL ON SHEET EG505 FOR MORE INFORMATION.
2. PARAPET MOUNTED AIR TERMINAL. DETAIL ON SHEET E14/EG504 FOR MORE INFORMATION.
3. FLAT ROOF MOUNTED AIR TERMINAL. DETAIL ON SHEET J8/EG504 FOR MORE INFORMATION.
4. LIGHTNING PROTECTION SYSTEM MAIN CONDUCTOR.

Professional Engineer
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Signature:
Typed or Printed Name: DUGAN BRADLEY
Date: 07/23/25 License Number: 61869

KEY PLAN



US Army Corps of Engineers ®

MARK	DESCRIPTION	DATE
0	READY-TO-ADVERTISE (RTA) SUBMITTAL	JUL 2025

DESIGNED BY: D. BRADLEY	ISSUE DATE: JUL 2025
DRAWN BY: S. YUNKER	SOLICITATION NO.: W912T525RA001
CHECKED BY: S. STRATTON	CONTRACT NO.: W912T524F0007
SUBMITTED BY: B. STREEBIN	
SIZE: ANSI D	FILE NAME: 165438_E_R22_1.rvt

US ARMY CORPS OF ENGINEERS
LITTLE ROCK DISTRICT
LITTLE ROCK, ARKANSAS

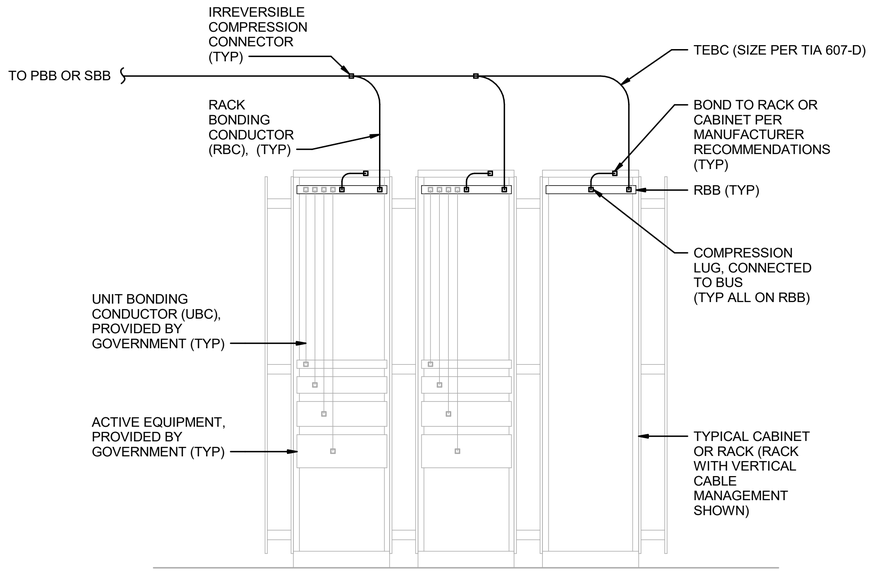
BURNS AND McDONNELL
9400 WARD PARKWAY,
KANSAS CITY, MO 64114
165438

F-35, SPECIAL ACCESS PROGRAM FACILITY
EBBING AIR NATIONAL GUARD BASE (ANGB), FORT SMITH, ARKANSAS

LIGHTNING PROTECTION PLAN - OVERALL

SHEET ID
EG102

READY-TO-ADVERTISE (RTA) SUBMITTAL

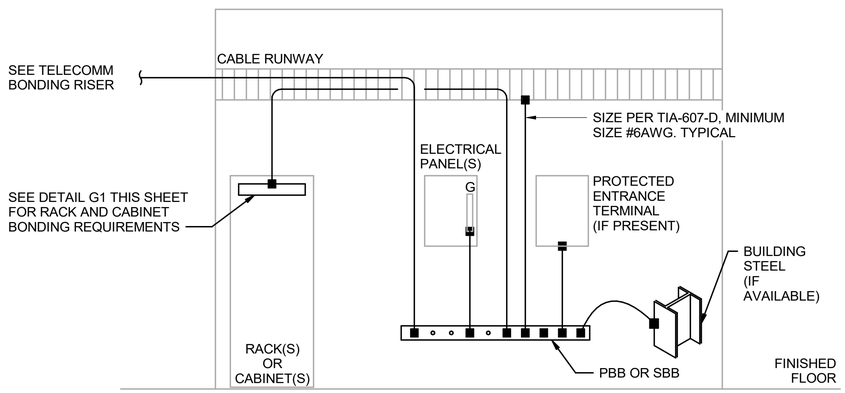


NOTES:

1. THIS DETAIL IS A GENERIC DEPICTION OF BONDING OF TELECOMMUNICATIONS CABINETS AND/OR RACKS WITHIN A TELECOMMUNICATIONS SPACE.
2. A TOP-MOUNTED RBB SHALL BE PROVIDED IN ALL TELECOMMUNICATIONS CABINETS OR RACKS.
3. A MINIMUM OF ONE TEBC SHALL BE PROVIDED IN ALL TELECOMMUNICATIONS SPACES AND BE ROUTED TO THE PBB OR SBB WITHIN THE SPACE.
4. ALL OTHER RACKS OR CABINETS WITHIN THE SPACE NOT BONDED DIRECTLY TO A TEBC SHALL BE BONDED TO A TEBC VIA THE USE OF A RBC AS INDICATED ABOVE.

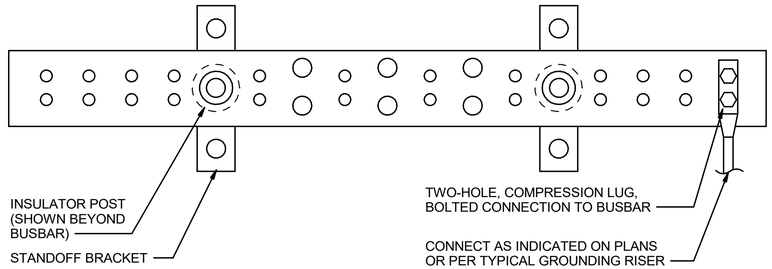
G1 TYPICAL RACK & CABINET BONDING CONNECTIONS

SCALE: NTS



A1 TYPICAL TELECOMMUNICATIONS SPACE BONDING CONNECTIONS

SCALE: NTS

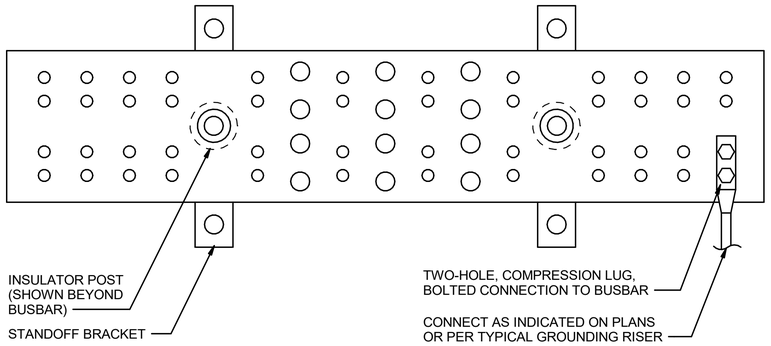


NOTES:

1. SBB SHALL BE 2" WIDE AND 1/4" THICK.
2. LENGTH OF EACH SBB SHALL BE AS REQUIRED TO TERMINATE ALL GROUNDING AND BONDING CONNECTIONS REQUIRED AT EACH SBB PLUS AN ADDITIONAL 25% FUTURE SPARE CONNECTIONS ON EACH SBB. IN NO CASE SHALL THE LENGTH OF THE SBB BE LESS THAN 24".
3. SBB SHALL BE TIA-607-D COMPLIANT AND CONFORM TO BICSI TDMM REQUIREMENTS.
4. SBB SHALL COMPLY WITH NEMA STANDARDS.
5. SBB SHALL ACCEPT TWO HOLE COMPRESSION LUGS WITH 5/16" OR 7/16" BOLT HOLES.
6. BONDING CONDUCTORS TERMINATING AT THE SBB SHALL HAVE A MINIMUM INSIDE BENDING RADIUS OF 8 INCHES.

G9 TYPICAL SBB DETAIL

SCALE: NTS



NOTES:

1. PBB SHALL BE 4" WIDE AND 1/4" THICK.
2. LENGTH OF PBB SHALL BE AS REQUIRED TO TERMINATE ALL GROUNDING AND BONDING CONNECTIONS REQUIRED AT THE PBB PLUS AN ADDITIONAL 25% FUTURE SPARE CONNECTIONS ON THE PBB. IN NO CASE SHALL THE LENGTH OF THE PBB BE LESS THAN 24".
3. PBB SHALL BE TIA-607-D COMPLIANT AND CONFORM TO BICSI TDMM REQUIREMENTS.
4. PBB SHALL COMPLY WITH NEMA STANDARDS.
5. PBB SHALL ACCEPT TWO HOLE COMPRESSION LUGS WITH 5/16" OR 7/16" BOLT HOLES.
6. BONDING CONDUCTORS TERMINATING AT THE PBB SHALL HAVE A MINIMUM INSIDE BENDING RADIUS OF 8 INCHES.

A9 TYPICAL PBB DETAIL

SCALE: NTS

GENERAL SHEET NOTES

1. THESE DRAWINGS ARE SUPPLEMENTAL TO THE PROJECT SPECIFICATIONS, ARE SCHEMATIC IN NATURE AND SHALL NOT BE USED FOR FIELD INSTALLATION. FIELD INSTALLATION SHALL BE PER APPROVED SHOP DRAWINGS. SEE PROJECT SPECIFICATIONS FOR SHOP DRAWINGS REQUIREMENTS. THE LAYOUT OF ALL TELECOMMUNICATIONS EQUIPMENT SHALL BE FULLY COORDINATED WITH OTHER TRADES, EQUIPMENT AND/OR SPACE PRIOR TO SUBMISSION OF SHOP DRAWINGS FOR APPROVAL.
2. SEE SHEETS E-001 AND E-002 FOR PROJECT GENERAL NOTES, SYMBOL LEGEND AND ABBREVIATIONS.

Professional Engineer
I hereby certify that this plan, specification, or report was prepared by me or under my direct supervision and that I am a duly Licensed Professional Engineer under the laws of the state of Minnesota.
Signature:
Typed or Printed Name: DUGAN BRADLEY
Date: 07/23/25 License Number: 61869

US Army Corps of Engineers ®

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DRAWN BY: S. YONKER
CHECKED BY: C. STRATTON
SUBMITTED BY: B. STREEBIN
SIZE: ANSI D
ISSUE DATE: JUL 2025
SOLICITATION NO.: W912T525RA001
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US ARMY CORPS OF ENGINEERS
LITTLE ROCK DISTRICT
LITTLE ROCK, ARKANSAS

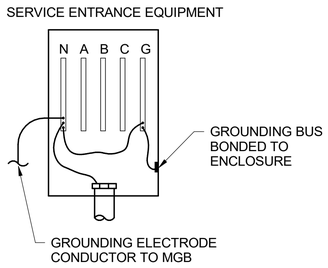
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F-35; SPECIAL ACCESS PROGRAM FACILITY
EBBING AIR NATIONAL GUARD BASE (ANGB), FORT SMITH, ARKANSAS

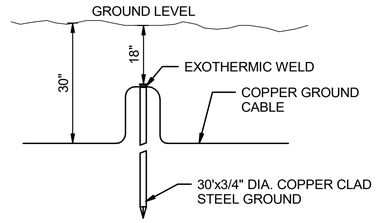
GROUNDING DETAILS

SHEET ID
EG501

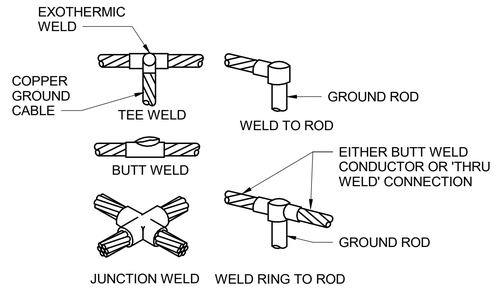
READY-TO-ADVERTISE (RTA) SUBMITTAL



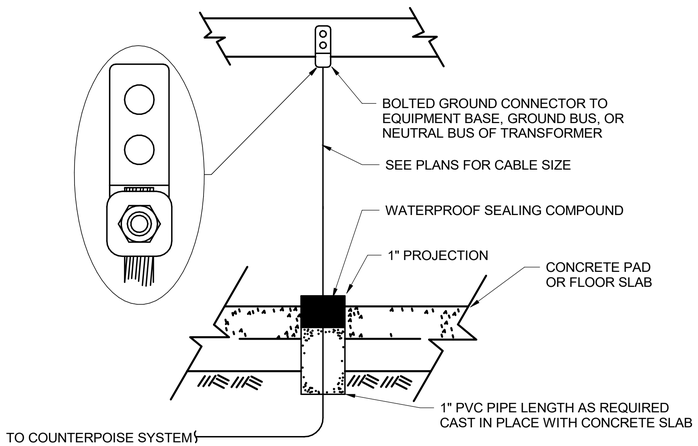
K4 SERVICE ENTRANCE GROUNDING DETAIL
SCALE: NTS



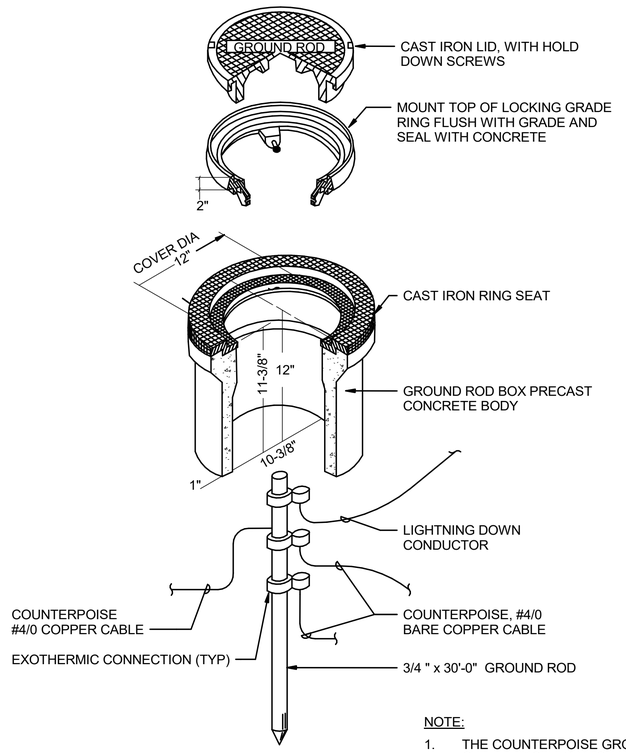
K12 TYPICAL GROUND ROD CONNECTION
SCALE: NTS



F4 TYPICAL EXOTHERMIC WELDS
SCALE: NTS



A4 TYPICAL GROUNDING SLAB PENETRATION
SCALE: NTS



NOTE:

1. THE COUNTERPOISE GROUND RING OF THE FACILITY MUST HAVE A RESISTANCE OF 10 OHMS OR LESS PER IEEE STANDARD #143, "GREEN BOOK". ADDITIONAL GROUND RODS MUST BE DRIVEN AS REQUIRED TO ACHIEVE THE PROPER RESISTANCE.

A12 TYPICAL GROUND TEST WELL
SCALE: NTS

Professional Engineer
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US ARMY CORPS OF ENGINEERS
LITTLE ROCK DISTRICT
LITTLE ROCK, ARKANSAS

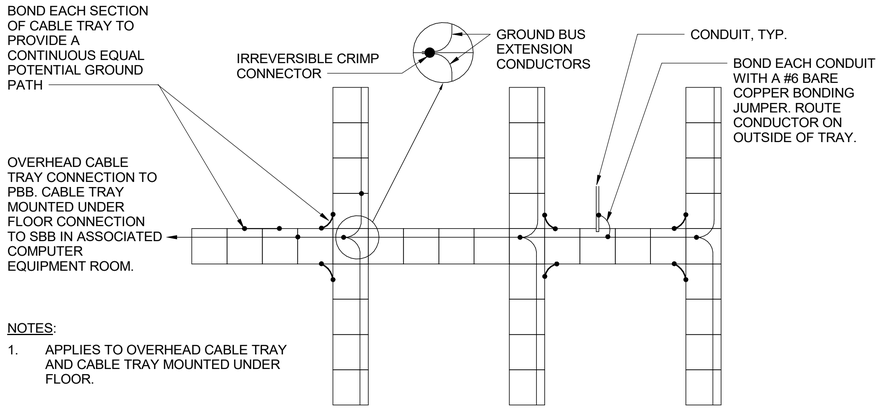
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165438

F-35: SPECIAL ACCESS PROGRAM FACILITY
EBBING AIR NATIONAL GUARD BASE (ANGB), FORT SMITH, ARKANSAS

GROUNDING DETAILS

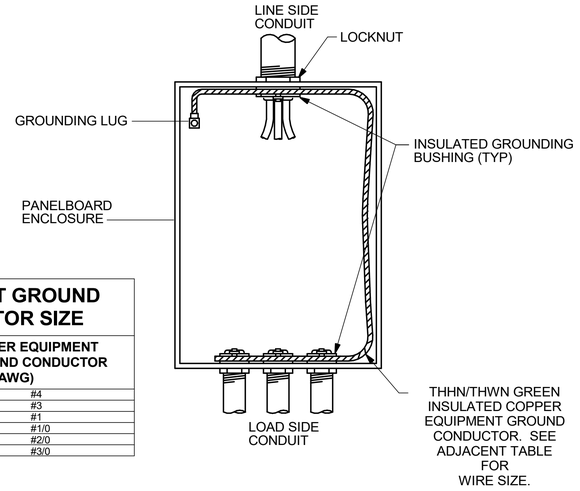
SHEET ID
EG502

READY-TO-ADVERTISE (RTA) SUBMITTAL



J2 TYPICAL CABLE TRAY BONDING DETAIL

SCALE: NTS

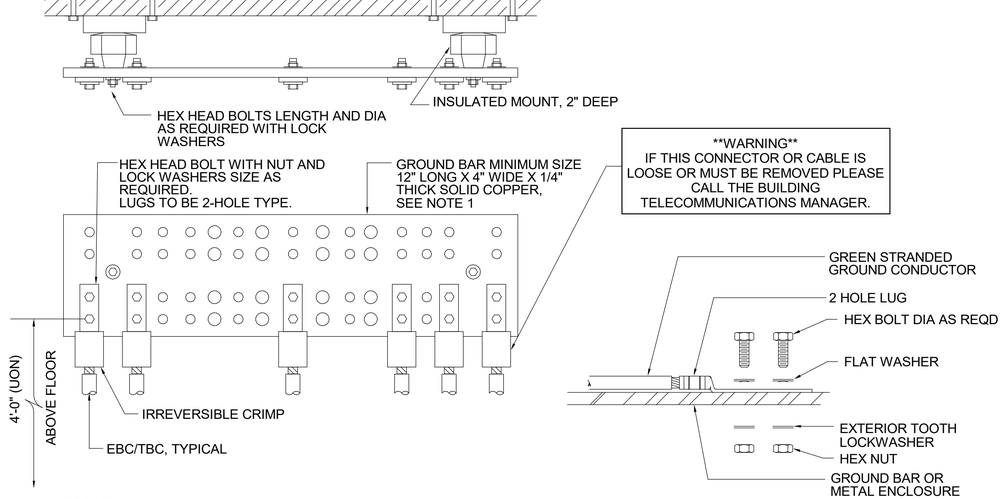


EQUIPMENT GROUND CONDUCTOR SIZE

PANELBOARD BUS AMPERE RATING	COPPER EQUIPMENT GROUND CONDUCTOR SIZE (AWG)
225A	#4
400A	#3
600A	#1
800A	#1/0
1000A	#2/0
1200A	#3/0

J12 TYPICAL PANELBOARD CONDUIT GROUNDING DETAIL

SCALE: NTS

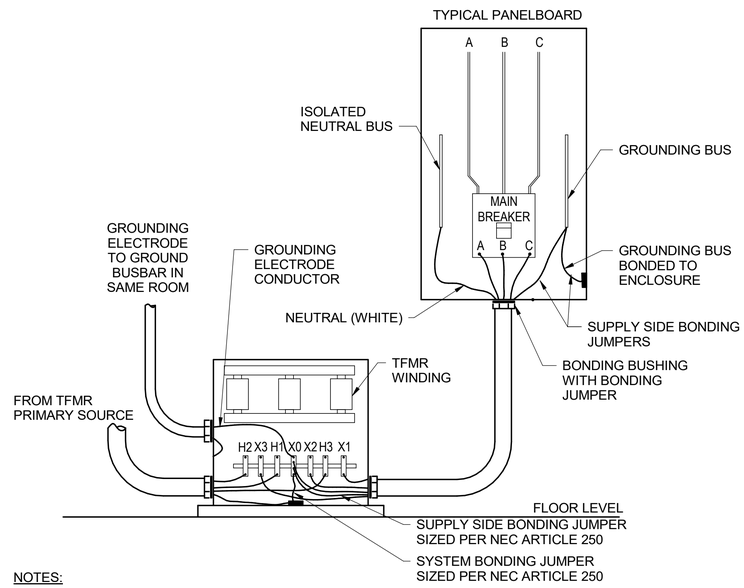


NOTES:

1. PROVIDE NUMBER AND SIZE OF CONNECTORS AND GROUND CONDUCTORS AND LENGTH OF GROUND BUSBAR AS REQUIRED FOR EACH GROUND BUSBAR LOCATION.
2. PROVIDE GROUND BUSBAR IN ACCORDANCE WITH EIA/TIA-607 GROUNDING STANDARDS.
3. DETAIL IS USED AN EXAMPLE. HOLE SIZE, SPACING AND PATTERN MUST BE IN ACCORDANCE WITH TIA-607C.
4. PROVIDE UL LISTED GROUND BUSBAR.
5. PROVIDE LABELS PER TIA-607C.
6. COORDINATE TELECOMMUNICATIONS GROUND BUS BAR LOCATIONS WITH EQUIPMENT INSTALLATION SO THAT NO GROUND BAR IS INSTALLED WITHIN 3 FEET OF METALLIC COMPONENTS, STEEL COLUMNS, CONDUCTING EQUIPMENT, ETC.

A2 MAIN GROUND BUSBAR (MGB) DETAIL

SCALE: NTS



NOTES:

1. TRANSFORMER BONDING STRAP, IF NOT PROVIDED BY THE TRANSFORMER MANUFACTURER THIS STRAP MUST BE THE SAME SIZE AS THE SYSTEM BONDING JUMPER. REFER TO NEC ARTICLE 250 FOR SYSTEM BONDING JUMPER, AND SUPPLY SIDE BONDING JUMPER SIZING REQUIREMENTS.
2. USE A BONDING BUSHING AND JUMPER AT THE CONDUIT TERMINATION. JUMPER MUST BE THE SAME SIZE AS THE GROUNDING ELECTRODE CONDUCTOR CONTAINED IN THE CONDUIT.
3. USE A BONDING CLAMP AT THE TERMINATION OF THE GROUNDING ELECTRODE CONDUCTOR TO THE ELECTRODE.

A10 DRY-TYPE TRANSFORMER GROUNDING DETAIL

SCALE: NTS

Professional Engineer
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US ARMY CORPS OF ENGINEERS
LITTLE ROCK DISTRICT
LITTLE ROCK, ARKANSAS

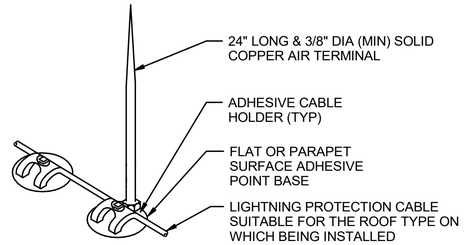
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F-35, SPECIAL ACCESS PROGRAM FACILITY
EBBING AIR NATIONAL GUARD BASE (ANGB), FORT SMITH, ARKANSAS

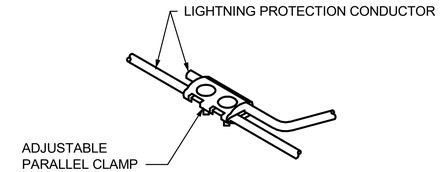
GROUNDING DETAILS

SHEET ID
EG503

READY-TO-ADVERTISE (RTA) SUBMITTAL



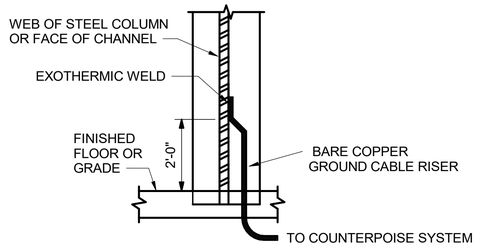
J8 TYPICAL LIGHTNING PROTECTION AIR TERMINAL
SCALE: NTS



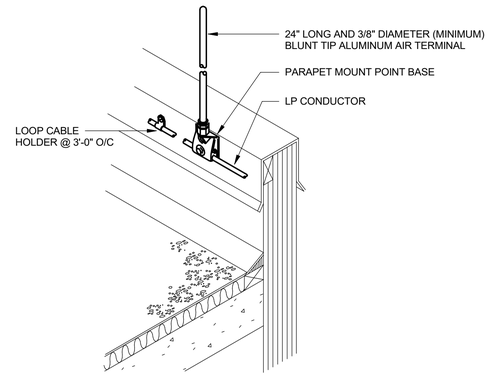
NOTE:

1. "T" TYPE CONNECTORS ARE NOT ALLOWED FOR LPS CONNECTIONS.

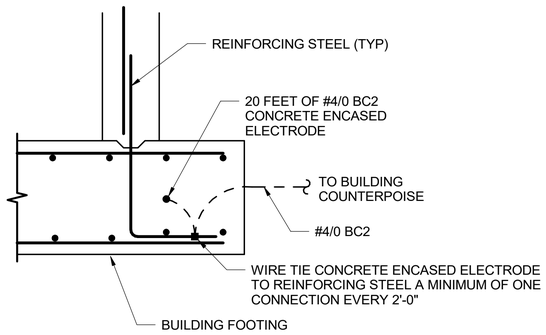
J14 LPS CABLE BONDING CLAMP
SCALE: NTS



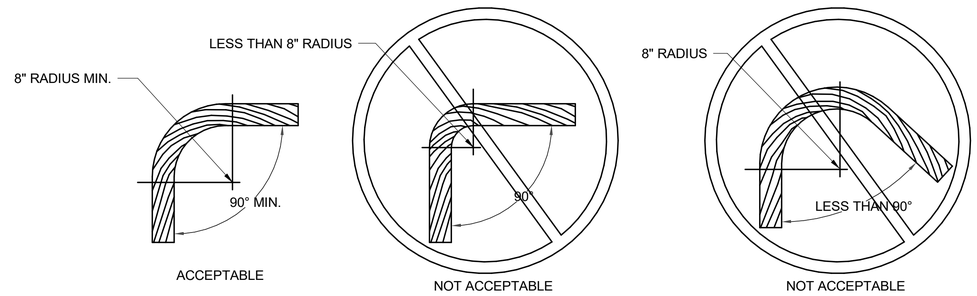
E8 TYPICAL EXOTHERMIC CONNECTION TO STEEL
SCALE: NTS



E14 AIR TERMINAL - PARAPET SIDE MOUNT DETAIL
SCALE: NTS



A2 CONCRETE ENCASED ELECTRODE DETAIL
SCALE: NTS



A8 TYPICAL LIGHTNING PROTECTION CABLE BENDING REQUIREMENTS
SCALE: NTS

Professional Engineer
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Signature:

Typed or Printed Name: DUGAN BRADLEY

Date: 07/23/25 License Number: 61869

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US ARMY CORPS OF ENGINEERS
LITTLE ROCK DISTRICT
LITTLE ROCK, ARKANSAS

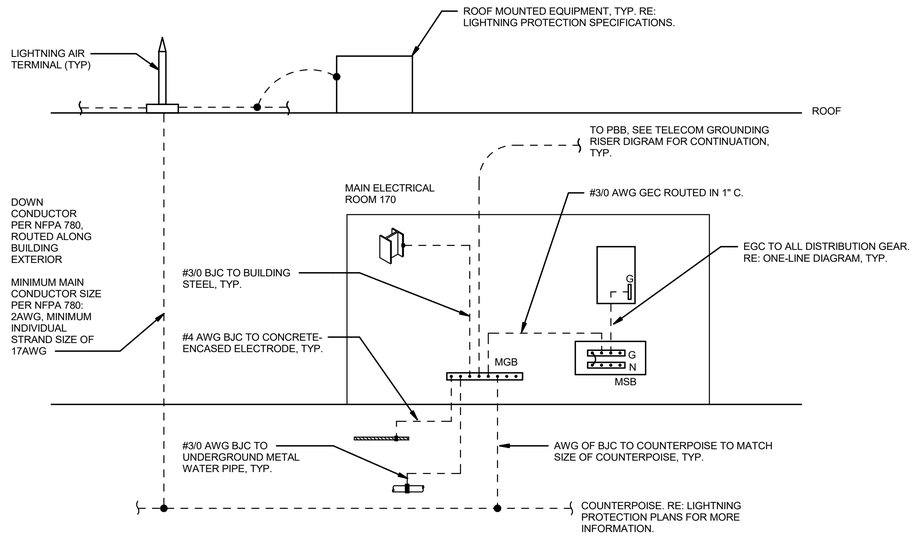
BURNS AND McDONNELL
9400 WARD PARKWAY,
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16438

F-35 SPECIAL ACCESS PROGRAM FACILITY
EBBING AIR NATIONAL GUARD BASE (ANGB), FORT SMITH, ARKANSAS

GROUNDING DETAILS

SHEET ID
EG504

READY-TO-ADVERTISE (RTA) SUBMITTAL



A6 GROUNDING RISER DIAGRAM

SCALE: NTS

NOTES

1. INSTALLATION MUST COMPLY WITH NEC ARTICLE 250 AND NFPA 780.
2. "GEC" = GROUNDING ELECTRODE CONDUCTOR.
3. "BJC" = BONDING JUMPER CONDUCTOR
4. "EGC" = EQUIPMENT GROUND CONDUCTOR. REFER TO EP700 SERIES OF SHEETS FOR MORE INFORMATION.
5. ALL CONDUCTORS MUST BE COPPER.
6. MAIN BONDING JUMPERS INSIDE SERVICE GEAR AND GENERATOR SIZED/PROVIDED BY GEAR MANUFACTURER.

Professional Engineer
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9400 WARD PARKWAY,
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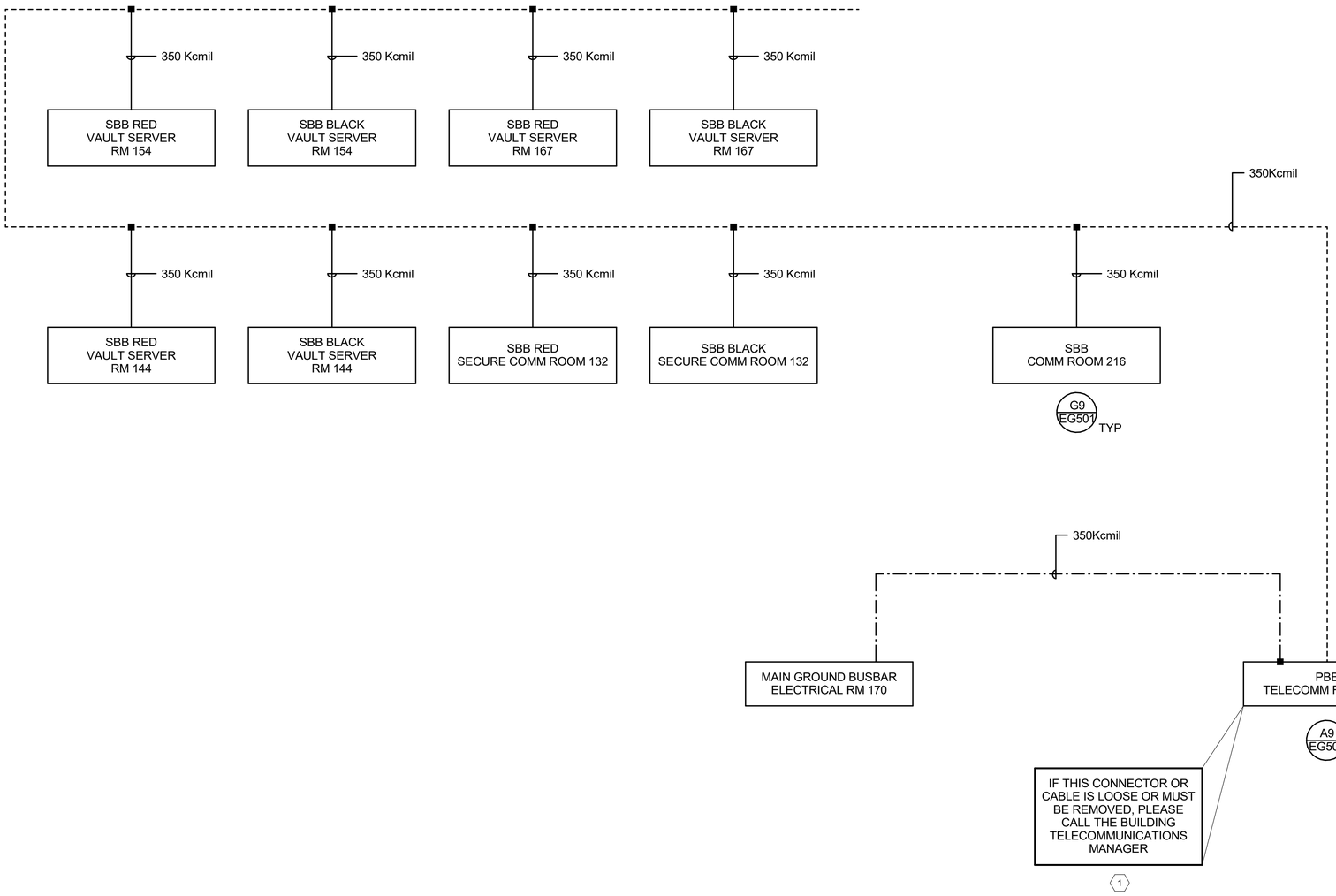
F-35: SPECIAL ACCESS PROGRAM FACILITY
EBBING AIR NATIONAL GUARD BASE (ANGB), FORT SMITH, ARKANSAS

GROUNDING DETAILS

SHEET ID

EG505

READY-TO-ADVERTISE (RTA) SUBMITTAL



FIRST FLOOR

A1 TELECOMMUNICATIONS GROUNDING RISER DIAGRAM

SCALE: NTS

GENERAL SHEET NOTES

1. THESE DRAWINGS ARE SUPPLEMENTAL TO THE PROJECT SPECIFICATIONS, ARE SCHEMATIC IN NATURE AND SHALL NOT BE USED FOR FIELD INSTALLATION. FIELD INSTALLATION SHALL BE PER APPROVED SHOP DRAWINGS. SEE PROJECT SPECIFICATIONS FOR SHOP DRAWINGS REQUIREMENTS. THE LAYOUT OF ALL TELECOMMUNICATIONS EQUIPMENT SHALL BE FULLY COORDINATED WITH OTHER TRADES, EQUIPMENT AND/OR SPACE PRIOR TO SUBMISSION OF SHOP DRAWINGS FOR APPROVAL.
2. SEE SHEETS E-001 AND E-002 FOR PROJECT GENERAL NOTES, SYMBOL LEGEND AND ABBREVIATIONS.

SHEET KEYNOTES

1. PROVIDE WARNING LABEL, TYPICAL AT EACH PBB AND SBB.

LEGEND

- TELECOMMUNICATIONS BONDING CONDUCTOR (TBC) (INSULATED, SIZED PER TIA-607-D)
- TELECOMMUNICATIONS BONDING BACKBONE (TBB) (INSULATED, SIZED PER TIA-607-D AS REQUIRED BY INSTALLER'S ROUTING)
- SECONDARY BONDING CONDUCTOR (SBC) (INSULATED, SIZED PER TIA-607-D)
- BACKBONE BONDING CONDUCTOR (BBC) (PROVIDE QUANTITY AND SIZE PER TIA-607-D)
- EXOTHERMIC WELDED CONNECTION
- IRREVERSIBLE COMPRESSION CONNECTOR

Professional Engineer
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F-35, SPECIAL ACCESS PROGRAM FACILITY
EBBING AIR NATIONAL GUARD BASE (ANGB), FORT SMITH, ARKANSAS

GROUNDING RISER DIAGRAM

SHEET ID
EG701

READY-TO-ADVERTISE (RTA) SUBMITTAL

AV EQUIPMENT AND SUPPORTING INFRASTRUCTURE GENERAL NOTES

1. ALL AV INFRASTRUCTURE, INCLUDING BUT NOT LIMITED TO CONDUIT, BOXES, AND PANELS, IS TO BE BID AND PROVIDED AS PART OF THE BASE BID.
2. ALL AV EQUIPMENT AND WIRING SHOWN ON THESE DRAWINGS IS TO BE BID AND PROVIDED AS PART OF BID OPTION - PROCURE AND INSTALL AUDIO-VISUAL EQUIPMENT.
3. THIS FACILITY IS A NEW STRUCTURE. COORDINATE MOUNTING CONDITIONS WITH OTHER TRADES.
4. COORDINATE ALL WORK WITH ARCHITECTURAL, ELECTRICAL AND TELECOMMUNICATIONS DRAWINGS.
5. ALL DIMENSIONAL NOTES ARE EXPRESSED BY H (HEIGHT), W (WIDTH), AND D (DEPTH), IN INCHES.
6. MOUNTING HEIGHTS SHOWN ARE TO THE BOTTOM EDGE OF THE EQUIPMENT, UNLESS NOTED OTHERWISE.
7. SEE GJ SERIES SHEETS FOR SECURE AREA PERIMETERS AND REQUIREMENTS. CONSTRUCTION FOR SECURE AREAS, SECURE AREA MATERIALS, AND COMPONENTS MUST COMPLY WITH UFC 4-010-05 AND IC TECH SPECS FOR ICD/ICS 705 AND FULLY MEET AND PASS ALL ACCREDITATIONS. COORDINATE WITH CONTRACTING OFFICER DURING CONSTRUCTION OF SECURE AREAS.

AV EQUIPMENT AND SUPPORTING INFRASTRUCTURE LEGEND

SYMBOL	DESCRIPTION
LS CCT XXX	LOUDSPEAKER CIRCUIT, OR PORTION THEREOF, WITH CIRCUIT IDENTIFIER SHOWN. SEE ONE-LINE DIAGRAM FOR CONNECTION DETAILS.
XX" W X XX" H	MOTORIZED PROJECTION SCREEN, FLUSH MOUNTED IN CEILING.
	VIDEO PROJECTOR, TYPE AS INDICATED ON THE DRAWINGS.
	FLAT PANEL DISPLAY, SIZE AND TYPE AS INDICATED ON THE DRAWINGS.
	AUDIO SOUNDBAR, MOUNTED TO WALL IN LOCATIONS SHOWN ON THE DRAWINGS.
XX" AFF.	VIDEO CAMERA, MOUNTED TO WALL OR CEILING IN LOCATIONS SHOWN ON THE DRAWINGS.
XXW	PENDANT LOUDSPEAKER, SUSPENDED FROM STRUCTURE ABOVE. TAP LOUDSPEAKER AT INDICATED WATTAGE.
XXW	CEILING LOUDSPEAKER, FLUSH MOUNTED IN LAY-IN TILE CEILING. TAP LOUDSPEAKER AT INDICATED WATTAGE.
	ARRAY MICROPHONE, FLUSH MOUNTED IN CEILING.
BOX/PANEL/DEVICE NAME; BOX/GANG/PANEL SIZE; MOUNTING HEIGHT; CONNECTIONS — "XXXX" X"xX"xX" X-XX" AFF XXX	AV CONNECTION BOX OR PANEL, WALL MOUNTED, SIZE AND TYPE AS INDICATED ON THE DRAWINGS. DOUBLE TRIANGLES INDICATE SURFACE MOUNT BOX/PANEL.
BOX/DEVICE NAME; CONNECTIONS — "XXXX" XXX	AV CONNECTION PANEL, IN MULTI-FUNCTION FLOOR BOX, SIZE AND TYPE AS INDICATED ON THE DRAWINGS.
	CONDUIT STUBBED OUT ABOVE CABLE TRAY OR ACCESSIBLE PORTION OF CEILING WITHIN THE SPACE THE STUB IS SHOWN. TERMINATE CONDUIT WITH INSULATED BUSHING.
CONDUIT SIZE — X.XX" XXX — CIRCUIT FUNCTION	CONDUIT CONCEALED IN WALL, CEILING, OR FLOOR; OR EXPOSED WHERE CONNECTED TO SURFACE MOUNTED BOXES. CONDUIT SIZE AND FUNCTION AS INDICATED BY TAG.
	CABLE TRAY, SIZE AND TYPE AS NOTED ON THE DRAWINGS.

ABBREVIATIONS

AC	AC POWER.
ACP	ACOUSTICAL CEILING PANEL.
ACT	ACOUSTICAL CEILING TILE.
AFC	ABOVE FINISHED CEILING. INDICATES DIMENSION ABOVE CEILING PANEL.
AFF	ABOVE FINISHED FLOOR. INDICATES DIMENSION ABOVE FLOOR SURFACE.
AP	ACCESS POINT.
AV	AUDIO-VISUAL.
B	BLANK COVER FOR FUTURE USE.
BP	BLANK PANEL.
C	CONDUIT, DIAMETER EXPRESSED IN INCHES.
CATV	CABLE TELEVISION.
CFCI	CONTRACTOR FURNISHED, CONTRACTOR INSTALLED.
DAN	DIGITAL AUDIO NETWORK.
DP	DISPLAYPORT.
FACP	FIRE ALARM CONTROL PANEL.
FO	FIBER OPTIC.
FP	FLAT PANEL.
HAS	HEARING ASSISTANCE SYSTEM.
HDMI	HIGH DEFINITION MULTIMEDIA INTERFACE.
GFCI	GOVERNMENT FURNISHED, CONTRACTOR INSTALLED.
GFGI	GOVERNEMENT FURNISHED, GOVERNMENT INSTALLED.
GWB	GYPSUM WALL BOARD.
MCP	METAL CEILING PANEL.
MIC	MICROPHONE LEVEL SIGNAL.
MM	MULTI-MODE (FIBER).
PB	PULLBOX.
RF	RADIO FREQUENCY.
SM	SINGLE-MODE (FIBER).
SPK	LOUDSPEAKER LEVEL SIGNAL.
ScTP	SCREENED TWISTED PAIR.
TBD	TO BE DETERMINED. CONTRACTOR TO FIELD VERIFY.
TC	TERMINATION CABINET.
TELCO	TELEPHONE UTILITY COMPANY.
TP	TOUCHPANEL.
TV	TELEVISION.
UTP	UNSHIELDED TWISTED PAIR.
VP	VENT PANEL.
XFMR	TRANSFORMER.

NOTATIONAL SYMBOLS

X	REVISION NUMBER, UPWARD TRIANGLE. REFER TO REVISION LIST ON SHEET WHERE REFERENCE OCCURS FOR REVISION DATE.
X	SHEET KEY NOTE, HEXAGON. REFER TO SPECIFIC NOTES ON SHEET WHERE REFERENCE OCCURS.

ONE-LINE DIAGRAM WIRE LEGEND

_XXX_____	WIRES FOR AUDIO, VIDEO, OR RADIO FREQUENCY SIGNALS OVER COPPER CABLING. CABLE OR SIGNAL TYPE AS INDICATED.
XXX _ _ _ _	WIRES FOR NETWORK OR CONTROL SIGNALS OVER COPPER CABLING. CABLE OR SIGNAL TYPE AS INDICATED.
XXX._._._._	WIRES FOR SIGNALS OVER FIBER CABLES. CABLE OR SIGNAL TYPE AS INDICATED.

ONE-LINE DIAGRAM SYMBOL LEGEND

DA	DISTRIBUTION AMPLIFIER.
STM	STEREO-TO-MONO AUDIO COMBINER.
V P	LOUDSPEAKER VOLUME CONTROL (P=PRIORITY OVERRIDE RELAY)
8W 3 — 1	LOUDSPEAKER EACH WITH LOUDSPEAKER LINE MATCHING TRANSFORMER IF SHOWN, WITH CONNECTIONS AS NOTED. REFER TO PLANS FOR QUANTITIES. LOUDSPEAKER TYPE (X) INDICATED WITHIN SYMBOL. WHERE MULTIPLE POWER TAP VALUES ARE SHOWN FOR LINE MATCHING TRANSFORMERS IN A GIVEN LOUDSPEAKER CIRCUIT, REFER TO PLANS FOR SPECIFIC LOCATIONS.
PWR	POWER AMPLIFIER, TYPE AND DETAILS AS INDICATED ON THE DRAWINGS.
	SCREW TERMINAL ON BARRIER STRIP. INSTALLED IN TERMINATION CABINETS UNLESS NOTED OTHERWISE.
	LOOSE CABLE, LENGTH AS INDICATED.
	FEMALE XLR RECEPTACLE OR CABLE CONNECTOR; 3 PINS UNLESS SUBSCRIPT INDICATES OTHERWISE.
	MALE XLR RECEPTACLE OR CABLE CONNECTOR; 3 PINS UNLESS SUBSCRIPT INDICATES OTHERWISE.
	LC FIBER CONNECTOR.
	FEMALE HD-15 CONNECTOR.
	FEMALE HDMI CONNECTOR.
	MALE HD-15 CONNECTOR.
	MALE HDMI CONNECTOR.
	FEMALE SPEAKON CONNECTOR.
	MALE SPEAKON CONNECTOR.
	FEMALE RJ45 CONNECTOR.
	MALE RJ45 CONNECTOR.
	FEMALE ETHERCON CONNECTOR.
	MALE ETHERCON CONNECTOR.
	FEMALE USB CONNECTOR.
	MALE USB CONNECTOR.
	RJ45 PATCH PANEL CONNECTION.
	AC POWER CORD.
	CONTINUATION OF EQUIPMENT OR LOUDSPEAKER CIRCUITS. REFER TO DRAWINGS FOR QUANTITIES.
X X	CONNECTION DESIGNATOR. CIRCUIT CONTINUED ON DIFFERENT SHEET OR AT OTHER DIAGRAM LOCATION. SHEET NUMBER WHERE CIRCUIT IS CONTINUED.
"LABELS"	SLANTED TEXT IN QUOTES INDICATES EQUIPMENT LABELS.

US Army Corps of Engineers ®

MARK	DESCRIPTION	DATE
0	READY-TO-ADVERTISE (RTA) SUBMITTAL	JUL 2025

DESIGNED BY: R. LEDO
DRAWN BY: B. SNOOK
CHECKED BY: J. HODGSON
SUBMITTED BY: B. STREEBIN
SIZE: ANSI D
ISSUE DATE: JUL 2025
SOLICITATION NO.: W912725R4001
CONTRACT NO.: W912S424C0007
FILE NAME: 165438_AV_R22.rvt

US ARMY CORPS OF ENGINEERS
LITTLE ROCK DISTRICT
LITTLE ROCK, ARKANSAS

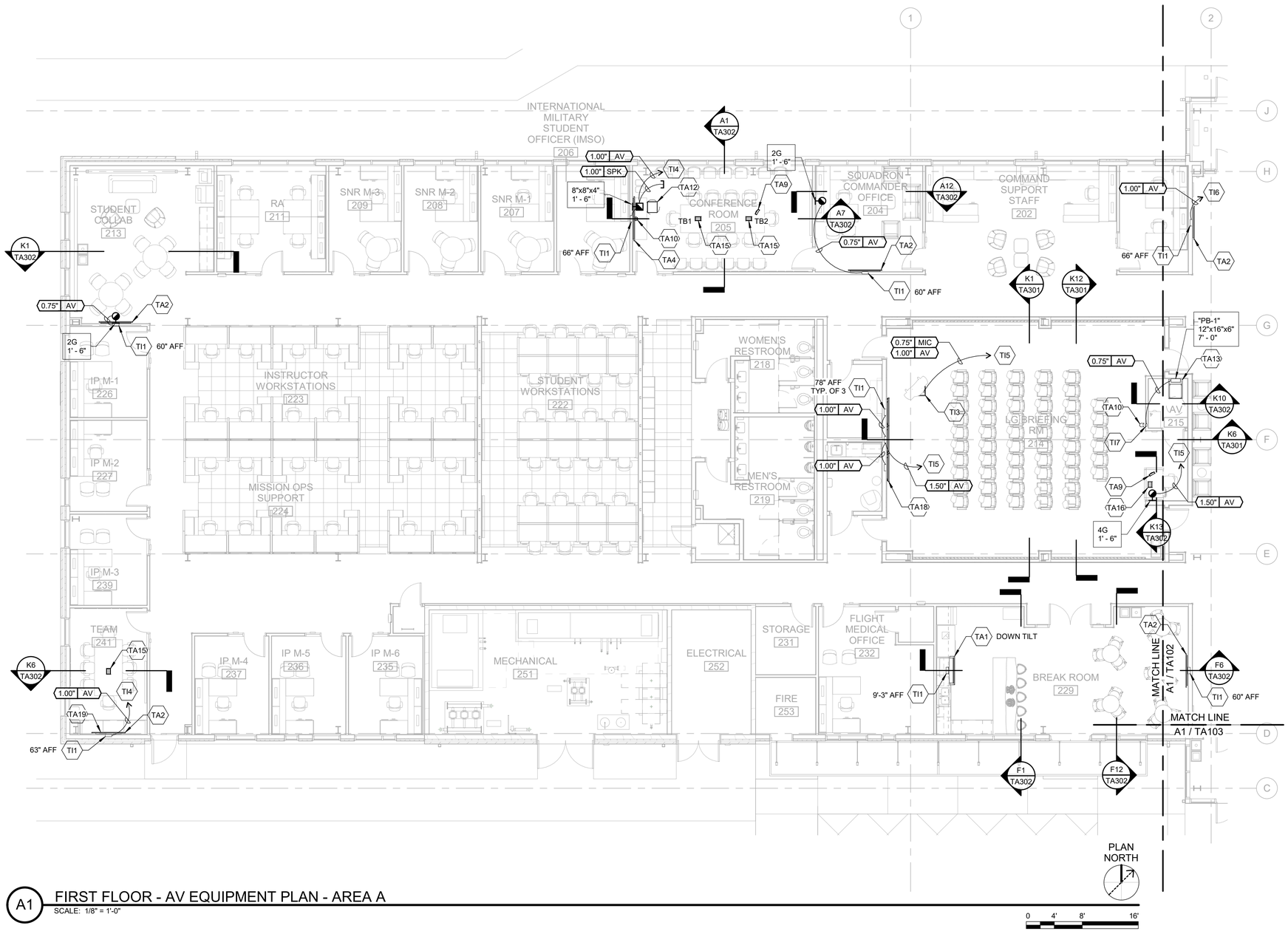
BURNS AND McDONNELL
9400 WARD PARKWAY,
KANSAS CITY, MO 64114
165438

F-35 SPECIAL ACCESS PROGRAM FACILITY
EBBING AIR NATIONAL GUARD BASE (ANGB), FORT SMITH, ARKANSAS

AV GENERAL NOTES AND LEGENDS

SHEET ID
TA100

READY-TO-ADVERTISE (RTA) SUBMITTAL

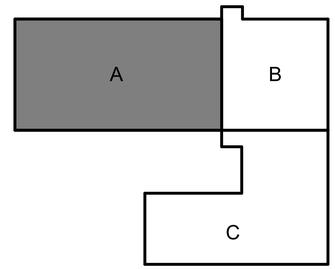


A1 FIRST FLOOR - AV EQUIPMENT PLAN - AREA A

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

AV EQUIPMENT KEYNOTES	
Key Value	Keynote Text
TA1	55-INCH DIAGONAL FLAT PANEL DISPLAY, WALL MOUNTED AT HEIGHT AS INDICATED ON SECTION VIEWS. REFER TO DETAILS A1/TA501 AND A8/TA501.
TA2	65-INCH DIAGONAL FLAT PANEL DISPLAY, WALL MOUNTED AT HEIGHT AS INDICATED ON SECTION VIEWS. REFER TO DETAILS A1/TA501 AND A8/TA501.
TA4	86-INCH DIGAONAL FLAT PANEL DISPLAY, WALL MOUNTED AT HEIGHT AS INDICATED ON SECTION VIEWS. REFER TO DETAILS A1/TA501 AND A8/TA501.
TA8	CEILING LOUDSPEAKER, FLUSH MOUNTED, TYPICAL THIS ROOM. REFER TO DETAIL M1/TA501.
TA9	AV CONTROL TOUCHPANEL AT OPERATOR DESK OR CONFERENCE TABLE.
TA10	PTZ VIDEO CAMERA, MOUNTED ON WALL WITH VIBRATION ISOLATION BRACKET.
TA11	CEILING ARRAY MICROPHONE, TYPICAL THIS ROOM. REFER TO DETAIL M7/TA501.
TA12	MILLWORK EQUIPMENT RACK, INSTALLED IN CABINET OR CREDENZA SHOWN ON INTERIORS PLANS. REFER TO DETAILS H1/TA501 AND H7/TA501.
TA13	FLOORSTANDING EQUIPMENT RACK, HOST ENCLOSURE WTH ROLL-OUT/ROTATING RACK SECTION. REFER TO DETAIL H13/TA501.
TA14	AUDIO SOUNDBAR MOUNTED BELOW DISPLAY(S).
TA15	AV CONNECTION(S) AT CONFERENCE TABLE VIA TABLE BOX (AND FLOOR BOX BELOW). REFER TO ONE-LINE DIAGRAMS.
TA16	AV CONNECTION(S) AT OPERATOR'S DESK VIA TABLE BOX AND WALL BOX. REFER TO ONE-LINE DIAGRAMS.
TA18	VIDEOWALL, 55-INCH TILED LCD TYPE, 3X3 LANDSCAPE CONFIGURATION, WALL MOUNTED AT HEIGHT AS INDICATED.
TA19	VIDEO SOUNDBAR MOUNTED BELOW DISPLAY(S).
TI1	FLAT PANEL BACKBOX, 4 GANG WITH FINISHED COVER, FOR USE WITH STANDARD SIZE DEVICE PLATES, FOR POWER/DATA/AV CONNECTIONS. FLUSH MOUNTED IN WALL AT HEIGHT INDICATED. COORDINATE INSTALLATION WITH ARCHITECTURAL WALL BLOCKING AND ELECTRICAL/DATA CONDUITS.
TI3	MULTI-FUNCTION FLOOR BOX SHARED WITH ELECTRICAL AND TELECOM. REFER TO ELECTRICAL DRAWINGS.
TI4	CONDUIT, SIZE AS INDICATED, TO FLOOR BOX IN SAME ROOM.
TI5	CONDUIT, SIZE AS INDICATED, TO PULLBOX "PB-1" LOCATED IN AV 215.
TI6	CONDUIT, SIZE AS INDICATED, TO AV WALL BOX LOCATED IN SCHEDULING & TRAINING 107.
TI7	2-GANG WALL BOX FOR AV DEVICE CONNECTION.
TI8	4-GANG WALL BOX FOR AV DEVICE CONNECTION.
TI9	PULLBOX "PB-1", SURFACE MOUNTED.

KEY PLAN



US Army Corps of Engineers ®

MARK	DESCRIPTION	DATE
0	READY-TO-ADVERTISE (RTA) SUBMITTAL	JUL 2025

DESIGNED BY: R. LEDO
DRAWN BY: B. SNOOK
CHECKED BY: C. HODGSON
SUBMITTED BY: B. STREEBIN
SIZE: ANSI D
ISSUE DATE: JUL 2025
SOLICITATION NO.: W912QZ25RA001
CONTRACT NO.: W912QZ24C0007
FILE NAME: 165438_AV_R22.rvt

US ARMY CORPS OF ENGINEERS
LITTLE ROCK DISTRICT
LITTLE ROCK, ARKANSAS

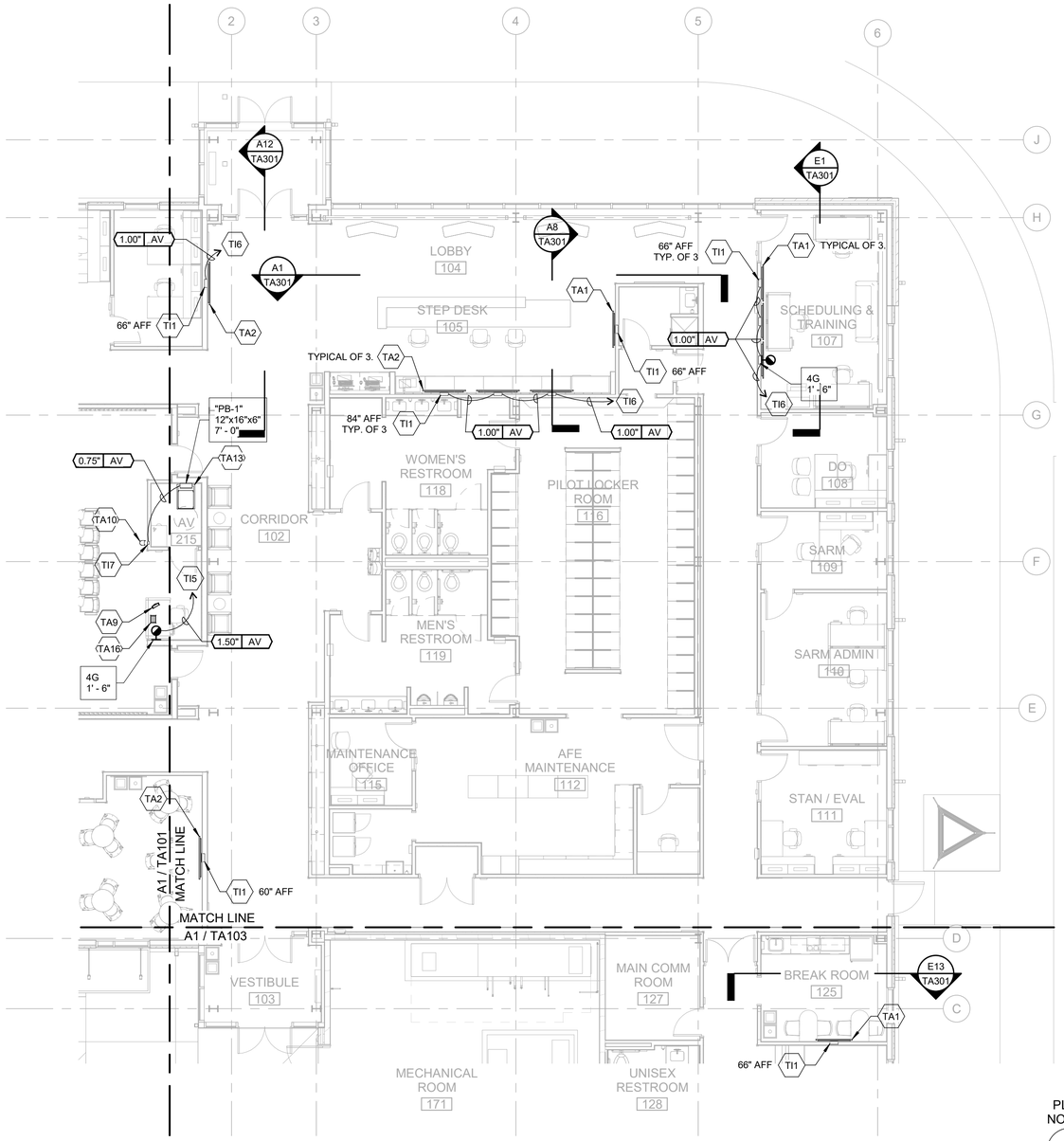
BURNS AND McDONNELL
9400 WARD PARKWAY,
KANSAS CITY, MO 64114
165438

F-35: SPECIAL ACCESS PROGRAM FACILITY
EBBING AIR NATIONAL GUARD BASE (ANGB), FORT SMITH, ARKANSAS

FIRST FLOOR AV EQUIPMENT PLAN - AREA A

SHEET ID
TA101

READY-TO-ADVERTISE (RTA) SUBMITTAL



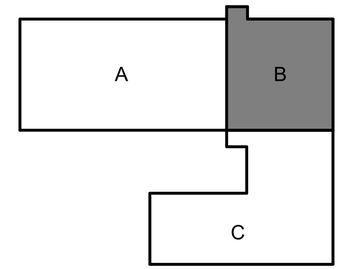
A1 FIRST FLOOR - AV EQUIPMENT PLAN - AREA B

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

0 4' 8' 16'

AV EQUIPMENT KEYNOTES	
Key Value	Keynote Text
TA1	55-INCH DIAGONAL FLAT PANEL DISPLAY, WALL MOUNTED AT HEIGHT AS INDICATED ON SECTION VIEWS. REFER TO DETAILS A1/TA501 AND A8/TA501.
TA2	65-INCH DIAGONAL FLAT PANEL DISPLAY, WALL MOUNTED AT HEIGHT AS INDICATED ON SECTION VIEWS. REFER TO DETAILS A1/TA501 AND A8/TA501.
TA4	86-INCH DIGAONAL FLAT PANEL DISPLAY, WALL MOUNTED AT HEIGHT AS INDICATED ON SECTION VIEWS. REFER TO DETAILS A1/TA501 AND A8/TA501.
TA8	CEILING LOUDSPEAKER, FLUSH MOUNTED, TYPICAL THIS ROOM. REFER TO DETAIL M1/TA501.
TA9	AV CONTROL TOUCHPANEL AT OPERATOR DESK OR CONFERENCE TABLE.
TA10	PTZ VIDEO CAMERA, MOUNTED ON WALL WITH VIBRATION ISOLATION BRACKET.
TA11	CEILING ARRAY MICROPHONE, TYPICAL THIS ROOM. REFER TO DETAIL M7/TA501.
TA12	MILLWORK EQUIPMENT RACK, INSTALLED IN CABINET OR CREDENZA SHOWN ON INTERIORS PLANS. REFER TO DETAILS H1/TA501 AND H7/TA501.
TA13	FLOORSTANDING EQUIPMENT RACK, HOST ENCLOSURE WTH ROLL-OUT/ROTATING RACK SECTION. REFER TO DETAIL H13/TA501.
TA14	AUDIO SOUNDBAR MOUNTED BELOW DISPLAY(S).
TA15	AV CONNECTION(S) AT CONFERENCE TABLE VIA TABLE BOX (AND FLOOR BOX BELOW). REFER TO ONE-LINE DIAGRAMS.
TA16	AV CONNECTION(S) AT OPERATOR'S DESK VIA TABLE BOX AND WALL BOX. REFER TO ONE-LINE DIAGRAMS.
TA18	VIDEOWALL, 55-INCH TILED LCD TYPE, 3X3 LANDSCAPE CONFIGURATION, WALL MOUNTED AT HEIGHT AS INDICATED.
TA19	VIDEO SOUNDBAR MOUNTED BELOW DISPLAY(S).
TI1	FLAT PANEL BACKBOX, 4 GANG WITH FINISHED COVER, FOR USE WITH STANDARD SIZE DEVICE PLATES, FOR POWER/DATA/AV CONNECTIONS. FLUSH MOUNTED IN WALL AT HEIGHT INDICATED. COORDINATE INSTALLATION WITH ARCHITECTURAL WALL BLOCKING AND ELECTRICAL/DATA CONDUITS.
TI3	MULTI-FUNCTION FLOOR BOX SHARED WITH ELECTRICAL AND TELECOM. REFER TO ELECTRICAL DRAWINGS.
TI4	CONDUIT, SIZE AS INDICATED, TO FLOOR BOX IN SAME ROOM.
TI5	CONDUIT, SIZE AS INDICATED, TO PULLBOX "PB-1" LOCATED IN AV 215.
TI6	CONDUIT, SIZE AS INDICATED, TO AV WALL BOX LOCATED IN SCHEDULING & TRAINING 107.
TI7	2-GANG WALL BOX FOR AV DEVICE CONNECTION.
TI8	4-GANG WALL BOX FOR AV DEVICE CONNECTION.
TI9	PULLBOX "PB-1", SURFACE MOUNTED.

KEY PLAN



US Army Corps of Engineers ®

MARK	DESCRIPTION	DATE
0	READY-TO-ADVERTISE (RTA) SUBMITTAL	JUL 2025

DESIGNED BY: R. LEDO
DRAWN BY: B. SNOOK
CHECKED BY: J. HODGSON
SUBMITTED BY: B. STREEBIN
ISSUE DATE: JUL 2025
SOLICITATION NO.: W9127S25RA001
CONTRACT NO.: W9127S24C0007
SIZE: ANSI D
FILE NAME: 165438_AV_R22.rvt

US ARMY CORPS OF ENGINEERS
LITTLE ROCK DISTRICT
LITTLE ROCK, ARKANSAS

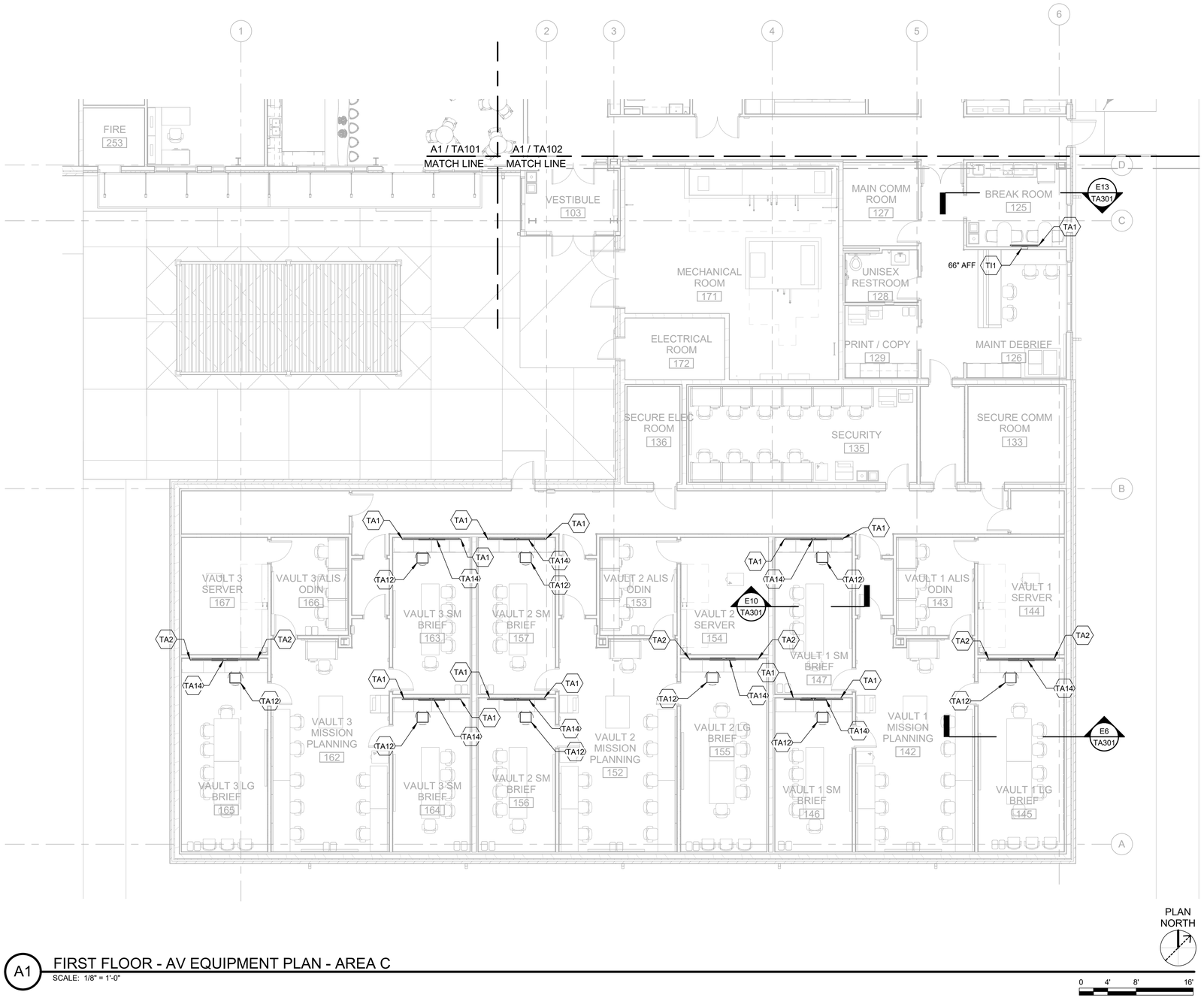
BURNS AND McDONNELL
9400 WARD PARKWAY,
KANSAS CITY, MO 64114
165438

F-35, SPECIAL ACCESS PROGRAM FACILITY
EBBING AIR NATIONAL GUARD BASE (ANGB), FORT SMITH, ARKANSAS

FIRST FLOOR AV EQUIPMENT PLAN - AREA B

SHEET ID
TA102

READY-TO-ADVERTISE (RTA) SUBMITTAL

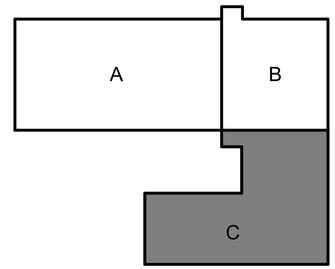


A1 FIRST FLOOR - AV EQUIPMENT PLAN - AREA C

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

AV EQUIPMENT KEYNOTES	
Key Value	Keynote Text
TA1	55-INCH DIAGONAL FLAT PANEL DISPLAY, WALL MOUNTED AT HEIGHT AS INDICATED ON SECTION VIEWS. REFER TO DETAILS A1/TA501 AND A8/TA501.
TA2	65-INCH DIAGONAL FLAT PANEL DISPLAY, WALL MOUNTED AT HEIGHT AS INDICATED ON SECTION VIEWS. REFER TO DETAILS A1/TA501 AND A8/TA501.
TA4	86-INCH DIGAONAL FLAT PANEL DISPLAY, WALL MOUNTED AT HEIGHT AS INDICATED ON SECTION VIEWS. REFER TO DETAILS A1/TA501 AND A8/TA501.
TA8	CEILING LOUDSPEAKER, FLUSH MOUNTED, TYPICAL THIS ROOM. REFER TO DETAIL M1/TA501.
TA9	AV CONTROL TOUCHPANEL AT OPERATOR DESK OR CONFERENCE TABLE.
TA10	PTZ VIDEO CAMERA, MOUNTED ON WALL WITH VIBRATION ISOLATION BRACKET.
TA11	CEILING ARRAY MICROPHONE, TYPICAL THIS ROOM. REFER TO DETAIL M7/TA501.
TA12	MILLWORK EQUIPMENT RACK, INSTALLED IN CABINET OR CREDENZA SHOWN ON INTERIORS PLANS. REFER TO DETAILS H1/TA501 AND H7/TA501.
TA13	FLOORSTANDING EQUIPMENT RACK, HOST ENCLOSURE WTH ROLL-OUT/ROTATING RACK SECTION. REFER TO DETAIL H13/TA501.
TA14	AUDIO SOUNDBAR MOUNTED BELOW DISPLAY(S).
TA15	AV CONNECTION(S) AT CONFERENCE TABLE VIA TABLE BOX (AND FLOOR BOX BELOW). REFER TO ONE-LINE DIAGRAMS.
TA16	AV CONNECTION(S) AT OPERATOR'S DESK VIA TABLE BOX AND WALL BOX. REFER TO ONE-LINE DIAGRAMS.
TA18	VIDEOWALL, 55-INCH TILED LCD TYPE, 3X3 LANDSCAPE CONFIGURATION, WALL MOUNTED AT HEIGHT AS INDICATED.
TA19	VIDEO SOUNDBAR MOUNTED BELOW DISPLAY(S).
TI1	FLAT PANEL BACKBOX, 4 GANG WITH FINISHED COVER, FOR USE WITH STANDARD SIZE DEVICE PLATES, FOR POWER/DATA/AV CONNECTIONS. FLUSH MOUNTED IN WALL AT HEIGHT INDICATED. COORDINATE INSTALLATION WITH ARCHITECTURAL WALL BLOCKING AND ELECTRICAL/DATA CONDUITS.
TI3	MULTI-FUNCTION FLOOR BOX SHARED WITH ELECTRICAL AND TELECOM. REFER TO ELECTRICAL DRAWINGS.
TI4	CONDUIT, SIZE AS INDICATED, TO FLOOR BOX IN SAME ROOM.
TI5	CONDUIT, SIZE AS INDICATED, TO PULLBOX "PB-1" LOCATED IN AV 215.
TI6	CONDUIT, SIZE AS INDICATED, TO AV WALL BOX LOCATED IN SCHEDULING & TRAINING 107.
TI7	2-GANG WALL BOX FOR AV DEVICE CONNECTION.
TI8	4-GANG WALL BOX FOR AV DEVICE CONNECTION.
TI9	PULLBOX "PB-1", SURFACE MOUNTED.

KEY PLAN



US Army Corps of Engineers ®

MARK	DESCRIPTION	DATE
0	READY-TO-ADVERTISE (RTA) SUBMITTAL	JUL 2025

DESIGNED BY: R. LEDO
DRAWN BY: B. SNOOK
CHECKED BY: C. HODGSON
SUBMITTED BY: B. STREEBIN
ISSUE DATE: JUL 2025
SOLICITATION NO.: W912725R4001
CONTRACT NO.: W912725C0007
SIZE: ANSI D
FILE NAME: 165438_AV_R22.rvt

US ARMY CORPS OF ENGINEERS
LITTLE ROCK DISTRICT
LITTLE ROCK, ARKANSAS

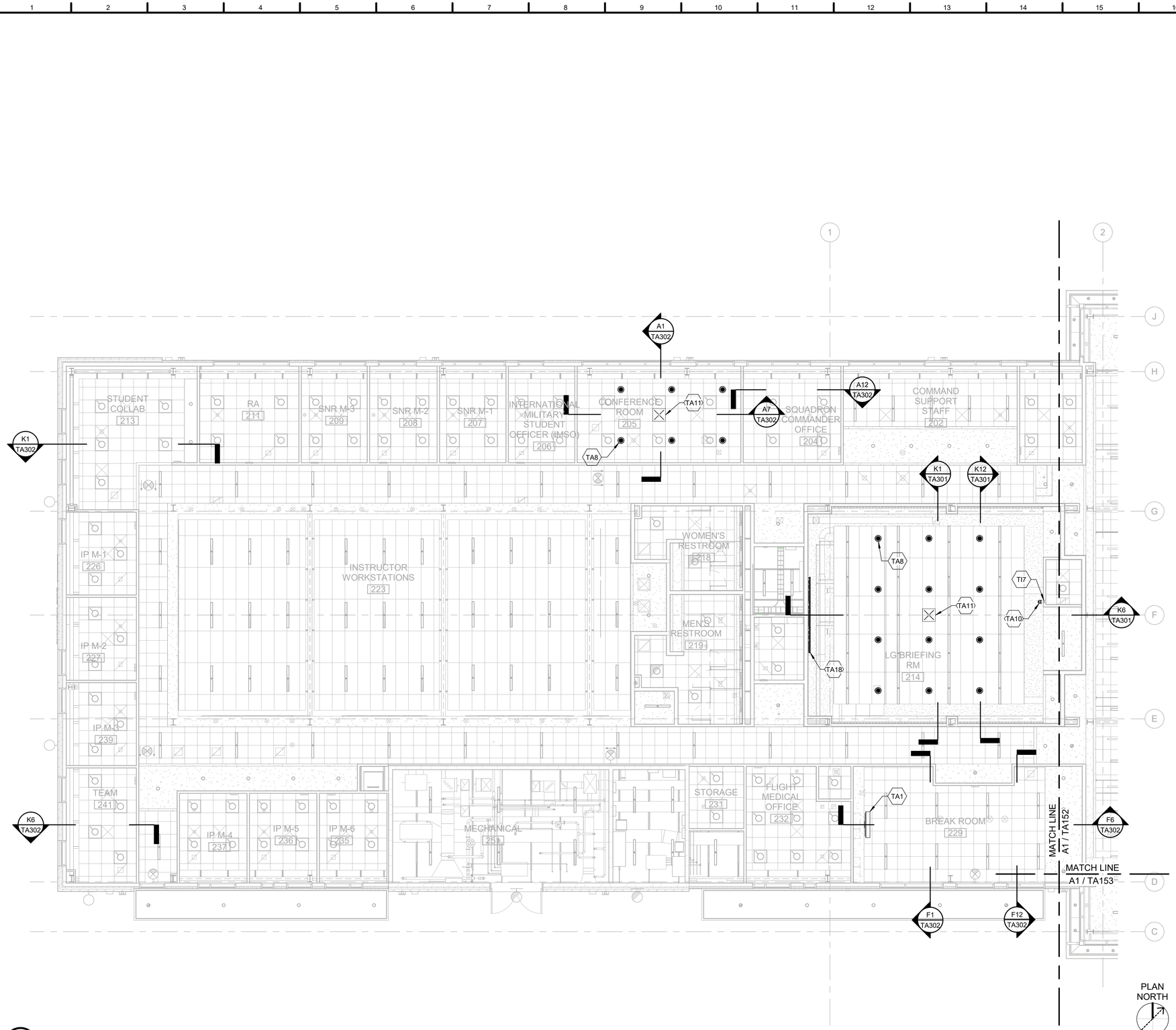
BURNS AND McDONNELL
9400 WARD PARKWAY,
KANSAS CITY, MO 64114
165438

F-35: SPECIAL ACCESS PROGRAM FACILITY
EBBING AIR NATIONAL GUARD BASE (ANGB), FORT SMITH, ARKANSAS

FIRST FLOOR AV EQUIPMENT PLAN - AREA C

SHEET ID
TA103

READY-TO-ADVERTISE (RTA) SUBMITTAL

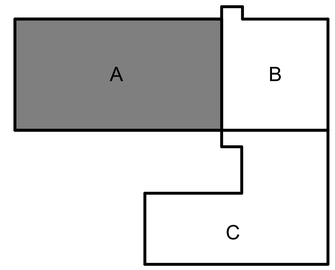


A1 FIRST FLOOR - AV REFLECTED CEILING PLAN - AREA A

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

AV EQUIPMENT KEYNOTES	
Key Value	Keynote Text
TA1	55-INCH DIAGONAL FLAT PANEL DISPLAY, WALL MOUNTED AT HEIGHT AS INDICATED ON SECTION VIEWS. REFER TO DETAILS A1/TA501 AND A8/TA501.
TA2	65-INCH DIAGONAL FLAT PANEL DISPLAY, WALL MOUNTED AT HEIGHT AS INDICATED ON SECTION VIEWS. REFER TO DETAILS A1/TA501 AND A8/TA501.
TA4	86-INCH DIGAONAL FLAT PANEL DISPLAY, WALL MOUNTED AT HEIGHT AS INDICATED ON SECTION VIEWS. REFER TO DETAILS A1/TA501 AND A8/TA501.
TA8	CEILING LOUDSPEAKER, FLUSH MOUNTED, TYPICAL THIS ROOM. REFER TO DETAIL M1/TA501.
TA9	AV CONTROL TOUCHPANEL AT OPERATOR DESK OR CONFERENCE TABLE.
TA10	PTZ VIDEO CAMERA, MOUNTED ON WALL WITH VIBRATION ISOLATION BRACKET.
TA11	CEILING ARRAY MICROPHONE, TYPICAL THIS ROOM. REFER TO DETAIL M7/TA501.
TA12	MILLWORK EQUIPMENT RACK, INSTALLED IN CABINET OR CREDENZA SHOWN ON INTERIORS PLANS. REFER TO DETAILS H1/TA501 AND H7/TA501.
TA13	FLOORSTANDING EQUIPMENT RACK, HOST ENCLOSURE WTH ROLL-OUT/ROTATING RACK SECTION. REFER TO DETAIL H13/TA501.
TA14	AUDIO SOUNDBAR MOUNTED BELOW DISPLAY(S).
TA15	AV CONNECTION(S) AT CONFERENCE TABLE VIA TABLE BOX (AND FLOOR BOX BELOW). REFER TO ONE-LINE DIAGRAMS.
TA16	AV CONNECTION(S) AT OPERATOR'S DESK VIA TABLE BOX AND WALL BOX. REFER TO ONE-LINE DIAGRAMS.
TA18	VIDEOWALL, 55-INCH TILED LCD TYPE, 3X3 LANDSCAPE CONFIGURATION, WALL MOUNTED AT HEIGHT AS INDICATED.
TA19	VIDEO SOUNDBAR MOUNTED BELOW DISPLAY(S).
TI1	FLAT PANEL BACKBOX, 4 GANG WITH FINISHED COVER, FOR USE WITH STANDARD SIZE DEVICE PLATES, FOR POWER/DATA/AV CONNECTIONS. FLUSH MOUNTED IN WALL AT HEIGHT INDICATED. COORDINATE INSTALLATION WITH ARCHITECTURAL WALL BLOCKING AND ELECTRICAL/DATA CONDUITS.
TI3	MULTI-FUNCTION FLOOR BOX SHARED WITH ELECTRICAL AND TELECOM. REFER TO ELECTRICAL DRAWINGS.
TI4	CONDUIT, SIZE AS INDICATED, TO FLOOR BOX IN SAME ROOM.
TI5	CONDUIT, SIZE AS INDICATED, TO PULLBOX "PB-1" LOCATED IN AV 215.
TI6	CONDUIT, SIZE AS INDICATED, TO AV WALL BOX LOCATED IN SCHEDULING & TRAINING 107.
TI7	2-GANG WALL BOX FOR AV DEVICE CONNECTION.
TI8	4-GANG WALL BOX FOR AV DEVICE CONNECTION.
TI9	PULLBOX "PB-1", SURFACE MOUNTED.

KEY PLAN



US Army Corps of Engineers ®

MARK	DESCRIPTION	DATE
0	READY-TO-ADVERTISE (RTA) SUBMITTAL	JUL 2025

ISSUE DATE: JUL 2025
SOLICITATION NO.: W912PS25RA001
CONTRACT NO.: W912PS24C0007

DESIGNED BY: R. LEDO
DRAWN BY: B. SNOOK
CHECKED BY: C. HODGSON
SUBMITTED BY: B. STREEBIN
SIZE: ANSI D
FILE NAME: 65438_AV_R22.rvt

US ARMY CORPS OF ENGINEERS
LITTLE ROCK DISTRICT
LITTLE ROCK, ARKANSAS

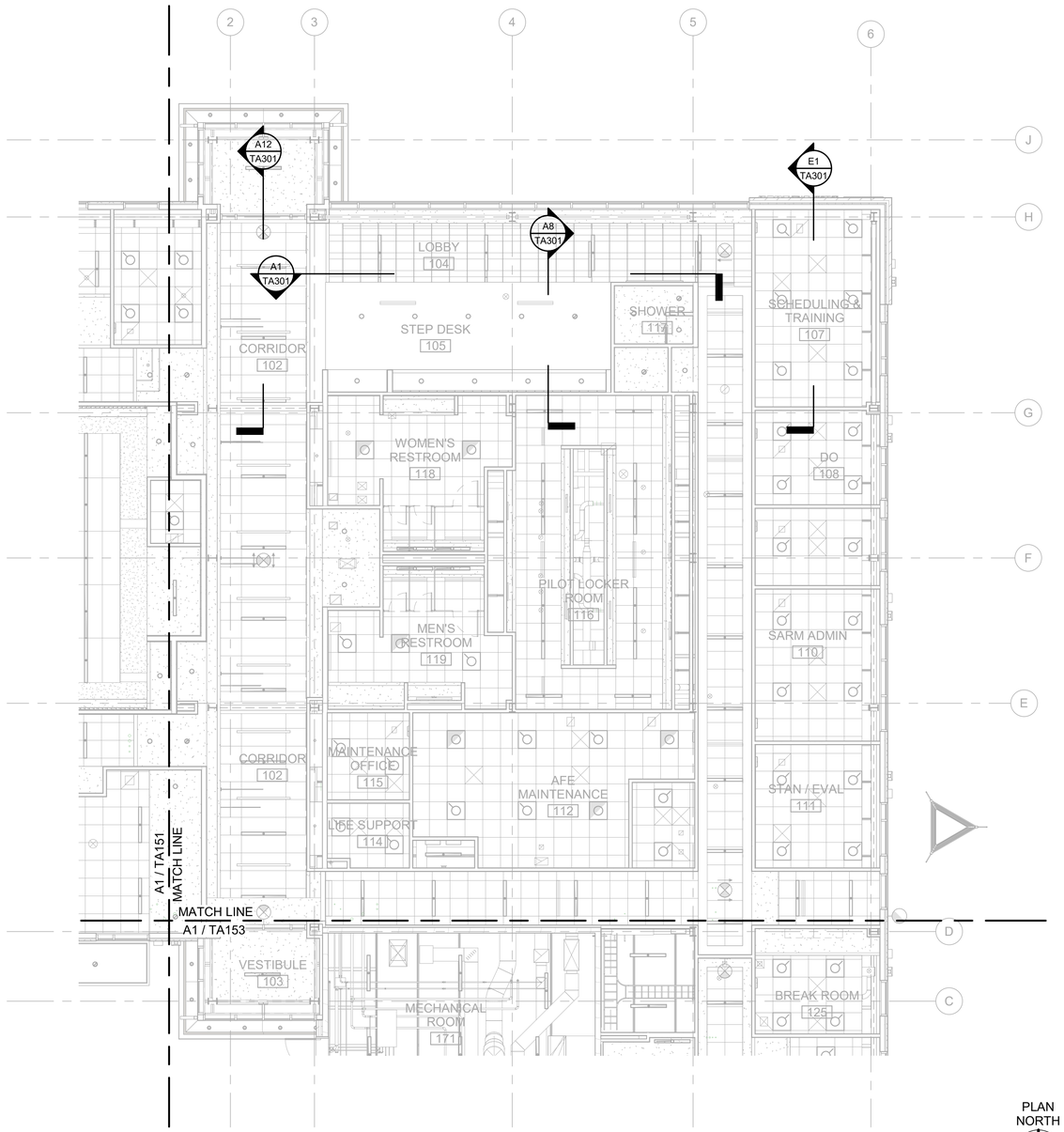
BURNS AND McDONNELL
9400 WARD PARKWAY,
KANSAS CITY, MO 64114
65438

F-35 SPECIAL ACCESS PROGRAM FACILITY
EBBING AIR NATIONAL GUARD BASE (ANGB), FORT SMITH, ARKANSAS

FIRST FLOOR AV REFLECTED CEILING PLAN - AREA A

SHEET ID
TA151

READY-TO-ADVERTISE (RTA) SUBMITTAL

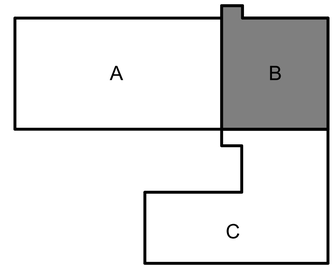


A1 FIRST FLOOR - AV REFLECTED CEILING PLAN - AREA B

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

AV EQUIPMENT KEYNOTES	
Key Value	Keynote Text
TA1	55-INCH DIAGONAL FLAT PANEL DISPLAY, WALL MOUNTED AT HEIGHT AS INDICATED ON SECTION VIEWS. REFER TO DETAILS A1/TA501 AND A8/TA501.
TA2	65-INCH DIAGONAL FLAT PANEL DISPLAY, WALL MOUNTED AT HEIGHT AS INDICATED ON SECTION VIEWS. REFER TO DETAILS A1/TA501 AND A8/TA501.
TA4	86-INCH DIGAONAL FLAT PANEL DISPLAY, WALL MOUNTED AT HEIGHT AS INDICATED ON SECTION VIEWS. REFER TO DETAILS A1/TA501 AND A8/TA501.
TA8	CEILING LOUDSPEAKER, FLUSH MOUNTED, TYPICAL THIS ROOM. REFER TO DETAIL M1/TA501.
TA9	AV CONTROL TOUCHPANEL AT OPERATOR DESK OR CONFERENCE TABLE.
TA10	PTZ VIDEO CAMERA, MOUNTED ON WALL WITH VIBRATION ISOLATION BRACKET.
TA11	CEILING ARRAY MICROPHONE, TYPICAL THIS ROOM. REFER TO DETAIL M7/TA501.
TA12	MILLWORK EQUIPMENT RACK, INSTALLED IN CABINET OR CREDENZA SHOWN ON INTERIORS PLANS. REFER TO DETAILS H1/TA501 AND H7/TA501.
TA13	FLOORSTANDING EQUIPMENT RACK, HOST ENCLOSURE WTH ROLL-OUT/ROTATING RACK SECTION. REFER TO DETAIL H13/TA501.
TA14	AUDIO SOUNDBAR MOUNTED BELOW DISPLAY(S).
TA15	AV CONNECTION(S) AT CONFERENCE TABLE VIA TABLE BOX (AND FLOOR BOX BELOW). REFER TO ONE-LINE DIAGRAMS.
TA16	AV CONNECTION(S) AT OPERATOR'S DESK VIA TABLE BOX AND WALL BOX. REFER TO ONE-LINE DIAGRAMS.
TA18	VIDEOWALL, 55-INCH TILED LCD TYPE, 3X3 LANDSCAPE CONFIGURATION, WALL MOUNTED AT HEIGHT AS INDICATED.
TA19	VIDEO SOUNDBAR MOUNTED BELOW DISPLAY(S).
TI1	FLAT PANEL BACKBOX, 4 GANG WITH FINISHED COVER, FOR USE WITH STANDARD SIZE DEVICE PLATES, FOR POWER/DATA/AV CONNECTIONS. FLUSH MOUNTED IN WALL AT HEIGHT INDICATED. COORDINATE INSTALLATION WITH ARCHITECTURAL WALL BLOCKING AND ELECTRICAL/DATA CONDUITS.
TI3	MULTI-FUNCTION FLOOR BOX SHARED WITH ELECTRICAL AND TELECOM. REFER TO ELECTRICAL DRAWINGS.
TI4	CONDUIT, SIZE AS INDICATED, TO FLOOR BOX IN SAME ROOM.
TI5	CONDUIT, SIZE AS INDICATED, TO PULLBOX "PB-1" LOCATED IN AV 215.
TI6	CONDUIT, SIZE AS INDICATED, TO AV WALL BOX LOCATED IN SCHEDULING & TRAINING 107.
TI7	2-GANG WALL BOX FOR AV DEVICE CONNECTION.
TI8	4-GANG WALL BOX FOR AV DEVICE CONNECTION.
TI9	PULLBOX "PB-1", SURFACE MOUNTED.

KEY PLAN



US Army Corps of Engineers ®

MARK	DESCRIPTION	DATE
0	READY-TO-ADVERTISE (RTA) SUBMITTAL	JUL 2025

DESIGNED BY: R. LEDO
DRAWN BY: B. SNOOK
CHECKED BY: J. HODGSON
SUBMITTED BY: B. STREEBIN
SIZE: ANSI D
ISSUE DATE: JUL 2025
SOLICITATION NO.: W912725R4001
CONTRACT NO.: W912724C0007
FILE NAME: 165438_AV_R22.rvt

US ARMY CORPS OF ENGINEERS
LITTLE ROCK DISTRICT
LITTLE ROCK, ARKANSAS

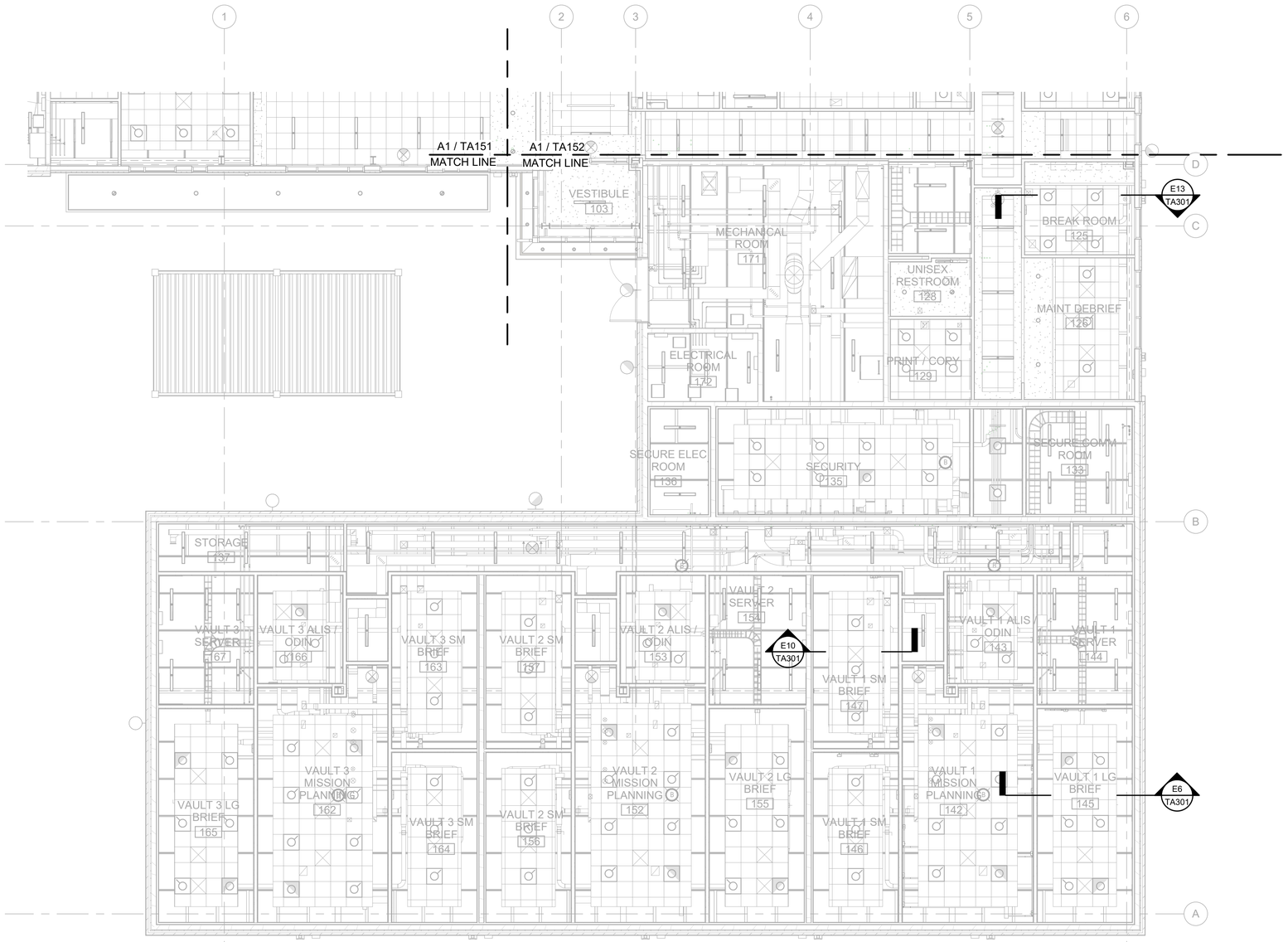
BURNS AND McDONNELL
9400 WARD PARKWAY,
KANSAS CITY, MO 64114
165438

F-35 SPECIAL ACCESS PROGRAM FACILITY
EBBING AIR NATIONAL GUARD BASE (ANGB), FORT SMITH, ARKANSAS

FIRST FLOOR AV REFLECTED CEILING PLAN - AREA B

SHEET ID
TA152

READY-TO-ADVERTISE (RTA) SUBMITTAL

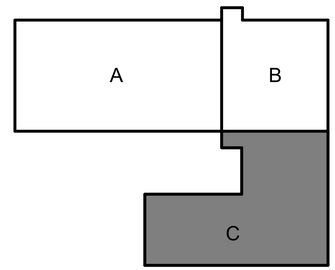


A1 FIRST FLOOR - AV REFLECTED CEILING PLAN - AREA C

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

AV EQUIPMENT KEYNOTES	
Key Value	Keynote Text
TA1	55-INCH DIAGONAL FLAT PANEL DISPLAY, WALL MOUNTED AT HEIGHT AS INDICATED ON SECTION VIEWS. REFER TO DETAILS A1/TA501 AND A8/TA501.
TA2	65-INCH DIAGONAL FLAT PANEL DISPLAY, WALL MOUNTED AT HEIGHT AS INDICATED ON SECTION VIEWS. REFER TO DETAILS A1/TA501 AND A8/TA501.
TA4	86-INCH DIGAONAL FLAT PANEL DISPLAY, WALL MOUNTED AT HEIGHT AS INDICATED ON SECTION VIEWS. REFER TO DETAILS A1/TA501 AND A8/TA501.
TA8	CEILING LOUDSPEAKER, FLUSH MOUNTED, TYPICAL THIS ROOM. REFER TO DETAIL M1/TA501.
TA9	AV CONTROL TOUCHPANEL AT OPERATOR DESK OR CONFERENCE TABLE.
TA10	PTZ VIDEO CAMERA, MOUNTED ON WALL WITH VIBRATION ISOLATION BRACKET.
TA11	CEILING ARRAY MICROPHONE, TYPICAL THIS ROOM. REFER TO DETAIL M7/TA501.
TA12	MILLWORK EQUIPMENT RACK, INSTALLED IN CABINET OR CREDENZA SHOWN ON INTERIORS PLANS. REFER TO DETAILS H1/TA501 AND H7/TA501.
TA13	FLOORSTANDING EQUIPMENT RACK, HOST ENCLOSURE WTH ROLL-OUT/ROTATING RACK SECTION. REFER TO DETAIL H13/TA501.
TA14	AUDIO SOUNDBAR MOUNTED BELOW DISPLAY(S).
TA15	AV CONNECTION(S) AT CONFERENCE TABLE VIA TABLE BOX (AND FLOOR BOX BELOW). REFER TO ONE-LINE DIAGRAMS.
TA16	AV CONNECTION(S) AT OPERATOR'S DESK VIA TABLE BOX AND WALL BOX. REFER TO ONE-LINE DIAGRAMS.
TA18	VIDEOWALL, 55-INCH TILED LCD TYPE, 3X3 LANDSCAPE CONFIGURATION, WALL MOUNTED AT HEIGHT AS INDICATED.
TA19	VIDEO SOUNDBAR MOUNTED BELOW DISPLAY(S).
TI1	FLAT PANEL BACKBOX, 4 GANG WITH FINISHED COVER, FOR USE WITH STANDARD SIZE DEVICE PLATES, FOR POWER/DATA/AV CONNECTIONS. FLUSH MOUNTED IN WALL AT HEIGHT INDICATED. COORDINATE INSTALLATION WITH ARCHITECTURAL WALL BLOCKING AND ELECTRICAL/DATA CONDUITS.
TI3	MULTI-FUNCTION FLOOR BOX SHARED WITH ELECTRICAL AND TELECOM. REFER TO ELECTRICAL DRAWINGS.
TI4	CONDUIT, SIZE AS INDICATED, TO FLOOR BOX IN SAME ROOM.
TI5	CONDUIT, SIZE AS INDICATED, TO PULLBOX "PB-1" LOCATED IN AV 215.
TI6	CONDUIT, SIZE AS INDICATED, TO AV WALL BOX LOCATED IN SCHEDULING & TRAINING 107.
TI7	2-GANG WALL BOX FOR AV DEVICE CONNECTION.
TI8	4-GANG WALL BOX FOR AV DEVICE CONNECTION.
TI9	PULLBOX "PB-1", SURFACE MOUNTED.

KEY PLAN



US Army Corps of Engineers ®

MARK	DESCRIPTION	DATE
0	READY-TO-ADVERTISE (RTA) SUBMITTAL	JUL 2025

ISSUE DATE: JUL 2025
SOLICITATION NO.: W912QR24A001
CONTRACT NO.: W912QR24C0007
DESIGNED BY: R. LEDO
DRAWN BY: B. SNOOK
CHECKED BY: C. HODGSON
SUBMITTED BY: B. STREEBIN
SIZE: ANSI D
FILE NAME: 165438_AV_R22.rvt

US ARMY CORPS OF ENGINEERS
LITTLE ROCK DISTRICT
LITTLE ROCK, ARKANSAS

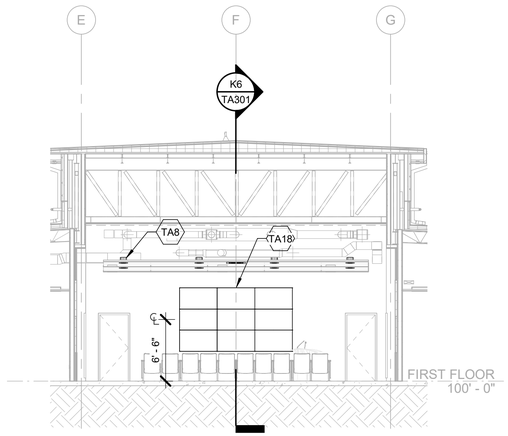
BURNS AND McDONNELL
9400 WARD PARKWAY,
KANSAS CITY, MO 64114
165438

F-35 SPECIAL ACCESS PROGRAM FACILITY
EBBING AIR NATIONAL GUARD BASE (ANGB), FORT SMITH, ARKANSAS

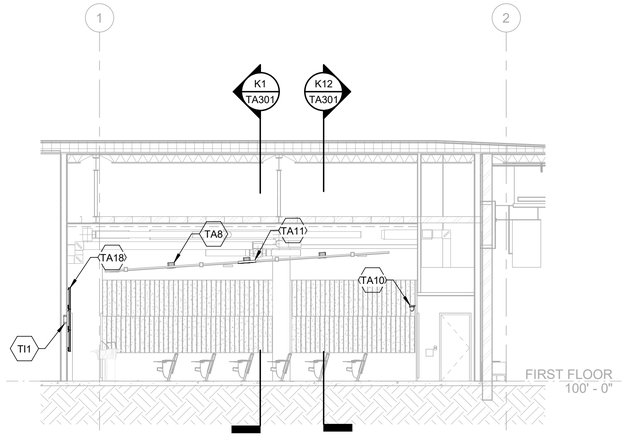
FIRST FLOOR AV REFLECTED CEILING PLAN - AREA C

SHEET ID
TA153

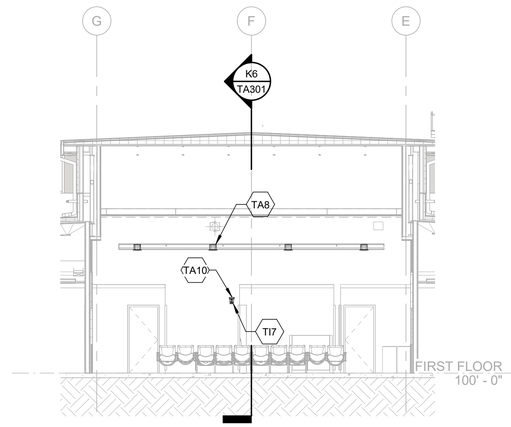
READY-TO-ADVERTISE (RTA) SUBMITTAL



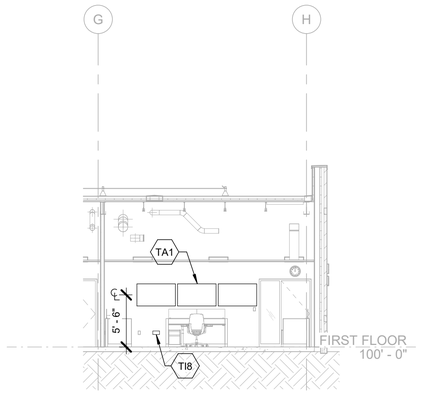
K1 LARGE BRIEFING 214 (LOOKING WEST)
SCALE: 1/8" = 1'-0"



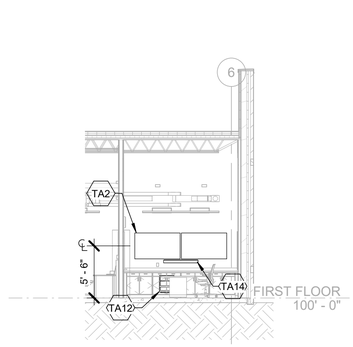
K6 LARGE BRIEFING 214 - (LOOKING NORTH)
SCALE: 1/8" = 1'-0"



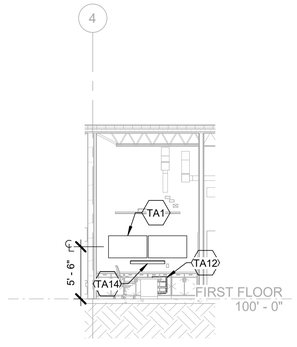
K12 LARGE BRIEFING 214 - (LOOKING EAST)
SCALE: 1/8" = 1'-0"



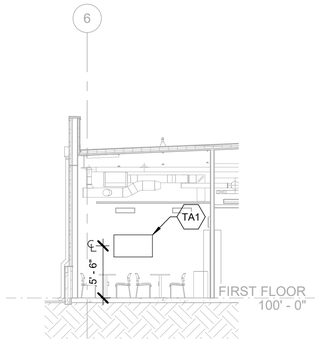
E1 SCHEDULING & TRAINING 107
SCALE: 1/8" = 1'-0"



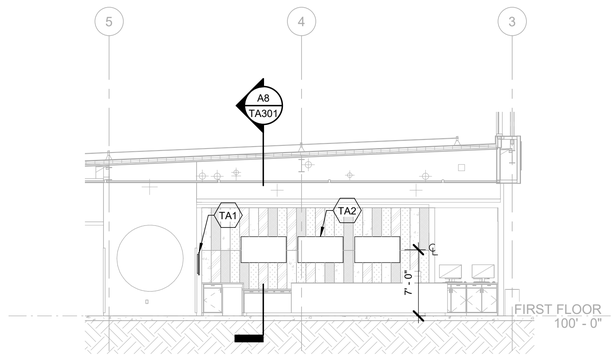
E6 LG VAULT BRIEFING - TYP.
SCALE: 1/8" = 1'-0"



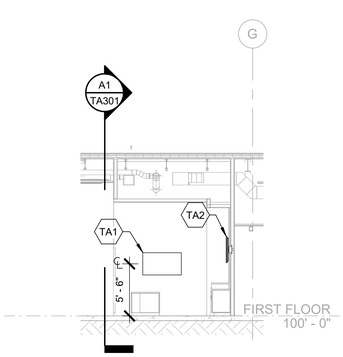
E10 SM VAULT BRIEFING - TYP.
SCALE: 1/8" = 1'-0"



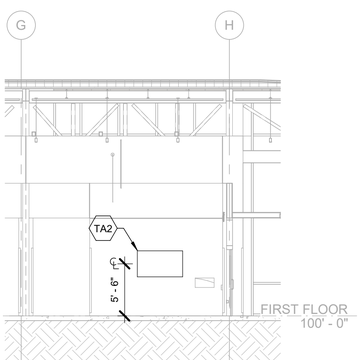
E13 BREAK ROOM 125
SCALE: 1/8" = 1'-0"



A1 LOBBY 104 (LOOKING SOUTH)
SCALE: 1/8" = 1'-0"



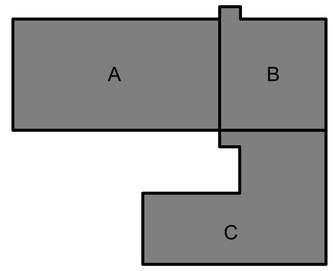
A8 LOBBY 104 (LOOKING EAST)
SCALE: 1/8" = 1'-0"



A12 LOBBY 104 (LOOKING WEST)
SCALE: 1/8" = 1'-0"

AV EQUIPMENT KEYNOTES	
Key Value	Keynote Text
TA1	55-INCH DIAGONAL FLAT PANEL DISPLAY, WALL MOUNTED AT HEIGHT AS INDICATED ON SECTION VIEWS. REFER TO DETAILS A1/TA501 AND A8/TA501.
TA2	65-INCH DIAGONAL FLAT PANEL DISPLAY, WALL MOUNTED AT HEIGHT AS INDICATED ON SECTION VIEWS. REFER TO DETAILS A1/TA501 AND A8/TA501.
TA4	86-INCH DIGAONAL FLAT PANEL DISPLAY, WALL MOUNTED AT HEIGHT AS INDICATED ON SECTION VIEWS. REFER TO DETAILS A1/TA501 AND A8/TA501.
TA8	CEILING LOUDSPEAKER, FLUSH MOUNTED, TYPICAL THIS ROOM. REFER TO DETAIL M1/TA501.
TA9	AV CONTROL TOUCHPANEL AT OPERATOR DESK OR CONFERENCE TABLE.
TA10	PTZ VIDEO CAMERA, MOUNTED ON WALL WITH VIBRATION ISOLATION BRACKET.
TA11	CEILING ARRAY MICROPHONE, TYPICAL THIS ROOM. REFER TO DETAIL M7/TA501.
TA12	MILLWORK EQUIPMENT RACK, INSTALLED IN CABINET OR CREDENZA SHOWN ON INTERIORS PLANS. REFER TO DETAILS H1/TA501 AND H7/TA501.
TA13	FLOORSTANDING EQUIPMENT RACK, HOST ENCLOSURE WTH ROLL-OUT/ROTATING RACK SECTION. REFER TO DETAIL H13/TA501.
TA14	AUDIO SOUNDBAR MOUNTED BELOW DISPLAY(S).
TA15	AV CONNECTION(S) AT CONFERENCE TABLE VIA TABLE BOX (AND FLOOR BOX BELOW). REFER TO ONE-LINE DIAGRAMS.
TA16	AV CONNECTION(S) AT OPERATOR'S DESK VIA TABLE BOX AND WALL BOX. REFER TO ONE-LINE DIAGRAMS.
TA18	VIDEOWALL, 55-INCH TILED LCD TYPE, 3X3 LANDSCAPE CONFIGURATION, WALL MOUNTED AT HEIGHT AS INDICATED.
TA19	VIDEO SOUNDBAR MOUNTED BELOW DISPLAY(S).
TI1	FLAT PANEL BACKBOX, 4 GANG WITH FINISHED COVER, FOR USE WITH STANDARD SIZE DEVICE PLATES, FOR POWER/DATA/AV CONNECTIONS. FLUSH MOUNTED IN WALL AT HEIGHT INDICATED. COORDINATE INSTALLATION WITH ARCHITECTURAL WALL BLOCKING AND ELECTRICAL/DATA CONDUITS.
TI3	MULTI-FUNCTION FLOOR BOX SHARED WITH ELECTRICAL AND TELECOM. REFER TO ELECTRICAL DRAWINGS.
TI4	CONDUIT, SIZE AS INDICATED, TO FLOOR BOX IN SAME ROOM.
TI5	CONDUIT, SIZE AS INDICATED, TO PULLBOX "PB-1" LOCATED IN AV 215.
TI6	CONDUIT, SIZE AS INDICATED, TO AV WALL BOX LOCATED IN SCHEDULING & TRAINING 107.
TI7	2-GANG WALL BOX FOR AV DEVICE CONNECTION.
TI8	4-GANG WALL BOX FOR AV DEVICE CONNECTION.
TI9	PULLBOX "PB-1", SURFACE MOUNTED.

KEY PLAN



US Army Corps of Engineers ®

MARK	DESCRIPTION	DATE
0	READY-TO-ADVERTISE (RTA) SUBMITTAL	JUL 2025

ISSUE DATE: JUL 2025
SOLICITATION NO.: W912725RA001
CONTRACT NO.: W912724C0007
DESIGNED BY: R. LEDO
DRAWN BY: B. SNOOK
CHECKED BY: J. HODGSON
SUBMITTED BY: B. STREEBIN
SIZE: ANSI D
FILE NAME: 165438 AV R22.rvt

US ARMY CORPS OF ENGINEERS
LITTLE ROCK DISTRICT
LITTLE ROCK, ARKANSAS

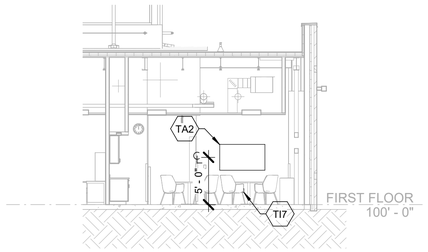
BURNS AND McDONNELL
9400 WARD PARKWAY,
KANSAS CITY, MO 64114
165438

F-35, SPECIAL ACCESS PROGRAM FACILITY
EBBING AIR NATIONAL GUARD BASE (ANGB), FORT SMITH, ARKANSAS

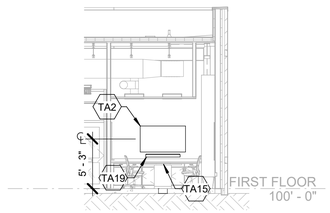
AV BUILDING SECTIONS

SHEET ID
TA301

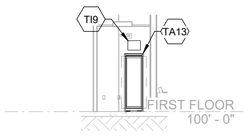
READY-TO-ADVERTISE (RTA) SUBMITTAL



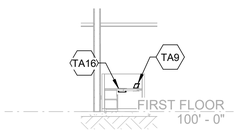
K1 STUDENT COLLAB 213
SCALE: 1/8" = 1'-0"



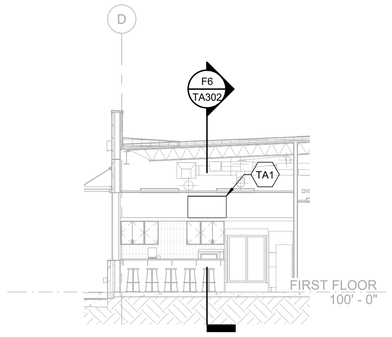
K6 TEAM 241
SCALE: 1/8" = 1'-0"



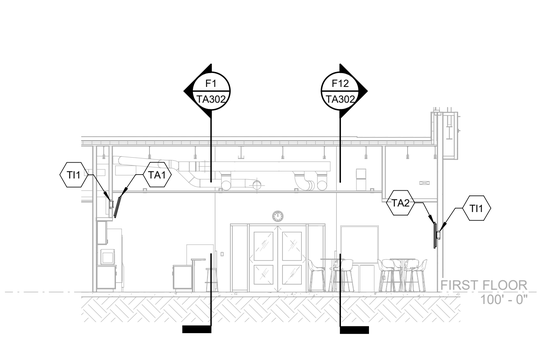
K10 AV 215
SCALE: 1/8" = 1'-0"



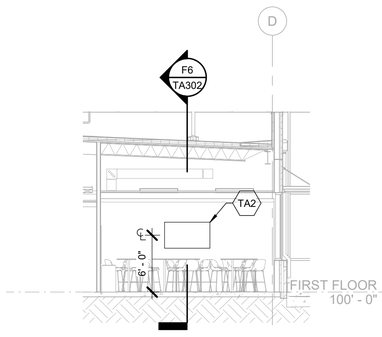
K13 OPERATOR DESK
SCALE: 1/8" = 1'-0"



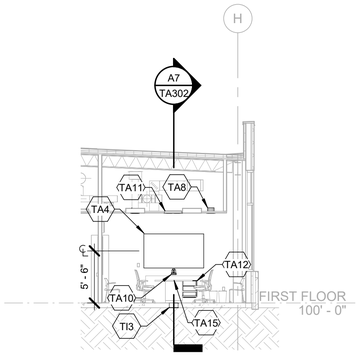
F1 BREAK ROOM 229 (LOOKING WEST)
SCALE: 1/8" = 1'-0"



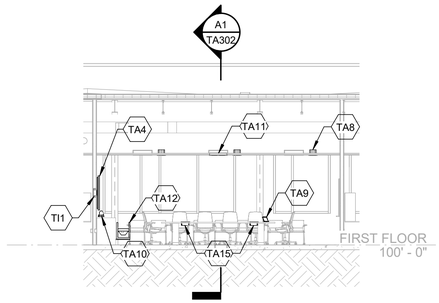
F6 BREAK ROOM 229 (LOOKING NORTH)
SCALE: 1/8" = 1'-0"



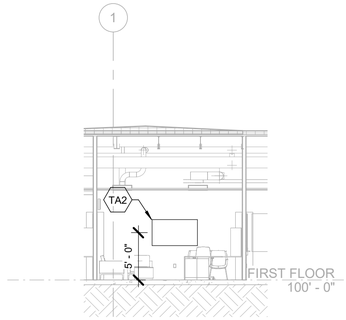
F12 BREAK ROOM 229 (LOOKING EAST)
SCALE: 1/8" = 1'-0"



A1 CONFERENCE RM 205 (LOOKING WEST)
SCALE: 1/8" = 1'-0"



A7 CONFERENCE RM 205 (LOOKING NORTH)
SCALE: 1/8" = 1'-0"

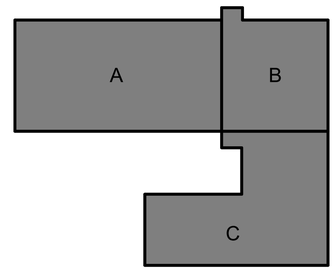


A12 SQUADRON COMMANDER OFFICE
SCALE: 1/8" = 1'-0"

AV EQUIPMENT KEYNOTES

Key Value	Keynote Text
TA1	55-INCH DIAGONAL FLAT PANEL DISPLAY, WALL MOUNTED AT HEIGHT AS INDICATED ON SECTION VIEWS. REFER TO DETAILS A1/TA501 AND A8/TA501.
TA2	65-INCH DIAGONAL FLAT PANEL DISPLAY, WALL MOUNTED AT HEIGHT AS INDICATED ON SECTION VIEWS. REFER TO DETAILS A1/TA501 AND A8/TA501.
TA4	86-INCH DIGAONAL FLAT PANEL DISPLAY, WALL MOUNTED AT HEIGHT AS INDICATED ON SECTION VIEWS. REFER TO DETAILS A1/TA501 AND A8/TA501.
TA8	CEILING LOUDSPEAKER, FLUSH MOUNTED, TYPICAL THIS ROOM. REFER TO DETAIL M1/TA501.
TA9	AV CONTROL TOUCHPANEL AT OPERATOR DESK OR CONFERENCE TABLE.
TA10	PTZ VIDEO CAMERA, MOUNTED ON WALL WITH VIBRATION ISOLATION BRACKET.
TA11	CEILING ARRAY MICROPHONE, TYPICAL THIS ROOM. REFER TO DETAIL M7/TA501.
TA12	MILLWORK EQUIPMENT RACK, INSTALLED IN CABINET OR CREDENZA SHOWN ON INTERIORS PLANS. REFER TO DETAILS H1/TA501 AND H7/TA501.
TA13	FLOORSTANDING EQUIPMENT RACK, HOST ENCLOSURE WTH ROLL-OUT/ROTATING RACK SECTION. REFER TO DETAIL H13/TA501.
TA14	AUDIO SOUNDBAR MOUNTED BELOW DISPLAY(S).
TA15	AV CONNECTION(S) AT CONFERENCE TABLE VIA TABLE BOX (AND FLOOR BOX BELOW). REFER TO ONE-LINE DIAGRAMS.
TA16	AV CONNECTION(S) AT OPERATOR'S DESK VIA TABLE BOX AND WALL BOX. REFER TO ONE-LINE DIAGRAMS.
TA18	VIDEOWALL, 55-INCH TILED LCD TYPE, 3X3 LANDSCAPE CONFIGURATION, WALL MOUNTED AT HEIGHT AS INDICATED.
TA19	VIDEO SOUNDBAR MOUNTED BELOW DISPLAY(S).
TI1	FLAT PANEL BACKBOX, 4 GANG WITH FINISHED COVER, FOR USE WITH STANDARD SIZE DEVICE PLATES, FOR POWER/DATA/AV CONNECTIONS. FLUSH MOUNTED IN WALL AT HEIGHT INDICATED. COORDINATE INSTALLATION WITH ARCHITECTURAL WALL BLOCKING AND ELECTRICAL/DATA CONDUITS.
TI3	MULTI-FUNCTION FLOOR BOX SHARED WITH ELECTRICAL AND TELECOM. REFER TO ELECTRICAL DRAWINGS.
TI4	CONDUIT, SIZE AS INDICATED, TO FLOOR BOX IN SAME ROOM.
TI5	CONDUIT, SIZE AS INDICATED, TO PULLBOX "PB-1" LOCATED IN AV 215.
TI6	CONDUIT, SIZE AS INDICATED, TO AV WALL BOX LOCATED IN SCHEDULING & TRAINING 107.
TI7	2-GANG WALL BOX FOR AV DEVICE CONNECTION.
TI8	4-GANG WALL BOX FOR AV DEVICE CONNECTION.
TI9	PULLBOX "PB-1", SURFACE MOUNTED.

KEY PLAN



US Army Corps of Engineers ®

MARK	DESCRIPTION	DATE
0	READY-TO-ADVERTISE (RTA) SUBMITTAL	JUL 2025

DESIGNED BY: R. LEDO
DRAWN BY: B. SNOOK
CHECKED BY: C. HODGSON
SUBMITTED BY: B. STREEBIN
ISSUE DATE: JUL 2025
SOLICITATION NO.: W9127S25RA001
CONTRACT NO.: W9127S24F0007
FILE NAME: 165438_AV_R22.rvt
SIZE: ANSI D

US ARMY CORPS OF ENGINEERS
LITTLE ROCK DISTRICT
LITTLE ROCK, ARKANSAS

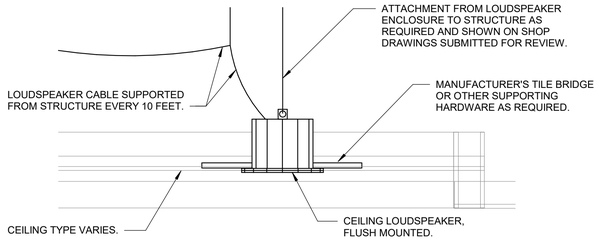
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KANSAS CITY, MO 64114
165438

F-35; SPECIAL ACCESS PROGRAM FACILITY
EBBING AIR NATIONAL GUARD BASE (ANGB), FORT SMITH, ARKANSAS

AV BUILDING SECTIONS

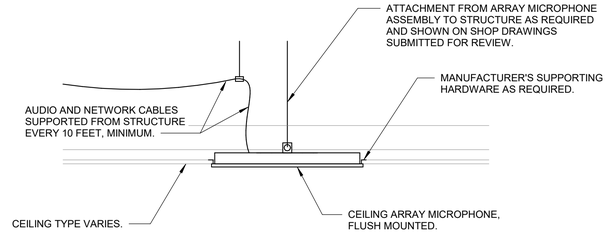
SHEET ID
TA302

READY-TO-ADVERTISE (RTA) SUBMITTAL



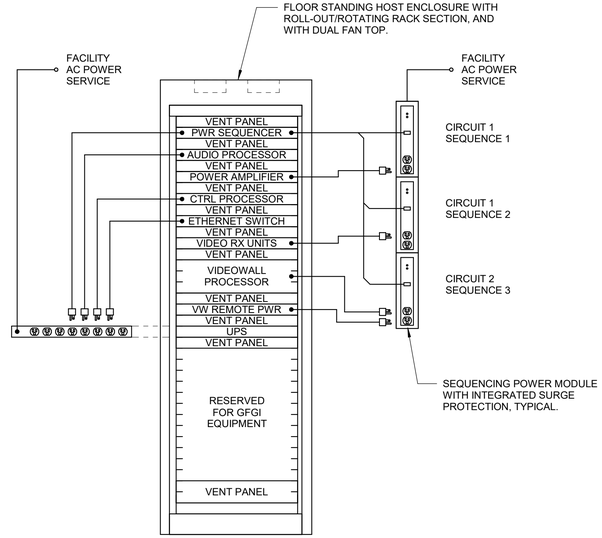
M1 CEILING LOUDSPEAKER MOUNTING DETAIL

SCALE: 1" = 1'-0"



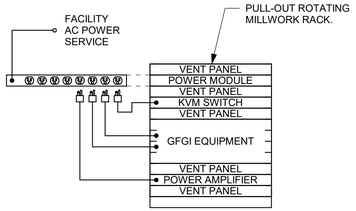
M7 CEILING ARRAY MICROPHONE MOUNTING DETAIL

SCALE: 1" = 1'-0"



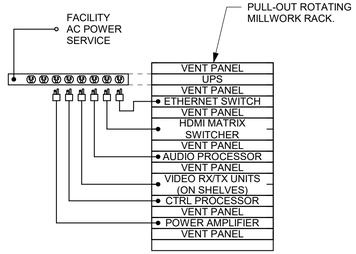
H13 AV 215 EQUIPMENT RACK FRONT PANEL DETAIL

SCALE: 1" = 1'-0"



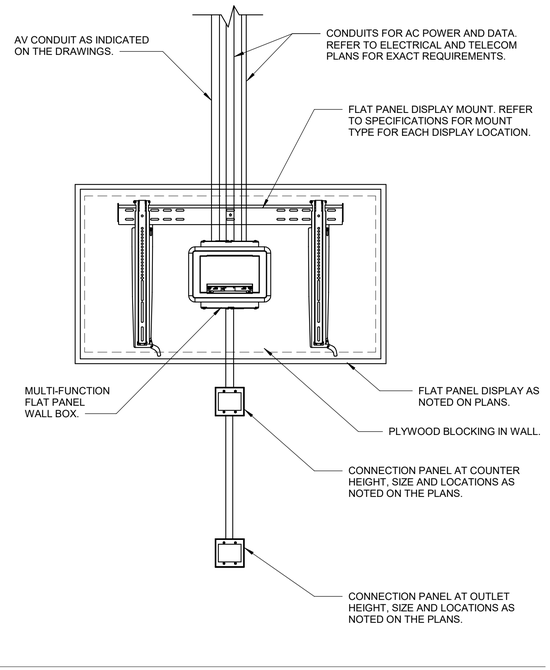
H1 TYPICAL VAULT BRIEFING MILLWORK RACK

SCALE: 1" = 1'-0"



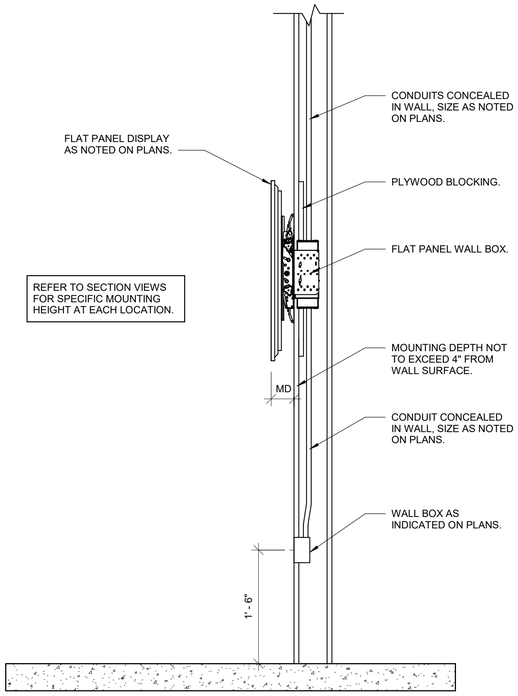
H7 CONF RM 205 MILLWORK RACK

SCALE: 1" = 1'-0"



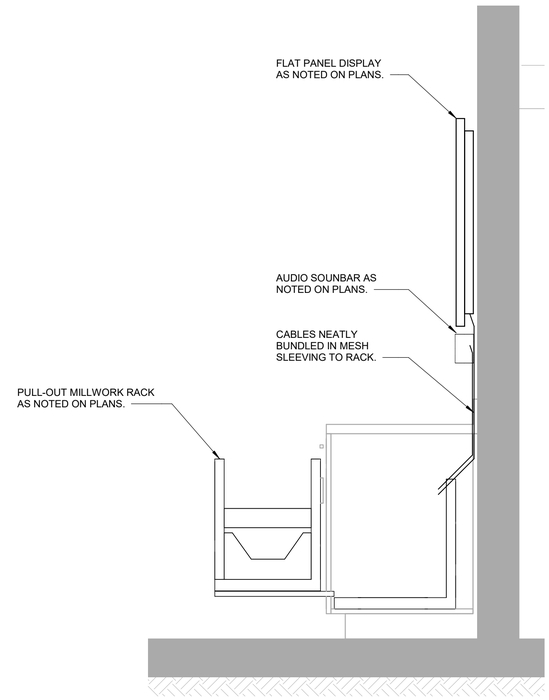
A1 TYPICAL FLAT PLANEL DISPLAY MOUNTING DETAIL ELEVATION

SCALE: 1" = 1'-0"



A8 TYPICAL FLAT PLANEL DISPLAY MOUNTING DETAIL SECTION

SCALE: 1" = 1'-0"



A14 VAULT DISPLAY/SOUNBAR SECTION DETAIL

SCALE: 1" = 1'-0"

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CONTRACT NO.: W912PS24C0007
FILE NAME: 165438_AV_R22.rvt

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LITTLE ROCK, ARKANSAS

BURNS AND McDONNELL
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AV DETAILS

SHEET ID

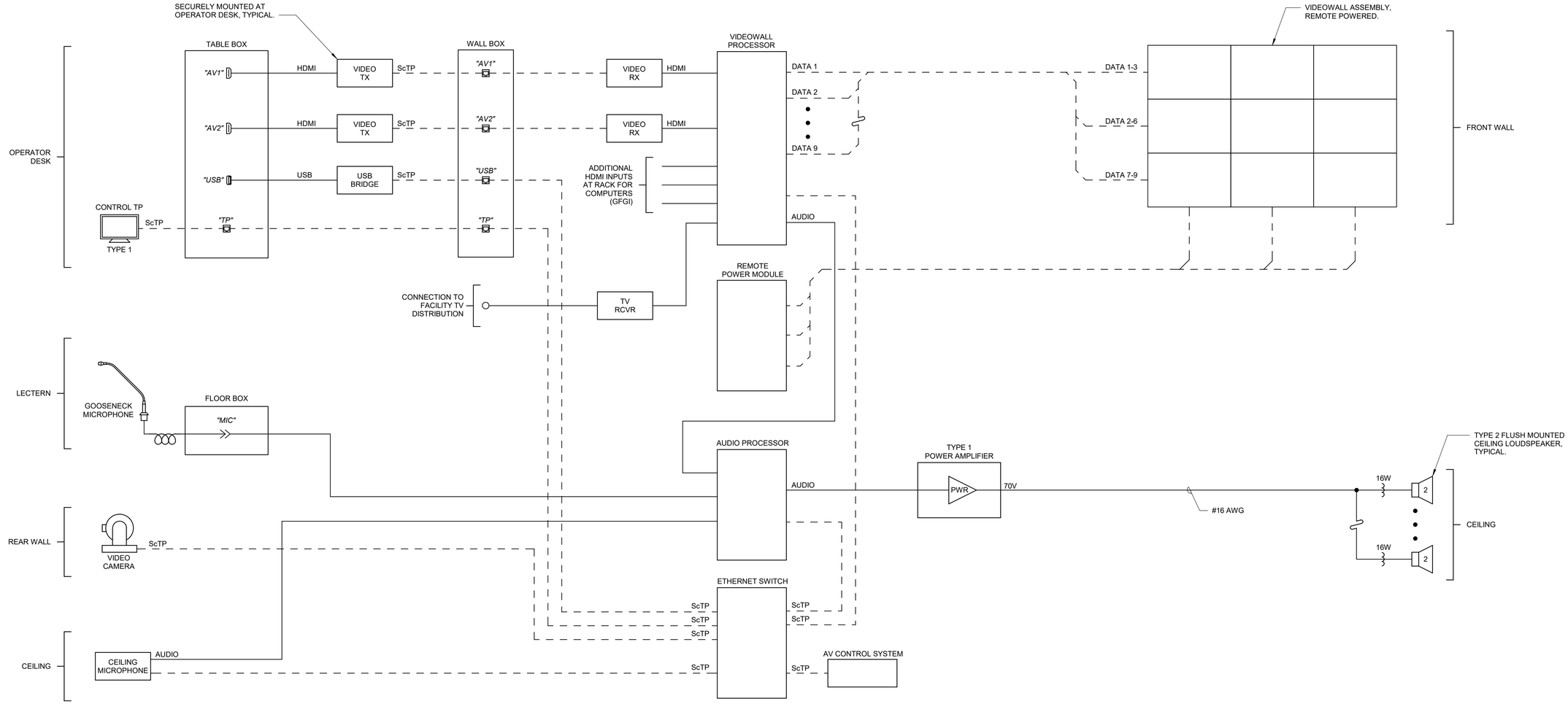
TA501

READY-TO-ADVERTISE (RTA) SUBMITTAL

LARGE BRIEFING ROOM 214 LOCATIONS AS NOTED

AV 215 EQUIPMENT RACK

LARGE BRIEFING ROOM 214 WALL AND CEILING LOCATIONS AS NOTED



A1 ONE-LINE DIAGRAM - LARGE BRIEFING ROOM 214

SCALE: NTS

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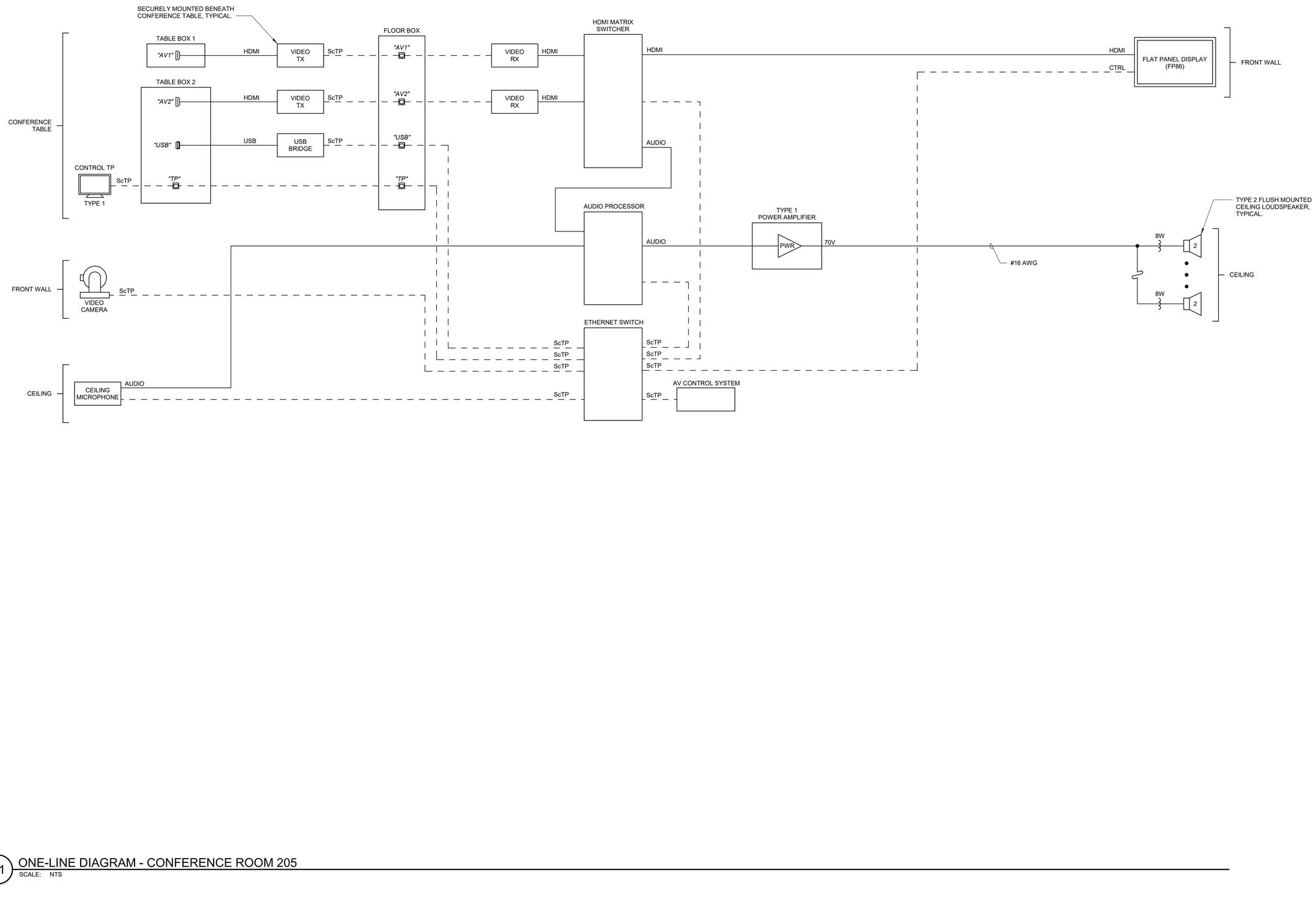
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EBBING AIR NATIONAL GUARD BASE (ANGB), FORT SMITH, ARKANSAS

ONE-LINE DIAGRAM - LARGE BRIEFING ROOM 214

SHEET ID

TA601

READY-TO-ADVERTISE (RTA) SUBMITTAL



A1 ONE-LINE DIAGRAM - CONFERENCE ROOM 205
SCALE: NTS

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LITTLE ROCK DISTRICT
LITTLE ROCK, ARKANSAS

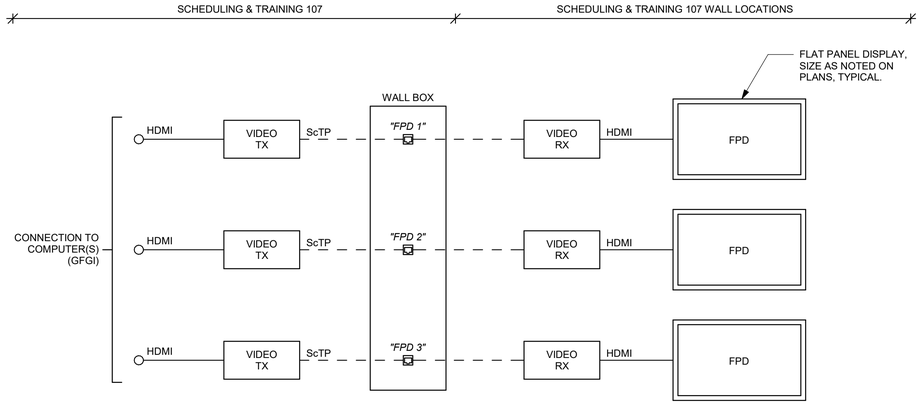
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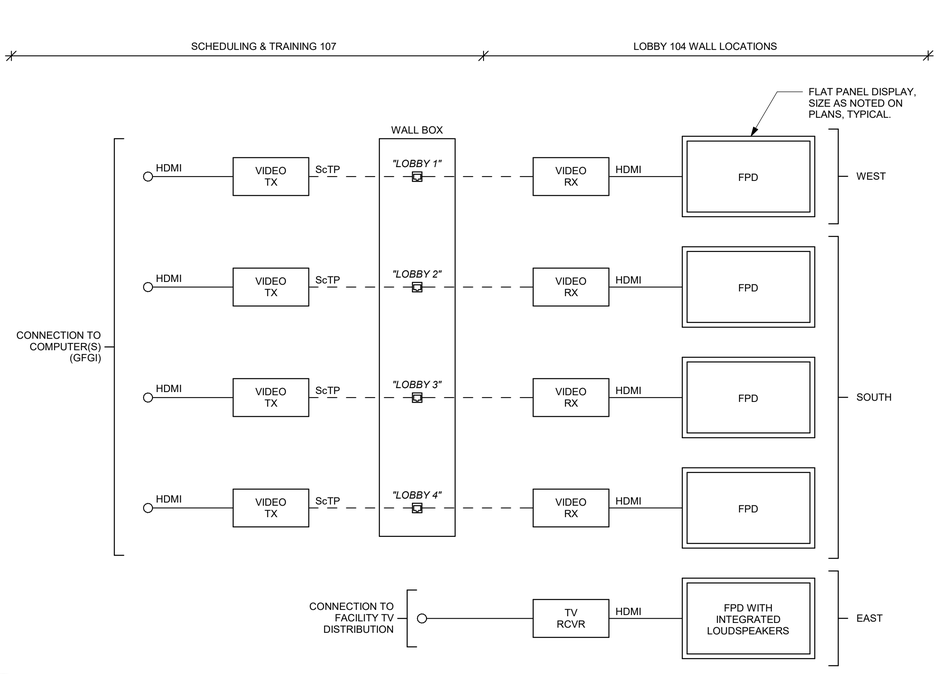
ONE-LINE DIAGRAM - CONFERENCE ROOM 205

SHEET ID
TA602

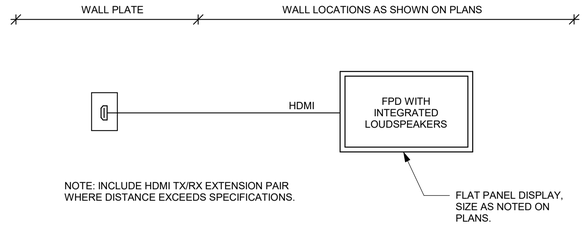
READY-TO-ADVERTISE (RTA) SUBMITTAL



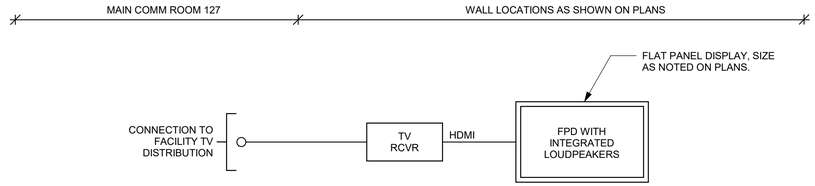
H1 ONE-LINE DIAGRAM - SCHEDULING & TRAINING 107
SCALE: NTS



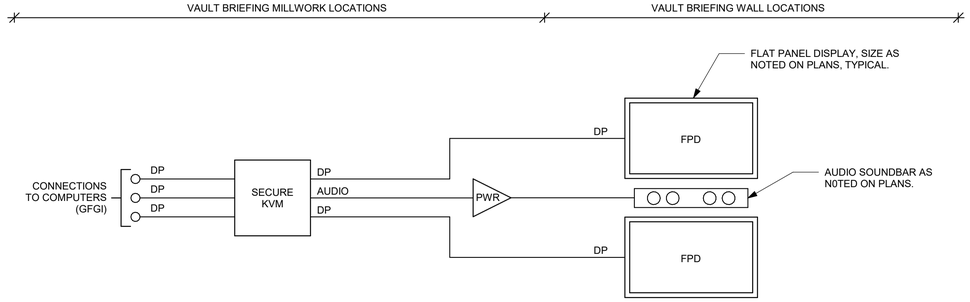
A1 ONE-LINE DIAGRAM - LOBBY 104
SCALE: NTS



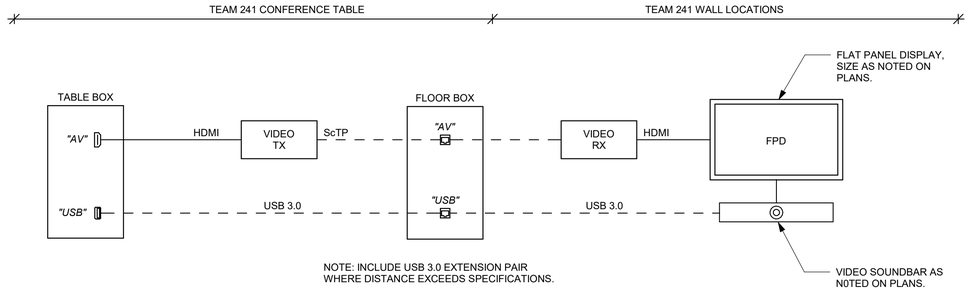
M10 ONE-LINE DIAGRAM - TYPICAL LOCAL INPUT DISPLAY
SCALE: NTS
SQUADRON COMMANDER OFFICE 204, STUDENT COLLAB 213



J10 ONE-LINE DIAGRAM - TYPICAL TV CONNECTION
SCALE: NTS
BREAK ROOM 125, BREAK ROOM 229 (X2)



E10 ONE-LINE DIAGRAM - TYPICAL VAULT BRIEFING
SCALE: NTS
BRIEFING 145, 146, 147, 155, 156, 157, 163, 164, 165



A10 ONE-LINE DIAGRAM - TEAM 241
SCALE: NTS

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US ARMY CORPS OF ENGINEERS
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LITTLE ROCK, ARKANSAS

BURNS AND McDONNELL
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KANSAS CITY, MO 64114
165438

F-35 SPECIAL ACCESS PROGRAM FACILITY
EBBING AIR NATIONAL GUARD BASE (ANGB), FORT SMITH, ARKANSAS

ONE-LINE DIAGRAM - MISCELLANEOUS SYSTEMS

SHEET ID
TA603

READY-TO-ADVERTISE (RTA) SUBMITTAL

ABBREVIATIONS

AC	ABOVE COUNTER
ACS	ACCESS CONTROL SYSTEM
AFF	ABOVE FINISHED FLOOR
ANSI	AMERICAN NATIONAL STANDARDS
AV	AUDIO/VISUAL
AWG	AMERICAN WIRE GAUGE
BAS	BUILDING AUTOMATION SYSTEM
BBC	BACKBONE BONDING CONDUCTOR
BICSI	BUILDING INDUSTRY CONSULTANTS SERVICE INTERNATIONAL
BMS	BALANCED MAGNETIC SWITCH -OR- BUILDING MANAGMENT SYSTEM
C	CONDUIT
CAT	CATEGORY (E.G. CAT6)
CATV	CABLE TELEVISION
CCTV	CLOSED CIRCUIT TELEVISION
CFCI	CONTRACTOR FURNISHED, CONTRACTOR INSTALLED
CL	CENTERLINE
COMM	TELECOMMUNICATIONS
COR	CONTRACTING OFFICER'S REPRESENTATIVE
CPP	COPPER PATCH PANEL
CRAC	COMPUTER ROOM AIR CONDITIONING UNIT
CT	CABLE TRAY
DC	DIRECT CURRENT
EGC	EQUIPMENT GROUNDING CONDUCTOR
ELEV	ELEVATOR
EMI	ELECTROMAGNETIC INTERFERENCE
EMT	ELECTRICAL METALLIC TUBING
EPO	EMERGENCY POWER OFF
ESS	ELECTRONIC SECURITY SYSTEMS
EXP	EXPLOSION PROOF
FB	FLOORBOX
FO	FIBER OPTIC
FPD	FLAT PANEL DISPLAY
FPP	FIBER OPTIC PATCH PANEL
FT	FEET OR FOOT
G	GROUND
GFGI	GOVERNMENT FURNISHED, GOVERNMENT INSTALLED
GND	GROUND
GRS	GALVANIZED RIGID STEEL CONDUIT
GYP	GYPSUM WALLBOARD
HCM	HORIZONTAL CABLE MANAGER
HZ	HERTZ
IDS	INTRUSION DETECTION SYSTEM
IP	INTERNET PROTOCOL
K	KILO
KCMIL	THOUSAND CIRCULAR MILS
LAN	LOCAL AREA NETWORK
LED	LIGHT EMITTING DIODE
MAX	MAXIMUM
MH	MAINTENANCE HOLE
MHZ	MEGAHERTZ
MM	MULTI-MODE
MN/PA	MASS NOTIFICIATION / PUBLIC ADDRESS
MPOE	MAIN POINT OF ENTRY
NC	NORMALLY CLOSED
NO	NORMALLY OPEN
NEC	NATIONAL ELECTRIC CODE
NEMA	NATIONAL ELECTRICAL MANUFACTURERS ASSOCIATION
NIC	NOT IN CONTRACT
NTS	NOT TO SCALE
OC	ON CENTER
OD	OUTSIDE DIAMETER
OH	OVERHEAD
OSP	OUTSIDE PLANT
OTDR	OPTICAL TIME DOMAIN REFLECTOMETRY
PA	PUBLIC ANNOUNCEMENT AND PAGING
PBB	PRIMARY BONDING BUSBAR
PDU	POWER DISTRIBUTION UNIT
PET	PROTECTED ENTRANCE TERMINAL
POE	POWER OVER ETHERNET
PTZ	PAN, TILT, ZOOM
RBB	RACK BONDING BUSBAR
RBC	RACK BONDING CONDUCTOR
RGS	RIGID GALVANIZED STEEL CONDUIT
RMS	ROOT MEAN SQUARE
SBB	SECONDARY BONDING BUSBAR
SBC	SECONDARY BONDING CONDUCTOR
SCCR	SHORT CIRCUIT CURRENT RATING
SJB	SECURITY JUNCTION BOX
SM	SINGLE-MODE
SPECS	SPECIFICATIONS
STI	SPEECH TRANSMISSION INDEX
STP	SHIELDED TWISTED PAIR
STR	STRAND
SYM	SYMMETRICAL
TBB	TELECOMMUNICATIONS BONDING BACKBONE
TBC	TELECOMMUNICATIONS BONDING CONDUCTOR
TDR	TIME DOMAIN REFLECTOMETRY
TEBC	TELECOMMUNICATIONS EQUIPMENT BONDING CONDUCTOR
TIA	TELECOMMUNICATIONS INDUSTRY ASSOCIATION
TYP	TYPICAL
UBC	UNIT BONDING CONDUCTOR
UG	UNDERGROUND
UL	UNDERWRITERS' LABORATORIES
UM	MICROMETER
UON	UNLESS OTHERWISE NOTED
UPS	UNINTERRUPTIBLE POWER SUPPLY
UTP	UNSHIELDED TWISTED PAIR
V	VOLTS
VA	VOLT AMPERES
VAC	VOLTS, ALTERNATING CURRENT
VOIP	VOICE OVER INTERNET PROTOCOL
VSS	VIDEO SURVEILLANCE SYSTEM
VTC	VIDEO TELECONFERENCE
W	WATT
WAO	WORK AREA OUTLET
WP	WALLPHONE -OR- WEATHERPROOF
XFMR	TRANSFORMER
Z	IMPEDANCE

SYMBOLS - ONE-LINE

WIRING RACEWAY TYPES

- EXPOSED CONDUIT - SINGLE LINE
- CONCEALED CONDUIT - SINGLE LINE
- CONDUIT ROUTED VERTICALLY

OUTLETS

- SEE SCHEDULE AND DETAILS ON TN500 SERIES SHEETS FOR COMMUNICATION OUTLET INFORMATION

▼1 COMMUNICATION OUTLET MOUNTED 18" AFF UON.

COMMUNICATIONS GENERAL INFORMATION

▼1 (OR) ▮1

FACEPLATE TYPE (REFER TO COMM DETAILS ON TN500 SERIES SHEETS FOR FACEPLATE TYPE DESCRIPTIONS)

OUTLETS WITH ELECTRICAL RECEPTACLES

- SEE COMMUNICATIONS OUTLET DETAILS FOR POWER AND COMMUNICATIONS REQUIREMENTS

CEILING MOUNTED

▮1 FLOORBOX RECESSED POWER/COMM

CABLE TRAY

TELECOMMUNICATIONS WIRE BASKET CABLE TRAY, 12" WIDE X 4" DEEP, UON, MOUNTING HEIGHT AS INDICATED ON SHEETS - COMPLY WITH TIA-607-D GROUNDING AND BONDING REQUIREMENTS

TELECOMMUNICATION LADDER STYLE CABLE RUNWAY, SIZE AND MOUNTING HEIGHT AS INDICATED ON SHEETS - COMPLY WITH TIA-607-D GROUNDING AND BONDING REQUIREMENTS

COMM ROOM EQUIPMENT

COMMUNICATIONS RACK

COMMUNICATIONS CABINET

TELECOMMUNICATIONS PRIMARY BONDING BUSBAR (PBB) OR SECONDARY BONDING BUSBAR (SBB)
- SEE DETAIL D5 ON SHEET [EG503] FOR PBB
- SEE DETAIL A5 ON SHEET [EG503] FOR SBB

FIRE RATED PLYWOOD BACKBOARD ALONG WALL AS SHOWN ON PLANS. PAINTING NOT REQUIRED.

CONDUIT INTO ROOM FROM FLOOR BELOW
- 4" UON
- PROVIDE PROTECTIVE BUSHING AT BOTH ENDS

COMMUNICATIONS DEVICES

- (J) JUNCTION BOX, CEILING
- JUNCTION BOX, WALL
- (S) 8" ROUND CEILING LOUDSPEAKER
- (H) WALL MOUNT HORN LOUDSPEAKER

SYMBOLS - MODIFIERS

AC	ABOVE COUNTER MOUNTING
FPD	FLAT PANEL DISPLAY
PROJ	PROJECTOR
SB	SMART BOARD
TV	TELEVISION
XX" AFF	MOUNT XX" AFF TO CENTER OF DEVICE
XX"W X X"D	WIDTH AND DEPTH OF CABLE TRAY

LEGEND NOTES

1. SYMBOL ORIENTATION DOES NOT IMPLY DEVICE OR EQUIPMENT ORIENTATION, UON.
2. SYMBOL SIZE DOES NOT IMPLY EQUIPMENT SIZE, UON.
3. MOUNTING HEIGHT INDICATED IN LEGEND AND ON THE SHEETS MUST BE THE DISTANCE MEASURED FROM THE CENTER OF THE DEVICE TO THE FINISHED FLOOR.
4. NOT ALL SYMBOLS ON THIS SHEET ARE USED AS PART OF THIS PROJECT.

GENERAL NOTES - INSIDE PLANT

1. BACKBONE CABLING MUST NOT BE INSTALLED USING J-HOOKS UNLESS OTHERWISE NOTED.
2. HORIZONTAL CABLING THROUGHOUT THE FACILITY MUST NOT EXCEED 295 FEET IN CABLE LENGTH PER TIA GUIDELINES. ROUTE PATHWAYS AND CABLES TO ENSURE THIS DISTANCE IS NOT EXCEEDED. NOTIFY COR PRIOR TO PATHWAY AND CABLE INSTALLATION IF THERE ARE AREAS WHERE THE EXPECTED CABLE LENGTH MAY BE IN EXCESS OF 295 FEET.
3. HORIZONTAL CABLING SERVING WALL MOUNTED TELECOMMUNICATIONS OUTLETS WALLS MUST BE ROUTED FROM TELECOMMUNICATIONS OUTLET IN MINIMUM OF 1" CONDUIT FROM EACH TELECOMMUNICATIONS OUTLET TO AREA CABLE TRAY, AND IN AREA CABLE TRAY TO DESIGNATED TELECOMMUNICATIONS ROOM.
4. ALL CONDUITS MUST BE CONCEALED UNLESS OTHERWISE NOTED ON PLAN. CONDUITS INSTALLED IN SPACES WITH CONCRETE WALLS. CMU WALLS OR SECURE WALLS AS INDICATED ON G-100 SERIES SHEETS MUST BE SURFACE MOUNTED AND PAINTED TO MATCH WALL FINISH. SEE ARCHITECTURAL SHEETS FOR WALL FINISHES.
5. ALL CABLING MUST BE LABELED IN ACCORDANCE WITH TIA-606-C.
6. USE WIDE BEND RADIUS CONDUITS FOR ALL CONDUITS CONTAINING TELECOMMUNICATIONS CABLING TO FACILITATE CABLE PULLING.
7. ALL TELECOMMUNICATION EQUIPMENT AND OUTLET INSTALLATION LOCATIONS MUST BE COORDINATED WITH FURNITURE INSTALLATION.
8. ALL PENETRATIONS IN WALLS, INCLUDING FIRE-RATED WALLS, MUST CONFORM TO THE ARCHITECTURAL PENETRATION DETAILS ON ARCHITECTURAL SHEETS.
9. ALL PENETRATIONS IN SECURE WALLS AND TEMPEST WALLS MUST CONFORM TO THE RF SHIELDING AND PENETRATION DETAILS INDICATED ON THE GC SERIES SHEETS.
10. PROVIDE CONDUITS, BACKBOXES, AND PULL-STRINGS FOR GFGI EQUIPMENT. COORDINATE FINAL LOCATIONS OF GFGI EQUIPMENT WITH THE COR PRIOR TO SUBMITTING CONDUIT AND BACKBOX LOCATION SHOP DRAWINGS FOR GOVERNMENT REVIEW.
11. MAINTAIN 12-INCHES CLEAR SPACE ABOVE CABLE TRAYS AND PROVIDE HORIZONTAL ACCESS TO CABLE TRAYS. BOTTOM OF TRAYS MUST BE MOUNTED 3" MINIMUM ABOVE DROP CEILINGS TO ALLOW ROOM FOR REMOVAL AND REPLACEMENT OF CEILING TILES.
12. ALL BACKBONE CABLE RUNS MUST HAVE 10' MAINTENANCE LOOPS AT BOTH ENDS. ALL HORIZONTAL CABLE RUNS MUST HAVE 10' MAINTENANCE LOOPS AT THE TELECOMMUNICATION ROOM END.
13. INSTALL TELECOMMUNICATIONS PULL BOXES IN STRAIGHT SECTIONS OF CONDUIT. DO NOT USE BOXES IN LIEU OF SWEEPING BENDS. PROVIDE BOXES WHEN:
    A. RACEWAY SECTION INCLUDES MORE THAN 180 DEGREES OF BENDS.
    B. LENGTH OF RACEWAY SECTION IS GREATER THAN 100 FEET.
14. EQUIPMENT AND UTILITIES, SUCH AS BUT NOT LIMITED TO PIPING AND DUCTWORK, NOT RELATED TO THE SUPPORT OF A TELECOMMUNICATIONS SPACE SHALL NOT BE INSTALLED IN, PASS THROUGH, OR ENTER THE SPACE.
15. SEE GJ & TY SHEETS FOR SECURE AREA AND TEMPEST BOUNDARIES AND REQUIREMENTS OF PENETRATIONS THROUGH THESE BOUNDARIES. CONSTRUCTION FOR SECURE AREAS, SECURE AREA MATERIALS AND COMPONENTS MUST COMPLY WITH UFC 4-010-05 AND IC TECH SPECS FOR ICD/ICS 705, AND FULLY MEET AND PASS ALL ACCREDITATION. COORDINATE WITH CONTRACTING OFFICER DURING CONSTRUCTION OF SECURE AREAS.

GENERAL NOTES - OUTSIDE PLANT

1. REFER TO CIVIL DRAWINGS FOR COORDINATION OF SITE WORK WITH OTHER DISCIPLINES.
2. REFER TO ELECTRICAL SITE DRAWINGS FOR TELECOMM. OSP WORK.
3. ALL UTILITY OUTAGES MUST BE COORDINATED THROUGH COR. OUTAGES MUST BE KEPT TO A MINIMUM AND MUST BE LIMITED TO AFTER HOURS AND WEEKENDS. ANY OUTAGES REQUIRING A WEEKDAY AND/OR EXTENDED OUTAGES GREATER THAN AFTER HOURS AND WEEKENDS MUST BE SCHEDULED 4 WEEKS IN ADVANCE AND ARE SUBJECT TO COR APPROVAL/DISAPPROVAL. REFER TO DIVISION 01 SPECIFICATIONS FOR ADDITIONAL INFORMATION.
4. PROVIDE CABLE INSTALLATION PLAN IN ACCORDANCE WITH 33 82 00. COORDINATE ALL CABLE CUT-OVERS WITH COR AND 188TH CS PRIOR TO FINALIZING INSTALLATION PLAN FOR SUBMITTAL.
5. ALL UTILITIES ARE NOT INDICATED ON THIS DRAWING. THE SUCCESSFUL CONTRACTOR WILL BE PROVIDED BASE UTILITY/GIS DRAWINGS OF ALL AFFECTED AREAS UPON CONTRACT AWARD. COORDINATE NEW DUCTBANK WITH ALL EXISTING UTILITIES.
6. ROUTING SHOWN IS DIAGRAMMATIC. ROUTE CONDUITS TO AVOID STRUCTURES AND ALL OTHER UTILITIES.
7. FIELD-CHECK ALL EXISTING CONDITIONS AND BE THOROUGHLY FAMILIAR WITH THE SITE BEFORE ANY WORK COMMENCES. ANY DISCREPANCIES IN THE DRAWINGS MUST BE IMMEDIATELY REPORTED TO THE COR BEFORE ANY FURTHER WORK COMMENCES.
8. THIS PROJECT REQUIRES UNDERGROUND WORK INCLUDING A PORTION OF THE WORK BEING PERFORMED IN EXISTING ROADWAYS AND PAVEMENTS. REPAIR ALL EXISTING ROADWAYS AND PAVEMENTS TO MATCH EXISTING.
9. THE UNDERGROUND WORK FOR THIS PROJECT REQUIRES CLOSE COORDINATION WITH EXISTING UTILITIES. VERIFY AND COORDINATE ALL WORK WITH ALL EXISTING UTILITIES, EXISTING EQUIPMENT, AND EXISTING CONDITIONS.
10. PRIOR TO DIGGING, OBTAIN ALL APPLICABLE DIGGING PERMITS. ALL UNDERGROUND UTILITIES IN THE WORK AREA MUST BE POSITIVELY IDENTIFIED BY A PRIVATE UTILITY LOCATING SERVICE IN ADDITION TO APPLICABLE BASE LOCATING SERVICE AND COORDINATED WITH THE BASE UTILITY DEPARTMENT. ALL MARKINGS MADE DURING THE UTILITY INVESTIGATION MUST BE MAINTAINED THROUGHOUT THE CONTRACT.
11. PHYSICALLY VERIFY UNDERGROUND UTILITY LOCATIONS BY HAND DIGGING AND/OR POT-HOLING USING WOOD OR FIBERGLASS HANDLED TOOLS WHEN ANY ADJACENT CONSTRUCTION WORK IS EXPECTED TO COME WITHIN THREE FEET OF THE UNDERGROUND SYSTEM. DIGGING WITHIN 2 FEET OF A KNOWN UTILITY MUST NOT BE PERFORMED BY MEANS OF MECHANICAL EQUIPMENT; HAND DIGGING MUST BE USED. IF CONSTRUCTION IS PARALLEL TO AN EXISTING UTILITY EXPOSE THE UTILITY BY HAND DIGGING EVERY 100 FEET IF PARALLEL WITHIN 5 FEET OF THE EXCAVATION.

REGISTERED COMMUNICATIONS DISTRIBUTION DESIGNER
WILLIAM J SCHWEITZER
BICSI ID# 111997
EXPIRES 12-31-25
RCDD
07/23/2025

US Army Corps of Engineers ®

MARK	DESCRIPTION	DATE
0	READY-TO-ADVERTISE (RTA) SUBMITTAL	JUL 2025

DESIGNED BY: W. SCHWEITZER
DRAWN BY: S. YUNKER
CHECKED BY: C. STRATTON
SUBMITTED BY: B. STREEBIN
ISSUE DATE: JUL 2025
SOLICITATION NO.: W912T525RA001
CONTRACT NO.: W912T524F0007
SIZE: ANSI D
FILE NAME:

US ARMY CORPS OF ENGINEERS
LITTLE ROCK DISTRICT
LITTLE ROCK, ARKANSAS

BURNS AND McDONNELL
9400 WARD PARKWAY,
KANSAS CITY, MO 64114
165438

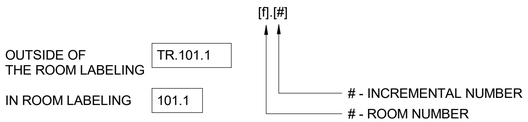
F-35; SPECIAL ACCESS PROGRAM FACILITY
EBBING AIR NATIONAL GUARD BASE (ANGB), FORT SMITH, ARKANSAS

TELECOMMUNICATIONS LEGEND

SHEET ID

TN001

READY-TO-ADVERTISE (RTA) SUBMITTAL

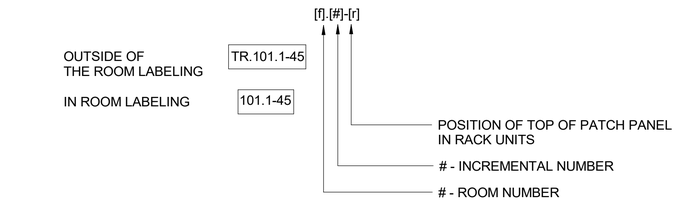


NOTES:

1. RACK/CABINET IDENTIFIER MUST BE LABELED ON THE FRONT AND REAR IN PLAIN SIGHT PREFERABLY CENTERED ON RACK/CABINET.
2. TEXT MUST BE EASILY READ WITH UPPER CASE LETTERING AND THE LABEL COLOR MUST CONTRAST WITH THE COLOR OF THE PIECE OF EQUIPMENT.

L5 RACK/CABINET IDENTIFIER

SCALE: NTS

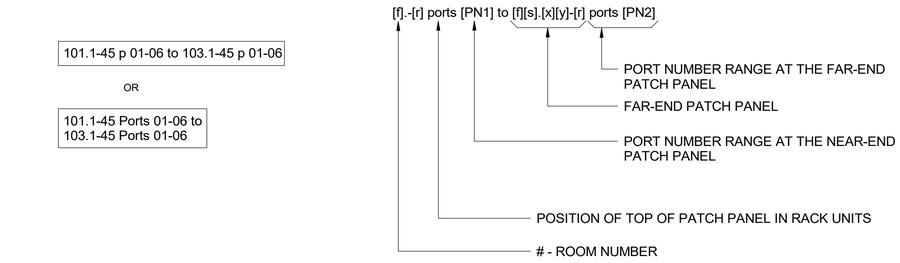


NOTES:

1. ALTHOUGH THE PATCH PANELS OCCUPY MULTIPLE RACK UNIT POSITIONS, EACH PATCH PANEL IS IDENTIFIED BY THE RACK UNIT POSITION OF THE TOP OF THE PATCH PANEL.
2. TEXT MUST BE EASILY READ WITH UPPER CASE LETTERING AND THE LABEL COLOR MUST CONTRAST WITH THE COLOR OF THE PIECE OF EQUIPMENT.

L11 PATCH PANEL IDENTIFIER

SCALE: NTS

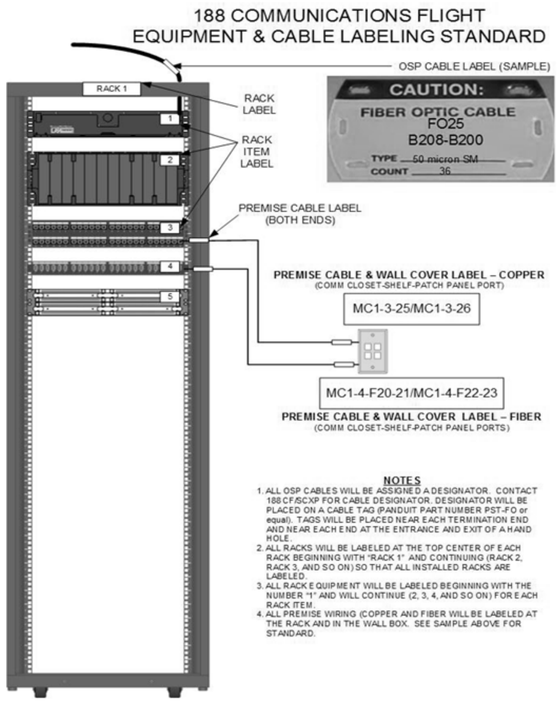


NOTES:

1. "PORTS" CAN BE LABELED AS EITHER "p" OR THE ENTIRE WORD "ports" AS SPACE PERMITS.
2. PATCH PANEL LABELS MAY INCLUDE ADDITIONAL INFORMATION SUCH AS CABLE TYPE, SUB-PANEL NAME, NEAR-END TELECOMMUNICATIONS SPACE NAME, AND FAR-END TELECOMMUNICATIONS SPACE NAME.
3. TEXT MUST BE EASILY READ WITH UPPER CASE LETTERING AND THE LABEL COLOR MUST CONTRAST WITH THE COLOR OF THE PIECE OF EQUIPMENT.

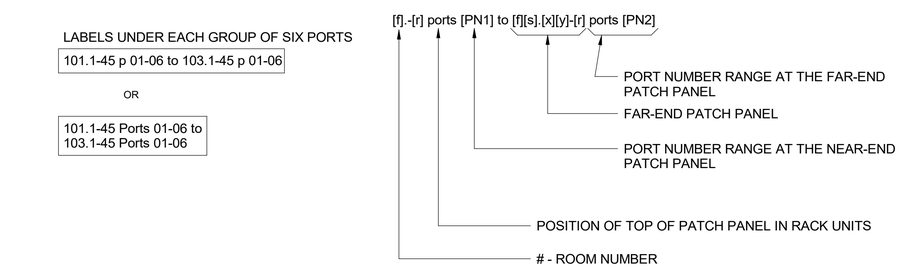
F11 FIBER PATCH PANEL PORT IDENTIFIER

SCALE: NTS



A5 RACK/CABINET ID DETAIL

SCALE: NTS



NOTES:

1. "PORTS" CAN BE LABELED AS EITHER "p" OR THE ENTIRE WORD "ports" AS SPACE PERMITS.
2. PATCH PANEL LABELS MAY INCLUDE ADDITIONAL INFORMATION SUCH AS CABLE TYPE, SUB-PANEL NAME, NEAR-END TELECOMMUNICATIONS SPACE NAME, AND FAR-END TELECOMMUNICATIONS SPACE NAME.
3. TEXT MUST BE EASILY READ WITH UPPER CASE LETTERING AND THE LABEL COLOR MUST CONTRAST WITH THE COLOR OF THE PIECE OF EQUIPMENT.

A11 UTP/STP PATCH PANEL PORT IDENTIFIER

SCALE: NTS



US Army Corps of Engineers ®

MARK	DESCRIPTION	DATE
0	READY-TO-ADV/ERTISE (RTA) SUBMITTAL	JUL 2025

DESIGNED BY: W. SCHWEITZER
DRAWN BY: S. YUNKER
CHECKED BY: S. PETERSON
SUBMITTED BY: B. STREEBIN
SIZE: ANSI D
ISSUE DATE: JUL 2025
SOLICITATION NO.: W912T525RA001
CONTRACT NO.: W912T524F0007
FILE NAME:

US ARMY CORPS OF ENGINEERS
LITTLE ROCK DISTRICT
LITTLE ROCK, ARKANSAS

BURNS AND McDONNELL
9400 WARD PARKWAY,
KANSAS CITY, MO 64114
165438

F-35: SPECIAL ACCESS PROGRAM FACILITY
EBBING AIR NATIONAL GUARD BASE (ANGB), FORT SMITH, ARKANSAS

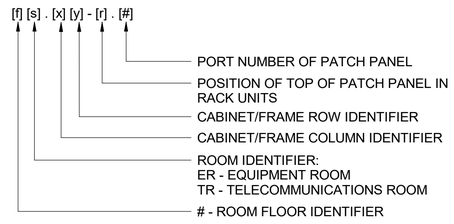
TELECOMMUNICATIONS LEGEND

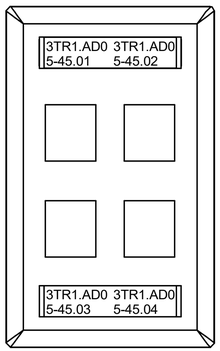
SHEET ID

TN002

READY-TO-ADVERTISE (RTA) SUBMITTAL

OUTLET PORT IDENTIFIER
3TR1.AD05-45.01



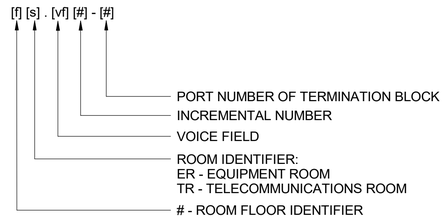


NOTES:

1. TEXT MUST BE EASILY READ WITH UPPER CASE LETTERING AND THE LABEL COLOR MUST CONTRAST WITH THE COLOR OF THE PIECE OF EQUIPMENT.

K11 TYPICAL OUTLET PORT IDENTIFIER
SCALE: NTS

TERMINATION BLOCK IDENTIFIER
3ER1.VF1-001



NOTES:

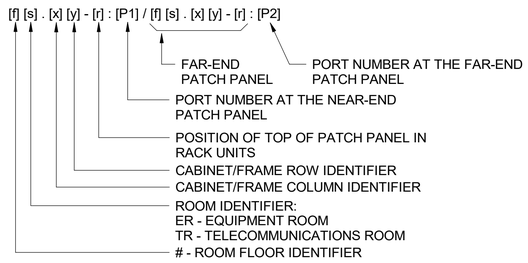
1. TEXT MUST BE EASILY READ WITH UPPER CASE LETTERING AND THE LABEL COLOR MUST CONTRAST WITH THE COLOR OF THE PIECE OF EQUIPMENT.

F11 TYPICAL TERMINATION BLOCK IDENTIFIER
SCALE: NTS

CABLE IDENTIFIER
AD05-45:01 / AG03-45:01

OR

AD05-45:01-06 / AG03-45:01-06

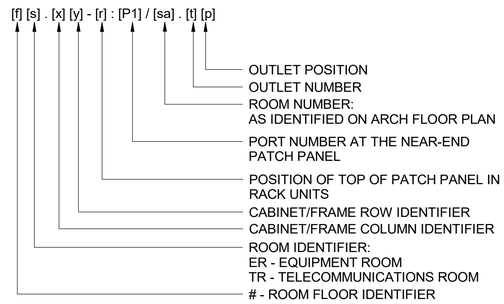


NOTES:

1. ROOM IDENTIFIER CAN BE OMITTED WHEN THE ROOM NAME IS OBVIOUS TO SOMEONE IN THE ROOM.
2. "PORTS" CAN BE LABELED AS EITHER "p" OR THE ENTIRE WORD "ports" AS SPACE PERMITS.
3. PATCH PANEL LABELS MAY INCLUDE ADDITIONAL INFORMATION SUCH AS CABLE TYPE, SUB-PANEL NAME, NEAR-END TELECOMMUNICATIONS SPACE NAME, AND FAR-END TELECOMMUNICATIONS SPACE NAME.
4. TEXT MUST BE EASILY READ WITH UPPER CASE LETTERING AND THE LABEL COLOR MUST CONTRAST WITH THE COLOR OF THE PIECE OF EQUIPMENT.

A2 TYPICAL CABLE IDENTIFIER - PATCH PANEL TO PATCH PANEL
SCALE: NTS

CABLE IDENTIFIER
AD05-45:01 / H101.01.D



NOTES:

1. ROOM IDENTIFIER CAN BE OMITTED WHEN THE ROOM NAME IS OBVIOUS TO SOMEONE IN THE ROOM.
2. "PORTS" CAN BE LABELED AS EITHER "p" OR THE ENTIRE WORD "ports" AS SPACE PERMITS.
3. PATCH PANEL LABELS MAY INCLUDE ADDITIONAL INFORMATION SUCH AS CABLE TYPE, SUB-PANEL NAME, NEAR-END TELECOMMUNICATIONS SPACE NAME, AND FAR-END TELECOMMUNICATIONS SPACE NAME.
4. TEXT MUST BE EASILY READ WITH UPPER CASE LETTERING AND THE LABEL COLOR MUST CONTRAST WITH THE COLOR OF THE PIECE OF EQUIPMENT.

A11 TYPICAL CABLE IDENTIFIER - PATCH PANEL TO OUTLET
SCALE: NTS

REGISTERED COMMUNICATIONS DISTRIBUTION DESIGNER
WILLIAM J SCHWEITZER
BICSI ID# 111997
EXPIRES 12-31-25
RCDD
07/23/2025

US Army Corps of Engineers ®

MARK	DESCRIPTION	DATE
0	READY-TO-ADVERTISE (RTA) SUBMITTAL	JUL 2025

DESIGNED BY: W. SCHWEITZER
DRAWN BY: S. YUNKER
CHECKED BY: C. STRATTON
SUBMITTED BY: B. STREEBIN
SIZE: ANSI D
ISSUE DATE: JUL 2025
SOLICITATION NO.: W9127S25RA001
CONTRACT NO.: W912DQ24F0007
FILE NAME:

US ARMY CORPS OF ENGINEERS
LITTLE ROCK DISTRICT
LITTLE ROCK, ARKANSAS

BURNS AND McDONNELL
9400 WARD PARKWAY,
KANSAS CITY, MO 64114
165438

F-35, SPECIAL ACCESS PROGRAM FACILITY
EBBING AIR NATIONAL GUARD BASE (ANGB), FORT SMITH, ARKANSAS

TELECOMMUNICATIONS LEGEND

SHEET ID
TN003

READY-TO-ADVERTISE (RTA) SUBMITTAL

ROOM SCHEDULE	
NAME	NUMBER
VESTIBULE	101
CORRIDOR	102
VESTIBULE	103
LOBBY	104
STEP DESK	105
CORRIDOR	106
SCHEDULING & TRAINING	107
DO	108
SARM	109
SARM ADMIN	110
STAN / EVAL	111
AFE MAINTENANCE	112
HELMET ALIGNMENT	113
LIFE SUPPORT	114
MAINTENANCE OFFICE	115
PILOT LOCKER ROOM	116
SHOWER	117

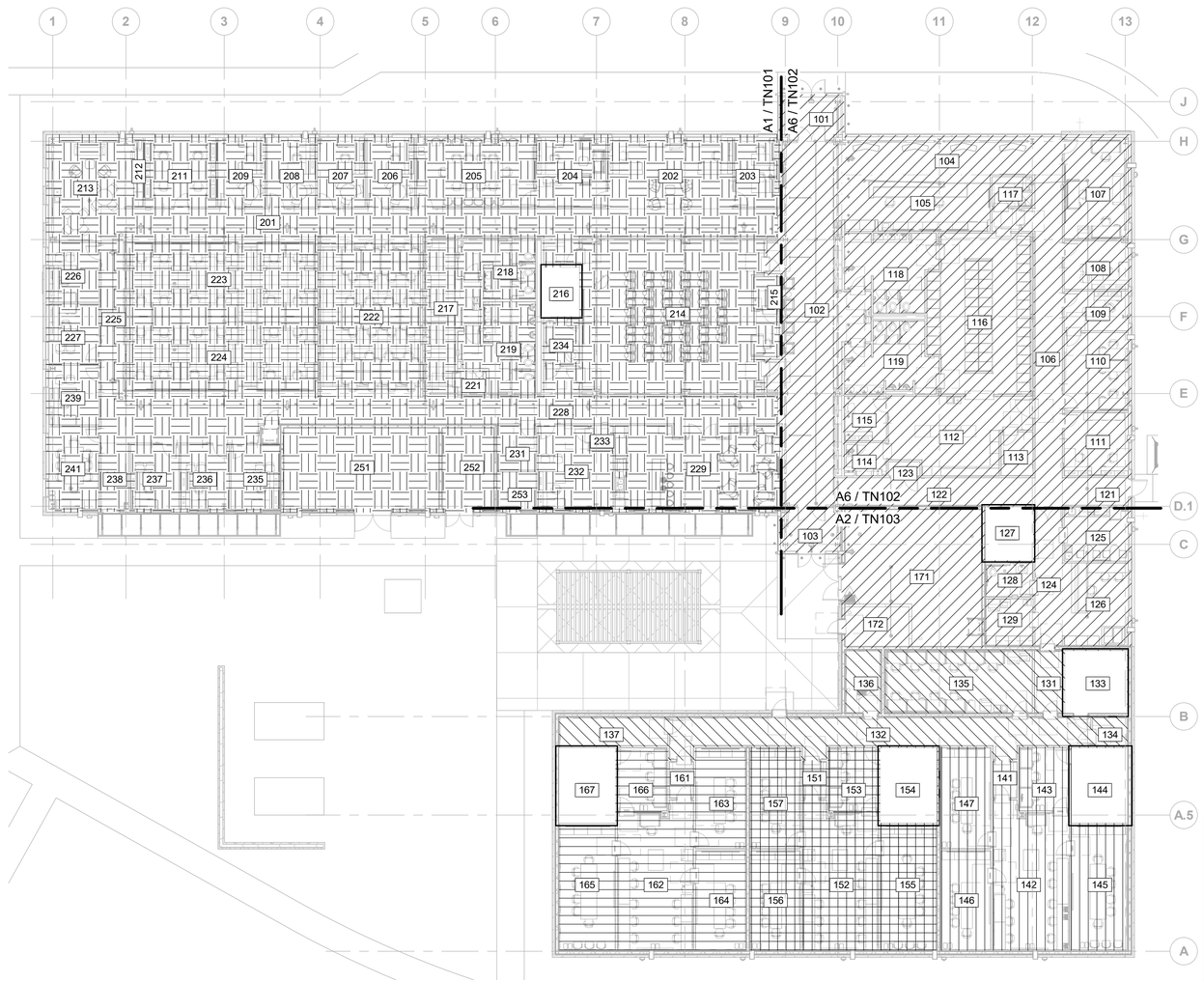
ROOM SCHEDULE	
NAME	NUMBER
WOMEN'S RESTROOM	118
MEN'S RESTROOM	119
HALL	121
CORRIDOR	122
ELECTRICAL CLOSET	123
CORRIDOR	124
BREAK ROOM	125
MAINT DEBRIEF	126
MAIN COMM ROOM	127
UNISEX RESTROOM	128
PRINT / COPY	129
MAN TRAP	131
CORRIDOR	132
SECURE COMM ROOM	133
STORAGE	134
SECURITY	135
SECURE ELEC ROOM	136

ROOM SCHEDULE	
NAME	NUMBER
STORAGE	137
MAN TRAP 1	141
VAULT 1 MISSION PLANNING	142
VAULT 1 ALIS / ODIN	143
VAULT 1 SERVER	144
VAULT 1 LG BRIEF	145
VAULT 1 SM BRIEF	146
VAULT 1 SM BRIEF	147
MAN TRAP 2	151
VAULT 2 MISSION PLANNING	152
VAULT 2 ALIS / ODIN	153
VAULT 2 SERVER	154
VAULT 2 LG BRIEF	155
VAULT 2 SM BRIEF	156
VAULT 2 SM BRIEF	157
MAN TRAP 3	161
VAULT 3 MISSION PLANNING	162

ROOM SCHEDULE	
NAME	NUMBER
VAULT 3 SM BRIEF	163
VAULT 3 SM BRIEF	164
VAULT 3 LG BRIEF	165
VAULT 3 ALIS / ODIN	166
VAULT 3 SERVER	167
MECHANICAL ROOM	171
ELECTRICAL ROOM	172
CORRIDOR	201
COMMAND SUPPORT STAFF	202
ACTIVITY PROGRAM COORDINATOR (APC) / RESOURCE ADVISOR (RA)	203
SQUADRON COMMANDER OFFICE	204
CONFERENCE ROOM	205
INTERNATIONAL MILITARY STUDENT OFFICER (IMSO)	206

ROOM SCHEDULE	
NAME	NUMBER
SNR M-1	207
SNR M-2	208
SNR M-3	209
RA	211
COPY / STORAGE	212
STUDENT COLLAB	213
LG BRIEFING RM	214
AV	215
COMM	216
STUDENT LOCKERS	217
WOMEN'S RESTROOM	218
MEN'S RESTROOM	219
JANITOR'S CLOSET	221
STUDENT WORKSTATIONS	222
INSTRUCTOR WORKSTATIONS	223
MISSION OPS SUPPORT	224
CORRIDOR	225

ROOM SCHEDULE	
NAME	NUMBER
IP M-1	226
IP M-2	227
CORRIDOR	228
BREAK ROOM	229
STORAGE	231
FLIGHT MEDICAL OFFICE	232
STORAGE	233
MOTHER'S ROOM	234
IP M-6	235
IP M-5	236
IP M-4	237
CORRIDOR	238
IP M-3	239
TEAM	241
ROOF ACCESS	242
MECHANICAL	251
ELECTRICAL	252
FIRE	253



PLAN NORTH

0 8' 16' 32'
SCALE IN FEET

A6 FIRST FLOOR TELECOMMUNICATIONS PLAN - OVERALL
SCALE: 1/16" = 1'-0"

GENERAL SHEET NOTES

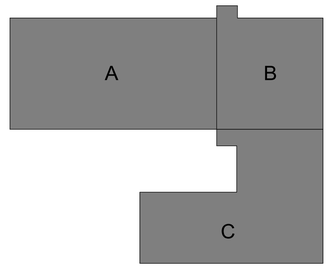
1. THESE DRAWINGS ARE SUPPLEMENTAL TO THE PROJECT SPECIFICATIONS, ARE SCHEMATIC IN NATURE AND SHALL NOT BE USED FOR FIELD INSTALLATION. FIELD INSTALLATION SHALL BE PER APPROVED SHOP DRAWINGS. SEE PROJECT SPECIFICATIONS FOR SHOP DRAWING REQUIREMENTS. THE LAYOUT OF ALL TELECOMMUNICATIONS EQUIPMENT SHALL BE FULLY COORDINATED WITH OTHER TRADES, EQUIPMENT AND/OR FURNITURE WITHIN THE ROOM AND/OR SPACE PRIOR TO SUBMISSION OF SHOP DRAWINGS FOR APPROVAL.
2. SEE SHEET TN001 FOR PROJECT GENERAL NOTES, SYMBOL LEGEND AND ABBREVIATIONS.
3. REFER TO TN002 AND TN003 FOR EQUIPMENT LABELING INFORMATION.

CABLE ZONES LEGEND

- RM 127
- RM 133
- RM 144
- RM 154
- RM 167
- RM 216

REGISTERED COMMUNICATIONS DISTRIBUTION DESIGNER
WILLIAM J SCHWEITZER
BICSI ID# 111997
EXPIRES 12-31-25
RCDD
07/23/2025

KEY PLAN



US Army Corps of Engineers ®

MARK	DESCRIPTION	DATE
0	READY-TO-ADV/ERTISE (RTA) SUBMITTAL	JUL 2025

DESIGNED BY: W. SCHWEITZER
DRAWN BY: S. YUNKER
CHECKED BY: S. STRATTON
SUBMITTED BY: B. STREEBIN
SIZE: ANSI D
ISSUE DATE: JUL 2025
SOLICITATION NO.: W9127S25RA001
CONTRACT NO.: W9127S24T0007
FILE NAME:

US ARMY CORPS OF ENGINEERS
LITTLE ROCK DISTRICT
LITTLE ROCK, ARKANSAS

BURNS AND McDONNELL
9400 WARD PARKWAY,
KANSAS CITY, MO 64114
165438

F-35 SPECIAL ACCESS PROGRAM FACILITY
EBBING AIR NATIONAL GUARD BASE (ANGB), FORT SMITH, ARKANSAS

FIRST FLOOR TELECOMMUNICATIONS PLAN OVERALL

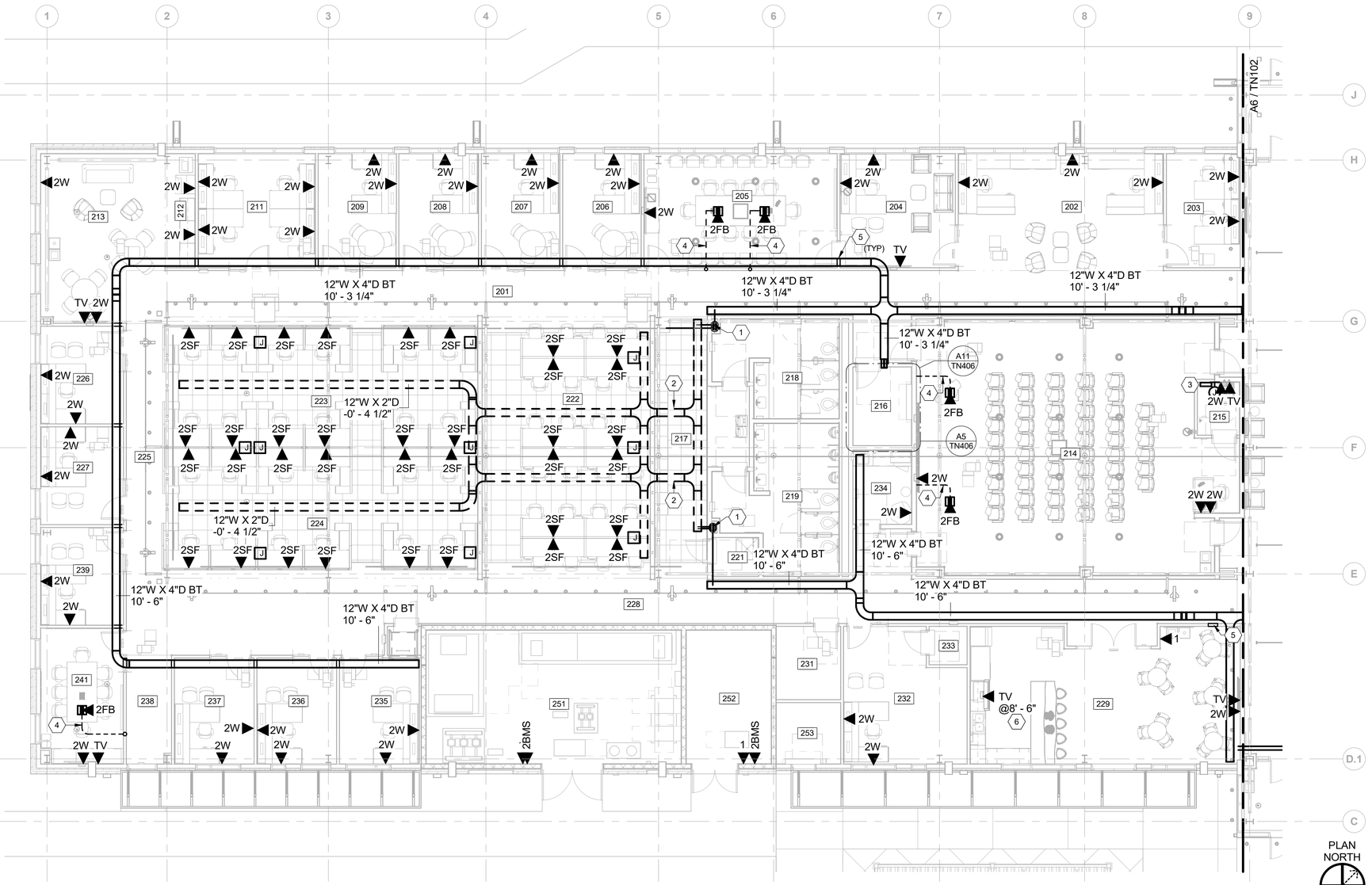
SHEET ID
TN010

READY-TO-ADVERTISE (RTA) SUBMITTAL

ROOM SCHEDULE - AREA A	
NAME	NUMBER
COMMAND SUPPORT STAFF	202
ACTIVITY PROGRAM COORDINATOR (APC) / RESOURCE ADVISOR (RA)	203
SQUADRON COMMANDER OFFICE	204
CONFERENCE ROOM	205
INTERNATIONAL MILITARY STUDENT OFFICER (IMSO)	206
SNR M-1	207
SNR M-2	208
SNR M-3	209
RA	211
COPY / STORAGE	212
STUDENT COLLAB	213

ROOM SCHEDULE - AREA A	
NAME	NUMBER
LG BRIEFING RM	214
AV	215
COMM	216
STUDENT LOCKERS	217
WOMEN'S RESTROOM	218
MEN'S RESTROOM	219
JANITOR'S CLOSET	221
STUDENT WORKSTATIONS	222
INSTRUCTOR WORKSTATIONS	223
MISSION OPS SUPPORT	224
CORRIDOR	225
IP M-1	226
IP M-2	227
CORRIDOR	228

ROOM SCHEDULE - AREA A	
NAME	NUMBER
BREAK ROOM	229
STORAGE	231
FLIGHT MEDICAL OFFICE	232
STORAGE	233
MOTHER'S ROOM	234
IP M-6	235
IP M-5	236
IP M-4	237
CORRIDOR	238
IP M-3	239
TEAM	241
MECHANICAL	251
ELECTRICAL	252
FIRE	253



A1 FIRST FLOOR TELECOMMUNICATIONS PLAN - AREA - A

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

GENERAL SHEET NOTES

1. THESE DRAWINGS ARE SUPPLEMENTAL TO THE PROJECT SPECIFICATIONS, ARE SCHEMATIC IN NATURE AND SHALL NOT BE USED FOR FIELD INSTALLATION. FIELD INSTALLATION SHALL BE PER APPROVED SHOP DRAWINGS. SEE PROJECT SPECIFICATIONS FOR SHOP DRAWING REQUIREMENTS. THE LAYOUT OF ALL TELECOMMUNICATIONS EQUIPMENT SHALL BE FULLY COORDINATED WITH OTHER TRADES, EQUIPMENT AND/OR FURNITURE WITHIN THE ROOM AND/OR SPACE PRIOR TO SUBMISSION OF SHOP DRAWINGS FOR APPROVAL.
2. SEE SHEET TN001 FOR PROJECT GENERAL NOTES, SYMBOL LEGEND AND ABBREVIATIONS.
3. REFER TO TN002 AND TN003 FOR EQUIPMENT LABELING INFORMATION.

SHEET KEYNOTES

1. CHASE TO RAISED ACCESS FLOOR. PROVIDE (2) 4" CONDUIT SLEEVES FROM ABOVE CEILING CABLE TRAY INTO CHASE.
2. UNDERFLOOR CABLE TRAY, SIZED AND ROUTED AS INDICATED. EXTEND UNDERFLOOR CABLE TO CABLE CHASE(S).
3. PROVIDE WALL MOUNT FIBER PATCH PANEL WITH (3) DUAL LC ADAPTERS, REFER TO TN701 FOR BACKBONE CABLE REQUIREMENTS.
4. (2) 1 1/4" CONDUITS, STUB INTO ACCESSIBLE CEILING SPACE.
5. PROVIDE CABLE TRAY THROUGH WALL PENETRATION, REFER TO G11/TN511. TYPICAL EACH PARTITION WALL THAT EXTENDS TO DECK.
6. MOUNTED AT SOFFIT ABOVE.

US Army Corps of Engineers ®

MARK	DESCRIPTION	DATE
0	READY-TO-ADV/ERTISE (RTA) SUBMITTAL	JUL 2025

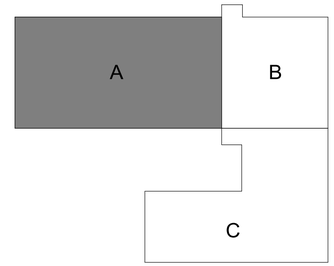
DESIGNED BY: W. SCHWEITZER
DRAWN BY: A. SANTOS
CHECKED BY: C. STRATTON
SUBMITTED BY: B. STREEBIN
SIZE: ANSI D
ISSUE DATE: JUL 2025
SOLICITATION NO.: W912T525RA001
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LITTLE ROCK, ARKANSAS

BURNS AND McDONNELL
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165438

REGISTERED COMMUNICATIONS DISTRIBUTION DESIGNER
WILLIAM J SCHWEITZER
BICSI ID# 111997
EXPIRES 12-31-25
RCDD
07/23/2025

KEY PLAN



F-35 SPECIAL ACCESS PROGRAM FACILITY
EBBING AIR NATIONAL GUARD BASE (ANGB), FORT SMITH, ARKANSAS

FIRST FLOOR TELECOMMUNICATIONS PLAN - AREA - A

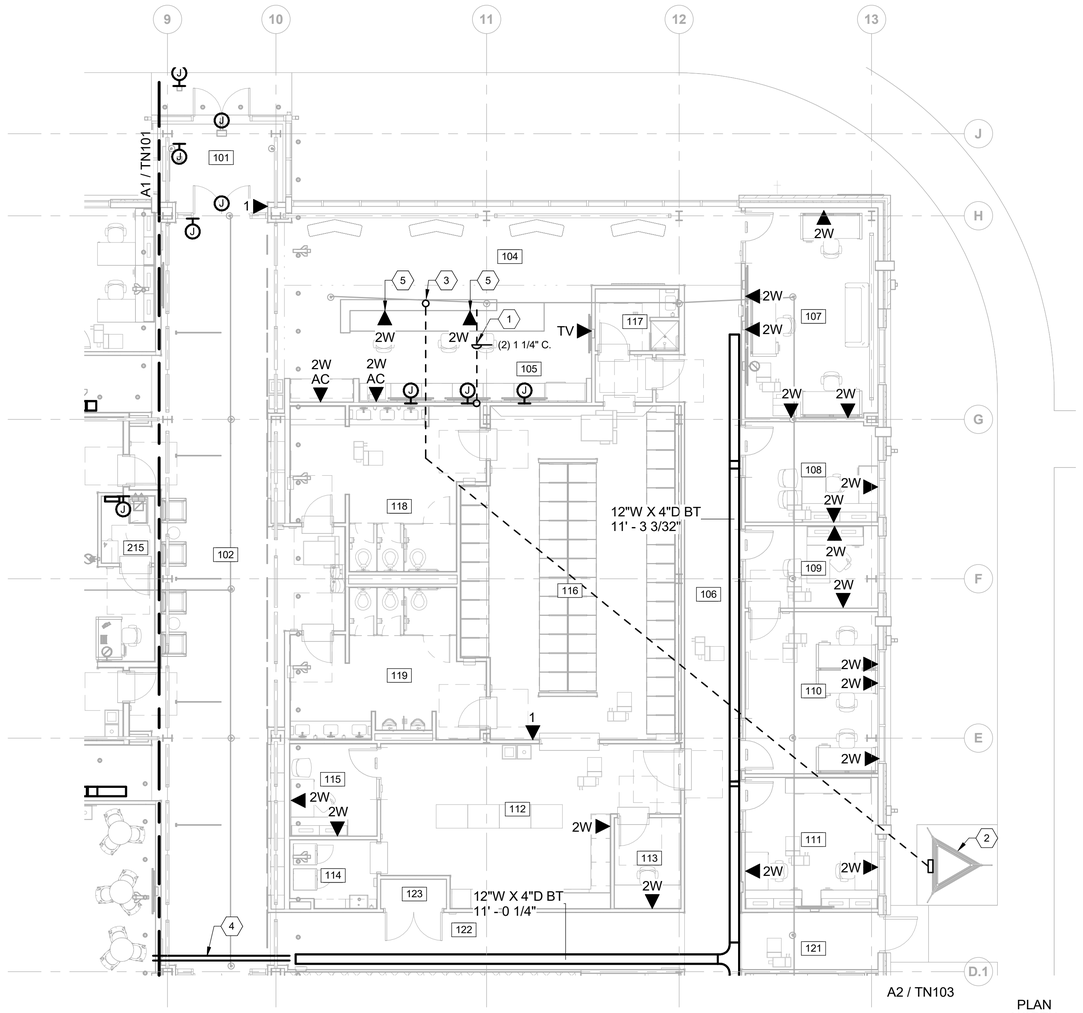
SHEET ID

TN101

READY-TO-ADVERTISE (RTA) SUBMITTAL

ROOM SCHEDULE - AREA B	
NAME	NUMBER
VESTIBULE	101
CORRIDOR	102
LOBBY	104
STEP DESK	105
CORRIDOR	106
SCHEDULING & TRAINING	107
DO	108
SARM	109
SARM ADMIN	110
STAN / EVAL	111
AFE MAINTENANCE	112

ROOM SCHEDULE - AREA B	
NAME	NUMBER
HELMET ALIGNMENT	113
LIFE SUPPORT	114
MAINTENANCE OFFICE	115
PILOT LOCKER ROOM	116
SHOWER	117
WOMEN'S RESTROOM	118
MEN'S RESTROOM	119
HALL	121
CORRIDOR	122
ELECTRICAL CLOSET	123



A6 FIRST FLOOR TELECOMMUNICATIONS PLAN - AREA - B

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

GENERAL SHEET NOTES

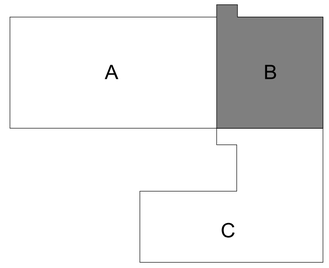
1. THESE DRAWINGS ARE SUPPLEMENTAL TO THE PROJECT SPECIFICATIONS, ARE SCHEMATIC IN NATURE AND SHALL NOT BE USED FOR FIELD INSTALLATION. FIELD INSTALLATION SHALL BE PER APPROVED SHOP DRAWINGS. SEE PROJECT SPECIFICATIONS FOR SHOP DRAWING REQUIREMENTS. THE LAYOUT OF ALL TELECOMMUNICATIONS EQUIPMENT SHALL BE FULLY COORDINATED WITH OTHER TRADES, EQUIPMENT AND/OR FURNITURE WITHIN THE ROOM AND/OR SPACE PRIOR TO SUBMISSION OF SHOP DRAWINGS FOR APPROVAL.
2. SEE SHEET TN001 FOR PROJECT GENERAL NOTES, SYMBOL LEGEND AND ABBREVIATIONS.
3. REFER TO TN002 AND TN003 FOR EQUIPMENT LABELING INFORMATION.

SHEET KEYNOTES

1. COORDINATE STUB LOCATION WITH STEP DESK FURNITURE.
2. UHF ANTENNA TOWER, PROVIDE 24"X24"X8" EXTERIOR RATED PULL BOX MOUNT AT 60" ABOVE FINISHED GRADE ON STRUCTURAL TOWER.
3. PROVIDE 2" EMPTY CONDUIT FROM STEP DESK TO ANTENNA TOWER STRUCTURE PULL BOX. STUB CONDUIT AT STEP DESK RADIO CABINET, SEAL AFTER CABLE INSTALLATION. REFER TO DETAIL L1/A-764.
4. PROVIDE (2) 4" EMPTY CONDUITS ACROSS CORRIDOR, MOUNT AT 11'-0".
5. DEVICE MOUNTED IN CASEWORK, COORDINATE INSTALLATION WITH CASEWORK INSTALLATION.

REGISTERED COMMUNICATIONS DISTRIBUTION DESIGNER
WILLIAM J SCHWEITZER
BICSI ID# 111997
EXPIRES 12-31-25
RCDD
07/23/2025

KEY PLAN



US Army Corps of Engineers ®

MARK	DESCRIPTION	DATE
0	READY-TO-ADVERTISE (RTA) SUBMITTAL	JUL 2025

ISSUE DATE:	JUL 2025
SOLICITATION NO.:	W9127S25RA001
CONTRACT NO.:	W9127S24T0007
DESIGNED BY:	W. SCHWEITZER
DRAWN BY:	S. YUNKER
CHECKED BY:	C. STRATTON
SUBMITTED BY:	B. STREEBIN
SIZE:	ANSI D
FILE NAME:	

US ARMY CORPS OF ENGINEERS
LITTLE ROCK DISTRICT
LITTLE ROCK, ARKANSAS

BURNS AND McDONNELL
9400 WARD PARKWAY,
KANSAS CITY, MO 64114
165438

F-35, SPECIAL ACCESS PROGRAM FACILITY
EBBING AIR NATIONAL GUARD BASE (ANGB), FORT SMITH, ARKANSAS

FIRST FLOOR TELECOMMUNICATIONS PLAN - AREA - B

SHEET ID

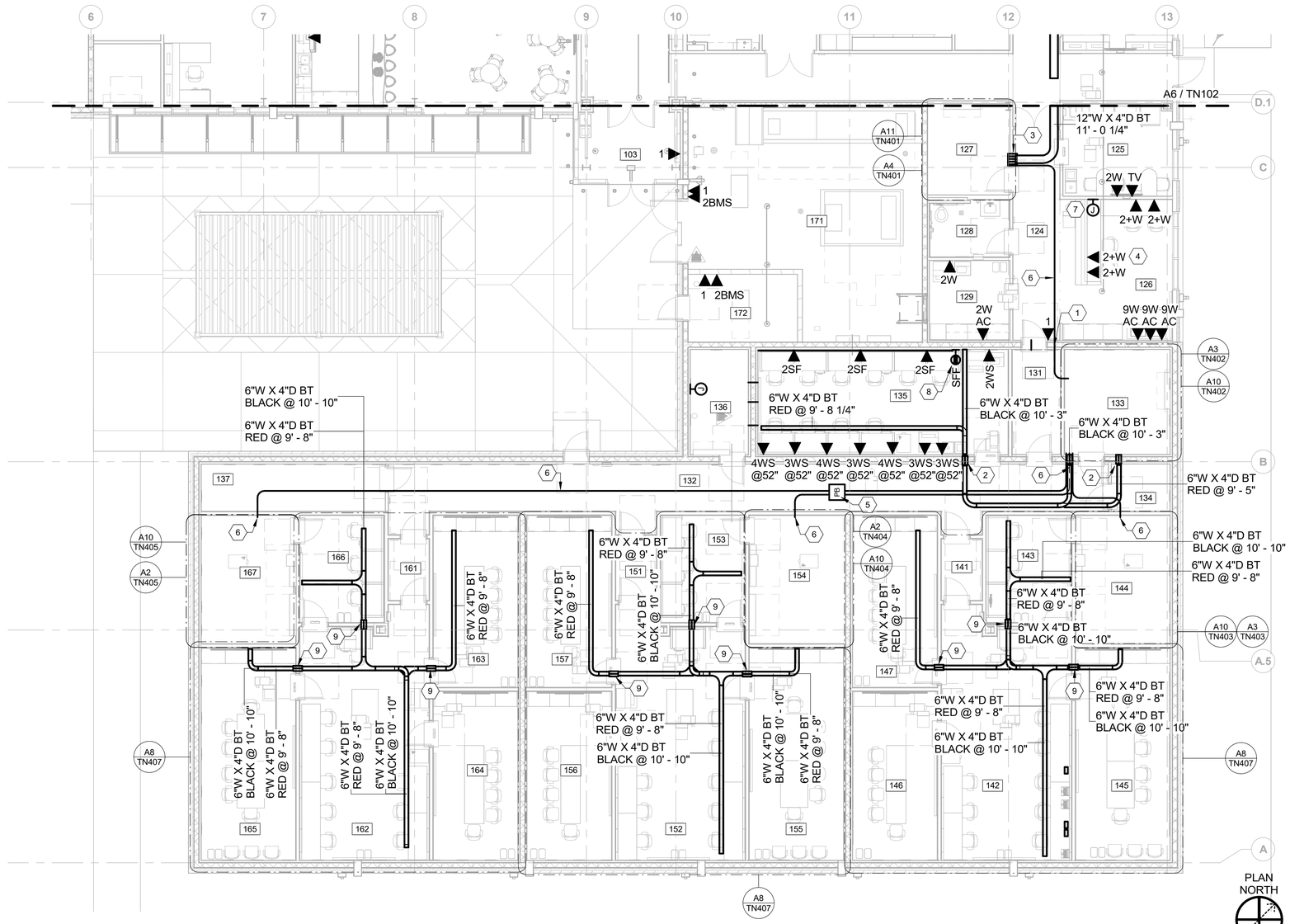
TN102

READY-TO-ADVERTISE (RTA) SUBMITTAL

ROOM SCHEDULE - AREA C	
NAME	NUMBER
VESTIBULE	103
CORRIDOR	124
BREAK ROOM	125
MAINT DEBRIEF	126
MAIN COMM ROOM	127
UNISEX RESTROOM	128
PRINT / COPY	129
MAN TRAP	131
CORRIDOR	132
SECURE COMM ROOM	133
STORAGE	134
SECURITY	135
SECURE ELEC ROOM	136

ROOM SCHEDULE - AREA C	
NAME	NUMBER
STORAGE	137
MAN TRAP 1	141
VAULT 1 MISSION PLANNING	142
VAULT 1 ALIS / ODIN	143
VAULT 1 SERVER	144
VAULT 1 LG BRIEF	145
VAULT 1 SM BRIEF	146
VAULT 1 SM BRIEF	147
MAN TRAP 2	151
VAULT 2 MISSION PLANNING	152
VAULT 2 ALIS / ODIN	153
VAULT 2 SERVER	154

ROOM SCHEDULE - AREA C	
NAME	NUMBER
VAULT 2 LG BRIEF	155
VAULT 2 SM BRIEF	156
VAULT 2 SM BRIEF	157
MAN TRAP 3	161
VAULT 3 MISSION PLANNING	162
VAULT 3 SM BRIEF	163
VAULT 3 SM BRIEF	164
VAULT 3 LG BRIEF	165
VAULT 3 ALIS / ODIN	166
VAULT 3 SERVER	167
MECHANICAL ROOM	171
ELECTRICAL ROOM	172



A2 FIRST FLOOR TELECOMMUNICATIONS PLAN - AREA - C

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

GENERAL SHEET NOTES

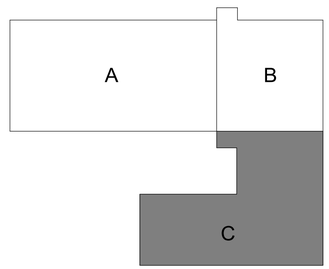
1. THESE DRAWINGS ARE SUPPLEMENTAL TO THE PROJECT SPECIFICATIONS, ARE SCHEMATIC IN NATURE AND SHALL NOT BE USED FOR FIELD INSTALLATION. FIELD INSTALLATION SHALL BE PER APPROVED SHOP DRAWINGS. SEE PROJECT SPECIFICATIONS FOR SHOP DRAWING REQUIREMENTS. THE LAYOUT OF ALL TELECOMMUNICATIONS EQUIPMENT SHALL BE FULLY COORDINATED WITH OTHER TRADES, EQUIPMENT AND/OR FURNITURE WITHIN THE ROOM AND/OR SPACE PRIOR TO SUBMISSION OF SHOP DRAWINGS FOR APPROVAL.
2. SEE SHEET TN001 FOR PROJECT GENERAL NOTES, SYMBOL LEGEND AND ABBREVIATIONS.
3. REFER TO TN002 AND TN003 FOR EQUIPMENT LABELING INFORMATION.
4. MAINTAIN 2" MINIMUM SEPARATION BETWEEN RED AND BLACK CABLES. WHERE CABLES RUN PARALLEL FOR DISTANCES EXCEEDING 98'-0", INCREASE SEPARATION TO 6" BETWEEN RED AND BLACK CABLES.
5. REFER TO GJ & TY SHEETS FOR SECURE AREA AND TEMPEST BOUNDARIES AND REQUIREMENTS OF PENETRATIONS THROUGH THESE BOUNDARIES. CONSTRUCTION FOR SECURE AREAS, SECURE AREA MATERIALS AND COMPONENTS MUST COMPLY WITH UFC 4-010-05 AND IC TECH SPECS FOR ICD/ICS 705, AND FULLY MEET AND PASS ALL ACCREDITATION. COORDINATE WITH CONTRACT OFFICER DURING CONSTRUCTION OF SECURE AREAS.

SHEET KEYNOTES

1. SECURE WALL, CONDUIT PENETRATION, REFER TO GJ504 FOR ADDITIONAL INFORMATION.
2. STC WALL PENETRATION.
3. CABLE TRAY THROUGH WALL PENETRATION.
4. DEVICE MOUNTED IN CASEWORK, COORDINATE INSTALLATION WITH CASEWORK INSTALLATION.
5. PROVIDE 24"W X 24"L X 8"D (MINIMUM) PULL BOX.
6. 2" CONDUITS FOR TELECOM BACKBONE CABLING.
   a. (1) 2" CONDUIT FROM RM 127 TO RM 133.
   b. (1) 2" CONDUIT FROM RM 133 TO RM 144.
   c. (1) 2" CONDUIT FROM RM 133 TO RM 154.
   d. (1) 2" CONDUIT FROM RM 133 TO RM 167.
7. DOUBLE GANG OUTLET BOX WITH (2) 1" CONDUITS FOR DEVICES MOUNTED IN CASEWORK.
8. PROVIDE SURFACE MOUNT SYSTEMS FURNITURE FEED (SFF), REFER TO A4/TN511.
9. PROVIDE (2) ACOUSTICAL RATED PENETRATION SLEEVES FOR EACH CABLE TRAY (RED/BLACK), REFER TO G1/TN511.

REGISTERED COMMUNICATIONS DISTRIBUTION DESIGNER
WILLIAM J SCHWEITZER
BICSI ID# 111997
EXPIRES 12-31-25
RCDD
07/23/2025

KEY PLAN



US Army Corps of Engineers ®

MARK	DESCRIPTION	DATE
0	READY-TO-ADVERTISE (RTA) SUBMITTAL	JUL 2025

DESIGNED BY: W. SCHWEITZER
DRAWN BY: S. YUNKER
CHECKED BY: S. STRATTON
SUBMITTED BY: B. STREEBIN
SIZE: ANSI D
ISSUE DATE: JUL 2025
SOLICITATION NO.: W912T5-25-RA001
CONTRACT NO.: W912T5-24-T-0007
FILE NAME:

US ARMY CORPS OF ENGINEERS
LITTLE ROCK DISTRICT
LITTLE ROCK, ARKANSAS

BURNS AND McDONNELL
9400 WARD PARKWAY,
KANSAS CITY, MO 64114
165438

F-35: SPECIAL ACCESS PROGRAM FACILITY
EBBING AIR NATIONAL GUARD BASE (ANGB), FORT SMITH, ARKANSAS

FIRST FLOOR TELECOMMUNICATIONS PLAN - AREA - C

SHEET ID
TN103

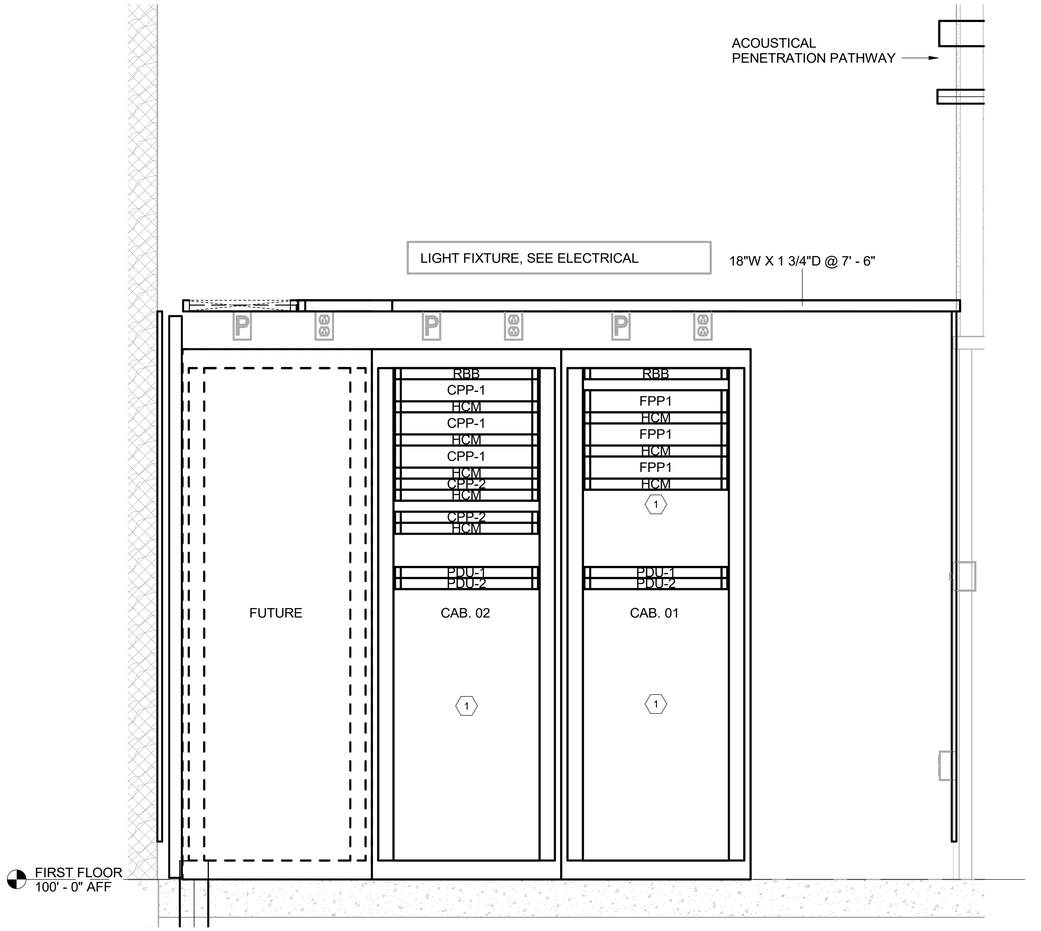
READY-TO-ADVERTISE (RTA) SUBMITTAL

COMMUNICATIONS DROPS - MAIN COMM ROOM 127

ROOM		OUTLET		COMM DROPS			
NO.	NAME	TYPE	QUANTITY	GREEN	WHITE	GRAY (DUAL LC)	GRAY
101	VESTIBULE	1	1	2	0	0	0
103	VESTIBULE	1	1	2	0	0	0
105	STEP DESK	2W	4	16	0	0	0
105	STEP DESK	TV	1	0	2	0	0
107	SCHEDULING & TRAINING	2W	5	20	0	0	0
108	DO	2W	2	8	0	0	0
109	SARM	2W	2	8	0	0	0
110	SARM ADMIN	2W	3	12	0	0	0
111	STAN / EVAL	2W	2	8	0	0	0
112	AFE MAINTENANCE	2W	1	4	0	0	0
113	HELMET ALIGNMENT	2W	1	4	0	0	0
115	MAINTENANCE OFFICE	2W	2	8	0	0	0
116	PILOT LOCKER ROOM	1	1	2	0	0	0
124	CORRIDOR	1	1	2	0	0	0
125	BREAK ROOM	2W	1	4	0	0	0
125	BREAK ROOM	TV	1	0	2	0	0
126	MAINT DEBRIEF	2+W	4	8	0	0	8
126	MAINT DEBRIEF	9W	3	0	0	6	0
129	PRINT / COPY	2W	2	8	0	0	0
171	MECHANICAL ROOM	1	1	2	0	0	0
171	MECHANICAL ROOM	2BMS	1	2	0	0	0
172	ELECTRICAL ROOM	1	1	2	0	0	0
172	ELECTRICAL ROOM	2BMS	1	2	0	0	0
Grand total: 42			42	124	4	6	8

RACK MOUNTED EQUIPMENT MAIN COMM ROOM 127

EQUIP ID	DESCRIPTION	USAGE
CAB. 01		
RBB	RACK BONDING BUSBAR - 1RU	
FPP1	72 PORT (DUAL LC) FIBER PATCH PANEL - 2RU	OSP
HCM	HORIZONTAL CABLE MANAGER, 1RU	
FPP1	72 PORT (DUAL LC) FIBER PATCH PANEL - 2RU	BACKBONE
HCM	HORIZONTAL CABLE MANAGER, 1RU	
FPP1	72 PORT (DUAL LC) FIBER PATCH PANEL - 2RU	HORIZONTAL GRAY
HCM	HORIZONTAL CABLE MANAGER, 1RU	
PDU-1	POWER DISTRIBUTION UNIT - 1 RU	
PDU-2	POWER DISTRIBUTION UNIT - 1 RU	
CAB. 02		
RBB	RACK BONDING BUSBAR - 1RU	
CPP-1	48 PORT CATEGORY 6 PATCH PANEL	HORIZONTAL - GREEN
HCM	HORIZONTAL CABLE MANAGER, 1RU	
CPP-1	48 PORT CATEGORY 6 PATCH PANEL	HORIZONTAL - GREEN
HCM	HORIZONTAL CABLE MANAGER, 1RU	
CPP-1	48 PORT CATEGORY 6 PATCH PANEL	HORIZONTAL - GREEN
HCM	HORIZONTAL CABLE MANAGER, 1RU	
CPP-2	24 PORT COPPER PATCH PANEL - 1 RU	HORIZONTAL - WHITE (TV)
HCM	HORIZONTAL CABLE MANAGER, 1RU	
PDU-1	POWER DISTRIBUTION UNIT - 1 RU	
PDU-2	POWER DISTRIBUTION UNIT - 1 RU	
CPP-2	24 PORT COPPER PATCH PANEL - 1 RU	HORIZONTAL - GRAY
HCM	HORIZONTAL CABLE MANAGER, 1RU	



A7 TELECOMMUNICATIONS ELEVATION - MAIN COMM ROOM 127

SCALE: 1" = 1'-0"

0 1/2' 1' 2'

SCALE IN FEET

GENERAL SHEET NOTES

1. THESE DRAWINGS ARE SUPPLEMENTAL TO THE PROJECT SPECIFICATIONS, ARE SCHEMATIC IN NATURE AND SHALL NOT BE USED FOR FIELD INSTALLATION. FIELD INSTALLATION SHALL BE PER APPROVED SHOP DRAWINGS. SEE PROJECT SPECIFICATIONS FOR SHOP DRAWING REQUIREMENTS. THE LAYOUT OF ALL TELECOMMUNICATIONS EQUIPMENT SHALL BE FULLY COORDINATED WITH OTHER TRADES, EQUIPMENT AND/OR FURNITURE WITHIN THE ROOM AND/OR SPACE PRIOR TO SUBMISSION OF SHOP DRAWINGS FOR APPROVAL.
2. SEE SHEET TN001 FOR PROJECT GENERAL NOTES, SYMBOL LEGEND AND ABBREVIATIONS.
3. REFER TO TN002 AND TN003 FOR EQUIPMENT LABELING INFORMATION.
4. SEE 'EG' SERIES DRAWINGS FOR TYPICAL IN-ROOM TELECOMMUNICATIONS BONDING CONNECTION REQUIREMENTS.

SHEET KEYNOTES

1. SPACE FOR GFGI EQUIPMENT.

REGISTERED COMMUNICATIONS DISTRIBUTION DESIGNER
WILLIAM J. SCHWEITZER
BICSI ID# 111997
EXPIRES 12-31-25
RCDD
07/23/2025

US Army Corps of Engineers ®

MARK	DESCRIPTION	DATE
0	READY-TO-ADVERTISE (RTA) SUBMITTAL	JUL 2025

DESIGNED BY: W. SCHWEITZER
DRAWN BY: S. YUNKER
CHECKED BY: C. STRATTON
SUBMITTED BY: B. STREEBIN
ISSUE DATE: JUL 2025
SOLICITATION NO.: W9127S25RA001
CONTRACT NO.: W9127S24F0007
SIZE: ANSI D
FILE NAME:

US ARMY CORPS OF ENGINEERS
LITTLE ROCK DISTRICT
LITTLE ROCK, ARKANSAS

BURNS AND McDONNELL
9400 WARD PARKWAY,
KANSAS CITY, MO 64114
165438

F-35 SPECIAL ACCESS PROGRAM FACILITY
EBBING AIR NATIONAL GUARD BASE (ANGB), FORT SMITH, ARKANSAS

TELECOMMUNICATIONS ELEVATIONS

SHEET ID

TN201

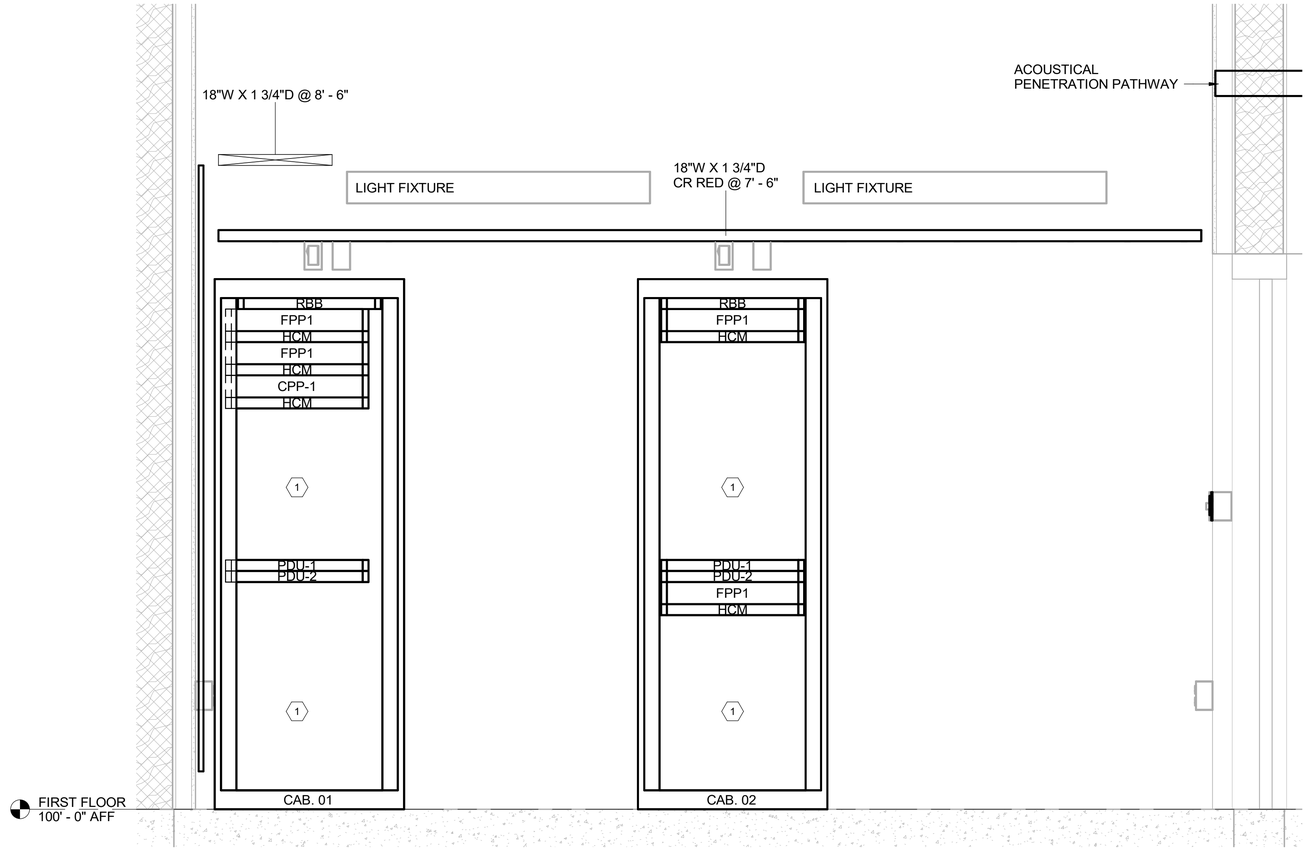
READY-TO-ADVERTISE (RTA) SUBMITTAL

COMMUNICATIONS DROPS - SECURE COMM ROOM 133

ROOM		OUTLET		COMM DROPS		
NO.	NAME	TYPE	QUANTITY	GREEN	RED (DUAL LC / "R")	RED (DUAL LC / "C")
133	SECURE COMM ROOM	1S	1	0	0	0
135	SECURITY	2SF	3	0	0	0
135	SECURITY	2WS	1	4	0	0
135	SECURITY	3WS	4	0	12	0
135	SECURITY	4WS	3	0	0	9
135	SECURITY	SFF	1	0	0	0
Grand total: 13			13	4	12	9

RACK MOUNTED EQUIPMENT SECURE COMM ROOM 133

EQUIP ID	DESCRIPTION	CLASSIFICATION	USAGE
CAB. 01			
RBB	RACK BONDING BUSBAR - 1RU	BLACK	
FPP1	72 PORT (DUAL LC) FIBER PATCH PANEL - 2RU	BLACK	BACKBONE TO 127
HCM	HORIZONTAL CABLE MANAGER, 1RU		
FPP1	72 PORT (DUAL LC) FIBER PATCH PANEL - 2RU	BLACK	BACKBONE TO VAULT #1, #2, & #3
HCM	HORIZONTAL CABLE MANAGER, 1RU		
CPP-1	48 PORT CATEGORY 6 PATCH PANEL	BLACK	HORIZONTAL - GREEN
HCM	HORIZONTAL CABLE MANAGER, 1RU		
PDU-1	POWER DISTRIBUTION UNIT - 1 RU	BLACK	
PDU-2	POWER DISTRIBUTION UNIT - 1 RU	BLACK	
CAB. 02			
RBB	RACK BONDING BUSBAR - 1RU		
FPP1	72 PORT (DUAL LC) FIBER PATCH PANEL - 2RU	RED	HORIZONTAL RED, "R"
HCM	HORIZONTAL CABLE MANAGER, 1RU		
PDU-1	POWER DISTRIBUTION UNIT - 1 RU	RED	
PDU-2	POWER DISTRIBUTION UNIT - 1 RU	RED	
FPP1	72 PORT (DUAL LC) FIBER PATCH PANEL - 2RU	RED	HORIZONTAL RED, "C"
HCM	HORIZONTAL CABLE MANAGER, 1RU		



A4 TELECOMMUNICATIONS ELEVATION - SECURE COMM ROOM 133

SCALE: 1" = 1'-0"

0 1/2' 1' 2'

SCALE IN FEET

GENERAL SHEET NOTES

1. THESE DRAWINGS ARE SUPPLEMENTAL TO THE PROJECT SPECIFICATIONS, ARE SCHEMATIC IN NATURE AND SHALL NOT BE USED FOR FIELD INSTALLATION. FIELD INSTALLATION SHALL BE PER APPROVED SHOP DRAWINGS. SEE PROJECT SPECIFICATIONS FOR SHOP DRAWING REQUIREMENTS. THE LAYOUT OF ALL TELECOMMUNICATIONS EQUIPMENT SHALL BE FULLY COORDINATED WITH OTHER TRADES, EQUIPMENT AND/OR FURNITURE WITHIN THE ROOM AND/OR SPACE PRIOR TO SUBMISSION OF SHOP DRAWINGS FOR APPROVAL.
2. SEE SHEET TN001 FOR PROJECT GENERAL NOTES, SYMBOL LEGEND AND ABBREVIATIONS.
3. REFER TO TN002 AND TN003 FOR EQUIPMENT LABELING INFORMATION.
4. SEE 'EG' SERIES DRAWINGS FOR TYPICAL IN-ROOM TELECOMMUNICATIONS BONDING CONNECTION REQUIREMENTS.

SHEET KEYNOTES

1. SPACE FOR GFGI EQUIPMENT.

INSTALLATION NOTES (SECURE AREA)

1. REFER TO TN501 AND TN502 MODULAR JACK AND CABLING FACEPLATE INFORMATION SCHEDULES FOR RED/BLACK WIRELINE INFORMATION.
2. 0'-2" (MIN) SEPARATION MUST BE MAINTAINED BETWEEN (CFCI) RED WIRELINE AND (CFCI) BLACK WIRELINES.
3. 0'-2" (MIN) SEPARATION MUST BE MAINTAINED BETWEEN (CFCI) RED WIRELINE AND (CFCI) BLACK POWERLINES.
4. 0'-6" (MIN) SEPARATION MUST BE MAINTAINED BETWEEN (CFCI) RED WIRELINE AND (CFCI) BLACK WIRELINES THAT RUN PARALLEL OVER 98'-0".
5. RED AND BLACK WIRELINES MUST NOT SHARE COMMON RACEWAY OR CABLE TRAY.

REGISTERED COMMUNICATIONS DISTRIBUTION DESIGNER
BICSI
WILLIAM J SCHWEITZER
BICSI ID# 111997
EXPIRES 12-31-25
RCDD
07/23/2025

US Army Corps of Engineers ®

MARK	DESCRIPTION	DATE
0	READY-TO-ADVERTISE (RTA) SUBMITTAL	JUL 2025

DESIGNED BY: W. SCHWEITZER
DRAWN BY: S. YUNKER
CHECKED BY: C. STRATTON
SUBMITTED BY: B. STREEBIN
SIZE: ANSI D
ISSUE DATE: JUL 2025
SOLICITATION NO.: W9127S25RA001
CONTRACT NO.: W9127S24F0007
FILE NAME:

US ARMY CORPS OF ENGINEERS
LITTLE ROCK DISTRICT
LITTLE ROCK, ARKANSAS

BURNS AND McDONNELL
9400 WARD PARKWAY,
KANSAS CITY, MO 64114
165438

F-35 SPECIAL ACCESS PROGRAM FACILITY
EBBING AIR NATIONAL GUARD BASE (ANGB), FORT SMITH, ARKANSAS

TELECOMMUNICATIONS ELEVATIONS

SHEET ID

TN202

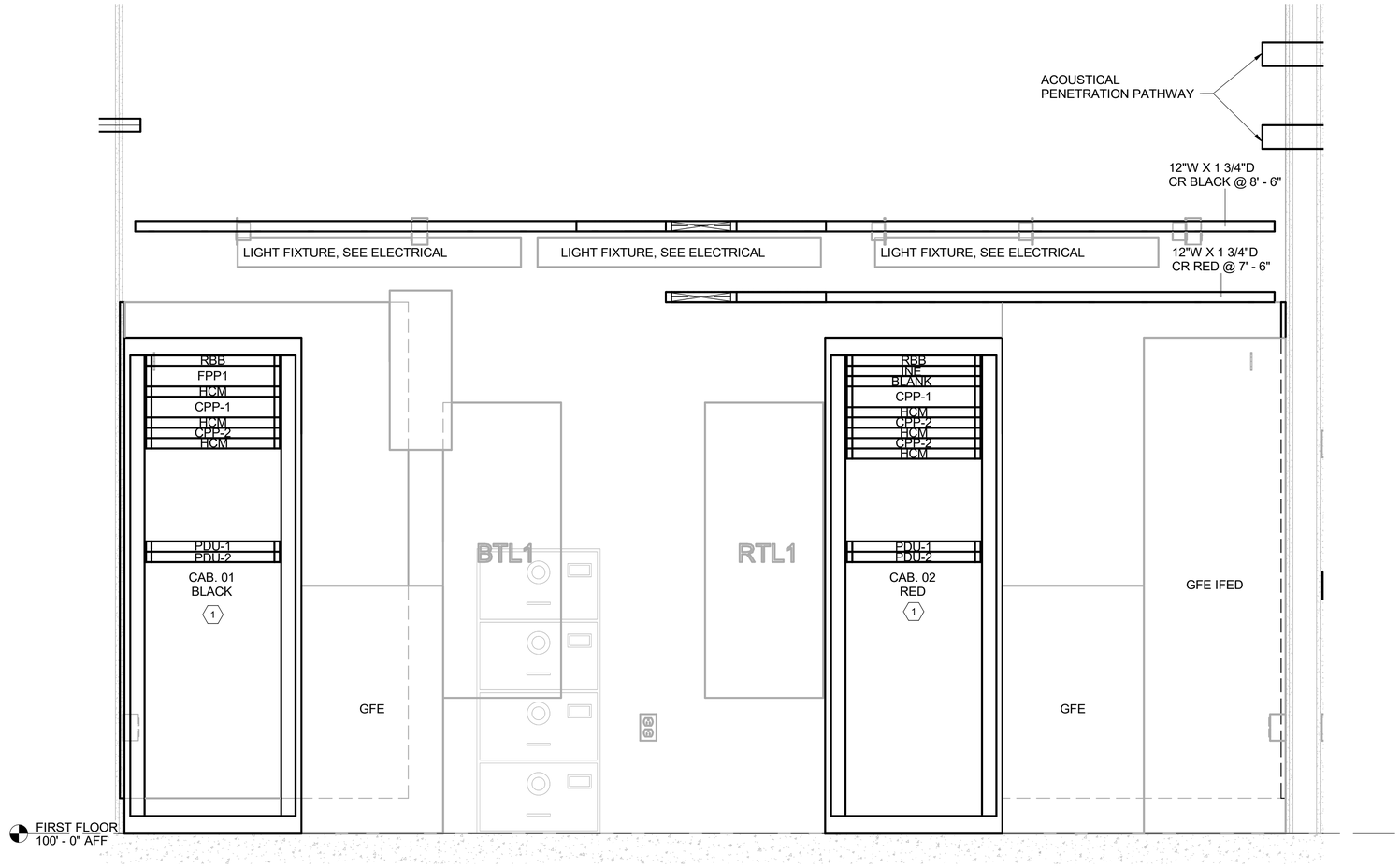
READY-TO-ADVERTISE (RTA) SUBMITTAL

COMMUNICATIONS DROPS - VAULT 1 SERVER 144

ROOM		OUTLET		COMM DROPS				
NO.	NAME	TYPE	QUANTITY	GRAY	GREEN	ORANGE	RED	BLUE
142	VAULT 1 MISSION PLANNING	2+WS	1	2	2	0	0	0
142	VAULT 1 MISSION PLANNING	5SF	6	12	0	0	0	0
142	VAULT 1 MISSION PLANNING	6WS	7	0	0	28	0	0
142	VAULT 1 MISSION PLANNING	7WS	1	0	0	0	2	0
142	VAULT 1 MISSION PLANNING	SFF	2	0	0	0	0	0
143	VAULT 1 ALIS / ODIN	2+SF	1	2	2	0	0	0
143	VAULT 1 ALIS / ODIN	5SF	2	4	0	0	0	0
143	VAULT 1 ALIS / ODIN	7WS	3	0	0	0	6	0
143	VAULT 1 ALIS / ODIN	8WS	3	0	0	6	0	6
143	VAULT 1 ALIS / ODIN	SFF	1	0	0	0	0	0
144	VAULT 1 SERVER	1S	1	1	0	0	0	0
145	VAULT 1 LG BRIEF	6WS	1	0	0	4	0	0
146	VAULT 1 SM BRIEF	6WS	1	0	0	4	0	0
147	VAULT 1 SM BRIEF	6WS	1	0	0	4	0	0
Grand total: 31			31	21	4	46	8	6

RACK MOUNTED EQUIPMENT VAULT 1 SERVER 144

EQUIP ID	DESCRIPTION	CLASSIFICATION	USAGE
CAB. 01			
RBB	RACK BONDING BUSBAR - 1RU	BLACK	
FPP1	72 PORT (DUAL LC) FIBER PATCH PANEL - 2RU	BLACK	BACKBONE
HCM	HORIZONTAL CABLE MANAGER, 1RU		
CPP-1	48 PORT CATEGORY 6 PATCH PANEL	BLACK	HORIZONTAL GRAY
HCM	HORIZONTAL CABLE MANAGER, 1RU		
CPP-2	24 PORT COPPER PATCH PANEL - 1 RU	BLACK	HORIZONTAL GREEN
HCM	HORIZONTAL CABLE MANAGER, 1RU		
PDU-1	POWER DISTRIBUTION UNIT - 1 RU	BLACK	
PDU-2	POWER DISTRIBUTION UNIT - 1 RU	BLACK	
CAB. 02			
RBB	RACK BONDING BUSBAR - 1RU	RED	
INE	NETWORK EQUIPMENT (GFGI) - 1 RU	RED	
BLANK	BLANK - 1RU		
CPP-1	48 PORT CATEGORY 6 PATCH PANEL	RED	HORIZONTAL ORANGE
HCM	HORIZONTAL CABLE MANAGER, 1RU		
CPP-2	24 PORT COPPER PATCH PANEL - 1 RU	RED	HORIZONTAL RED, "R"
HCM	HORIZONTAL CABLE MANAGER, 1RU		
CPP-2	24 PORT COPPER PATCH PANEL - 1 RU	RED	HORIZONTAL BLUE
HCM	HORIZONTAL CABLE MANAGER, 1RU		
PDU-1	POWER DISTRIBUTION UNIT - 1 RU	RED	
PDU-2	POWER DISTRIBUTION UNIT - 1 RU	RED	



A3 TELECOMMUNICATIONS ELEVATION - VAULT 1 SERVER 144
SCALE: 1" = 1'-0"

0 1/2' 1' 2'
SCALE IN FEET

GENERAL SHEET NOTES

1. THESE DRAWINGS ARE SUPPLEMENTAL TO THE PROJECT SPECIFICATIONS, ARE SCHEMATIC IN NATURE AND SHALL NOT BE USED FOR FIELD INSTALLATION. FIELD INSTALLATION SHALL BE PER APPROVED SHOP DRAWINGS. SEE PROJECT SPECIFICATIONS FOR SHOP DRAWING REQUIREMENTS. THE LAYOUT OF ALL TELECOMMUNICATIONS EQUIPMENT SHALL BE FULLY COORDINATED WITH OTHER TRADES, EQUIPMENT AND/OR FURNITURE WITHIN THE ROOM AND/OR SPACE PRIOR TO SUBMISSION OF SHOP DRAWINGS FOR APPROVAL.
2. SEE SHEET TN001 FOR PROJECT GENERAL NOTES, SYMBOL LEGEND AND ABBREVIATIONS.
3. REFER TO TN002 AND TN003 FOR EQUIPMENT LABELING INFORMATION.
4. SEE 'EG' SERIES DRAWINGS FOR TYPICAL IN-ROOM TELECOMMUNICATIONS BONDING CONNECTION REQUIREMENTS.

SHEET KEYNOTES

1. SPACE FOR GFGI EQUIPMENT.

INSTALLATION NOTES (SECURE AREA)

1. REFER TO TN501 AND TN502 MODULAR JACK AND CABLING FACEPLATE INFORMATION SCHEDULES FOR RED/BLACK WIRELINE INFORMATION.
2. 0'-2" (MIN) SEPARATION MUST BE MAINTAINED BETWEEN (CFCI) RED WIRELINE AND (CFCI) BLACK WIRELINES.
3. 0'-2" (MIN) SEPARATION MUST BE MAINTAINED BETWEEN (CFCI) RED WIRELINE AND (CFCI) BLACK POWERLINES.
4. 0'-6" (MIN) SEPARATION MUST BE MAINTAINED BETWEEN (CFCI) RED WIRELINE AND (CFCI) BLACK WIRELINES THAT RUN PARALLEL OVER 98'-0".
5. RED AND BLACK WIRELINES MUST NOT SHARE COMMON RACEWAY OR CABLE TRAY.

REGISTERED COMMUNICATIONS DISTRIBUTION DESIGNER
WILLIAM J SCHWEITZER
BICSI ID# 111997
EXPIRES 12-31-25
RCDD
07/23/2025

US Army Corps of Engineers ®

MARK	DESCRIPTION	DATE
0	READY-TO-ADV/ERTISE (RTA) SUBMITTAL	JUL 2025

ISSUE DATE: JUL 2025
SOLICITATION NO.: W912725RA001
CONTRACT NO.: W912724F0007

DESIGNED BY:	W. SCHWEITZER
DRAWN BY:	S. YUNKER
CHECKED BY:	C. HERRINGTON
SUBMITTED BY:	B. STREEBIN
SIZE:	ANSI D
FILE NAME:	

US ARMY CORPS OF ENGINEERS
LITTLE ROCK DISTRICT
LITTLE ROCK, ARKANSAS

BURNS AND McDONNELL
9400 WARD PARKWAY,
KANSAS CITY, MO 64114
165438

F-35, SPECIAL ACCESS PROGRAM FACILITY
EBBING AIR NATIONAL GUARD BASE (ANGB), FORT SMITH, ARKANSAS

TELECOMMUNICATIONS ELEVATIONS

SHEET ID
TN203

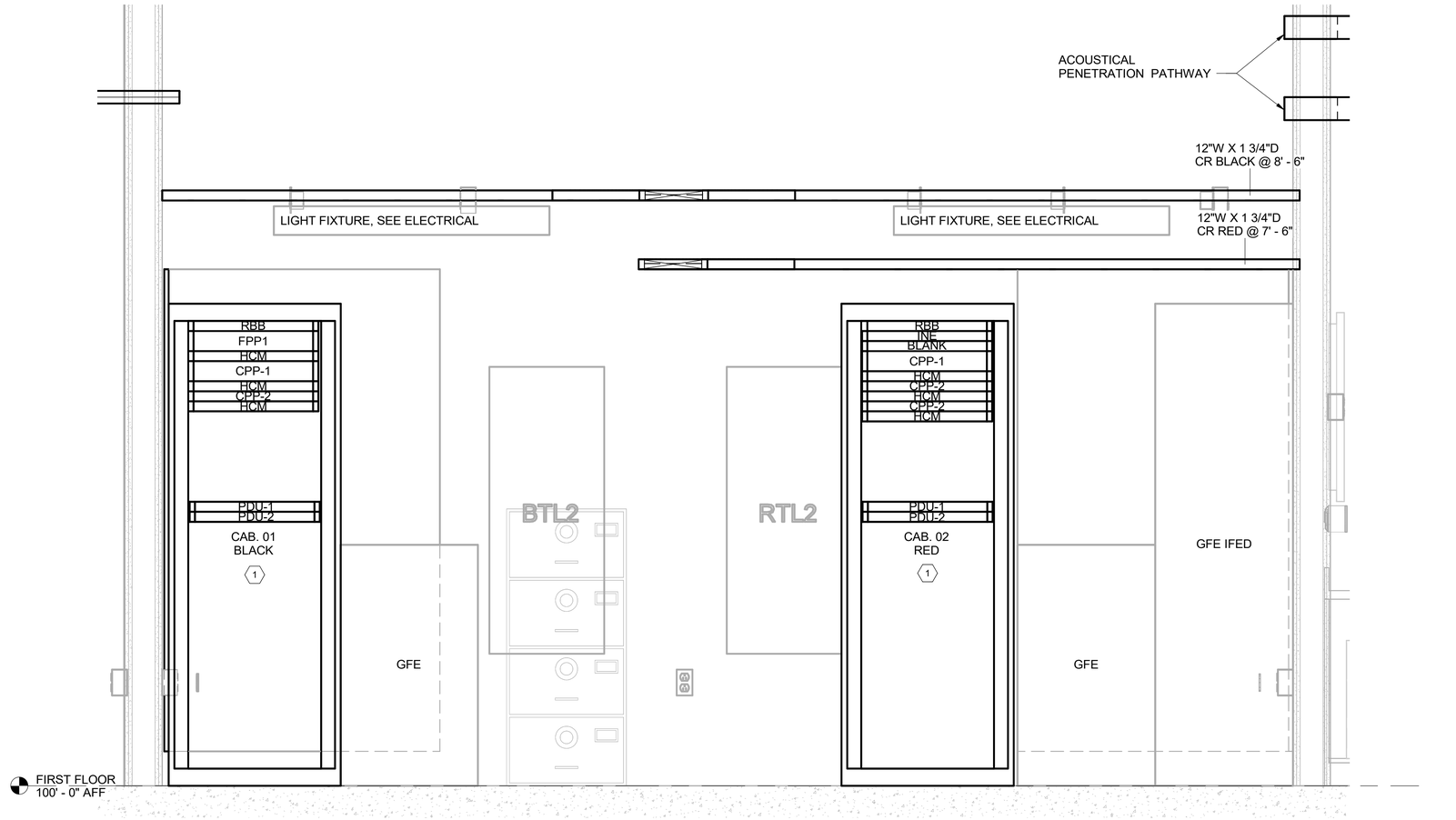
READY-TO-ADVERTISE (RTA) SUBMITTAL

COMMUNICATIONS DROPS - VAULT 2 SERVER 154

ROOM		OUTLET		COMM DROPS				
NO.	NAME	TYPE	QUANTITY	GREEN	GRAY	ORANGE	RED	BLUE
152	VAULT 2 MISSION PLANNING	2+WS	1	2	2	0	0	0
152	VAULT 2 MISSION PLANNING	5SF	6	0	12	0	0	0
152	VAULT 2 MISSION PLANNING	6WS	7	0	0	28	0	0
152	VAULT 2 MISSION PLANNING	7WS	1	0	0	0	2	0
152	VAULT 2 MISSION PLANNING	SFF	2	0	0	0	0	0
153	VAULT 2 ALIS / ODIN	2+SF	1	2	2	0	0	0
153	VAULT 2 ALIS / ODIN	5SF	2	0	4	0	0	0
153	VAULT 2 ALIS / ODIN	7WS	3	0	0	0	6	0
153	VAULT 2 ALIS / ODIN	8WS	3	0	0	6	0	6
153	VAULT 2 ALIS / ODIN	SFF	1	0	0	0	0	0
154	VAULT 2 SERVER	1S	1	0	1	0	0	0
155	VAULT 2 LG BRIEF	6WS	1	0	0	4	0	0
156	VAULT 2 SM BRIEF	6WS	1	0	0	4	0	0
157	VAULT 2 SM BRIEF	6WS	1	0	0	4	0	0
Grand total: 31			31	4	21	46	8	6

RACK MOUNTED EQUIPMENT VAULT 2 SERVER 154

EQUIP ID	DESCRIPTION	CLASSIFICATION	USAGE
CAB. 01			
RBB	RACK BONDING BUSBAR - 1RU	BLACK	
FPP1	72 PORT (DUAL LC) FIBER PATCH PANEL - 2RU	BLACK	BACKBONE
HCM	HORIZONTAL CABLE MANAGER, 1RU		
CPP-1	48 PORT CATEGORY 6 PATCH PANEL	BLACK	HORIZONTAL GRAY
HCM	HORIZONTAL CABLE MANAGER, 1RU		
CPP-2	24 PORT COPPER PATCH PANEL - 1 RU	BLACK	HORIZONTAL GREEN
HCM	HORIZONTAL CABLE MANAGER, 1RU		
PDU-1	POWER DISTRIBUTION UNIT - 1 RU	BLACK	
PDU-2	POWER DISTRIBUTION UNIT - 1 RU	BLACK	
CAB. 02			
RBB	RACK BONDING BUSBAR - 1RU	RED	
INE	NETWORK EQUIPMENT (GFGI) - 1 RU	RED	
BLANK	BLANK - 1RU	RED	
CPP-1	48 PORT CATEGORY 6 PATCH PANEL	RED	HORIZONTAL ORANGE
HCM	HORIZONTAL CABLE MANAGER, 1RU		
CPP-2	24 PORT COPPER PATCH PANEL - 1 RU	RED	HORIZONTAL RED, "R"
HCM	HORIZONTAL CABLE MANAGER, 1RU		
CPP-2	24 PORT COPPER PATCH PANEL - 1 RU	RED	HORIZONTAL BLUE
HCM	HORIZONTAL CABLE MANAGER, 1RU		
PDU-1	POWER DISTRIBUTION UNIT - 1 RU	RED	
PDU-2	POWER DISTRIBUTION UNIT - 1 RU	RED	



A2 TELECOMMUNICATIONS ELEVATION - VAULT 2 SERVER 154

SCALE: 1" = 1'-0"

0 1/2' 1' 2'

SCALE IN FEET

GENERAL SHEET NOTES

1. THESE DRAWINGS ARE SUPPLEMENTAL TO THE PROJECT SPECIFICATIONS, ARE SCHEMATIC IN NATURE AND SHALL NOT BE USED FOR FIELD INSTALLATION. FIELD INSTALLATION SHALL BE PER APPROVED SHOP DRAWINGS. SEE PROJECT SPECIFICATIONS FOR SHOP DRAWING REQUIREMENTS. THE LAYOUT OF ALL TELECOMMUNICATIONS EQUIPMENT SHALL BE FULLY COORDINATED WITH OTHER TRADES, EQUIPMENT AND/OR FURNITURE WITHIN THE ROOM AND/OR SPACE PRIOR TO SUBMISSION OF SHOP DRAWINGS FOR APPROVAL.
2. SEE SHEET TN001 FOR PROJECT GENERAL NOTES, SYMBOL LEGEND AND ABBREVIATIONS.
3. REFER TO TN002 AND TN003 FOR EQUIPMENT LABELING INFORMATION.
4. SEE 'EG' SERIES DRAWINGS FOR TYPICAL IN-ROOM TELECOMMUNICATIONS BONDING CONNECTION REQUIREMENTS.

SHEET KEYNOTES

1. SPACE FOR GFGI EQUIPMENT.

INSTALLATION NOTES (SECURE AREA)

1. REFER TO TN501 AND TN502 MODULAR JACK AND CABLING FACEPLATE INFORMATION SCHEDULES FOR RED/BLACK WIRELINE INFORMATION.
2. 0'-2" (MIN) SEPARATION MUST BE MAINTAINED BETWEEN (CFCI) RED WIRELINE AND (CFCI) BLACK WIRELINES.
3. 0'-2" (MIN) SEPARATION MUST BE MAINTAINED BETWEEN (CFCI) RED WIRELINE AND (CFCI) BLACK POWERLINES.
4. 0'-6" (MIN) SEPARATION MUST BE MAINTAINED BETWEEN (CFCI) RED WIRELINE AND (CFCI) BLACK WIRELINES THAT RUN PARALLEL OVER 98'-0".
5. RED AND BLACK WIRELINES MUST NOT SHARE COMMON RACEWAY OR CABLE TRAY.

REGISTERED COMMUNICATIONS DISTRIBUTION DESIGNER
WILLIAM J SCHWEITZER
BICSI ID# 111997
EXPIRES 12-31-25
RCDD
07/23/2025

US Army Corps of Engineers ®

MARK	DESCRIPTION	DATE
0	READY-TO-ADV/ERTISE (RTA) SUBMITTAL	JUL 2025

DESIGNED BY: W. SCHWEITZER
DRAWN BY: S. YUNKER
CHECKED BY: C. STRATTON
SUBMITTED BY: B. STREEBIN
SIZE: ANSI D
ISSUE DATE: JUL 2025
SOLICITATION NO.: W9127S25RA001
CONTRACT NO.: W9127S24F0007
FILE NAME:

US ARMY CORPS OF ENGINEERS
LITTLE ROCK DISTRICT
LITTLE ROCK, ARKANSAS

BURNS AND McDONNELL
9400 WARD PARKWAY,
KANSAS CITY, MO 64114
165438

F-35 SPECIAL ACCESS PROGRAM FACILITY
EBBING AIR NATIONAL GUARD BASE (ANGB), FORT SMITH, ARKANSAS

TELECOMMUNICATIONS ELEVATIONS

SHEET ID

TN204

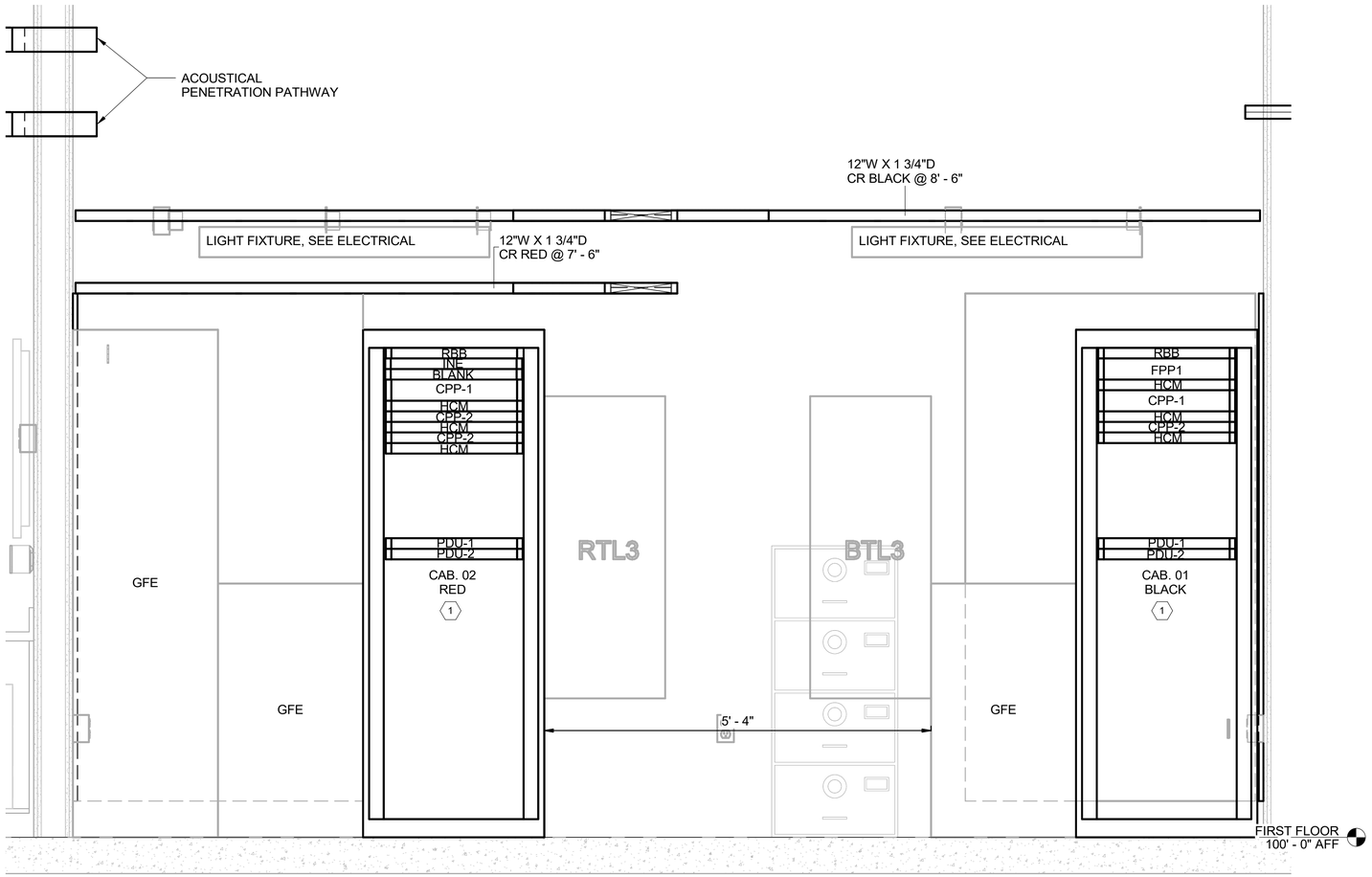
READY-TO-ADVERTISE (RTA) SUBMITTAL

COMMUNICATIONS DROPS - VAULT 3 SERVER 167

ROOM		OUTLET		COMM DROPS				
NO.	NAME	TYPE	QUANTITY	GREEN	GRAY	ORANGE	RED	BLUE
162	VAULT 3 MISSION PLANNING	2+WS	1	2	2	0	0	0
162	VAULT 3 MISSION PLANNING	5SF	6	0	12	0	0	0
162	VAULT 3 MISSION PLANNING	6WS	7	0	0	28	0	0
162	VAULT 3 MISSION PLANNING	7WS	1	0	0	0	2	0
162	VAULT 3 MISSION PLANNING	SFF	2	0	0	0	0	0
163	VAULT 3 SM BRIEF	6WS	1	0	0	4	0	0
164	VAULT 3 SM BRIEF	6WS	1	0	0	4	0	0
165	VAULT 3 LG BRIEF	6WS	1	0	0	4	0	0
166	VAULT 3 ALIS / ODIN	2+SF	1	2	2	0	0	0
166	VAULT 3 ALIS / ODIN	5SF	2	0	4	0	0	0
166	VAULT 3 ALIS / ODIN	7WS	3	0	0	0	6	0
166	VAULT 3 ALIS / ODIN	8WS	3	0	0	6	0	6
166	VAULT 3 ALIS / ODIN	SFF	1	0	0	0	0	0
167	VAULT 3 SERVER	1S	1	0	1	0	0	0
Grand total: 31			31	4	21	46	8	6

RACK MOUNTED EQUIPMENT VAULT 3 SERVER 167

EQUIP ID	DESCRIPTION	CLASSIFICATION	USAGE
CAB. 01			
RBB	RACK BONDING BUSBAR - 1RU	BLACK	
FPP1	72 PORT (DUAL LC) FIBER PATCH PANEL - 2RU	BLACK	BACKBONE
HCM	HORIZONTAL CABLE MANAGER, 1RU		
CPP-1	48 PORT CATEGORY 6 PATCH PANEL	BLACK	HORIZONTAL GRAY
HCM	HORIZONTAL CABLE MANAGER, 1RU		
CPP-2	24 PORT COPPER PATCH PANEL - 1 RU	BLACK	HORIZONTAL GREEN
HCM	HORIZONTAL CABLE MANAGER, 1RU		
PDU-1	POWER DISTRIBUTION UNIT - 1 RU	BLACK	
PDU-2	POWER DISTRIBUTION UNIT - 1 RU	BLACK	
CAB. 02			
RBB	RACK BONDING BUSBAR - 1RU	RED	
INE	NETWORK EQUIPMENT (GFGI) - 1 RU		
BLANK	BLANK - 1RU		
CPP-1	48 PORT CATEGORY 6 PATCH PANEL	RED	HORIZONTAL ORANGE
HCM	HORIZONTAL CABLE MANAGER, 1RU		
CPP-2	24 PORT COPPER PATCH PANEL - 1 RU	RED	HORIZONTAL RED, "R"
HCM	HORIZONTAL CABLE MANAGER, 1RU		
CPP-2	24 PORT COPPER PATCH PANEL - 1 RU	RED	HORIZONTAL BLUE
HCM	HORIZONTAL CABLE MANAGER, 1RU		
PDU-1	POWER DISTRIBUTION UNIT - 1 RU	RED	
PDU-2	POWER DISTRIBUTION UNIT - 1 RU	RED	



A3 TELECOMMUNICATIONS ELEVATION - VAULT 3 SERVER 167

SCALE: 1" = 1'-0"

0 1' 2' 4'

SCALE IN FEET

GENERAL SHEET NOTES

1. THESE DRAWINGS ARE SUPPLEMENTAL TO THE PROJECT SPECIFICATIONS, ARE SCHEMATIC IN NATURE AND SHALL NOT BE USED FOR FIELD INSTALLATION. FIELD INSTALLATION SHALL BE PER APPROVED SHOP DRAWINGS. SEE PROJECT SPECIFICATIONS FOR SHOP DRAWING REQUIREMENTS. THE LAYOUT OF ALL TELECOMMUNICATIONS EQUIPMENT SHALL BE FULLY COORDINATED WITH OTHER TRADES, EQUIPMENT AND/OR FURNITURE WITHIN THE ROOM AND/OR SPACE PRIOR TO SUBMISSION OF SHOP DRAWINGS FOR APPROVAL.
2. SEE SHEET TN001 FOR PROJECT GENERAL NOTES, SYMBOL LEGEND AND ABBREVIATIONS.
3. REFER TO TN002 AND TN003 FOR EQUIPMENT LABELING INFORMATION.
4. SEE 'EG' SERIES DRAWINGS FOR TYPICAL IN-ROOM TELECOMMUNICATIONS BONDING CONNECTION REQUIREMENTS.

SHEET KEYNOTES

1. SPACE FOR GFGI EQUIPMENT.

INSTALLATION NOTES (SECURE AREA)

1. REFER TO TN501 AND TN502 MODULAR JACK AND CABLING FACEPLATE INFORMATION SCHEDULES FOR RED/BLACK WIRELINE INFORMATION.
2. 0'-2" (MIN) SEPARATION MUST BE MAINTAINED BETWEEN (CFCI) RED WIRELINE AND (CFCI) BLACK WIRELINES.
3. 0'-2" (MIN) SEPARATION MUST BE MAINTAINED BETWEEN (CFCI) RED WIRELINE AND (CFCI) BLACK POWERLINES.
4. 0'-6" (MIN) SEPARATION MUST BE MAINTAINED BETWEEN (CFCI) RED WIRELINE AND (CFCI) BLACK WIRELINES THAT RUN PARALLEL OVER 98'-0".
5. RED AND BLACK WIRELINES MUST NOT SHARE COMMON RACEWAY OR CABLE TRAY.

REGISTERED COMMUNICATIONS DISTRIBUTION DESIGNER
WILLIAM J SCHWEITZER
BICSI ID# 111997
EXPIRES 12-31-25
RCDD
07/23/2025

US Army Corps of Engineers ®

MARK	DESCRIPTION	DATE
0	READY-TO-ADV/ERTISE (RTA) SUBMITTAL	JUL 2025

DESIGNED BY: W. SCHWEITZER
DRAWN BY: S. YUNKER
CHECKED BY: C. STRATTON
SUBMITTED BY: B. STREEBIN
SIZE: ANSI D
ISSUE DATE: JUL 2025
SOLICITATION NO.: W912QR25RA001
CONTRACT NO.: W912QR24F0007
FILE NAME:

US ARMY CORPS OF ENGINEERS
LITTLE ROCK DISTRICT
LITTLE ROCK, ARKANSAS

BURNS AND McDONNELL
9400 WARD PARKWAY,
KANSAS CITY, MO 64114
165438

F-35: SPECIAL ACCESS PROGRAM FACILITY
EBBING AIR NATIONAL GUARD BASE (ANGB), FORT SMITH, ARKANSAS

TELECOMMUNICATIONS ELEVATIONS

SHEET ID

TN205

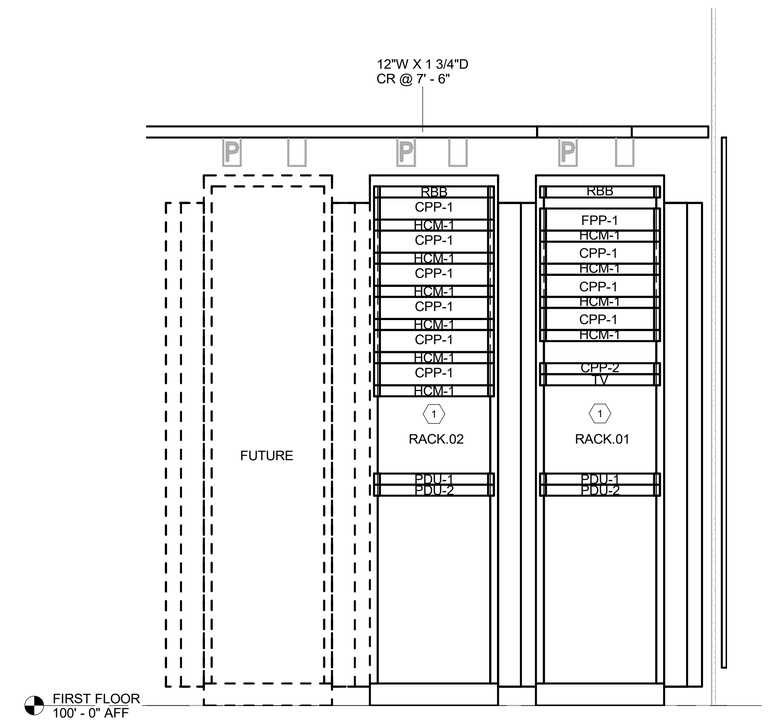
READY-TO-ADVERTISE (RTA) SUBMITTAL

COMMUNICATIONS DROPS - COMM ROOM 216

ROOM		OUTLET		COMM DROPS	
NO.	NAME	TYPE	QUANTITY	GREEN	WHITE
202	COMMAND SUPPORT STAFF	2W	3	12	0
203	ACTIVITY PROGRAM COORDINATOR (APC) / RESOURCE ADVISOR (RA)	2W	2	8	0
204	SQUADRON COMMANDER OFFICE	2W	2	8	0
204	SQUADRON COMMANDER OFFICE	TV	1	0	2
205	CONFERENCE ROOM	2FB	2	8	0
205	CONFERENCE ROOM	2W	1	4	0
205	CONFERENCE ROOM	FB1	2	0	0
206	INTERNATIONAL MILITARY STUDENT OFFICER (IMSO)	2W	2	8	0
207	SNR M-1	2W	2	8	0
208	SNR M-2	2W	2	8	0
209	SNR M-3	2W	2	8	0
211	RA	2W	4	16	0
212	COPY / STORAGE	2W	2	8	0
213	STUDENT COLLAB	2W	2	8	0
213	STUDENT COLLAB	TV	1	0	2
214	LG BRIEFING RM	2FB	2	8	0
214	LG BRIEFING RM	2W	3	12	0
214	LG BRIEFING RM	FB1	2	0	0
215	AV	2W	1	4	0
215	AV	TV	1	0	2
222	STUDENT WORKSTATIONS	2SF	12	24	0
223	INSTRUCTOR WORKSTATIONS	2SF	12	24	0
224	MISSION OPS SUPPORT	2SF	12	24	0
226	IP M-1	2W	2	8	0
227	IP M-2	2W	2	8	0
229	BREAK ROOM	1	1	2	0
229	BREAK ROOM	2W	1	4	0
229	BREAK ROOM	TV	2	0	4
232	FLIGHT MEDICAL OFFICE	2W	2	8	0
234	MOTHER'S ROOM	2W	1	4	0
235	IP M-6	2W	2	8	0
236	IP M-5	2W	2	8	0
237	IP M-4	2W	2	8	0
239	IP M-3	2W	2	8	0
241	TEAM	2FB	1	4	0
241	TEAM	2W	1	4	0
241	TEAM	FB1	1	0	0
241	TEAM	TV	1	0	2
251	MECHANICAL	1	1	2	0
251	MECHANICAL	2BMS	1	2	0
252	ELECTRICAL	1	1	2	0
252	ELECTRICAL	2BMS	1	2	0
Grand total: 102			102	282	12

RACK MOUNTED EQUIPMENT COMM ROOM 216

EQUIP ID	DESCRIPTION	USAGE
RACK.01		
RBB	RACK BONDING BUSBAR - 1RU	
FPP-1	72 PORT (DUAL LC) FIBER PATCH PANEL - 2RU	BACKBONE
HCM-1	HORIZONTAL CABLE MANAGER - 1RU	
CPP-1	48 PORT COPPER PATCH PANEL - 2RU	HORIZONTAL GREEN
HCM-1	HORIZONTAL CABLE MANAGER - 1RU	
CPP-1	48 PORT COPPER PATCH PANEL - 2RU	HORIZONTAL GREEN
HCM-1	HORIZONTAL CABLE MANAGER - 1RU	
CPP-1	48 PORT COPPER PATCH PANEL - 2RU	HORIZONTAL GREEN
HCM-1	HORIZONTAL CABLE MANAGER - 1RU	
CPP-2	24 PORT COPPER PATCH PANEL - 1 RU	HORIZONTAL WHITE (TV)
TV	TV	
PDU-1	POWER DISTRIBUTION UNIT - 1 RU	
PDU-2	POWER DISTRIBUTION UNIT - 1 RU	
RACK.02		
RBB	RACK BONDING BUSBAR - 1RU	
CPP-1	48 PORT COPPER PATCH PANEL - 2RU	HORIZONTAL GREEN
HCM-1	HORIZONTAL CABLE MANAGER - 1RU	
CPP-1	48 PORT COPPER PATCH PANEL - 2RU	HORIZONTAL GREEN
HCM-1	HORIZONTAL CABLE MANAGER - 1RU	
CPP-1	48 PORT COPPER PATCH PANEL - 2RU	HORIZONTAL GREEN
HCM-1	HORIZONTAL CABLE MANAGER - 1RU	
CPP-1	48 PORT COPPER PATCH PANEL - 2RU	HORIZONTAL GREEN
HCM-1	HORIZONTAL CABLE MANAGER - 1RU	
CPP-1	48 PORT COPPER PATCH PANEL - 2RU	HORIZONTAL GREEN
HCM-1	HORIZONTAL CABLE MANAGER - 1RU	
PDU-1	POWER DISTRIBUTION UNIT - 1 RU	
PDU-2	POWER DISTRIBUTION UNIT - 1 RU	



A9 TELECOMMUNICATIONS ELEVATION - COMM ROOM 216

SCALE: 1" = 1'-0"

0 1' 2' 4'

SCALE IN FEET

GENERAL SHEET NOTES

1. THESE DRAWINGS ARE SUPPLEMENTAL TO THE PROJECT SPECIFICATIONS, ARE SCHEMATIC IN NATURE AND SHALL NOT BE USED FOR FIELD INSTALLATION. FIELD INSTALLATION SHALL BE PER APPROVED SHOP DRAWINGS. SEE PROJECT SPECIFICATIONS FOR SHOP DRAWING REQUIREMENTS. THE LAYOUT OF ALL TELECOMMUNICATIONS EQUIPMENT SHALL BE FULLY COORDINATED WITH OTHER TRADES, EQUIPMENT AND/OR FURNITURE WITHIN THE ROOM AND/OR SPACE PRIOR TO SUBMISSION OF SHOP DRAWINGS FOR APPROVAL.
2. SEE SHEET TN001 FOR PROJECT GENERAL NOTES, SYMBOL LEGEND AND ABBREVIATIONS.
3. REFER TO TN002 AND TN003 FOR EQUIPMENT LABELING INFORMATION.
4. SEE 'EG' SERIES DRAWINGS FOR TYPICAL IN-ROOM TELECOMMUNICATIONS BONDING CONNECTION REQUIREMENTS.

SHEET KEYNOTES

1. SPACE FOR GFGI EQUIPMENT.

REGISTERED COMMUNICATIONS DISTRIBUTION DESIGNER
WILLIAM J SCHWEITZER JR
BICSI ID# 111997
EXPIRES 12-31-25
RCDD
07/23/2025

US Army Corps of Engineers ®

MARK	DESCRIPTION	DATE
0	READY-TO-ADVERTISE (RTA) SUBMITTAL	JUL 2025

DESIGNED BY: W. SCHWEITZER
DRAWN BY: A. SANTOS
CHECKED BY: S. STRATTON
SUBMITTED BY: B. STREEBIN
SIZE: ANSI D
FILE NAME:

ISSUE DATE: JUL 2025
SOLICITATION NO.: W912725RA001
CONTRACT NO.: W912724F0007

US ARMY CORPS OF ENGINEERS
LITTLE ROCK DISTRICT
LITTLE ROCK, ARKANSAS

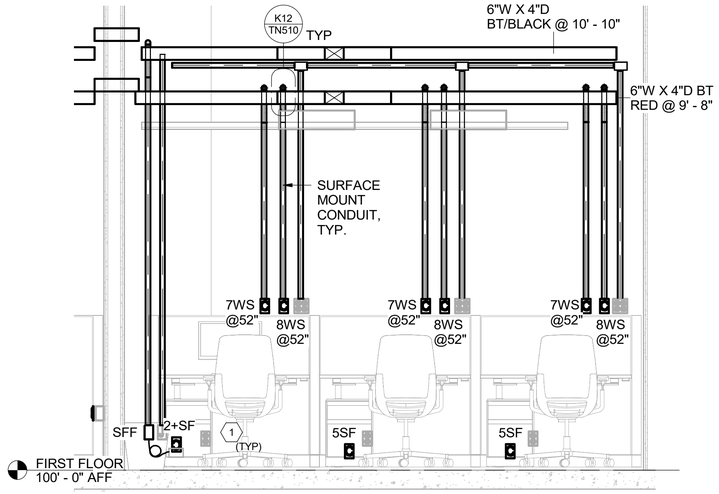
BURNS AND McDONNELL
9400 WARD PARKWAY,
KANSAS CITY, MO 64114
165438

F-35: SPECIAL ACCESS PROGRAM FACILITY
EBBING AIR NATIONAL GUARD BASE (ANGB), FORT SMITH, ARKANSAS

TELECOMMUNICATIONS ELEVATIONS

SHEET ID
TN206

READY-TO-ADVERTISE (RTA) SUBMITTAL

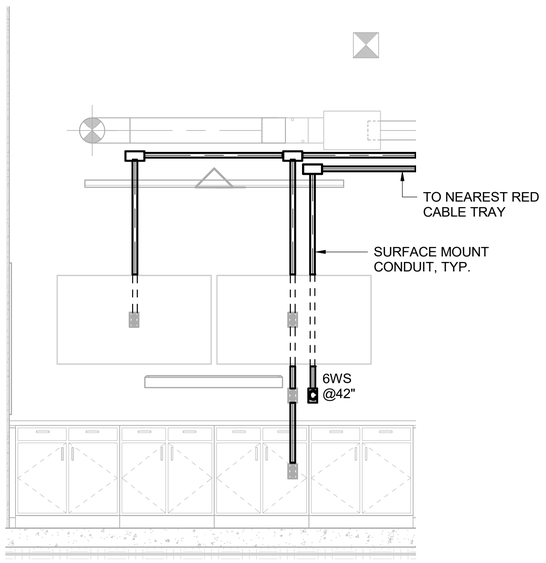


H8 TYPICAL VAULT ALIS / ODIN

SCALE: 1/2" = 1'-0"

0 1' 2' 4'

SCALE IN FEET

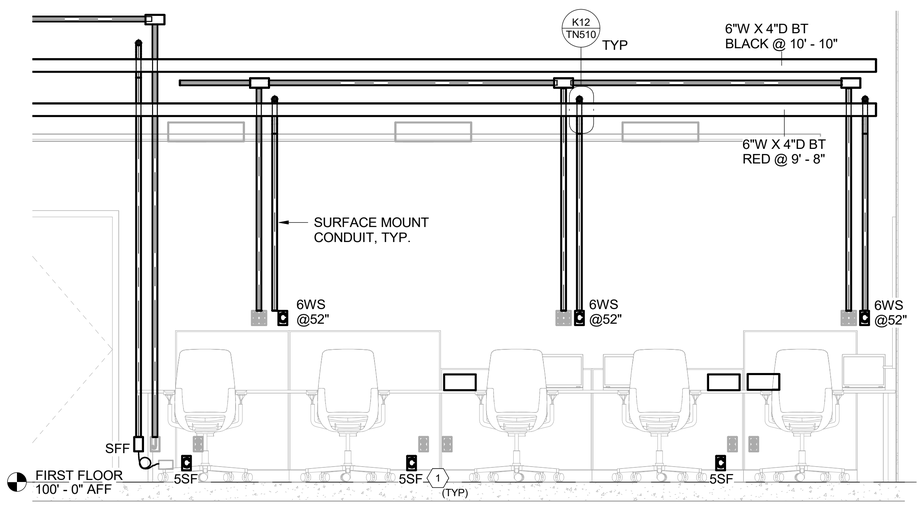


A1 TYPICAL VAULT BRIEF ROOM

SCALE: 1/2" = 1'-0"

0 1' 2' 4'

SCALE IN FEET



A8 TYPICAL VAULT MISSION PLANNING ELEVATION

SCALE: 1/2" = 1'-0"

0 1' 2' 4'

SCALE IN FEET

GENERAL SHEET NOTES

1. THESE DRAWINGS ARE SUPPLEMENTAL TO THE PROJECT SPECIFICATIONS, ARE SCHEMATIC IN NATURE AND SHALL NOT BE USED FOR FIELD INSTALLATION. FIELD INSTALLATION SHALL BE PER APPROVED SHOP DRAWINGS. SEE PROJECT SPECIFICATIONS FOR SHOP DRAWING REQUIREMENTS. THE LAYOUT OF ALL TELECOMMUNICATIONS EQUIPMENT SHALL BE FULLY COORDINATED WITH OTHER TRADES, EQUIPMENT AND/OR FURNITURE WITHIN THE ROOM AND/OR SPACE PRIOR TO SUBMISSION OF SHOP DRAWINGS FOR APPROVAL.
2. SEE SHEET TN001 FOR PROJECT GENERAL NOTES, SYMBOL LEGEND AND ABBREVIATIONS.
3. REFER TO TN002 AND TN003 FOR EQUIPMENT LABELING INFORMATION.
4. SEE 'EG' SERIES DRAWINGS FOR TYPICAL IN-ROOM TELECOMMUNICATIONS BONDING CONNECTION REQUIREMENTS.

SHEET KEYNOTES

1. DEVICE MOUNTED IN SYSTEM FURNITURE. COORDINATE INSTALL WITH FURNITURE INSTALLATION.

INSTALLATION NOTES (SECURE AREA)

1. REFER TO TN501 AND TN502 MODULAR JACK AND CABLING FACEPLATE INFORMATION SCHEDULES FOR RED/BLACK WIRELINE INFORMATION.
2. 0'-2" (MIN) SEPARATION MUST BE MAINTAINED BETWEEN (CFCI) RED WIRELINE AND (CFCI) BLACK WIRELINES.
3. 0'-2" (MIN) SEPARATION MUST BE MAINTAINED BETWEEN (CFCI) RED WIRELINE AND (CFCI) BLACK POWERLINES.
4. 0'-6" (MIN) SEPARATION MUST BE MAINTAINED BETWEEN (CFCI) RED WIRELINE AND (CFCI) BLACK WIRELINES THAT RUN PARALLEL OVER 98'-0".
5. RED AND BLACK WIRELINES MUST NOT SHARE COMMON RACEWAY OR CABLE TRAY.

REGISTERED COMMUNICATIONS DISTRIBUTION DESIGNER
WILLIAM J SCHWEITZER
BICSI ID# 111997
EXPIRES 12-31-25
RCDD
07/23/2025

US Army Corps of Engineers ®

MARK	DESCRIPTION	DATE
0	READY-TO-ADVERTISE (RTA) SUBMITTAL	JUL 2025

DESIGNED BY: W. SCHWEITZER
DRAWN BY: A. SANTOS
CHECKED BY: S. STRATTON
SUBMITTED BY: B. STREEBIN
SIZE: ANSI D
ISSUE DATE: JUL 2025
SOLICITATION NO.: W912T525RA001
CONTRACT NO.: W912T524F0007
FILE NAME:

US ARMY CORPS OF ENGINEERS
LITTLE ROCK DISTRICT
LITTLE ROCK, ARKANSAS

BURNS AND McDONNELL
9400 WARD PARKWAY,
KANSAS CITY, MO 64114
16438

F-35 SPECIAL ACCESS PROGRAM FACILITY
EBBING AIR NATIONAL GUARD BASE (ANGB), FORT SMITH, ARKANSAS

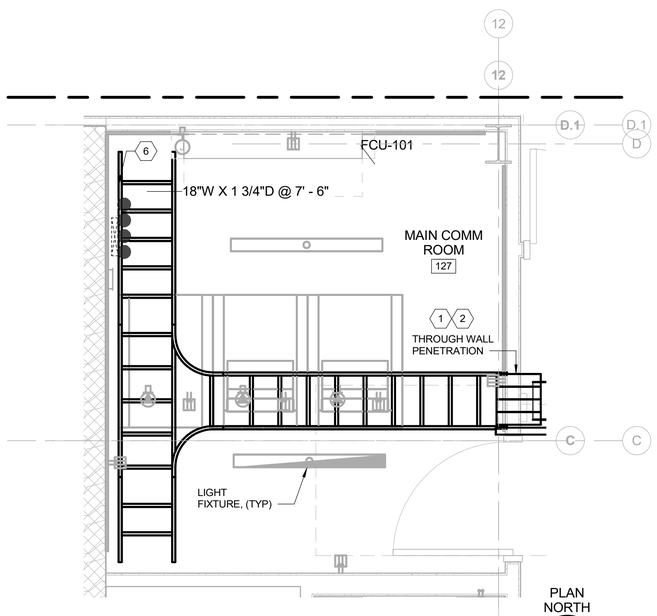
TELECOMMUNICATIONS SECTIONS

SHEET ID
TN207

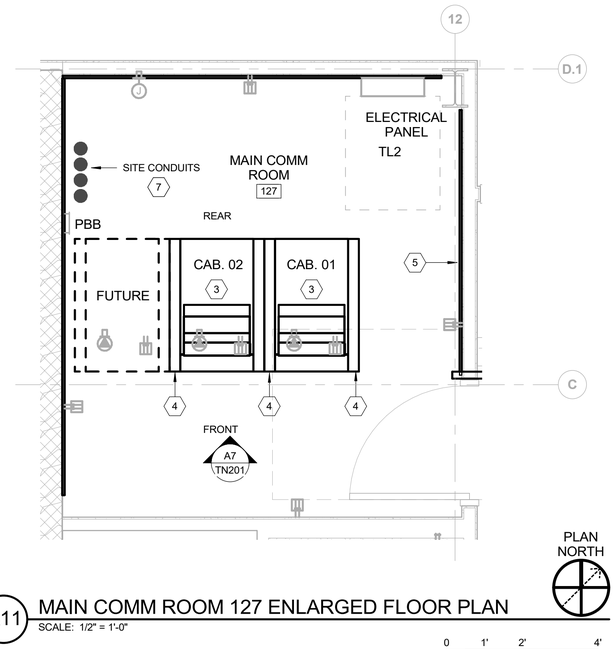
READY-TO-ADVERTISE (RTA) SUBMITTAL

CABINET SCHEDULE - MAIN COMM ROOM 127

CABINET IDEN	ROOM		DIMENSIONS			DOORS		SIDES	VERTICAL EXHAUST DUCT	NOTES
	NAME	NUMBER	WIDTH	DEPTH	HEIGHT	FRONT	BACK			
CAB. 01	MAIN COMM ROOM	127	2' - 6"	3' - 6"	7' - 0"	METAL MESH	METAL MESH	L-R	No	PROVIDE WITH VERTICAL CABLE MANAGEMENT
CAB. 02	MAIN COMM ROOM	127	2' - 6"	3' - 6"	7' - 0"	METAL MESH	METAL MESH	L-R	No	PROVIDE WITH VERTICAL CABLE MANAGEMENT
FUTURE	MAIN COMM ROOM	127	2' - 6"	3' - 6"	7' - 0"	METAL MESH	METAL MESH	L-R	No	



A4 MAIN COMM ROOM 127 ENLARGED CABLE TRAY PLAN
SCALE: 1/2" = 1'-0"



A11 MAIN COMM ROOM 127 ENLARGED FLOOR PLAN
SCALE: 1/2" = 1'-0"

GENERAL SHEET NOTES

1. THESE DRAWINGS ARE SUPPLEMENTAL TO THE PROJECT SPECIFICATIONS, ARE SCHEMATIC IN NATURE AND SHALL NOT BE USED FOR FIELD INSTALLATION. FIELD INSTALLATION SHALL BE PER APPROVED SHOP DRAWINGS. SEE PROJECT SPECIFICATIONS FOR SHOP DRAWING REQUIREMENTS. THE LAYOUT OF ALL TELECOMMUNICATIONS EQUIPMENT SHALL BE FULLY COORDINATED WITH OTHER TRADES, EQUIPMENT AND/OR FURNITURE WITHIN THE ROOM AND/OR SPACE PRIOR TO SUBMISSION OF SHOP DRAWINGS FOR APPROVAL.
2. SEE SHEET TN001 FOR PROJECT GENERAL NOTES, SYMBOL LEGEND AND ABBREVIATIONS.
3. REFER TO TN002 AND TN003 FOR EQUIPMENT LABELING INFORMATION.
4. SEE 'EG' SERIES DRAWINGS FOR TYPICAL IN-ROOM TELECOMMUNICATIONS BONDING CONNECTION REQUIREMENTS.
5. SEE 'EG' SERIES DRAWINGS FOR TELECOMMUNICATIONS GROUNDING BACKBONE REQUIREMENTS.

SHEET KEYNOTES

1. PROVIDE VERTICAL CABLE RUNWAY FROM HORIZONTAL CABLE RUNWAY UP TO THROUGH WALL PENETRATION. SUPPORT VERTICAL CABLE BUNDLES TO VERTICAL CABLE RUNWAY, REFER TO DETAIL A2/TN512.
2. CABLE TRAY THROUGH WALL PENETRATION. REFER TO G11/TN511.
3. PROVIDE FLOOR MOUNTED COMMUNICATIONS EQUIPMENT CABINET, TYPICAL.
4. PROVIDE VERTICAL CABLE MANAGEMENT BOTH SIDES OF CABINET, TYPICAL EACH RACK.
5. FIRE RATED PLYWOOD, TYPICAL (3) THREE WALLS.
6. PROVIDE VERTICAL CABLE RUNWAY FROM HORIZONTAL CABLE RUNWAY DOWN TO SITE CONDUIT STUB-UPS. SUPPORT VERTICAL CABLE TO VERTICAL CABLE RUNWAY. REFER TO DETAIL A2/TN512.
7. SITE CONDUITS, REFER TO ES116 FOR ADDITIONAL INFORMATION.

REGISTERED COMMUNICATIONS DISTRIBUTION DESIGNER
WILLIAM J SCHWEITZER
BICSI ID# 111997
EXPIRES 12-31-25
RCDD
07/23/2025

US Army Corps of Engineers ®

MARK	DESCRIPTION	DATE
0	READY-TO-ADV/ERTISE (RTA) SUBMITTAL	JUL 2025

DESIGNED BY: W. SCHWEITZER
DRAWN BY: S. YUNKER
CHECKED BY: C. STRATTON
SUBMITTED BY: B. STREEBIN
ISSUE DATE: JUL 2025
SOLICITATION NO.: W912735-25-RA001
CONTRACT NO.: W912735-24-T0007
SIZE: ANSI D
FILE NAME:

US ARMY CORPS OF ENGINEERS
LITTLE ROCK DISTRICT
LITTLE ROCK, ARKANSAS

BURNS AND McDONNELL
9400 WARD PARKWAY,
KANSAS CITY, MO 64114
165438

F-35; SPECIAL ACCESS PROGRAM FACILITY
EBBING AIR NATIONAL GUARD BASE (ANGB), FORT SMITH, ARKANSAS

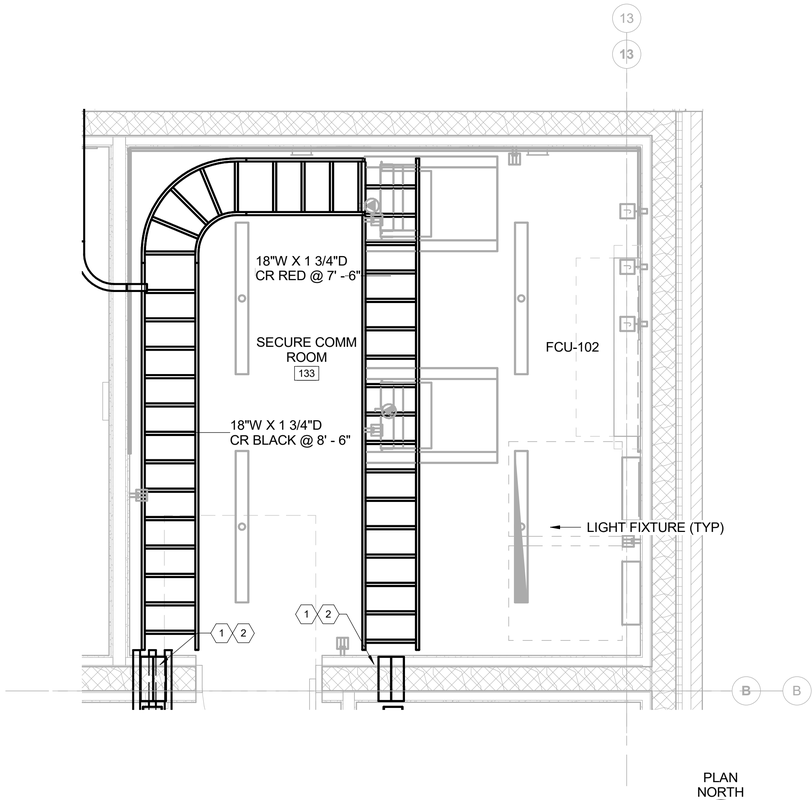
TELECOMMUNICATIONS ENLARGED PLAN

SHEET ID
TN401

READY-TO-ADVERTISE (RTA) SUBMITTAL

CABINET SCHEDULE - SECURE COMM ROOM 133

CABINET IDEN	ROOM		DIMENSIONS			DOORS		SIDES	VERTICAL EXHAUST DUCT	NOTES
	NAME	NUMBER	WIDTH	DEPTH	HEIGHT	FRONT	BACK			
CAB. 01	SECURE COMM ROOM	133	2' - 6"	3' - 6"	7' - 0"	METAL MESH	METAL MESH	L-R	No	PROVIDE WITH VERTICAL CABLE MANAGEMENT
CAB. 02	SECURE COMM ROOM	133	2' - 6"	3' - 6"	7' - 0"	METAL MESH	METAL MESH	L-R	No	PROVIDE WITH VERTICAL CABLE MANAGEMENT

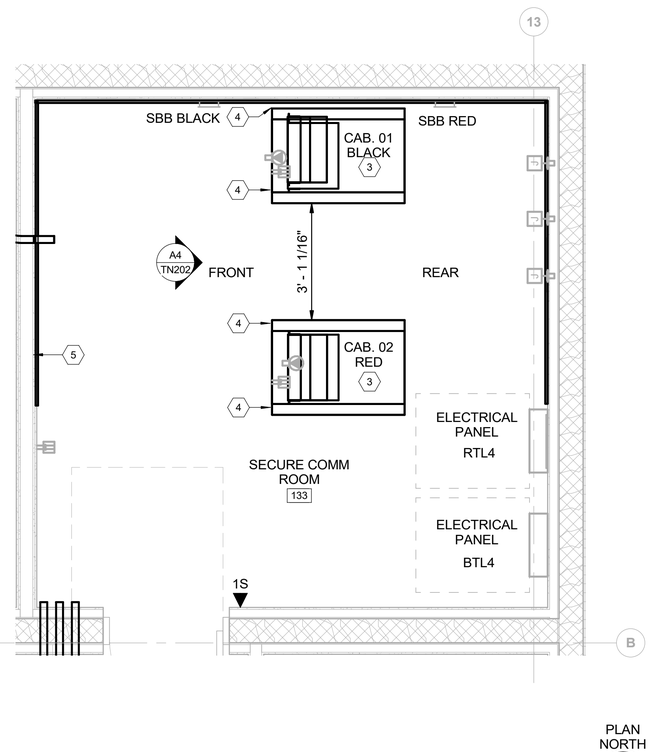


A3 SECURE COMMS ROOM 133 ENLARGED CABLE TRAY PLAN

SCALE: 1/2" = 1'-0"

0 1' 2' 4'

SCALE IN FEET



A10 SECURE COMMS ROOM 133 ENLARGED FLOOR PLAN

SCALE: 1/2" = 1'-0"

0 1' 2' 4'

SCALE IN FEET

GENERAL SHEET NOTES

1. THESE DRAWINGS ARE SUPPLEMENTAL TO THE PROJECT SPECIFICATIONS, ARE SCHEMATIC IN NATURE AND SHALL NOT BE USED FOR FIELD INSTALLATION. FIELD INSTALLATION SHALL BE PER APPROVED SHOP DRAWINGS. SEE PROJECT SPECIFICATIONS FOR SHOP DRAWING REQUIREMENTS. THE LAYOUT OF ALL TELECOMMUNICATIONS EQUIPMENT SHALL BE FULLY COORDINATED WITH OTHER TRADES, EQUIPMENT AND/OR FURNITURE WITHIN THE ROOM AND/OR SPACE PRIOR TO SUBMISSION OF SHOP DRAWINGS FOR APPROVAL.
2. SEE SHEET TN001 FOR PROJECT GENERAL NOTES, SYMBOL LEGEND AND ABBREVIATIONS.
3. REFER TO TN002 AND TN003 FOR EQUIPMENT LABELING INFORMATION.
4. SEE 'EG' SERIES DRAWINGS FOR TYPICAL IN-ROOM TELECOMMUNICATIONS BONDING CONNECTION REQUIREMENTS.
5. SEE 'EG' SERIES DRAWINGS FOR TELECOMMUNICATIONS GROUNDING BACKBONE REQUIREMENTS.

SHEET KEYNOTES

1. PROVIDE VERTICAL CABLE RUNWAY FROM HORIZONTAL CABLE RUNWAY UP TO ACOUSTICAL RATED PATHWAY. SUPPORT VERTICAL CABLE BUNDLES TO VERTICAL CABLE RUNWAY. REFER TO DETAIL A2/TN512.
2. PROVIDE (2) ACOUSTICAL RATED PENETRATION SLEEVES, REFER TO G1/TN511.
3. PROVIDE FLOOR MOUNTED COMMUNICATIONS EQUIPMENT CABINET, TYPICAL.
4. PROVIDE VERTICAL CABLE MANAGEMENT BOTH SIDES OF CABINET, TYPICAL EACH RACK.
5. FIRE-RATED PLYWOOD, TYPICAL (3) THREE WALLS.

REGISTERED COMMUNICATIONS DISTRIBUTION DESIGNER
WILLIAM J SCHWEITZER
BICSI ID# 111997
EXPIRES 12-31-25
RCDD
07/23/2025

US Army Corps of Engineers ®

MARK	DESCRIPTION	DATE
0	READY-TO-ADVERTISE (RTA) SUBMITTAL	JUL 2025

DESIGNED BY:	W. SCHWEITZER
DRAWN BY:	S. YUNKER
CHECKED BY:	C. HEROLD
QUALITY CONTROL BY:	W. SCHWEITZER
SUBMITTED BY:	B. STREEBIN
SIZE:	ANSI D
FILE NAME:	
ISSUE DATE:	JUL 2025
SOLICITATION NO.:	W912725RA001
CONTRACT NO.:	W912724F0007

US ARMY CORPS OF ENGINEERS
LITTLE ROCK DISTRICT
LITTLE ROCK, ARKANSAS

BURNS AND McDONNELL
9400 WARD PARKWAY,
KANSAS CITY, MO 64114
165438

F-35, SPECIAL ACCESS PROGRAM FACILITY
EBBING AIR NATIONAL GUARD BASE (ANGB), FORT SMITH, ARKANSAS

TELECOMMUNICATIONS ENLARGED PLAN

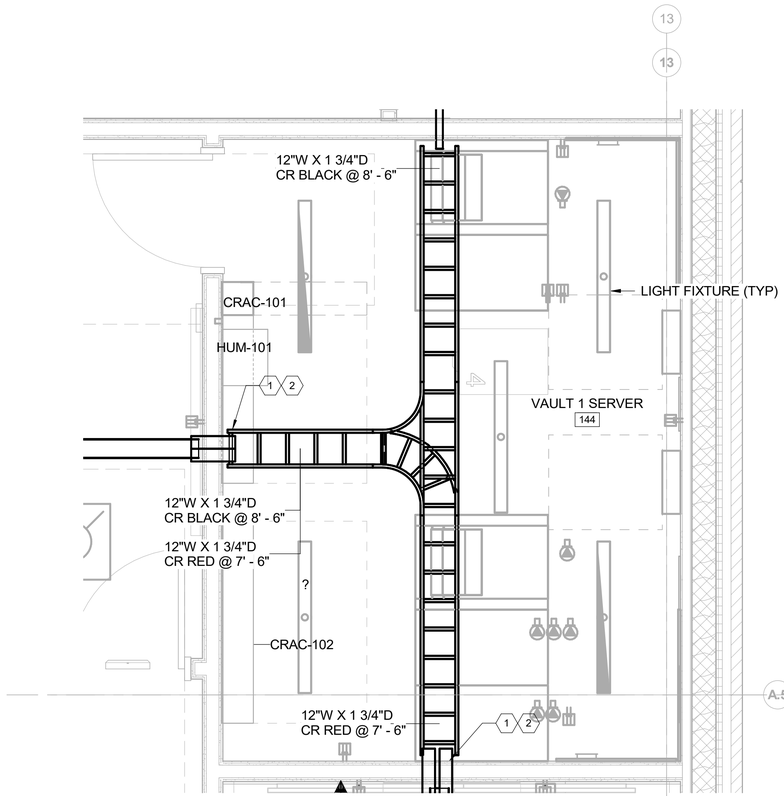
SHEET ID

TN402

READY-TO-ADVERTISE (RTA) SUBMITTAL

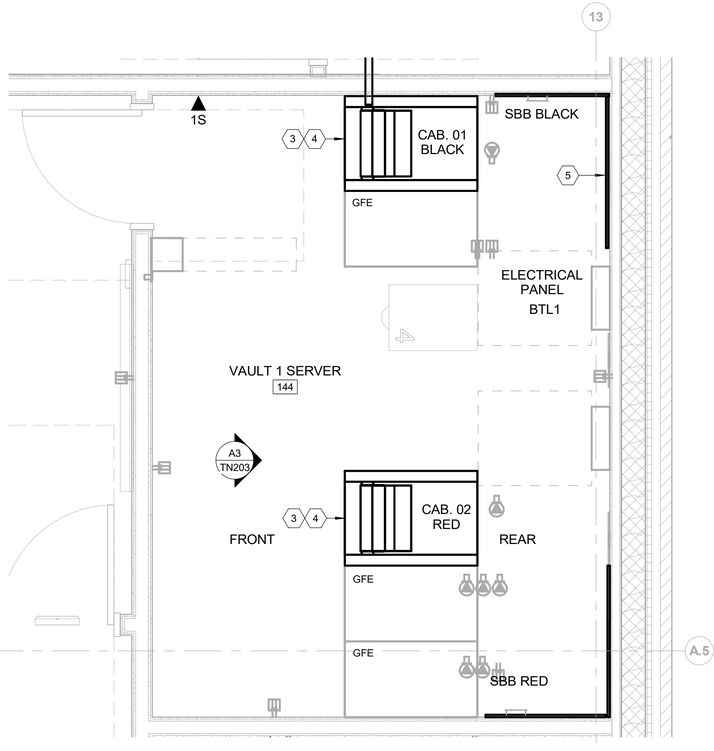
CABINET SCHEDULE - VAULT 1 SERVER 144

CABINET IDEN	ROOM		DIMENSIONS			DOORS		SIDES	VERTICAL EXHAUST DUCT	NOTES
	NAME	NUMBER	WIDTH	DEPTH	HEIGHT	FRONT	BACK			
CAB. 01	VAULT 1 SERVER	144	2' - 6"	3' - 6"	7' - 0"	METAL MESH	METAL MESH	L-R		PROVIDE WITH VERTICAL CABLE MANAGEMENT
CAB. 02	VAULT 1 SERVER	144	2' - 6"	3' - 6"	7' - 0"	METAL MESH	METAL MESH	L-R		PROVIDE WITH VERTICAL CABLE MANAGEMENT



A3 VAULT 1 SERVER 144 ENLARGED CABLE TRAY PLAN

SCALE: 1/2" = 1'-0"



A10 VAULT 1 SERVER 144 ENLARGED PLAN

SCALE: 1/2" = 1'-0"

GENERAL SHEET NOTES

1. THESE DRAWINGS ARE SUPPLEMENTAL TO THE PROJECT SPECIFICATIONS, ARE SCHEMATIC IN NATURE AND SHALL NOT BE USED FOR FIELD INSTALLATION. FIELD INSTALLATION SHALL BE PER APPROVED SHOP DRAWINGS. SEE PROJECT SPECIFICATIONS FOR SHOP DRAWING REQUIREMENTS. THE LAYOUT OF ALL TELECOMMUNICATIONS EQUIPMENT SHALL BE FULLY COORDINATED WITH OTHER TRADES, EQUIPMENT AND/OR FURNITURE WITHIN THE ROOM AND/OR SPACE PRIOR TO SUBMISSION OF SHOP DRAWINGS FOR APPROVAL.
2. SEE SHEET TN001 FOR PROJECT GENERAL NOTES, SYMBOL LEGEND AND ABBREVIATIONS.
3. REFER TO TN002 AND TN003 FOR EQUIPMENT LABELING INFORMATION.
4. SEE 'EG' SERIES DRAWINGS FOR TYPICAL IN-ROOM TELECOMMUNICATIONS BONDING CONNECTION REQUIREMENTS.
5. SEE 'EG' SERIES DRAWINGS FOR TELECOMMUNICATIONS GROUNDING BACKBONE REQUIREMENTS.

SHEET KEYNOTES

1. PROVIDE VERTICAL CABLE RUNWAY FROM HORIZONTAL CABLE RUNWAY UP TO ACOUSTICAL RATED PATHWAY. SUPPORT VERTICAL CABLE BUNDLES TO VERTICAL CABLE RUNWAY. REFER TO DETAIL A2/TN512.
2. PROVIDE (2) ACOUSTICAL RATED PENETRATION SLEEVES FOR EACH CABLE TRAY (RED / BLACK), REFER TO G1/TN511.
3. PROVIDE FLOOR MOUNTED CABINET.
4. PROVIDE VERTICAL CABLE MANAGEMENT BOTH SIDES OF CABINET.
5. FIRE-RATED PLYWOOD, WHERE INDICATED.

REGISTERED COMMUNICATIONS DISTRIBUTION DESIGNER
WILLIAM J SCHWEITZER
BICSI ID# 111997
EXPIRES 12-31-25
RCDD
07/23/2025

US Army Corps of Engineers ®

MARK	DESCRIPTION	DATE
0	READY-TO-ADV/ERTISE (RTA) SUBMITTAL	JUL 2025

DESIGNED BY: W. SCHWEITZER
DRAWN BY: S. YUNKER
CHECKED BY: C. STRATTON
SUBMITTED BY: B. STREEBIN
SIZE: ANSI D
ISSUE DATE: JUL 2025
SOLICITATION NO.: W912T525RA001
CONTRACT NO.: W912T524F0007
FILE NAME:

US ARMY CORPS OF ENGINEERS
LITTLE ROCK DISTRICT
LITTLE ROCK, ARKANSAS

BURNS AND McDONNELL
9400 WARD PARKWAY,
KANSAS CITY, MO 64114
165438

F-35: SPECIAL ACCESS PROGRAM FACILITY
EBBING AIR NATIONAL GUARD BASE (ANGB), FORT SMITH, ARKANSAS

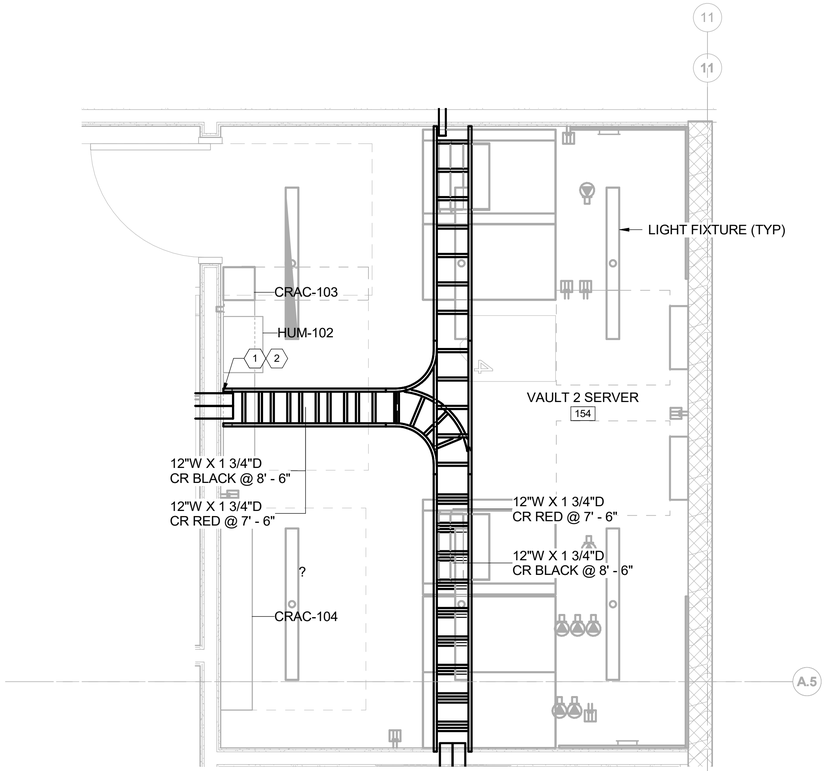
TELECOMMUNICATIONS ENLARGED PLAN

SHEET ID
TN403

READY-TO-ADVERTISE (RTA) SUBMITTAL

CABINET SCHEDULE - VAULT 2 SERVER 154

CABINET IDEN	ROOM		DIMENSIONS			DOORS		SIDES	VERTICAL EXHAUST DUCT	NOTES
	NAME	NUMBER	WIDTH	DEPTH	HEIGHT	FRONT	BACK			
CAB. 01	VAULT 2 SERVER	154	2' - 6"	3' - 6"	7' - 0"	METAL MESH	METAL MESH	L-R		PROVIDE WITH VERTICAL CABLE MANAGEMENT
CAB. 02	VAULT 2 SERVER	154	2' - 6"	3' - 6"	7' - 0"	METAL MESH	METAL MESH	L-R		PROVIDE WITH VERTICAL CABLE MANAGEMENT



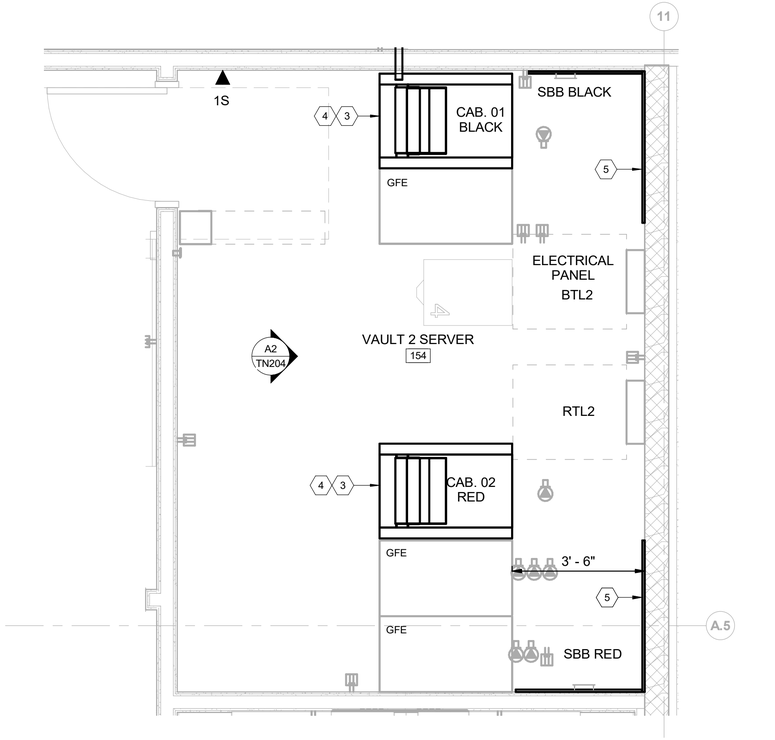
PLAN NORTH

A2 VAULT 2 SERVER 154 ENLARGED CABLE TRAY PLAN

SCALE: 1/2" = 1'-0"

0 1' 2' 4'

SCALE IN FEET



PLAN NORTH

A10 VAULT 2 SERVER 154 ENLARGED PLAN

SCALE: 1/2" = 1'-0"

0 1' 2' 4'

SCALE IN FEET

GENERAL SHEET NOTES

1. THESE DRAWINGS ARE SUPPLEMENTAL TO THE PROJECT SPECIFICATIONS, ARE SCHEMATIC IN NATURE AND SHALL NOT BE USED FOR FIELD INSTALLATION. FIELD INSTALLATION SHALL BE PER APPROVED SHOP DRAWINGS. SEE PROJECT SPECIFICATIONS FOR SHOP DRAWING REQUIREMENTS. THE LAYOUT OF ALL TELECOMMUNICATIONS EQUIPMENT SHALL BE FULLY COORDINATED WITH OTHER TRADES, EQUIPMENT AND/OR FURNITURE WITHIN THE ROOM AND/OR SPACE PRIOR TO SUBMISSION OF SHOP DRAWINGS FOR APPROVAL.
2. SEE SHEET TN001 FOR PROJECT GENERAL NOTES, SYMBOL LEGEND AND ABBREVIATIONS.
3. REFER TO TN002 AND TN003 FOR EQUIPMENT LABELING INFORMATION.
4. SEE 'EG' SERIES DRAWINGS FOR TYPICAL IN-ROOM TELECOMMUNICATIONS BONDING CONNECTION REQUIREMENTS.
5. SEE 'EG' SERIES DRAWINGS FOR TELECOMMUNICATIONS GROUNDING BACKBONE REQUIREMENTS.

SHEET KEYNOTES

1. PROVIDE VERTICAL CABLE RUNWAY FROM HORIZONTAL CABLE RUNWAY UP TO ACOUSTICAL RATED PATHWAY. SUPPORT VERTICAL CABLE BUNDLES TO VERTICAL CABLE RUNWAY. REFER TO DETAIL A2/TN512.
2. PROVIDE (2) ACOUSTICAL RATED PENETRATION SLEEVES FOR EACH CABLE TRAY (RED / BLACK), REFER TO G1/TN511.
3. PROVIDE FLOOR MOUNTED CABINET.
4. PROVIDE VERTICAL CABLE MANAGEMENT BOTH SIDES OF CABINET.
5. FIRE-RATED PLYWOOD, WHERE INDICATED.

REGISTERED COMMUNICATIONS DISTRIBUTION DESIGNER
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BICSI ID# 111997
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US Army Corps of Engineers ®

MARK	DESCRIPTION	DATE
0	READY-TO-ADVERTISE (RTA) SUBMITTAL	JUL 2025

ISSUE DATE: JUL 2025
SOLICITATION NO.: W912T525RA001
CONTRACT NO.: W912T524F0007

DESIGNED BY: W. SCHWEITZER
DRAWN BY: S. YUNKER
CHECKED BY: S. STRATTON
SUBMITTED BY: B. STREEBIN
SIZE: ANSI D
FILE NAME:

US ARMY CORPS OF ENGINEERS
LITTLE ROCK DISTRICT
LITTLE ROCK, ARKANSAS

BURNS AND McDONNELL
9400 WARD PARKWAY,
KANSAS CITY, MO 64114
165438

F-35 SPECIAL ACCESS PROGRAM FACILITY
EBBING AIR NATIONAL GUARD BASE (ANGB), FORT SMITH, ARKANSAS

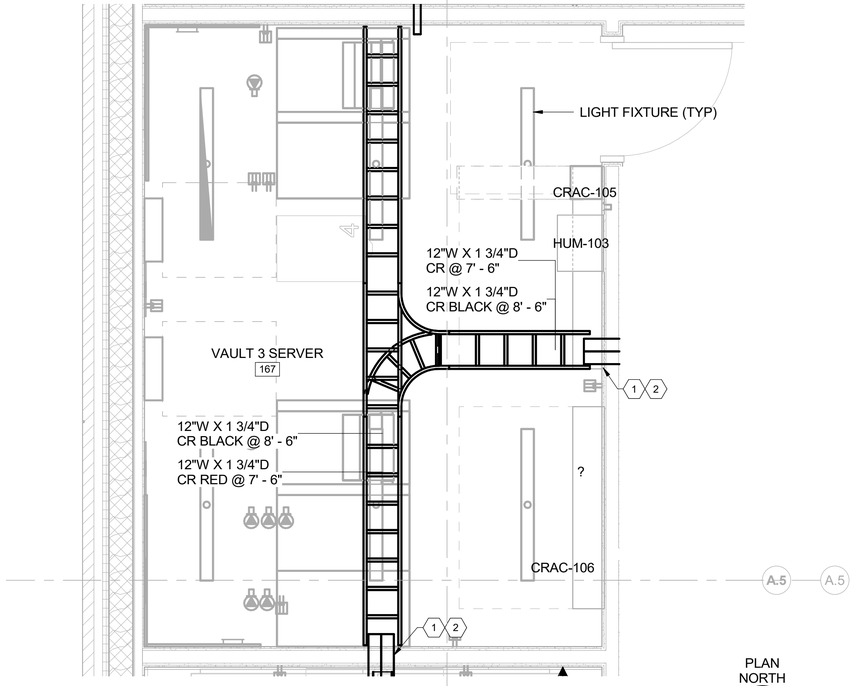
TELECOMMUNICATIONS ENLARGED PLAN

SHEET ID
TN404

READY-TO-ADVERTISE (RTA) SUBMITTAL

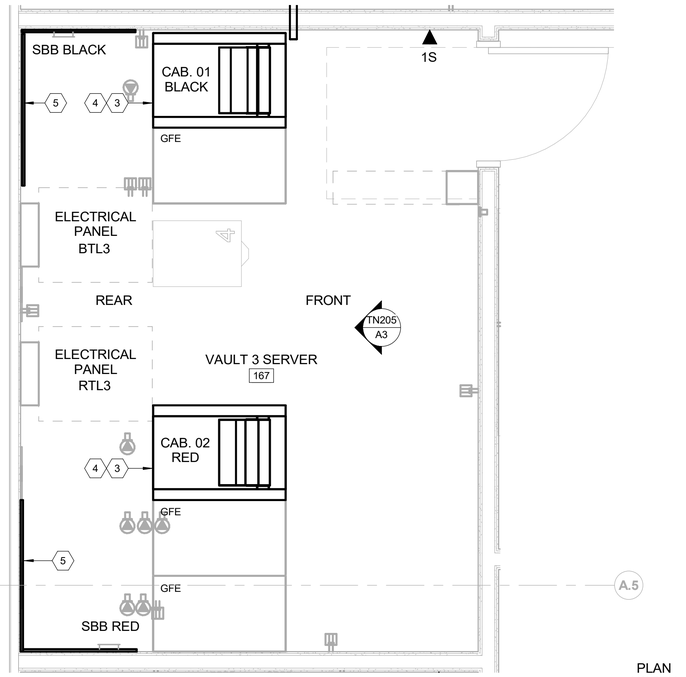
CABINET SCHEDULE - VAULT 3 SERVER 167

CABINET IDEN	ROOM		DIMENSIONS			DOORS		SIDES	VERTICAL EXHAUST DUCT	NOTES
	NAME	NUMBER	WIDTH	DEPTH	HEIGHT	FRONT	BACK			
CAB. 01	VAULT 3 SERVER	167	2' - 6"	3' - 6"	7' - 0"	METAL MESH	METAL MESH	L-R		PROVIDE WITH VERTICAL CABLE MANAGEMENT
CAB. 02	VAULT 3 SERVER	167	2' - 6"	3' - 6"	7' - 0"	METAL MESH	METAL MESH	L-R		PROVIDE WITH VERTICAL CABLE MANAGEMENT



A2 VAULT 3 SERVER 167 ENLARGED CABLE TRAY PLAN
SCALE: 1/2" = 1'-0"

0 1' 2' 4'
SCALE IN FEET



A10 VAULT 3 SERVER 167 ENLARGED PLAN
SCALE: 1/2" = 1'-0"

0 1' 2' 4'
SCALE IN FEET

GENERAL SHEET NOTES

1. THESE DRAWINGS ARE SUPPLEMENTAL TO THE PROJECT SPECIFICATIONS, ARE SCHEMATIC IN NATURE AND SHALL NOT BE USED FOR FIELD INSTALLATION. FIELD INSTALLATION SHALL BE PER APPROVED SHOP DRAWINGS. SEE PROJECT SPECIFICATIONS FOR SHOP DRAWING REQUIREMENTS. THE LAYOUT OF ALL TELECOMMUNICATIONS EQUIPMENT SHALL BE FULLY COORDINATED WITH OTHER TRADES, EQUIPMENT AND/OR FURNITURE WITHIN THE ROOM AND/OR SPACE PRIOR TO SUBMISSION OF SHOP DRAWINGS FOR APPROVAL.
2. SEE SHEET TN001 FOR PROJECT GENERAL NOTES, SYMBOL LEGEND AND ABBREVIATIONS.
3. REFER TO TN002 AND TN003 FOR EQUIPMENT LABELING INFORMATION.
4. SEE 'EG' SERIES DRAWINGS FOR TYPICAL IN-ROOM TELECOMMUNICATIONS BONDING CONNECTION REQUIREMENTS.
5. SEE 'EG' SERIES DRAWINGS FOR TELECOMMUNICATIONS GROUNDING BACKBONE REQUIREMENTS.

SHEET KEYNOTES

1. PROVIDE VERTICAL CABLE RUNWAY FROM HORIZONTAL CABLE RUNWAY UP TO ACOUSTICAL RATED PATHWAY. SUPPORT VERTICAL CABLE BUNDLES TO VERTICAL CABLE RUNWAY. REFER TO DETAIL A2/TN512.
2. PROVIDE (3) ACOUSTICAL RATED PENETRATION SLEEVES FOR EACH CABLE TRAY (RED / BLACK), REFER TO G1/TN511.
3. PROVIDE FLOOR MOUNTED CABINET.
4. PROVIDE VERTICAL CABLE MANAGEMENT BOTH SIDES OF CABINET.
5. FIRE-RATED PLYWOOD, WHERE INDICATED.

REGISTERED COMMUNICATIONS DISTRIBUTION DESIGNER
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WILLIAM J SCHWEITZER
BICSI ID# 111997
EXPIRES 12-31-25
RCDD
07/23/2025

US Army Corps of Engineers ®

MARK	DESCRIPTION	DATE
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ISSUE DATE: JUL 2025
SOLICITATION NO.: W912T525RA001
CONTRACT NO.: W912T524F0007
DESIGNED BY: W. SCHWEITZER
DRAWN BY: S. YUNKER
CHECKED BY: S. PETTIGREW
SUBMITTED BY: B. STREEBIN
SIZE: ANSI D
FILE NAME:

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LITTLE ROCK DISTRICT
LITTLE ROCK, ARKANSAS

BURNS AND McDONNELL
9400 WARD PARKWAY,
KANSAS CITY, MO 64114
165438

F-35, SPECIAL ACCESS PROGRAM FACILITY
EBBING AIR NATIONAL GUARD BASE (ANGB), FORT SMITH, ARKANSAS

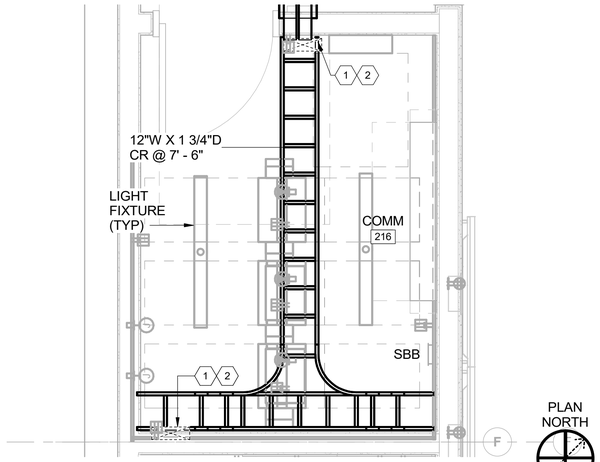
TELECOMMUNICATIONS ENLARGED PLAN

SHEET ID
TN405

READY-TO-ADVERTISE (RTA) SUBMITTAL

RACK SCHEDULE - COMM ROOM 216

RACK IDEN	ROOM		DIMENSIONS			DOORS		SIDES	VERTICAL EXHAUST DUCT	NOTES
	NAME	NUMBER	WIDTH	DEPTH	HEIGHT	FRONT	BACK			
FUTURE	COMM	216	1' - 7"	1' - 3"	7' - 0"					
RACK.01	COMM	216	1' - 7"	1' - 3"	7' - 0"					
RACK.02	COMM	216	1' - 7"	1' - 3"	7' - 0"					

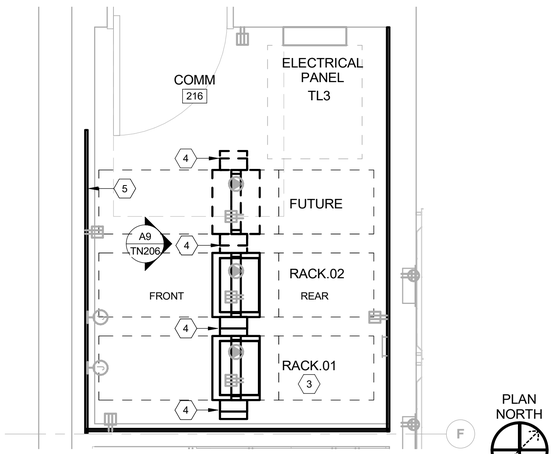


A5 COMM ROOM 216 ENLARGED CABLE TRAY PLAN

SCALE: 1/2" = 1'-0"

0 1' 2' 4'

SCALE IN FEET



A11 COMM ROOM 216 ENLARGED PLAN

SCALE: 1/2" = 1'-0"

0 1' 2' 4'

SCALE IN FEET

GENERAL SHEET NOTES

1. THESE DRAWINGS ARE SUPPLEMENTAL TO THE PROJECT SPECIFICATIONS, ARE SCHEMATIC IN NATURE AND SHALL NOT BE USED FOR FIELD INSTALLATION. FIELD INSTALLATION SHALL BE PER APPROVED SHOP DRAWINGS. SEE PROJECT SPECIFICATIONS FOR SHOP DRAWING REQUIREMENTS. THE LAYOUT OF ALL TELECOMMUNICATIONS EQUIPMENT SHALL BE FULLY COORDINATED WITH OTHER TRADES, EQUIPMENT AND/OR FURNITURE WITHIN THE ROOM AND/OR SPACE PRIOR TO SUBMISSION OF SHOP DRAWINGS FOR APPROVAL.
2. SEE SHEET TN001 FOR PROJECT GENERAL NOTES, SYMBOL LEGEND AND ABBREVIATIONS.
3. REFER TO TN002 AND TN003 FOR EQUIPMENT LABELING INFORMATION.
4. SEE 'EG' SERIES DRAWINGS FOR TYPICAL IN-ROOM TELECOMMUNICATIONS BONDING CONNECTION REQUIREMENTS.
5. SEE 'EG' SERIES DRAWINGS FOR TELECOMMUNICATIONS GROUNDING BACKBONE REQUIREMENTS.

SHEET KEYNOTES

1. PROVIDE VERTICAL CABLE RUNWAY FROM HORIZONTAL CABLE RUNWAY UP TO PATHWAY THROUGH WALL. SUPPORT VERTICAL CABLE BUNDLES TO VERTICAL CABLE RUNWAY, REFER TO DETAIL A2/TN512.
2. CABLE TRAY THROUGH WALL PENETRATION. REFER TO G11/TN511.
3. PROVIDE FLOOR MOUNTED COMMUNICATIONS RACK, TYPICAL.
4. PROVIDE VERTICAL CABLE MANAGEMENT BOTH SIDES OF RACK, TYPICAL EACH RACK.
5. FIRE RATED PLYWOOD, TYPICAL (3) THREE WALLS.

REGISTERED COMMUNICATIONS DISTRIBUTION DESIGNER
WILLIAM J SCHWEITZER
BICSI ID# 111997
EXPIRES 12-31-25
RCDD
07/23/2025

US Army Corps of Engineers ®

MARK	DESCRIPTION	DATE
0	READY-TO-ADVERTISE (RTA) SUBMITTAL	JUL 2025

DESIGNED BY: W. SCHWEITZER
DRAWN BY: A. SANTOS
CHECKED BY: S. STRATTON
SUBMITTED BY: B. STREEBIN
SIZE: ANSI D
ISSUE DATE: JUL 2025
SOLICITATION NO.: W912725RA001
CONTRACT NO.: W912724F0007
FILE NAME:

US ARMY CORPS OF ENGINEERS
LITTLE ROCK DISTRICT
LITTLE ROCK, ARKANSAS

BURNS AND McDONNELL
9400 WARD PARKWAY,
KANSAS CITY, MO 64114
16538

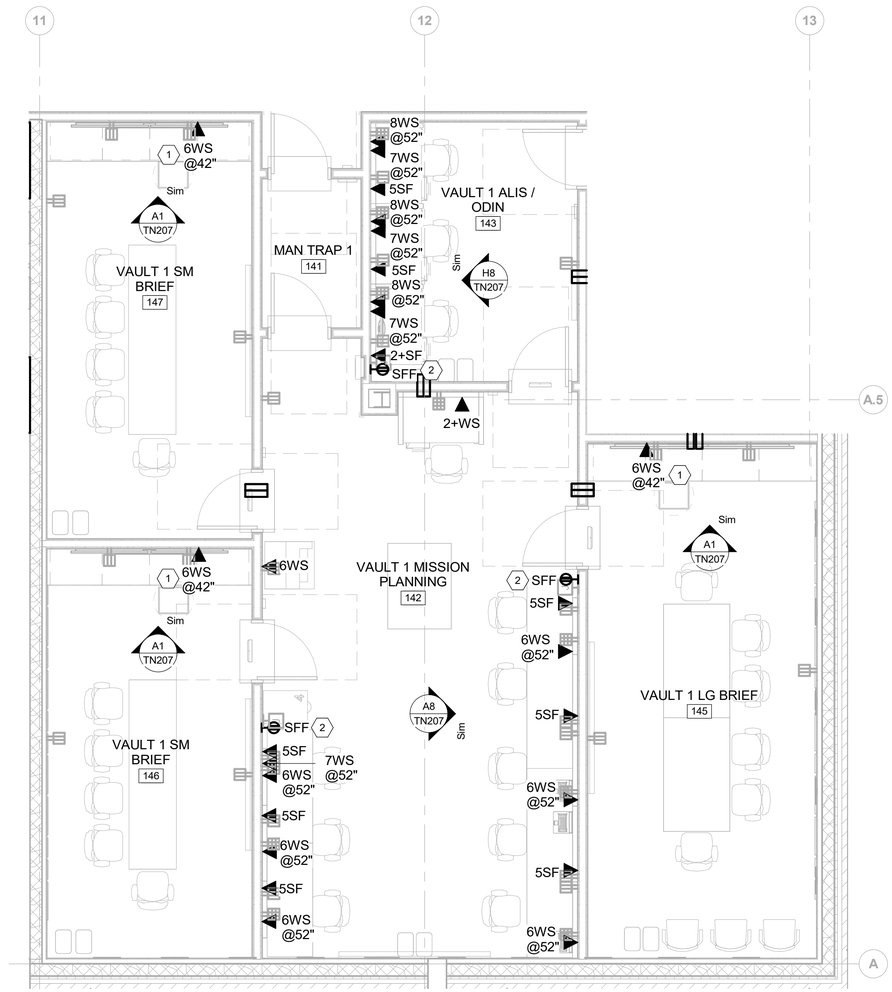
F-35 SPECIAL ACCESS PROGRAM FACILITY
EBBING AIR NATIONAL GUARD BASE (ANGB), FORT SMITH, ARKANSAS

TELECOMMUNICATIONS ENLARGED PLAN

SHEET ID

TN406

READY-TO-ADVERTISE (RTA) SUBMITTAL



PLAN NORTH

A8 TYPICAL VAULT ENLARGED PLAN

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

0 2' 4' 8'

SCALE IN FEET

GENERAL SHEET NOTES

1. THESE DRAWINGS ARE SUPPLEMENTAL TO THE PROJECT SPECIFICATIONS, ARE SCHEMATIC IN NATURE AND SHALL NOT BE USED FOR FIELD INSTALLATION. FIELD INSTALLATION SHALL BE PER APPROVED SHOP DRAWINGS. SEE PROJECT SPECIFICATIONS FOR SHOP DRAWING REQUIREMENTS. THE LAYOUT OF ALL TELECOMMUNICATIONS EQUIPMENT SHALL BE FULLY COORDINATED WITH OTHER TRADES, EQUIPMENT AND/OR FURNITURE WITHIN THE ROOM AND/OR SPACE PRIOR TO SUBMISSION OF SHOP DRAWINGS FOR APPROVAL.
2. SEE SHEET TN001 FOR PROJECT GENERAL NOTES, SYMBOL LEGEND AND ABBREVIATIONS.
3. REFER TO TN002 AND TN003 FOR EQUIPMENT LABELING INFORMATION.
4. MAINTAIN 2" MINIMUM SEPARATION BETWEEN RED AND BLACK CABLES. WHERE CABLES RUN PARALLEL FOR DISTANCES EXCEEDING 98'-0", INCREASE SEPARATION TO 6" BETWEEN RED AND BLACK CABLES.
5. REFER TO GJ & TY SHEETS FOR SECURE AREA AND TEMPEST BOUNDARIES AND REQUIREMENTS OF PENETRATIONS THROUGH THESE BOUNDARIES. CONSTRUCTION FOR SECURE AREAS, SECURE AREA MATERIALS AND COMPONENTS MUST COMPLY WITH UFC 4-010-05 AND IC TECH SPECS FOR ICD/ICS 705, AND FULLY MEET AND PASS ALL ACCREDITATION. COORDINATE WITH CONTRACT OFFICER DURING CONSTRUCTION OF SECURE AREAS.

SHEET KEYNOTES

1. BRIEFING ROOM DEVICE DROP, MOUNT AT 3'-6".
2. PROVIDE SURFACE MOUNT SYSTEM FURNITURE FEED, REFER TO A4/TN511.

INSTALLATION NOTES (SECURE AREA)

1. REFER TO TN501 AND TN502 MODULAR JACK AND CABLING FACEPLATE INFORMATION SCHEDULES FOR RED/BLACK WIRELINE INFORMATION.
2. 0'-2" (MIN) SEPARATION MUST BE MAINTAINED BETWEEN (CFCI) RED WIRELINE AND (CFCI) BLACK WIRELINES.
3. 0'-2" (MIN) SEPARATION MUST BE MAINTAINED BETWEEN (CFCI) RED WIRELINE AND (CFCI) BLACK POWERLINES.
4. 0'-6" (MIN) SEPARATION MUST BE MAINTAINED BETWEEN (CFCI) RED WIRELINE AND (CFCI) BLACK WIRELINES THAT RUN PARALLEL OVER 98'-0".
5. RED AND BLACK WIRELINES MUST NOT SHARE COMMON RACEWAY OR CABLE TRAY.

REGISTERED COMMUNICATIONS DISTRIBUTION DESIGNER
WILLIAM J SCHWEITZER
BICSI ID# 111997
EXPIRES 12-31-25
RCDD
07/23/2025

US Army Corps of Engineers ®

MARK	DESCRIPTION	DATE
0	READY-TO-ADV/ERTISE (RTA) SUBMITTAL	JUL 2025

DESIGNED BY: W. SCHWEITZER
DRAWN BY: A. SANTOS
CHECKED BY: C. STRATTON
SUBMITTED BY: B. STREEBIN
SIZE: ANSI D
ISSUE DATE: JUL 2025
SOLICITATION NO.: W912735R5A001
CONTRACT NO.: W912735R7007
FILE NAME:

US ARMY CORPS OF ENGINEERS
LITTLE ROCK DISTRICT
LITTLE ROCK, ARKANSAS

BURNS AND McDONNELL
9400 WARD PARKWAY,
KANSAS CITY, MO 64114
165438

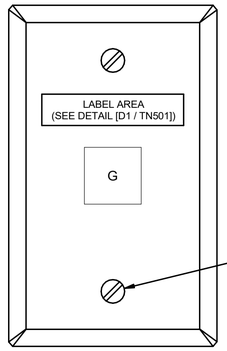
F-35: SPECIAL ACCESS PROGRAM FACILITY
EBBING AIR NATIONAL GUARD BASE (ANGB), FORT SMITH, ARKANSAS

TELECOMMUNICATIONS ENLARGED PLAN

SHEET ID

TN407

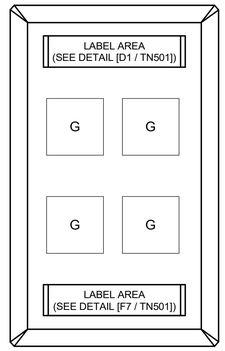
READY-TO-ADVERTISE (RTA) SUBMITTAL



TYPE 1 OUTLET SCHEDULE		
OUTLET MODIFIER	DESCRIPTION	MOUNTING
	WALLPHONE	RECESSED, +48" AFF, UON
S		SURFACE, +48" AFF

▼ 1XXX
SEE COMMUNICATIONS OUTLET MODIFIER SCHEDULE FOR ADDITIONAL INFORMATION REGARDING OUTLET CONFIGURATION / MOUNTING

K1 COMM OUTLET TYPE 1
SCALE: NTS

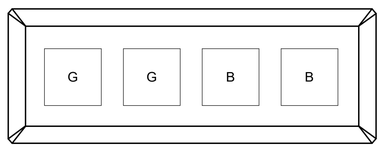


TYPE 2SF OUTLET SCHEDULE		
OUTLET MODIFIER	DESCRIPTION	MOUNTING

▼ 2XXX
SEE COMMUNICATIONS OUTLET MODIFIER SCHEDULE FOR ADDITIONAL INFORMATION REGARDING OUTLET CONFIGURATION / MOUNITNG

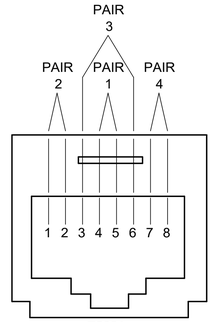
E1 COMM OUTLET TYPE 2
SCALE: NTS

TYPE 2SF OUTLET SCHEDULE		
OUTLET MODIFIER	DESCRIPTION	MOUNTING



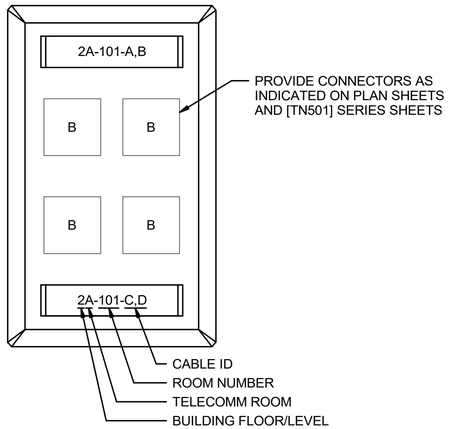
2SF
▼
SEE COMMUNICATIONS OUTLET MODIFIER SCHEDULE FOR ADDITIONAL INFORMATION REGARDING OUTLET CONFIGURATION / MOUNTING

A1 COMM OUTLET TYPE 2SF
SCALE: NTS



PAIR ID	PIN #
T1	4
R1	5
T2	1
R2	2
T3	3
R3	6
T4	7
R4	8

L7 TYPICAL MODULAR PLUG PINOUT
SCALE: NTS



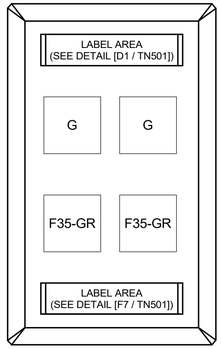
F7 TYPICAL TELECOMMUNICATIONS FACEPLATE LABELING
SCALE: NTS

MODULAR JACK AND CABLING FACEPLATE INFORMATION SCHEDULE						
IMAGE	DESIGNATOR	RED/BLACK CLASSIFICATION	MODULAR JACK		CABLE	
			DESCRIPTION	COLOR	DESCRIPTION	COLOR
	B	N/A	BLANK INSERT	MATCH FACEPLATE	N/A	N/A
	G	BLACK	CAT6 8P8C RJ-45 NON-KEYED	GREEN	4-PAIR CATEGORY 6 STP	GREEN
	TV	BLACK	CAT 6 8P8C RJ45 NON-KEYED	WHITE	4-PAIR CATEGORY 6 STP	BLACK
	R	RED	SM FO NON-KEYED LC-DUPLEX TYPE CONNECTOR	RED	2-STRAND SM FO CABLE	RED
	C	RED	SM FO NON-KEYED LC-DUPLEX TYPE CONNECTOR	RED	2-STRAND SM FO CABLE	RED
	F35-GR	BLACK	CAT 6 8P8C RJ45 NON-KEYED	GRAY	4-PAIR CATEGORY 6 STP	GRAY
	F35-GRF	BLACK	SM FO NON-KEYED LC-DUPLEX TYPE CONNECTOR	GRAY	2-STRAND SM FO CABLE	GRAY
	F35-R	RED	CAT 6 8P8C RJ45 NON-KEYED	RED	4-PAIR CATEGORY 6 STP	GRAY / RED STRIPE
	F35-B	RED	CAT 6 8P8C RJ45 NON-KEYED	BLUE	4-PAIR CATEGORY 6 STP	VIOLET / BLUE STRIPE
	F35-OR	RED	CAT 6 8P8C RJ45 NON-KEYED	ORANGE	4-PAIR CATEGORY 6 STP	PINK / BLUE STRIPE

NOTE: CABLE STRIPING MAY BE INTEGRAL TO CABLE JACKET OR CABLE BUNDLES MUST BE IDENTIFIED EVERY 1 METER WITH CABLE TIE COLOR CODED SIMILAR TO "STRIPE" COLOR. CABLE TRAY, BOUNDLE LIKE COLORS, IE. GREEN, RED-"R", RED-"C", GRAY, GRAY-RED STRIPE, VIOLET-BLUE STRIPE, PINK-BLUE STRIPE.

COMMUNICATIONS OUTLET MODIFIER SCHEDULE		
OUTLET MODIFIER	DESCRIPTION	MOUNTING
BMS	BUILDING MANAGEMENT SYSTEM	SURFACE WALL MOUNT, +18" AFF, UON
FB	FLOORBOX	COORDINATE FACEPLATE & OUTLET MOUNTING REQUIREMENTS WITH ELECTRICAL DEVICES WITHIN FLOORBOX.
SF	SYSTEMS FURNITURE	COORDINATE MOUNTING REQUIREMENTS WITH SYSTEMS FURNITURE. CABLING SHALL BE ROUTED WITHIN & TERMINATED IN SYSTEMS FURNITURE NEAR OUTLET LOCATION INDICATED ON SHEETS.
W	RECESSED WALL MOUNT	RECESSED, +18" AFF, UON
WS	SURFACE WALL MOUNT	SURFACED, +18" AFF, UON
AC	ABOVE COUNTER	MOUNT ABOVER COUNTER, COORDINATE WITH CASEWORK ELEVATION

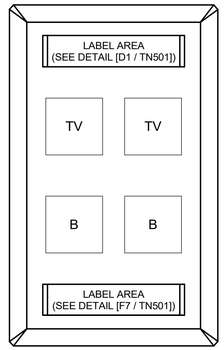
TYPE 2+ OUTLET SCHEDULE		
OUTLET MODIFIER	DESCRIPTION	MOUNTING



▼ 2XXX
SEE COMMUNICATIONS OUTLET MODIFIER SCHEDULE FOR ADDITIONAL INFORMATION REGARDING OUTLET CONFIGURATION / MOUNITNG

A7 COMM OUTLET TYPE 2+
SCALE: NTS

TYPE TV OUTLET SCHEDULE		
OUTLET MODIFIER	DESCRIPTION	MOUNTING
	WALL-MOUNT	+60", COORDINATE MOUNTING HEIGHT WITH TV DISPLAY



▼ TVXXX
SEE COMMUNICATIONS OUTLET MODIFIER SCHEDULE FOR ADDITIONAL INFORMATION REGARDING OUTLET CONFIGURATION / MOUNTING

A13 COMM OUTLET TYPE TV
SCALE: NTS

REGISTERED COMMUNICATIONS DISTRIBUTION DESIGNER
WILLIAM J SCHWEITZER
BICSI ID# 111997
EXPIRES 12-31-25
RCDD
07/23/2025

US Army Corps of Engineers ®

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DESIGNED BY: W. SCHWEITZER
DRAWN BY: S. YUNKER
CHECKED BY: C. STRATTON
SUBMITTED BY: B. STREEBIN
SIZE: ANSI D
ISSUE DATE: JUL 2025
SOLICITATION NO.: W9127S25RA001
CONTRACT NO.: W9127S24T0007
FILE NAME:

US ARMY CORPS OF ENGINEERS
LITTLE ROCK DISTRICT
LITTLE ROCK, ARKANSAS

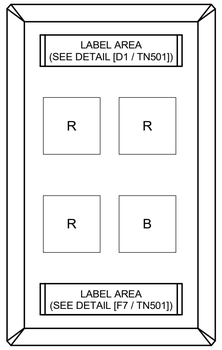
BURNS AND McDONNELL
9400 WARD PARKWAY,
KANSAS CITY, MO 64114
165438

F-35: SPECIAL ACCESS PROGRAM FACILITY
EBBING AIR NATIONAL GUARD BASE (ANGB), FORT SMITH, ARKANSAS

TELECOMMUNICATION DETAILS

SHEET ID
TN501

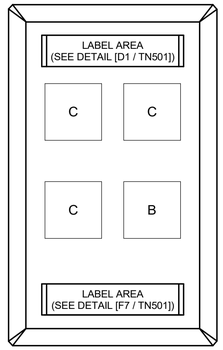
READY-TO-ADVERTISE (RTA) SUBMITTAL



TYPE 3 OUTLET SCHEDULE		
OUTLET MODIFIER	DESCRIPTION	MOUNTING
WS	SURFACE WALL-MOUNT	+48" AFF, UON

▼ 3XXX — SEE COMMUNICATIONS OUTLET MODIFIER SCHEDULE FOR ADDITIONAL INFORMATION REGARDING OUTLET CONFIGURATION / MOUNTING

K1 COMM OUTLET TYPE 3
SCALE: NTS

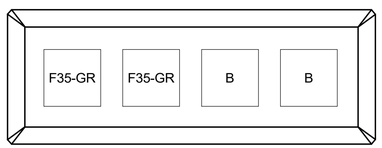


TYPE 4 OUTLET SCHEDULE		
OUTLET MODIFIER	DESCRIPTION	MOUNTING

▼ 4XXX — SEE COMMUNICATIONS OUTLET MODIFIER SCHEDULE FOR ADDITIONAL INFORMATION REGARDING OUTLET CONFIGURATION / MOUNTING

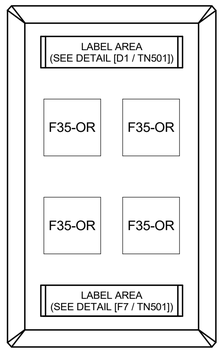
K7 COMM OUTLET TYPE 4
SCALE: NTS

TYPE 5SF OUTLET SCHEDULE		
OUTLET MODIFIER	DESCRIPTION	MOUNTING



5SF ▼ SEE COMMUNICATIONS OUTLET MODIFIER SCHEDULE FOR ADDITIONAL INFORMATION REGARDING OUTLET CONFIGURATION / MOUNTING

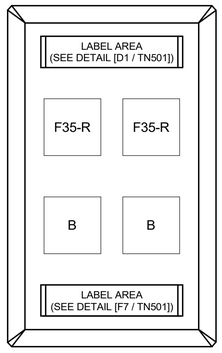
E1 COMM OUTLET TYPE 5SF
SCALE: NTS



TYPE 6 OUTLET SCHEDULE		
OUTLET MODIFIER	DESCRIPTION	MOUNTING

▼ 6XXX — SEE COMMUNICATIONS OUTLET MODIFIER SCHEDULE FOR ADDITIONAL INFORMATION REGARDING OUTLET CONFIGURATION / MOUNTING

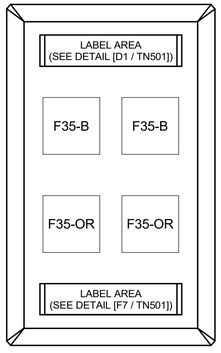
E7 COMM OUTLET TYPE 6
SCALE: NTS



TYPE 7 OUTLET SCHEDULE		
OUTLET MODIFIER	DESCRIPTION	MOUNTING

▼ 7XXX — SEE COMMUNICATIONS OUTLET MODIFIER SCHEDULE FOR ADDITIONAL INFORMATION REGARDING OUTLET CONFIGURATION / MOUNTING

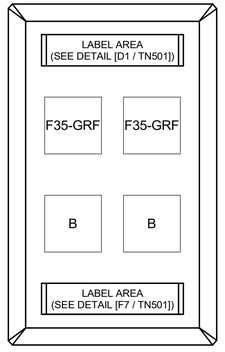
A1 COMM OUTLET TYPE 7
SCALE: NTS



TYPE 8 OUTLET SCHEDULE		
OUTLET MODIFIER	DESCRIPTION	MOUNTING

▼ 8XXX — SEE COMMUNICATIONS OUTLET MODIFIER SCHEDULE FOR ADDITIONAL INFORMATION REGARDING OUTLET CONFIGURATION / MOUNTING

A7 COMM OUTLET TYPE 8
SCALE: NTS



TYPE 9 OUTLET SCHEDULE		
OUTLET MODIFIER	DESCRIPTION	MOUNTING

▼ 9XXX — SEE COMMUNICATIONS OUTLET MODIFIER SCHEDULE FOR ADDITIONAL INFORMATION REGARDING OUTLET CONFIGURATION / MOUNTING

A13 COMM OUTLET TYPE 9
SCALE: NTS

MODULAR JACK AND CABLING FACEPLATE INFORMATION SCHEDULE

IMAGE	DESIGNATOR	RED/BLACK CLASSIFICATION	MODULAR JACK		CABLE	
			DESCRIPTION	COLOR	DESCRIPTION	COLOR
	B	N/A	BLANK INSERT	MATCH FACEPLATE	N/A	N/A
	G	BLACK	CAT6 8P8C RJ-45 NON-KEYED	GREEN	4-PAIR CATEGORY 6 STP	GREEN
	TV	BLACK	CAT 6 8P8C RJ45 NON-KEYED	WHITE	4-PAIR CATEGORY 6 STP	BLACK
	R	RED	SM FO NON-KEYED LC-DUPLEX TYPE CONNECTOR	RED	2-STRAND SM FO CABLE	RED
	C	RED	SM FO NON-KEYED LC-DUPLEX TYPE CONNECTOR	RED	2-STRAND SM FO CABLE	RED
	F35-GR	BLACK	CAT 6 8P8C RJ45 NON-KEYED	GRAY	4-PAIR CATEGORY 6 STP	GRAY
	F35-GRF	BLACK	SM FO NON-KEYED LC-DUPLEX TYPE CONNECTOR	GRAY	2-STRAND SM FO CABLE	GRAY
	F35-R	RED	CAT 6 8P8C RJ45 NON-KEYED	RED	4-PAIR CATEGORY 6 STP	GRAY / RED STRIPE
	F35-B	RED	CAT 6 8P8C RJ45 NON-KEYED	BLUE	4-PAIR CATEGORY 6 STP	VIOLET / BLUE STRIPE
	F35-OR	RED	CAT 6 8P8C RJ45 NON-KEYED	ORANGE	4-PAIR CATEGORY 6 STP	PINK / BLUE STRIPE

NOTE: CABLE STRIPING MAY BE INTEGRAL TO CABLE JACKET OR CABLE BUNDLES MUST BE IDENTIFIED EVERY 1 METER WITH CABLE TIE COLOR CODED SIMILAR TO "STRIPE" COLOR. CABLE TRAY, BOUNDLE LIKE COLORS, IE. GREEN, RED-"R", RED-"C", GRAY, GRAY-RED STRIPE, VIOLET-BLUE STRIPE, PINK-BLUE STRIPE.

COMMUNICATIONS OUTLET MODIFIER SCHEDULE		
OUTLET MODIFIER	DESCRIPTION	MOUNTING
BMS	BUILDING MANAGEMENT SYSTEM	SURFACE WALL MOUNT, +18" AFF, UON
FB	FLOORBOX	COORDINATE FACEPLATE & OUTLET MOUNTING REQUIREMENTS WITH ELECTRICAL DEVICES WITHIN FLOORBOX.
SF	SYSTEMS FURNITURE	COORDINATE MOUNTING REQUIREMENTS WITH SYSTEMS FURNITURE. CABLING SHALL BE ROUTED WITHIN & TERMINATED IN SYSTEMS FURNITURE NEAR OUTLET LOCATION INDICATED ON SHEETS.
W	RECESSED WALL MOUNT	RECESSED, +18" AFF, UON
WS	SURFACE WALL MOUNT	SURFACED, +18" AFF, UON
AC	ABOVE COUNTER	MOUNT ABOVER COUNTER, COORDINATE WITH CASEWORK ELEVATION

REGISTERED COMMUNICATIONS DISTRIBUTION DESIGNER
WILLIAM J SCHWEITZER
BICSI ID# 111997
EXPIRES 12-31-25
RCDD
07/23/2025

US Army Corps of Engineers ®

MARK	DESCRIPTION	DATE
0	READY-TO-ADV/ERTISE (RTA) SUBMITTAL	JUL 2025

DESIGNED BY: W. SCHWEITZER
DRAWN BY: S. YUNKER
CHECKED BY: C. PETERSON
SUBMITTED BY: B. STREEBIN
SIZE: ANSI D
FILE NAME:

ISSUE DATE: JUL 2025
SOLICITATION NO.: W912T525RA001
CONTRACT NO.: W912T524F0007

US ARMY CORPS OF ENGINEERS
LITTLE ROCK DISTRICT
LITTLE ROCK, ARKANSAS

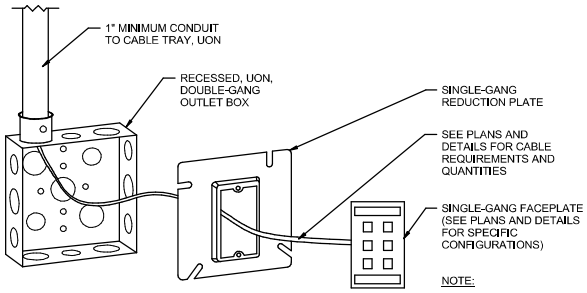
BURNS AND McDONNELL
9400 WARD PARKWAY,
KANSAS CITY, MO 64114
165438

F-35, SPECIAL ACCESS PROGRAM FACILITY
EBBING AIR NATIONAL GUARD BASE (ANGB), FORT SMITH, ARKANSAS

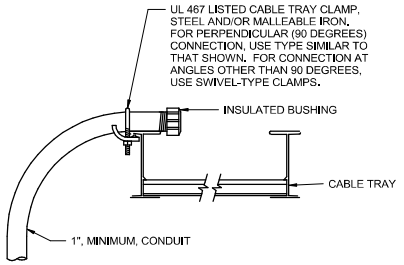
TELECOMMUNICATION DETAILS

SHEET ID
TN502

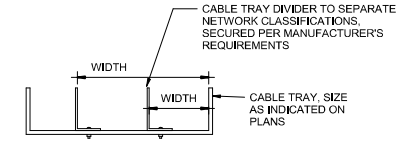
READY-TO-ADVERTISE (RTA) SUBMITTAL



F4 TYPICAL COMMUNICATIONS OUTLET BOX
SCALE: NTS

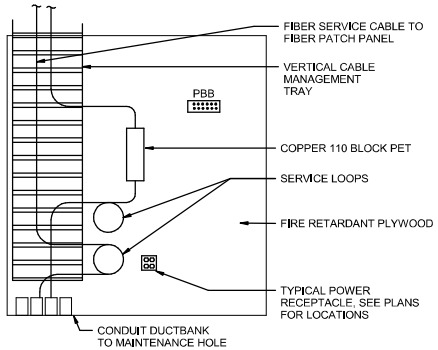


K12 TYPICAL CONDUIT TO OVERHEAD CABLE TRAY DETAIL
SCALE: NTS

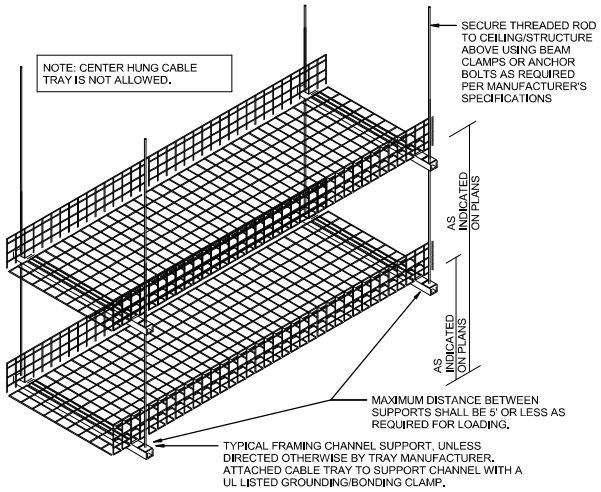


NOTES:
1. UTILIZE BRIDGES AT CABLE TRAY INTERSECTIONS.
2. DIVIDER AND BRIDGES ARE TO BE OF THE SAME MANUFACTURER AS THE CABLE TRAY.
3. BOUNDLE LIKE COLORS, IE, GREEN, RED-"R", RED-"C", GRAY, GRAY-RED STRIPE, VIOLET-BLUE STRIPE, PINK-BLUE STRIPE.

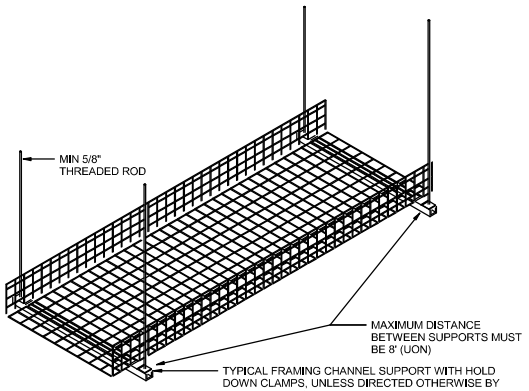
G4 TYPICAL DIVIDED CABLE TRAY DETAIL (SECURE AREA ONLY)
SCALE: NTS



F12 TYPICAL TELECOMM CABLE ENTRANCE
SCALE: NTS



A4 TYPICAL STACKED BASKET CABLE TRAY DETAIL
SCALE: NTS



A12 TYPICAL BASKET CABLE TRAY DETAIL
SCALE: NTS

US Army Corps of Engineers ®

MARK	DESCRIPTION	DATE
1	AM0067 - SECURE AREA TRAY CLARIFICATION	FEB 2026
0	READY-TO-ADVERTISE (RTA) SUBMITTAL	JUL 2025

DESIGNED BY: W. SCHWEITZER	ISSUE DATE: JUL 2025
DRAWN BY: S. VANMETER	SOLICITATION NO.: W912QZ25R0010
CHECKED BY: S. STRATTON	CONTRACT NO.: W912QZ24F0007
SUBMITTED BY: B. STREEBY	
SIZE: ANSI D	FILE NAME: 185458_F22_1.rvt

US ARMY CORPS OF ENGINEERS
LITTLE ROCK DISTRICT
LITTLE ROCK, ARKANSAS

BURNS AND McDONNELL
9400 WARD PARKWAY
KANSAS CITY, MO 64114
185458

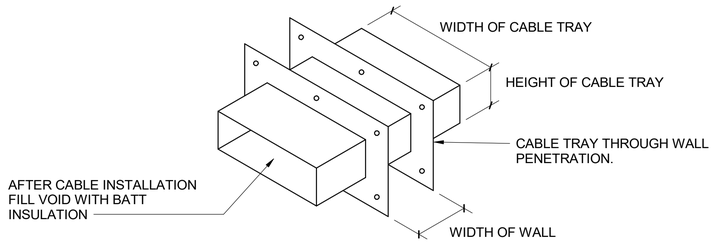
F-35, SPECIAL ACCESS PROGRAM FACILITY
EBBING AIR NATIONAL GUARD BASE (ANGB), FORT SMITH, ARKANSAS

TELECOMMUNICATION DETAILS

REGISTERED COMMUNICATIONS DISTRIBUTION DESIGNER
BICSI
WILLIAM J SCHWEITZER
BICSI ID# 111997
EXPIRES 12-31-28
RCDD
02/19/2026

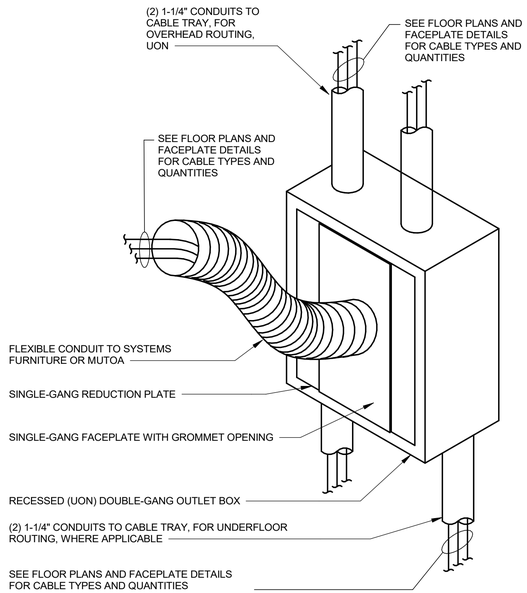
SHEET ID
TN510.1

READY-TO-ADVERTISE (RTA) SUBMITTAL



G11 TYPICAL CABLE TRAY NON-RATED THROUGH WALL PENETRATION DETAIL

SCALE: NTS

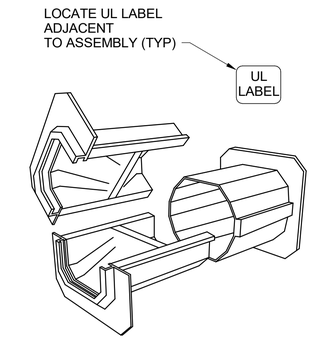


NOTES

1. MOUNT OUTLET BOX AT 12" AFF UON.

A4 TYPICAL SYSTEMS FURNITURE (SFF) FEED

SCALE: NTS



NOTES:

1. PATHWAY ADJUSTS TO ACCOMMODATE WALL THICKNESSES BETWEEN 4" AND 8".
2. PATHWAYS CAN BE GANGED FOR ADDITIONAL CAPACITY.
3. DEVICE NOT SUITABLE FOR USE IN FIRE RATED BARRIERS.
4. PLENUM TESTED TO UL 2043.
5. SMOKE BARRIER UL LISTING.
6. MINIMUM STC RATING OF 50. STC TESTING FOR 0-100% FILL.

A11 TYPICAL SMOKE AND ACOUSTICAL PENETRATION DETAIL

SCALE: NTS

REGISTERED COMMUNICATIONS DISTRIBUTION DESIGNER
WILLIAM J SCHWEITZER
BICSI ID# 111997
EXPIRES 12-31-25
RCDD
07/23/2025

US Army Corps of Engineers ®

MARK	DESCRIPTION	DATE
0	READY-TO-ADVERTISE (RTA) SUBMITTAL	JUL 2025

DESIGNED BY: W. SCHWEITZER
DRAWN BY: S. YUNKER
CHECKED BY: S. STREETER
SUBMITTED BY: B. STREEBIN
SIZE: ANSI D
ISSUE DATE: JUL 2025
SOLICITATION NO.: W9127S25RA001
CONTRACT NO.: W9127S24T0007
FILE NAME:

US ARMY CORPS OF ENGINEERS
LITTLE ROCK DISTRICT
LITTLE ROCK, ARKANSAS

BURNS AND McDONNELL
9400 WARD PARKWAY,
KANSAS CITY, MO 64114
165438

F-35: SPECIAL ACCESS PROGRAM FACILITY
EBBING AIR NATIONAL GUARD BASE (ANGB), FORT SMITH, ARKANSAS

TELECOMMUNICATIONS DETAILS

SHEET ID

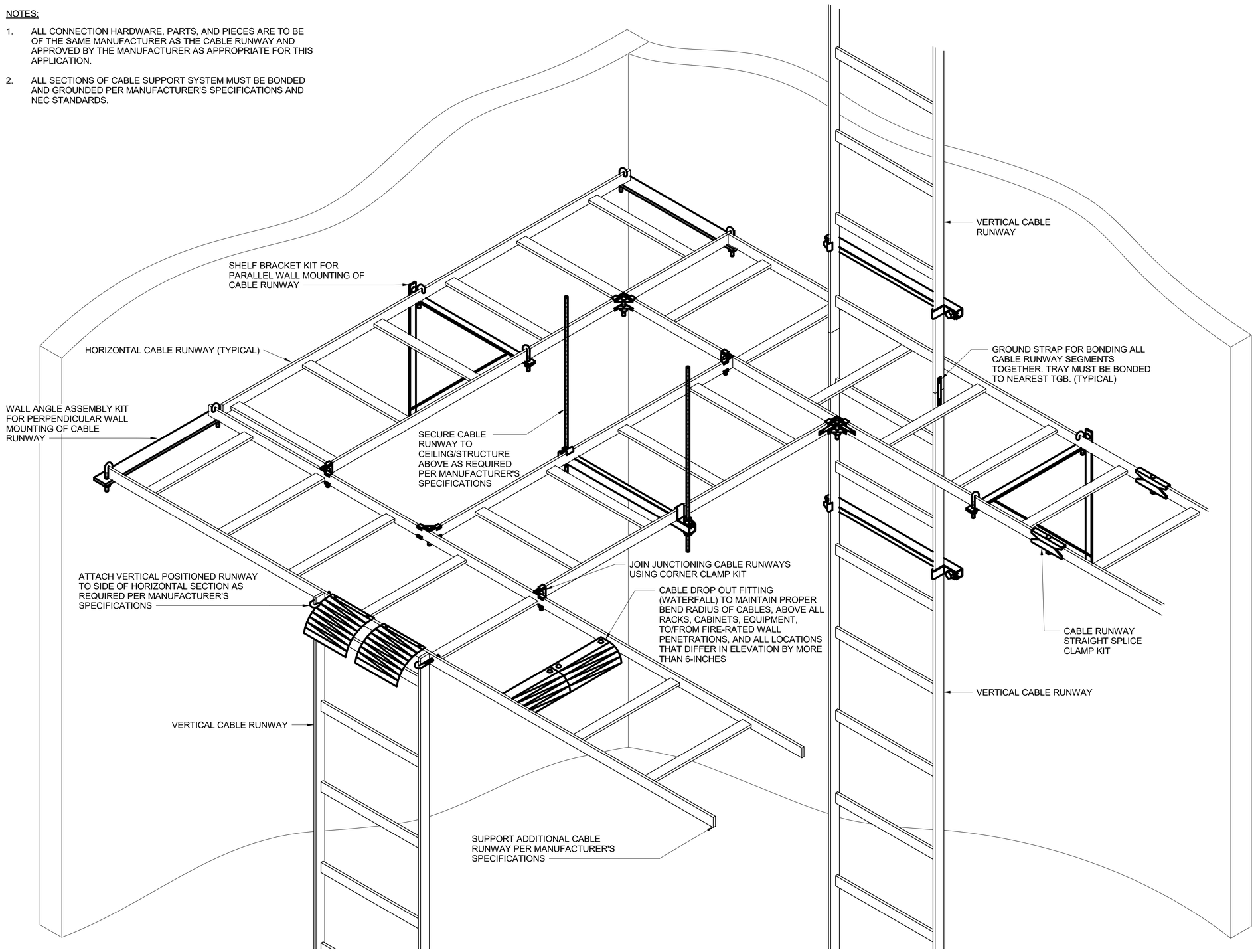
TN511

READY-TO-ADVERTISE (RTA) SUBMITTAL

NOTES:

1. ALL CONNECTION HARDWARE, PARTS, AND PIECES ARE TO BE OF THE SAME MANUFACTURER AS THE CABLE RUNWAY AND APPROVED BY THE MANUFACTURER AS APPROPRIATE FOR THIS APPLICATION.

2. ALL SECTIONS OF CABLE SUPPORT SYSTEM MUST BE BONDED AND GROUNDED PER MANUFACTURER'S SPECIFICATIONS AND NEC STANDARDS.



A2 TYPICAL CABLE RUNWAY CONNECTION DETAIL
SCALE: NTS

REGISTERED COMMUNICATIONS DISTRIBUTION DESIGNER
WILLIAM J SCHWEITZER
BICSI ID# 111997
EXPIRES 12-31-25
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07/23/2025

US Army Corps of Engineers ®

MARK	DESCRIPTION	DATE
0	READY-TO-ADVERTISE (RTA) SUBMITTAL	JUL 2025

ISSUE DATE: JUL 2025
SOLICITATION NO.: W9127S25KA001
CONTRACT NO.: W9127S24T0007

DESIGNED BY: W. SCHWEITZER
DRAWN BY: S. YUNKER
CHECKED BY:
CONSTRUCTION SUBMITTED BY: B. STREEBIN
SIZE: ANSI D
FILE NAME:

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LITTLE ROCK, ARKANSAS

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F-35, SPECIAL ACCESS PROGRAM FACILITY
EBBING AIR NATIONAL GUARD BASE (ANGB), FORT SMITH, ARKANSAS

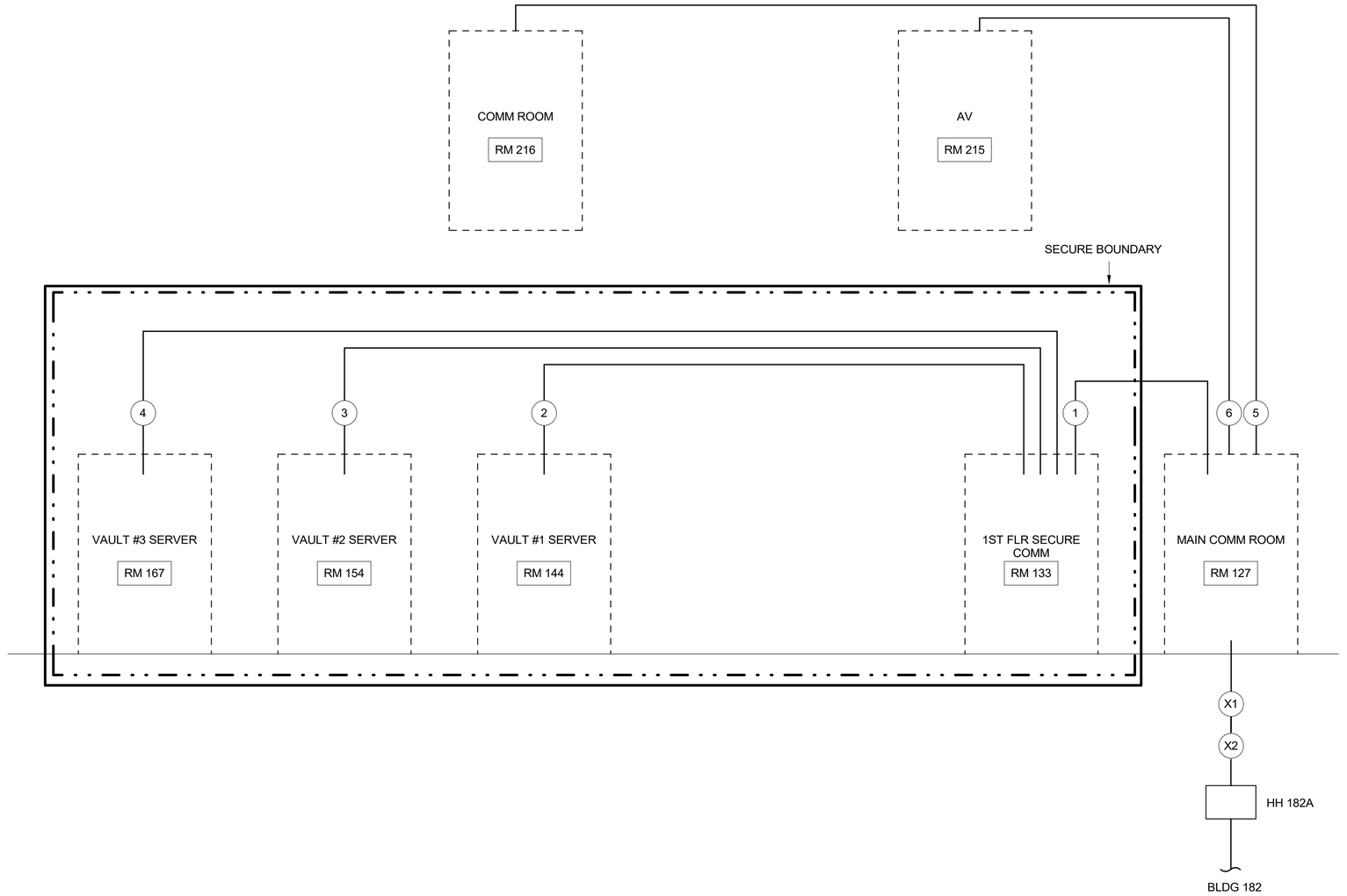
TELECOMMUNICATIONS DETAILS

SHEET ID
TN512

READY-TO-ADVERTISE (RTA) SUBMITTAL

COMMUNICATIONS BACKBONE CABLE SCHEDULE

CABLE			FROM			TO		
ID	QUANTITY	TYPE	ROOM	RACK	PATHWAY	ROOM	RACK	DESCRIPTION
1	48-STRAND	SINGLE-MODE FIBER (OS2)	MAIN COMM ROOM #127	CAB.01	2" CONDUIT	SECURE COMM ROOM #133	CAB.01	
2	24-STRAND	SINGLE-MODE FIBER (OS2)	SECURE COMM RM. 133	CAB.01	2" CONDUIT	VAULT 1 SERVER ROOM #144	CAB. 02	
3	24-STRAND	SINGLE-MODE FIBER (OS2)	SECURE COMM RM. 133	CAB.01	2" CONDUIT	VAULT 2 SERVER ROOM #154	CAB. 02	
4	24-STRAND	SINGLE-MODE FIBER (OS2)	SECURE COMM RM. 133	CAB.01	2" CONDUIT	VAULT 3 SERVER ROOM #167	CAB. 02	
5	12-STRAND	SINGLE-MODE FIBER (OS2)	MAIN COMM ROOM #127	CAB.01	CABLE TRAY	COMM RM #216	RACK.01	
6	6-STRAND	SINGLE-MODE FIBER (OS2)	MAIN COMM ROOM #127	CAB.01	CABLE TRAY	RM 215	RM 215	
X1	72-STRAND	SINGLE-MODE FIBER (OS2) (OSP)	MAIN COMM ROOM #127	CAB.01	TELECOMM DUCTBANK AS INDICATED ON ES101	BUILDING 182	TBD	
X2	25-PAIR	COPPER (OSP, PE89)	MAIN COMM ROOM #127	WALL MOUNT	TELECOMM DUCTBANK AS INDICATED ON ES101	BUILDING 182	TBD	



A2 TELECOMMUNICATIONS BACKBONE RISER DIAGRAM
SCALE: NTS

GENERAL SHEET NOTES

1. THESE DRAWINGS ARE SUPPLEMENTAL TO THE PROJECT SPECIFICATIONS, ARE SCHEMATIC IN NATURE AND SHALL NOT BE USED FOR FIELD INSTALLATION. FIELD INSTALLATION SHALL BE PER APPROVED SHOP DRAWINGS. SEE PROJECT SPECIFICATIONS FOR SHOP DRAWING REQUIREMENTS. THE LAYOUT OF ALL TELECOMMUNICATIONS EQUIPMENT SHALL BE FULLY COORDINATED WITH OTHER TRADES, EQUIPMENT AND/OR FURNITURE WITHIN THE ROOM AND/OR SPACE PRIOR TO SUBMISSION OF SHOP DRAWINGS FOR APPROVAL.
2. SEE SHEET TN001 FOR PROJECT GENERAL NOTES, SYMBOL LEGEND AND ABBREVIATIONS.
3. REFER TO TN002 AND TN003 FOR EQUIPMENT LABELING INFORMATION.
4. SEE TN200 & TN400 SERIES SHEETS FOR EQUIPMENT ELEVATIONS AND ENLARGED PLANS OF TELECOMMUNICATIONS SPACES.
5. COORDINATE CABLE INSTALLATION WITHIN EXISTING BUILDINGS AND IN BUILDING 182 WITH COR AND 188TH CS.
6. REFER TO ED111 AND ES116 FOR ADDITIONAL INFORMATION REGARDING OUTSIDE PLANT (OSP) CABLING.

REGISTERED COMMUNICATIONS DISTRIBUTION DESIGNER
WILLIAM J SCHWEITZER
BICSI ID# 111997
EXPIRES 12-31-25
RCDD
07/23/2025

US Army Corps of Engineers ®

MARK	DESCRIPTION	DATE
0	READY-TO-ADVERTISE (RTA) SUBMITTAL	JUL 2025

ISSUE DATE: JUL 2025
SOLICITATION NO.: W912TS25RA001
CONTRACT NO.: W912TS24F0007

DESIGNED BY: W. SCHWEITZER	
DRAWN BY: S. YUNKER	
CHECKED BY: S. STRATTON	
SUBMITTED BY: B. STREEBIN	FILE NAME:
SIZE: ANSI D	

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F-35: SPECIAL ACCESS PROGRAM FACILITY
EBBING AIR NATIONAL GUARD BASE (ANGB), FORT SMITH, ARKANSAS

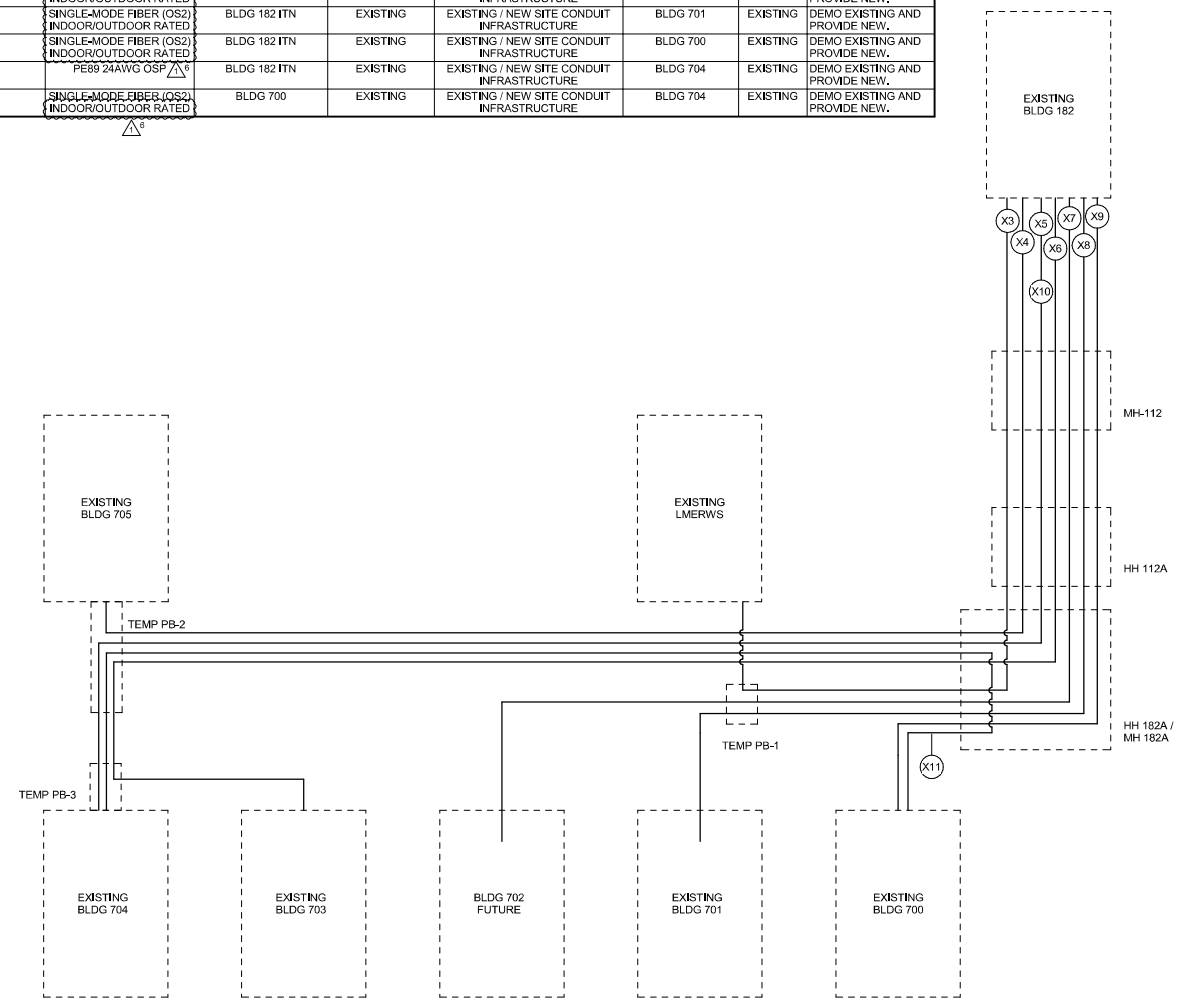
TELECOMMUNICATIONS BACKBONE RISER DIAGRAM

SHEET ID
TN701

READY-TO-ADVERTISE (RTA) SUBMITTAL

COMMUNICATIONS BACKBONE CABLE SCHEDULE - TEMP FACILITIES

CABLE ID	CABLE QUANTITY	CABLE TYPE	FROM ROOM	FROM RACK	PATHWAY	TO ROOM	TO RACK	DESCRIPTION
X3	(3) 4-STRAND TFOCA (MIL-DTL-83526 STYLE – 4-CH)	SINGLE-MODE FIBER (OS2) OUTDOOR RATED	BLDG 182 ITN	EXISTING	EXISTING / NEW SITE CONDUIT INFRASTRUCTURE	LMWERS	EXISTING	DEMO EXISTING AND PROVIDE NEW.
X4	12-STRAND	SINGLE-MODE FIBER (OS2) INDOOR/OUTDOOR RATED	BLDG 182 ITN	EXISTING	EXISTING / NEW SITE CONDUIT INFRASTRUCTURE	BLDG 705	EXISTING	DEMO EXISTING AND PROVIDE NEW.
X5	12-STRAND	SINGLE-MODE FIBER (OS2) INDOOR/OUTDOOR RATED	BLDG 182 ITN	EXISTING	EXISTING / NEW SITE CONDUIT INFRASTRUCTURE	BLDG 704	EXISTING	DEMO EXISTING AND PROVIDE NEW.
X6	12-STRAND	SINGLE-MODE FIBER (OS2) INDOOR/OUTDOOR RATED	BLDG 182 ITN	EXISTING	EXISTING / NEW SITE CONDUIT INFRASTRUCTURE	BLDG 703	EXISTING	DEMO EXISTING AND PROVIDE NEW.
X7	12-STRAND	SINGLE-MODE FIBER (OS2) INDOOR/OUTDOOR RATED	BLDG 182 ITN	EXISTING	EXISTING / NEW SITE CONDUIT INFRASTRUCTURE	BLDG 702	EXISTING	DEMO EXISTING AND PROVIDE NEW.
X8	24-STRAND	SINGLE-MODE FIBER (OS2) INDOOR/OUTDOOR RATED	BLDG 182 ITN	EXISTING	EXISTING / NEW SITE CONDUIT INFRASTRUCTURE	BLDG 701	EXISTING	DEMO EXISTING AND PROVIDE NEW.
X9	12-STRAND	SINGLE-MODE FIBER (OS2) INDOOR/OUTDOOR RATED	BLDG 182 ITN	EXISTING	EXISTING / NEW SITE CONDUIT INFRASTRUCTURE	BLDG 700	EXISTING	DEMO EXISTING AND PROVIDE NEW.
X10	12-PAIR	PE89 24AWG OSP	BLDG 182 ITN	EXISTING	EXISTING / NEW SITE CONDUIT INFRASTRUCTURE	BLDG 704	EXISTING	DEMO EXISTING AND PROVIDE NEW.
X11	24-STRAND	SINGLE-MODE FIBER (OS2) INDOOR/OUTDOOR RATED	BLDG 700	EXISTING	EXISTING / NEW SITE CONDUIT INFRASTRUCTURE	BLDG 704	EXISTING	DEMO EXISTING AND PROVIDE NEW.



A2 COMMUNICATIONS BACKBONE RISER DIAGRAM - TEMP FACILITIES
SCALE: NTS

GENERAL SHEET NOTES

1. THESE DRAWINGS ARE SUPPLEMENTAL TO THE PROJECT SPECIFICATIONS, ARE SCHEMATIC IN NATURE AND SHALL NOT BE USED FOR FIELD INSTALLATION. FIELD INSTALLATION SHALL BE PER APPROVED SHOP DRAWINGS. SEE PROJECT SPECIFICATIONS FOR SHOP DRAWING REQUIREMENTS. THE LAYOUT OF ALL TELECOMMUNICATIONS EQUIPMENT SHALL BE FULLY COORDINATED WITH OTHER TRADES, EQUIPMENT AND/OR FURNITURE WITHIN THE ROOM AND/OR SPACE PRIOR TO SUBMISSION OF SHOP DRAWINGS FOR APPROVAL.
2. SEE SHEET TN001 FOR PROJECT GENERAL NOTES, SYMBOL LEGEND AND ABBREVIATIONS.
3. REFER TO TN002 AND TN003 FOR EQUIPMENT LABELING INFORMATION.
4. REFER TO ED111 FOR TEMP FACILITY LOCATIONS AND EXISTING CONDUIT ROUTING. REFER TO ES116 FOR NEW WORK REGARDING OUTSIDE PLANT (OSP) INFRASTRUCTURE. CONTRACTOR SHALL PROVIDE ADDITIONAL 50'-0" COILED CABLE AT EACH TEMP FACILITY. FIELD VERIFY AND CONFIRM TERMINATION LOCATIONS WITHIN THE TEMP FACILITIES PRIOR TO INSTALLATION.
5. COORDINATE CABLE INSTALLATION WITHIN EXISTING BUILDINGS AND IN BUILDING 182 WITH COR AND 188TH CS.

SHEET KEYNOTES

1. FIELD VERIFY AND CONFIRM TFOCA'S CONNECTOR TYPE WITH COR AND 188TH CS PRIOR TO INSTALLATION.

US Army Corps of Engineers ®

MARK	DESCRIPTION	DATE
1	AMM267 - BACKBONE CABLE TYPE CLARIFICATION	FEB 2026
0	READY-TO-ADVERTISE (RTA) SUBMITTAL	JUL 2025

DESIGNED BY: W. SCHWEITZER
DRAWN BY: A. MATTOS
CHECKED BY: S. STRATTON
SUBMITTED BY: B. STREEBIN
SIZE: ANSI D
ISSUE DATE: JUL 2025
SOLICITATION NO.: W912S2-25-R-0010
CONTRACT NO.: W912S2-24F0007
FILE NAME: 185438_702_1.vt

US ARMY CORPS OF ENGINEERS LITTLE ROCK DISTRICT LITTLE ROCK, ARKANSAS

BURNS AND McDONNELL 9400 WARD PARKWAY KANSAS CITY, MO 64114 185438

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BICSI ID# 111997
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02/19/2026

F-35, SPECIAL ACCESS PROGRAM FACILITY
EBBING AIR NATIONAL GUARD BASE (ANGB), FORT SMITH, ARKANSAS

TELECOMMUNICATIONS BACKBONE RISER DIAGRAM

SHEET ID
TN702.1

READY-TO-ADVERTISE (RTA) SUBMITTAL

SOUND MASKING SYSTEM NOTES

1. A LOCAL, SINGLE-ZONE SOUND-MASKING SYSTEM COMPLYING WITH ASTM E1374, CONSISTING OF A CONTROL UNIT AND LOUDSPEAKER MUST BE PROVIDED WHERE INDICATED ON PLANS.
2. CONTROL UNIT MUST INCLUDE SOUND-MASKING GENERATOR AND CONSTANT 70.7-V CABLING TO THE LOUDSPEAKERS.
3. SOUND-MASKING GENERATOR MUST BE DIGITAL, SOLID-STATE, RANDOM SEQUENCE NOISE GENERATOR, STABLE IN SOUND SPECTRUM AND OUTPUT LEVEL, AND CONTAINING THE FOLLOWING:
   A. ELECTRONIC SOUND GENERATOR AND EQUALIZERS FOR SHAPING THE SOUND-MASKING SPECTRUM.
   B. SOUND-MASKING: 125 HZ TO 8 KHZ WITH EQUALIZERS FOR ADJUSTING THE SOUND-MASKING SPECTRUM AT THIRD-OCTAVE RESOLUTION.
   C. SOUND-MASKING VOLUME ADJUSTMENT: AT LEAST 10 STEPS AT 1.5 DB EACH, OR A CONTINUOUS ADJUSTMENT WITH THAT RANGE.
4. CEILING AND HVAC DUCT MOUNTED LOUDSPEAKER MUST MEET THE FOLLOWING REQUIREMENTS:
   A. CONE TYPE: 5 INCHES IN DIAMETER WITH 1 INCH VOICE COIL AND MINIMUM 10 OZ CERAMIC MAGNET MOUNTED IN AN ACOUSTIC ENCLOSURE.
   B. IMPEDANCE: 16 OHMS.
   C. RATED OUTPUT LEVEL: 10 W RMS.
   D. DISPERSION ANGLE: 100 DEGREES.
   E. SENSITIVITY: 90 DB SOUND-PRESSURE LEVEL (SPL) AT 1 W/M ON THE REFERENCE AXIS.
   F. AUDIO OUTPUT: 87 DBA MAXIMUM.
   G. FREQUENCY RESPONSE: PLUS OR MINUS 3 DB FROM 90 TO 10,000 HZ.
5. SOUND-MASKING CABLE JACKET IS TO BE BLACK IN COLOR.

SYMBOLS - MODIFIERS

AC	ABOVE COUNTER MOUNTING
XX" AFF	MOUNT XX" AFF TO CENTER OF DEVICE
XX" AFG	MOUNT XX" AFG TO CENTER OF DEVICE

ABBREVIATIONS

ACS	ACCESS CONTROL SYSTEM
AFF	ABOVE FINISHED FLOOR
AFG	ABOVE FINISHED GRADE
DBP	ACS DOOR BOARD PANEL
CFCI	CONTRACTOR FURNISHED, CONTRACTOR INSTALLED
CP	CAMERA POLE
CSM	CONSTRUCTION SECURITY MANAGER
CSP	CONSTRUCTION SECURITY PLAN
DCP	DOOR CONTROL PANEL
EAL	ENTRY AUTHORIZATION LIST
ESS	ELECTRONIC SECURITY SYSTEM
GFGI	GOVERNMENT FURNISHED, GOVERNMENT INSTALLED
GSA	GENERAL SERVICES ADMINISTRATION
IDS	INTRUSION DETECTION SYSTEM
LP	LIGHT POLE
NIC	NETWORK INTERFACE CARD
PIR	PASSIVE INFRARED
PTZ	PAN, TILT, ZOOM
SM	SOUND MASKING
SSM	SITE SECURITY MANAGER
UON	UNLESS OTHERWISE NOTED
WP	WEATHERPROOF
VSS	VIDEO SURVEILLANCE SYSTEM
ZEP	IDS ZONE EXPANDER PANEL

LEGEND NOTES

1. SYMBOL ORIENTATION DOES NOT IMPLY DEVICE OR EQUIPMENT ORIENTATION, UON.
2. SYMBOL SIZE DOES NOT IMPLY EQUIPMENT SIZE, UON.
3. MOUNTING HEIGHT INDICATED IN LEGEND AND ON THE SHEETS MUST BE THE DISTANCE MEASURED FROM THE CENTER OF THE DEVICE TO THE FINISHED FLOOR (INTERIOR) OR FINISHED GRADE (EXTERIOR).
4. NOT ALL SYMBOLS ON THIS SHEET ARE USED AS PART OF THIS PROJECT.
5. SEE TYPICAL DETAILS ON TY500 SERIES SHEETS.

GENERAL SHEET NOTES

1. CONTRACTOR MUST PROVIDE CONDUITS, BACKBOXES, AND PULL-STRINGS FOR GFGI EQUIPMENT. COORDINATE FINAL LOCATIONS OF CARD READERS, PASSIVE INFRARED SENSORS, AND LOCATION OF CONTROL PANELS WITH THE OWNER PRIOR TO SUBMITTING CONDUIT AND BACKBOX LOCATION SHOP DRAWINGS FOR GOVERNMENT REVIEW.
2. IT IS THE CONTRACTOR'S RESPONSIBILITY TO FOLLOW AND COMPLY WITH ICD/ICS-705-1 TECHNICAL SPECIFICATIONS.
3. CONSTRUCTION FOR SECURE AREAS, AND SECURE AREA MATERIAL AND COMPONENTS, SHALL COMPLY WITH UFC 4-010-05 AND IC TECH SPECS FOR ICD/ICS 705, AND FULLY MEET AND PASS ALL ACCREDITATION.
4. ALL BACKBOXES AND RACEWAY SHALL BE SURFACE MOUNTED WITHIN THE SECURE SPACE AND CONCEALED OUTSIDE OF THE SECURE SPACE.
5. SEE GJ & TY SHEETS FOR SECURE AREA AND TEMPEST BOUNDARIES AND REQUIREMENTS OF PENETRATIONS THROUGH THESE BOUNDARIES. CONSTRUCTION FOR SECURE AREAS, SECURE AREA MATERIALS AND COMPONENTS MUST COMPLY WITH UFC 4-010-05 AND IC TECH SPECS FOR ICD/ICS 705, AND FULLY MEET AND PASS ALL ACCREDITATION. COORDINATE WITH CONTRACTING OFFICER DURING CONSTRUCTION OF SECURE AREAS.
6. INSTALL INTERIOR CONDUITS AND BOXES IN ACCORDANCE WITH NFPA 70, SECTION 26 20 00 INTERIOR DISTRIBUTION SYSTEM, AND ICS 705-1. INSTALL EXTERIOR CONDUITS IN ACCORDANCE WITH NFPA 70, SECTION 33 71 02 UNDERGROUND ELECTRICAL DISTRIBUTION, AND ICS 705-1.

SYMBOLS - SECURITY

- CEILING OR PENDANT MOUNT PAN-TILT-ZOOM SECURITY CAMERA (GFGI)
- WALL OR PARAPET MOUNT PAN-TILT-ZOOM SECURITY CAMERA (GFGI)
- CEILING OR PENDANT MOUNT FIXED DOME SECURITY CAMERA (GFGI)
- WALL OR PARAPET MOUNT FIXED DOME SECURITY CAMERA (GFGI)
- CORNER OR CEILING MOUNT MULTI-IMAGER SECURITY CAMERA (GFGI)
  - CAMERA NUMBER
  - C-##
  - /TY###
  - SHEET NUMBER
  - CAMERA VIEW DETAIL
- 1.1 / ----- DOOR SECURITY HARDWARE CALLOUT. SEE TY500 SERIES SHEETS FOR DETAILS.
  - DETAIL NUMBER
  - 1.1 / -----
  - ARROW INDICATES MORE SECURE SIDE OF DOOR
  - DOOR NUMBER
- ACS ACCESS CONTROL SYSTEM PANEL (GFGI)
  - ACS-###
  - ROOM NUMBER
- BP BADGE PRINTER (GFGI)
- BM HIGH SECURITY SWITCH (GFGI) UL 634 HSS LEVEL 2; UFC 4-010-05 3-4.17.3.3 POINT SENSORS
- CR CARD READER (GFGI)
- KP CARD READER WITH PIN (GFGI)
- EL ELECTRIFIED LOCK (PROVIDED BY DIVISION 8)
- EH ELECTRIFIED HINGE (PROVIDED BY DIVISION 8)
- IDS IDS SYSTEM PANEL (GFGI)
  - IDS-###
  - ROOM NUMBER
- J JUNCTION BOX
- LA LOCAL ALARM (GFGI)
- RR REMOTE RELEASE (GFGI)
- PB PUSH-BUTTON RELEASE (GFGI)
- X10 MECHANICAL LOCK (X-10) (PROVIDED BY DIVISION 8)
- SM SOUND MASKING SPEAKER
- PIR PASSIVE INFRARED MOTION DETECTOR (GFGI)
- CMD INTRUSION DETECTION SYSTEM COMMAND KEYPAD (GFGI)
- PCU PREMISE CONTROL UNIT (GFGI)
- REX REQUEST TO EXIT (GFGI) (PROVIDED BY DIVISION 8)
- SJB SECURITY JUNCTION BOX
- SEC SECURITY EQUIPMENT CABINET
- SMA SOUND MASKING AREA GENERATOR
- CTV WALL MOUNT CCTV MONITOR (GFGI)
- WKS SECURITY MONITORING AND REPORTING WORKSTATION (GFGI)
- FX FIBER OPTIC CONVERTER
- SECURE SPACE PERIMETER
- TEMPEST PERIMETER

NOTE: PERIMETERS AND BOUNDARIES INCLUDES TRUE FLOORS AND TRUE CEILINGS.

Professional Engineer
I hereby certify that this plan, specification, or report was prepared by me or under my direct supervision and that I am a duly Licensed Professional Engineer under the laws of the state of Minnesota.
Signature: _____
Typed or Printed Name: DUGAN BRADLEY
Date: 07/23/25 License Number: 61869

US Army Corps of Engineers ®

MARK	DESCRIPTION	DATE
0	READY-TO-ADVERTISE (RTA) SUBMITTAL	JUL 2025

DESIGNED BY: J. SCHAMBERGER
DRAWN BY: Z. MATHEWS
CHECKED BY: S. STRATTON
SUBMITTED BY: B. STREEBIN
SIZE: ANSI D
ISSUE DATE: JUL 2025
SOLICITATION NO.: W9127S25RA001
CONTRACT NO.: W9127S24T0007
FILE NAME: 16543B_E_R22_r.rvt

US ARMY CORPS OF ENGINEERS
LITTLE ROCK DISTRICT
LITTLE ROCK, ARKANSAS

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F-35: SPECIAL ACCESS PROGRAM FACILITY
EBBING AIR NATIONAL GUARD BASE (ANGB), FORT SMITH, ARKANSAS

SECURITY LEGEND, ABBREVIATIONS, AND NOTES

SHEET ID
TY001

READY-TO-ADVERTISE (RTA) SUBMITTAL

ROOM SCHEDULE	
NAME	NUMBER
VESTIBULE	101
CORRIDOR	102
VESTIBULE	103
LOBBY	104
STEP DESK	105
CORRIDOR	106
SCHEDULING & TRAINING	107
DO	108
SARM	109
SARM ADMIN	110
STAN / EVAL	111
AFE MAINTENANCE	112
HELMET ALIGNMENT	113
LIFE SUPPORT	114
MAINTENANCE OFFICE	115
PILOT LOCKER ROOM	116
SHOWER	117

ROOM SCHEDULE	
NAME	NUMBER
WOMEN'S RESTROOM	118
MEN'S RESTROOM	119
HALL	121
CORRIDOR	122
ELECTRICAL CLOSET	123
CORRIDOR	124
BREAK ROOM	125
MAINT DEBRIEF	126
MAIN COMM ROOM	127
UNISEX RESTROOM	128
PRINT / COPY	129
MAN TRAP	131
CORRIDOR	132
SECURE COMM ROOM	133
STORAGE	134
SECURITY	135
SECURE ELEC ROOM	136

ROOM SCHEDULE	
NAME	NUMBER
STORAGE	137
MAN TRAP 1	141
VAULT 1 MISSION PLANNING	142
VAULT 1 ALIS / ODIN	143
VAULT 1 SERVER	144
VAULT 1 LG BRIEF	145
VAULT 1 SM BRIEF	146
VAULT 1 SM BRIEF	147
MAN TRAP 2	151
VAULT 2 MISSION PLANNING	152
VAULT 2 ALIS / ODIN	153
VAULT 2 SERVER	154
VAULT 2 LG BRIEF	155
VAULT 2 SM BRIEF	156
VAULT 2 SM BRIEF	157
MAN TRAP 3	161
VAULT 3 MISSION PLANNING	162

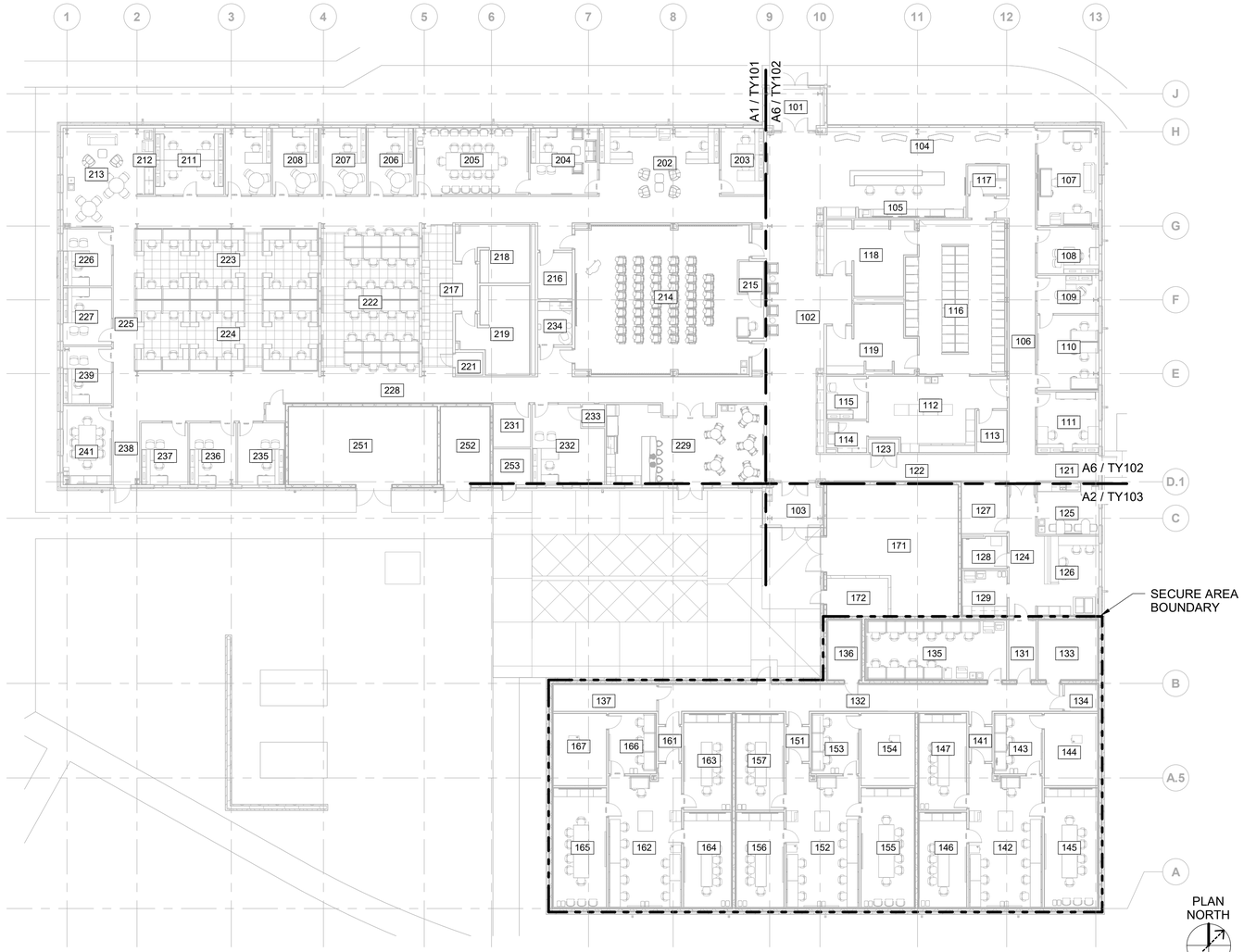
ROOM SCHEDULE	
NAME	NUMBER
VAULT 3 SM BRIEF	163
VAULT 3 SM BRIEF	164
VAULT 3 LG BRIEF	165
VAULT 3 ALIS / ODIN	166
VAULT 3 SERVER	167
MECHANICAL ROOM	171
ELECTRICAL ROOM	172
CORRIDOR	201
COMMAND SUPPORT STAFF	202
ACTIVITY PROGRAM COORDINATOR (APC) / RESOURCE ADVISOR (RA)	203
SQUADRON COMMANDER OFFICE	204
CONFERENCE ROOM	205
INTERNATIONAL MILITARY STUDENT OFFICER (IMSO)	206

ROOM SCHEDULE	
NAME	NUMBER
SNR M-1	207
SNR M-2	208
SNR M-3	209
RA	211
COPY / STORAGE	212
STUDENT COLLAB	213
LG BRIEFING RM	214
AV	215
COMM	216
STUDENT LOCKERS	217
WOMEN'S RESTROOM	218
MEN'S RESTROOM	219
JANITOR'S CLOSET	221
STUDENT WORKSTATIONS	222
INSTRUCTOR WORKSTATIONS	223
MISSION OPS SUPPORT	224
CORRIDOR	225

ROOM SCHEDULE	
NAME	NUMBER
IP M-1	226
IP M-2	227
CORRIDOR	228
BREAK ROOM	229
STORAGE	231
FLIGHT MEDICAL OFFICE	232
STORAGE	233
MOTHER'S ROOM	234
IP M-6	235
IP M-5	236
IP M-4	237
CORRIDOR	238
IP M-3	239
TEAM	241
ROOF ACCESS	242
MECHANICAL	251
ELECTRICAL	252
FIRE	253

GENERAL SHEET NOTES

1. REFER TO SHEET TY001 FOR LEGEND, ABBREVIATIONS, AND NOTES.
2. ALL BACKBOXES AND RACEWAY SHALL BE SURFACE MOUNTED WITHIN THE SECURE SPACE AND CONCEALED OUTSIDE OF THE SECURE SPACE.



A5 FIRST FLOOR SECURITY PLAN - OVERALL
SCALE: 1/16" = 1'-0"

0 8' 16' 32'
SCALE IN FEET

US Army Corps of Engineers ®

MARK	DESCRIPTION	DATE
0	READY-TO-ADV/ERTISE (RTA) SUBMITTAL	JUL 2025

DESIGNED BY: J. SCHAMBERGER
DRAWN BY: Z. MATHEWS
CHECKED BY: S. STRATTON
SUBMITTED BY: B. STREEBIN
SIZE: ANSI D
ISSUE DATE: JUL 2025
SOLICITATION NO.: W912T525RA001
CONTRACT NO.: W912T524F0007
FILE NAME: 165438_E_R22

US ARMY CORPS OF ENGINEERS
LITTLE ROCK DISTRICT
LITTLE ROCK, ARKANSAS

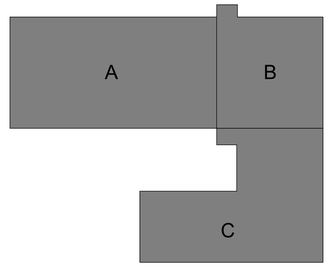
BURNS AND McDONNELL
9400 WARD PARKWAY,
KANSAS CITY, MO 64114
165438

Professional Engineer
I hereby certify that this plan, specification, or report was prepared by me or under my direct supervision and that I am a duly Licensed Professional Engineer under the laws of the state of Minnesota.
Signature:
Typed or Printed Name: DUGAN BRADLEY
Date: 07/23/25 License Number: 61869

F-35 SPECIAL ACCESS PROGRAM FACILITY
EBBING AIR NATIONAL GUARD BASE (ANGB), FORT SMITH, ARKANSAS

FIRST FLOOR SECURITY PLAN - OVERALL

KEY PLAN



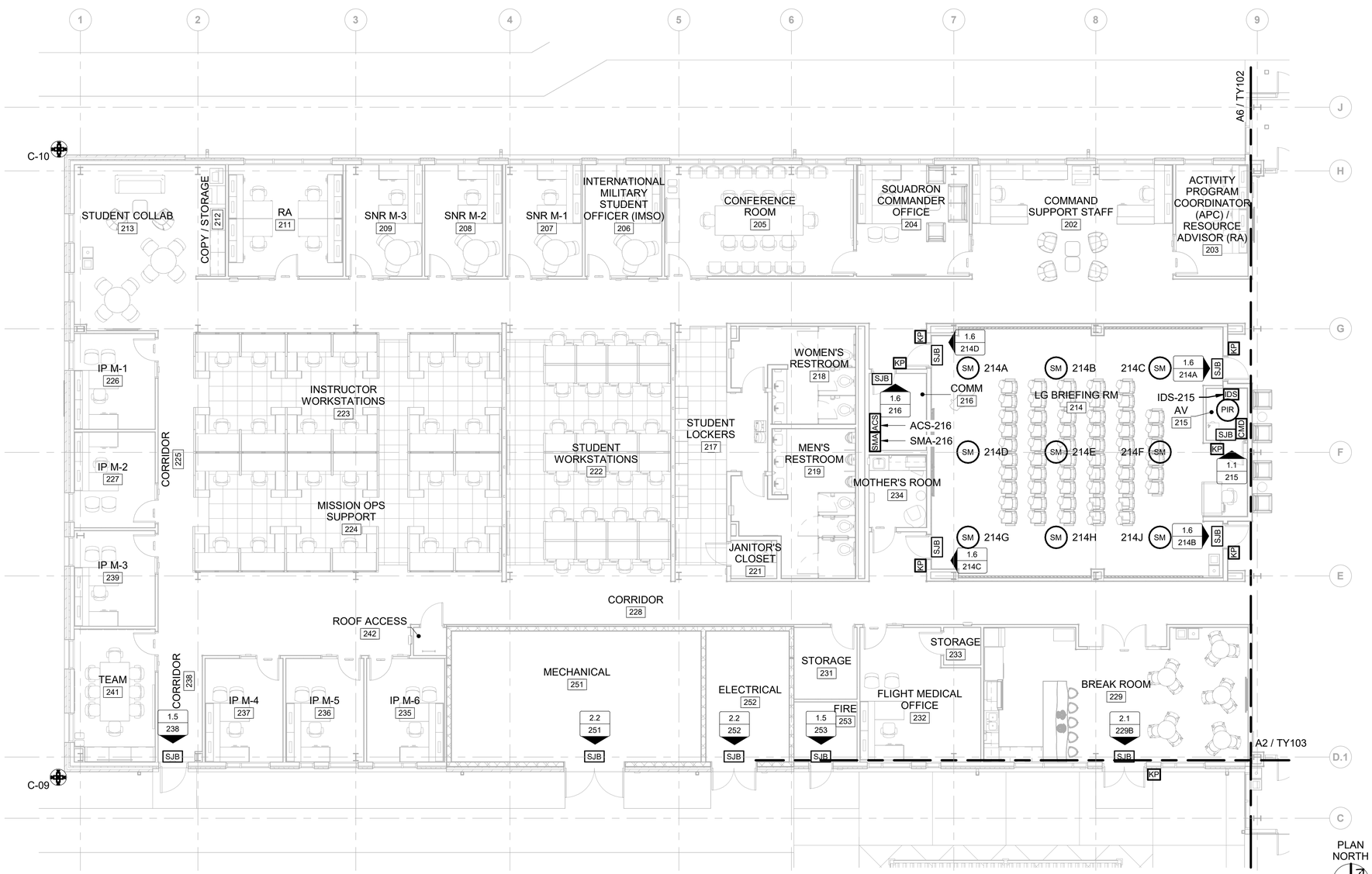
SHEET ID
TY100

READY-TO-ADVERTISE (RTA) SUBMITTAL

ROOM SCHEDULE - AREA A	
NAME	NUMBER
COMMAND SUPPORT STAFF	202
ACTIVITY PROGRAM COORDINATOR (APC) / RESOURCE ADVISOR (RA)	203
SQUADRON COMMANDER OFFICE	204
CONFERENCE ROOM	205
INTERNATIONAL MILITARY STUDENT OFFICER (IMSO)	206
SNR M-1	207
SNR M-2	208
SNR M-3	209
RA	211
COPY / STORAGE	212
STUDENT COLLAB	213

ROOM SCHEDULE - AREA A	
NAME	NUMBER
LG BRIEFING RM	214
AV	215
COMM	216
STUDENT LOCKERS	217
WOMEN'S RESTROOM	218
MEN'S RESTROOM	219
JANITOR'S CLOSET	221
STUDENT WORKSTATIONS	222
INSTRUCTOR WORKSTATIONS	223
MISSION OPS SUPPORT	224
CORRIDOR	225
IP M-1	226
IP M-2	227
CORRIDOR	228

ROOM SCHEDULE - AREA A	
NAME	NUMBER
BREAK ROOM	229
STORAGE	231
FLIGHT MEDICAL OFFICE	232
STORAGE	233
MOTHER'S ROOM	234
IP M-6	235
IP M-5	236
IP M-4	237
CORRIDOR	238
IP M-3	239
TEAM	241
ROOF ACCESS	242
MECHANICAL	251
ELECTRICAL	252
FIRE	253



A1 FIRST FLOOR SECURITY PLAN - AREA - A

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

0 4' 8' 16'

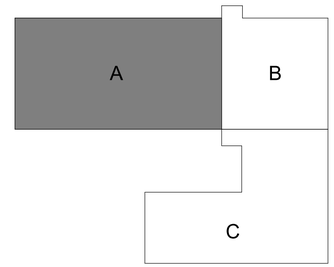
SCALE IN FEET

GENERAL SHEET NOTES

1. REFER TO SHEET TY001 FOR LEGEND, ABBREVIATIONS, AND NOTES.
2. ALL BACKBOXES AND RACEWAY SHALL BE SURFACE MOUNTED WITHIN THE SECURE SPACE AND CONCEALED OUTSIDE OF THE SECURE SPACE.
3. CONDUIT TO RUN IN WALL CAVITY BACK TO TELECOMM ROOM WHEN EXTERIOR CAMERAS ARE MOUNTED ON SECURE AREA PERIMETER WALL.
4. CONDUIT ROUTING THIS SHEET ONLY:
   - A. NON-SECURE SPACE: ROUTE CONDUIT TO COMM ROOM - 216
   - B. SECURE SPACE: ROUTE IDS CONDUIT WITHIN AV ROOM - 215

Professional Engineer
I hereby certify that this plan, specification, or report was prepared by me or under my direct supervision and that I am a duly Licensed Professional Engineer under the laws of the state of Minnesota.
Signature:
Typed or Printed Name: DUGAN BRADLEY
Date: 07/23/25 License Number: 61869

KEY PLAN



US Army Corps of Engineers ®

MARK	DESCRIPTION	DATE
0	READY-TO-ADVERTISE (RTA) SUBMITTAL	JUL 2025

DESIGNED BY: J. SCHAMBERGER
DRAWN BY: Z. MATHEWS
CHECKED BY: S. STRATTON
SUBMITTED BY: B. STREEBIN
ISSUE DATE: JUL 2025
SOLICITATION NO.: W912T525RA001
CONTRACT NO.: W912T524F0007
SIZE: ANSI D
FILE NAME: 165438_E_R22

US ARMY CORPS OF ENGINEERS
LITTLE ROCK DISTRICT
LITTLE ROCK, ARKANSAS

BURNS AND McDONNELL
9400 WARD PARKWAY,
KANSAS CITY, MO 64114
165438

F-35 SPECIAL ACCESS PROGRAM FACILITY
EBBING AIR NATIONAL GUARD BASE (ANGB), FORT SMITH, ARKANSAS

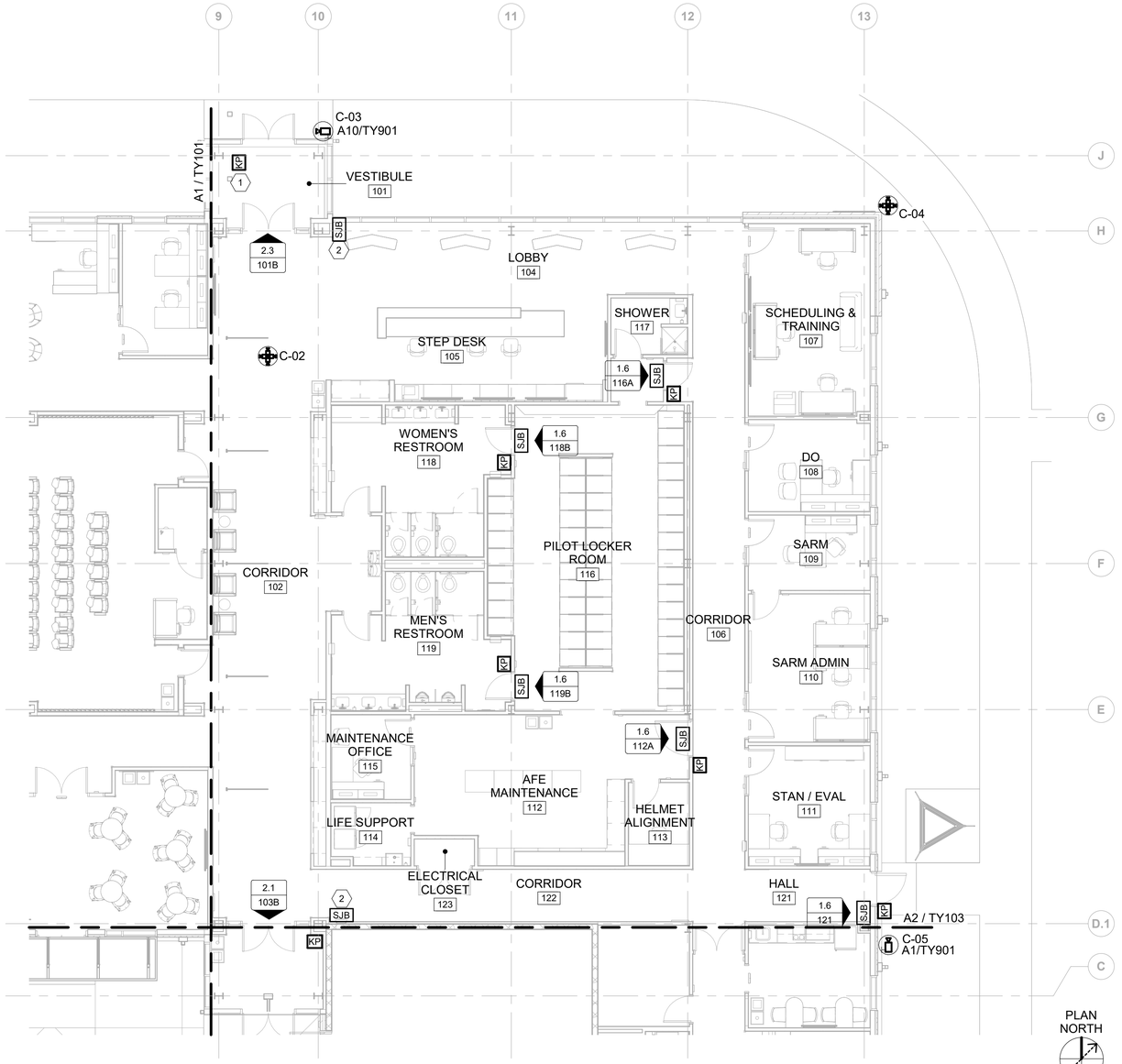
FIRST FLOOR SECURITY FLOOR PLAN - AREA - A

SHEET ID
TY101

READY-TO-ADVERTISE (RTA) SUBMITTAL

ROOM SCHEDULE - AREA B	
NAME	NUMBER
VESTIBULE	101
CORRIDOR	102
LOBBY	104
STEP DESK	105
CORRIDOR	106
SCHEDULING & TRAINING	107
DO	108
SARM	109
SARM ADMIN	110
STAN / EVAL	111
AFE MAINTENANCE	112

ROOM SCHEDULE - AREA B	
NAME	NUMBER
HELMET ALIGNMENT	113
LIFE SUPPORT	114
MAINTENANCE OFFICE	115
PILOT LOCKER ROOM	116
SHOWER	117
WOMEN'S RESTROOM	118
MEN'S RESTROOM	119
HALL	121
CORRIDOR	122
ELECTRICAL CLOSET	123



A6 FIRST FLOOR SECURITY PLAN - AREA - B

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

SCALE IN FEET

GENERAL SHEET NOTES

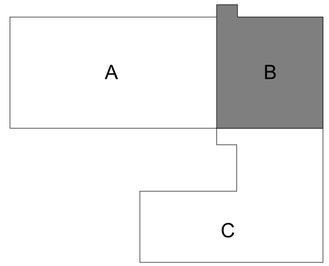
1. REFER TO SHEET TY001 FOR LEGEND, ABBREVIATIONS, AND NOTES.
2. ALL BACKBOXES AND RACEWAY SHALL BE SURFACE MOUNTED WITHIN THE SECURE SPACE AND CONCEALED OUTSIDE OF THE SECURE SPACE.
3. CONDUIT TO RUN IN WALL CAVITY BACK TO TELECOMM ROOM WHEN EXTERIOR CAMERAS ARE MOUNTED ON SECURE AREA PERIMETER WALL.
4. CONDUIT ROUTING THIS SHEET ONLY:
   - A. NON-SECURE SPACE: ROUTE CONDUIT TO COMM ROOM - 127
   - B. SECURE SPACE: (NOT APPLICABLE THIS SHEET)

SHEET KEYNOTES

1. ADA PEDESTAL MOUNTED DEVICE.
2. MOUNT SJB ABOVE CEILING OUT OF VIEW.

Professional Engineer
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Signature:
Typed or Printed Name: DUGAN BRADLEY
Date: 07/23/25 License Number: 61869

KEY PLAN



US Army Corps of Engineers ®

MARK	DESCRIPTION	DATE
0	READY-TO-ADV/ERTISE (RTA) SUBMITTAL	JUL 2025

DESIGNED BY: J. SCHAMBERGER
DRAWN BY: Z. MATHEWS
CHECKED BY: S. STRATTON
SUBMITTED BY: B. STREEBIN
SIZE: ANSI D
ISSUE DATE: JUL 2025
SOLICITATION NO.: W912T525RA001
CONTRACT NO.: W912T524F0007
FILE NAME: 165438_E_R22

US ARMY CORPS OF ENGINEERS
LITTLE ROCK DISTRICT
LITTLE ROCK, ARKANSAS

BURNS AND McDONNELL
9400 WARD PARKWAY,
KANSAS CITY, MO 64114
165438

F-35 SPECIAL ACCESS PROGRAM FACILITY
EBBING AIR NATIONAL GUARD BASE (ANGB), FORT SMITH, ARKANSAS

FIRST FLOOR SECURITY FLOOR PLAN - AREA - B

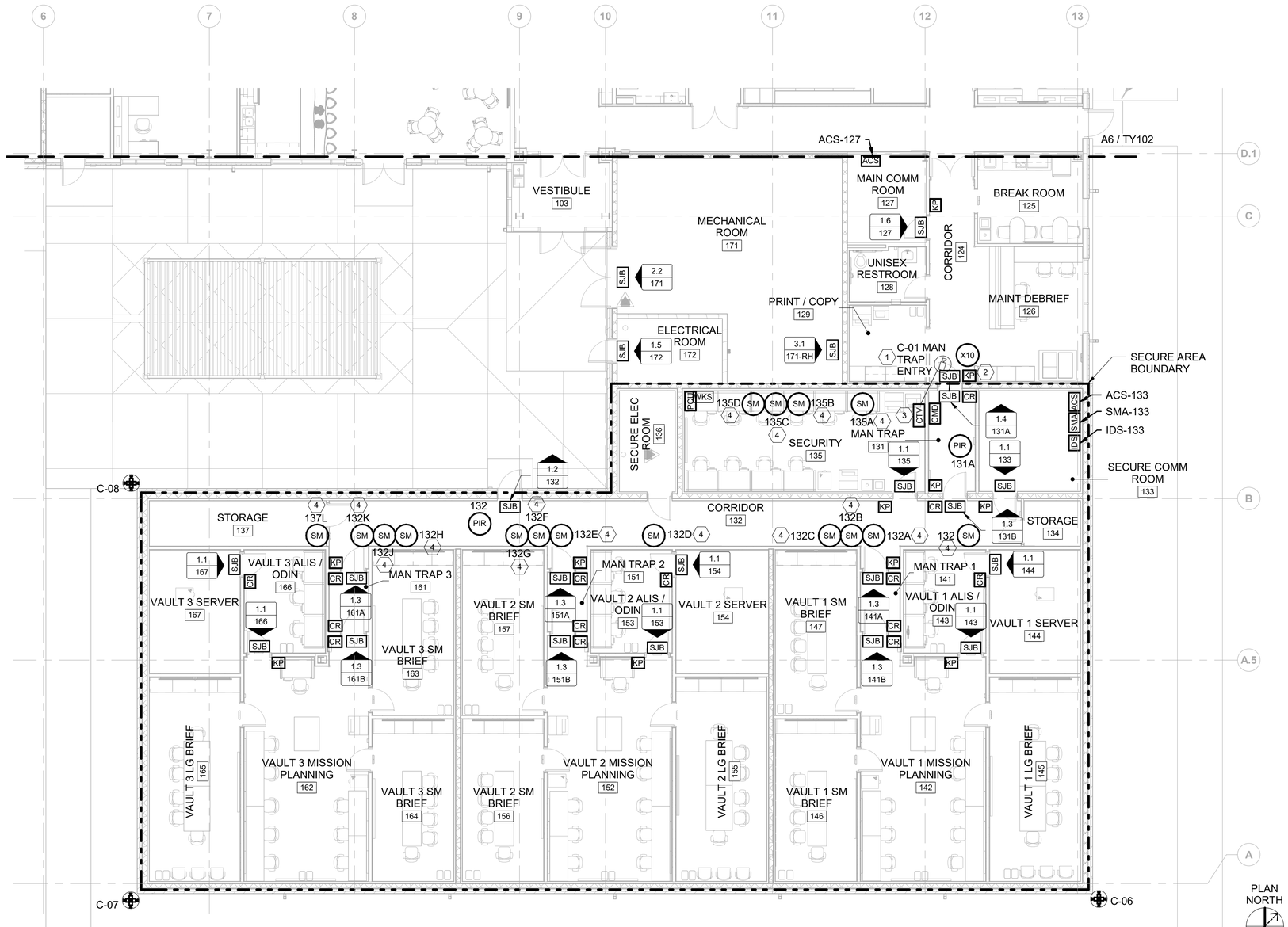
SHEET ID
TY102

READY-TO-ADVERTISE (RTA) SUBMITTAL

ROOM SCHEDULE - AREA C	
NAME	NUMBER
VESTIBULE	103
CORRIDOR	124
BREAK ROOM	125
MAINT DEBRIEF	126
MAIN COMM ROOM	127
UNISEX RESTROOM	128
PRINT / COPY	129
MAN TRAP	131
CORRIDOR	132
SECURE COMM ROOM	133
STORAGE	134
SECURITY	135
SECURE ELEC ROOM	136

ROOM SCHEDULE - AREA C	
NAME	NUMBER
STORAGE	137
MAN TRAP 1	141
VAULT 1 MISSION PLANNING	142
VAULT 1 ALIS / ODIN	143
VAULT 1 SERVER	144
VAULT 1 LG BRIEF	145
VAULT 1 SM BRIEF	146
MAN TRAP 2	151
VAULT 2 ALIS / ODIN	153
VAULT 2 SERVER	154
VAULT 2 LG BRIEF	155
VAULT 2 SM BRIEF	156
MAN TRAP 3	161
VAULT 3 ALIS / ODIN	166
VAULT 3 SERVER	167
VAULT 3 LG BRIEF	165
VAULT 3 SM BRIEF	163
VAULT 3 MISSION PLANNING	162
VAULT 2 SM BRIEF	157
VAULT 2 MISSION PLANNING	152
VAULT 3 ALIS / ODIN	153
VAULT 3 SERVER	154
VAULT 3 SM BRIEF	164

ROOM SCHEDULE - AREA C	
NAME	NUMBER
VAULT 2 LG BRIEF	155
VAULT 2 SM BRIEF	156
VAULT 2 SM BRIEF	157
MAN TRAP 3	161
VAULT 3 MISSION PLANNING	162
VAULT 3 SM BRIEF	163
VAULT 3 SM BRIEF	164
VAULT 3 LG BRIEF	165
VAULT 3 ALIS / ODIN	166
MECHANICAL ROOM	171
ELECTRICAL ROOM	172



A2 FIRST FLOOR SECURITY PLAN - AREA - C

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

GENERAL SHEET NOTES

1. REFER TO SHEET TY001 FOR LEGEND, ABBREVIATIONS, AND NOTES.
2. ALL BACKBOXES AND RACEWAY SHALL BE SURFACE MOUNTED WITHIN THE SECURE SPACE AND CONCEALED OUTSIDE OF THE SECURE SPACE.
3. CONDUIT TO RUN IN WALL CAVITY BACK TO TELECOMM ROOM WHEN EXTERIOR CAMERAS ARE MOUNTED ON SECURE AREA PERIMETER WALL.
4. CONDUIT ROUTING THIS SHEET ONLY:
   - A. NON-SECURE SPACE: ROUTE CONDUIT TO COMM ROOM - 127
   - B. SECURE SPACE: ROUTE CONDUIT TO SECURE COMM ROOM - 133

SHEET KEYNOTES

1. MAN TRAP ENTRY CAMERA C-01 PROVIDE PENETRATION THROUGH SECURE PERIMETER.
2. MAN TRAP ENTRY DOOR SJB 131A PROVIDE PENETRATION THROUGH SECURE PERIMETER.
3. WALL MOUNTED CCTV DISPLAY (GFGI)
4. SOUND MASKING SPEAKER LOCATED IN HVAC DUCT.

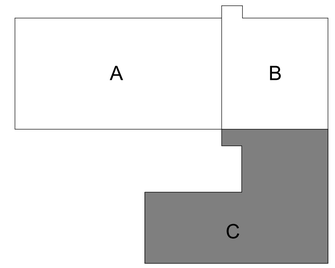
Professional Engineer
I hereby certify that this plan, specification, or report was prepared by me or under my direct supervision and that I am a duly Licensed Professional Engineer under the laws of the state of Minnesota.

Signature:

Typed or Printed Name: DUGAN BRADLEY

Date: 07/23/25 License Number: 61869

KEY PLAN



US Army Corps of Engineers ®

MARK	DESCRIPTION	DATE
0	READY-TO-ADV/ERTISE (RTA) SUBMITTAL	JUL 2025

DESIGNED BY: J. SCHAMBERGER
DRAWN BY: Z. MATHEWS
CHECKED BY: S. STRATTON
SUBMITTED BY: B. STREEBIN
SIZE: ANSI D
ISSUE DATE: JUL 2025
SOLICITATION NO.: W912T2S25RA001
CONTRACT NO.: W912T2S24F0007
FILE NAME: 16438_E_R22

US ARMY CORPS OF ENGINEERS
LITTLE ROCK DISTRICT
LITTLE ROCK, ARKANSAS

BURNS AND McDONNELL
9400 WARD PARKWAY,
KANSAS CITY, MO 64114
165438

F-35 SPECIAL ACCESS PROGRAM FACILITY
EBBING AIR NATIONAL GUARD BASE (ANGB), FORT SMITH, ARKANSAS

FIRST FLOOR SECURITY FLOOR PLAN - AREA - C

SHEET ID

TY103

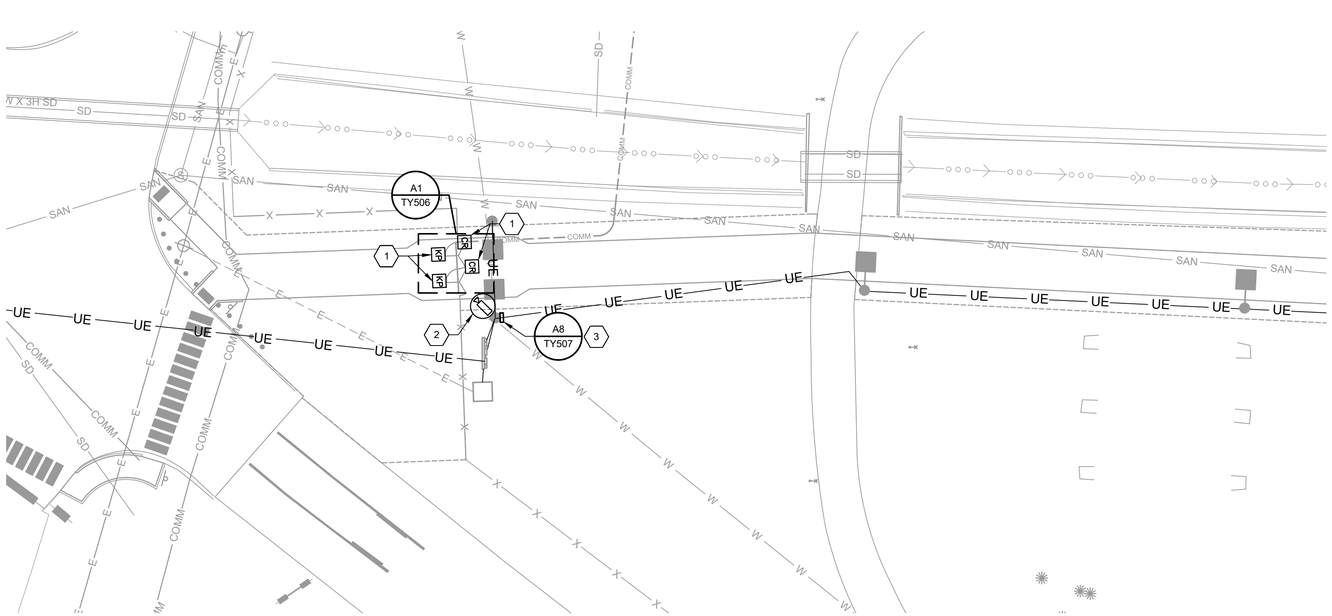
READY-TO-ADVERTISE (RTA) SUBMITTAL

GENERAL SHEET NOTES

1. REFER TO SHEET TY001 FOR LEGEND, ABBREVIATIONS, AND NOTES.
2. ALL WORK ASSOCIATED WITH THE PEDESTRIAN TURNSTILE, SIDEWALK, AND FENCE ON THIS SHEET TO BE BID AS PART OF BID OPTION - SECURITY TURNSTILE.

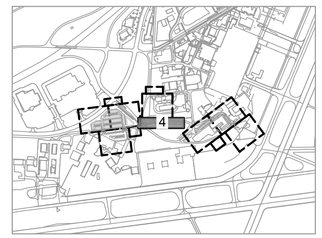
SHEET KEYNOTES

1. CARD READERS CIRCUIT TO THE ENCLOSURE MOUNTED ON THE LIGHT POLE.
2. SECURITY CAMERA CIRCUIT TO THE ENCLOSURE MOUNTED ON THE LIGHT POLE.
3. SECURITY ENCLOSURE MOUNTED ON LIGHT POLE.



A4 SECURITY - SITE PLAN - AREA 4
SCALE: 1" = 20'

KEY PLAN



Professional Engineer
I hereby certify that this plan, specification, or report was prepared by me or under my direct supervision and that I am a duly Licensed Professional Engineer under the laws of the state of Minnesota.
Signature:
Typed or Printed Name: DUGAN BRADLEY
Date: 07/23/25 License Number: 61869

US Army Corps of Engineers ®

MARK	DESCRIPTION	DATE
0	READY-TO-ADVERTISE (RTA) SUBMITTAL	JUL 2025

DESIGNED BY: J. SCHAMBERGER
DRAWN BY: Z. MATHEWS
CHECKED BY: T. HARLESS
SUBMITTED BY: STREEBIN
SIZE: ANSI D
ISSUE DATE: JUL 2025
SOLICITATION NO.: W9127S25RA001
CONTRACT NO.: W9127S24F0007
FILE NAME: 165438TY114.dwg

US ARMY CORPS OF ENGINEERS
LITTLE ROCK DISTRICT
LITTLE ROCK, ARKANSAS

BURNS AND McDONNELL
9400 WARD PARKWAY,
KANSAS CITY MO, 64114
165438

F-35; SPECIAL ACCESS PROGRAM FACILITY
EBBING AIR NATIONAL GUARD BASE (ANGB), FORT SMITH, ARKANSAS

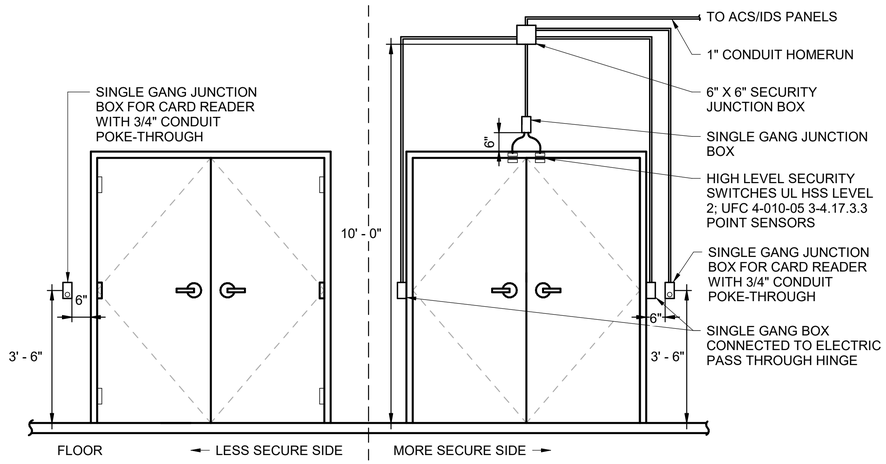
SECURITY - SITE PLAN - AREA 4

SHEET ID
TY114

READY-TO-ADVERTISE (RTA) SUBMITTAL

GENERAL SHEET NOTES

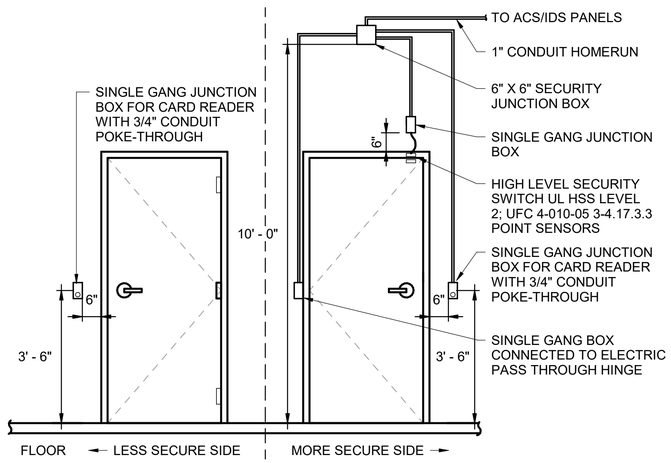
1. REFER TO SHEET TY001 FOR LEGEND, ABBREVIATIONS, AND NOTES.
2. REFER TO TY100 SERIES FLOORPLAN FOR QUANTITY AND LOCATION OF DEVICE BACKBOXES.
3. MIRROR BACKBOX AND RACEWAY FOR OPPOSITE SWING DOOR PER FLOORPLANS.
4. SEE ARCHITECTURAL CONSTRUCTION DOCUMENTS FOR APPROPRIATE DOOR HARDWARE.
5. ALL BACKBOXES AND RACEWAY SHALL BE SURFACE MOUNTED WITHIN THE SECURE SPACE AND CONCEALED OUTSIDE OF THE SECURE SPACE.



NOTES:

1. ALL BACKBOXES AND RACEWAY SHALL BE SURFACE MOUNTED WITHIN THE SECURE SPACE AND CONCEALED OUTSIDE OF THE SECURE SPACE.
2. ALL J-BOXES AND SJB WHERE CABLES ARE SPLICED REQUIRE TAMPER SWITCHES.
3. SURFACE MOUNT HIGH LEVEL SECURITY SWITCH UL HSS LEVEL 2; UFC 4-010-05 3-4.17.3.3 POINT SENSORS CLOSE TO DOOR EDGE (LATCH SIDE) PER MANUFACTURER'S RECOMMENDATIONS.
4. CONTRACTOR SHALL SIZE CONDUIT PER N.E.C., MINIMUM 3/4".

A1 TYPICAL DOUBLE DOOR ROUGH-IN
SCALE: NTS



NOTES:

1. ALL BACKBOXES AND RACEWAY SHALL BE SURFACE MOUNTED WITHIN THE SECURE SPACE AND CONCEALED OUTSIDE OF THE SECURE SPACE.
2. ALL J-BOXES AND SJB WHERE CABLES ARE SPLICED REQUIRE TAMPER SWITCHES.
3. SURFACE MOUNT HIGH LEVEL SECURITY SWITCH UL HSS LEVEL 2; UFC 4-010-05 3-4.17.3.3 POINT SENSORS CLOSE TO DOOR EDGE (LATCH SIDE) PER MANUFACTURER'S RECOMMENDATIONS.
4. CONTRACTOR SHALL SIZE CONDUIT PER N.E.C., MINIMUM 3/4".

A11 TYPICAL SINGLE DOOR ROUGH-IN
SCALE: NTS

Professional Engineer
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Signature:
Typed or Printed Name: DUGAN BRADLEY
Date: 07/23/25 License Number: 61869

US Army Corps of Engineers ®

MARK	DESCRIPTION	DATE
0	READY-TO-ADV/ERTISE (RTA) SUBMITTAL	JUL 2025

DESIGNED BY: J. SCHAMBERGER
DRAWN BY: Z. MATHEWS
CHECKED BY: S. STREETER
SUBMITTED BY: B. STREEBIN
SIZE: ANSI D
FILE NAME: 165439_E_R22
ISSUE DATE: JUL 2025
SOLICITATION NO.: W912T525RA001
CONTRACT NO.: W912T524F0007

US ARMY CORPS OF ENGINEERS
LITTLE ROCK DISTRICT
LITTLE ROCK, ARKANSAS

BURNS AND McDONNELL
9400 WARD PARKWAY,
KANSAS CITY, MO 64114
165438

F-35: SPECIAL ACCESS PROGRAM FACILITY
EBBING AIR NATIONAL GUARD BASE (ANGB), FORT SMITH, ARKANSAS

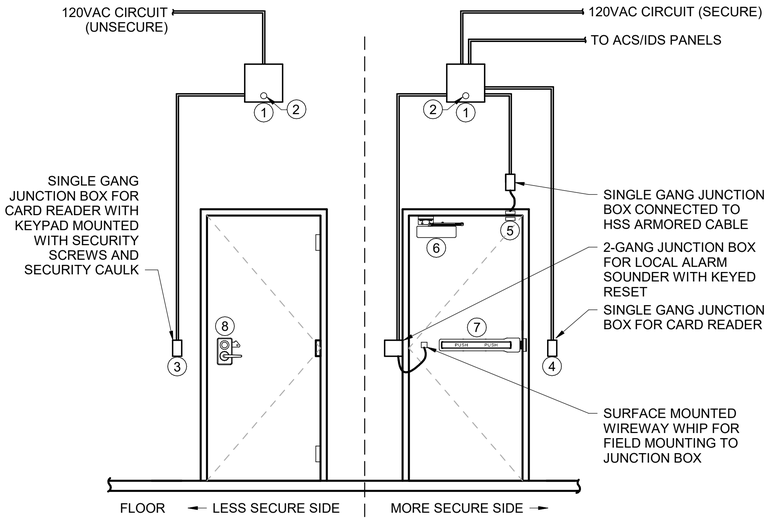
SECURITY DETAILS

SHEET ID
TY501

READY-TO-ADVERTISE (RTA) SUBMITTAL

GENERAL SHEET NOTES

1. REFER TO SHEET TY001 FOR LEGEND, ABBREVIATIONS, AND NOTES.
2. REFER TO TY100 SERIES FLOORPLAN FOR QUANTITY AND LOCATION OF DEVICE BACKBOXES.
3. MIRROR BACKBOX AND RACEWAY FOR OPPOSITE SWING DOOR PER FLOORPLANS.
4. SEE ARCHITECTURAL CONSTRUCTION DOCUMENTS FOR APPROPRIATE DOOR HARDWARE.
5. ALL BACKBOXES AND RACEWAY SHALL BE SURFACE MOUNTED WITHIN THE SECURE SPACE AND CONCEALED OUTSIDE OF THE SECURE SPACE.

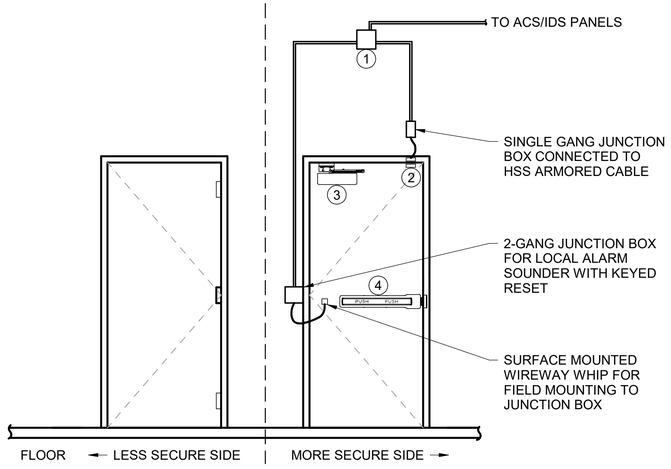


PLAN NOTES:

1. 12" X 12" SECURITY JUNCTION BOX
2. 1" CONDUIT SECURE AREA / SHIELDING PENETRATION
3. CARD READER WITH KEYPAD
4. CARD READER
5. HIGH LEVEL SECURITY SWITCH UL HSS LEVEL 2; UFC 4-010-05 3-4.17.3.3 POINT SENSOR
6. DOOR CLOSER WITH EXTRA HEAVY DUTY PARALLEL ARM
7. FF-L 2890C TYPE IV HIGH SECURITY PANIC BAR
8. FF-L 2890C TYPE IV HIGH SECURITY ELECTRIC LOCK WITH X-10 COMBINATION LOCK

G1 1.4 - SINGLE DOOR WITH X-10 LOCK

SCALE: NTS

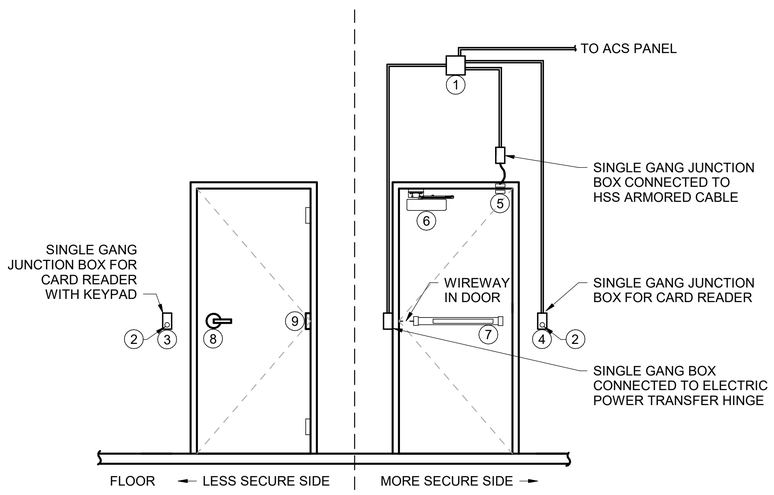


PLAN NOTES:

1. 6" X 6" SECURITY JUNCTION BOX
2. HIGH LEVEL SECURITY SWITCH UL HSS LEVEL 2; UFC 4-010-05 3-4.17.3.3 POINT SENSOR
3. DOOR CLOSER WITH EXTRA HEAVY DUTY PARALLEL ARM
4. FF-L 2890C TYPE X HIGH SECURITY PANIC BAR EXIT ONLY

G10 1.2 - SINGLE DOOR EMERGENCY EXIT ONLY WITH LOCAL ALARM AND KEY RESET

SCALE: NTS

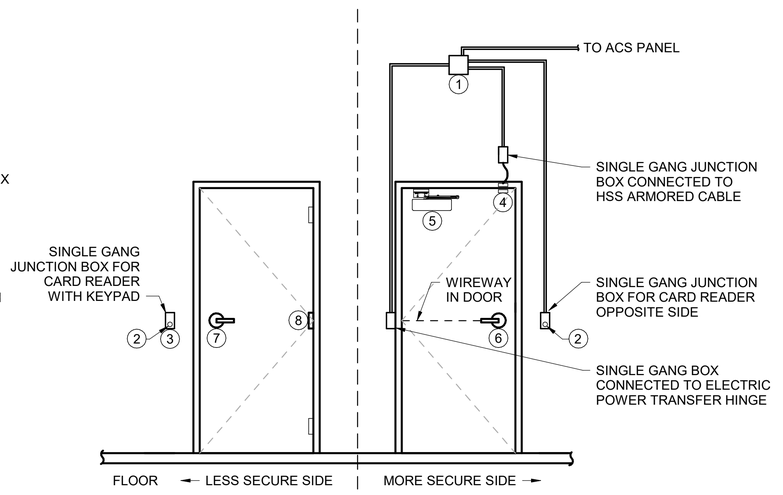


PLAN NOTES:

1. 6" X 6" SECURITY JUNCTION BOX
2. 3/4" CONDUIT PENETRATION
3. CARD READER WITH KEYPAD
4. CARD READER
5. HIGH LEVEL SECURITY SWITCH UL HSS LEVEL 2; UFC 4-010-05 3-4.17.3.3 POINT SENSOR
6. DOOR CLOSER WITH HEAVY DUTY PARALLEL ARM
7. FREE EGRESS EXIT DEVICE
8. FAIL SECURE ELECTRIC LOCK
9. ELECTRIC POWER TRANSFER (EPT) HINGE

A1 1.3 - SINGLE DOOR WITH DUAL CARD READERS

SCALE: NTS



PLAN NOTES:

1. 6" X 6" SECURITY JUNCTION BOX
2. 3/4" CONDUIT PENETRATION
3. CARD READER WITH KEYPAD
4. HIGH LEVEL SECURITY SWITCH UL HSS LEVEL 2; UFC 4-010-05 3-4.17.3.3 POINT SENSOR
5. DOOR CLOSER WITH HEAVY DUTY PARALLEL ARM
6. FREE EGRESS TRIM LEVER
7. FAIL SECURE ELECTRIC LOCK
8. ELECTRIC POWER TRANSFER (EPT) HINGE

Professional Engineer
I hereby certify that this plan, specification, or report was prepared by me or under my direct supervision and that I am a duly Licensed Professional Engineer under the laws of the state of Minnesota.
Signature:
Typed or Printed Name: DUGAN BRADLEY
Date: 07/23/25 License Number: 61869

A10 1.1 - SINGLE DOOR WITH CARD READER

SCALE: NTS

US Army Corps of Engineers ®

MARK	DESCRIPTION	DATE
0	READY-TO-ADVERTISE (RTA) SUBMITTAL	JUL 2025

DESIGNED BY: J. SCHAMBERGER
DRAWN BY: Z. MATHEWS
CHECKED BY: S. STRATTON
SUBMITTED BY: B. STREEBIN
SIZE: ANSI D
ISSUE DATE: JUL 2025
SOLICITATION NO.: W912T2S25KA001
CONTRACT NO.: W912T3624F0007
FILE NAME: 16438_E_R22

US ARMY CORPS OF ENGINEERS
LITTLE ROCK DISTRICT
LITTLE ROCK, ARKANSAS

BURNS AND McDONNELL
9400 WARD PARKWAY,
KANSAS CITY, MO 64114
16438

F-35 SPECIAL ACCESS PROGRAM FACILITY
EBBING AIR NATIONAL GUARD BASE (ANGB), FORT SMITH, ARKANSAS

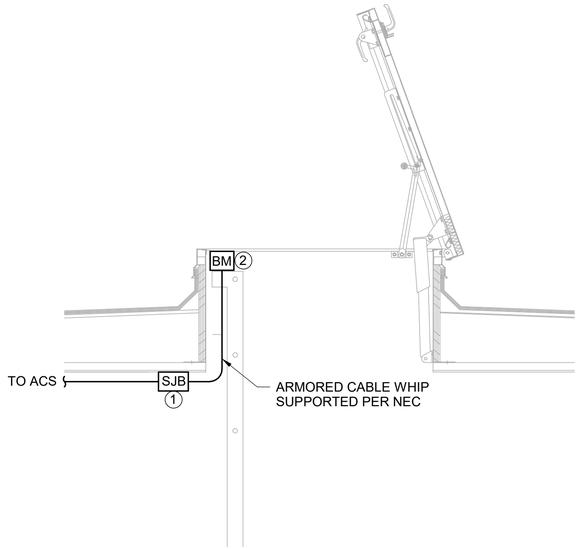
SECURITY DETAILS

SHEET ID
TY502

READY-TO-ADVERTISE (RTA) SUBMITTAL

GENERAL SHEET NOTES

1. REFER TO SHEET TY001 FOR LEGEND, ABBREVIATIONS, AND NOTES.
2. PROVIDE CONDUIT TO JUNCTION BOX ON THE OTHER SIDE OF WALL.
3. SEE ARCHITECTURAL DOCUMENTS FOR APPROPRIATE DOOR HARDWARE.
4. ALL BACKBOXES AND RACEWAY SHALL BE SURFACE MOUNTED WITHIN THE SECURE SPACE AND CONCEALED OUTSIDE OF THE SECURE SPACE.



NOTE:

1. ROOF HATCH SHALL BE SECURED WITH A HIGH SECURITY PADLOCK MEETING FEDERAL SPECIFICATION MIL-DTL-43607J. PADLOCK KEYS SHALL BE STORED IN A SECURITY CONTAINER LOCATED WITHIN THE SECURE SPACE.

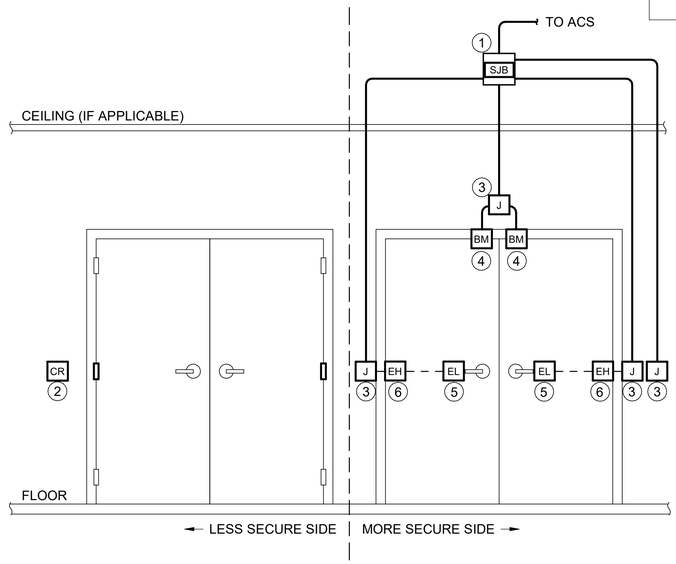
DOOR OPERATION:

1. ACS MUST MONITOR HIGH SECURITY SWITCH (UL 634 HSS LEVEL 2; UFC 4-010-05 3-4.17.3.3 POINT SENSORS).
2. ESS MUST ALARM 24/7 WHEN THE ROOF HATCH IS OPENED.

KEYED NOTES:

1. SECURITY JUNCTION BOX
2. HIGH LEVEL SECURITY SWITCH UL HSS LEVEL 2; UFC 4-010-05 3-4.17.3.3 POINT SENSOR

G1 3.1 - MONITORED ROOF HATCH WITH ACS ALARM
SCALE: NTS



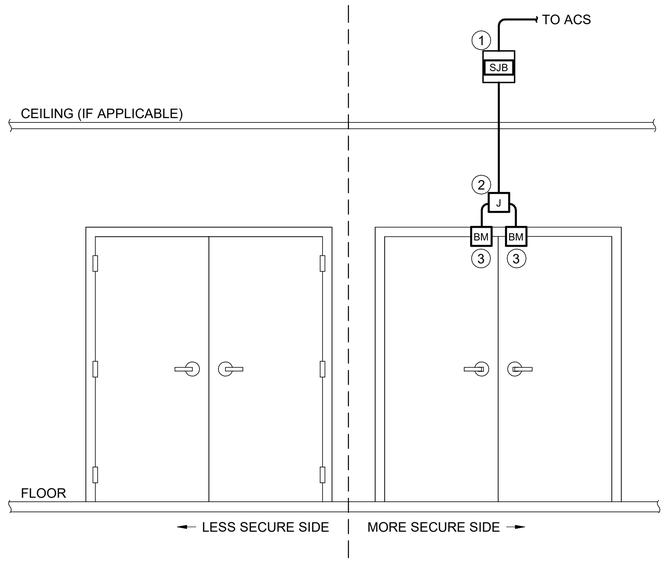
DOOR OPERATION:

1. ACS MUST MONITOR HIGH LEVEL SECURITY SWITCH UL HSS LEVEL 2; UFC 4-010-05 3-4.17.3.3 POINT SENSOR.
2. ESS MUST ALARM IF ACS SYSTEM IS NOT USED TO OPEN THE DOOR.
3. REFER TO FLOOR PLANS FOR REQUIREMENT OF CARD READER OR CARD READER WITH KEYPAD.

KEYED NOTES:

1. SECURITY JUNCTION BOX
2. CARD READER OR CARD READER WITH KEYPAD
3. JUNCTION BOX
4. HIGH LEVEL SECURITY SWITCH UL HSS LEVEL 2; UFC 4-010-05 3-4.17.3.3 POINT SENSOR
5. ELECTRIC LOCK WITH INTEGRAL REX SWITCH
6. ELECTRIC PASS THROUGH HINGE

G11 2.1 - DOUBLE DOOR WITH CARD READER
SCALE: NTS



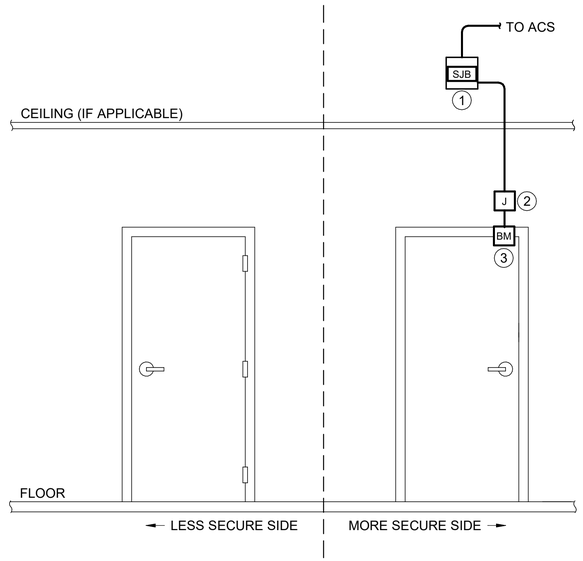
DOOR OPERATION:

1. DOOR MUST ALLOW FREE EGRESS.
2. ACS MUST MONITOR HIGH LEVEL SECURITY SWITCH UL HSS LEVEL 2; UFC 4-010-05 3-4.17.3.3 POINT SENSOR.
3. ESS MUST ALARM 24/7 WHEN THE DOOR IS OPENED.

KEYED NOTES:

1. SECURITY JUNCTION BOX
2. JUNCTION BOX
3. HIGH LEVEL SECURITY SWITCH UL HSS LEVEL 2; UFC 4-010-05 3-4.17.3.3 POINT SENSOR

A1 2.2 - DOUBLE DOOR WITH ACS ALARM
SCALE: NTS



DOOR OPERATION:

1. DOOR MUST ALLOW FREE EGRESS.
2. ACS MUST MONITOR HIGH LEVEL SECURITY SWITCH UL HSS LEVEL 2; UFC 4-010-05 3-4.17.3.3 POINT SENSOR.
3. ESS MUST ALARM 24/7 WHEN THE DOOR IS OPENED.

PLAN NOTES:

1. SECURITY JUNCTION BOX
2. JUNCTION BOX
3. HIGH LEVEL SECURITY SWITCH UL HSS LEVEL 2; UFC 4-010-05 3-4.17.3.3 POINT SENSOR

A11 1.5 - SINGLE DOOR WITH ACS ALARM
SCALE: NTS

Professional Engineer
I hereby certify that this plan, specification, or report was prepared by me or under my direct supervision and that I am a duly Licensed Professional Engineer under the laws of the state of Minnesota.
Signature:
Typed or Printed Name: DUGAN BRADLEY
Date: 07/23/25 License Number: 61869

US Army Corps of Engineers ®

MARK	DESCRIPTION	DATE
0	READY-TO-ADVERTISE (RTA) SUBMITTAL	JUL 2025

DESIGNED BY: J. SCHAMBERGER
DRAWN BY: Z. MATHEWS
CHECKED BY: S. STRATTON
SUBMITTED BY: B. STREEBIN
SIZE: ANSI D
ISSUE DATE: JUL 2025
SOLICITATION NO.: W912T525RA001
CONTRACT NO.: W912T524F0007
FILE NAME: 16438_E_R22

US ARMY CORPS OF ENGINEERS
LITTLE ROCK DISTRICT
LITTLE ROCK, ARKANSAS

BURNS AND McDONNELL
9400 WARD PARKWAY,
KANSAS CITY, MO 64114
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F-35 SPECIAL ACCESS PROGRAM FACILITY
EBBING AIR NATIONAL GUARD BASE (ANGB), FORT SMITH, ARKANSAS

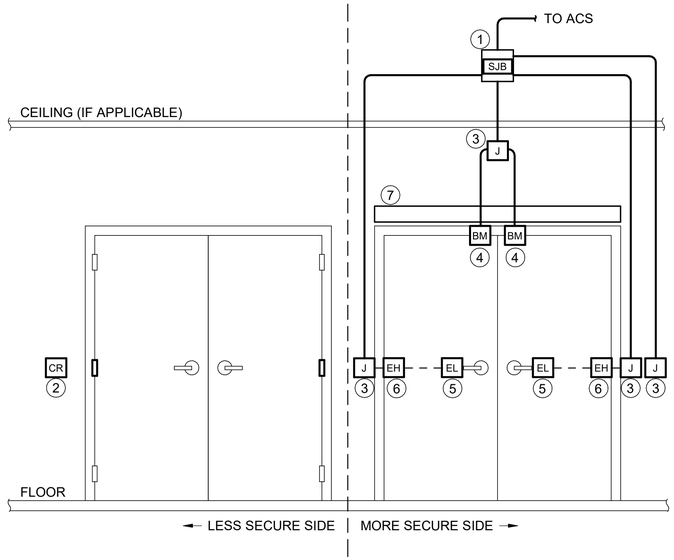
SECURITY DETAILS

SHEET ID
TY503

READY-TO-ADVERTISE (RTA) SUBMITTAL

GENERAL SHEET NOTES

1. REFER TO SHEET TY001 FOR LEGEND, ABBREVIATIONS, AND NOTES.
2. PROVIDE CONDUIT TO JUNCTION BOX ON THE OTHER SIDE OF WALL.
3. SEE ARCHITECTURAL DOCUMENTS FOR APPROPRIATE DOOR HARDWARE.
4. ALL BACKBOXES AND RACEWAY SHALL BE SURFACE MOUNTED WITHIN THE SECURE SPACE AND CONCEALED OUTSIDE OF THE SECURE SPACE.



F9 2.3 - DOUBLE DOOR ADA WITH CARD READER

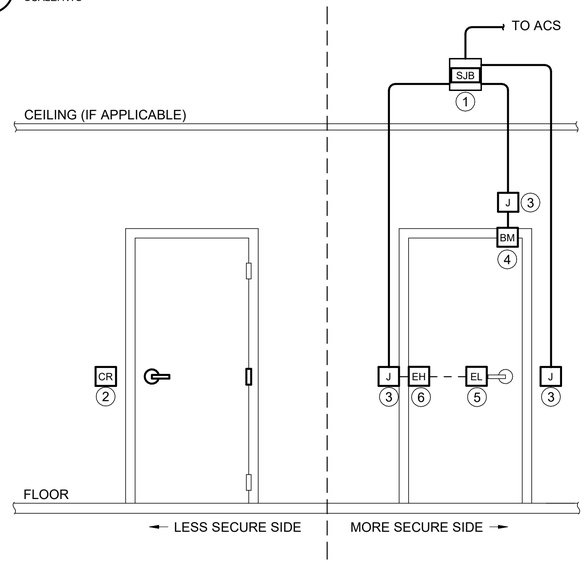
SCALE: NTS

DOOR OPERATION:

1. ACS MUST MONITOR HIGH LEVEL SECURITY SWITCH UL HSS LEVEL 2; UFC 4-010-05 3-4.17.3.3 POINT SENSOR.
2. ESS MUST ALARM IF ACS SYSTEM IS NOT USED TO OPEN THE DOOR.
3. REFER TO FLOOR PLANS FOR REQUIREMENT OF CARD READER OR CARD READER WITH KEYPAD.

KEYED NOTES:

1. SECURITY JUNCTION BOX
2. CARD READER OR CARD READER WITH KEYPAD
3. JUNCTION BOX
4. HIGH LEVEL SECURITY SWITCH UL HSS LEVEL 2; UFC 4-010-05 3-4.17.3.3 POINT SENSOR
5. ELECTRIC LOCK WITH INTEGRAL REX SWITCH
6. ELECTRIC PASS THROUGH HINGE
7. POWERED DOOR OPERATOR



A9 1.6 - SINGLE DOOR WITH CARD READER WITH ACS ALARM

SCALE: NTS

DOOR OPERATION:

1. ACS MUST MONITOR HIGH LEVEL SECURITY SWITCH UL HSS LEVEL 2; UFC 4-010-05 3-4.17.3.3 POINT SENSOR.
2. ESS MUST ALARM IF IDS SYSTEM IS ARMED AND THE DOOR IS OPENED.
3. REFER TO FLOOR PLANS FOR REQUIREMENT OF CARD READER OR CARD READER WITH KEYPAD.

KEYED NOTES:

1. SECURITY JUNCTION BOX
2. CARD READER OR CARD READER WITH KEYPAD
3. JUNCTION BOX
4. HIGH LEVEL SECURITY SWITCH UL HSS LEVEL 2; UFC 4-010-05 3-4.17.3.3 POINT SENSOR
5. ELECTRIC LOCK WITH INTEGRAL REX SWITCH
6. ELECTRIC PASS THROUGH HINGE

Professional Engineer
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Signature:

Typed or Printed Name: DUGAN BRADLEY

Date: 07/23/25 License Number: 61869

US Army Corps of Engineers ®

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DESIGNED BY: J. SCHAMBERGER
DRAWN BY: Z. MATHEWS
CHECKED BY: S. STRATTON
SUBMITTED BY: B. STREEBIN
SIZE: ANSI D
ISSUE DATE: JUL 2025
SOLICITATION NO.: W912725RA001
CONTRACT NO.: W912725A4T0007
FILE NAME: 16438_E_R22

US ARMY CORPS OF ENGINEERS
LITTLE ROCK DISTRICT
LITTLE ROCK, ARKANSAS

BURNS AND McDONNELL
9400 WARD PARKWAY,
KANSAS CITY, MO 64114
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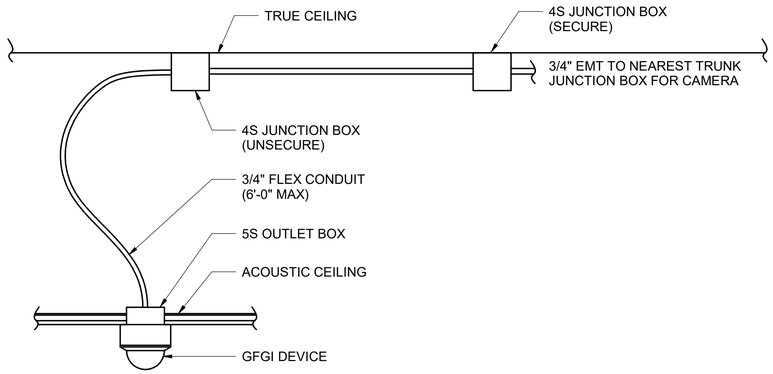
F-35: SPECIAL ACCESS PROGRAM FACILITY
EBBING AIR NATIONAL GUARD BASE (ANGB), FORT SMITH, ARKANSAS

SECURITY DETAILS

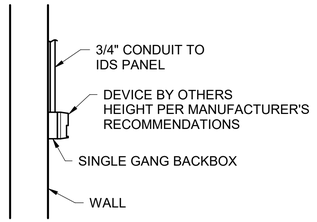
SHEET ID

TY504

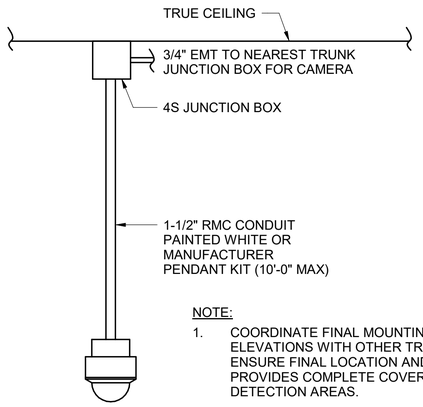
READY-TO-ADVERTISE (RTA) SUBMITTAL



K1 CEILING MOUNTED CAMERA
SCALE: NTS



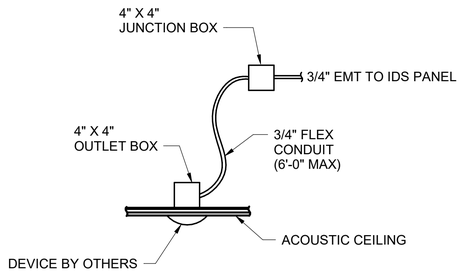
K12 WALL MOUNTED PIR ROUGH-IN
SCALE: NTS



NOTE:

1. COORDINATE FINAL MOUNTING LOCATIONS AND ELEVATIONS WITH OTHER TRADES AND OWNER. ENSURE FINAL LOCATION AND ELEVATION PROVIDES COMPLETE COVERAGE OF INTENDED DETECTION AREAS.

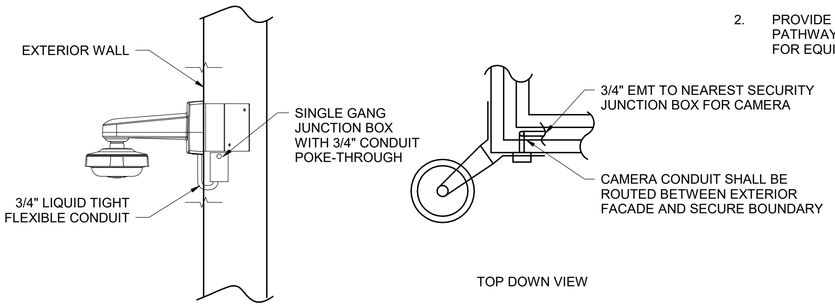
F1 PENDANT MOUNTED CAMERA
SCALE: NTS



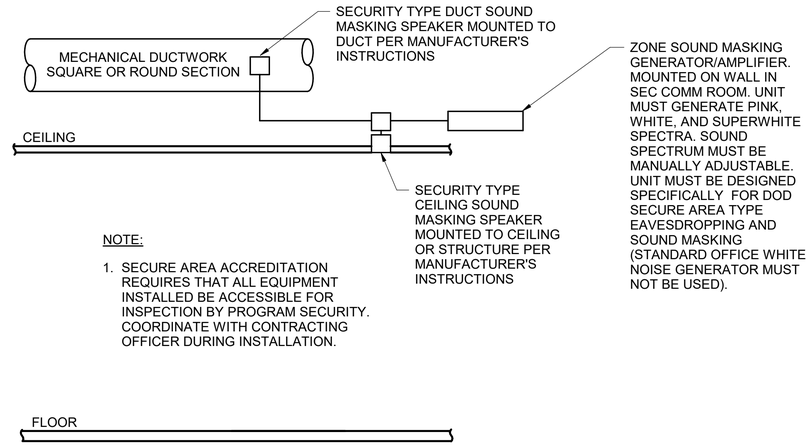
G12 CEILING MOUNTED PIR ROUGH-IN
SCALE: NTS

NOTES:

1. CONDUIT SHALL NOT PASS THROUGH SECURE AREA BOUNDARY.
2. PROVIDE CODE COMPLIANT PATHWAYS. REFER TO FLOORPLAN FOR EQUIPMENT ROOM LOCATION.



A1 TYPICAL EXTERIOR WALL MOUNTED CAMERA
SCALE: NTS



NOTE:

1. SECURE AREA ACCREDITATION REQUIRES THAT ALL EQUIPMENT INSTALLED BE ACCESSIBLE FOR INSPECTION BY PROGRAM SECURITY. COORDINATE WITH CONTRACTING OFFICER DURING INSTALLATION.

A12 TYPICAL SECURE SOUND MASKING INSTALLATION
SCALE: NTS

US Army Corps of Engineers ®

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DESIGNED BY: J. SCHAMBERGER
DRAWN BY: Z. MATHEWS
CHECKED BY: S. STRATTON
SUBMITTED BY: B. STREEBIN
SIZE: ANSI D
ISSUE DATE: JUL 2025
SOLICITATION NO.: W912T525RA001
CONTRACT NO.: W912T524F0007
FILE NAME: 16543B_E_R22

US ARMY CORPS OF ENGINEERS
LITTLE ROCK DISTRICT
LITTLE ROCK, ARKANSAS

BURNS AND McDONNELL
9400 WARD PARKWAY,
KANSAS CITY, MO 64114
165438

Professional Engineer
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Signature: _____
Typed or Printed Name: DUGAN BRADLEY
Date: 07/23/25 License Number: 61869

F-35: SPECIAL ACCESS PROGRAM FACILITY
EBBING AIR NATIONAL GUARD BASE (ANGB), FORT SMITH, ARKANSAS

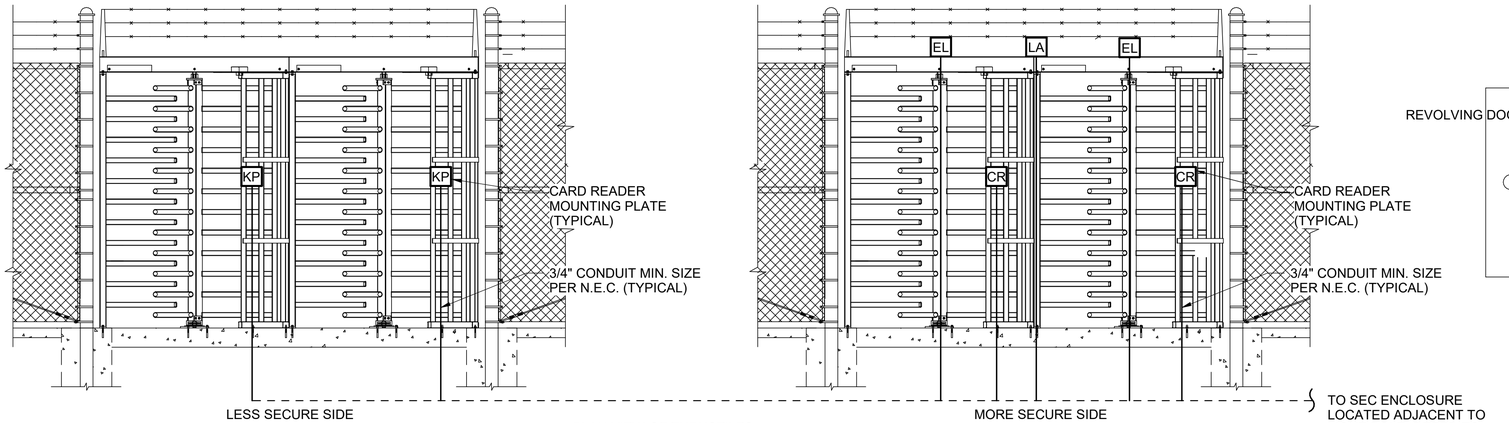
SECURITY DETAILS

SHEET ID
TY505

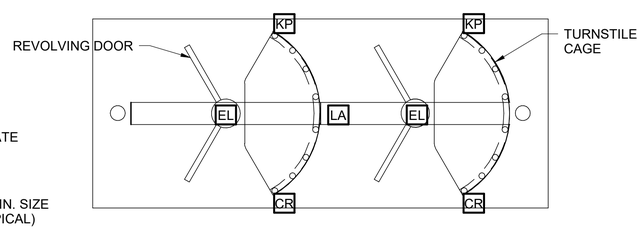
READY-TO-ADVERTISE (RTA) SUBMITTAL

GENERAL SHEET NOTES

1. REFER TO SHEET TY001 FOR LEGEND, ABBREVIATIONS, AND NOTES.
2. ALL WORK ASSOCIATED WITH THE PEDESTRIAN TURNSTILE, SIDEWALK, AND FENCE ON THIS SHEET TO BE BID AS PART OF BID OPTION - SECURITY TURNSTILE.



PLAN VIEW OF TURNSTILES



NOTES:

1. PROVIDE DEVICE BACK BOX AND CONDUIT ROUGH-IN ONLY FOR GFGI FURNISHED SECURITY DEVICES.
2. COORDINATE FINAL MOUNTING LOCATIONS AND ROUGH-IN DETAILS WITH TURNSTILE MANUFACTURER SELECTED.
3. SECURITY DEVICE RACEWAY WILL BE ROUTED TO SECURITY ENCLOSURE MOUNTED ON UNISTRUT ASSEMBLY ADJACENT TO LIGHT POLE. REFER TO SHEET TY114 FOR LOCATION.
4. REFER TO SHEET TY507 FOR ENCLOSURE ROUGH-IN DETAIL.
5. REFER TO ELECTRICAL DRAWINGS FOR POWER INFORMATION.
6. REFER TO TELECOM DRAWINGS FOR FIBER-OPTIC BACKBONE INFORMATION.

A1 7.0 - DOUBLE SITE TURNSTILE - REVOLVING GATE SECURITY
SCALE: NTS

Professional Engineer
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SOLICITATION NO.: W912T525RA001
CONTRACT NO.: W912T524F0007
SIZE: ANSI D
FILE NAME: 165438_E_R22

US ARMY CORPS OF ENGINEERS
LITTLE ROCK DISTRICT
LITTLE ROCK, ARKANSAS

BURNS AND McDONNELL
9400 WARD PARKWAY,
KANSAS CITY, MO 64114
165438

F-35: SPECIAL ACCESS PROGRAM FACILITY
EBBING AIR NATIONAL GUARD BASE (ANGB), FORT SMITH, ARKANSAS

SECURITY DETAILS

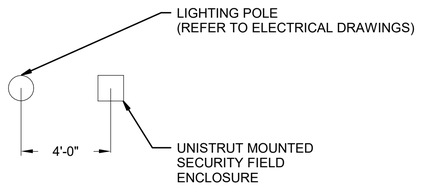
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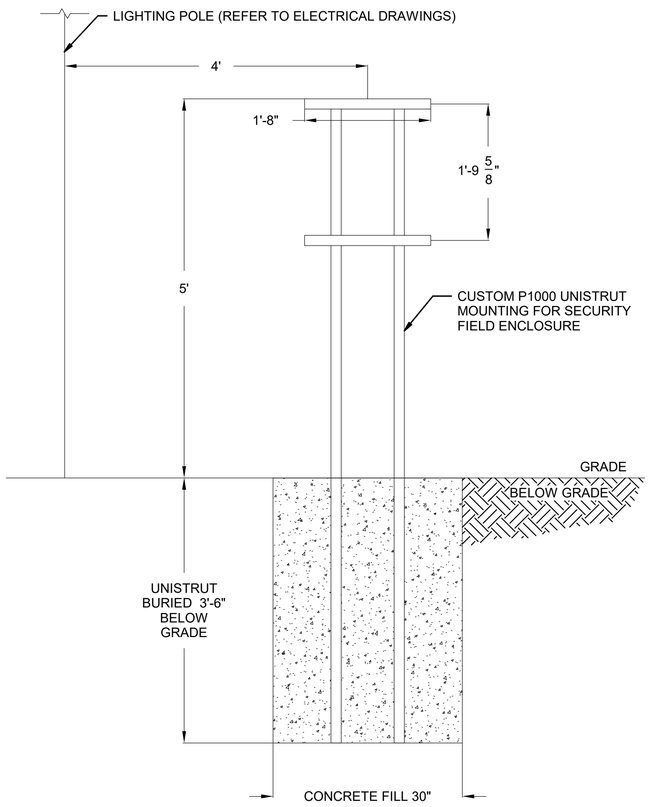
READY-TO-ADVERTISE (RTA) SUBMITTAL

GENERAL SHEET NOTES

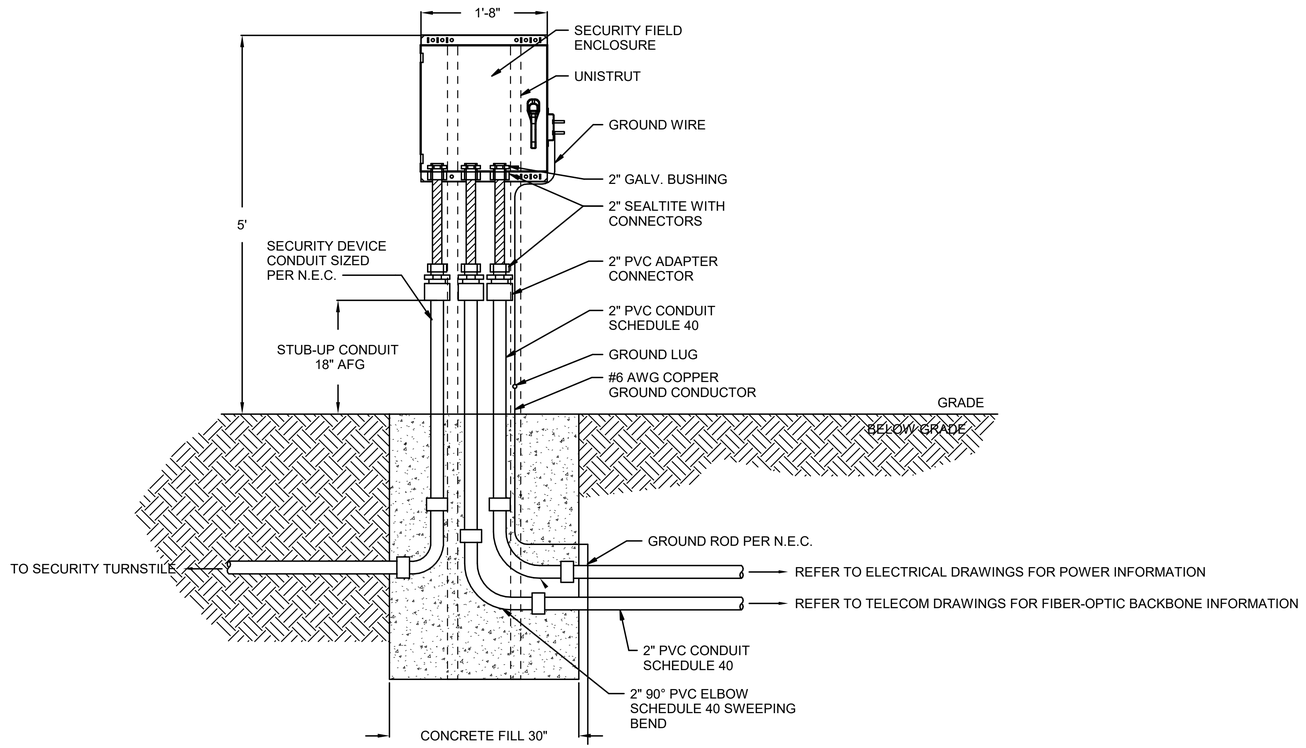
1. REFER TO SHEET TY001 FOR LEGEND, ABBREVIATIONS, AND NOTES.
2. ALL WORK ASSOCIATED WITH THE PEDESTRIAN TURNSTILE, SIDEWALK, AND FENCE ON THIS SHEET TO BE BID AS PART OF BID OPTION - SECURITY TURNSTILE.

PLAN VIEW





A1 UNISTRUT MOUNTING
SCALE: NTS



A8 SECURITY ENCLOSURE
SCALE: NTS

Professional Engineer
I hereby certify that this plan, specification, or report was prepared by me or under my direct supervision and that I am a duly Licensed Professional Engineer under the laws of the state of Minnesota.
Signature:
Typed or Printed Name: DUGAN BRADLEY
Date: 07/23/25 License Number: 61869

US Army Corps of Engineers ®

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DRAWN BY: Z. MATHEWS
CHECKED BY: S. STRICKLAND
SUBMITTED BY: B. STREEBIN
SIZE: ANSI D
ISSUE DATE: JUL 2025
SOLICITATION NO.: W912T525RA001
CONTRACT NO.: W912T524F0007
FILE NAME: 165439_E_R22

US ARMY CORPS OF ENGINEERS
LITTLE ROCK DISTRICT
LITTLE ROCK, ARKANSAS

BURNS AND McDONNELL
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KANSAS CITY, MO 64114
165438

F-35 SPECIAL ACCESS PROGRAM FACILITY
EBBING AIR NATIONAL GUARD BASE (ANGB), FORT SMITH, ARKANSAS

SECURITY DETAILS

SHEET ID
TY507

READY-TO-ADVERTISE (RTA) SUBMITTAL

SECURITY DOOR SCHEDULE

DOOR DETAIL	DOOR #	LOCATION	NETWORK ROOM
2.3	101B	104 - LOBBY	COMM ROOM 127
2.1	103B	122 - CORRIDOR	COMM ROOM 127
1.6	112A	112 - AFE MAINTENANCE	COMM ROOM 127
1.6	116A	116 - PILOT LOCKER ROOM	COMM ROOM 127
1.6	118B	116 - PILOT LOCKER ROOM	COMM ROOM 127
1.6	119B	116 - PILOT LOCKER ROOM	COMM ROOM 127
1.6	121	121 - HALL	COMM ROOM 127
1.6	127	127 - MAIN COMM ROOM	COMM ROOM 127
1.4	131A	131 - MAN TRAP	SECURE COMM ROOM 133
1.4	131A	124 - CORRIDOR	SECURE COMM ROOM 133
1.3	131B	132 - CORRIDOR	SECURE COMM ROOM 133
1.2	132	132 - CORRIDOR	SECURE COMM ROOM 133
1.1	133	133 - SECURE COMM ROOM	SECURE COMM ROOM 133
1.1	135	135 - SECURITY	SECURE COMM ROOM 133
1.3	141A	141 - MAN TRAP 1	SECURE COMM ROOM 133
1.3	141B	142 - VAULT 1 MISSION PLANNING	SECURE COMM ROOM 133
1.1	143	143 - VAULT 1 ALIS / ODIN	SECURE COMM ROOM 133
1.1	144	144 - VAULT 1 SERVER	SECURE COMM ROOM 133
1.3	151A	151 - MAN TRAP 2	SECURE COMM ROOM 133
1.3	151B	152 - VAULT 2 MISSION PLANNING	SECURE COMM ROOM 133
1.1	153	153 - VAULT 2 ALIS / ODIN	SECURE COMM ROOM 133
1.1	154	154 - VAULT 2 SERVER	SECURE COMM ROOM 133
1.3	161A	161 - MAN TRAP 3	SECURE COMM ROOM 133
1.3	161B	162 - VAULT 3 MISSION PLANNING	SECURE COMM ROOM 133
1.1	166	166 - VAULT 3 ALIS / ODIN	SECURE COMM ROOM 133
1.1	167	167 - VAULT 3 SERVER	SECURE COMM ROOM 133
2.2	171	171 - MECHANICAL ROOM	COMM ROOM 127
3.1	171-RH	171 - MECHANICAL ROOM	COMM ROOM 127
1.5	172	172 - ELECTRICAL ROOM	COMM ROOM 127
1.6	214A	214 - LG BRIEFING RM	COMM ROOM 216
1.6	214B	214 - LG BRIEFING RM	COMM ROOM 216
1.6	214C	214 - LG BRIEFING RM	COMM ROOM 216
1.6	214D	214 - LG BRIEFING RM	COMM ROOM 216
1.1	215	215 - AV	AV ROOM 215
1.6	216	216 - COMM	COMM ROOM 216
2.1	229B	229 - BREAK ROOM	COMM ROOM 216
1.5	238	238 - CORRIDOR	COMM ROOM 216
2.2	251	251 - MECHANICAL	COMM ROOM 216
2.2	252	252 - ELECTRICAL	COMM ROOM 216
3.1	252-RH		COMM ROOM 216
1.5	253	253 - FIRE	COMM ROOM 216

SECURITY CAMERA SCHEDULE

CAMERA #	MOUNTING HEIGHT	MOUNTING TYPE	CAMERA TYPE	LOCATION	NETWORK ROOM
C-01 MAN TRAP ENTRY	CEILING	CEILING	FIXED DOME	124 - CORRIDOR	SECURITY OFFICE 135
C-02	CEILING	PENDANT	MULTI-IMAGER	102 - CORRIDOR	COMM ROOM 127
C-03	12'-0"	WALL	FIXED DOME	EXTERIOR	COMM ROOM 127
C-04	12'-0"	CORNER	MULTI-IMAGER	EXTERIOR	COMM ROOM 127
C-05	12'-0"	WALL	FIXED DOME	EXTERIOR	COMM ROOM 127
C-06	12'-0"	CORNER	MULTI-IMAGER	EXTERIOR	COMM ROOM 127
C-07	12'-0"	CORNER	MULTI-IMAGER	EXTERIOR	COMM ROOM 127
C-08	12'-0"	CORNER	MULTI-IMAGER	EXTERIOR	COMM ROOM 127
C-09	12'-0"	CORNER	MULTI-IMAGER	EXTERIOR	COMM ROOM 216
C-10	12'-0"	CORNER	MULTI-IMAGER	EXTERIOR	COMM ROOM 216

SECURITY INTRUSTION DETECTION DEVICE SCHEDULE

DEVICE #	LOCATION	NETWORK ROOM	NETWORK PANEL
CMD 132	132 - CORRIDOR	SECURE COMM ROOM 133	IDS-133
CMD 215	215 - AV	AV ROOM 215	IDS-215
PIR-131B	132 - CORRIDOR	SECURE COMM ROOM 133	IDS-133
PIR-132	132 - CORRIDOR	SECURE COMM ROOM 133	IDS-133
PIR-215	215 - AV	AV ROOM 215	IDS-215

Professional Engineer
I hereby certify that this plan, specification, or report was prepared by me or under my direct supervision and that I am a duly Licensed Professional Engineer under the laws of the state of Minnesota.

Signature:

Typed or Printed Name: DUGAN BRADLEY

Date: 07/23/25 License Number: 61869

US Army Corps of Engineers ®

MARK	DESCRIPTION	DATE
0	READY-TO-ADVERTISE (RTA) SUBMITTAL	JUL 2025

DESIGNED BY: J. SCHAMBERGER
DRAWN BY: Z. MATHEWS
CHECKED BY: S. STRATTON
SUBMITTED BY: B. STREEBIN
SIZE: ANSI D
ISSUE DATE: JUL 2025
SOLICITATION NO.: W912725RA001
CONTRACT NO.: W912724F0007
FILE NAME: 16438_E_R22

US ARMY CORPS OF ENGINEERS
LITTLE ROCK DISTRICT
LITTLE ROCK, ARKANSAS

BURNS AND McDONNELL
9400 WARD PARKWAY,
KANSAS CITY, MO 64114
16438

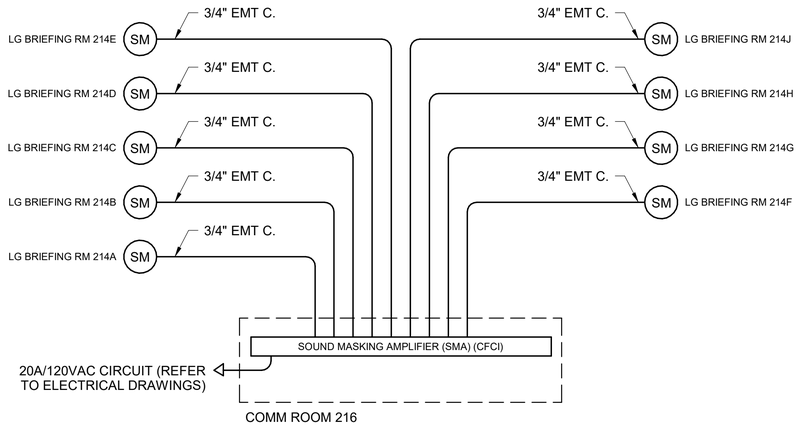
F-35 SPECIAL ACCESS PROGRAM FACILITY
EBBING AIR NATIONAL GUARD BASE (ANGB), FORT SMITH, ARKANSAS

SECURITY SCHEDULES

SHEET ID

TY601

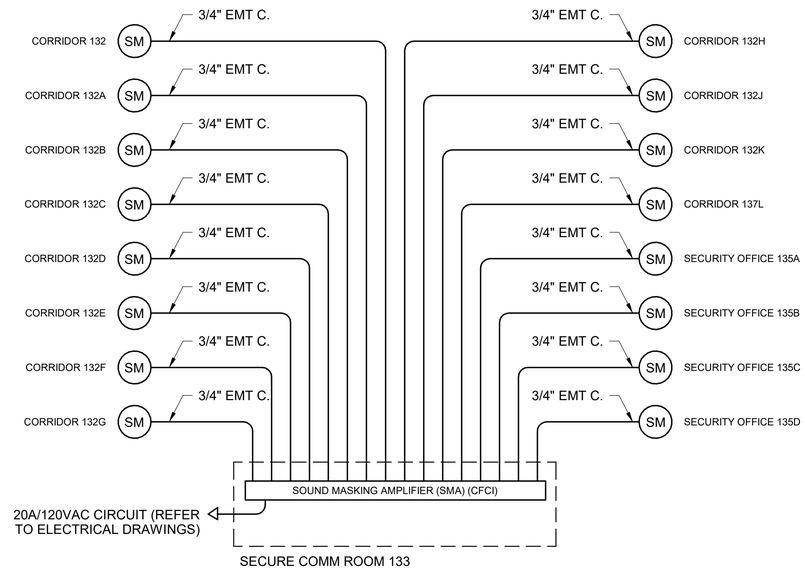
READY-TO-ADVERTISE (RTA) SUBMITTAL



FIRST FLOOR

J1 WHITE NOISE GENERATOR SYSTEM RISER - COMM ROOM 216

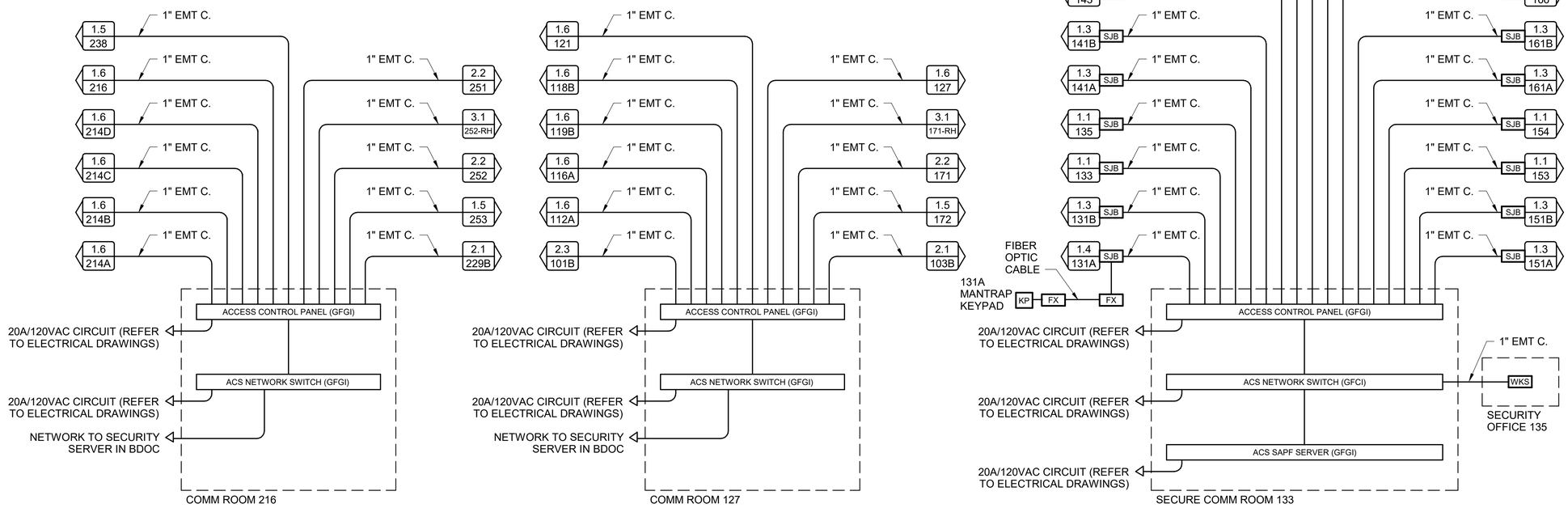
SCALE: NTS



FIRST FLOOR

J12 WHITE NOISE GENERATOR SYSTEM RISER - SECURE COMM ROOM 133

SCALE: NTS



FIRST FLOOR

A1 ACCESS CONTROL SYSTEM RISER

SCALE: NTS

US Army Corps of Engineers ®

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DRAWN BY: Z. MATHEWS
CHECKED BY: S. STRATTON
SUBMITTED BY: B. STREEBIN
SIZE: ANSI D
ISSUE DATE: JUL 2025
SOLICITATION NO.: W912T525RA001
CONTRACT NO.: W912T524F0007
FILE NAME: 16543B_E_R22

US ARMY CORPS OF ENGINEERS
LITTLE ROCK DISTRICT
LITTLE ROCK, ARKANSAS

BURNS AND McDONNELL
9400 WARD PARKWAY,
KANSAS CITY, MO 64114
16543B

Professional Engineer
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Signature: _____
Typed or Printed Name: DUGAN BRADLEY
Date: 07/23/25 License Number: 61869

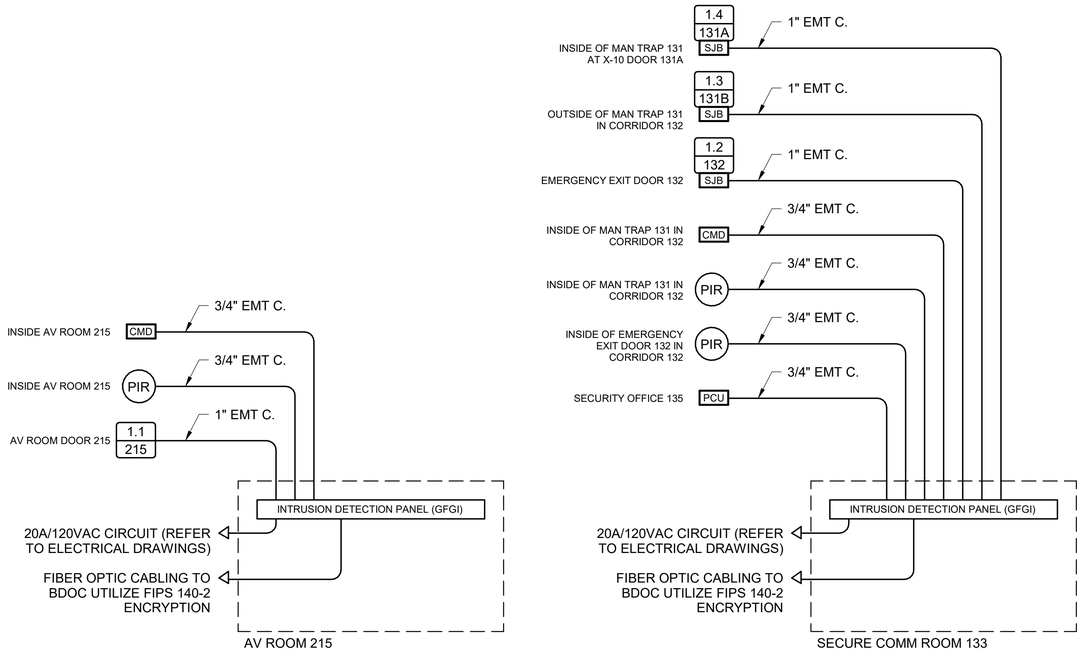
F-35; SPECIAL ACCESS PROGRAM FACILITY
EBBING AIR NATIONAL GUARD BASE (ANGB), FORT SMITH, ARKANSAS

SECURITY RISERS

SHEET ID

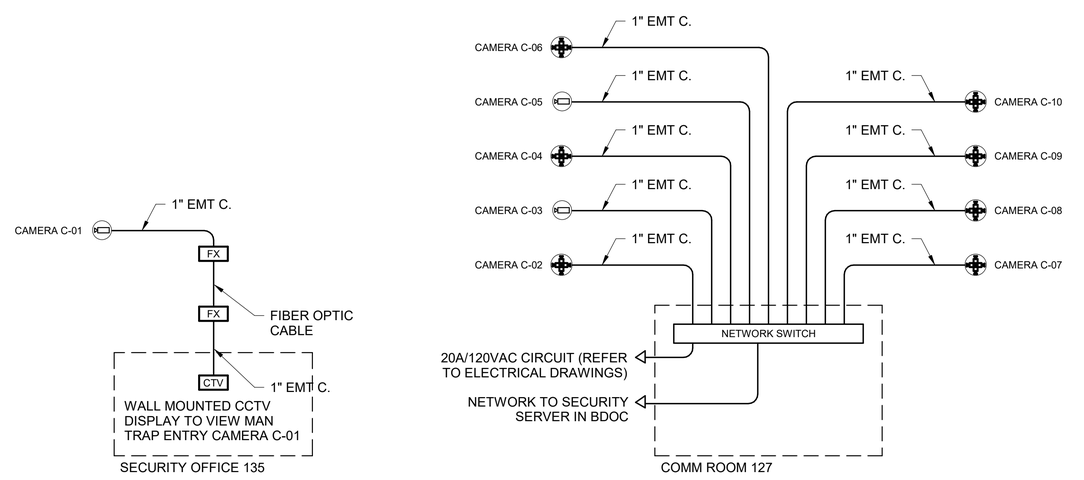
TY701

READY-TO-ADVERTISE (RTA) SUBMITTAL



G8 INTRUSION DETECTION SYSTEM RISER

SCALE: NTS



A8 CLOSED CIRCUIT TV SYSTEM RISER

SCALE: NTS

Professional Engineer
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Signature:

Typed or Printed Name: DUGAN BRADLEY

Date: 07/23/25 License Number: 61869

US Army Corps of Engineers ®

MARK	DESCRIPTION	DATE
0	READY-TO-ADVERTISE (RTA) SUBMITTAL	JUL 2025

DESIGNED BY: J. SCHAMBERGER
DRAWN BY: Z. MATHEWS
CHECKED BY: S. STRATTON
SUBMITTED BY: B. STREEBIN
SIZE: ANSI D
ISSUE DATE: JUL 2025
SOLICITATION NO.: W912T525RA001
CONTRACT NO.: W912T524F0007
FILE NAME: 16543B_E_R22

US ARMY CORPS OF ENGINEERS
LITTLE ROCK DISTRICT
LITTLE ROCK, ARKANSAS

BURNS AND McDONNELL
9400 WARD PARKWAY,
KANSAS CITY, MO 64114
16543B

F-35 SPECIAL ACCESS PROGRAM FACILITY
EBBING AIR NATIONAL GUARD BASE (ANGB), FORT SMITH, ARKANSAS

SECURITY RISERS

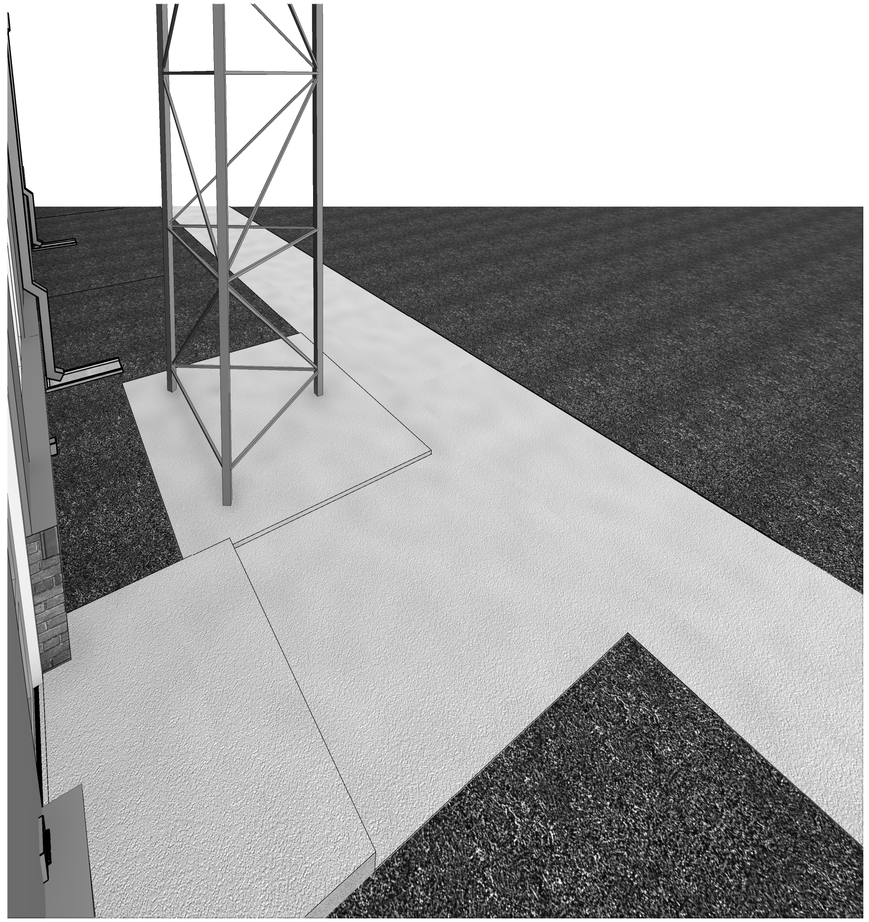
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TY702

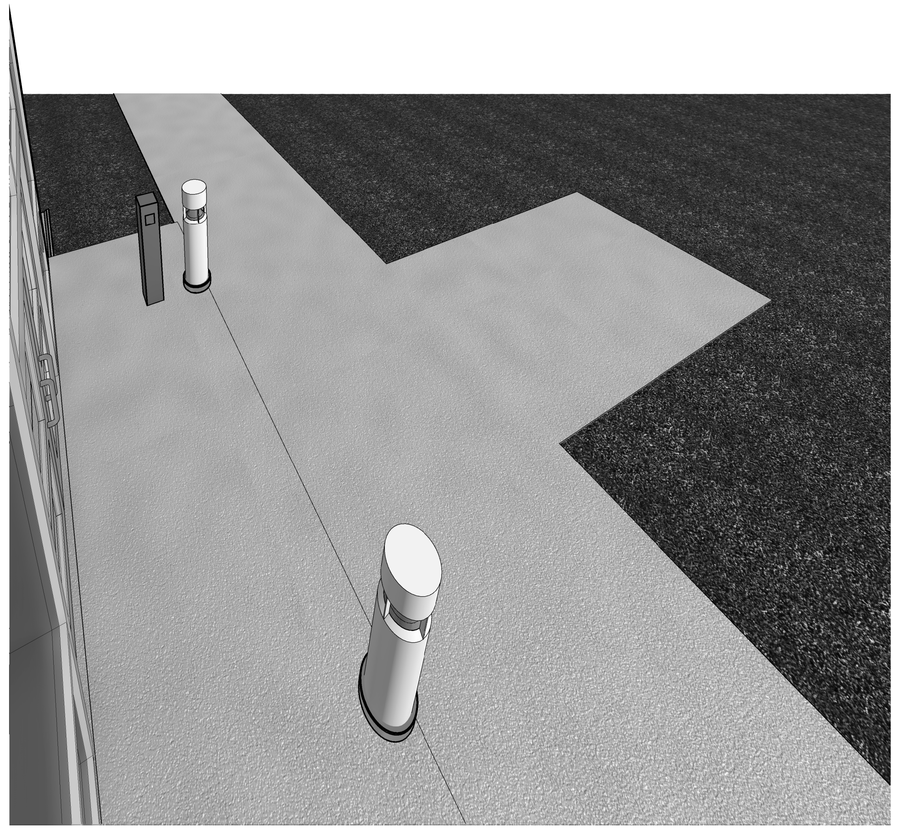
READY-TO-ADVERTISE (RTA) SUBMITTAL

GENERAL SHEET NOTES

1. REFER TO SHEET TY001 FOR LEGEND, ABBREVIATIONS, AND NOTES.



A1 CAMERA VIEW - C-05
SCALE: NTS



A10 CAMERA VIEW - C-03
SCALE: NTS

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Signature:

Typed or Printed Name: DUGAN BRADLEY

Date: 07/23/25 License Number: 61869

US Army Corps of Engineers ®

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0	READY-TO-ADV/ERTISE (RTA) SUBMITTAL	JUL 2025

DESIGNED BY: J. SCHAMBERGER
DRAWN BY: Z. MATHEWS
CHECKED BY: S. STRATTON
SUBMITTED BY: B. STREEBIN
SIZE: ANSI D
ISSUE DATE: JUL 2025
SOLICITATION NO.: W912T525RA001
CONTRACT NO.: W912T524F0007
FILE NAME: 165438_E_R22

US ARMY CORPS OF ENGINEERS
LITTLE ROCK DISTRICT
LITTLE ROCK, ARKANSAS

BURNS AND McDONNELL
9400 WARD PARKWAY,
KANSAS CITY, MO 64114
165438

F-35 SPECIAL ACCESS PROGRAM FACILITY
EBBING AIR NATIONAL GUARD BASE (ANGB), FORT SMITH, ARKANSAS

SECURITY CAMERA VIEWS

SHEET ID

TY901

READY-TO-ADVERTISE (RTA) SUBMITTAL